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

September 4, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
SEP - 7 1956

Mr. Hugh W. Evans
Pacific Uranium Mines
1924 White Avenue
Grand Junction, Colorado

Re: Docket DMEA 4206 (Uranium)
John Brown et al. groups,
Mesa County, Colorado

Dear Mr. Evans:

This will acknowledge receipt of your letter dated August 31, 1956 requesting the status of the captioned DMEA application.

In the same mail we received a copy of a letter from the Acting Administrator to the Pacific Uranium Mines Company, 292 So. La Cienega Boulevard, Beverly Hills, California in which he advised the Applicant Company of the final action regarding the application for DMEA Aid.

Very truly yours,

J. W. Townsend

J. W. Townsend
Acting Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Sec. Op. Comm. (2)
Docket 4206
Chron.

John P. Kellogg, *Manager*
Robert L. Redmond, *Chief Geologist*
Main Office in Los Angeles

Mining
Exploration
Geology
Engineering

PACIFIC URANIUM MINES

1924 White Avenue
GRAND JUNCTION, COLORADO
Phone 487 or 488

August 31, 1956

RECEIVED
SEP 7 1956
DMEA
DEPARTMENT OF THE INTERIOR

Mr. W. M. Traver
Executive Officer, DMEA
Field Team, Region III
United States Department of the Interior
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 4206 (Uranium)
John Brown et al groups
Mesa County, Colorado

Dear Mr. Traver:

On June 14, 1956 a field inspection was made of the John Brown etc. claims on Beaver Mesa, Colorado. Since this date we have had no information as to the status of our Defense Minerals Exploration Administration loan application.

We would greatly appreciate knowing what progress has been made and if any further information or records should be furnished by us. Thank you.

Yours truly,

Hugh W. Evans

HWE:moh

CW

700

FILE COPY
Surname:
Murphy
Williams
Lowe
Selvedge

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

Pacific Uranium Mines Company
292 South La Cienega Boulevard
Beverly Hills, California

AUG 28 1956

Re: Docket No. DMEA-4206 (Uranium)
John Brown, et al., groups
Mesa County, Colorado

Gentlemen:

Your application for aid in an exploration project and other information available to us in Washington concerning the above-named property have been reviewed.

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 indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

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

Sincerely yours,

Frank E. Johnson

ACTING Administrator

FMMurphy/izm 8-28-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
DMEA Field Team, Reg. III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

C

Docket

700

Murphy
Ellis

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-4206

Commodity: Uranium

Applicant: Pacific Uranium Mines Company
292 South La Cienega Boulevard
Beverly Hills, California

Property: The property consists of 58 unpatented, contiguous mining claims and fractions, situated in secs. 6, 7, and 8, T. 50 N., R. 19 W., and in secs. 1 and 12, T. 50 N., R. 20 W., N.M.P.M., Mesa County, Colorado. Two of the claims are owned by the Applicant, the remainder are held by lease.

Date of Application: March 1, 1956

Amount of Application: $80,851.50

Referred to Field Team: April 23, 1956

Field Examination made: June 14, 1956

Field Team Report received: August 15, 1956

Work Proposed:

Stage I - 1) Drill 35 holes from Brushy Basin benches, on a grid pattern of 600' x 800'; and
2) Rim stripping, 100 hours of bulldozer work.

Stage II - Drill 25 holes, from top of Burro Canyon formation, on a grid pattern of 600' x 1200'.

Stage III- Drill 12 offsets to mineralized holes, on 200-foot centers.

Estimated Costs of Project:

Plug drilling, 26,255 feet	$43,065.25
Core drilling, 6,600 feet	26,586.25
Bulldozer, 100 hrs. (rim-stripping)	1,200.00
Standby time ½ hr./hole @ $12/hole	432.00
Surveying and mapping	750.00
Assaying	360.00
Probing $10.00/hole	720.00
Core boxes 132 @ $6.15 each	811.80
Angledozer, 2½ hr./hole @ $12/hr.	2,160.00
Supervision, 6 mths. @ $750/mth.	4,500.00
Other	266.20
TOTAL	$80,851.50

Excerpts from Field Team Report:

The claim area, which is part of John Brown Mesa, is bounded on the northwest by Beaver Mesa and on the east and south by higher parts of the John Brown Mesa. The area lies on the southwest limb of the Dolores syncline.

Rocks cropping out on the claims are the Jurassic Morrison formation and the Cretaceous Burro Canyon and the Dakato formations. All the significant deposits found in the Beaver Mesa area to the northwest of theproperty occur in the upper sandstone rim of the Salt Wash member of the Morrison formation.

The subject property is located near an area of general favorability and adjoins a claim containing an estimated 5000 ton ore body. However, the 26 holes drilled by the Applicant south and east of this ore body are barren of minerals. Inspection of the recovered core shows that much of the area is underlain by thin sandstone lenses and that a large proportion of the associated mudstone is red to mottled red and green and that carbonaceous material is generally sparse.

From the thickness of the sandstone lenses, and the small amount of altered mudstone associated with them, ore bodies, if they exist on theproperty, would likely be small.

The Applicant's engineer stated that the company would not be interested in developing an ore body less than 20,000 tons in size due to the economic requirements for mining at the depths of the potential ore zones on the subject claims.

The Field Team agrees with the field examiners that there is little possibility of discovering significant amounts of uranium on the subject property, and recommends the application be denied.

Commodity Members' Comments:

USBM, James Paone, August 22, 1956:

Mr. Paone concurs in the Field Team's recommendation of denial.

USGS, W. P. Williams, August 23, 1956:

Mr. Williams notes that the core from the 26 holes drilled was unmineralized and showed the Salt Wash sandstone to be thin, discontinuous, and unfavorable for ore deposits. He concurs in the Field Team's recommendation for denial because of the many unfavorable features mentioned by the Field Team.

Rare & Miscellaneous Metals Div., F. M. Murphy, August 28, 1956:

> A review of the Field Team Report indicates that although small deposits of uranium ore might occur on the subject property, there is little chance of finding a deposit large enough to be profitably mined at depths of 300 to 400 feet from the surface.

Conclusion and Recommendation:

This Division agrees with the conclusion of the field examiners and Field Team that significant deposits of uranium ore are not likely to be found on the subject property, and concur in their recommendation to deny the application.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

8/24/56

IN REPLY REFER TO:

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

August 23, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4206, Pacific Uranium Mines Company, John Brown claims, Mesa County, Colorado

The field examiners report that 26 drill holes have been completed on the property. Core from these holes was unmineralized and showed the sandstones of the Salt Wash member to be thin and unfavorable for uranium ore deposits. Furthermore, the main ore zone in the vicinity, the uppermost sandstone of the Salt Wash, has been shown to be thin and discontinuous on the property.

Too many unfavorable features are associated with the subject property to justify DMEA participation in exploration costs at this time. I concur with the recommendations for denial of the application.

W. P. Williams

W. P. Williams

RECEIVED

IN REPLY REFER TO:

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

August 23, 1956

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WPWilliams:iml
G-8/23/56

W. P. Williams

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

IN REPLY REFER TO:

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

August 23, 1956

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

August 23, 1956

Memorandum

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From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4206, Pacific Uranium Mines Company, John Brown claims, Mesa County, Colorado

The field examiners report that 20 drill holes have been completed on the property. Core from these holes was unmineralized and showed the sandstones of the Salt Wash member to be thin and unfavorable for uranium ore deposits. Furthermore, the main ore zone in the vicinity, the uppermost sandstone of the Salt Wash, has been shown to be thin and discontinuous on the property.

Too many unfavorable features are associated with the subject property to justify DMEA participation in exploration costs at this time. I concur with the recommendations for denial of the application.

WPWilliams:iml
G-8/23/56

W. P. Williams

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

8/23/56

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

August 22, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Alternate Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 4206 (Uranium)
Pacific Uranium Mines Company (John Brown group), Mesa County, Colorado

I have reviewed the report of examination, DMEA Docket 4206, Pacific Uranium Mines Company (John Brown group), Mesa County, Colorado, dated August 10 and received in this office August 17, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The field examiners recommend that the application for exploration assistance be denied because the possibility of discovering an ore deposit of significant size on the subject claims is not good.

We concur in the denial.

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

James Paone
James Paone

RECEIVED
AUG 23 1956

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

August 22, 1956

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Uranium Commodity Committee

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

August 22, 1956

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We concur in the denial.

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

James Paone

8/20/56

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

RECEIVED
AUG 15 1956

August 13, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company (John Brown group), Mesa County, Colorado

Enclosed are the original and three copies of a joint engineering and geologic report on the subject property.

The field examiners conclude that there is little possibility of discovering a significant amount of uranium on this property. They recommend that the application be denied. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8-17-56
(date)

DMEA
Date Rec'd.

RECEIVED AUG 13 1956

AUG 15 1956 BUREAU OF MINES
Denver, Colorado

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
August 10, 1956

TRANSMITTED

AUG 13 1956

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company (John Brown Group) Mesa County, Colorado

Enclosed are the original and nine copies of the Joint Engineering and Geologic Report by Howard F. Albee, Geologist and Harry F. Robertson, Mining Engineer, covering docket DMEA 4206.

Pacific Uranium Mines Company applied for DMEA assistance to explore the John Brown Group of Claims in Mesa County, Colorado for 26,255 feet of non-core and 6,600 feet of core drilling at an estimated cost of $80,852.00. The property was examined on June 14, 1956 by Howard F. Albee and Harry F. Robertson.

The examining team concluded that there was little possibility of discovering a significant amount of uranium on the John Brown Group of Claims. It is recommended that the application be denied.

Bill King
for E. N. Harshman
Member Field Team

John F. Shaw
John F. Shaw
Supervising Mining Engineer

JFS/sh

Enclosures
cc: 9
EHHarshman
DMEA 4206
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
8-17-56

MINERAL DEPOSITS
JUL 25 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

GEOLOGICAL SURVEY
DENVER
RECEIVED
AUG 15 1956

July 24, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: Howard F. Albee for J. William Hasler

TRANSMITTED
AUG 13 1956

Subject: Transmittal of examination report, Pacific Uranium Mines Company, DMEA docket 4206 (Uranium), John Brown group of claims, Mesa County, Colorado

Pacific Uranium Mines Company, Grand Junction, Colorado, applied to the Defense Minerals Exploration Administration for assistance to explore for uranium in an area southeast of Beaver Mesa in Mesa County, Colorado.

An examination was made June 14, 1956, by Howard F. Albee, U. S. Geological Survey, and Harry F. Robertson, U. S. Bureau of Mines, in company with Hugh W. Evans, chief engineer for the applicant.

The group of claims lies near Beaver Mesa, which is an area favorable for the occurrence of uranium. Cores from drill holes on the claims, however, show that the property is generally underlain by thin sandstone lenses and red to mottled red and green mudstone. Carbonaceous material is sparce. These criteria indicate that the probability of the occurrence of ore bodies is very poor, and that if ore bodies exist they would likely be small. The examining team, therefore, recommends denial of the application. I concur with the conclusions and recommendations of the examining team.

Enclosed are 10 copies of figure 2 for inclusion in the examination report.

Howard F. Albee
For J. William Hasler,
Geologist

HFA/mlr

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8-17-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

RECEIVED
AUG 15 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

CONFIDENTIAL
not for public quotation
or inspection

TRANSMITTED
AUG 13 1956

DMEA 4206

JOHN BROWN GROUP

Pacific Uranium Mines Company

Mesa County, Colorado

Uranium

Joint Engineering and Geologic Report

By

H. F. Albee, Geologist
Geological Survey

H. F. Robertson, Mining Engineer
Bureau of Mines

August 10, 1956

Reviewed by
DMEA OPERATING COMMITTEE
8-17-56
(date)

DMEA 4206

PACIFIC URANIUM MINES COMPANY
JOHN BROWN GROUP
MESA COUNTY, COLORADO

CONTENTS

Joint engineering and geologic report — Page

Introduction and summary....1
Acknowledgements....2
Location, topography, and climate....2
History and production....3
Ownership and extent....3
Present status....4
Mining equipment and other facilities....4
Geology....5
Ore deposits....7
Proposed exploration....8
Conclusions and recommendations....10

ILLUSTRATIONS

Figure		Follows page
1.	Location map, Beaver Mesa Property, Pacific Uranium Mines Company, Mesa County, Colorado, DMEA 4206	1
2.	Geologic map showing the John Brown, et al., group of claims, Pacific Uranium Mines Company, Mesa County, Colorado	5

DMEA 4206

RECEIVED
AUG 15 1956

PACIFIC URANIUM MINES COMPANY
JOHN BROWN GROUP
MESA COUNTY, COLORADO

INTRODUCTION AND SUMMARY

Pacific Uranium Mines Company, 1924 White, Grand Junction, Colorado, applied to DMEA for assistance in a plug- and core-drilling program on the John Brown group of claims near Beaver Mesa, Mesa County, Colorado (fig. 1). The application proposes a three stage project consisting of 26,255 feet of non-core drilling and 6,600 feet of core drilling in 72 holes at an estimated total cost of $80,852.00, using the contract bid of Sprague and Henwood, Inc., the lowest of three submitted. Government participation at 75 percent would be $60,639.00.

The property was examined on June 14, 1956, by a DMEA examining team accompanied by Hugh W. Evans, Chief Engineer for Pacific Uranium Mines Company.

Cores from holes previously drilled on the property by the applicant and others were inspected by the examining team; these cores indicated that most of the area is underlain by thin sandstone lenses and red to red and green mottled mudstone. Carbonaceous material is generally sparse. The logs and assays from many holes drilled by the USGS and private operators in the Beaver Mesa area has shown that these conditions indicate that ore bodies, if they exist, will be small. Mr. Evans, chief engineer for the applicant, stated that the Company would not be interested in developing an ore body of

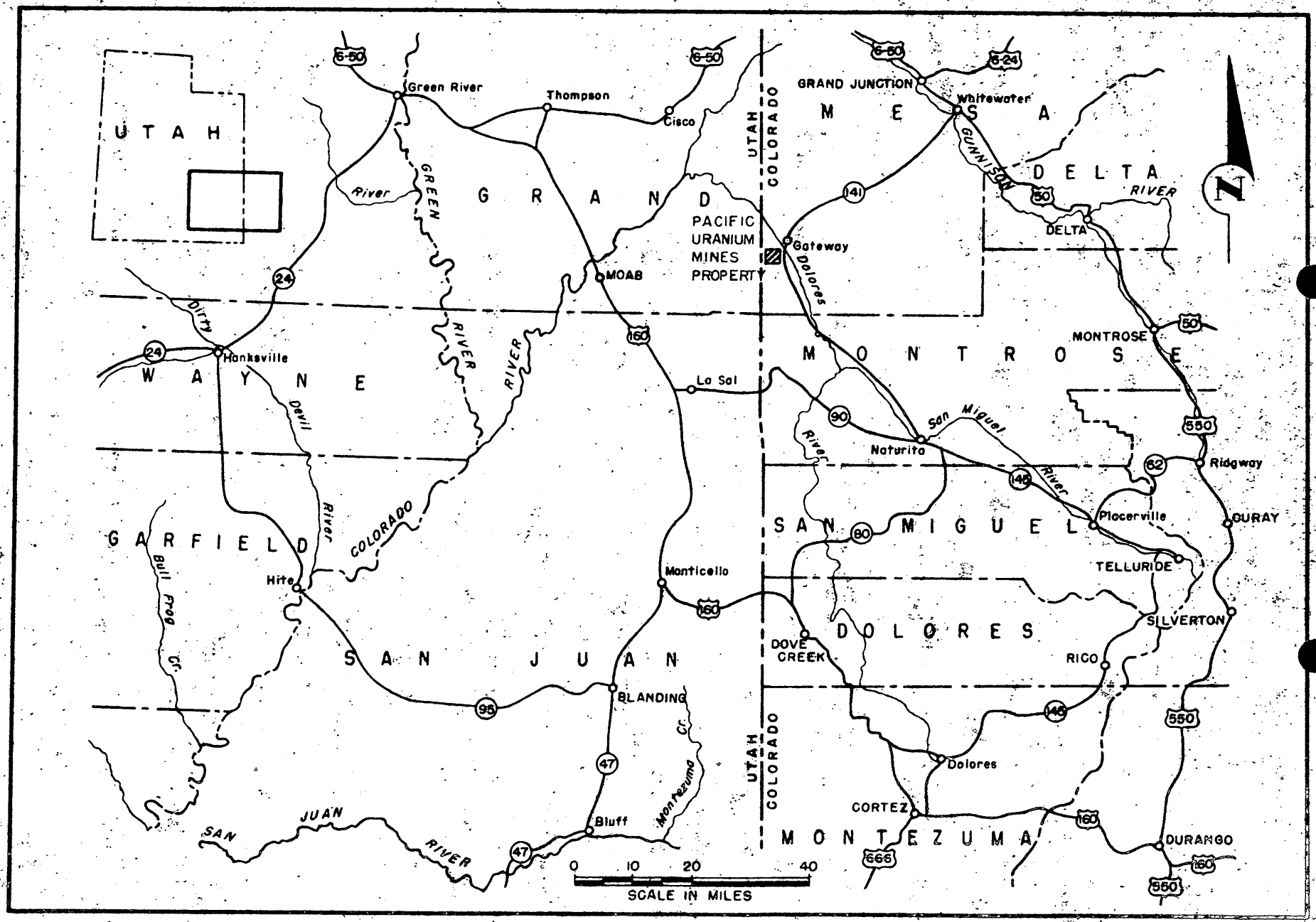


FIGURE 1 - LOCATION MAP, BEAVER MESA PROPERTY, PACIFIC URANIUM MINES COMPANY, MESA COUNTY, COLO. DMEA 4206

less than 20,000 tons. The possibility of discovering an ore deposit of this size on the subject claims is not good. The examining team, therefore, recommends denial of the request for Government participation in the exploration program.

ACKNOWLEDGMENTS

The examining team was accompanied to the property by Hugh W. Evans, chief engineer for the applicant.

The Atomic Energy Commission was consulted about the proposed project and for ore reserve data. Government exploration on Beaver Mesa has been carried on by the Geological Survey. Data from this work was made available to the examining team, and personnel from the U. S. Geological Survey Beaver Mesa project were consulted for information pertaining to the subject claims.

Consideration was also given to the memorandum from W. P. Williams, USGS, suggesting that initial drilling on wide-spaced centers might be warranted.

LOCATION, TOPOGRAPHY, AND CLIMATE

The subject property consists of 58 unpatented, contiguous mining claims and fractions located in secs. 6, 7, and 8, T. 50 N., R. 19 W., NMPM; and secs. 1 and 12, T. 50 N., R. 20 W., NMPM, Mesa County, Colorado. The claims are southwest of John Brown Canyon on John Brown Mesa which is near Beaver Mesa.

The claim area is ten miles by the John Brown Canyon access road from Gateway, Colorado, and 63 miles over State Highway 141 from Grand Junction, Colorado, the nearest major source of supplies. The claims are at altitudes ranging from 7000 to 7600 feet and cover a broad, brush covered bench formed by the Cretaceous Burro Canyon formation and Jurassic Brushy Basin formation that overlooks John Brown Canyon.

Precipitation is moderate to heavy and sometimes results in flash-floods or blizzards that temporarily disrupt operations. Labor procurement in the area is no problem.

HISTORY AND PRODUCTION

Vanadium mining operations on Beaver Mesa were done before World War I. Activity since World War II was stimulated by the demand for uranium.

There has been no production from the property, though it lies near an area of known ore deposits.

OWNERSHIP AND EXTENT

The land included in the application is held by 58 unpatented mining claims and fractions. Two of the claims are owned by the applicant; twenty-nine claims are owned by Flanders Mining Company and leased to the applicant; twenty-one claims are owned jointly by Flanders Mining Company and Southwestern Uranium Trading Company and leased to the applicant. The applicant is negotiating for a

lease on six claims owned by Climax Uranium Corporation but is withholding final action pending approval or denial of the DMEA application. The leases appear to be valid documents.

The total area covered by the claims amounts to about 1,024 acres. According to the applicant, all requirements have been fullfilled for valid claim locations and the necessary annual assessment work has been performed and the affidavits recorded at the Mesa County Courthouse.

PRESENT STATUS

No drilling has been done on the property since January 23, 1956. Prior to this time, Pacific Uranium Mines Company drilled 24 diamond-drill holes; Climax Uranium Company drilled one hole, and the Flanders Mining Company drilled one hole. Seven of the holes were classified as favorable by the applicant and used in constructing favorability contours on a map. One hole, JB-16, was drilled as an offset near a favorable zone but no conclusive results were obtained.

The 26 core-drill holes constitute all of the exploration and development performed on the subject property. The cores from these holes furnished accurate information on the formations underlying the claims.

MINING EQUIPMENT AND OTHER FACILITIES

There is no mining equipment on the property at the present time. A camp, consisting of four frame cabins, has been established

at Willow Springs. The applicant states that he could rent two of these as housing for project personnel. Power requirements would be met by use of diesel or gasoline plants.

The John Brown Canyon road crosses the property and access roads have been bulldozed to various other places within the claim boundaries.

GEOLOGY

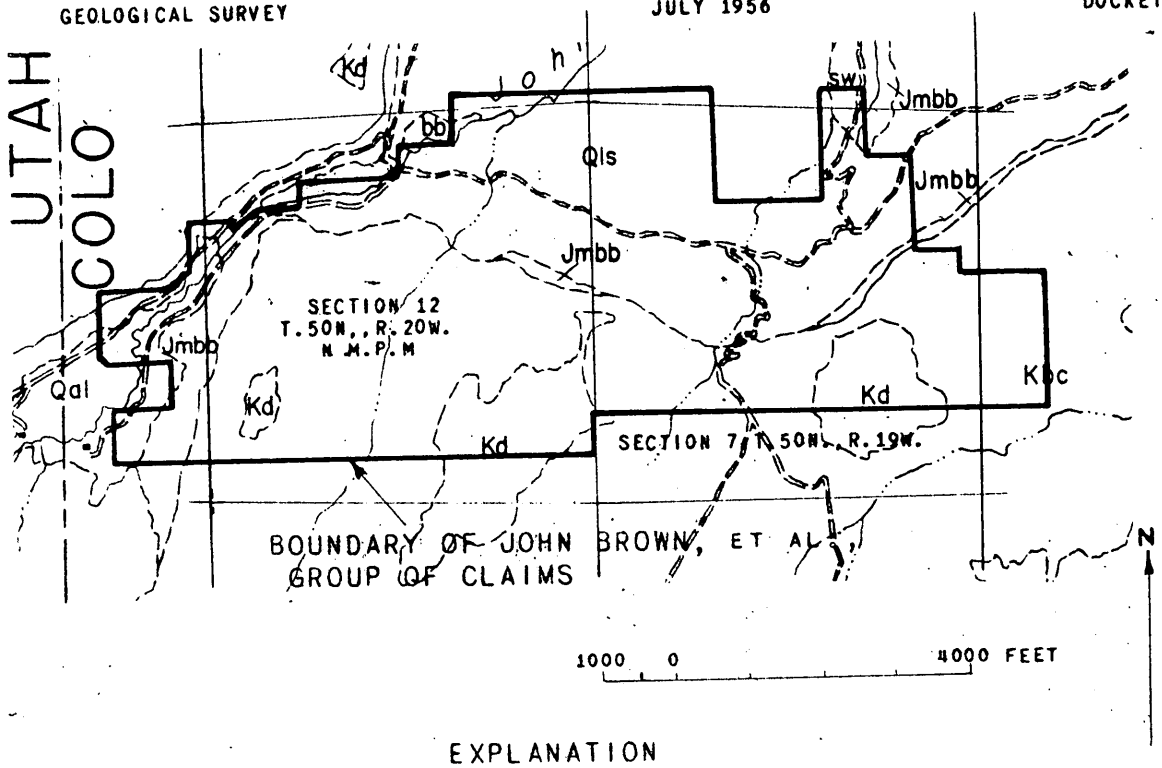
The area, which is part of John Brown Mesa, is bounded on the northwest by Beaver Mesa and on the east and south by higher parts of John Brown Mesa. The surface of John Brown Mesa rises in a southerly direction to the rim of Sinbad Valley and to the northeast drops off in a succession of vertical cliffs, steep slopes, and benches into the canyon of the Dolores River.

The area lies on the southwest limb of the Dolores syncline. The syncline trends northwest and plunges southeast at a low angle. The rocks underlying the area dip about 2° to the northeast.

The rocks in the immediate vicinity of the claims are comprised of the Jurassic Morrison formation and the Cretaceous Burro Canyon and Dakota formations (fig. 2). Much of the Morrison formation is covered with recent landslide material and alluvium. The Morrison formation is made up of two members; the lower Salt Wash sandstone member and the upper Brushy Basin shale member. The Salt Wash ranges from 280 to 340 feet and the Brushy Basin member ranges from 340 to

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
JULY 1956
DOCKET 4206



EXPLANATION

Qal	QUATERNARY ALLUVIUM
Qls	QUATERNARY LANDSLIDE
Kd	CRETACEOUS DAKOTA SANDSTONE
Kbc	CRETACEOUS BURRO CANYON FORMATION
Jmbb	BRUSHY BASIN MEMBER OF THE JURASSIC MORRISON FORMATION
Jmsw	SALT WASH MEMBER OF THE JURASSIC MORRISON FORMATION
~~	GEOLOGIC CONTACT

Note: BASE FROM PRELIMINARY GEOLOGIC MAP OF THE SINBAD VALLEY - FISHER VALLEY ANTICLINE, COLORADO AND UTAH BY E. M. SHOEMAKER.

FIGURE 2.--GEOLOGIC MAP SHOWING THE JOHN BROWN, ET AL., GROUP OF CLAIMS, PACIFIC URANIUM MINES COMPANY, MESA COUNTY, COLORADO.

360 feet in thickness. The Burro Canyon formation of Cretaceous age caps the southern part of the area, however, remnants of the Cretaceous Dakota sandstone are present in places back of the Burro Canyon rim. The Burro Canyon formation is nearly 200 feet thick and the Dakota remnants are from 20 to 40 feet thick.

The Salt Wash sandstone is composed dominantly of sandstone interbedded with shale and mudstone. The sandstone commonly occurs as ledges or rims traceable along the outcrop, but within each ledge or rim the individual beds are lenticular and discontinuous. The lenses are separated in places by mudstone and contain mudstone seams and lenses. Most of the sandstone is medium- to medium-fine grained and is composed largely of subangular to subrounded quartz grains.

The Brushy Basin shale member consists predominantly of vari-colored bentonitic shale and mudstone, with intercalated beds and lenses of sandstone and conglomeratic sandstone. The shale and mudstone range in color from white to pastel tints of red and green. The Brushy Basin usually forms smooth slopes covered with talus blocks and boulders weathered from the overlying formations, however, in the area of the claims the Brushy Basin forms a relatively thin slope and a broad bench on which is a variable thickness of landslide material and alluvium.

The Burro Canyon formation and Dakota sandstone are composed predominantly of sandstone and conglomeratic sandstone interbedded

with thin lenses of gray and green shale. The Burro Canyon and Dakota characteristically crop out as cliffs or a series of thick resistant ledges.

ORE DEPOSITS

All of the significant uranium bearing deposits found in the Beaver Mesa area to the northwest of the property are in the uppermost sandstone rim of the Salt Wash member of the Morrison formation. Logs of drill holes on the John Brown group show this sandstone to be discontinuous and relatively thin compared to most of the sandstone drilled on Beaver Mesa. It ranges from 1 foot to 70 feet in thickness on the property and many of the drill hole logs show from 2 to 3 thin sandstone lenses separated by mudstone.

No ore deposits have been found on the property, although a 5,000 ton ore body has been discovered on an adjoining claim to the north. Drill holes on the property south and east of the ore body are barren of uranium and the cores consist of material that is unfavorable for its occurrence. Cores from drill holes located east and west across the property were inspected and show that much of the area is underlain by thin sand lenses and that a large proportion of the associated mudstone is red to mottled red and green. Carbonaceous material is generally sparse.

Logs from 26 core drill holes were submitted with the application, five of which were classified by the applicant as favorable. The

cores were examined and were found to be generally unfavorable. Drill holes JB 13 and JB 14 should be classified as semi-favorable; all others were determined to be unfavorable.

Ore bodies have been found in sandstone lenses that are classified as thin, in this report, but the resulting ore bodies were small. A thin sandstone, in so far as favorability is concerned, is considered to be ore under 30 feet thick, and about 70 percent of the holes drilled on the claims penetrated thin sandstone.

Many miles of the Salt Wash have been prospected and drilled from Beaver Mesa southerly toward Sinbad Valley and as previously stated the only significant ore bodies found are those on Beaver Mesa.

The Pacific Uranium Mines Company engineer stated that the company would not be interested in developing an ore body less than 20,000 tons in size. Because of the thicknesses of the sandstone lenses and the small amount of altered mudstone associated with them, the ore bodies would tend to be small.

PROPOSED EXPLORATION

The applicant proposes a three phase program consisting of rim-stripping, core, and non-core drilling. The division between the first and second phases is primarily based on drilling depths. The third phase includes offset drilling into the more favorable zones.

Assuming a northeast elongation for the ore bodies a target area measuring 773 feet on a N45°W axis and 900 feet on a N45°E axis has been calculated, by the applicant, for a 20,000 tons ore body with an average thickness of five feet. The proposed grid pattern is oriented for locating the maximum number of holes along the N45°W axis or across the trend. Independent contractors would be used for all drilling and angle dozer work.

Phase I, consists of drilling 35 holes or 11,600 feet from the Brushy Basin benches. The average depth of hole would be 333 feet and the bottom 100 feet of each hole would be cored. The proposed holes are spaced so that existing drill holes form a part of the grid pattern. As a supplement to the drilling program, and to be conducted simultaneously with it, is 100 hours of angle dozer work along the rim. The angle dozer work is called phase IA. The total estimated cost of phase I and IA is $25,737.25.

Phase II includes all drilling from the top of the Burro Canyon formation. The average depth of the 25 holes in this phase is 619 feet for a total footage of 15,465 feet. The last 100 feet in each hole would be core-drilled. The spacing for this phase is 1200 feet on the N45°W axis, staggered from one row to the next, resulting in a hole every 600 feet across the trend. The distance between the rows of holes is maintained at 800 feet. The total estimated cost of phase II is $34,146.25.

Phase III holes would offset previously drilled mineralized or ore holes on 200-foot centers. Twelve holes are planned with a total footage of 5,730 feet. The coring interval would be 50 feet.

The total cost of the proposed program is estimated at $80,852.00. Government participation would be 75 percent of the total or $60,639.00.

No project modifications are suggested by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

The applicant's property is located near an area of general favorability and adjoins a claim containing an estimated 5,000 ton ore body. However, holes drilled on the property south and east of the ore body are barren of mineral and the cores indicate that the Salt Wash member is unfavorable for the occurrence of ore deposits.

Inspection of the cores recovered from holes previously drilled on the property show that much of the subject area is underlain by thin sandstone lenses and that a large proportion of the associated mudstone is red to mottled red and green. Carbonaceous material is generally sparse. The criteria as developed by the USGS for the favorableness of an area for uranium deposition indicates that the possibility of discovering a significant ore body is not good.

The Pacific Uranium Mines Company engineer stated that the company would not be interested in developing an ore body less than 20,000 tons in size due to the economic requirements for mining at the depth of the potential ore zones on the subject claims. From the thickness of the sandstone lenses and the small amount of altered mudstone associated with them, ore bodies, if they exist on the property, would likely be small.

Therefore, the examining team recommends denial of the applicant's request for Government participation in the exploration of the subject claims.

8/15/56

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

August 13, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
AUG 15 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company (John Brown group), Mesa County, Colorado

Enclosed are the original and three copies of a joint engineering and geologic report on the subject property.

The field examiners conclude that there is little possibility of discovering a significant amount of uranium on this property. They recommend that the application be denied. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8/17/56
(date)

DMEA
Date Rec'd.
RECEIVED AUG 13 1956
AUG 15 1956
BUREAU OF MINES
Denver, Colorado

TRANSMITTED

AUG 13 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
August 10, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company (John Brown Group) Mesa County, Colorado

Enclosed are the original and nine copies of the Joint Engineering and Geologic Report by Howard F. Albee, Geologist and Harry F. Robertson, Mining Engineer, covering docket DMEA 4206.

Pacific Uranium Mines Company applied for DMEA assistance to explore the John Brown Group of Claims in Mesa County, Colorado for 26,255 feet of non-core and 6,600 feet of core drilling at an estimated cost of $80,852.00. The property was examined on June 14, 1956 by Howard F. Albee and Harry F. Robertson.

The examining team concluded that there was little possibility of discovering a significant amount of uranium on the John Brown Group of Claims. It is recommended that the application be denied.

Rd King
for E. N. Harshman
Member Field Team

John F. Shaw
Supervising Mining Engineer

JFS/sh

Enclosures
cc: 9
EHHarshman
DMEA 4206
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
8/17/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
AUG 15 1956

P. O. Box 360
Grand Junction, Colorado

July 24, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

TRANSMITTED

Through: E. N. Harshman

From: Howard F. Albee for J. William Beasler

AUG 13 1956

Subject: Transmittal of examination report, Pacific Uranium Mines Company, DMEA docket 4206 (Uranium), John Brown group of claims, Mesa County, Colorado

Pacific Uranium Mines Company, Grand Junction, Colorado, applied to the Defense Minerals Exploration Administration for assistance to explore for uranium in an area southeast of Beaver Mesa in Mesa County, Colorado.

An examination was made June 14, 1956, by Howard F. Albee, U. S. Geological Survey, and Harry F. Robertson, U. S. Bureau of Mines, in company with Hugh W. Evans, chief engineer for the applicant.

The group of claims lies near Beaver Mesa, which is an area favorable for the occurrence of uranium. Cores from drill holes on the claims, however, show that the property is generally underlain by thin sandstone lenses and red to mottled red and green mudstone. Carbonaceous material is sparce. These criteria indicate that the probability of the occurrence of ore bodies is very poor, and that if ore bodies exist they would likely be small. The examining team, therefore, recommends denial of the application. I concur with the conclusions and recommendations of the examining team.

Enclosed are 10 copies of figure 2 for inclusion in the examination report.

Howard F. Albee
For J. William Beasler,
Geologist

HFA/alr

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8-17-56

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

RECEIVED
AUG 15 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

CONFIDENTIAL
not for public quotation
or inspection

TRANSMITTED
AUG 13 1956

DMEA 4206

JOHN BROWN GROUP

Pacific Uranium Mines Company

Mesa County, Colorado

Uranium

Joint Engineering and Geologic Report

By

H. F. Albee, Geologist
Geological Survey

H. F. Robertson, Mining Engineer
Bureau of Mines

August 10, 1956

Reviewed by
DMEA OPERATING COMMITTEE
8-17-56
(date)

DMEA 4206

RECEIVED
AUG 15 1956

PACIFIC URANIUM MINES COMPANY
JOHN BROWN GROUP
MESA COUNTY, COLORADO

CONTENTS

Joint engineering and geologic report — Page

Introduction and summary....1
Acknowledgements....2
Location, topography, and climate....2
History and production....3
Ownership and extent....3
Present status....4
Mining equipment and other facilities....4
Geology....5
Ore deposits....7
Proposed exploration....8
Conclusions and recommendations....10

ILLUSTRATIONS

Figure — Follows page

1. Location map, Beaver Mesa Property, Pacific Uranium Mines Company, Mesa County, Colorado, DMEA 4206....1

2. Geologic map showing the John Brown, et al., group of claims, Pacific Uranium Mines Company, Mesa County, Colorado....5

DMEA 4206

PACIFIC URANIUM MINES COMPANY
JOHN BROWN GROUP
MESA COUNTY, COLORADO

INTRODUCTION AND SUMMARY

Pacific Uranium Mines Company, 1924 White, Grand Junction, Colorado, applied to DMEA for assistance in a plug- and core-drilling program on the John Brown group of claims near Beaver Mesa, Mesa County, Colorado (fig. 1). The application proposes a three stage project consisting of 26,255 feet of non-core drilling and 6,600 feet of core drilling in 72 holes at an estimated total cost of $80,852.00, using the contract bid of Sprague and Henwood, Inc., the lowest of three submitted. Government participation at 75 percent would be $60,639.00.

The property was examined on June 14, 1956, by a DMEA examining team accompanied by Hugh W. Evans, Chief Engineer for Pacific Uranium Mines Company.

Cores from holes previously drilled on the property by the applicant and others were inspected by the examining team; these cores indicated that most of the area is underlain by thin sandstone lenses and red to red and green mottled mudstone. Carbonaceous material is generally sparse. The logs and assays from many holes drilled by the USGS and private operators in the Beaver Mesa area has shown that these conditions indicate that ore bodies, if they exist, will be small. Mr. Evans, chief engineer for the applicant, stated that the Company would not be interested in developing an ore body of

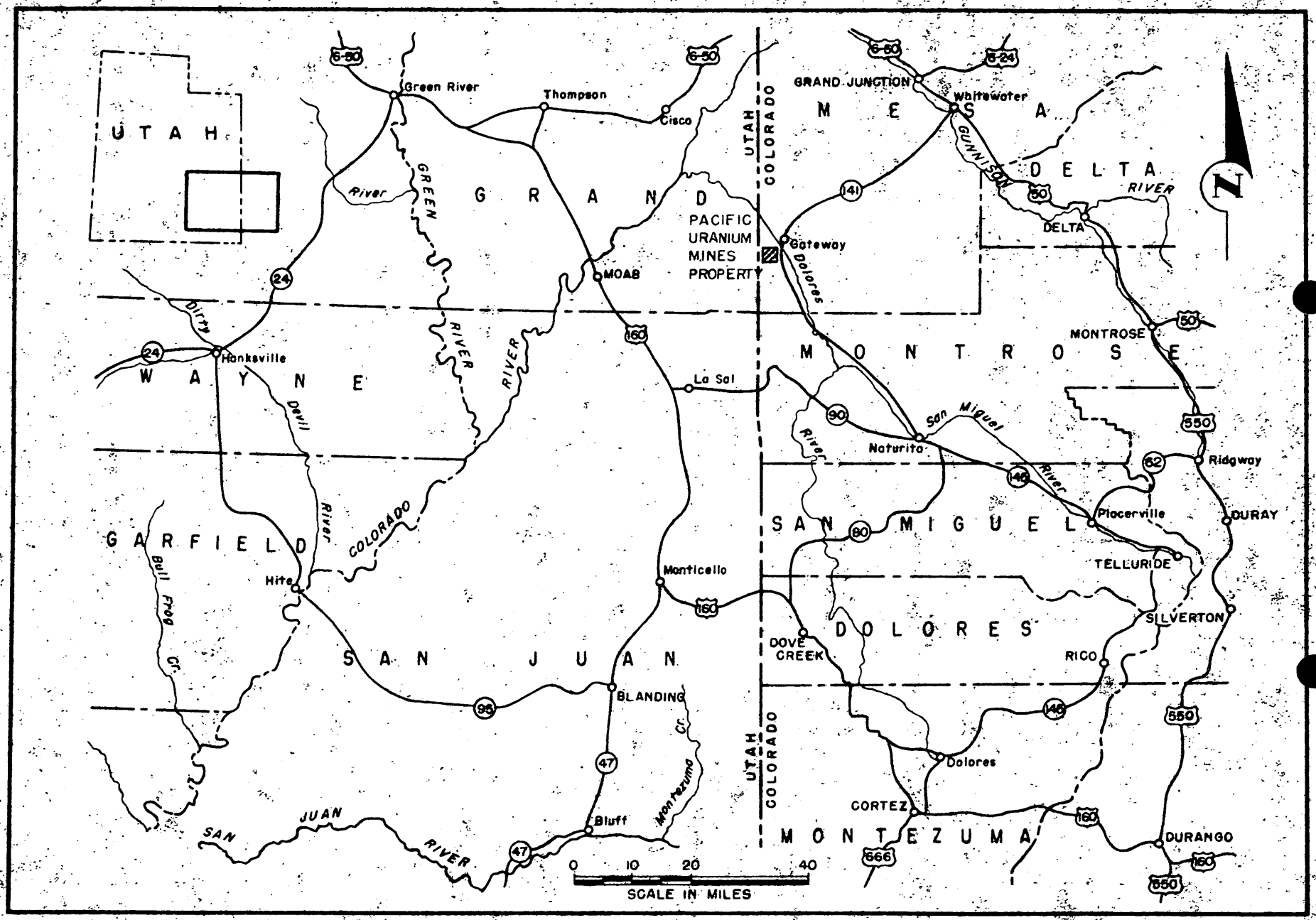


FIGURE 1 - LOCATION MAP, BEAVER MESA PROPERTY, PACIFIC URANIUM MINES COMPANY, MESA COUNTY, COLO. DMEA4206

less than 20,000 tons. The possibility of discovering an ore deposit of this size on the subject claims is not good. The examining team, therefore, recommends denial of the request for Government participation in the exploration program.

ACKNOWLEDGMENTS

The examining team was accompanied to the property by Hugh W. Evans, chief engineer for the applicant.

The Atomic Energy Commission was consulted about the proposed project and for ore reserve data. Government exploration on Beaver Mesa has been carried on by the Geological Survey. Data from this work was made available to the examining team, and personnel from the U. S. Geological Survey Beaver Mesa project were consulted for information pertaining to the subject claims.

Consideration was also given to the memorandum from W. P. Williams, USGS, suggesting that initial drilling on wide-spaced centers might be warranted.

LOCATION, TOPOGRAPHY, AND CLIMATE

The subject property consists of 58 unpatented, contiguous mining claims and fractions located in secs. 6, 7, and 8, T. 50 N., R. 19 W., NMPM; and secs. 1 and 12, T. 50 N., R. 20 W., NMPM, Mesa County, Colorado. The claims are southwest of John Brown Canyon on John Brown Mesa which is near Beaver Mesa.

The claim area is ten miles by the John Brown Canyon access road from Gateway, Colorado, and 63 miles over State Highway 141 from Grand Junction, Colorado, the nearest major source of supplies. The claims are at altitudes ranging from 7000 to 7600 feet and cover a broad, brush covered bench formed by the Cretaceous Burro Canyon formation and Jurassic Brushy Basin formation that overlooks John Brown Canyon.

Precipitation is moderate to heavy and sometimes results in flash-floods or blizzards that temporarily disrupt operations. Labor procurement in the area is no problem.

HISTORY AND PRODUCTION

Vanadium mining operations on Beaver Mesa were done before World War I. Activity since World War II was stimulated by the demand for uranium.

There has been no production from the property, though it lies near an area of known ore deposits.

OWNERSHIP AND EXTENT

The land included in the application is held by 58 unpatented mining claims and fractions. Two of the claims are owned by the applicant; twenty-nine claims are owned by Flanders Mining Company and leased to the applicant; twenty-one claims are owned jointly by Flanders Mining Company and Southwestern Uranium Trading Company and leased to the applicant. The applicant is negotiating for a

lease on six claims owned by Climax Uranium Corporation but is withholding final action pending approval or denial of the DMEA application. The leases appear to be valid documents.

The total area covered by the claims amounts to about 1,024 acres. According to the applicant, all requirements have been fullfilled for valid claim locations and the necessary annual assessment work has been performed and the affidavits recorded at the Mesa County Courthouse.

PRESENT STATUS

No drilling has been done on the property since January 23, 1956. Prior to this time, Pacific Uranium Mines Company drilled 24 diamond-drill holes; Climax Uranium Company drilled one hole, and the Flanders Mining Company drilled one hole. Seven of the holes were classified as favorable by the applicant and used in constructing favorability contours on a map. One hole, JB-16, was drilled as an offset near a favorable zone but no conclusive results were obtained.

The 26 core-drill holes constitute all of the exploration and development performed on the subject property. The cores from these holes furnished accurate information on the formations underlying the claims.

MINING EQUIPMENT AND OTHER FACILITIES

There is no mining equipment on the property at the present time. A camp, consisting of four frame cabins, has been established

at Willow Springs. The applicant states that he could rent two of these as housing for project personnel. Power requirements would be met by use of diesel or gasoline plants.

The John Brown Canyon road crosses the property and access roads have been bulldozed to various other places within the claim boundaries.

GEOLOGY

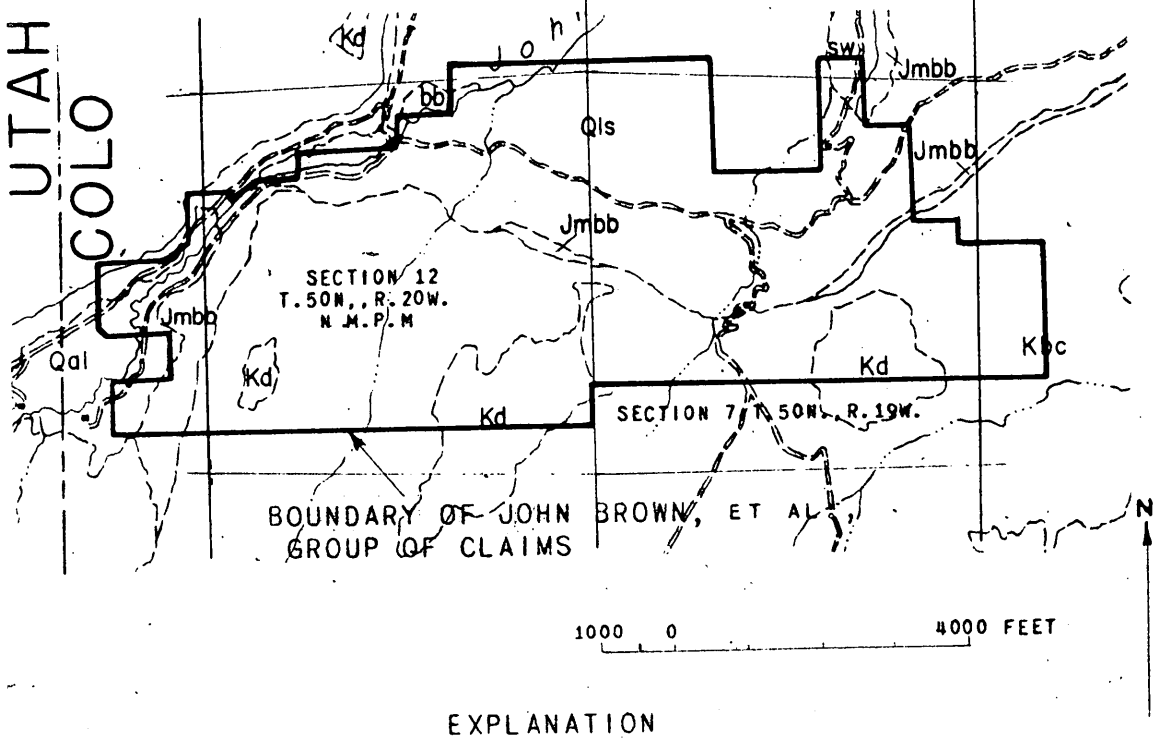
The area, which is part of John Brown Mesa, is bounded on the northwest by Beaver Mesa and on the east and south by higher parts of John Brown Mesa. The surface of John Brown Mesa rises in a southerly direction to the rim of Sinbad Valley and to the northeast drops off in a succession of vertical cliffs, steep slopes, and benches into the canyon of the Dolores River.

The area lies on the southwest limb of the Dolores syncline. The syncline trends northwest and plunges southeast at a low angle. The rocks underlying the area dip about 2° to the northeast.

The rocks in the immediate vicinity of the claims are comprised of the Jurassic Morrison formation and the Cretaceous Burro Canyon and Dakota formations (fig. 2). Much of the Morrison formation is covered with recent landslide material and alluvium. The Morrison formation is made up of two members; the lower Salt Wash sandstone member and the upper Brushy Basin shale member. The Salt Wash ranges from 280 to 340 feet and the Brushy Basin member ranges from 340 to

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
JULY 1956
DOCKET 4206



EXPLANATION

Qal	QUATERNARY ALLUVIUM
Qls	QUATERNARY LANDSLIDE
Kd	CRETACEOUS DAKOTA SANDSTONE
Kbc	CRETACEOUS BURRO CANYON FORMATION
Jmbb	BRUSHY BASIN MEMBER OF THE JURASSIC MORRISON FORMATION
Jmsw	SALT WASH MEMBER OF THE JURASSIC MORRISON FORMATION
~~	GEOLOGIC CONTACT

Note: BASE FROM PRELIMINARY GEOLOGIC MAP OF THE SINBAD VALLEY - FISHER VALLEY ANTICLINE, COLORADO AND UTAH BY E. M. SHOEMAKER.

FIGURE 2.--GEOLOGIC MAP SHOWING THE JOHN BROWN, ET AL., GROUP OF CLAIMS, PACIFIC URANIUM MINES COMPANY, MESA COUNTY, COLORADO.

360 feet in thickness. The Burro Canyon formation of Cretaceous age caps the southern part of the area, however, remnants of the Cretaceous Dakota sandstone are present in places back of the Burro Canyon rim. The Burro Canyon formation is nearly 200 feet thick and the Dakota remnants are from 20 to 40 feet thick.

The Salt Wash sandstone is composed dominantly of sandstone interbedded with shale and mudstone. The sandstone commonly occurs as ledges or rims traceable along the outcrop, but within each ledge or rim the individual beds are lenticular and discontinuous. The lenses are separated in places by mudstone and contain mudstone seams and lenses. Most of the sandstone is medium- to medium-fine grained and is composed largely of subangular to subrounded quartz grains.

The Brushy Basin shale member consists predominantly of vari-colored bentonitic shale and mudstone, with intercalated beds and lenses of sandstone and conglomeratic sandstone. The shale and mudstone range in color from white to pastel tints of red and green. The Brushy Basin usually forms smooth slopes covered with talus blocks and boulders weathered from the overlying formations, however, in the area of the claims the Brushy Basin forms a relatively thin slope and a broad bench on which is a variable thickness of landslide material and alluvium.

The Burro Canyon formation and Dakota sandstone are composed predominantly of sandstone and conglomeratic sandstone interbedded

with thin lenses of gray and green shale. The Burro Canyon and Dakota characteristically crop out as cliffs or a series of thick resistant ledges.

ORE DEPOSITS

All of the significant uranium bearing deposits found in the Beaver Mesa area to the northwest of the property are in the uppermost sandstone rim of the Salt Wash member of the Morrison formation. Logs of drill holes on the John Brown group show this sandstone to be discontinuous and relatively thin compared to most of the sandstone drilled on Beaver Mesa. It ranges from 1 feet to 70 feet in thickness on the property and many of the drill hole logs show from 2 to 3 thin sandstone lenses separated by mudstone.

No ore deposits have been found on the property, although a 5,000 ton ore body has been discovered on an adjoining claim to the north. Drill holes on the property south and east of the ore body are barren of uranium and the cores consist of material that is unfavorable for its occurrence. Cores from drill holes located east and west across the property were inspected and show that much of the area is underlain by thin sand lenses and that a large proportion of the associated mudstone is red to mottled red and green. Carbonaceous material is generally sparse.

Logs from 26 core drill holes were submitted with the application, five of which were classified by the applicant as favorable. The

cores were examined and were found to be generally unfavorable. Drill holes JB 13 and JB 14 should be classified as semi-favorable; all others were determined to be unfavorable.

Ore bodies have been found in sandstone lenses that are classified as thin, in this report, but the resulting ore bodies were small. A thin sandstone, in so far as favorability is concerned, is considered to be ore under 30 feet thick, and about 70 percent of the holes drilled on the claims penetrated thin sandstone.

Many miles of the Salt Wash have been prospected and drilled from Beaver Mesa southerly toward Sinbad Valley and as previously stated the only significant ore bodies found are those on Beaver Mesa.

The Pacific Uranium Mines Company engineer stated that the company would not be interested in developing an ore body less than 20,000 tons in size. Because of the thicknesses of the sandstone lenses and the small amount of altered mudstone associated with them, the ore bodies would tend to be small.

PROPOSED EXPLORATION

The applicant proposes a three phase program consisting of rim-stripping, core, and non-core drilling. The division between the first and second phases is primarily based on drilling depths. The third phase includes offset drilling into the more favorable zones.

Assuming a northeast elongation for the ore bodies a target area measuring 773 feet on a N45°W axis and 900 feet on a N45°E axis has been calculated, by the applicant, for a 20,000 ton ore body with an average thickness of five feet. The proposed grid pattern is oriented for locating the maximum number of holes along the N45°W axis or across the trend. Independent contractors would be used for all drilling and angle dozer work.

Phase I, consists of drilling 35 holes or 11,600 feet from the Brushy Basin benches. The average depth of hole would be 333 feet and the bottom 100 feet of each hole would be cored. The proposed holes are spaced so that existing drill holes form a part of the grid pattern. As a supplement to the drilling program, and to be conducted simultaneously with it, is 100 hours of angle dozer work along the rim. The angle dozer work is called phase IA. The total estimated cost of phase I and IA is $25,737.25.

Phase II includes all drilling from the top of the Burro Canyon formation. The average depth of the 25 holes in this phase is 619 feet for a total footage of 15,465 feet. The last 100 feet in each hole would be core-drilled. The spacing for this phase is 1200 feet on the N45°W axis, staggered from one row to the next, resulting in a hole every 600 feet across the trend. The distance between the rows of holes is maintained at 800 feet. The total estimated cost of phase II is $34,146.25.

Phase III holes would offset previously drilled mineralized or ore holes on 200-foot centers. Twelve holes are planned with a total footage of 5,730 feet. The coring interval would be 50 feet.

The total cost of the proposed program is estimated at $80,852.00. Government participation would be 75 percent of the total or $60,639.00.

No project modifications are suggested by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

The applicant's property is located near an area of general favorability and adjoins a claim containing an estimated 5,000 ton ore body. However, holes drilled on the property south and east of the ore body are barren of mineral and the cores indicate that the Salt Wash member is unfavorable for the occurrence of ore deposits.

Inspection of the cores recovered from holes previously drilled on the property show that much of the subject area is underlain by thin sandstone lenses and that a large proportion of the associated mudstone is red to mottled red and green. Carbonaceous material is generally sparse. The criteria as developed by the USGS for the favorableness of an area for uranium deposition indicates that the possibility of discovering a significant ore body is not good.

The Pacific Uranium Mines Company engineer stated that the company would not be interested in developing an ore body less than 20,000 tons in size due to the economic requirements for mining at the depth of the potential ore zones on the subject claims. From the thickness of the sandstone lenses and the small amount of altered mudstone associated with them, ore bodies, if they exist on the property, would likely be small.

Therefore, the examining team recommends denial of the applicant's request for Government participation in the exploration of the subject claims.

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

RECEIVED
JUN 18 1956

June 14, 1956

20th New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With copy of Legal Documents)
J. W. Ensler (With copy of Legal Documents)

From: Field Team, Region XII

Subject: Docket DMEA 4206 (Uranium) Pacific Uranium Mines Company, (John Brown, et al., Grants) Mora County, Colorado

Enclosed are the following legal documents to be placed with the copy of the brochure on the subject docket:

1. Copy of a Deed dated 6-21-55 from John F. Kellogg to Pacific Uranium Mines Company for the two Pasatiempo claims.

2. Copy of an Amendment to Option Purchase Agreement (inclusion of two Roxy Foxy claims).

3. Copy of an Amendment to Option Purchase Agreement No. 2 (inclusion of two Jessamy claims, and extended in time to allow for DMEA project or denial of application). Signed in February and April, 1956.

4. Copy of an Amendment to Mining Lease No. 2; signed in February and April, 1956 by parties in Original and Amended Mining Leases; relative to DMEA loan.

The Applicant furnished the Washington Office, DMEA, one copy each of the following:

1. Original Mining Lease dated 9-19-55 between Flanders Mining Company and Southwestern Uranium Trading Corp. as Lessors, and Pacific Uranium Mines Company, as Lessee.

2. Original Option Purchase Agreement dated 9-15-55 between Plumbore Mining Company and Pacific Uranium Mines Company, for the 87 Northern Slope group of claims.

3. Amendment to Mining Lease; signed in December, 1955 by parties to Original Mining Lease.

This office has not received a copy of the three last-mentioned legal documents.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

DEC:sb

cc: Docket 4205
Chadr. Op. Comm. (2)
Northman
Chrom.

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

RECEIVED
JUN 18 1956

June 14, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With copy of Legal Documents)
J. W. Hanley (With copy of Legal Documents)

From: Field Team, Region III

Subject: Docket DMEA 4806 (Uranium) Pacific Uranium Mines Company, (John Brown, et al., Groups) Mesa County, Colorado

Enclosed are the following legal documents to be placed with the copy of the brochure on the subject docket:

1. Copy of a Deed dated 6-21-55 from John F. Kellogg to Pacific Uranium Mines Company for the two Peciack claims.

2. Copy of an Amendment to Option Purchase Agreement (inclusion of two Rosy Posy claims).

3. Copy of an Amendment to Option Purchase Agreement No. 2 (inclusion of two Jessmary claims, and extended in time to allow for DMEA project or denial of application). Signed in February and April, 1956.

4. Copy of an Amendment to Mining Lease No. 2; signed in February and April, 1956 by parties in Original and Amended Mining Leases; relative to DMEA loan.

The Applicant furnished the Washington Office, DMEA, one copy each of the following:

1. Original Mining Lease dated 9-15-55 between Flambeau Mining Company and Southwestern Uranium Trading Corp. as Lessors, and Pacific Uranium Mines Company, as Lessee.

RECEIVED
JUN 18 1956

2. Original Option Purchase Agreement dated 9-15-55 between Flambeau Mining Company and Pacific Uranium Mines Company, for the 27 Western Slope group of claims.

3. Amendment to Mining Lease; signed in December, 1955 by parties in Original Mining Lease.

This office has not received a copy of the three last-mentioned legal documents.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

WMT:ab

cc: Docket 4806
Chair. Op. Comm. (2)
Berthman
Chron.

700

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

FILE COPY
Surname:

JUN 11 1956

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

Re: Docket No. DMEA-4206 (Uranium)
Pacific Uranium Mines Company
John Brown, et al., Groups
Mesa County, Colorado

Dear Mr. Traver:

Enclosed are two copies of a letter, dated May 3, 1956, from the captioned Applicant and two copies of each of the documents mentioned in the letter, that the Applicant submitted in quadruplicate. The single copies of the other documents have been retained for our files as the Field Team received similar copies with the application.

To date we have not been advised what action the Applicant has taken in regard to the Climax Uranium Company's Cherry Creek claims Nos. 1 through 6.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee

Enclosures

FMMurphy/zim 6-7-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JCHosted, Rm. 3210, GSA

APPROVED:

/s/ Robert W. Geehan
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

5/28/56 gla

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

RECEIVED
MAY 28 1956

May 24, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: DMEA Docket 4206 (Uranium) Pacific Uranium Mines Company, (John Brown, et al. groups), Mesa County, Colorado

Enclosed are two drilling bids submitted by the Applicant in reply to our letter to him dated April 26, 1956.

Will you please include these bids in the two copies of the application you have in the Washington office. We are forwarding copies of these bids to the field for inclusion in the brochures on the subject application which they have.

DMEA Field Team, Region III

By J. W. Townsend
Acting Executive Officer

Enclosures

220 Whiteside Bldg.
Phone: PO 3-5131
Lubbock, Texas

SCOTT BROS.
drilling company
"Exploration Drilling Service"

Branch:
641 Glenwood Ave.
Phone: 45
Grand Junction, Colo.

RECEIVED
MAY 28 1956
DMEA
Date Rec'd.
MAY 23 1956
BUREAU OF MINES
Denver, Colorado

May 9, 1956

Pacific Uranium Mines Company
1924 White
Grand Junction, Colorado

Gentlemen:

We would like to quote the following prices for drilling requested on Beaver Mesa:

Phase I

Plug-Bit Drilling
0-300 ft.....$1.50 per ft.
Core Drilling
0-350 ft.....$3.75 per ft.

Phase II

Plug-Bit Drilling
0-300 ft.....$1.50 per ft.
300-600 ft.....$1.75 per ft.
Core Drilling
0-300 ft.....$3.75 per ft.
300-620 ft.....$5.00 per ft.

Phase III

Plug-Bit Drilling
0-300 ft.....$1.50 per ft.
300-600 ft.....$1.75 per ft.
Core Drilling
0-300 ft.....$3.75 per ft.
300-620 ft.....$5.00 per ft.

Stand-by time for all three phases is $12.00/hr.

Sincerely,

L. W. Scott Partner

L.W. Scott

SCOTT BROS. DRILLING CO.

LWS:lan

RECEIVED
MAY 28 1956

MINERALS ENGINEERING COMPANY
P. O. BOX 1951
GRAND JUNCTION, COLORADO

DMEA
Date Rec'd
MAY 23 [redacted]

BUREAU OF MINES
Denver, Colorado

May 17, 1956

Mr. John P. Kellogg
Pacific Uranium Mines
1924 White Avenue
Grand Junction, Colorado

Dear Mr. Kellogg:

In reply to our conversation yesterday, please accept the following quotations as our bid for your D.M.E.A. proposal on your John Brown Group, Pociash Group and Cherry Creek Group of claims around Willow Springs claims on Beaver Mesa, for a minimum total footage of 10,000 feet of diamond core drilling to a maximum depth of 500 feet per hole.

Depth	Price per Foot Plug Bit	Price per Foot EX Core
0-100 feet	$ 2.50	$ 3.00
100-200 feet	2.65	3.25
200-300 feet	2.75	3.50
300-400 feet	3.15	4.25
400-500 feet	3.65	5.00

Stand-by time will be charged at the rate of $12.00 per hour.

It was my understanding that you would have all access and drill roads in suitable condition for 2-wheel drive equipment and that we would be required to have a minimum of two diamond core drills.

Very truly yours,

MINERALS ENGINEERING COMPANY

Edson Foster

Edson Foster
Assistant Drill Superintendent

EF/k

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

RECEIVED
MAY 28 1956

May 24, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: DMEA Docket 4206 (Uranium) Pacific Uranium Mines Company, (John Brown, et al. groups), Mesa County, Colorado

Enclosed are two drilling bids submitted by the Applicant in reply to our letter to him dated April 26, 1956.

Will you please include these bids in the two copies of the application you have in the Washington office. We are forwarding copies of these bids to the field for inclusion in the brochures on the subject application which they have.

DMEA Field Team, Region III

J. W. Townsend

By J. W. Townsend
Acting Executive Officer

Enclosures

220 Whiteside Bldg.
Phone: PO 3-5131
Lubbock, Texas

SCOTT BROS.
drilling company
"Exploration Drilling Services"

Branch:
641 Glenwood Ave.
Phone: 45
Grand Junction, Colo.

RECEIVED
MAY 28 1956

May 9, 1956

DMEA
Date Rec'd.
MAY 23 1956
BUREAU OF MINES
Denver, Colorado

Pacific Uranium Mines Company
1924 White
Grand Junction, Colorado

Gentlemen:

We would like to quote the following prices for drilling requested on Beaver Mesa:

Phase I

Plug-Bit Drilling
0-300 ft.....$1.50 per ft.
Core Drilling
0-350 ft.....$3.75 per ft.

Phase II

Plug-Bit Drilling
0-300 ft.....$1.50 per ft.
300-600 ft.....$1.75 per ft.
Core Drilling
0-300 ft.....$3.75 per ft.
300-620 ft.....$5.00 per ft.

Phase III

Plug-Bit Drilling
0-300 ft.....$1.50 per ft.
300-600 ft.....$1.75 per ft.
Core Drilling
0-300 ft.....$3.75 per ft.
300-620 ft.....$5.00 per ft.

Stand-by time for all three phases is $12.00/hr.

Sincerely,

L.W. Scott Partner

L.W. Scott

SCOTT BROS. DRILLING CO.

LWS:lan

MINERALS ENGINEERING COMPANY
P. O. BOX 1951
GRAND JUNCTION, COLORADO

RECEIVED
MAY 28 1956
DMEA
Date Rec'd.
MAY 23 1956
BUREAU OF MINES
Denver, Colorado

May 17, 1956

Mr. John P. Kellogg
Pacific Uranium Mines
1924 White Avenue
Grand Junction, Colorado

Dear Mr. Kellogg:

In reply to our conversation yesterday, please accept the following quotations as our bid for your D.M.E.A. proposal on your John Brown Group, Pociash Group and Cherry Creek Group of claims around Willow Springs claims on Beaver Mesa, for a minimum total footage of 10,000 feet of diamond core drilling to a maximum depth of 500 feet per hole.

Depth	Price per Foot Plug Bit	BX Core
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It was my understanding that you would have all access and drill roads in suitable condition for 2-wheel drive equipment and that we would be required to have a minimum of two diamond core drills.

Very truly yours,

MINERALS ENGINEERING COMPANY

Edson Foster

Edson Foster
Assistant Drill Superintendent

EF/k

John P. Kellogg, *Manager*
Robert L. Redmond, *Chief Geologist*
Main Office in Los Angeles

5-8-56

Mining
Exploration
Geology
Engineering

PACIFIC URANIUM MINES

1924 White Avenue
GRAND JUNCTION, COLORADO
Phone 487 or 488

May 3, 1956

RECEIVED
MAY 8 - 1956

Mr. Ernest Wm. Ellis, Chief
Rare and Miscellaneous Metals Division
Defense Minerals Exploration Administration
U. S. Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4206 (uranium)
John Brown, et al., groups
Mesa County, Colorado

Dear Mr. Ellis:

In answer to your letter of March 15, in which you request signed copies of all legal documents indicating that we have uncontested right of possession of the claims listed in our original application, I am enclosing the following Verifax copies:

4 copies - Deed dated 6/21/1955 from John P. Kellogg to Pacific Uranium Mines Company for the two Pociask claims.

1 copy - Original Mining Lease dated 9/15/1955 between Flanders Mining Company and Southwestern Uranium Trading Corp. as Lessors, and Pacific Uranium Mines Company, as Lessee.

1 copy - Original Option Purchase Agreement dated 9/15/1955 between Flanders Mining Company and Pacific Uranium Mines Company, for the 27 Western Slope group of claims.

1 copy - Amendment to Mining Lease; signed in December, 1955 by parties in Original Mining Lease.

4 copies - Amendment to Option Purchase Agreement (inclusion of two Rosy Pozy claims).

4 copies - Amendment to Option Purchase Agreement No. 2 (inclusion of two January claims, and amended in time to allow for DMEA project or denial of application). Signed in February and April, 1956.

4 copies - Amendment to Mining Lease No. 2; signed in February and April, 1956 by parties in Original and Amended Mining Leases; relative to DMEA loan.

Please notify us if these are not sufficient copies for your purposes. Copies of the Climax agreement are being signed, and will follow in a few days.

Yours very truly,
John P. Kellogg

5-3-56
Murphy

April 27, 1956

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company (John Brown, et al., groups), Mesa County, Colorado

The subject application in the amount of $7,011.50 was received in this office on April 27, 1956.

A field examination will be made and suitable report prepared by an engineer from the Denver or Grand Junction office.

JOHN F. SHAW

John F. Shaw

cc: W. M. Traver (2)
E. N. Harshman
J. W. Hasler
M. H. Salsbury
J. F. Shaw
Sec. Op. Com. (2)

RECEIVED
MAY 2 - 1956

April 27, 1956

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company (John Brown, et al., groups), Mesa County, Colorado

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JOHN F. SHAW

John F. Shaw

cc: W. M. Traver (2)
E. N. Harkman
J. W. Hasler
M. H. Salsbury
J. F. Shaw
See. Op. Com. (2)

RECEIVED
MAY 2 - 1956

4-30-56

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

April 26, 1956

224 New Customhouse
Denver 2, Colorado

Pacific Uranium Mines Company
292 South LaCienega Boulevard, Suite 210
Beverly Hills, California

Re: Docket DMEA 4206 (Uranium) John Brown et al groups, Mesa County, Colorado

Gentlemen:

The captioned application contained only one bid for drilling. Will you please submit two additional drilling bids for your proposed drilling on these claims from contractors.

When we receive the two additional bids, in quadruplicate, we will continue to process your application.

Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Chair. Op. Comm. (2)
Docket 4206
Shaw (2)
Hasler
Harshman
Chron.

RECEIVED
APR 30 1956

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

April 26, 1956

224 New Customhouse
Denver 2, Colorado

Pacific Uranium Mines Company
292 South LaCienega Boulevard, Suite 210
Beverly Hills, California

Re: Docket DMEA 4206 (Uranium) John Brown et al groups, Mesa County, Colorado

Gentlemen:

The captioned application contained only one bid for drilling. Will you please submit two additional drilling bids for your proposed drilling on these claims from contractors.

When we receive the two additional bids, in quadruplicate, we will continue to process your application.

Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Chair. Op. Comm. (2)
Docket 4206
Shaw (2)
Hasler
Harshman
Chron.

RECEIVED
APR 30 1956

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

April 26, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
J. W. Hasler

From: Field Team, Region III

Subject: Docket DMEA 4206 (Uranium) Pacific Uranium Mines Company, (John Brown, et al., groups), Mesa County, Colorado

Enclosed is the subject application in the amount of $73,011.50. A field examination and suitable report are requested.

The Applicant lists among other of his claims John Brown No. 1. Please advise if this is the same John Brown No. 1 claim subordinated to the Government under Contract Idm-2408, Gateway Mining Company.

Also enclosed is a copy of a letter from the Chairman, Operating Committee dated April 23, 1956 and attached memoranda of review by members of the Uranium Commodity Committee.

The Applicant has been requested to furnish two additional bids from contractors, and copies of these bids will be forwarded you when received by this office for your use in the cost estimates.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures
DMC:ab
cc: Chair. Op. Comm. (2)
Docket 4206
Harshman
Chron.

RECEIVED
APR 2 1956

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

April 26, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
J. W. Easler

From: Field Team, Region III

Subject: Docket DMEA 4206 (Uranium) Pacific Uranium Mines Company, (John Brown, et al., groups), Mesa County, Colorado

Enclosed is the subject application in the amount of $73,011.50. A field examination and suitable report are requested.

The Applicant lists among other of his claims John Brown No. 1. Please advise if this is the same John Brown No. 1 claim subordinated to the Government under Contract Idm-3408, Gateway Mining Company.

Also enclosed is a copy of a letter from the Chairman, Operating Committee dated April 23, 1956 and attached memoranda of review by members of the Uranium Commodity Committee.

The Applicant has been requested to furnish two additional bids from contractors, and copies of these bids will be forwarded you when received by this office for your use in the cost estimates.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures
EMC:ab
cc: Chair. Op. Comm. (2)
Docket 4206
Harshman
Chron.

RECEIVED
APR 30 1956

700

FILE COPY

Surnames: Murphy, Selfridge

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

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

APR 23 1956

Re: Docket No. DMEA-4206 (Uranium)
Pacific Uranium Mines Company
John Brown, et al., groups
Mesa County, Colorado

Dear Mr. Traver:

In accordance with the Grand Junction and your memoranda dated April 10 and 13, 1956, respectively, the captioned application is referred to Region III Field Team for a field examination and recommendation.

Copies of memoranda dated April 18 and 19, 1956, by W. P. Williams, USGS, and J. E. Crawford, USBM, respectively, relating to the application are enclosed.

In the event the Field Team recommends a project on the subject groups of claims, it should advise the Applicant that, we will require six copies of a Consent to Lien from the four groups of lessors mentioned on page two of the supplemental information submitted with the application. Also, instruct the Applicant to submit two additional drilling bids from contractors if the Field Team recommends a project.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

/s/ Robert W. Geehan (GCS)
Member, Bureau of Mines

N. E. Nelson (GCS)
Member, Geological Survey

F. M. Murphy/izm 4-23-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

RGK

700

FILE COPY
Surname:

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

APR 23 1956

Pacific Uranium Mines Company
292 South La Cienega Boulevard, Suite 210
Beverly Hills, California

Re: Docket No. DMEA-4206 (Uranium)
John Brown, et al., groups
Mesa County, Colorado

Gentlemen:

The application for assistance in exploring your property, 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:

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

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

FMMurphy/izm 4-20-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Region III (2)

RGB.

4-20-56

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

RECEIVED
APR

April 19, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Application for Assistance, DMEA Docket 4206, Pacific Uranium Mines Company (John Brown, et al groups), Mesa County, Colo.

I have reviewed the attached application, DMEA Docket 4206, Pacific Uranium Mines Company, Mesa County, Colo., dated April 10, 1956 and received in this office April 17. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Pacific Uranium Mines Company has applied for Federal aid to explore for uranium on 56 unpatented mining claims located in Mesa County, Colo. The proposed work includes 32,855 feet of plug bit and core drilling at a cost of $69,651.50, and 280 hours of bulldozing at a cost of $3,360. The total estimated cost of the project is $73,011.50.

The subject property is located in an area classified as semi-favorable for the occurrence of uranium deposits; 26 holes drilled by the applicant were barren.

The Field Team, Region III, recommend the examination of the subject claims because of their position in a semi-favorable area. We concur in the recommendation.

John E Crawford
John E. Crawford

Attachment

4-19-56

IN REPLY REFER TO:

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

April 18, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4206, Pacific Uranium Mines Company, John Brown claims, Beaver Mesa, Mesa County, Colorado.

The applicant proposes an exploration project consisting of a total of 72 holes, a total of 32,855 feet of drilling, at a total estimated cost of $80,852. The work would be performed in three stages. The property involved consists of 58 mining claims located about 2 to 3 miles from the Corvusite and Lumsden mines on Beaver Mesa.

Twenty-six holes have been drilled on the property, none of which encountered ore. The major portion of the property, however, remains unexplored.

As pointed out by Grand Junction people, although no Government drilling has been done on the property the area in general has been classified as semi-favorable--probably on the basis of rim exposures and outcrops.

The application should be referred to the Field Team for further analysis. An initial stage of drilling on wide-spaced centers may be warranted to obtain more information on the favorability of the ore-bearing sandstone.

W. P. Williams

W. P. Williams

IN REPLY REFER TO:

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

April 18, 1956

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4806, Pacific Uranium Mines Company, John Brown claims, Beaver Mesa, Mesa County, Colorado.

The applicant proposes an exploration project consisting of a total of 72 holes, a total of 32,855 feet of drilling, at a total estimated cost of $80,852. The work would be performed in three stages. The property involved consists of 53¼ mining claims located about 2 to 3 miles from the Corvusite and Lucahan mines on Beaver Mesa.

Twenty-six holes have been drilled on the property, some of which encountered ore. The major portion of the property, however, remains unexplored.

As pointed out by Grand Junction people, although no Government drilling has been done on the property the area in general has been classified as semi-favorable--probably on the basis of rim exposures and outcrops.

The application should be referred to the Field Team for further analysis. An initial stage of drilling on wide-spaced centers may be warranted to obtain more information on the favorability of the ore-bearing sandstone.

W. P. Williams

WPWilliams:jeh
4/18/56
cc: Director's reading 4212
Branch reading 4212
DMEA (3)
Docket file
J. E. Crawford, 3641 Int.
J. G. Hosted, 3210, GSA

4-16-56

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

RECEIVED
APR 16 1956

April 13, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 4206 (Uranium), Pacific Uranium Mines Company, (John Brown, et al groups), Mesa County, Colorado

Enclosed are the original and three copies of a review of the subject application by members of the Grand Junction office, DMEA. Because the applicant's claims are located in a semi-favorable area, a field examination is recommended. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Hume

MINERAL DEPARTMENT
IN REPLY REFER TO:

RECEIVED DMEA
APR 1 0 1956

RECEIVED
APR 11 1956

GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

April 10, 1956

Memorandum

DMEA
Date Rec'd.

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

APR 12 1956

From: J. William Hasler
M. H. Salsbury

BUREAU OF MINES
Denver, Colorado

Subject: DMEA docket 4206 (Uranium), Pacific Uranium Mines Company, (John Brown, et al groups), Mesa County, Colorado

The Pacific Uranium Mines Company has applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the John Brown, et al., groups of claims. These claims lie adjacent to Beaver Mesa in the Gateway mining district of Mesa County, Colorado, in sections 6, 7, and 8, T. 50 N., R. 19 W., and sections 1 and 12, T. 50 N., R. 20 W., NMPM.

The application is for exploration in the Salt Wash member of the Morrison formation on 56 unpatented, contiguous mining claims. Twenty-six holes have been drilled on the claims, 7 of which have been classified as favorable, although all existing holes are barren. The drill logs show that the ore-bearing sandstone is generally thin and the associated mudstone is rarely green or gray.

The claims are outside the area drilled by the U. S. Geological Survey, and no work has been done in the area by the Atomic Energy Commission. The U. S. Geological Survey personnel of the Beaver Mesa project state that the claims lie within an area classified as semi-favorable for the occurrence of ore deposits. The ore-bearing sandstone pinches and swells in the area and, although it is generally thin, one drill hole penetrated 71 feet of the sand.

Beaver Mesa, adjoining the subject claims to the northwest, is a highly productive area. Because of this and their position in a semi-favoralbe area, the John Brown, et al groups of claims should be examined in the field.

J. William Hasler
J. William Hasler,
U. S. Geological Survey

M. H. Salsbury by JWH
M. H. Salsbury
U. S. Bureau of Mines

HFA/mlr

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED APR 10 1956

APR 11 1956

P. O. Box 360
Grand Junction, Colorado

April 10, 1956

Memorandum

DMEA
Date Rec'd.

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

E N H. APR 12 1956

From: J. William Hasler
M. H. Salsbury

BUREAU OF MINES
Denver, Colorado

Subject: DMEA docket 4206 (Uranium), Pacific Uranium Mines Company, (John Brown, et al groups), Mesa County, Colorado

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J. William Hasler
J. William Hasler,
U. S. Geological Survey

M. H. Salsbury by JWH
M. H. Salsbury
U. S. Bureau of Mines

HFA/mlr

PACIFIC URANIUM MINES COMPANY
SUITE 210
292 SOUTH LA CIENEGA BLVD.
BEVERLY HILLS, CALIFORNIA
OLEANDER 8-7771

April 6, 1956

Mr. Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division
U.S. Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D.C.

Dear Sir:

Reference is made to your letter of March 30, 1956 re:

Docket No. DMEA-3928 (Uranium)
Contract No. Idm-E926
Green River Claims
Emery County, Utah

Docket No. DMEA-4206 (Uranium)
John Brown, et al., groups
Mesa County, Colorado

The mailing address which you should use in communicating with this company is Suite 210, 292 South La Cienega Boulevard, Beverly Hills, California.

Thank you very much for calling this inconsistency to our attention.

Very sincerely yours,

PACIFIC URANIUM MINES COMPANY

By_____
Irving Klubok

IK:sk

Surname copy

700

Murphy
Ellis

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

Pacific Uranium Mines Company
Suite 210, 232 South La Cienega Boulevard
Beverly Hills, California

MAR 30 1956

Re: Docket No. DMEA-3928 (Uranium)
Contract No. Ida-3926
Green River Claims
Emery County, Utah
Docket No. DMEA-4206 (Uranium)
John Brown, et al., groups
Mesa County, Colorado

Gentlemen:

Referring to the captioned contract and your new application, docket No. DMEA-4206, we note that the addresses given are 1227 South Vermont Avenue, Los Angeles 6, California, and 1924 White, Grand Junction, Colorado, respectively. However, in DMEA-4206, in Mr. Hugh W. Evans' report, the Beverly Hills, California, address is given.

Will you please advise this office which of the above addresses should be used in mailing correspondence to your company.

Sincerely yours,

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

FMMurphy/gla
3-29-56
cc to: Admr.'s Reading File
Docket DMEA-3928
" DMEA-4206
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700 - DMEA-3928 contract
Mr. Murphy
DMEA Field Team, Region III (2)

Surname copy

Murphy 700
Ellis
Selfridge
Herman
Wittendorf

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

MAR 30 1956

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

Re: Docket No. DMEA-4206 (Uranium)
Pacific Uranium Mines Company
John Brown, et al., groups
Mesa County, Colorado

Dear Mr. Traver:

Enclosed are two copies of a letter, dated March 26, 1956, from Mr. Hugh W. Evans, Chief Engineer of the captioned company, in response to Mr. Ellis' letter of March 15, requesting additional information.

As the question of property rights should be clarified soon, it is suggested that the Grand Junction office be requested to submit its recommendation in regard to the subject application.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

/s/ Robert W. Geehan (RWG)
Member, Bureau of Mines

N. E. Nelson (NEN)
Member, Geological Survey

FMMurphy/gla
3-29-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700, Mr. Murphy

3/29/56 gla

John P. Kellogg, *Manager*
Robert L. Redmond, *Chief Geologist*
Main Office in Los Angeles

Mining
Exploration
Geology
Engineering

PACIFIC URANIUM MINES

1924 White Avenue
GRAND JUNCTION, COLORADO
Phone 487 or 488

RECEIVED
MAR 29 1956

March 26, 1956

Mr. Ernest Wm. Ellis
Chief Rare and Miscellaneous Metals Division
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-4206 (Uranium)
John Brown, et, al., groups
Mesa County, Colorado

Dear Mr. Ellis:

No signed contracts were on file in our Grand Junction office where the loan application was prepared. Copies are now being made of the signed agreements and these will be forwarded to you within two weeks.

We should know by the end of March whether a satisfactory agreement can be reached with the Climax Uranium Company. A signed copy of this agreement will be mailed you if and when it is made.

The data shown on page 5 of the report refers to the original location recording date, book, and page number. If you wish all the dates and recording information on each of the claims, please notify us accordingly. Providing you with this information would take another week or so because the individual history of each claim is quite detailed.

Yours truly,

Hugh W. Evans

Hugh W. Evans
Chief Engineer

HWE/js

700

FILE COPY
Surname:
Murphy
Ellis
Kilsgaard
Hosted
Wittendorf

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

MAR 15 1956

Pacific Uranium Mines Company
292 South La Cienega Boulevard ← OK.
Beverly Hills, California

Re: Docket No. DMEA-4206 (Uranium)
John Brown, et al., groups
Mesa County, Colorado

Gentlemen:

Your application for Government aid in exploring the groups of claims, under the captioned docket number, has been referred to this Division for review and action.

We note in the subject application that the copies of leases submitted, with the exception of the Pociask and Pociask Extension lease to John P. Kellogg, are unsigned and lack recording data. Moreover, no evidence was submitted showing that John P. Kellogg has assigned the Pociask lease to your company.

We also note that you are presently negotiating with Climax Uranium Company in regard to the six Cherry Creek claims.

In order to further process the subject application we will require copies of all legal documents which indicate that you have uncontested right of possession of the claims that might be encumbered in the event a contract is approved.

In regard to the "Claim Location Information," page 5 of the application, are these data the latest amended location recordings?

If you anticipate some delay in compiling and submitting the above-requested additional information, kindly advise this office the approximate date we may expect to receive it.

Sincerely yours,

SIGNED

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

FMMurphy/izm 3-13-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3220, GSA

Letter in drawer

RLB.

700

FILE COPY
Surname:
Murphy
Selfridge
Mittendorf

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

MAR 15 1956

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

Re: Docket No. DMEA-4206 (Uranium)
Pacific Uranium Mines Company
John Brown, et al., groups
Mesa County, Colorado

Dear Mr. Traver:

Enclosed are two copies of a letter, of even date, to the referenced Applicant from Mr. Ellis, which is self explanatory. Also, enclosed are two copies of the Applicant's response, dated January 20, 1956, to Mr. Mittendorf's letter of January 10, in regard to application DMEA-3928 and John P. Kellogg's interest therein.

The question of the accusation against John P. Kellogg was discussed with Joe Hosted, AEC, Washington, contact man in regard to thorium-uranium applications for DMEA aid. He said that as far as AEC was concerned he believed that the Commission would not object to DMEA aid in exploring claims not involved under the AEC charge, even though John P. Kellogg is a member of the company.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JB)

Enclosures

APPROVED:

/s/ Robert W. Geehan (JB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JB)
Member, Geological Survey

FMMurphy/izm 3-13-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

R.C.K.

March 9, 1956
Subject: DMEA-4206
Re: Exploration Assistance
Beaver Mesa Claims

Pacific Uranium Mines Company
1924 White
Grand Junction, Colorado

Gentlemen:

The receipt of your application dated March 1, 1956, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4206 and referred to the Rare & Misc. 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

March 9, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA - 4206 Pacific Uranium Mines Company

Robert E. Adams
Chief, Operation's Control
and Statistics Division

9.

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

RECEIVED
MAR - 8 1956

March 5, 1956

224 New Customhouse
Denver 2, Colorado

DMEA-4206

Memorandum

To: Chairman, Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium), Pacific Uranium Mines Company, John Brown Mesa, Mesa County, Colorado

Enclosed are two copies of the subject application in the amount of $73,011.50.

It is noted that no signed copies of leases were submitted by the applicant company except in the case of the Lease and Option Agreement on the Pociask and Pociask Extension leased to John P. Kellogg. No evidence is submitted that John P. Kellogg has assigned this lease to the applicant company. The subject application is further complicated by a Farm-Out Agreement between the Climax Uranium Company and Pacific Uranium Mines on the six Cherry Creek claims. No copy of this agreement was included in the application. John P. Kellogg is the manager of the Pacific Uranium Mines and was the subject of C. O. Mittendorf's letter dated January 16, 1956 to the Pacific Uranium Mines Company on Docket No. DMEA 3928 (Uranium), Green River claims, Emery County, Utah. We have no copy of the reply to the above-mentioned letter from Mr. Mittendorf. We are, however, advised that J. P. Kellogg is free on $1,500.00 bond since his arrest August 28 in Grand Junction and faces a maximum penalty of two years in prison and $5,000.00 fine if convicted.

send copy to F.F.

For the above reasons, we have not forwarded a copy of the subject application to the Grand Junction office for their review. We will continue to hold in this office our copy and the Grand Junction copy of the application pending advice from you.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

MF-103
(Revised April 1952)

DMEA
Do Rec'd
MAR 2 1956

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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MAR - 8 1956
BUREAU OF MINES
Denver, Colorado

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. DMEA-4206
Metal or Mineral Uranium
Date Received 3-8-56
Estimated Cost $ 73,811.50
Participation (Government %)

$ 80,857.50

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: Pacific Uranium Mines Company
1924 White,
Grand Junction, Colorado See page 2

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract
See pages 3 & 4 and Appendix A

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

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

(*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.

(*e*) If you own the land, describe any liens or encumbrances on it

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

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. See pages 17, 18 & 26 & Appendix B

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. None

(*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. See pages 10 thru 15 and 25

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See pages 5 thru 7

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. See pages 8 & 9

16—66551-1

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

(*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. See page 19 thru 26

(*c*) The work will start within 30 days and be completed within 6 months from the date of an exploration project contract.

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

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: See pages 23 & 24

(*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?

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated March 1, 1956, 195__

PACIFIC URANIUM MINES COMPANY

(Applicant)

By Hugh W. Evans

Hugh W. Evans
Vice-President & Chief Engineer

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

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Pacific Uranium Mines Company

Grand Junction, Colorado

BEAVER MESA CLAIMS

DEFENSE MINERALS EXPLORATION ADMINISTRATION

LOAN APPLICATION

REPORT

February, 1956

Hugh W. Evans,
Chief Engineer

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CONTENTS

	Page No.
ABSTRACT	1
APPLICANT - LESSEE	2
LESSORS	
PROPERTY DESCRIPTION & OWNERSHIP	3
LOCATION & ACCESSIBLITY	6
PHYSIOGRAPHY, TOPOGRAPHY & CLIMATE	9
GEOLOGY	
Regional	10
Local	10
ORE-HORIZON & LITHOLOGY	14
EXPLORATION RECORD	16
PROPOSED EXPLORATION PROGRAM	18
Phase I & IA	19
Phase II	19
Phase III	21
Miscellaneous	23
References	27
APPENDIX	28

TABLES

1	Claim Location Information	5
2	Stratigraphic Column	13
3	Exploration Drill-Hole Summary	17
4	Proposed Exploration Drill-Holes	20
5	Proposed Exploration Program - Cost Breakdown	22

ILLUSTRATIONS

Figure		
1	General Location of Area	8
1A	Specific Location of Area and Region Geology	12
2	Beaver Mesa Ore Occurrences	15
3	Topographic - Geologic Map	24
4	Claim, Exploration Drill Hole Pattern, and Favorability Map	25
5	Cross Sections	26

ABSTRACT

The Pacific Uranium Mines Company recently initiated a uranium exploration program in a favorable but unexplored area on Beaver Mesa, Colorado. The company feels that to successfully complete this program it requires Government aid in the form of a Defense Minerals Exploration Administration loan.

Fifty-three claims or approximately 1024 acres are to be drilled on a grid pattern by "plug-drilling" to and coring through the ore-bearing sandstone. To date 26 holes have been drilled on this property, and although favorable lithology has been encountered, no ore discovery has been made. The proposed exploration program in which the Government is being requested to participate includes 72 holes, a total of 32,855 feet, and will cost an estimated $80,852.00. The loan requested amounts to $62,889.00.

This exploration program is divided into three phases. The first phase consists of drilling the northern portion of the property. The average drilling depth for this phase is 333 feet. The second phase drilling is on the Burro Canyon formation where the average drilling depth is 619 feet. The third phase consists of offsetting favorable holes in an attempt to delineate any mineralized zones discovered during either of the first two phases.

APPLICANT - LESSEE

Pacific Uranium Mines Company
Incorporated in Nevada

Offices at:
1924 White
Grand Junction,
Colorado — Phone 487 or 488

292 South La Cienega Blvd.
Beverly Hills,
California — Phone OLeander 5-7771
OLympia 2-0824

LESSORS

Owner	Claims
Flanders Mining Company Post Office Box 861 Grand Junction Colorado — Phone 3832	Rozy 36 Rozy Pozy (Shown as "Pozy" on Fig 4) Rozy Pozy Nos. 1 thru 17 January January Nos. 1, 4 thru 7, and 14 thru 17
Southwestern Uranium Trading Company 415 San Facinto Building Houston 2 Texas — Phone CA 5-0577	Note: These claims are owned jointly with Flanders John Brown Nos. 1 thru 11, and 23 thru 26 Babbie and Babbie Ext. Henriette and Henrietta Ext. L Litz Fraction Robert
Arthur & Robert Pociask 400 Orchard Ave Grand Junction Colorado — Phone 4098-R	Pociask and Pociask Ext.
Climax Uranium Company 749 Main Street Grand Junction Colorado — Phone 3455	Note: Negotiations in progress for farm-out Cherry Creek Nos. 1 thru 6

PROPERTY DESCRIPTION & OWNERSHIP

This application covers 56 unpatented, contiguous mining claims and fractions located in Township 50 North, New Mexico Prime Meridan, Section 6, 7 and 8 of Range 19 west; and Sections 1 and 12 of Range 20 West. The northwest corner of John Brown No. 8 is located 5290 feet S 1°20' W from the following section corner: T51N, R20W, Sec 36, R19W, Sec31; T50N, R20W, Sec 1, R19W, Sec 6 (Fig 4). The area encompassed by these claims amounts to approximately 1024 acres.

The 29 Flanders Mining Company and the 21 Flanders and Southwestern Uranium Trading Company claims have a complicated history and chain of title. However, a careful examination of the abstracts, which the Flanders Mining Company keeps up to date, indicates that no legal questions should arise as to their title to this ground. The claims have been conveyed from their original locators to the present owners by mining quit claim deeds which have been recorded with the Mesa County recorder. Affidavits of Labor pertaining to the fullfillment of annual assessment work have been posted and recorded for each year. The requirements pertaining to the locating of a mining claim on oil and gas leases have been complied with in accordance with federal legislation. All the claim locations were ammended in 1955 to take benefit of Colorado Senate Bill 271. The 21 Flanders and Southwestern claims have been surveyed by a professional engineer.

The two Pociask claims are still owned by the original locators. Their title appears to be in order. Assessment work

has been done as required. The Pociask claim was located before any oil and gas lease had been applied for in this area, and the Pociask Extension was located in accordance with Public Law 585. These claims have been amended under Colorado Senate Bill 271.

The applicant will not be able to pass a title opinion on the six Cherry Creek claims until after negotiations with the Climax Uranium Company have been completed. It is presumed that their title to this ground is legal and secure.

The only conflicts known are those between the Blue Bird and the Babbie and John Brown No. 3 claims and between the Utah No. 7 and the John Brown No. 26 and Rozy Pozy claims. These conflicts are shown on Fig. 4.

Detailed location information is shown in Table I. Copies of the lease agreements are included in Appendix A.

TABLE I

CLAIM LOCATION INFORMATION

Present Owner	Claim	Date Located	Locator	Date	Recorded Book	Page
Flanders & Southwestern	JB 1,2	20June50	E. C. Hughes	10Jul50	528	489-90
	JB 3-10	2Jul50	E. C. Hughes	23Aug50	531	391-8
	JB 11	15Sep50	Ray Lewis	22Sept50	533	158
	JB 23-26	15Sept50	Corvusite Mining & Exploration Co.	4Oct50	533	545-8
	Babbie	10Jul50	J. W. Lewis	23Aug50	531	390
	Henrietta & Robert	10Oct50	Gateway Mining & Development Co.	23Aug50	595	13,14
	Babbie Ext L Litz Frac	14Aug54	" "	23Sep54	619	34,35
	Henrietta Ext	14Aug54	" "	11Sep54	617	460
Flanders	Rozy 36 Rozy Pozy	18Oct54	A. Pociask, Agt.	16Nov54	625	31,32
	RP 1-4	12Jan53	R. Pociask	7Feb53	578	328-31
	RP 5-14	1Nov53	R & A Pociask, J.W. Lewis, Agt	15Jan54	596	174-83
	RP 15-17	15Jan54	R. Pociask	25Feb54	598	552-4
	January J 1-17	15Jan54	R. Pociask	25Feb54	598	514,15, 18-21, 28-31
Pociask	Pociask	20Jun53	A. Pociask	27Jun53	585	463
	Pociask Ext	25Dec54	A. Pociask	25Feb54	634	453
Climax	CC 1-6					

LOCATION & ACCESSIBILITY

The property to be explored is ten road miles southwest of Gateway in Mesa County, Colorado, on that portion of Beaver Mesa locally known as John Brown Mesa. The western edge of the claims are within 800 feet of the Utah-Colorado border (Fig 1 & 1A). An all-weather dirt road serviced by the County passes through the entire length of the property (Fig 3). The property is reached by traveling southwest from Gateway across the Dolores River on Colorado State Highway #141 for one mile and then turning right (west) up the John Brown Canyon road. Nine miles up this steep canyon the road levels off on Beaver Mesa. At this point the road is on the Babbie Extension claim.

There is an airstrip on the Dolores Point of Beaver Mesa about ten road miles from the property. There is also an airstrip at Gateway.

The two closest uranium-vanadium processing plants are the Uravan Mill, Uravan, Colorado, 46 road miles to the southeast and the Climax Mill, Grand Junction, Colorado, 66 road miles to the northeast. Regular ore hauls are being made to these plants from producting mines on Beaver Mesa over the road which passes through this property.

Gateway has postal service, but the nearest telephone is located 12 miles east in Unaweep Canyon at the Dalton Ranch just off Highway #141. In case of emergency, there is a two-way radio at the Cherokee-Ute Shaft two miles to the northwest of the property. Gateway has some housing facilities, two restaurants, a grocery store, two filing stations, a school and a church. There is a limited source of labor available in the area. Grand Junction serves as the main source of materials, supplies and equipment. There is no source of power except from portable generators on Beaver Mesa.

The Flanders Mining Company owns two cabins at Willow Springs which can be rented by the applicant and can house a dozen or more men.

PHYSIOGRAPHY, TOPOGRAPHY & CLIMATE

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Beaver Mesa is a tongue off the La Sal Mountains which dips gently towards the Dolores River. The highest peak in the La Sals is Mount Peale, 13,089 feet, which is located about ten miles southwest of the property. The mesa is generally flat, but cliffs are formed at the edge of the Burro Canyon and Salt Wash Morrison Formations. The topography changes abruptly just below the claims where the Salt Wash rim is exposed at the head of John Brown Canyon. Here in a comparatively short distance there is a 2000-foot drop to the Dolores River. The average elevation of the property is 7300 feet (Fig 3).

A small amount of timber stands on the claims which could be used for mining. Cedars, spruce, pinion and yellow pine, aspen, and scrub oak grow in this area. The climate is semi-arid and both cactus and sage brush are found.

Drinking water is available at two springs on the claims. These springs will also provide a certain amount of drilling water. Additional drilling water is found at reservoirs which have been built for this purpose. Great care must be exercised not to take water from reservoirs built to provide water for the cattle which graze on Beaver Mesa. The normal precipitation from May to October is 8.6 inches, but the most precipitation occurs as snow during the winter for which no records were located. Snow can be expected from November through March. With rare exception, operations should continue year around. The road conditions are the worst during the spring when the ground is thawing.

GEOLOGY

Regional:

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The property is located on the Colorado Plateau at the northwestern extremity of the Uravan Mineral Belt and just within the zone of favorability outlined by E. J. McKay in Geological Survey Bulletin 1009J (Fig IA & 2). The Sinbad anticline and the La Sal dome form the major structures to the south and west. The Sagers syncline, along which the Dolores River flows, and the Uncompahgre uplift form the major structures to the north and east. The sediments on Beaver Mesa dip from two to nine degrees towards the axis of the Sagers syncline with the dip rapidly becoming steeper towards the La Sal dome.

The area is a deeply dissected, rugged highland varying from 5000 to 7600 feet in elevation. Sediments range in age from Triassic to Cretaceous. Uraniferious deposits are most commonly found in the Salt Wash member of the Morrison formation of Jurassic age.

Local:

The formations exposed on this property are, in ascending order, the Salt Wash and Brushy Basin members of the Morrison, the Burro Canyon, and the Dakota (Fig 3 & 5). These beds have a dip of approximately two degrees to the northeast. Erosion has removed all but twenty feet or so of the Dakota which is exposed in spots along the southern portion of the claims. The Burro Canyon rim runs generally east and west through the center of the property, and this formation has a maximum thickness of about 205 feet. The northern half of the property is Brushy Basin mingled with Burro Canyon slump blocks and alluvium. A stratigraphic column is shown in Table II.

Although there is thought to be some local faulting in this area with displacements of from one to ten feet, none has been observed on the property. A large portion of the surface is covered by unconsolidated slump and alluvial material which makes a detailed geological examination very difficult. The Burro Canyon formation exposed exhibits some close fracturing with a strike of N40°W. No obvious contact between the Salt Wash and Brushy Basin members was discovered during the recent drilling program which the applicant could use to definitely determine any faulting or change in dip.

TABLE II

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STRATIGRAPHIC COLUMN

System	Formation	Thickness	Description
Cretaceous	Dakota	15-60'	Yellowish-brown conglomeratic sandstone; some yellow sandy clay and carbonaceous shale.
	Burro Canyon	180-205'	Variecolored sandstone, shale lenses and conglomerate. Cliff forming.
Jurassic (Upper)	Morrison Brushy Basin	330-390'	Variecolored shale; some sandstone lenses; few thin bedded limestone beds; Slope forming.
	Salt Wash	300-400'	Dominantly red but white and green in ore zones composed of nearly equal parts of sandstone and mudstone strata. Rapid facies changes and lenticular sandstone. Rim forming. The top 100 feet is considered the ore horizon. Fluvial.
	Summerville	50?	Regularly bedded, reddish brown sandstone and sandy shale; with some greenish white sandstone, gypsum, and limestone, Marine.

ORE-HORIZON & LITHOLOGY

The most productive ore-horizon on this part of Beaver Mesa is the top 100 feet of the Salt Wash member of the Morrison. Although several ore-bearing sandstones may be encountered in the upper one-third of the Salt Wash, the most productive sand is usually on top. This sandstone is not persistent, but where it is present it is highly lenticular, varying from a few feet to over forty feet in thickness. The sandstone is usually reddish brown to light bluff, friable, and in places contains a considerable amount of fossil wood material. Limonite and manganese oxide duffusion-banding are abundant in both reddish brown and light-colored sandstone. The top of the mudstone underlying the upper sandstone is red except in the vicinity of ore deposits. The mudstone alteration can be expected to lie in an aureole around an ore deposit for a distance of about 300 feet. The ore bodies in this section of Beaver Mesa have a tendency to be elongated in a northeasterly direction, the direction of dip. (Fig 2).

Useful guides to ore are those discussed in Geological Survey Bulletin 988 B by Doris Blackman Weir. These are the sandstone thickness and color, the altered mudstone thickness at the base of the sandstone, the color of the mudstone within the ore-bearing sandstone, and the carbon content of the sandstone. On Beaver Mesa the most important indicators seem to be the presence of altered mudstone and its thickness.

EXPLORATION RECORD

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On January 23, 1956 the Pacific Uranium Mines Company temporarily halted its exploration drilling program on Beaver Mesa, which had begun in the summer of 1955, to weigh the probabilities of making an ore discovery with additional drilling. The company concluded that the existing 26 barren, diamond-drill holes did not disprove the potential of this property, but instead provided valuable information on which a full scale exploration program could be based.

Of the 26 holes, one was drilled by the Climax Uranium Company and one by the Flanders Mining Company. In both of these holes it is possible that the most favorable sandstone was not included in the section cored. The remaining 24 holes were drilled by the applicant. Seven of these are classified favorable. This classification is based on the guides to ore mentioned in the previous section, modified on the basis of information gained from the 8000 ton ore discovery made in the immediate vicinity of this property. The favorability of each hole was determined numberically using the Bulletin 988 B method, and the zones of favorability outlined by contour lines. These favorability contours and the location of the drill holes are shown in Fig. 4. The only hole actually drilled as an offset into favorability was JB-16. A summary of the drilling is shown in Table III and the drill logs are included in Appendix B.

TABLE III

EXPLORATION DRILL-HOLE SUMMARY

Drill Hole No.	Drilled by	Date Completed	Depth	Footage Plugged	Footage Cored	Numerical Favor-ability	Cost
P-1	Voltron	30May55	275	140	135	10	$626.75
P-2	Pacific	30Aug55	360	210	150	12	967.00
P-3	"	30Oct55	284.5	193	91.5	10	729.12
M-126	Climax	21Apr54	505	415	90	-	-
JB-1	Flanders	5Jul55	404	300	104	-	-
JB-2	Pacific	15Oct55	420	339	81	8	981.75
JB-3	"	23Nov55	339	220	119	16-Fav	750.75
JB-4	"	11Nov55	320	308	12	Poor core rec	661.00
JB-5	"	8Nov55	327	250	77	12	650.25
JB-6	"	23Nov55	270	200	70	10	565.50
JB-7	"	23Nov55	183.5	90	93.5	14-Fav	530.62
JB-8	"	6Dec55	290	183	107	12	640.55
JB-9	"	1Dec55	305	210	95	4	668.75
JB-10	"	30Nov55	300	200	100	4	657.00
JB-11	"	28Nov55	320	220	100	12	677.00
JB-12	"	10Dec55	305	200	105	14-Fav	661.25
JB-13	"	15Dec55	290	190	100	18-Fav	641.00
JB-14	"	20Dec55	305	180	125	14-Fav	694.25
JB-15	"	3Jan56	335	250	85	12	688.25
JB-16	"	6Jan56	230	120	110	10	585.00
JB-17	"	7Jan56	350	250	100	18-Fav	725.00
JB-18	"	11Jan56	370	270	100	10	757.00
JB-19	"	20Jan56	400	300	100	14-Fav	805.00
JB-20	"	20Jan56	330	250	80	4	660.00
JB-22	"	13Jan56	349	250	99	4	721.75
JB-23	"	21Jan56	235	160	75	4	499.75
Miscel							4230.66
Total	26 Holes		8402	5898	2504		$20,774.95

PROPOSED EXPLORATION PROGRAM

The proposed exploration program has been divided into three phases. The division between the first and second phases is primarily a matter of drilling depths. The third phase includes offset drilling into the more favorable zones.

The drilling target area and the grid pattern are based on the altered-mudstone-aureole and orebody-elongation theories stated in the Ore Horizon and Lithology section. A target area measuring 773 feet on the N45°W axis and 900 feet on the N45°E axis has been calculated for a 20,000 ton orebody with an average thickness of five feet. The grid pattern is oriented for locating the maximum number of holes along the N45°W axis or across the trend.

Independent contractors will be used for all drilling and angledozer work. Reference is made to Appendix C to substantiate the estimated drilling costs. It should be noted that all drilling done so far on this property has been done with water.

At present the applicant is negotiating with the Climax Uranium Company for the right to conduct an exploration program on the six Cherry Creek claims. Should these negotiations prove unsuccessful, then 5195 feet and $11,864.50 should be subtracted from the figures shown below.

The total cost of this 32,855-foot exploration drilling program is estimated to be $80,852.00 (Table V). The applicant wishes to borrow from the Defense Minerals Exploration Administration the authorized 75 percent of this sum, or $62,889.00, to be repaid out of future production from the property. With two drilling rigs

in continuous service, the program should be completed within six months after its starting date.

Phases I & IA:

Phase I includes all drilling from the Brushy Basin benches. The average drill depth is 333 feet. As a supplement to the drilling program, and to be conducted simultaneously with it, is 100 hours of angledozer work along the rim. This angledozer work is called Phase IA.

There are 35 holes or 11,600 feet of drilling in Phase I (Table IV). The bottom 100 feet of each hole is to be cored. If and when it is possible to exercise good control, the coring interval should be reduced to 75 feet or less. The spacing is 600 feet between holes on the N45°W axis of the grid pattern and 800 feet between holes on the perpendicular axis. The holes on the former are staggered so that the group effect is a hole every 300 feet across the trend. The grid pattern is not precise because advantage has been taken of existing drill holes.

The total estimated cost of Phases I & IA is $25,737.25. Two and a half months should be sufficient to complete this phase.

PHASE II:

Phase II includes all drilling from the top of the Burro Canyon formation. The average depth of the 25 holes in this phase is 619 feet. The total footage amounts to 15,465 feet of which 2500 feet is core. The total estimated cost of Phase II is $34,146.25, and it should be completed in two and a half months.

TABLE IV

PROPOSED EXPLORATION DRILL HOLES

Drill Hole No.	Phase I Estimated Collar Elevation	Estimated Depth	Drill Hole No.	Phase II Estimated Collar Elevation	Estimated Depth
B1-1	7420	290	B2-1	7690	580
B1-2	7480	370	B2-2	7560	475
B1-3	7420	325	B2-3	7750	670
B1-4	7450	370	B2-4	7690	635
B1-5	7420	340	B2-5	7620	590
B1-6	7400	350	B2-6	7640	580
B1-7	7430	370	B2-7	7610	580
B1-8	7380	395	B2-8	7560	560
B1-9	7330	365	B2-9	7650	620
B1-10	7220	275	B2-10	7580	580
B1-11	7270	325	B2-11	7560	585
B1-12	7130	240	B2-12	7690	685
B1-13	7200	290	B2-13	7610	635
B1-14	7320	375	B2-14	7660	685
B1-15	7330	390	B2-15	7560	615
B1-16	7270	345	B2-16	7610	660
B1-17	7330	410	B2-17	7520	580
B1-18	7220	325	B2-18	7380	490
B1-19	7210	315	B2-19	7340	475*
B1-20	7160	290	B2-20	7590	725*
B1-21	7160	315	B2-21	7550	715
B1-22	7200	330	B2-22	7490	680
B1-23	7240	345	B2-23	7530	695
B1-24	7330	435	B2-24	7500	690
B1-25	7210	340	B2-25	7490	680
B1-26	7150	310			
B1-27	7210	340			
B1-28	7240	370			
B1-29	6920	130*			
B1-30	7020	200			
B1-31	7170	340			
B1-32	7200	360			
B1-33	7110	330			
B1-34	7130	320			
B1-35	7250	440*			
Total	35 Holes	11,660	Total	25 Holes	15,465
	Average depth 333'			Average depth 619'	

* Either the deepest or the shallowest hole.

1. on climax
cherry Creek claims

The grid pattern for Phase II is the same as described in Phase I except that the hole spacing is increased. The spacing for this phase on the N45°W axis is 1200 feet staggered from one row to the next, resulting in a hole every 600 feet across the trend. The distance between these rows of holes is maintained at 800 feet.

Phase III:

The purpose of Phase III is to offset mineralized or ore holes on 200-foot centers and thereby roughly delineate any mineralized zones, and/or to offset into zones of favorability indicated by the drilling done on Phases I and II. Twelve holes are planned with an estimated total footage of 5730 feet. This is based on six holes with an average depth of 335 feet and six holes with an average depth of 620 feet. Because it should be possible to maintain good control on this phase, the coring interval is set at 50 feet. The estimated cost of this phase is $10,968.00, and it should take no longer than a month.

The zones of favorability into which the offset drilling will be done shall be determined numerically. Favorability contour lines of the type shown in Fig 4 will be used to mark these zones. Holes would be offset into those zones indicating a favorability of 15 or better.

Phase III should commence after the completion of Phase I if sufficient favorability is indicated. However, only six Phase III holes should be drilled in the Phase I area before the completion of Phase II. After the completion of Phase II the remaining six offset holes should be drilled in those areas in which they will serve the greatest value.

43,065.25
26,586.25
69,652.00

TABLE V

PROPOSED EXPLORATION PROGRAM --- COST BREAKDOWN

Item	Flanders			Climax			Pociask			Total		
	Holes	Footage	Cost	Holes	Footage	Cost	Holes	Footage	Cost	Holes	Footage	Cost
Phase I	22	P 4760 C 2200 T 6960	7616.00 7150.00 14,766.00	10	P 2705 C 1000 T 3705	4328.00 3356.25 7684.25	3	P 695 C 300 T 995	1112.00 975.00 2087.00	35	P 8160 C 3500 T11,660	13,056.00 11,481.25 24,537.25
Phase IA	100 hr	Dozer	1200.00							100 hr	Dozer	1,200.00
Phase II	23	P12,010 C 2300 T14,310	19,973.25 11,611.25 31,584.50	2	P 955 C 200 T 1155	1573.00 988.75 2561.75				25	P12,965 C 2500 T15,465	21,546.25 12,600.00 34,146.25
Phase III	11	P 4845 C 550 T 5395	8007.00 2342.50 10,349.50	1	P 285 C 50 T 335	456.00 162.50 618.50				12	P 5130 C 600 T 5730	8,463.00 2,505.00 10,968.00
Miscel *			8700.00			1000.00			300.00			10,000.00
Total	55	P21,615 C 5050 T26,665	35,596.25 21,103.75 66,600.00	13	P 3945 C 1250 T 5195	6357.00 4507.50 11,864.50	3	P 695 C 300 T 995	1112.00 975.00 2387.00	72	P26,255 C 6600 T32,855	43,065.25 26,586.25 80,851.50

P --- plug, C --- core, T --- Total: * Distribution purely arbitrary

Independent Contractors: Drilling - 32,855 ft. - $69,651.50
Angeldozer - 280 hrs - 3,360.00

Total $73,011.50

Miscellaneous:

The breakdown of the $10,000.00 miscellaneous charge shown in Table V is as follows:

Standby-time - ½hr/hole @ $12/hole	$ 432.00
Survey (Closed traverse survey carrying elevations around the property into which all drill holes could be tied.) - 26,940 ft @ 28¢/ft	750.00
Assaying - 1/hole @ $3.50 U_3O_8 & $1.50 V_2O_5	360.00
Probing - $10.00/hole	720.00
Core boxes - 132 AX size boxes @$6.15ea	811.80
Angledozer - 2½hr/hole @ $12/hr	2,160.00
Supervision - 6 mos @ $750/mo	4,500.00
Other	266.20
TOTAL	$ 10,000.00

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REFERENCES

Stratigraphy of the Morrison and Related Formations, Colorado Plateau Region. A Preliminary Report. Geological Survey Bulletin 1009 E, L. C. Craig.

Criteria for outlining areas favorable for Uranium Deposits in parts of Colorado and Utah. Geological Survey Bulletin 1009 T, E. J. McKay.

Geologic guides to prospecting for Carnotite Deposits on Colorado Plateau. Geological Survey Bulletin 988 B, Doris Blachman Weir.

Regional tectonics of the Colorado Plateau and relationship to the orgin and distribution of Uranium. Vincent C. Kelley.

Guidebook to the geology of Utah. No. 9, Utah Geological Society 1954.

APPENDIX A

Flanders Mining Company - - - Pacific Uranium Mines Company

I Mining Lease

II Amendment to Mining Lease

III Amendment 2 to Option Purchase Agreement

Pociask - - - Pacific Uranium Mines Company Lease and Option Agreement

Climax Uranium Company - - - Pacific Uranium Mines Company Farm-out Agreement

CLIMAX URANIUM COMPANY - PACIFIC URANIUM MINES COMPANY FARM-OUT AGREEMENT

Will be forwarded if and when negotiations have been successfully completed on the six Cherry Creek claims. This report was submitted prior to the completion of these negotiations because of an agreement with the Flanders Mining Company to apply for a DMEA loan by March 1, 1956.

APPENDIX B

Drill Hole Logs

P-1 thru 3

JB-1 thru 20, 22 & 23

M-126

DRILL HOLE LOG

Logged For: Voltron Corporation

Type of Drill: Da Coro Drilling Co
NX core

COORDINATES: 70' S35°00W fr NEX Poc

Drill Hole No. Poc #1
Total depth 275
Collar elev. 5953 assumed
Area Beaver Mesa, Colorado
Indications of Ore: Semi-favorable

Client: Pociask
Date started: 25 May 55
Date completed: 30 May 55
Logged by: L. Jaynes

140-180	40	Lt Br	Gn, Rd
225-266.5	41.5	Lt Br	Rd

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DEPTH From	DEPTH To	Rock	Color	Grade	DESCRIPTION REMARKS
0	140				Plug
140	170	SS	Lt Br	C	
170	180	SS	Lt Br	F	
180	185	MS	Gn, Rd		R MS seams
185	190	MS	Rd		
190	210	MS	Rd		
210	215	SS	Lt Br	F	
215	220	MS	Rd		
220	223	MS	Pp		
223	225	MS	R		
225	231.5	SS	Lt Br		Limy - w/ yellow stains (iron)
231.5	246.5	SS	Lt Br, Rd		SS fractured - interbedded Gy SS
246.5	265	SS	Lt Br		Dark Rd MS galls
265	266.5	SS	Lt Br		w/ large Rd MS galls
266.5	275	MS	Rd		

SAMPLE BASE | THICK | ABRASIVENESS | SPECIFICATIONS

Abbreviations

Wh - white
Br - brown
R - red
Gy - gray
Bl - blue
Gn - green
Yw - yellow
Or - orange
Pp - purple
Bk - black
CBSS - conglomerate sandstone
CS - conglomerate
SS - sandstone
MS - mudstone
SLT - siltstone
F - fine
M - medium
C - coarse
N - none
S - sparse
A - abundant

Hole No. Poc #1

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Company

Type of Drill: Portable II, II core

Drill-hole No.: Poo 12

Total depth: 360

Collar elev.: 6067 Tuscarora P

Area: Beaver Mesa, Colorado

COORDINATES

North: 0 East: 0

Tie: 280' N 35° 00' E fr. S.E. Poo

Claim: Podack

Date started: 22 Aug 55

Date completed: 30 Aug 55

Logged by: Jon Jensen

Summary of log: Sand-favorable OBSS 210–250 Thick 40; SS color Br–LtBr MS Rd; Cbn. L–S
270–340 70 Rd–LtBr under OBSS M L–S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	210					Plug
210	215	SS	LtBr	F	S	some Ca Sil
215	220	SS	LtBr	F		w/ Ca Sil
220	230	SS	LtBr	F	S	
230	235	SS	LtBr, Rd	M		some pebbles
235	240	SS	Br	F		w/ limy specks & Ca Sil
240	250	SS	Br	M-F		bra Rd MS & Ca Sil
250	260	MS	Rd			some interbedded LtBr SS
260	270	MS	Rd			
270	275	SS	Rd	F		
275	280	SS	Br	F		w/ Ca Sil
280	282	SS	Rd			w/ limestone & Rd clay
282	285	SS	Rd	F		w/ red pellets & some
285	289	SS	LtBr	F	S	carbon in some
289.5	290	SS	limy		S	C @ 289.5 SS w/ Ca Sil pellets
290	297	SS	Br			w/ quartz & Rd MS pellets — [illegible]
297	300	SS	LtBr		S	
300	302	SS	Br	F		
302	303.5	SS	limy			w/ Ca Sil
303.5	309.8	SS	Rd			w/ Rd MS pellets
309.8	310	SS	LtBr			lots of sil
310	311	SS	Br, limy			w/ Ca Sil & Rd M pellets
311	317	SS	Br		S	w/ some of R MS
317	317.5	MS	Rd			
317.5	327	SS	Br			
327	327.1	SS	Br		S	bed SS w/ M pellets & C
327.1	340	SS	LtBr/Br		S	SS w/ interbedded SS Br
340	360	MS	Rd, Gy SS			

y-Ray Log

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. Poo 12

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COLORADO PRINTING CO.

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Mayhew 1000 Special Rotary NX

Drill-hole No.: P # 3
Total depth: 284.5
Collar elev.: 5963.2' T assumed P
Area: Beaver Mesa, Colorado

COORDINATES
North: - East: -
Tie: 282' 576° 50' W Fr nex Pociask

Claim: Pociask
Date started: Oct. 20, 1955
Date completed: Oct. 30, 1955
Logged by: H. W. Evans

Summary of log: Unfavorable ; OBSS 253-268 Thick 15' ; SS color Wh, Br ; MS R under OBSS ; Cbn. S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	193					193' Plug
193	196	SS	R, Br, & Wh	F	N	6' Minute black specks in sand, Mottled red & Gn at base.
199	200.5	MS	R	F	N	1.5' Soft & easily decomposed
200.5	202.5	ST	Br, Gy, Gn	VF	N	2' Dense red brnd
202.5	203	MS	R	F	N	0.5' Very soft
203	208	St	R, Wh, & Gy	F	N	5' Very dense & brnd. Mostly R with some grayish-white streaks
208	220	MS, SS, & ST	Gn, R, Wh, Gy	F	N	12' Interbedded seams of mudstone, sandstone, & siltstone with no definite cut offs.
220	223	SS	R, Br, & Wh	F	S(?)	3' Many fine red seams running thru sand, Considerable fine black specks in sand.
223	232	SS	R, Br, & Wh	F, VF	S	9' Dense r/Br & Gn specks
232	237	ST	Gr, Wh	VF		5' Greenish mud galls H/depth limy.
237	238.5	MS	R	VF		1.5' Grading into silt stone
238.5	253	SS	R, Wh, & Br	F		4.5' Many thin red seams
253	268	SS	Wh, Br	M		15' Crystal clear sand, Some mud inclusions with depth
268	270	MS	R, Wh	F		2'
270	283	SS	Br, Wh	F	S	13' Milky white sand
283	284.5	MS	R, Gn	F		1.5' Containing some limy ST
						Core pulled -86.3
						Cored -91.5
						Percent core recovery = 94.3

y-Ray Log 0 — 2000

All core checked for anomalous radioactivity. None shown
Most of the core effervesced when tested with HCL sol'n: high lime content.

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. P # 3

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COLORADO PRINTING CO.

DRILL HOLE LOG

Logged For

Type of Drill: Sprague & Henwood Diamond AX

Flan[illegible]s Mining Company

COORDINATES

Drill-hole No. JB #1
Total depth 404'
Collar elev. 5972 Assumed P
Area

North – East –
Tie 140' S 14° 00' W fr NEX JB #5

Claim John Brown #5
Date started
Date completed
Logged by

Summary of log unfavorable ; OBSS 378-397 Thick 19' ; SS color Gr, Br ; MS under OBSS R ; Cbn. S - 388-9'

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	DESCRIPTION / REMARKS
0	300					Plug
300	305	MS	Gr, Br			5')
305	314	MS	Gr, Rd			9') 17'
314	317	MS	Rd, Gr			3')
317	319.5	SS	Gr	M-F		2.5' Light green
319.5	324	MS	Rd			4.5'
324	334	MS-SS	Rd, Br			10'
334	345	MS	Gr, Gy	F		11' Small amt. of F, SS
345	347	SS	Gr, Gy	M-F		2'
347	354	MS	Gr, Gy			7'
354	378	MS	Rd			24' Gr near base
378	397	SS	Gr, Br	M-F	S	19' Some carbon streaks 388' - 9'
397	404	MS	R			7'

Total footage cored 104.0
Total core pulled 100.5
Per Cent Recovery 93.5
Hole was probed, and there was no count in the core (?).

Y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Approx. copy only!
hwe

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
B—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OL—S—ore bearing sandstone	

Hole No. JB #1

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[illegible] MINING CO.

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Mayhew 1000 Special Rotary NX

Drill-hole No.: JB #2
Total depth: 420'
Collar elev.: 6114.5 T assumed P
Area: Beaver Mesa, Colorado

COORDINATES
North: ~ East: ~
Tie 144' 585° 10'W of
sux Pociask E, nex LL Fr

Claim: John Brown # 24
Date started: Oct. 11, 1955
Date completed: Oct. 15, 1955
Logged by: H. W. Evans

Summary of log: Unfavorable; OBSS 323-350 Thick 27'; SS color Red; MS under OBSS Green; Cbn. S
351-381 30'

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	305					305' Plug
305	323	MS	R, Wh, & Gy	F	N	18' Mottled in color, dense, some sandy seams.
323	350	SS	R, Br, & Wh	M	N	27' Color tends towards Wh with depth. Sandy mud near top & some mud galls included thru out. Streaks of black & Gn interspersed with mud near base. Sand powered with fine black mineral.
350	351	MS	R	F	N	1'
351	381	SS	R, Wh	M	S	30' Black, white, & green specks in sand. Thin R mud seams run thru sand near top give brecciated appearance. Down Gn small mud balls near base.
381	385	MS	Gr, Br, & R	F	N	4' Changing from Gn to R with depth.
385	420	MS	R, Br, & Gn	F		35' Plug

Total footage cored 80'
Total core pulled 80'
Percent core recovered 100 %

All core checked for anomalous radioactivity - None Shown

y-Ray Log
0 — 800

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #2

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No.: JB #3

Total depth: 339

Collar elev.: 5989 Tansmed P

Area: Beaver Mesa, Colorado

COORDINATES

North: - East: -

Tie: 296' N 36° 40' E fr SW JB #11

Claim: John Brown #11

Date started: 11 Nov. 1955

Date completed: 23 Nov. 1955

Logged by: M. V. Evans

Summary of log: semi-favorable OBSS 251-256 Thick 5'; SS color Gn-Wh; MS Gn strip; Cbn. S
266-305 39' L, Wh, Gy, Gr under OBSS Dark R-Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	220					220' Plug
220	251	MS	R-Br-Gn	VF	N	31' Mottled R & Gn after 220 with darker colors and becoming greener with depth. All Gn after 245. Some ST.
251	256	SS	Gn-Wh	F to M	S	5' Some mud seam. SS appears bleached.
256	266	M	R	F	N	10' Gn strip at base
266	305	SS	R, Wh, Gy	M-C	S	39' R & Gn thin mud seam in SS 280-290. Vert. fracture 286-7'. Numerous thin dark mineralized streaks 293-305. 0.2' dark mud seam 310.
305	339	MS	Br, Gn, Rd, Gy	F	N	34' Very dark MS at top becoming lighter with depth.

Sparse to abundant lime.

Total footage cored - 119
Total core pulled - 118.1
Per Cent Recovery - 99.3

All core checked for anomlous radioactivity - None shown

Probe: 245.4 - 255.8 showed anomlous radioactivity. Highest counts @ 245.4, 247.0, 253.2 all were Ext 2, Scale 0.1. Reading 7 on a Universal Counter.

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #3

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Mayhew 1000 Special Rotary NX (2 5/16")

COORDINATES

Drill-hole No.: JB #4
Total depth: 320'
Collar elev.: 5949 Measured P
Area: Beaver Mesa, Colorado

North: - East: -
Tie: 350' S 51° 45' E fr NX JB #11

Claim: John Brown #11
Date started: 30 Oct. 55
Date completed: 11 Nov. 55
Logged by: H. W. Evans

Summary of log: Unfavorable; OBSS 268 - 269 Thick 1'; SS color Gr-Wh; MS R; Cbn N
276 - 279 3' R, Br, Wh under OBSS

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
268	269	SS	Gr, Wh	F	N	1' Lity
269	276	MS	R	VF	N	7' Lity becoming a mottled red and green at base. Six-inch core only showed no lim
276	279	SS	R, Br, Wh	VF	N	3' Lity red down
279	280	MS	R	VF	N	1' Lity red down
280	320	MS	R	-	-	40' Plugged due to loss of dia. bit. Info. based on driller. Some SS stringers only.

Total footage cored 12.0'
Total core pulled 12.0'
Per Cent Recovery 100%
All core checked for anomalous radioactivity - None shown
161 - 172.5' showed a reading of 7 with Universal Counter set at .1 and Ext. 2.

y-Ray Log: 0 — 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations: Probed to 218'

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #4

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

Drill-hole No. JB 15
Total depth 327'
Collar elev. 5265 T. assumed P
Area Beaver Mesa, Colorado

North – East –
Tie 240' S 21° 00' E fr MZ JB 711

Claim John Brown #11
Date started 8 Nov. 55
Date completed 11 Nov. 55
Logged by U. V. Brown

Summary of log Unconformable; OBSS 274 – 293.5 thick 9.5' SS color Wh, Gy; MS R under OBSS; Cbn S – A
300 – 320 20'

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
250	255	MS	R	VF	N	5' Some lim & mud
255	263	MSS	R	F	N	8' Thin layers of mud & mudstone
263	270	SS	Wh, Br	VF	S to A?	7' Containing a lean mass of black spots
270	274	MSS	R, Wh, Br	VF–M	S	4' A mud & mud mixture
274	293.5	SS	Wh, Gy	M	S	9.5' Good looking sand with a low lim content. An almost vertical fracture then fr 292 – 293.5. Also, may fracture on bedding plane
293.5	294	MS	R	VF	N	0.5'
294	296	SS	Wh, R	F	S to A?	2'
296	300	MS, St	R, Gr	VF	N	4' Color blending fr R to Gr with depth
300	320	SS	R, Wh	VF	S	20' With more and more mud near towards the bottom
320	323	MS	R	VF	N	3'
323	325	SS	R, Wh	F	N	2' Dense
325	327	MS	R, Wh	F	N	2'

Total footage cored 77'
Total core pulled 66.2
Per cent Recovery 96%
All core checked for non-low radioactivity – None shown
No nonlow radiometric count recorded. Probed to 294'

y-Ray Log 0 – 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB 15

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

Drill-hole No. JB #6
Total depth 270
Collar elev. 5927 Assumed P
Area Beaver Mesa, Colorado

North – East –
Tie 600' S 56° 00' E fr NW JB #11

Claim: John Brown #11
Date started: 11 Nov. 55
Date completed: 23 Nov. 55
Logged by: H. W. Evans

Summary of log unfavorable (borderline) : OBSS 220–250.5 Thick 30.5 SS color R, Wh, Gr : MS Gn (thin) under OBSS : Cbn.

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	200					200' Plug
200	220	MS–ST	R, Gn	VF	N	20' Vert. fracture 200–1'. ST seam of fr 1 to 2' thick only
220	250.5	SS	R, Wh, Gn	M to F	S	30.5' Some vert. fracturing fr R & Gn mud galls fr 243–5'. Sand redder thru middle portion
250.5	270	MS	R, Gn	F – VF	N	19.5' Some ST seam. Thin Gn mud seam at bun of mud above
						Abundant lime throughout core
						Note: 190–200 core plugged Total footage cored 70 Total core pulled 66.9 Per Cent Recovery 95.5%
						All core checked for anomalous radioactivity – None shown
						Prove: No truly anomalous high

y-Ray Log: 0 – 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST (%) U_3O_8	FIELD EST (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh – white	CG – conglomerate
Br – brown	SS – sandstone
R – red	MS – mudstone
Gy – gray	ST – siltstone
Bl – blue	F – fine
Gn – green	M – medium
Yw – yellow	C – coarse
Bk – black	N – none
Pp – purple	S – sparse
Cbn – carbon	A – abundant
OBSS – ore bearing sandstone	

Hole No. JB #6

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DRILL HOLE LOG

Scott Bros.

Logged For: Pacific Uranium Mines Co.

Type of Drill: Mayhew 1000 Special
NX Core

Drill-hole No. JB 47
Total depth 183.5
Collar elev. 5826 T unknown P
Area Beaver Mesa, Colorado

COORDINATES
North – East –
Tie 750' N 13° 30' W fr
SE JB 49

Claim: John Brown #9
Date started 12 Nov. 55
Date completed 23 Nov. 55
Logged by H. W. Evans

Summary of log: Semi-favorable OBSS 104–47 Thick 43; SS color R; MS R, Gn; Cbn N
150–64 14 Wh, Br under OBSS R, Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	90					90' Plug
90	100	SS	R, Br, Wh	F–M	S	10' Gn mud balls at base
100	104	MS	R, Gn	F	N	4' Mottled
104	147	SS	R	F–M	N	43' Tan blended R & Gn mud balls @ 124'. Vert. fracture 129 – 132' and 143 – 144'. Sand in raiter below 130' but still tinged with R
147	150	MS	R, Gn	F	N	3'
150	164	SS	Wh, Br	M–C	S	14' Some R & Gn mud balls, also some black mineralized streaks. Hor. fracture 161 – 162'
164	183.5	MS	R, Gn	F	N	19.5' Top portion mostly R the base mostly Gn

Lime content of sand somewhat lower than previous holes tested

Total footage cored 93.5
Total Core Pulled 86.7
Per Cent Recovery 92.8%

All core checked for anomalous radioactivity – None shown

Probe: No truly anomalous highs

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB 47

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No.: JB #8
Total depth: 290
Collar elev.: 5960 T. assumed P
Area: Beaver Mesa, Colorado

COORDINATES
North: - East: -
Tie: 18' S 3° 30' E fr. EM JB #10

Claim: John Brown #5
Date started: 28 Nov. 55
Date completed: 6 Dec. 55
Logged by: H. W. Evans

Summary of log: Unfavorable; OBSS 183-193 Thick 10' ; SS color Wh ; MS Gn ; Cbn. S
203-216 13' Wh, Rd under OBSS Rd S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS	
0	183					183'	Plug
183	193	SS	Wh	M	S	10'	Some Gn MS inclusion and limonite coloring
193	203	MS	Gn, Rd	VF-F	N	10'	Gn MS on top, otherwise mottled.
203	216	SS	Wh, Rd	F-M	S	13'	Some dark mineralized streaks at 214'
216	260	MS	Rd, Gn	VF	N	44'	Some thin ST seam Generally mottled in color.
260	265	SS	R	F	N	5'	Dense
265	270	MS	Gn, Gy, Rd	F	N	5'	
270	277	SS	Gy, Wh	F-M	N	7'	Dense with mud seam
277	290	MS	Gy, Gn, Rd	VF	N	13'	Dark colors becoming redder with depth

Lime content average

Total footage cored 107
Core Pulled 105.8
Per Cent Recovery 98.7%

All core checked for anomalous radioactivity - None shown

Prove: Highest count @ 271.7 showed 6 on External 2 & setting .1 of a Universal Counter

γ-Ray Log: 0 — 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST (%) U_3O_8	FIELD EST (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #8

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

Drill-hole No. JB #9
Total depth 305'
Collar elev. 5981 Assumed P
Area Beaver Mesa, Colorado

North — East —
Tie 700' S 41° 00' W fr NEX JB #5

Claim John Brown #5
Date started 23 Nov. 55
Date completed 1 Dec. 55
Logged by H. W. Evans

Summary of log: Unfavorable ; OBSS 210–216 Thick 6' ; SS color R, Wh ; MS Gn, R ; Cbn N
233–245 12' Br, R, Wh under OBSS R, Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	210					210' Plug
210	216	SS	R, Wh	M	N	6' Some Gn MS inclusions
216	233	MS	R, Gn	F	N	17' Mottled
233	245	SS	Br, Rd, Wh	MF	S	12' Containing fine red mud seams which show many black mineral particles. 0.6' dark Rd mud seam at 243'
245	283	MS	R, Gn	F	N	38' Mottled but mostly red
283	288	ST	Gn, Gy	VF	N	5' Dark colors
288	305	MS	R, Gn	F	N	17'

Abundant lime except fr 280 – 290'

Total footage cored 95
Total Core Pulled 93.7
Per Cent Recovery 98.6%

All core checked for unusual radioactivity – None shown

Probe: No truly unusual radioactivity

γ-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
—	—	—	—	—	—

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #9

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #10
Total depth 300
Collar elev. 5947 T assumed P
Area Beaver Mesa, Colorado

COORDINATES
North = East =
Tie 580' S 36° 15' E fr NTX JB #11

Claim John Brown #11
Date started 16 Nov. 55
Date completed 30 Nov. 55
Logged by H. M. Evans

Summary of log Unfavorable ; OBSS 240 - 259 Thick 19'; SS color R, Wh ; MS R, Gn ; Cbn. M-S
280 - 294 14' R, Wh under OBSS R, Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	180					180' Plug
180	240	MS	R, Gn	VF	N	60' Mostly R but some mottled Gn and a few Gn ST seams
240	259	SS	R, Wh	MF-M	N-S	19' Many red and green thin SS near top. Whiter SS towards bottom, with some Fe mineralized streaks
259	280	MS	R, Gn	F	N	21' Bleeds into red at bottom
280	294	SS	R, Wh	M	S	14' Whiter towards bottom. There are some red and dark mineralized streaks near the bottom
294	300	MS	R, Gn	F	N	6' Some thin Gn MS seams
						Abundant lime throughout core
						Note: Top 20' core-plugged
						Total footage cored 100
						Total Core Pulled 93.2
						Per Cent Recovery 93.2%
						All core checked for random radioactivity - None shown
						Probe: 265-269.2 abnormally high. Highest count on Universal Counter @ 267.3 - Ext 2, Scale 0.1, Reading 6.0

y-Ray Log (0 – 1000)

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
—	—	—	—	—	—

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #10

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #11
Total depth 320
Collar elev. 5973 Assumed
Area Beaver Mesa, Colorado

COORDINATES
North - East -
Tie 640' N 76° 45' E fr SW JB #11

Claim John Brova #10
Date started 21 Nov. 55
Date completed 28 Nov. 55
Logged by H. W. Evans

Summary of log Semi-favorable OBSS 264 - 304 Thick 40' ; SS color Gy, Wh, Br & R ; MS under OBSS Dark Gn ; Cbn. S-A

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	220					220' Plug
220	231	MS	R, Gr	VF	N	11' Mottled Gn near base
231	233	ST	Gn, Gy	VF	N	2'
233	250	MS	R	VF	N	17' Some mottled Gn
250	252	ST	Gy, Br	VF	N	2'
252	255	MS	R	VF	N	3'
255	258	ST	Gy, Gn	VF	N	3' Dark Gn-Br near top with dark R-Br streak near base
258	264	MS	R, Gn	VF	N	6' Mud blends into sand. More Gn near base
264	304	SS	Gy, Wh, Br, & R	M	S-A	40' Some black mineralized (?) streaks fr 284-290'. Vert. fractures fr 296-298'. Sand becomes redder towards base
304	320	MS&ST	Gn, R	VF	N	16' Dark Gn at top becoming redder towards base

Abundant lime throughout core

Note: 210-220' core-plugged
Total Footage Cored 100
Total Core Pulled 98.2
Per Cent Cofe Recovery 98.2%

All core checked for anomalous radioactivity - None shown
Probe: 193-196.9' abnormally high
Highest at 194' External 2, Scale 0.1
Rading 9.5 on Universal Counter

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

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Hole No. JB #11

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #12
Total depth 305
Collar elev. 5951 Tassumed P
Area Beaver Mesa, Colorado

COORDINATES
North – East –
Tie 180' N 36° 00' W fr NEX JB #5

Claim John Brown #7
Date started 6 Dec. 55
Date completed 10 Dec. 55
Logged by H. H. Evans

Summary of log Semi-favorable OBSS 204-229 Thick 25 ; SS color Wh ; MS Gn ; Cbn. S-A
270-301.5 31.5 Rd, Wh under OBSS R N-S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	200					200' Plug
200	204	MS	Rd, Wh, Gn	F	N	4' Some sand in mud
204	229	SS	Wh	M	S-A	25' Mud seams near top. Good porous sand; Vertical fracture at 225'. Thin Gn MS seam at base
229	260	MS	Rd, Gn	VF	N	31' Dense and mostly red
260	265	SS	R	F	N	5' Dense
265	270	MS	R	F	N	5' Sandy
270	301.5	SS	Rd, Wh	F-M	N-S	31.5' Many Rd MS to 279. Thin Gn MS seam @ 279. Horizontal fractures at 287. Sand becomes whiter and more porous with depth. Thin Gn MS seams at base.
301.5	305	M	R	F	N	3.5'

Lime content average

Total footage cored 105
Total core pulled 103.3
Per Cent recovery 98.5%

All core checked for anomalous radioactivity - None shown

Probe: No truly anomalous high

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh - white
Br - brown
R - red
Gn - gray
Bl - blue
Gr - green
Yw - yellow
Bk - black
Pl - purple
Cbn - carbon
OBSS - ore bearing sandstone
CG - conglomerate
SS - sandstone
MS - mudstone
ST - siltstone
F - fine
M - medium
C - coarse
N - none
S - sparse
A - abundant

Hole No. JB # 12

DRILL HOLE LOG

Logged For

Type of Drill Sprague & Henwood — Pacific Uranium Mines Co.

Drill-hole No. JB #13 — COORDINATES — Claim John Brown #10

Total depth 290 — North – East – — Date started 6 Dec. 55

Collar elev. 5934T assumed P — Tie 280' N 13° 30' W fr — Date completed 15 Dec. 55

Area Beaver Mesa, Colorado — SEX JB #10 — Logged by H. V. Evans

Summary of log [illegible] bl OBSS 236–279 Thick 43'; SS color Rd to Wh; MS under OBSS Gn; Cbn S–A

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	190					190' Plug
190	201	MS	Rd	VF	N	11' Little to no Gn coloring
201	208	ST–SS	Rd–Gn	F	N	7' Very dense
208	232	MS	Rd, Gn	F	N	24' Mottled green w/some ST seams
232	235	SS	Rd, Wh, Br	F	N	3' Dense
235	236	MS	Rd	F	N	1'
236	279	SS	Rd, Wh	F–M	S–A	43' Varying fr porous to dense and then back to porous. Rd at top blends into Wh towards base. Sample #1 taken of 250.6–252.3 interval because of dark color despite no count. Gn MS galls towards base
279	280	MS	Gn	VF	N	1'
280	290	MS	Rd	VF	N	10' Dense ST seams. Gn at top becoming mostly red with depth. Lime slightly lower in SS

Total footage cored - 100
Total core pulled - 99.1
Per Cent Recovery - 99.1

All core checked for anomalous radioactivity - None shown

Probe: Highest count 273–4' 7 to 9 on External 2 & Setting 0.1 of Universal counter. No check in the core

y-Ray Log

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
252.6	1.7			0.0%	0.03%

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
Rd—red	MS—mudstone
Gn—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #13

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #14
Total depth: 305
Collar elev. 5933 T. assumed P
Area: Beaver Mesa

COORDINATES
North: – East: –
Tie: 150' N 17° 30' W fr. SEJ JB #8

Claim: John Brown #8
Date started: 16 Dec. 55
Date completed: 20 Dec. 55
Logged by: H. W. Evans

Summary of log: Favorable ; OBSS 270–300 Thick 30 ; SS color Rd, Wh, Ga ; MS Ga under OBSS ; Cbn. S–A

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	180					180 Plug
180	190	SS	Wh	M	S	10 Fairly porous. Much lime
190	229	MS	Rd, Ga, Gy	VF	N	39 Mottled with some ST seams. Lime varies fr S to A
229	240	SS&MS	Gy, Ga, Rd	F	N	11 Vertical fractures at 235 & 240. 2–3' MS & SS seams. Lime fr S to A
240	270	MS	Rd, Ga	F	N	30 Mottled but quite a bit of Ga and becoming very sandy at the base.
270	300	SS	Rd, Wh, Ga	M	S–A	30 Some Rd MS seams near top containing many Fe mineral particles. Ga MS seams near base in a porous sand. Lime S–A
300	302	MS	Ga	F	N	2 Appeared to be bleached
302	305	MS	Rd	F	N	3

Total footage cored 125.0
Total Core Pulled 122.1
Per Cent Recovery 97.7

All core checked for anomalous radioactivity – None shown

Probe: 206–209 showed anomalous radioactivity – at 0.3 and Ex. 2 on a Universal County the following readings were taken:

206'	1	or	.01% U_3O_8
207'	3.5	or	.03% "
208'	4.5	or	.04% "
209'	3.5	or	.03% "

These readings were not verified by the core

γ-Ray Log: 0 – 1600

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh—white
Br—brown
R—red
Gy—gray
Bl—blue
Gn—green
Yw—yellow
Bk—black
Pp—purple
Cbn—carbon
OBSS—ore bearing sandstone
CG—conglomerate
SS—sandstone
MS—mudstone
ST—siltstone
F—fine
M—medium
C—coarse
N—none
S—sparse
A—abundant

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Hole No. JB #14

COLORADO PRINTING CO.

DRILL HOLE LOG

Logged For

Type of Drill: Sprague & Henwood Diamond AX

Pacific Uranium Mines Co.

COORDINATES

Drill-hole No. JB # 15

Total depth 335

Collar elev. 5931 T. assumed P

Area Beaver Mesa, Colorado

North — East —

Tie 85' N 24° 0' W fr SEX JB#7

Claim John Brown #7

Date started 20 Dec. 55

Date completed 3 Jan. 56

Logged by H. H. Evans

Summary of log Unfavorable : OBSS 286-310 Thick 24 : SS color Wh : MS under OBSS Rd & Gn : Cbn. N

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS	
0	250					250	Plug
250	286	MS	Rd & Gn	F	N	36	Mottled Rd & Gn and becoming very sandy towards the base
286	310	SS	Wh	MF to M	N	24	Porous with Rd & Gn mud galls at base. Vertical fracture betw. 300 & 303 Lime content fairly low
310	313	MS	Gn & Rd	F	N	3	More Gn than Rd
313	319	MS	Rd & Gn	F	N	6	Mottled
319	322	SS	Rd	F	N	3	Dense
322	335	MS	Rd & Gn	F	N	13	Mottled but colors generally dark

Total footage cored 85

Total core pulled 83.7

Per Cent Recovery 98.5%

All core checked for radioactive anomalies - None shown

Probe: No radioactive highs detected.

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh - white	CG - conglomerate
Br - brown	SS - sandstone
R - red	MS - mudstone
Gy - gray	ST - siltstone
Bl - blue	F - fine
Gn - green	M - medium
Yw - yellow	C - coarse
Bk - black	N - none
Pp - purple	S - sparse
Cbn - carbon	A - abundant
OBSS - ore bearing sandstone	

Hole No. JB #15

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COLORADO PRINTING CO

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood

Drill-hole No.: JB #16
Total depth: 230
Collar elev.: 5873 T ..... P
Area: Beaver Ham, Colorado

COORDINATES
North: - East: -
Tie: 585' N 1° 0' E fr SW JB 9

Claim: John Brown 9
Date started: 1/3/56
Date completed: 1/6/56
Logged by: H. W. Evans

Summary of log: Favorable (thickness to carbon only); OBSS: 153-221; Thick: 68; SS color: Rd-Wh; MS under OBSS: Rd; Cbn: S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	120					120 Plug
120	133	MS	Rd	F	N	13
133	135	ST	Gn	F	N	2
135	153	MS	Rd	F	N	18 Some Gn MS seam at top. Becoming very sandy at bot.
153	221	SS	Rd-Wh	MF to MC	S	68 Muddy sand at top. Sand becomes whiter to coarser towards base. The carbon is concentrated in streaks. There appears to be some limonite staining in the sand. Vert. Fract. (45° ∧) @ 155'. Many MS seam in sand.
221	230	MS	Rd	F	N	9 Some Gn MS seam
						Total footage cored 110
						Total corepulled 102.5
						Per Cent Core Recovery 92.5
						Core checked for anomalous radioactivity - none shown.
						Hole probed: No anomalous radioactivity recorded

γ-Ray Log: 0 — 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #16

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COLORADO PRINTING CO

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood

Drill-hole No. JB # 17
Total depth 350
Collar elev. 5960 P
Area Beaver Mesa

COORDINATES
North ..... East .....
Tie 297' N 76° 0' E fr
STA JB # 4

Claim John Brown #4
Date started 1/3/56
Date completed 1/7/56
Logged by H. H. Evans

Summary of log Favorable ; OBSS 302.5-310 Thick 7.5 ; SS color Gy, Et, Ca ; MS Ca under OBSS ; Cbn. N-S
(Mud color & radioactivity only)

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	250					250 Plug
250	302.5	MS	Ca-Rd			52.5 Considerably more Ca than Rd. Sandy and dense at top. Color mottled.
302.5	304	SS	Gy, Bk	F	S	1.5 Purplish-red tinge to colors indicated. Appeared mineralized. Sample taken.
304	310	SS	Gy, Ca	F	N-S	6 Brown and muddy
310	311.7	MS	Ca	F	N	1.7 Thin Rd MS seam at base
311.7	318	SS-MS	Ca	F	N	6.3
318	350	MS	Rd, Ca	F	S	32 Some M grained SS seam reddish in color & drab in section.

Total footage cored 100
Total core pulled 98.0
Per Cent Recovery 98.0%

Core indicated higher background radioactivity betw. 301 & 304.
Ex 2, .1 = 3.5 or 0.015%

Probs rich Uranium contour showed following anomalies:
95.4 Ex. 2, .1 = 6 or 0.03% U
122.0 Ex. 2, .1 = 5 or 0.03% U
301.0 Ex. 2, .1 = 5 or 0.03% U
301.6 Ex. 2, .1 = 9 or 0.03% U

50% + Ca MS in hole

y-Ray Log

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
304	1.5			0.015	?

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #17

DRILL HOLE LOG

Logged For

Type of Drill Spraque & Hanwood Diamond AX — Pacific Uranium Mines

Drill-hole No. JB #18
Total depth 370
Collar elev. 6142 Tassumed P
Area Beaver Mesa, Colo

COORDINATES
North - East -
Tie 175' S40° 00' E fr N
C/L JB #25

Claim John Brown #25
Date started Jan 4, 1956
Date completed Jan 11, 1956
Logged by H. W. Evans

Summary of log Unfavorable; OBSS 270-325 Thick 55; SS color Rd-Wh; MS Rd; Cbn N-S
337-350 13 Rd under OBSS Rd N-S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	270					270' Plug
270	273	SS	Rd	F-M	S	3' Plugged into sand
273	275	MS	Rd	VF	N	2'
275	296	SS	Rd-Wh	F-M	S-A	21' Whiter and more porous towards base. Some Bk mineralized streaks. MS seams towards base.
296	297	MS	Rd	VF	N	1'
297	325	SS	Rd, Wh, Gn	F-M	N-S	28' Dense at top becoming whiter with larger grain size towards base. Many thin Rd MS seams to 310. Many Gn MS seams with Bk mineralized particles 310 to 322.
325	328	ST	Rd	F	N	3' Dense
328	338	MS	Rd	F	N	10' Sandy
338	350	SS	Rd	F-M	N-S	12' Dense
350	370	MS-ST	Rd, Gn	F	N	20' Two thick ST seams

Less lime in sand than in mud

Total footage cored - 100
Core pulled - 95.3
Percent recovery - 95.3

No radioactivity in core

Probe: High count 142.1-145
Universal counter: Ext 2.
Set 0.3 -- 144.6 Read 5.0
or 0.05% U_3O_8

y-Ray Log 0 100

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #18

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #19
Total depth 400
Collar elev. 6152 (assumed)
Area Beaver Mesa, Colo.
Summary of log: Favorable

COORDINATES: North – East –
Line 30' N 15°00' E fr DM
JB #25

Claim: John Brown 24
Date started: Jan 7, '56
Date completed: Jan 20, '56
Logged by: H. W. Evans

303-323	Thick 20	SS color Gn-Wh	MS under OBSS Rd	Cem. N-S
335-355	20	Rd-Wh	Rd	S-A
361-396	35	Rd, Wh, Gn	Rd	S

DEPTH From	DEPTH To	Rock	Color	Grain	Cement	Thickness	REMARKS
0	300					300'	Plug
300	303	MS	Rd	F	N	3'	
303	323	SS	Gn & Wh	VF	N	20'	Some Gn MS seams & galls at base
323	335	MS	Rd	F	N	12'	
335	355	SS	Rd & Wh	F-M	S-A	20'	Muddy at top with mud seams at base. Many Bk mineralized streaks.
355	361	MS	Rd	F	N	6'	Sandy at base
361	396	SS	Rd, Gy, Gn, Wh	F-M	S	35'	Muddy at top. Some Gn MS galls and seams esp. towards base. One-foot Limestone seams at 379 & 386.
396	400	MS	Dr Rd & Gn	VF	N	4'	Dense

Lime mostly sparce in SS except for seams noted. Abundant in MS.

Total footage cored = 100
Core pulled = 98.5
Percent Recovery = 98.5

No anomalous radioactivity indicated in core.

Probe: No high count

SAMPLE BASE	SAMPLE THICK	LAB AS AY % U3O8	LAB AS AY % V2O5	FIELD EST % U3O8	FIELD EST % V2O5
–	–	–	–	–	–

Abbreviations

Wh = white	Cgl = conglomerate
Br = brown	SS = sandstone
R = red	MS = mudstone
Gy = gray	ST = siltstone
Bl = blue	F = fine
Gn = green	M = medium
Yw = yellow	C = coarse
Bk = black	N = none
Pp = purple	S = sparse
Cm = carbon	A = abundant
OBSS = ore bearing sandstone	

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Hole No. JB #19

DRILL HOLE LOG

Logged For

Type of Drill: Sprague & Henwood Diamond AX

Pacific Uranium Mines

COORDINATES

Drill-hole No. JB #20

Total depth 330

Collar elev. 6155 (assumed)

Area Beaver Mesa, Colo.

North - East -

Tie 410' S58° 00' W fr SWX JB #25

Claim John Brown #26

Date started Jan 12, '56

Date completed Jan 20, '56

Logged by H. N. Evans

Summary of log: Unfavorable, OBSS 240-253? Thick 13'; SS color Wh; MS under OBSS Rd; Cbn. N

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS	y-Ray Log 0 – 1000
0	250					250' Plug	
250	253	SS	Wh	F	N	3' Dense (Plugged thru at least 10' SS)	
253	309	MS	Rd &Gn	F	N	56' Mottled color. Many ST seams fr 1-1½' in width.	
309	311	SS	Rd	F	N	2' Dense	
311	330	MS	Rd &Gn	F	N	19' Sandy at top	
						Lime abundant	
						Total footage cored = 80	
						Core pulled = 70.8	
						Percent recovery = 88.5	
						No anomalous radioactivity shown in core	
						Prods: High count from 104.6 - 111.2	
						Universal counter: Ext 2, Set 0.3 -- 104.9 = 1.0	
						109.1 = 4.5	
						111.2 = 2.0	
						Note: 4.5 reading indicates 0.045% U_3O_8	

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #20

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

North: - East: -

T.125' N10°00'W fr S

C/L JB #3

Drill-hole No. JB #22

Total depth: 349

Collar elev. 5916 Tassumoor

Area: Beaver Mesa, Colo.

Claim: John Brown #3

Date started: Jan 9, '56

Date completed: Jan 13, '56

Logged by: H. W. Evans

Summary of log: Unfavorable; OBSS 267-279 Thick 12'; SS color Rd-Wh; MS color Rd & Gn; Cbn. S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	250					250' Plug
250	256	MS	Rd	F	N	6'
256	259	ST	Gn	F	N	3'
259	267	MS	Rd	F	S	8' Last 5' very muddy
267	279	SS	Rd-Wh	F-M	S	12' Muddy at top & dense near base. Some Bk mineralized streaks
279	330	MS	Rd & Gn	F	N	51' Some ST seams
330	335	SS	Gy-Gn	F	N	5' Dense
335	349	MS	Rd	F	N	14'

Lime abundant except in portions of two sands

Total footage cored - 99
Core pulled - 97.6
Percent recovery - 98.5

No anomalous radioactivity in core

Probe: High count at 322'
Universal counter: Ext 2, Set 0.1 -- 4.5

y-Ray Log

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #22

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DRILL HOLE LOG

Logged For

Type of Drill Sprague & Henwood Pacific Uranium Mines
Diamond AX

Drill-hole No. JB #23
Total depth 235
Collar elev 5823 Tassumed P
Area Beaver Mesa, Colo.

COORDINATES
North - East -
Tie 130' N45°30'E fr WC
25' E fr NE Babbie

Claim John Brown #2
Date started Jan 17, '56
Date completed Jan 21, '56
Logged by H. W. Evans

Summary of log Unfavorable; OBSS 163-176 Thick 13; SS color Rd-Wh; MS under OBSS Rd; Cbn. S

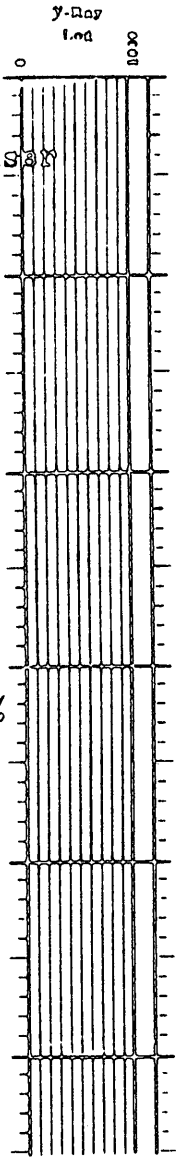
DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	160					160' Plug
160	163	MS	Rd	F	N	3'
163	176	SS	Rd, Br, Wh	F-M	S	13' Becoming whiter & denser towards base
176	182	MS	Rd	F	N	6'
182	185	SS	Gn & Wh	F	S	3' Very dense
185	187	MS	Rd	F	N	2'
187	197	SS	Rd & Gn	F	S	10' Very dense with many MS seams
197	202	MS	Rd & Gn	F	N	5' Mottled color
202	207	SS	Rd & Wh	F	S	5' Dense and muddy
207	235	MS	Rd, Wh, Gn	F	N	28' With some dense and muddy SS seams

Lime with rare exception abundant

Total footage cored - 75'
Core pulled - 73.8'
Percent recovery - 98.5%

No anomalous radioactivity in core

Probe: no high count areas



SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #23

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DRILL HOLE LOG

Logged For: Climax Uranium Company

Type of Drill: Diamond Core

Drill-hole No.: M 123
Total depth: 505
Collar elev.: 7220 T[illegible] P
Area: Beaver Mesa, Colo

COORDINATES
North: – East: –
Tie: Between 4 just North of DM'n of CC2 & CC1 on CC2

Claim: Cherry Creek 2
Date started:
Date completed: 21 Apr 54
Logged by: J. P. Conway

Summary of log: ; OBSS: Thick: ; SS color: ; MS under OBSS: ; Cbn:

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS	5-Day Log
0	115	MS	Rd			115' Plug	
115	116	MS	Rd			1' Sandy	
116	145	SS	Rd-Wh			29' Contains Rd MS galls & limonite specks from cong. of Bk minerals in zone of 123	
145	146	SS	Rd			1'	
146	152	MS	Rd			6' Sandy	
152	169	SS	Rd	F		17' Some Rd MS Galls & bands	
169	170	SS	Gn			1'	
170	171	MS	Rd			1' Sandy	
171	176	SS	Rd			2'	
176	191	SS	Rd-Wh		S	15' Rd MS galls	
191	194	MS	Rd			3'	
194	196	SS	Wh			2'	
196	505	MS	Rd			9'	

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
Rd—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No.

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APPENDIX C

Spraque & Henwood Drilling Cost Estimate

MANUFACTURERS OF
DIAMOND DRILLS
DRILLING EQUIPMENT
DIAMOND BITS

BRANCH OFFICES
NEW YORK PITTSBURGH
PHILADELPHIA
GRAND JUNCTION COLO

EXECUTIVE OFFICES & PLANT
201 S OLIVE STREET
SCRANTON, PA.

SPRAGUE & HENWOOD INC.
CONTRACTORS FOR
DIAMOND DRILLING
SHOT DRILLING · SOIL SAMPLING · PRESSURE GROUTING
WATER WELLS & CHURN DRILLING

PLEASE REPLY TO
P. O. BOX 048
GRAND JUNCTION, COLO.
TELEPHONE 004

February 10, 1956

Pacific Uranium Corp.
1924 White Ave.
Grand Junction, Colo.

Gentlemen:

In accordance with our conversations with your Mr. Evans, we are pleased to submit the following prices for drilling on your Beaver Mesa property. It is our understanding these prices are submitted in conjuction with your application for DMEA loan for drilling a 3 phase program; 1st phase to consist of 35 holes totaling 11,660 ft. - 2nd phase consisting of 25 holes totaling 15,465 ft. - 3rd phase consisting of 12 holes totaling 5,730 ft.

PROPOSAL

Non-Core Drilling

Item 1 - From surface to 400 ft. depth.....$1.60 per ft.
Item 2 - From 400 ft. to 600 ft. depth.....$1.85 per ft.
Item 3 - From 600 ft. to 800 ft. depth.....$3.00 per ft.

Core Drilling

Item 4 - From surface to 400 ft. depth.....$3.25 per ft.
Item 5 - From 400 ft. to 600 ft. depth.....$4.50 per ft.
Item 6 - From 600 ft. to 800 ft. depth.....$6.00 per ft.

Delays

Item 7 - Delays required by customer for logging etc.....$12.00 per hr.

Casing

Item 8 - Casing left in holes at request of customer or casing abandoned after reasonable effort to retrieve by using such equipment normally capable of retrieving such casing, will be charged to customer at the present market value.

Grand Junction, Colorado
February 10, 1956

(Cont. Page -2-)

This proposal is subject to our normal provisions which would be included in our formal quotation at a later date, should we be awarded this work. It is brought to your attention that this proposal is not binding and that a formal contract for this work would depend upon availability of crews and equipment at such time your program would commence.

We thank you for the opportunity of submitting this proposal and we are most happy to be of service to you in any way in respect to your DMEA application.

Very truly yours,

SPRAGUE & HENWOOD, INC.

Vincent D. Nourse

VDN:bc

CC: Scranton
File

Item #1

Recorded at.....o'clock.....M., ...

Reception No..... .....Recorder.

THIS DEED, Made this twenty-first day of June in the year of our Lord one thousand nine hundred and fifty-five between

JOHN. P. KELLOGG

of the City of Grand Junction County of Mesa and State of Colorado, of the first part, and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation

WITNESSETH, That the said party of the first part, for and in consideration of the sum of TEN ($10.00) DOLLARS, to the said party of the first part in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, has remised, released, sold, conveyed and QUIT CLAIMED, and by these presents do remise, release, sell, convey and QUIT CLAIM unto the said party of the second part, its successors and assigns, forever, all the right, title, interest, claim and demand which the said party of the first part has in and to the following described mining claims situate, lying and being in the County of Mesa and State of Colorado, to-wit:

POCIASK, recorded in Book 585, page 463
POCIASK EXTENSION, " " " 634, page 453

RECEIVED
MAY 7 - 1956

Part of the 96 c.r.

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto belonging or in anywise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever, of the said party of the first part, either in law or equity, to the only proper use, benefit and behoof of the said party of the second part, its and assigns forever.

IN WITNESS WHEREOF, The said party of the first part has hereunto set his hand and seal the day and year first above written.

Signed, Sealed and Delivered in the Presence of

John P. Kellogg [SEAL]

.....[SEAL]

.....[SEAL]

.....[SEAL]

STATE OF COLORADO,
County of } ss.

The foregoing instrument was acknowledged before me this 21st day of June A. D. 1955, by John P. Kellogg

My commission expires May 1, 1957. Witness my hand and official seal.

.....
Notary Public.

*If by natural person or persons here insert name or names; if by person acting in representative or official capacity or as attorney-in-fact, then insert name of person so executing, attorney-in-fact or other capacity or description; if by officer of corporation, then insert name of such officer or officers, as the president or other officers of such corporation, naming it.—Statutory Acknowledgment, Session 1907.

No. 983. QUIT CLAIM DEED.—Bradford-Robinson Ptg. Co., Mfrs. Robinson's Legal Blanks, 1224-40 Stout St., Denver, Colorado

Item # 2

MINING LEASE

THIS AGREEMENT, made and entered into this 15th day of September, 1955, by and between FLANDERS MINING COMPANY, a co-partnership, composed of Frederick L. Anderson, Lee Van Atta, Lawrence Duerig, and H. P. Slagel, and SOUTHWESTERN URANIUM TRADING CORPORATION, A Delaware Corporation, hereinafter referred to as "LESSORS", and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, hereinafter referred to as "LESSEE".

RECEIVED MAY 7 - 1956

Reference is made to paragraph one (1) of Exhibit "C" of that Special Warranty Deed (attached hereto and made a part hereof and hereinafter referred to as "said Deed") recorded on October 4, 1954, in book 620, page 50, of the records of the County Clerk and Recorder of Mesa County Colorado, said Deed providing for the conveyance of certain mining claims listed therein by the Gateway Mining and Development Company, Inc., to the Flanders Mining Company. Said paragraph one (1) of Exhibit "C" of said Deed provides for the payment of $1,000,000.00 to the Gateway Mining and Development Company, Inc., out of 10% of the gross value of all ores, metals, or minerals mined and sold from all the mining claims listed therein.

WITNESSETH:

That for and in consideration of the premises and the mutual covenants and agreements herein contained, the parties agree as follows, to-wit:

1. The Lessors do hereby let, lease and demise unto the Lessee the following described unpatented lode mining claims situated in the Gateway (unorganized) Mining District, Mesa County, Colorado, (said claims being sometimes hereinafter referred to as the "Gateway group"), to-wit:

CLAIM NAME	Described in the records of Mesa Co., Colorado. Book	Page
John Brown 5	531	393
John Brown 9	531	397
John Brown 10	531	398
John Brown 11	533	158
John Brown 23	533	546
	* 547	21
	* 625	549
John Brown 24	533	545
	* 547	22
John Brown 25	533	548
	* 617	463
	* 625	550
John Brown 26	533	547

	Book	Page
John Brown 26	☆ 625	544
Robert	595	14
	☆ 617	458
Henrietta	595	13
	☆ 617	457
Henrietta Extension	617	460
Litz Fraction	619	34

(said claims being located in sections 11 and 12, township 50 north, range 20 west, New Mexico Prime Meridian)

for a term of five (5) years beginning on this date and for so long a time thereafter the Lessee is fulfilling the requirements of this lease, unless said lease is sooner terminated as hereinafter provided.

2. The Lessee agrees to pay as payment for rental of said premises a 20% royalty on the gross value of all ores, metals and minerals extracted from said premises until such time as a total of 20,000 tons have been mined and marketed; thereafter, Lessee agrees to pay a 25% royalty on the gross value of all ores, metals, and minerals extracted from said premises; PROVIDED, however, that said 20% or 25% royalty, whichever it may be at the time, shall be reduced to 10% or 15% whenever the Gateway Mining and Development Company, Inc., shall have received a total of $1,000,000.00, said payment being more fully described in paragraph 1 of Exhibit "C" of the said Deed attached hereto. Said percentages shall include similar percentages of all premiums or bonuses that may be paid by the United States Atomic Energy Commission, or any other governmental agency, but shall not include any development or haulage allowances received by the Lessee for ores extracted from said premises, it being the agreement of the parties that development and haulage allowances paid to the Lessee shall be kept and retained by it as its sole and separate property. It is agreed between the parties that the rentals to be paid to the Lessor shall be paid by the buyer or buyers of ore produced from said premises and this agreement shall constitute the authority of said buyer or buyers of ore produced from said premises to deduct the amount of rentals due the Lessors from the purchase price of any ores and to remit same to the Lessors at their Grand Junction office.

3. The parties hereto agree that all parties shall have the benefit of any depletion allowances now provided by statute or which may be hereafter provided by statute as their interests may appear.

4. The Lessee agrees to commence a drilling program on said claims prior to October 1, 1955, and to drill not less than thirty-six (36) holes on said claims prior to March 21, 1956, coring through the estimated ore sands, unless said drilling program shall be halted as hereinafter provided. Lessee agrees that it will drill a minimum of five (5) holes a month so long as said program is continuing. If at any time during the drilling program the Lessee elects to cease drilling and to commence mining operations, either by sinking a shaft or incline, or by driving a drift, then it may terminate the drilling program and concentrate all its efforts on mining; PROVIDED, however, that in the event the drilling program is so terminated, then the Lessee shall drill at least one (1) drill hole per year on each of the claims not being actively mined, and on each of the claims not surrendered back to the Lessors as hereinafter provided. Said yearly periods shall commence on the date of the termination of the original program.

5. Beginning with the date that the drilling program has been completed, or that it has been terminated under the provisions of paragraph four (4) above, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below) during the term of this lease for labor and equipment to be used for the purpose of exploration for and development of ore on said mining claims, or to extract from within the limits of said mining claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said claims (said drilling to include the minimum commitments described in paragraph three (3) above), sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims.

6. In the event the Lessee elects to surrender back to the Lessors any of the claims included in the lease, then the commitment relative to expenditures for exploration and development and the value of the ore mined shall be reduced at the rate of $2,000.00 per claim surrendered per quarter, provided, however, that at no time will said exploration-development-mining commitment be reduced below

$5,000.00 per quarter. In order for the said three month commitment to be so reduced, the surrender of any claim or claims must be made prior to the three (3) month period or during the first thirty days of any three month period. If the surrender is made during the last sixty (60) days of any three month period, then no reduction in the exploration, development, and mining shall occur until the following period.

7. The Lessee further agrees that in the event commercial ore is discovered on said claims, it will proceed with due diligence and in good miner-like fashion to develop and mine said ore in as great quantities as is consistent with good mining procedure and practice.

8. It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an Option Purchase Agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within thirty (30) days after the completion of 36 holes on the Gateway group, but prior to the time when any mining operations shall commence on the Gateway group and in no event later than seven (7) months from the date of this agreement, or that it will surrender both its option on the Western Slope group to Flanders Mining Company and this lease on the Gateway group to the Lessors.

9. Lessors agree that in the event the Western Slope option is exercised, and in the event that a commercial ore body is discovered on the Western Slope group, then they will grant the Lessee whatever right-of-way it may require through the Gateway group, whether the claim or claims on which said right-of-way must be placed has (have) been surrendered back to the Lessors or not.

10. Lessee agrees to allow the Lessors or their agent, from time to time, to enter upon said premises or into the shaft and drift giving entry to said premises for the purpose of inspection, survey, or taking samples therefrom. Lessee further agrees to furnish upon request all geological data pertinent to said mining claims obtained by the exploration, development, or mining thereof, and to furnish upon request adequate proof that the terms of paragraph four (4), five (5), six (6) and seven (7) above have been complied with.

11. Lessee agrees to comply with all requirements of the state and federal mining inspectors and to do no act or thing to cause either the federal or state mine inspector to close the mine located upon said premises.

12. Lessee shall and hereby does assume all responsibility in case of accident or injury of its employees or their persons who may become injured in or about said property, and agrees to indemnify and save Lessors harmless therefor, and to carry such public liability insurance which will so protect Lessors.

13. Lessee agrees to promptly pay all bills and expenses incurred by it and by said prompt payment to prevent the filing of any and all liens of miners, mechanics or materialmen against said leased premises, and to pay all Federal and State taxes and exactions levied or assessed in connection with the removal of ore from said mining claims, including taxes or stockpiled ore, whether such taxes be property, occupation or other taxes; PROVIDED that this shall not apply to any income taxes payable by Lessors on royalties or income received by them from said claims or from ore mined and removed therefrom. Further, if a production or severance tax is levied or assessed against production from the property herein at any time during the term of this lease, Lessee shall pay such tax but Lessors shall pay Lessee a proportionate share of the same based on the Lessor's royalties as herein stated.

14. Lessee agrees at all times to comply fully with the provisions of the Workmen's Compensation laws of the State of Colorado and a failure at any time to so fully comply with said provisions shall automatically render this lease null and void.

15. Lessee agrees that it will keep posted upon the premises above described, in a conspicuous place, a notice in the following form, to-wit:

NOTICE TO ALL EMPLOYEES ON THIS PROPERTY AND TO ALL OTHERS WHOM IT MAY CONCERN:

NOTICE IS HEREBY GIVEN TO ALL PARTIES PERFORMING LABOR OR FURNISHING SKILL, MATERIALS, MACHINERY, OR OTHER FIXTURES OR SUPPLIES OF ANY KIND, IN, TO OR ON ANY MINE OR MILL UPON THIS PROPERTY, OR IN, TO OR ON SAID PROPERTY OF ANY PART THEREOF THAT THE UNDERSIGNED, THE OWNERS OF SAID PROPERTY, ARE NOT AND WILL NOT BE RESPONSIBLE FOR ANY LABOR PERFORMED OR SKILL, MATERIALS, MACHINERY, FIXTURES, OR SUPPLIES OR ANY KIND FURNISHED IN, TO OR UPON SAID PROPERTY OR ANY PART THEREOF, NOR SHALL THE INTEREST OF SAID OWNERS BE SUBJECT TO ANY LIEN FOR SAME. ALL PERSONS ARE HEREBY NOTIFIED THAT THE PROPERTY AFORESAID IS BEING OPERATED BY PACIFIC URANIUM MINES COMPANY TO WHOM ALL PERSONS MUST LOOK FOR PAYMENT.

16. Lessee agrees that it shall at all times during the term of this agreement comply with the provisions of the laws now existing or which may be hereafter enacted relative to the performing of annual labor and improvements upon the above-described

unpatented lode mining claims and agrees to keep and file all necessary affidavits of assessment work so done by it not later than April 15 of each year.

17. Lessee agrees that if it returns any or all of said claims to the Lessors, whether because of cancellation of the lease as hereinafter provided or because of voluntary surrender, then it shall return the tunnels, drifts, and mine workings on said claims to the Lessors in good condition unless said workings have been damaged by unavoidable accident, PROVIDED, however, that the Lessee shall be entitled to keep in its possession and for its use whatever right-of-way it may require in order to reach whatever commercial ore on the Western Slope group it may be actively mining.

18. IT IS MUTUALLY AGREED between the parties hereto that Lessee shall have the right to surrender this lease at any time upon giving Lessors at least 30 days written notice sent by registered mail to their office in Grand Junction, Colorado, and, upon such surrender or cancellation as hereinafter provided, Lessee shall have the right, within 30 days, to remove its machinery, equipment, and personal property from said claims PROVIDED that all royalty payments have been paid in full.

19. The Lessee is hereby given the right to assign this lease to third parties of its own choosing. Upon making said assignment, Lessee shall be fully and finally discharged and relieved of any and all liability hereunder, only PROVIDED, however, that it has been in full compliance with the provisions of this lease agreement up to the date of said assignment.

20. The Lessors make no warranty as to title except as to persons claiming by, through, or under them. Lessee has made its own inquiry and investigation as to title and is satisfied with regard thereto, and Lessors make no warranties except as to those specifically contained herein.

21. The performance of any obligations, covenants, conditions or terms, either express or implied hereunder, may be delayed or suspended at any time while, but only so long as the party upon whom the burden of performance may rest shall be hindered in or prevented from performance by an Act of God, accident, strike, lockout, operation of law, war or national emergency, governmental agency regulation, weather conditions which would prevent or render performance abnormally expensive or difficult, unavailability of labor or materials in the open market, or any cause, whether similar or dissimilar, beyond such party's reasonable control.

IT IS MUTUALLY AGREED between the parties hereto that upon violation by Lessee of any of the covenants in this lease, the term thereof shall, at the option of Lessors, expire, and the same and said mining claims shall become forfeited to Lessors and Lessors may thereupon enter upon said mining claims and dispossess all persons occupying same or, at its option, Lessee and all persons found in occupation thereof may be proceeded against as guilty of unlawful detainer; PROVIDED, however, that if said lease is forfeited upon the election of Lessors by reason of the failure of Lessee to perform any covenant thereof, Lessors shall give Lessee at least 30 days notice in writing, by registered mail sent to it at its Grand Junction, Colorado, office notifying it of such failure and setting out in such notice the substantial facts as to any such default or breach, and upon failure or refusal by Lessee to cure and correct such default within 30 days from the receipt of such notice, Lessee shall surrender and deliver up possession of said mining claims, and its rights under this Lease shall thereupon cease and determine.

Time is of the essence of this agreement and all covenants and conditions contained herein, express or implied, shall extend to and be binding upon the heirs, executors, administrators, successors and lawful assigns of all of the parties hereto.

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

FLANDERS MINING COMPANY, A co-partnership

By Frederick T. Anderson
Partner Lessee

ATTEST

Secretary

SOUTHWESTERN URANIUM TRADING CORP.

By Alex W. Head - President
Lessor

ATTEST:

Secretary

PACIFIC URANIUM MINES COMPANY

By A. E. Hurley, President
Lessee

STATE OF ~~COLORADO~~ California)
) SS
COUNTY OF ~~[illegible]~~ Santa Clara)

The foregoing instrument was acknowledged before me this 23rd day of September, 1955, by Frederick L. Anderson for and on behalf of Flanders Mining Company, a co-partnership.

Josephine J. Douglas
Notary Public

MY COMMISSION EXPIRES JULY 27, 1959

STATE OF TEXAS)
) SS
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me this 28th day of September, 1955, by Alex W. Head for and on behalf of Southwestern Uranium Trading Corporation, a Delaware Corporation.

Frances Lee McCallister
FRANCES LEE McCALLISTER Notary Public in and for
HARRIS COUNTY TEXAS

STATE OF California)
) SS
COUNTY OF Los Angeles

The foregoing instrument was acknowledged before me this 19th day of September, 1955, by A. E. Hurley for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

Shirley Karlin
Notary Public

My Commission Expires July 18, 1959

Item #3

OPTION PURCHASE AGREEMENT

RECEIVED MAY 7 - 1956

THIS AGREEMENT is entered into as of this 15th day of September, 1955, by and between Flanders Mining Company, a co-partnership composed of Frederick L. Anderson, Lee Van Atta, Hazen P. Slagel, and Laurence Duerig, hereinafter called "First Party", and Pacific Uranium Mines Company, a Nevada Corporation, of Grand Junction, Colorado, hereinafter called "Second Party".

Reference is made to that certain Mining Lease Agreement between Flanders Mining Company and Southwestern Uranium Trading Corporation, as Lessors, and Pacific Uranium Mines Company, as Lessee, wherein said Lessee takes under lease a certain group of twelve (12) unpatented lode mining claims located in Section 11 and 12, Township 50 north, range 20 west, NMPM, said claims being hereinafter referred to as the "Gateway group", said Mining Lease Agreement being attached hereto and made a part hereof.

Reference is further made to that certain group of twenty-seven (27) unpatented lode mining claims lying contiguous to and directly south of the Gateway group, said claims being hereinafter referred to as the "Western Slope group", and being more specifically described as follows, to-wit:

Claim Name	Described in the records of Mesa County, Colorado Book	Page
Rozy 36	625	32
Rozy Rosy	625	31
Rosy Posy 1	578	328
" " 2	578	329
" " 3	578	330
" " 4	578	331
" " 5	596	174
" " 6	625	25
" " 7	625	27
" " 8	625	26
" " 9	596	178
" " 10	596	179
" " 11	619	506
" " 12	619	507
" " 13	625	28
" " 14	625	29
" " 15	625	30
" " 16	619	508
" " 17	619	509
January 1	598	515
" 5	598	519
" 6	598	520
" 7	598	521
" 14	598	528
" 15	598	529
" 16	598	530
" 17	598	531

Both parties hereby enter into an option purchase agreement on

said Western Slope group, mutually agreeing as follows:

1. First Party hereby grants Second Party an option to purchase said Western Slope group for a total of $25,000.00, to be paid either in cash or in the stock of Pacific Uranium Mines Company, of Los Angeles, California, said stock to be valued at market price on the date this agreement is executed. Said purchase shall be for a 100% interest in said Western Slope group, except that the First Party shall retain a royalty amounting to 9% of the gross values of all ores, metals, and minerals extracted and marketed from said group.

2. It is mutually agreed that this Option Purchase Agreement and the mining lease agreement attached hereto shall be executed concurrently and that neither agreement shall become effective until the other has been executed by all parties. It is further mutually agreed that unless this Option Purchase Agreement is exercised as hereinafter described, then the Second Party shall automatically surrender its rights acquired under the Mining Lease Agreement, and deliver to the Lessors of that agreement a reconveyance of the mining claims listed therein, this obligation, however, being subject to the provisions of paragraph 6 of this Option Purchase Agreement.

3. This Option Purchase Agreement shall be exercised within 30 days after the completion of 36 drill holes on the Gateway group, but prior to the time when any mining operations shall commence either on the Gateway group or the Western Slope group, but in any event not later than seven (7) months from the date of this agreement.

4. First Party agrees to permit Second Party to explore the Western Slope group in any manner it may choose prior to the time this Option must be exercised provided, however, that no mining operations shall commence until the option is exercised, and that no exploration activities shall commence until the Second Party has been informed by the First Party that the First Party has accepted title to and purchased said Western Slope group.

5. In the event the Option Purchase Agreement is exercised, any commercial ore discovered in the Western Slope group shall be mined in as great quantities as is consistent with good mining practice and procedure.

6. First Party is currently in the process of examining title

on the Western Slope group. Said title examination is being made in detail by Mr. Thomas K. Younge of the law firm of Holmes, Younge and Hochmuth of Grand Junction, Colorado. In the event that the First Party accepts title to said claims, it will warrant said title only as to persons claiming through, by, or under First Party. Second Party hereby agrees that in the event First Party accepts title, then it also will accept said title. However, First Party agrees that in the event it rejects title on the Western Slope group, then it will release Second Party from the obligations contained in paragraph 2 of this agreement and paragraph 7 of the Mining Lease Agreement, wherein the Second Party is obligated to exercise its option on the Western Slope group if it elects to continue exploration or commence mining on the Gateway group following the completion of the original drilling program on the Gateway group. In this event, First Party agrees to allow Second Party to keep in effect its lease on the said Gateway group.

Time is of the essence in this agreement and all covenants and conditions contained herein, expressed or implied, shall extend to and be binding upon the heirs, executors, administrators, successors and lawful assigns of all the parties hereto.

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

FLANDERS MINING COMPANY, A Co-partnership

By _____
Partner First Party

PACIFIC URANIUM MINES COMPANY, A Nevada Corporation

By _____
President Second Party

ATTEST:

_____
Secretary

STATE OF California)
) SS
COUNTY OF Santa Clara)

The foregoing instrument was acknowledged before me this 23rd day of September, 1955, by Frederick A. Anderson for and on behalf of Flanders Mining Company, a co-partnership.

_____
Notary Public

MY COMMISSION EXPIRES JULY 27, 1960

STATE OF California)
) SS
COUNTY OF Los Angeles)

The foregoing instrument was acknowledged before me this 19th day of September, 1955, by C. E. Hurley for and on behalf of Pacific Uranium Mines Company, a Nevada Corporation.

Shirley Barlow
Notary Public
My Commission Expires July 18, 1959

Item #4

RECEIVED
MAY 7 - 1956

AMENDMENT TO MINING LEASE

WHEREAS Flanders Mining Company, a co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAWRENCE G. DUERIG, and HAZEN P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, A Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, as "Lessee" did enter into a Mining Lease agreement dated September 15, 1955; and

WHEREAS it is the mutual desire of both Lessors and Lessee to amend said agreement;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #1 of said agreement is amended to include in addition to the mining claims already listed the following mining claims:

Claim Name	Described in the Records of Mesa Co., Colorado	Book	Page
John Brown #1	July 10, 1950	528	499
John Brown #2	" "	"	489
John Brown #3	Aug. 23, 1950	531	391
John Brown #4	" "	"	392
John Brown #6	" "	"	394
John Brown #7	" "	"	395
John Brown #8	" "	"	396
Babbie	" "	"	390
Babbie Extension	Sept. 23, 1954	619	35

B

The mining claims listed in the original Mining Lease agreement shall hereinafter be referred to as "Group A". The mining claims listed in this amendment shall hereinafter be referred to as "Group B".

2. The first sentence of Paragraph #2 of said agreement is amended to read as follows:

"The Lessee agrees to pay as payment for rental <u>of said Group A and Group B mining claims a 20%</u> royalty ....."

O.K.

3. Paragraph #4 of said agreement is amended in its entirety to read as follows:

"The Lessee agrees to commence a drilling program on said Group A claims prior to October 1, 1955, and to drill not less than thirty-six (36) holes on said claims prior to March 21, 1956, and to commence a drilling program on said

Group B. claims prior to March 1, 1956, and to drill not less than thirty-two (32) holes on said claims prior to July 1, 1956, unless either of said drilling programs shall be halted as hereinafter provided. Lessee agrees that it will drill a minimum of five (5) holes a month so long as said programs are continuing, and to coreall holes through the estimated ore horizons. If at any time during either of the two drilling programs on the separate groups the Lessee elects to cease drilling on one group to commence mining operations on said group, either by sinking a shaft or incline, or by driving a drift, then it may terminate the drilling program on that group and concentrate all its efforts on mining, PROVIDED, however, that it informs Lessors to this effect by registered mail sent to them at P. O. Box 861, Grand Junction, specifying in said notice the date of termination of the drilling, and further PROVIDED that in the event the drilling program on said group is so terminated, then the Lessee shall drill one (1) drill hole per year on each of the claims in said group not being actively mined, and on each of the claims not surrendered back to the Lessors as hereinafter provided. Said yearly periods shall commence on the date of the termination of the original program. It is mutually agreed that the two drilling programs on Group A and B shall be considered separately, and that the termination of drilling and commencement of mining on one group shall not mean that drilling on the other group shall be terminated unless mining shall be commenced on that group also".

5. Paragraph #5 of said agreement is amended in its entirety to read as follows:

"Beginning with the date that the last of the two drilling programs has been completed, or that they have been terminated under the provisions of paragraph four (4) above, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this lease on both A and B Groups for labor and equipment to be used for the purpose of exploration for and development of ore on said Group A and Group B mining claims, or to extract

from within the limits of said mining claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said Group A and Group B claims (said drilling to include the minimum commitments described in paragraph three (3) above), sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims."

6. Paragraph #8 of said agreement is amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of 36 holes on the Group A claims of the Gateway group, but prior to the time when any mining operations shall commence on the Group A claims of the Gateway group and in no event later than seven (7) months from the date of this agreement, or that it will surrender both its option on the Western Slope group to Flanders Mining Company and its lease on the Group A claims of the Gateway group to the Lessors".

7. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of November, 1955.

FLANDERS MINING COMPANY, A co-partnership

Partner Lessee

ATTEST:

Secretary

SOUTHWESTERN URANIUM TRADING CORP.

Lessee

ATTEST:

Secretary

PACIFIC URANIUM MINES COMPANY

Lessee

STATE OF ~~COLORADO~~ California)
) SS
COUNTY OF ~~MESA~~ Santa Clara)

The foregoing instrument was acknowledged before me this 1st day of ~~November~~ December, 1955, by Frederick T. Flanders for and on behalf of Flanders Mining Company, a co-partnership.

Notary Public
MY COMMISSION EXPIRES JULY 22, [illegible]

STATE OF TEXAS)
) SS
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me this 14th day of ~~November~~ December, 1955, by W. J. W. Merritt for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corp.

Notary Public in and for Harris County, Texas.

STATE OF CALIF.)
) SS
COUNTY OF Los Angeles)

30 The foregoing instrument was acknowledged before me this 30 day of November, 1955, by IRVING KLUGER for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

Notary Public

Item # 5

RECEIVED
MAY 7 - 1956

AMENDMENT TO OPTION PURCHASE AGREEMENT

WHEREAS Flanders Mining Company, a co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, HAZEN P. SPANEL, and LAURENCE G. DURRIE, as "First Party, and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, of Grand Junction, Colorado, as "Second Party", did enter into an Option Purchase Agreement dated September 15, 1955, whereby Second Party obtained an option to purchase twenty-five mining claims known as the "Western Slope Group" from First Party; and

WHEREAS it is the mutual desire of both parties to add two additional mining claims to said Western Slope Group without increasing the commitments of the Second Party;

NOW THEREFORE, it is mutually agreed that the following two mining claims shall be added to the Western Slope Group, and that they shall become subject to all the provisions of said Option Purchase Agreement as enumerated:

Claim Name	Described in the Records of Mesa Co. Colorado, in Book	Page
Rosy Posy Extension #1	644	127 128

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of November, 1955.

FLANDERS MINING COMPANY, A co-partnership

Frederick L. Anderson
Partner Lessee

PACIFIC URANIUM MINES COMPANY

Irving Kirsch
Lessee

ATTEST:

Irving Kirsch
Secretary

STATE OF California } SS
COUNTY OF Santa Clara

The foregoing instrument was acknowledged before me this 4th day of ~~November~~ December, 1955, by Frederick L. Anderson for and on behalf of Flanders Mining Company, a co-partnership.

Pauline J. Tonglas
Notary Public
MY COMMISSION EXPIRES JULY 27, 1959

STATE OF Calif } SS
COUNTY OF L. Angeles

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

My Commission Expires July 18, 1959

AMENDMENT TO OPTION PURCHASE AGREEMENT
NO. 2

WHEREAS Flanders Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DUERIG, and HAZEN P. SLAGEL, as "First Party", and Pacific Uranium Mines Company, a Nevada Corporation of Grand Junction, Colorado, as "Second Party". did enter into an Option Purchase Agreement dated Sept. 15, 1955, whereby Second Party obtained an option to purchase twenty-five mining claims known as the "Western Slope Group" from First Party; and

WHEREAS said parties did enter into an agreement dated ~~November~~ Dec. 14, 1955, amending said Option Purchase Agreement; and

WHEREAS Flanders Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Option Purchase Agreement and Amendment to Option Purchase Agreement, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. The following two mining claims shall be added to the Western Slope Group, and shall become subject to all the provisions of the said Option Purchase Agreement:

Claim Name	Described in the Records of Mesa County, Colo. Book	Page
January	661	138
January 4	"	142

2. Paragraph #3 of said Option Purchase Agreement shall be amended in its entirety to read as follows:

"This Option Purchase Agreement shall be exercised on or before ~~within~~ thirty (30) days after the completion of the last hole to be drilled under a proposed Defense Minerals Exploration Administration project, application for which is to include both the Gateway group and the Western Slope group, or, in the event the said DMEA loan application is rejected, within ~~ninety (90)~~ ninety (90) days after the date of said rejection. ~~completion of the drilling of 20 additional core~~ holes ~~by Lessee~~".

3. It is mutually agreed that all other provisions of the said Option Purchase Agreement and Amendment to Option Purchase Agreement shall remain in full force and effect, and be applicable to said Western Slope Group.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of _____, 19___.

FLANDERS MINING COMPANY, A co-partnership

By Laurence G. Duering
Partner Lessor

PACIFIC URANIUM MINES COMPANY

Attest:
Secretary

By A. E. Hurley
A. E. HURLEY
President

STATE OF California)
) SS
COUNTY OF Santa Clara)

The foregoing instrument was acknowledged before me this 21st day of February, 1956, by Laurence G. Duering for and on behalf of Flanders Mining Company, a co-partnership.

My commission expires July 17, 1959 Josephine J. Douglas
Notary Public

STATE OF California)
) SS
COUNTY OF Los Angeles)

The foregoing instrument was acknowledged before me this [illegible] day of April, 1956, by A. E. Hurley [illegible] on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

Notary Public

My Commission Expires July 13, 1959

AMENDMENT TO MINING LEASE NO. 2

RECEIVED
MAY 7 - 1956

WHEREAS Flanders Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DUERIG, AND HAZEN P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, a Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation, as "Lessees", did enter into a Mining Lease dated September 15, 1955; and

WHEREAS the same parties did enter into an agreement dated _____, 1955, amending said Mining Lease; and

WHEREAS Flanders Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Mining Lease and Amendment to Mining Lease over to Flanders Mining Company, a Nevada Corporation, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS said Mining Lease and Amendment to Mining Lease do prescribe that Lessor shall perform certain minimum exploration requirements on the said claims listed therein within certain prescribed periods of time or surrender said claims back to Lessors; and

WHEREAS Lessee did complete a portion of the said minimum exploration requirements; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #4 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"The Lessee agrees to submit to the Defense Minerals Exploration Administration (hereinafter called "DMEA") prior to March 1, 1956, an application for a loan for the purpose of continuing exploratory drilling on the Group A and Group B claims (hereinafter called "said claims") said loan application to request that a minimum of $20,000.00 be furnished by the DMEA to conduct said additional drilling. Relative to said loan application, it is mutually agreed as follows:

a) If said loan is granted, Lessee shall be absolutely and unconditionally obligated to undertake the payment of all those costs of the loan project not paid by the DMEA, said costs to

include those incurred by the normal maintenance of the claims while the loan project is being carried on. Lessee further agrees not to surrender any of the said claims back to Lessor until the loan project has been completed.

b) If said loan is granted and if the production of uranium ore results, Lessee shall pay the DMEA the full amount of the royalty due under the DMEA contract, but Lessors shall reimburse Lessee monthly for one-half (1/2) of the amount paid by the Lessee to the DMEA.

c) If said loan is not granted by the DMEA, Lessee shall surrender said Group A and Group B claims back to Lessors within thirty (30) days after the rejection of said loan application, or shall within thirty (30) days of said rejection commence an exploration program of its own as hereinafter described in paragraph 5 of this Mining Lease".

2. Paragraph #5 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"Beginning on the date thirty (30) days after the last drill hole of the said DMEA loan project has been completed or thirty (30) days after the said loan application has been rejected, ~~or if said DMEA loan is not approved by July 1, 1956~~ the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this lease on said claims for labor and equipment to be used for the purpose of exploration for and development of ore on said claims, or to extract from within the limits of said claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said claims, sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims. Lessee further agrees that

in the event he commences an actual mining operation on any of the said claims, then the minimum requirements as outlined above shall include the drilling of one core hole a year to ore horizon depth on each of the said claims not being actively mined and on each of the claims not surrendered back to Lessors as hereinafter provided, said minimum requirement to prevail whether sufficient ore to fulfill the ninety (90) day dollar commitment is produced or not."

3. Paragraph #6 of said Mining Lease is hereby amended to include the following at the end of the paragraph:

"This paragraph is subject to the provisions of paragraph 4 a) above".

4. Paragraph #8 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign as option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of the last drill hole of the DMEA project, but prior to the time when any mining operations shall commence on the claims of the Gateway group or that it will surrender both its option on the Western Slope group back to Flanders Mining Company and its lease on the Gateway group back to Lessors. In the event the above described DMEA loan is rejected, and provided Lessee commences an exploration program on the said claims as hereinabove described in paragraph 5, it is agreed that said option on the Western Slope group shall be exercised on or before thirty (30) days after the completion of an additional twenty (20) drill holes by Lessee on the Gateway group.

5. Paragraph #18 of said Mining Lease is amended to include the following after the words "to surrender this lease at any time" in line 2 of the said paragraph:

5. continued

".....after the completion of the above described DMEA loan project or after the rejection of said DMEA loan application ".

6. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of February, 1956.

FLANDERS MINING COMPANY, ~~A co-partnership~~
A Nevada Corporation

By Frederick S. Anderson
Lessor

ATTEST
Secretary

SOUTHWESTERN URANIUM TRADING CORP.,
A Delaware Corporation

By _____
Lessor

ATTEST
Secretary

PACIFIC URANIUM MINES COMPANY
A Nevada Corporation

By A. E. Hurley
A. E. HURLEY, Lessee

STATE OF California)
) SS
COUNTY OF Santa Clara

The foregoing instrument was acknowledged before me this 21st day of February, 1956, by Frederick S. Anderson for and on behalf of Flanders Mining Company, a co-partnership.

MY COMMISSION EXPIRES JULY 27, 1959

Josephine J. Douglas
Notary Public

STATE OF)
) SS
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of _____, 195___, by _____ for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corp.

_____
Notary Public

STATE OF California)
) SS
COUNTY OF Los Angeles)

The foregoing instrument was acknowledged before me this 30th day of April, 1956, by R. E. Hurley for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

Notary Public

My Commission Expires July 23, [illegible]

Item #1

Recorded at ..... o'clock ..... M., ...

Reception No. ..... Recorder.

THIS DEED, Made this twenty-first day of June in the year of our Lord one thousand nine hundred and fifty-five between

JOHN. P. KELLOGG

of the City of Grand Junction County of Mesa and State of Colorado, of the first part, and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation

WITNESSETH, That the said party of the first part, for and in consideration of the sum of TEN ($10.00) DOLLARS, to the said party of the first part in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, has remised, released, sold, conveyed and QUIT CLAIMED, and by these presents do es remise, release, sell, convey and QUIT CLAIM unto the said party of the second part, its successors and assigns, forever, all the right, title, interest, claim and demand which the said party of the first part has in and to the following described mining claims situate, lying and being in the County of Mesa and State of Colorado, to-wit:

POCIASK, recorded in Book 585, page 463
POCIASK EXTENSION, " " " 634, page 453

Part of the [illegible]

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto belonging or in anywise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever, of the said party of the first part, either in law or equity, to the only proper use, benefit and behoof of the said party of the second part, its and assigns forever.

IN WITNESS WHEREOF, The said party of the first part has hereunto set his hand and seal the day and year first above written.

Signed, Sealed and Delivered in the Presence of

John P. Kellogg [SEAL]

[SEAL]

[SEAL]

[SEAL]

STATE OF COLORADO, } ss.
County of

The foregoing instrument was acknowledged before me this 21st day of June A. D. 1957 by John P. Kellogg

My commission expires May 1, 1957 . Witness my hand and official seal.

Notary Public.

*If by natural person or persons here insert name or names; if by person acting in representative or official capacity or as attorney-in-fact, then insert name of person as executor, attorney-in-fact or other capacity or description; if by officer of corporation, then insert name of such officer or officers, as the president or other officers of such corporation, naming it.—*Statutory Acknowledgment, Section 1007.*

Item # 5

AMENDMENT TO OPTION PURCHASE AGREEMENT

WHEREAS Flanders Mining Company, a copartnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, [illegible] P. [illegible], and LAWRENCE O. DURIS, as "First Party, and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, of Grand Junction, Colorado, as "Second Party", did enter into an Option Purchase Agreement dated September 15, 1955, whereby Second Party obtained an option to purchase twenty-five mining claims known as the "Western Slope Group" from First Party; and

WHEREAS it is the mutual desire of both parties to add two additional mining claims to said Western Slope Group without increasing the commitments of the Second Party;

NOW THEREFORE, it is mutually agreed that the following two mining claims shall be added to the Western Slope Group, and that they shall become subject to all the provisions of said Option Purchase Agreement as enumerated:

Claim Name	Recorded in the Records of Mesa Co. Book	Page
Rosy Posy Extension #1	644	127 128

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of November, 1955.

FLANDERS MINING COMPANY, A co-partnership

Frederick L. Anderson
Partner Lessee

PACIFIC URANIUM MINES COMPANY

ATTEST:
Irving Hybok
Secretary

Irving Hybok
Secretary Lessee

STATE OF California }
COUNTY OF Santa Clara } SS

The foregoing instrument was acknowledged before me this 5th day of November, December, 1955, by Frederick L. Anderson for and on behalf of Flanders Mining Company, a co-partnership.

Josephine J. Douglas
Notary Public
MY COMMISSION EXPIRES JULY 30, 1958

STATE OF Calif }
COUNTY OF L.A. } SS

The foregoing instrument was acknowledged before me this 30 day of November, 1955, by [illegible] for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

AMENDMENT TO OPTION PURCHASE AGREEMENT
NO. 2

RECEIVED
MAY 7 - 1956

WHEREAS Flanders Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DUERIG, and HAZEN P. SLAGEL, as "First Party", and Pacific Uranium Mines Company, a Nevada Corporation of Grand Junction, Colorado, as "Second Party". did enter into an Option Purchase Agreement dated Sept. 15, 1955, whereby Second Party obtained an option to purchase twenty-five mining claims known as the "Western Slope Group" from First Party; and

WHEREAS said parties did enter into an agreement dated Dec ~~November~~ 14, 1955, amending said Option Purchase Agreement; and

WHEREAS Flanders Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Option Purchase Agreement and Amendment to Option Purchase Agreement, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. The following two mining claims shall be added to the Western Slope Group, and shall become subject to all the provisions of the said Option Purchase Agreement:

Claim Name	Described in the Records of Mesa County, Colo. Book	Page
January	661	138
January 4	"	142

2. Paragraph #3 of said Option Purchase Agreement shall be amended in its entirety to read as follows:

"This Option Purchase Agreement shall be exercised on or before ~~within~~ thirty (30) days after the completion of the last hole to be drilled under a proposed Defense Minerals Exploration Administration project, application for which is to include both the Gateway group and the Western Slope group, or, in the event the said DMEA loan application is rejected, within ~~ninety (90)~~ ninety (90) days after the date of said rejection. ~~completion of the drilling of 20 additional core holes by Lessee~~".

WMS JR

3. It is mutually agreed that all other provisions of the said Option Purchase Agreement and Amendment to Option Purchase Agreement shall remain in full force and effect, and be applicable to said Western Slope Group.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of _____, 19___.

FLANDERS MINING COMPANY, A co-partnership

By Lawrence G. Duerig
Partner Lessor

PACIFIC URANIUM MINES COMPANY

Attest:
Secretary

By A. E. Hurley
A. E. HURLEY Lessee

STATE OF California)
) SS
COUNTY OF Santa Clara

The foregoing instrument was acknowledged before me this 21st day of February, 1956, by Lawrence G. Duerig for and on behalf of Flanders Mining Company, a co-partnership.

My commission expires May 27, [illegible]

Josephine J. Douglas
Notary Public

STATE OF California)
) SS
COUNTY OF Los Angeles)

The foregoing instrument was acknowledged before me this 2nd day of April, 1956, by A. E. Hurley for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

Shelly [illegible]
Notary Public

My Commission Expires May 25, [illegible]

RECEIVED
MAY 7 - 1956

AMENDMENT TO MINING LEASE NO. 2

WHEREAS Flanders Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DUERIG, AND HAZEN P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, a Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation, as "Lessees", did enter into a Mining Lease dated September 15, 1955; and

WHEREAS the same parties did enter into an agreement dated [illegible], 1956, amending said Mining Lease; and

WHEREAS Flanders Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Mining Lease and Amendment to Mining Lease over to Flanders Mining Company, a Nevada Corporation, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS said Mining Lease and Amendment to Mining Lease do prescribe that Lessor shall perform certain minimum exploration requirements on the said claims listed therein within certain prescribed periods of time or surrender said claims back to Lessors; and

WHEREAS Lessee did complete a portion of the said minimum exploration requirements; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #4 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"The Lessee agrees to submit to the Defense Minerals Exploration Administration (hereinafter called "DMEA") prior to March 1, 1956, an application for a loan for the purpose of continuing exploratory drilling on the Group A and Group B claims (hereinafter called "said claims") said loan application to request that a minimum of $20,000.00 be furnished by the DMEA to conduct said additional drilling. Relative to said loan application, it is mutually agreed as follows:

a) If said loan is granted, Lessee shall be absolutely and unconditionally obligated to undertake the payment of all those costs of the loan project not paid by the DMEA, said costs to

include those incurred by the normal maintenance of the claims while the loan project is being carried on. Lessee further agrees not to surrender any of the said claims back to Lessor until the loan project has been completed.

b) If said loan is granted and if the production of uranium ore results, Lessee shall pay the DMEA the full amount of the royalty due under the DMEA contract, but Lessors shall reimburse Lessee monthly for one-half (1/2) of the amount paid by the Lessee to the DMEA.

c) If said loan is not granted by the DMEA, Lessee shall surrender said Group A and Group B claims back to Lessors within thirty (30) days after the rejection of said loan application, or shall within thirty (30) days of said rejection commence an exploration program of its own as hereinafter described in paragraph 5 of this Mining Lease".

2. Paragraph #5 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"Beginning on the date thirty (30) days after the last drill hole of the said DMEA loan project has been completed or thirty (30) days after the said loan application has been rejected, ~~or if said DMEA loan is not approved by July 1, 1956,~~ the Lessee agrees to expend not less than $24, [illegible] three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this lease on said claims for labor and equipment to be used for the purpose of exploration for and development of ore on said claims, or to extract from within the limits of said claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said claims, sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims. Lessee furtner agrees that

in the event he commences an actual mining operation on any of the said claims, then the minimum requirements as outlined above shall include the drilling of one core hole a year to ore horizon depth on each of the said claims not being actively mined and on each of the claims not surrendered back to Lessors as hereinafter provided, said minimum requirement to prevail whether sufficient ore to fulfill the ninety (90) day dollar commitment is produced or not."

3. Paragraph #6 of said Mining Lease is hereby amended to include the following at the end of the paragraph:

"This paragraph is subject to the provisions of paragraph 4 a) above".

4. Paragraph #8 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign as option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of the last drill hole of the DMEA project, but prior to the time when any mining operations shall commence on the claims of the Gateway group or that it will surrender both its option on the Western Slope group back to Flanders Mining Company and its lease on the Gateway group back to Lessors. In the event the above described DMEA loan is rejected, and provided Lessee commences an exploration program on the said claims as hereinabove described in paragraph 5, it is agreed that said option on the Western Slope group shall be exercised on or before thirty (30) days after the completion of an additional twenty (20) drill holes by Lessee on the Gateway group.

5. Paragraph #18 of said Mining Lease is amended to include the following after the words "to surrender this lease at any time" in line 2 of the said paragraph:

5. continued

".....after the completion of the above described DMEA loan project or after the rejection of said DMEA loan application ".

6. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this ____ __day of February, 1956.

FLANDERS MINING COMPANY, ~~A corp~~
A Nevada Corporation ~~partnership~~

By Frederick S. Anderson
Lessor

ATTEST
[illegible] S. Wahl Jr.
Secretary

SOUTHWESTERN URANIUM TRADING CORP.,
A Delaware Corporation

By [illegible]
Lessor

ATTEST
[illegible]
Secretary

PACIFIC URANIUM MINES COMPANY
A Nevada Corporation

By A. E. Hurley
A E Hurley, Lessee

STATE OF California)
) SS
COUNTY OF Santa Clara

The foregoing instrument was acknowledged before me this 21st day of February, 1956, by Frederick S. Anderson for and on behalf of Flanders Mining Company, a co-partnership.

~~MY COMMISSION EXPIRES MAY 27, 1959~~ Josephine J. Douglas
Notary Public

STATE OF)
) SS
COUNTY OF)

The foregoing instrument was acknowledged before me this _____day of _____, 195___, by _____ for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corp.

_____
Notary Public

STATE OF California }
COUNTY OF Los Angeles } SS

The foregoing instrument was acknowledged before me this 27th day of April, 1956, by R. E. Hurley for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

[illegible]
Notary Public

[illegible]

LEASE AND OPTION AGREEMENT

THIS AGREEMENT, Made and entered into this _____ day of March, A. D. 1955, by and between ARTHUR POCIASK and ROBERT POCIASK, hereinafter known as Parties of the First Part, and JOHN P. KELLOGG, hereinafter known as Party of the Second Part,

W I T N E S S E T H

THAT for and in consideration of the sum of one dollar and other valuable consideration, cash in hand paid, parties of the first part hereby lease to party of the second part the following described unpatented mining claims located in the Gateway District, Mesa County, Colorado, to-wit:

Pociask, recorded in Book 585, Page 463
Pociask Extension, in Book 634, Page 453

The term of this lease shall commence on this date and terminate on March 9, 1960, unless sooner terminated as herein provoded.

In the event party of the second part performs all of the covenants herein agreed to be performed by him, second party shall have the right to renew this lease for a further term of five (5) years from and after March 9, 1960 upon giving to first parties written notice of his intention so to do at least six (6) months prior to the end of the primary term.

Party of the second part agrees to perform sufficient assessment work each year to maintain the claims as valid claims under the Mining Laws and to file Affidavits of Annual Labor each year

such purchase first parties shall be deemed to have, own and retain an overriding royalty commensurate with and equal to the royalty to be paid to them under the lease herein provided.

Party of the second part agrees to furnish to parties of the first part, upon request and at all times, all drilling locations, assays, geologic and hole location maps and any and all other pertinent data regarding exploration work performed by second party on the within described mining claims.

In the event party of the second part fails to perform any agreements or covenants herein agreed to be performed by him, first parties shall have the right to terminate this agreement upon giving to second party, or his assigns ten (10) days written notice of their intention so to do.

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

Antoon Porisek (SEAL)

Robert Porisek (SEAL)

Parties of the First Part.

John P. Kellogg (SEAL)

Party of the Second Part.

AMENDMENT TO OPTION PURCHASE AGREEMENT
NO. 2

WHEREAS Flandro Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DURRIE, and HAZEN P. SLAGEL, as "First Party", and Pacific Uranium Mines Company, a Nevada Corporation of Grand Junction, Colorado, as "Second Party": did enter into an Option Purchase Agreement dated Sept. 15, 1955, whereby Second Party obtained an option to purchase twenty-five mining claims known as the "Western Slope Group" from First Party; and

WHEREAS said parties did enter into an agreement dated November _____, 1955, amending said Option Purchase Agreement; and

WHEREAS Flandro Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Option Purchase Agreement and Amendment to Option Purchase Agreement, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. The following two mining claims shall be added to the Western Slope Group, and shall become subject to all the provisions of the said Option Purchase Agreement:

Claim Name	Described in the Records of Mesa County, Colo. Book	Page
January	661	138
January 4		142

2. Paragraph (j) of said Option Purchase Agreement shall be amended in its entirety to read as follows:

"This Option Purchase Agreement shall be exercised within thirty (30) days after the completion of the last hole to be drilled under a proposed Defense Minerals Exploration Administration project, application for which is to include both the Gateway group and the Western Slope group, or, in the event the said DMEA loan application is rejected, within thirty (30) days after the completion of the drilling of 20 additional core holes by Lessee".

3. It is mutually agreed that all other provisions of the said Option Purchase Agreement and Amendment to Option Purchase Agreement shall remain in full force and effect, and be applicable to said Western Slope Group.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____day of _____, 19___.

AMENDMENT TO MINING LEASE NO. [illegible]

WHEREAS Flandors Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DUERIG, AND HAZEN P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, a Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation, as "Lessees", did enter into a Mining Lease dated September 15, 1955; and

WHEREAS the same parties did enter into an agreement dated November _____, 1955, amending said Mining Lease; and

WHEREAS Flandors Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Mining Lease and Amendment to Mining Lease over to Flandors Mining Company, a Nevada Corporation, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS said Mining Lease and Amendment to Mining Lease do prescribe that Lessor shall perform certain minimum exploration requirements on the said claims listed therein within certain prescribed periods of time or surrender said claims back to Lessors; and

WHEREAS Lessee did complete a portion of the said minimum exploration requirements; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #4 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"The Lessee agrees to submit to the Defense Minerals Exploration Administration (hereinafter called "DMEA") prior to March 1, 1956, an application for a loan for the purpose of continuing exploratory drilling on the Group A and Group B claims (hereinafter called "said claims") said loan application to request that a minimum of $20,000.00 be furnished by the DMEA to conduct said additional drilling. Relative to said loan application, it is mutually agreed as follows:

a) If said loan is granted, Lessee shall be absolutely and unconditionally obligated to undertake the payment of all [illegible] costs of the loan project not paid by the DMEA, said costs [illegible]

include those incurred by the normal maintenance of the claims while the loan project is being carried on. Lessee further agrees not to surrender any of the said claims back to Lessor until the loan project has been completed.

b) If said loan is granted and if the production of uranium ore results, Lessee shall pay the DMEA the full amount of the royalty due under the DMEA contract, but Lessors shall reimburse Lessee monthly for one-half (1/2) of the amount paid by the Lessee to the DMEA.

c) If said loan is not granted by the DMEA, Lessee shall surrender said Group A and Group B claims back to Lessors within thirty (30) days after the rejection of said loan application, or shall within thirty (30) days of said rejection commence an exploration program of its own as hereinafter described in paragraph 5 of this Mining Lease".

2. Paragraph #5 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"Beginning on the date thirty (30) days after the last drill hole of the said DMEA loan project has been completed or thirty (30) days after the said loan application has been rejected, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this lease on said claims for labor and equipment to be used for the purpose of exploration for and development of ore on said claims, or to extract from within the limits of said claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.0 in exploration for and development of ore on said mining claim Said exploration and development shall include drilling on said claims, sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocki out a commercial ore on said claims. Lessee further agrees th

in the event be commence an actual mining operation on any of the said claims, then the minimum requirements as outlined above shall include the drilling of one core hole a year to one horizon depth on each of the said claims not being actively mined and on each of the claims not surrendered back to Lessors as hereinafter provided, said minimum requirement to prevail whether sufficient ore to fulfill the ninety (90) day delivery commitment is produced or not."

3. Paragraph #5 of said Mining Lease is hereby amended to include the following at the end of the paragraph:

"This paragraph is subject to the provisions of paragraph 4 a) above".

4. Paragraph #8 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of the last drill hole of the DMEA project, but prior to the time when any mining operations shall commence on the claims of the Gateway group or that it will surrender both its option on the Western Slope group back to Flanders Mining Company and its lease on the Gateway group back to Lessors. In the event the above described DMEA lease is rejected, and provided Lessee commences an exploration program on the said claims as hereinabove described in paragraph 5, it is agreed that said option on the Western Slope group may be exercised within thirty (30) days after the completion of an additional twenty (20) drill holes by Lessee on the Gateway group.

5. Paragraph #16 of said Mining Lease is amended to include the following after the words "to surrender this lease at any time" in line 2 of the said paragraph:

5. continued

".....after the completion of the above described DMEA loan project or after the rejection of said DMEA loan application ".

6. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____day of February, 1956.

_____
Lessor

_____

AMENDMENT TO MINING LEASE

WHEREAS Flamboro Mining Company, a co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAWRENCE G. LUNKIE, and WAYNE P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, A Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, as "Lessee" did enter into a Mining Lease agreement dated September 15, 1955; and

WHEREAS it is the mutual desire of both Lessors and Lessee to amend said agreement;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #1 of said agreement is amended to include in addition to the mining claims already listed the following mining claims:

Claim Name	Described in the Records of San Co., Colorado	Book	Page
John Brown #1	July 10, 1950	528	490
John Brown #2	" "	"	489
John Brown #3	Aug. 23, 1950	531	191
John Brown #4	" "	"	192
John Brown #6	" "	"	194
John Brown #7	" "	"	195
John Brown #8	" "	"	196
Babbie	" "	"	199
Babbie Extension	Sept. 23, 1954	619	35

The mining claims listed in the original Mining Lease agreement shall hereinafter be referred to as "Group A". The mining claims listed in this amendment shall hereinafter be referred to as "Group B".

2. The first sentence of Paragraph #2 of said agreement is amended to read as follows:

"The Lessee agrees to pay as payment for rental of said Group A and Group B mining claims a 20% royalty ....."

3. Paragraph #4 of said agreement is amended in its entirety to read as follows:

"The Lessee agrees to commence a drilling program on said Group A claims prior to October 1, 1955, and to drill not less than thirty-six (36) holes on said claims prior to March 31, 1956, and to commence a drilling program on said

Group B. claims prior to March 1, 1956, and to drill not less than thirty-two (32) holes on said claims prior to July 1, 1956, unless either of said drilling programs shall be halted as hereinafter provided. Lessee agrees that it will drill a minimum of five (5) holes a month so long as said programs are continuing, and to overall holes through the estimated ore horizons. If at any time during either of the two drilling programs on the separate groups the Lessee elects to cease drilling on one group to commence mining operations on said group, either by sinking a shaft or incline, or by driving a drift, then it may terminate the drilling program on that group and concentrate all its efforts on mining, PROVIDED, however, that it informs Lessors to this effect by registered mail sent to them at P. O. Box 661, Grand Junction, specifying in said notice the date of termination of the drilling, and further PROVIDED that in the event the drilling program on said group is so terminated, then the Lessee shall drill one (1) drill hole per year on each of the claims in said group not being actively mined, and on each of the claims not surrendered back to the Lessors as hereinafter provided. Said yearly periods shall commence on the date of the termination of the original program. It is mutually agreed that the two drilling programs on Group A and B shall be considered separately, and that the termination of drilling and commencement of mining on one group shall not mean that drilling on the other group shall be terminated unless mining shall be commenced on that group also".

5. Paragraph #5 of said agreement is amended in its entirety to read as follows:

"Beginning with the date that the last of the two drilling programs has been completed, or that they have been terminated under the provisions of paragraph four (4) above, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this lease on both A and B Groups for labor and equipment to be used for the purpose of exploration for and development of ore on said Group A and Group B mining claims, or to extract

from within the limits of said mining claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said Group A and Group B claims (said drilling to include the minimum commitments described in paragraph three (3) above), sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims."

6. Paragraph #8 of said agreement is amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of 36 holes on the Group A claims of the Gateway group, but prior to the time when any mining operations shall commence on the Group A claims of the Gateway group and in no event later than seven (7) months from the date of this agreement, or that it will surrender both its option on the Western Slope group to Flanders Mining Company and its lease on the Group A claims of the Gateway group to the Lessors".

7. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of November, 1955.

FLANDERS MINING COMPANY, A co-partnership

_____
Partner Partner

ATTEST:

SOUTHWESTERN URANIUM TRADING CORP.

_____
Secretary

_____
President

ATTEST:

PACIFIC URANIUM MINES COMPANY

_____
Secretary

_____
President

STATE OF COLORADO)
) ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Flanders Mining Company, a co-partnership.

_____
Notary Public

STATE OF)
) ss
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corp.

_____
Notary Public

STATE OF)
) ss
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

_____
Notary Public

OPTION PURCHASE AGREEMENT

THIS AGREEMENT is entered into as of this _____ day of August, 1955, by and between Flanders Mining Company, a copartnership composed of Frederick L. Anderson, Leo Van Atta, Emma P. Slapel, and Lorenzo Durig, hereinafter called "First Party", and Pacific Uranium Mines Company, a Nevada Corporation of Grand Junction, Colorado, hereinafter called "Second Party".

Reference is made to that certain Mining Lease Agreement between Flanders Mining Company and Southwestern Uranium Trading Corporation, as Lessors, and Pacific Uranium Mines Company, as Lessee, wherein said Lessee taken under lease a certain group of twelve (12) unpatented lode mining claims located in Sections 11 and 12, Township 50 North, Range 20 West, NMPM, said claims being hereinafter referred to as the "Gateway group", said Mining Lease Agreement being attached hereto and made a part hereof.

Reference is further made to that certain group of twenty-seven (27) unpatented lode mining claims lying contiguous to and directly south of the Gateway group, said claims being hereinafter referred to as the "Western Slope group", and being more specifically described as follows, to-wit:

Claim Name		Described in the records of Mesa County, Colorado	
		Book	Page
Roxy 36	Pozy on Map	625	12
Pozy Roxy	-	625	11
Roxy Pozy	1	578	128
" "	2	578	129
" "	3	578	130
" "	4	578	131
" "	5	593	174
" "	6	625	25
" "	7	625	27
" "	8	625	26
" "	9	593	178
" "	10	593	179
" "	11	619	503
" "	12	619	507
" "	13	625	28
" "	14	625	29
" "	15	625	30
" "	16	619	508
" "	17	619	509
January	1	593	515
"	5	593	519
"	6	593	520
"	7	593	521
"	14	593	528
"	15	593	529
"	16	593	530
"	17	593	531

The parties hereby enter into an option purchase agreement on

said Western Slope group, mutually agreeing as follows:

1. First Party hereby grants Second Party an option to purchase said Western Slope group for a total of $[illegible],000.00, to be paid either in cash or in the stock of Pacific Uranium Mines Company, of Los Angeles, California, said stock to be valued at market price on the date this agreement is executed. Said purchase shall be for a 100% interest in said Western Slope group, except that the First Party shall retain a royalty amounting to 9% of the gross value of all ores, metals, and minerals extracted and marketed from said group.

2. It is mutually agreed that this Option Purchase Agreement and the mining lease agreement attached hereto shall be executed concurrently and that neither agreement shall become effective until the other has been executed by all parties. It is further mutually agreed that unless this Option Purchase Agreement is exercised as hereinafter described, then the Second Party shall automatically surrender its rights acquired under the Mining Lease Agreement, and deliver to the Lessors of that agreement a reconveyance of the mining claims listed therein, this obligation, however, being subject to the provisions of paragraph 6 of this Option Purchase Agreement.

3. This Option Purchase Agreement shall be exercised within 30 days after the completion of 3 drill holes on the Ontario group, but prior to the time when any mining operations shall commence either on the Ontario group or the Western Slope group, but in any event not later than seven (7) months from the date of this agreement.

4. First Party agrees to permit Second Party to explore the Western Slope group in any manner it may choose prior to the time this Option must be exercised provided, however, that no mining operations shall commence until the option is exercised, and that no exploration activities shall commence until the Second Party has been informed by the First Party that the First Party has accepted title to and purchased said Western Slope group.

5. In the event the Option Purchase Agreement is exercised, any commercial ore discovered in the Western Slope group shall be mined in as great quantities as is consistent with good mining practice and procedure.

6. First Party is currently in the process of examining title

on the Western Slope group. Said title examination is being made in detail by Mr. Thomas K. Younge of the law firm of Kelman, Younge and Hockenmith of Grand Junction, Colorado. In the event that the First Party accepts title to said claims, it will warrant said title only as to persons claiming through, by, or under First Party. Second Party hereby agrees that in the event First Party accepts title, then it also will accept said title. However, First Party agrees that in the event it rejects title on the Western Slope group, then it will release Second Party from the obligations contained in paragraph 2 of this agreement and paragraph 7 of the Mining Lease Agreement, wherein the Second Party is obligated to exercise its option on the Western Slope group if it elects to continue exploration or commence mining on the Gateway group following the completion of the original drilling program on the Gateway group. In this event, First Party agrees to allow Second Party to keep in effect its lease on the said Gateway group.

Time is of the essence in this agreement and all covenants and conditions contained herein, expressed or implied, shall extend to and be binding upon the heirs, executors, administrators, successors and lawful assigns of all the parties hereto.

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

PLANTERS MINING COMPANY, A co-partnership

BY _____
Partner First Party

ATTEST:

PACIFIC URANIUM MINES COMPANY, A Nevada Corporation

_____
Secretary

BY _____
Second Party

STATE OF }
COUNTY OF } SS

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by _____ for and on behalf of Planters Mining Company, a co-partnership.

_____
Notary Public

STATE OF
COUNTY OF } SS

The foregoing instrument was acknowledged before me this_____ Day of _____, 19__, by _____for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

_____
Notary Public

RECEIVED
MAR - 8 1956

MINING LEASE

THIS AGREEMENT, made and entered into this _____ day of August, 1955, by and between FLANDERS MINING COMPANY, a co-partnership composed of Frederick L. Anderson, Leo Van Atta, Lawrence Duerig, and H. F. Slagel, and SOUTHWESTERN URANIUM TRADING CORPORATION, A Delaware Corporation, hereinafter referred to as "LESSORS", and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, hereinafter referred to as "LESSEE".

Reference is made to paragraph one (1) of Exhibit "C" of that Special Warranty Deed (attached hereto and made a part hereof and hereinafter referred to as "said Deed") recorded on October 4, 1954, in book 620, page 50, of the records of the County Clerk and Recorder of Mesa County Colorado, said Deed providing for the conveyance of certain mining claims listed therein by the Gateway Mining and Development Company, Inc., to the Flanders Mining Company. Said paragraph one (1) of Exhibit "C" of said Deed provides for the payment of $1,000,000.00 to the Gateway Mining and Development Company, in ... out of 10% of the gross value of all ores, metals, or minerals mined and sold from all the mining claims listed therein.

WITNESSETH:

That for and in consideration of the promises and the mutual covenants and agreements herein contained, the parties agree as follows, to-wit:

1. The Lessors do hereby let, lease and demise unto the Lessee the following described unpatented lode mining claims situated in the Gateway (unorganized) Mining District, Mesa County, Colorado, (said claims being sometimes hereinafter referred to as the "Gateway group"), to-wit:

CLAIM NAME	Described in the records of Mesa Co., Colorado. Book	Page
John Brown 5	531	193
John Brown 9	531	197
John Brown 10	531	198
John Brown 11	533	158
John Brown 23	533	546
	* 547	21
	* 625	549
John Brown 24	533	545
	* 547	22
John Brown 25	533	548
	* 617	463
	* 625	550
John Brown 26	533	547

		Book	Page
John Brown 26	*	625	544
Robert		595	14
	*	617	458
Henrietta		595	13
	*	617	457
Henrietta Extension		617	460
Lite Fraction		619	14

(said claims being located in sections 11 and 12, township 50 north, range 20 west, New Mexico Prime Meridian)

for a term of five (5) years beginning on this date and for so long a time thereafter the Lessee is fulfilling the requirements of this lease, unless said lease is sooner terminated as hereinafter provided.

2. The Lessee agrees to pay as payment for rental of said premises a 20% royalty on the gross value of all ores, metals and minerals extracted from said premises until such time as a total of 20,000 tons have been mined and marketed; thereafter, Lessee agrees to pay a 25% royalty on the gross value of all ores, metals, and minerals extracted from said premises; PROVIDED, however, that said 20% or 25% royalty, whichever it may be at the time, shall be reduced by 10% whenever the Atomic Mining and Development Company, Inc., shall have received [illegible] of 1,000,000.00, said payment being more fully described in paragraph 1 of "Exhibit "C" of the said Deed attached hereto. Said percentages shall include similar percentages of all premium or bonus that may be paid by the United States Atomic Energy Commission, or any other governmental agency, but shall not include any development or haulage allowances received by the Lessee for ores extracted from said premises, it being the agreement of the parties that development and haulage allowances paid to the Lessee shall be kept and retained by it as its sole and separate property. It is agreed between the parties that the rentals to be paid to the Lessor shall be paid by the buyer or buyers of ore produced from said premises and this agreement shall constitute the authority of said buyer or buyers of ore produced from said premises to deduct the amount of rentals due the Lessors from the purchase price of ore and to remit same to the Lessors at their Grand Junction offi

3. The parties hereto agree that all parties shall have the benefit of any depletion allowances now provided by statute or whi may be hereafter provided by statute as their interests may appear

4. The Lessee agrees to commence a drilling program on said claims prior to September 10, 1955, and to drill not less than thirty-six (36) holes on said claims prior to March 1, 1956, comin

through the estimated ore sands, unless said drilling program shall be halted as hereinafter provided. Lessee agrees that it will drill a minimum of five (5) holes a month so long as said program is continuing. If at any time during the drilling program the Lessee elects to cease drilling and to commence mining operations, either by sinking a shaft or incline, or by driving a drift, then it may terminate the drilling program and concentrate all its efforts on mining; PROVIDED, however, that in the event the drilling program is so terminated, then the Lessee shall drill at least one (1) drill hole per year on each of the claims not being actively mined, and on each of the claims not surrendered back to the Lessors as hereinafter provided. Said yearly periods shall commence on the date of the termination of the original program.

5. Beginning with the date that the drilling program has been completed, or that it has been terminated under the provisions of paragraph four (4) above, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below) during the term of this lease for labor and equipment to be used for the purpose of exploration for and development of ore on said mining claims, or to extract from within the limits of said mining claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said claims (said drilling to include the minimum commitments described in paragraph three (3) above), sinking a shaft on said cla[illegible], [illegible] or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims.

6. In the event the Lessee elects to surrender back to the Lessors any of the claims included in the lease, then the commitment relative to expenditures for exploration and development and the value

of the ore mined shall be reduced at the rate of $2,000.00 per claim surrendered per quarter, provided, however, that at no time will said exploration-development-mining commitment be reduced below $5,000.00 per quarter. In order for the said three month commitment to be so reduced, the surrender of any claim or claims must be made prior to the three (3) month period or during the first thirty days of any three month period. If the surrender is made during the last sixty (60) days of any three month period, then no reduction in the exploration, development, and mining shall occur until the following period.

7. The Lessee further agrees that in the event commercial ore is discovered on said claims, it will proceed with due diligence and in good miner-like fashion to develop and mine said ore in as great quantities as is consistent with good mining procedure and practice.

8. It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an Option Purchase Agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within thirty (30) days after the completion of 36 holes on the Gateway group, but prior to the time when any mining operations shall commence on the Gateway group and in no event later than seven (7) months from the date of this agreement, or that it will surrender both its option on the Western Slope group to Flanders Mining Company and this lease on the Gateway group to the Lessors.

9. Lessors agree that in the event the Western Slope option is exercised, and in the event that a commercial ore body is discovered on the Western Slope group, then they will grant the Lessee whatever right-of-way it may require through the Gateway group, whether the claim or claims on which said right-of-way must be placed has (have) been surrendered back to the Lessors or not.

10. Lessee agrees to allow the Lessors or their agent, from time to time, to enter upon said premises or into the shaft and drift giving entry to said premises for the purpose of inspection, survey, or taking samples therefrom. Lessee further agrees to furnish upon request

all geological data pertinent to said mining claims obtained by the exploration, development, or mining thereof, and to furnish upon request adequate proof that the terms of paragraph four (4), five (5) six (6) and seven (7) above have been complied with.

11. Lessee agrees to comply with all requirements of the state and federal mining inspectors and to do no act or thing to cause either the federal or state mine inspector to close the mine located upon said premises.

12. Lessee shall and hereby does assume all responsibility in case of accident or injury of its employees or their persons who may become injured [illegible] about said property, and agrees to indemnify and save Lessors harmless therefor, and to carry such public liability insurance which will so protect Lessors.

13. Lessee agrees to promptly pay all bills and expenses incurred by it and by said prompt payment to prevent the filing of any and all liens of miners, mechanics or materialmen against said leased premises, and to pay all Federal and State taxes and exactions levied or assessed in connection with the removal of ore from said mining claims, including taxes on stockpiled ore, whether such taxes be property, occupation or other taxes; PROVIDED that this shall not apply to any income taxes payable by Lessors on royalties or income received by them from said claims or from ore mined and removed therefrom. Further, if a production or severance tax is levied or assessed against production from the property herein at any time during the term of this lease, Lessee shall pay such tax but Lessors shall pay Lessee a proportionate share of the same based on the Lessor's royalties as herein stated.

14. Lessee agrees at all times to comply fully with the provisions of the Workmen's Compensation laws of the State of Colorado and a failure at any time to so fully comply with said provisions shall automatically render this lease null and void.

15. Lessee agrees that it will keep posted upon the premises above described, in a conspicuous place, a notice in the following form, to-wit:

NOTICE TO ALL EMPLOYEES ON THIS PROPERTY AND TO ALL OTHERS WHOM IT MAY CONCERN:

NOTICE IS HEREBY GIVEN TO ALL PARTIES PERFORMING LABOR OR FURNISHING SKILL, MATERIALS, MACHINERY, OR OTHER FIXTURES OR SUPPLIES OF ANY KIND, IN, TO OR OF ANY MINE OR MILL UPON THIS

PROPERTY, OR IN, TO OR ON SAID PROPERTY OF ANY PART THEREOF THAT THE UNDERSIGNED, THE OWNERS OF SAID PROPERTY, ARE NOT AND WILL NOT BE RESPONSIBLE FOR ANY LABOR PERFORMED OR SKILL, MATERIALS, MACHINERY, FIXTURES, OR SUPPLIES OR ANY KIND FURNISHED IN, TO OR UPON SAID PROPERTY OR ANY PART THEREOF, NOR SHALL THE INTEREST OF SAID OWNERS BE SUBJECT TO ANY LIEN FOR SAME. ALL PERSONS ARE HEREBY NOTIFIED THAT THE PROPERTY AFORESAID IS BEING OPERATED BY PACIFIC URANIUM MINES COMPANY TO WHOM ALL PERSONS MUST LOOK FOR PAYMENT.

16. Lessee agrees that it shall at all times during the term of this agreement comply with the provisions of the laws now existing or which may be hereafter enacted relative to the performing of annual labor and improvements upon the above-described unpatented lode mining claims and agrees to keep and file all necessary affidavits of assessment work so done by it not later than April 15 of each year.

17. Lessee agrees that if it returns any or all of said claims to the Lessors, whether because of cancellation of the lease as hereinafter provided or because of voluntary surrender, then it shall return the tunnels, drifts, and mine workings on said claims to the Lessors in good condition unless said workings have been damaged by unbeldable accident, PROVIDED, however, that the Lessee shall be entitled to keep in its possession and for its use whatever right-of-way it may require in order to reach whatever commercial ore on the Eastern Slope group it may be actively mining.

18. IT IS MUTUALLY AGREED between the parties hereto that Lessee shall have the right to surrender this lease at any time upon giving Lessors at least 30 days written notice sent by registered mail to their office in Grand Junction, Colorado, and, upon such surrender or cancellation as hereinafter provided, Lessee shall have the right, within 30 days, to remove its machinery, equipment, and personal property from said claims PROVIDED that all royalty payments have been paid in full.

19. The Lessee is hereby given the right to assign this lease to third parties of its own choosing. Upon making said assignment, Lessee shall be fully and finally discharged and relieved of any and all liability hereunder, only PROVIDED, however, that it has been in full compliance with the provisions of this lease agreement up to the date of said assignment.

20. The Lessors make no warranty as to title except as to persons claiming by, through, or under them. Lessee has made its own inquiry and investigation as to title and is satisfied with regard thereto,

and Lessors make no warranties except as to those specifically contained herein.

21. The performance of any obligations, covenants, conditions or terms, either express or implied hereunder, may be delayed or suspended at any time while, but only so long as the party upon whom the burden of performance may rest shall be hindered in or prevented from performance by an Act of God, accident, strike, lock-out, operation of law, war or national emergency, governmental agency regulation, weather conditions which would prevent or render performance abnormally expensive or difficult, unavailability of labor or materials in the open market, or any cause, whether similar or dissimilar, beyond such party's reasonable control.

IT IS MUTUALLY AGREED between the parties hereto that upon violation by Lessee of any of the covenants in this lease, the term thereof shall, at the option of Lessors, expire, and the same and said mining claims shall become forfeited to Lessors and Lessors may thereupon enter upon said mining claims and dispossess all persons occupying same or, at its option, Lessee and all persons found in occupation thereof may be proceeded against as guilty of unlawful detainer; PROVIDED, however, that if said lease is forfeited upon the election of Lessors by reason of the failure of Lessee to perform any covenant thereof, Lessors shall give Lessee at least 30 days notice in writing, by registered mail sent to it at its Grand Junction, Colorado, office, notifying it of such failure and setting out in such notice the substantial facts as to any such default or breach, and upon failure or refusal by Lessee to cure and correct such default within 30 days from the receipt of such notice, Lessee shall surrender and deliver up possession of said mining claims, and its rights under this lease shall thereupon cease and determine.

Time is of the essence of this agreement and all covenants and conditions contained herein, express or implied, shall extend to and be binding upon the heirs, executors, administrators, successors and lawful assigns of all of the parties hereto.

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

FLANDERS MINING COMPANY, A co-partnership

By _____
Partner Lessor

SOUTHWESTERN URANIUM TRADING CORP.

ATTEST

_____ By _____
Secretary Lessor

PACIFIC URANIUM MINES COMPANY

ATTEST:

_____ By _____
Secretary Lessee

STATE OF COLORADO)
) SS
COUNTY OF MESA)

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by _____ for and on behalf of Flanders Mining Company, a co-partnership.

_____
Notary Public

STATE OF)
) SS
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by _____ for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corporation.

_____
Notary Public

STATE OF)
) SS
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by _____ for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

_____
Notary Public

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
APR 10 1956

APR 11 1956

GEOLOGICAL SURVEY
DENVER, COLORADO

P. O. Box 360
Grand Junction, Colorado

April 10, 1956

Memorandum

DMEA
Date Rec'd.
APR 12 1956
BUREAU OF MINES
Denver, Colorado

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman EnH

From: J. William Hasler
M. H. Salsbury

Subject: DMEA docket 4206 (Uranium), Pacific Uranium Mines Company, (John Brown, et al groups), Mesa County, Colorado

The Pacific Uranium Mines Company has applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the John Brown, et al., groups of claims. These claims lie adjacent to Beaver Mesa in the Gateway mining district of Mesa County, Colorado, in sections 6, 7, and 8, T. 50 N., R. 19 W., and sections 1 and 12, T. 50 N., R. 20 W., NMPM.

The application is for exploration in the Salt Wash member of the Morrison formation on 56 unpatented, contiguous mining claims. Twenty-six holes have been drilled on the claims, 7 of which have been classified as favorable, although all existing holes are barren. The drill logs show that the ore-bearing sandstone is generally thin and the associated mudstone is rarely green or gray.

The claims are outside the area drilled by the U. S. Geological Survey, and no work has been done in the area by the Atomic Energy Commission. The U. S. Geological Survey personnel of the Beaver Mesa project state that the claims lie within an area classified as semi-favorable for the occurrence of ore deposits. The ore-bearing sandstone pinches and swells in the area and, although it is generally thin, one drill hole penetrated 71 feet of the sand.

Beaver Mesa, adjoining the subject claims to the northwest, is a highly productive area. Because of this and their position in a semi-favorable area, the John Brown, et al groups of claims should be examined in the field.

J. William Hasler
J. William Hasler,
U. S. Geological Survey

M. H. Salsbury by JWH
M. H. Salsbury
U. S. Bureau of Mines

HFA/mlr

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Pacific Uranium Mines Company

Grand Junction, Colorado

BEAVER MESA CLAIMS

DEFENSE MINERALS EXPLORATION ADMINISTRATION

LOAN APPLICATION

REPORT

February, 1956

Hugh W. Evans,
Chief Engineer

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

MAR 2 1956

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

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BUREAU OF MINES
Denver, Colorado
MAR - 8 1956

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. DMEA-4206
Metal or Mineral Uranium
Date Received 3-8-56
Estimated Cost $73,011.50
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: Pacific Uranium Mines Company
1924 White,
Grand Junction, Colorado See page 2

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract
See pages 3 & 4 and Appendix A

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

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

(*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.

(*e*) If you own the land, describe any liens or encumbrances on it

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

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. See pages 17, 18 & 26 & Appendix B

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. None

(*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. See pages 10 thru 15 and 25

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See pages 5 thru 7

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. See pages 8 & 9

16—66551-1

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

(*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 contact veins, ore-bearing beds, etc. See page 19 thru 26

(*c*) The work will start within 30 days and be completed within 6 months from the date of an exploration project contract.

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

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: See pages 23 & 24

(*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?

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated March 1, 1956, 195__

PACIFIC URANIUM MINES COMPANY

(Applicant)

By Hugh W. Evans

Hugh W. Evans
Vice-President & Chief Engineer

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

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CONTENTS

	Page No.
ABSTRACT	1
APPLICANT - LESSEE	2
LESSORS	
PROPERTY DESCRIPTION & OWNERSHIP	3
LOCATION & ACCESSIBLITY	6
PHYSIOGRAPHY, TOPOGRAPHY & CLIMATE	9
GEOLOGY	
Regional	10
Local	10
ORE-HORIZON & LITHOLOGY	14
EXPLORATION RECORD	16
PROPOSED EXPLORATION PROGRAM	18
Phase I & IA	19
Phase II	19
Phase III	21
Miscellaneous	23
References	27
APPENDIX	28

TABLES

1	Claim Location Information	5
2	Stratigraphic Column	13
3	Exploration Drill-Hole Summary	17
4	Proposed Exploration Drill-Holes	20
5	Proposed Exploration Program - Cost Breakdown	22

ILLUSTRATIONS

Figure		
1	General Location of Area	8
1A	Specific Location of Area and Region Geology	12
2	Beaver Mesa Ore Occurrences	15
3	Topographic - Geologic Map	24
4	Claim, Exploration Drill Hole Pattern, and Favorability Map	25
5	Cross Sections	26

ABSTRACT

The Pacific Uranium Mines Company recently initiated a uranium exploration program in a favorable but unexplored area on Beaver Mesa, Colorado. The company feels that to successfully complete this program it requires Government aid in the form of a Defense Minerals Exploration Administration loan.

Fifty-three claims or approximately 1024 acres are to be drilled on a grid pattern by "plug-drilling" to and coring through the ore-bearing sandstone. To date 26 holes have been drilled on this property, and although favorable lithology has been encountered, no ore discovery has been made. The proposed exploration program in which the Government is being requested to participate includes 72 holes, a total of 32,855 feet, and will cost an estimated $80,852.00. The loan requested amounts to $62,889.00.

This exploration program is divided into three phases. The first phase consists of drilling the northern portion of the property. The average drilling depth for this phase is 333 feet. The second phase drilling is on the Burro Canyon formation where the average drilling depth is 619 feet. The third phase consists of offsetting favorable holes in an attempt to delineate any mineralized zones discovered during either of the first two phases.

APPLICANT - LESSEE

Pacific Uranium Mines Company
Incorporated in Nevada

Offices at:
1924 White
Grand Junction,
Colorado — Phone 487 or 488

292 South La Cienega Blvd.
Beverly Hills,
California — Phone OLeander 5-7771
OLympia 2-0824

LESSORS

Owner	Claims
Flanders Mining Company Post Office Box 861 Grand Junction Colorado Phone 3832	Rozy 36 Rozy Pozy (Shown as "Pozy" on Fig 4) Rozy Pozy Nos. 1 thru 17 January January Nos. 1, 4 thru 7, and 14 thru 17
Southwestern Uranium Trading Company 415 San Facinto Building Houston 2 Texas Phone CA 5-0577	Note: These claims are owned jointly with Flanders John Brown Nos. 1 thru 11, and 23 thru 26 Babbie and Babbie Ext. Henriette and Henrietta Ext. L Litz Fraction Robert
Arthur & Robert Pociask 400 Orchard Ave Grand Junction Colorado Phone 4098-R	Pociask and Pociask Ext.
Climax Uranium Company 749 Main Street Grand Junction Colorado Phone 3455	Note: Negotiations in progress for farm-out Cherry Creek Nos. 1 thru 6

PROPERTY DESCRIPTION & OWNERSHIP

This application covers 56 unpatented, contiguous mining claims and fractions located in Township 50 North, New Mexico Prime Meridan, Section 6, 7 and 8 of Range 19 west; and Sections 1 and 12 of Range 20 West. The northwest corner of John Brown No. 8 is located 5290 feet S 1°20' W from the following section corner: T51N, R20W, Sec 36, R19W, Sec31; T50N, R20W, Sec 1, R19W, Sec 6 (Fig 4). The area encompassed by these claims amounts to approximately 1024 acres.

The 29 Flanders Mining Company and the 21 Flanders and Southwestern Uranium Trading Company claims have a complicated history and chain of title. However, a careful examination of the abstracts, which the Flanders Mining Company keeps up to date, indicates that no legal questions should arise as to their title to this ground. The claims have been conveyed from their original locators to the present owners by mining quit claim deeds which have been recorded with the Mesa County recorder. Affidavits of Labor pertaining to the fullfillment of annual assessment work have been posted and recorded for each year. The requirements pertaining to the locating of a mining claim on oil and gas leases have been complied with in accordance with federal legislation. All the claim locations were ammended in 1955 to take benefit of Colorado Senate Bill 271. The 21 Flanders and Southwestern claims have been surveyed by a professional engineer.

The two Pociask claims are still owned by the original locators. Their title appears to be in order. Assessment work

has been done as required. The Pociask claim was located before any oil and gas lease had been applied for in this area, and the Pociask Extension was located in accordance with Public Law 585. These claims have been amended under Colorado Senate Bill 271.

The applicant will not be able to pass a title opinion on the six Cherry Creek claims until after negotiations with the Climax Uranium Company have been completed. It is presumed that their title to this ground is legal and secure.

The only conflicts known are those between the Blue Bird and the Babbie and John Brown No. 3 claims and between the Utah No. 7 and the John Brown No. 26 and Rozy Pozy claims. These conflicts are shown on Fig. 4.

Detailed location information is shown in Table I. Copies of the lease agreements are included in Appendix A.

TABLE I

CLAIM LOCATION INFORMATION

Present Owner	Claim	Date Located	Locator	Date	Recorded Book	Page
Flanders & Southwestern	JB 1,2	20June50	E. C. Hughes	10Jul50	528	489-90
	JB 3-10	2Jul50	E. C. Hughes	23Aug50	531	391-8
	JB 11	15Sep50	Ray Lewis	22Sept50	533	158
	JB 23-26	15Sept50	Corvusite Mining & Exploration Co.	4Oct50	533	545-8
	Babbie	10Jul50	J. W. Lewis	23Aug50	531	390
	Henrietta & Robert	10Oct50	Gateway Mining & Development Co.	23Aug50	595	13,14
	Babbie Ext L Litz Frac	14Aug54	" "	23Sep54	619	34,35
	Henrietta Ext	14Aug54	" "	11Sep54	617	460
Flanders	Rozy 36 Rozy Pozy	18Oct54	A. Pociask, Agt.	16Nov54	625	31,32
	RP 1-4	12Jan53	R. Pociask	7Feb53	578	328-31
	RP 5-14	1Nov53	R & A Pociask, J.W. Lewis, Agt	15Jan54	596	174-83
	RP 15-17	15Jan54	R. Pociask	25Feb54	598	552-4
	January J 1-17	15Jan54	R. Pociask	25Feb54	598	514,15, 18-21, 28-31
Pociask	Pociask	20Jun53	A. Pociask	27Jun53	585	463
	Pociask Ext	25Dec54	A. Pociask	25Feb54	634	453
Climax	CC 1-6					

LOCATION & ACCESSIBILITY

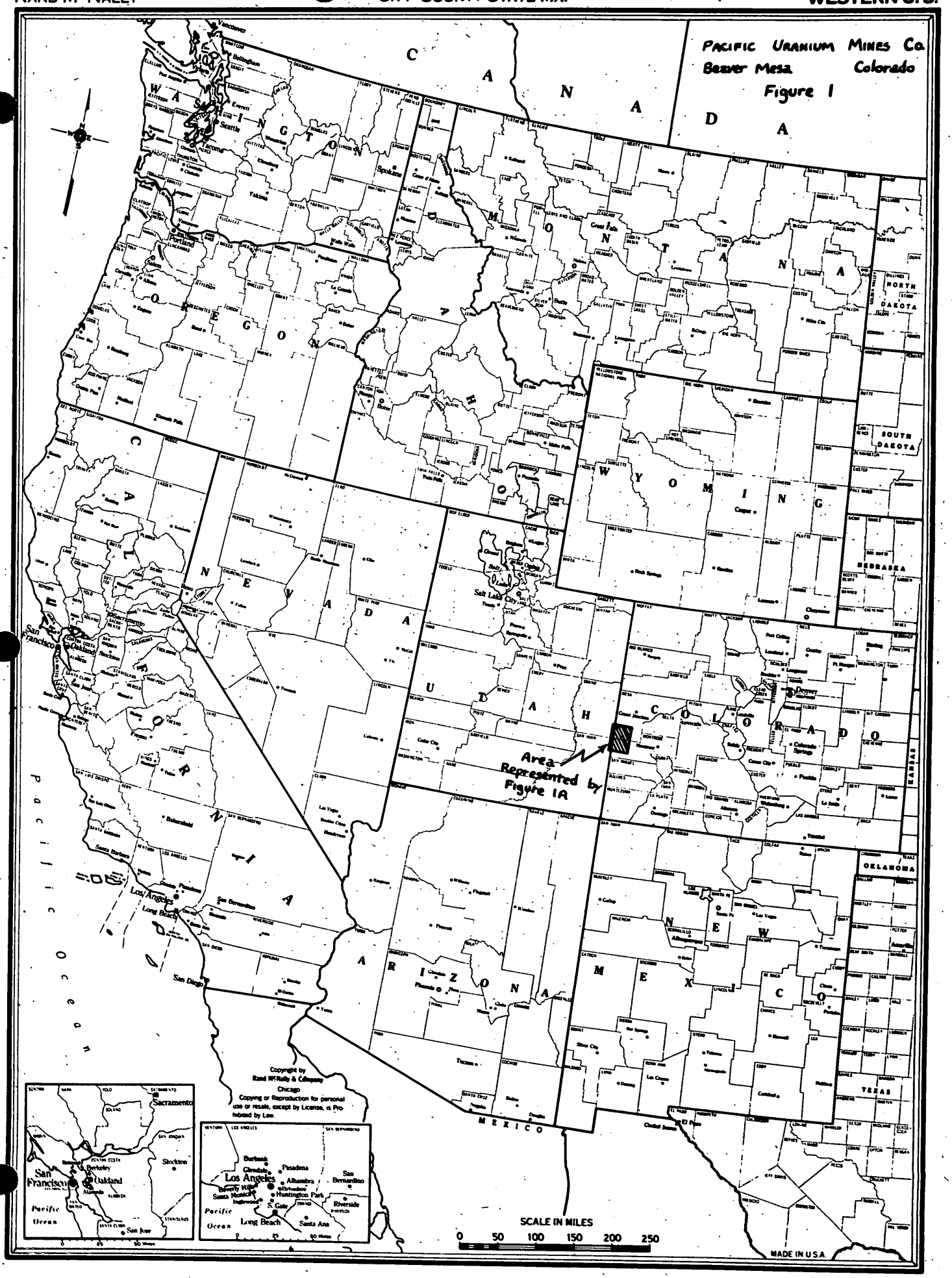
The property to be explored is ten road miles southwest of Gateway in Mesa County, Colorado, on that portion of Beaver Mesa locally known as John Brown Mesa. The western edge of the claims are within 800 feet of the Utah-Colorado border (Fig 1 & 1A). An all-weather dirt road serviced by the County passes through the entire length of the property (Fig 3). The property is reached by traveling southwest from Gateway across the Dolores River on Colorado State Highway #141 for one mile and then turning right (west) up the John Brown Canyon road. Nine miles up this steep canyon the road levels off on Beaver Mesa. At this point the road is on the Babbie Extension claim.

There is an airstrip on the Dolores Point of Beaver Mesa about ten road miles from the property. There is also an airstrip at Gateway.

The two closest uranium-vanadium processing plants are the Uravan Mill, Uravan, Colorado, 46 road miles to the southeast and the Climax Mill, Grand Junction, Colorado, 66 road miles to the northeast. Regular ore hauls are being made to these plants from producing mines on Beaver Mesa over the road which passes through this property.

Gateway has postal service, but the nearest telephone is located 12 miles east in Unaweep Canyon at the Dalton Ranch just off Highway #141. In case of emergency, there is a two-way radio at the Cherokee-Ute Shaft two miles to the northwest of the property. Gateway has some housing facilities, two restaurants, a grocery store, two filing stations, a school and a church. There is a limited source of labor available in the area. Grand Junction serves as the main source of materials, supplies and equipment. There is no source of power except from portable generators on Beaver Mesa.

The Flanders Mining Company owns two cabins at Willow Springs which can be rented by the applicant and can house a dozen or more men.


PACIFIC URANIUM MINES Co.
Beaver Mesa Colorado
Figure 1
CANADA
WASHINGTON
OREGON
CALIFORNIA
NEVADA
IDAHO
MONTANA
WYOMING
UTAH
COLORADO
ARIZONA
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
MEXICO
Pacific Ocean
Area Represented by Figure 1A
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SCALE IN MILES
0 50 100 150 200 250
MADE IN U.S.A.

PHYSIOGRAPHY, TOPOGRAPHY & CLIMATE

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Beaver Mesa is a tongue off the La Sal Mountains which dips gently towards the Dolores River. The highest peak in the La Sals is Mount Peale, 13,089 feet, which is located about ten miles southwest of the property. The mesa is generally flat, but cliffs are formed at the edge of the Burro Canyon and Salt Wash Morrison Formations. The topography changes abruptly just below the claims where the Salt Wash rim is exposed at the head of John Brown Canyon. Here in a comparatively short distance there is a 2000-foot drop to the Dolores River. The average elevation of the property is 7300 feet (Fig 3).

A small amount of timber stands on the claims which could be used for mining. Cedars, spruce, pinion and yellow pine, aspen, and scrub oak grow in this area. The climate is semi-arid and both cactus and sage brush are found.

Drinking water is available at two springs on the claims. These springs will also provide a certain amount of drilling water. Additional drilling water is found at reservoirs which have been built for this purpose. Great care must be exercised not to take water from reservoirs built to provide water for the cattle which graze on Beaver Mesa. The normal precipitation from May to October is 8.6 inches, but the most precipitation occurs as snow during the winter for which no records were located. Snow can be expected from November through March. With rare exception, operations should continue year around. The road conditions are the worst during the spring when the ground is thawing.

GEOLOGY

Regional:

The property is located on the Colorado Plateau at the northwestern extremity of the Uravan Mineral Belt and just within the zone of favorability outlined by E. J. McKay in Geological Survey Bulletin 1009J (Fig IA & 2). The Sinbad anticline and the La Sal dome form the major structures to the south and west. The Sagers syncline, along which the Dolores River flows, and the Uncompahgre uplift form the major structures to the north and east. The sediments on Beaver Mesa dip from two to nine degrees towards the axis of the Sagers syncline with the dip rapidly becoming steeper towards the La Sal dome.

The area is a deeply dissected, rugged highland varying from 5000 to 7600 feet in elevation. Sediments range in age from Triassic to Cretaceous. Uraniferious deposits are most commonly found in the Salt Wash member of the Morrison formation of Jurassic age.

Local:

The formations exposed on this property are, in ascending order, the Salt Wash and Brushy Basin members of the Morrison, the Burro Canyon, and the Dakota (Fig 3 & 5). These beds have a dip of approximately two degrees to the northeast. Erosion has removed all but twenty feet or so of the Dakota which is exposed in spots along the southern portion of the claims. The Burro Canyon rim runs generally east and west through the center of the property, and this formation has a maximum thickness of about 205 feet. The northern half of the property is Brushy Basin mingled with Burro Canyon slump blocks and alluvium. A stratigraphic column is shown in Table II.

Although there is thought to be some local faulting in this area with displacements of from one to ten feet, none has been observed on the property. A large portion of the surface is covered by unconsolidated slump and alluvial material which makes a detailed geological examination very difficult. The Burro Canyon formation exposed exhibits some close fracturing with a strike of N40°W. No obvious contact between the Salt Wash and Brushy Basin members was discovered during the recent drilling program which the applicant could use to definitely determine any faulting or change in dip.

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TABLE II

STRATIGRAPHIC COLUMN

System	Formation	Thickness	Description
Cretaceous	Dakota	15-60'	Yellowish-brown conglomeratic sandstone; some yellow sandy clay and carbonaceous shale.
	Burro Canyon	180-205'	Variecolored sandstone, shale lenses and conglomerate. Cliff forming.
Jurassic (Upper)	Morrison Brushy Basin	330-390'	Variecolored shale; some sandstone lenses; few thin bedded limestone beds; Slope forming.
	Salt Wash	300-400'	Dominantly red but white and green in ore zones composed of nearly equal parts of sandstone and mudstone strata. Rapid facies changes and lenticular sandstone. Rim forming. The top 100 feet is considered the ore horizon. Fluvial.
	Summerville	50?	Regularly bedded, reddish brown sandstone and sandy shale; with some greenish white sandstone, gypsum, and limestone, Marine.

ORE-HORIZON & LITHOLOGY

The most productive ore-horizon on this part of Beaver Mesa is the top 100 feet of the Salt Wash member of the Morrison. Although several ore-bearing sandstones may be encountered in the upper one-third of the Salt Wash, the most productive sand is usually on top. This sandstone is not persistent, but where it is present it is highly lenticular, varying from a few feet to over forty feet in thickness. The sandstone is usually reddish brown to light bluff, friable, and in places contains a considerable amount of fossil wood material. Limonite and manganese oxide duffusion-banding are abundant in both reddish brown and light-colored sandstone. The top of the mudstone underlying the upper sandstone is red except in the vicinity of ore deposits. The mudstone alteration can be expected to lie in an aureole around an ore deposit for a distance of about 300 feet. The ore bodies in this section of Beaver Mesa have a tendency to be elongated in a northeasterly direction, the direction of dip. (Fig 2).

Useful guides to ore are those discussed in Geological Survey Bulletin 988 B by Doris Blackman Weir. These are the sandstone thickness and color, the altered mudstone thickness at the base of the sandstone, the color of the mudstone within the ore-bearing sandstone, and the carbon content of the sandstone. On Beaver Mesa the most important indicators seem to be the presence of altered mudstone and its thickness.

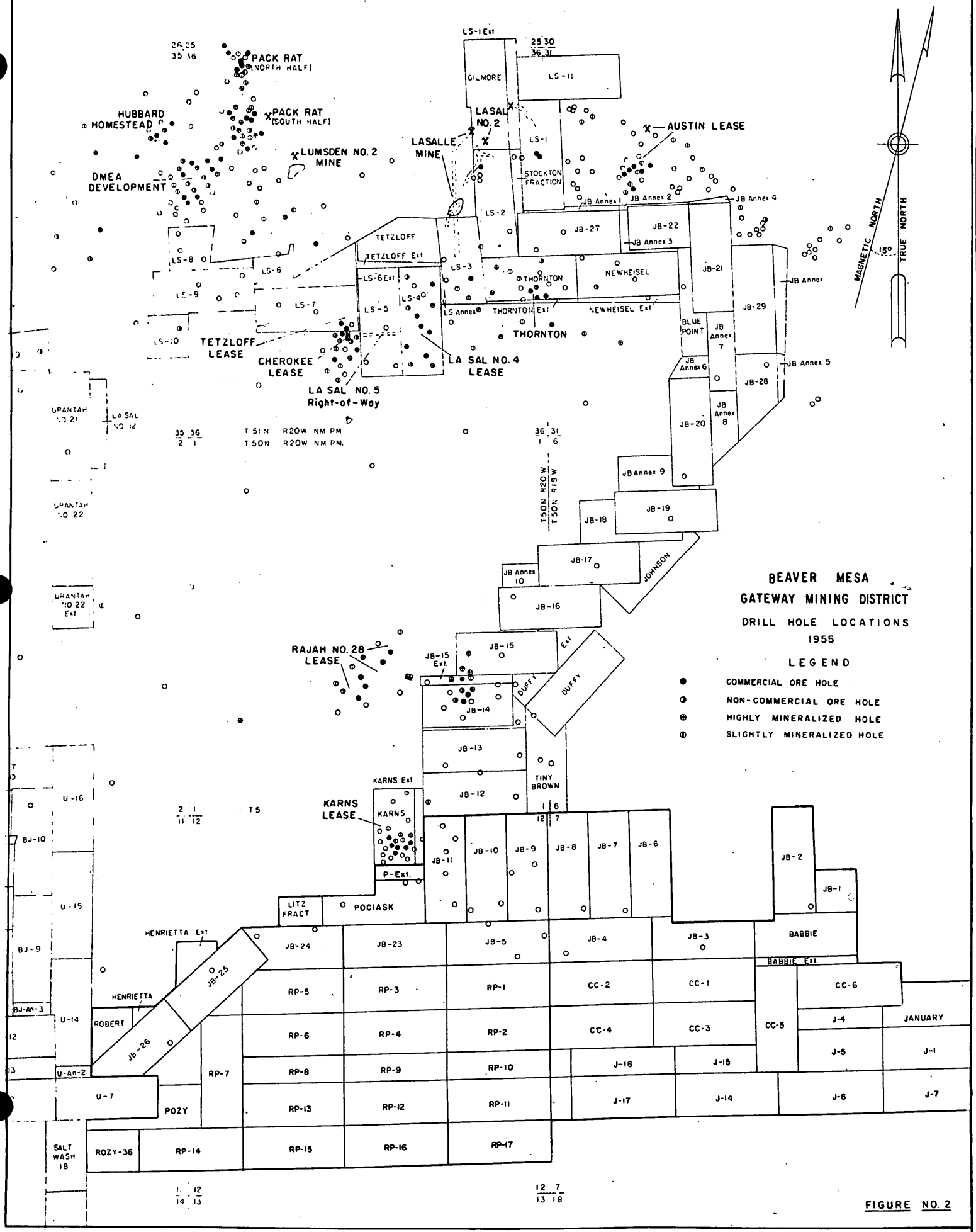
BEAVER MESA
GATEWAY MINING DISTRICT
DRILL HOLE LOCATIONS
1955
LEGEND
COMMERCIAL ORE HOLE
NON-COMMERCIAL ORE HOLE
HIGHLY MINERALIZED HOLE
SLIGHTLY MINERALIZED HOLE
MAGNETIC NORTH
TRUE NORTH
15°
PACK RAT (NORTH HALF)
PACK RAT (SOUTH HALF)
HUBBARD HOMESTEAD
DMEA DEVELOPMENT
LUMSDEN NO. 2 MINE
LASALLE MINE
LASAL NO. 2
AUSTIN LEASE
TETZLOFF LEASE
CHEROKEE LEASE
LA SAL NO. 4 LEASE
LA SAL NO. 5 Right-of-Way
THORNTON
RAJAH NO. 28 LEASE
KARNS LEASE
T 51 N R20W NM PM
T 50N R20W NM PM
T 50N R20W
T 50N R19W
T 5
GILMORE
LS-11
LS-1
STOCKTON FRACTION
LS-2
JB-27
JB-22
JB Annex 1
JB Annex 2
JB Annex 3
JB Annex 4
JB-21
JB Annex
JB-29
JB-28
JB Annex 5
JB Annex 6
JB Annex 7
JB Annex 8
JB-20
JB Annex 9
JB-19
JB-18
JB-17
JOHNSON
JB Annex 10
JB-16
JB-15
JB-15 Ext.
DUFFY
JB-14
JB-13
TINY BROWN
JB-12
KARNS Ext
KARNS
P-Ext.
JB-11
JB-10
JB-9
JB-8
JB-7
JB-6
JB-2
JB-1
BABBIE
BABBIE Ext.
JB-3
JB-4
JB-5
JB-23
JB-24
JB-25
JB-26
HENRIETTA Ext
HENRIETTA
ROBERT
LITZ FRACT
POCIASK
RP-5
RP-3
RP-1
CC-2
CC-1
CC-6
RP-6
RP-4
RP-2
CC-4
CC-3
CC-5
J-4
JANUARY
J-5
J-1
RP-8
RP-9
RP-10
J-16
J-15
RP-7
RP-13
RP-12
RP-11
J-17
J-14
J-6
J-7
POZY
U-7
SALT WASH 18
ROZY-36
RP-14
RP-15
RP-16
RP-17
U-16
U-15
U-14
U-An-2
BJ-10
BJ-9
BJ-An-3
LS-1 Ext
LS-6 Ext
LS-4
LS-5
LS-3
LS-7
LS-8
LS-9
LS-10
LS Annex
THORNTON Ext
NEWHEISEL
NEWHEISEL Ext
BLUE POINT
TETZLOFF
TETZLOFF Ext
GRANTAH NO 21
LA SAL NO 12
GRANTAH NO 22
GRANTAH NO 22 Ext

FIGURE NO. 2

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EXPLORATION RECORD

On January 23, 1956 the Pacific Uranium Mines Company temporarily halted its exploration drilling program on Beaver Mesa, which had begun in the summer of 1955, to weigh the probabilities of making an ore discovery with additional drilling. The company concluded that the existing 26 barren, diamond-drill holes did not disprove the potential of this property, but instead provided valuable information on which a full scale exploration program could be based.

Of the 26 holes, one was drilled by the Climax Uranium Company and one by the Flanders Mining Company. In both of these holes it is possible that the most favorable sandstone was not included in the section cored. The remaining 24 holes were drilled by the applicant. Seven of these are classified favorable. This classification is based on the guides to ore mentioned in the previous section, modified on the basis of information gained from the 8000 ton ore discovery made in the immediate vicinity of this property. The favorability of each hole was determined numberically using the Bulletin 988 B method, and the zones of favorability outlined by contour lines. These favorability contours and the location of the drill holes are shown in Fig. 4. The only hole actually drilled as an offset into favorability was JB-16. A summary of the drilling is shown in Table III and the drill logs are included in Appendix B.

TABLE III

EXPLORATION DRILL-HOLE SUMMARY

Drill Hole No.	Drilled by	Date Completed	Depth	Footage Plugged	Footage Cored	Numerical Favor-ability	Cost
P-1	Voltron	30May55	275	140	135	10	$626.75
P-2	Pacific	30Aug55	360	210	150	12	967.00
P-3	"	30Oct55	284.5	193	91.5	10	729.12
M-126	Climax	21Apr54	505	415	90	-	-
JB-1	Flanders	5Jul55	404	300	104	-	-
JB-2	Pacific	15Oct55	420	339	81	8	981.75
JB-3	"	23Nov55	339	220	119	16-Fav	750.75
JB-4	"	11Nov55	320	308	12	Poor core rec	661.00
JB-5	"	8Nov55	327	250	77	12	650.25
JB-6	"	23Nov55	270	200	70	10	565.50
JB-7	"	23Nov55	183.5	90	93.5	14-Fav	530.62
JB-8	"	6Dec55	290	183	107	12	640.55
JB-9	"	1Dec55	305	210	95	4	668.75
JB-10	"	30Nov55	300	200	100	4	657.00
JB-11	"	28Nov55	320	220	100	12	677.00
JB-12	"	10Dec55	305	200	105	14-Fav	661.25
JB-13	"	15Dec55	290	190	100	18-Fav	641.00
JB-14	"	20Dec55	305	180	125	14-Fav	694.25
JB-15	"	3Jan56	335	250	85	12	688.25
JB-16	"	6Jan56	230	120	110	10	585.00
JB-17	"	7Jan56	350	250	100	18-Fav	725.00
JB-18	"	11Jan56	370	270	100	10	757.00
JB-19	"	20Jan56	400	300	100	14-Fav	805.00
JB-20	"	20Jan56	330	250	80	4	660.00
JB-22	"	13Jan56	349	250	99	4	721.75
JB-23	"	21Jan56	235	160	75	4	499.75
Miscel							4230.66
Total	26 Holes		8402	5898	2504		$20,774.95

PROPOSED EXPLORATION PROGRAM

The proposed exploration program has been divided into three phases. The division between the first and second phases is primarily a matter of drilling depths. The third phase includes offset drilling into the more favorable zones.

The drilling target area and the grid pattern are based on the altered-mudstone-aureole and orebody-elongation theories stated in the Ore Horizon and Lithology section. A target area measuring 773 feet on the N45°W axis and 900 feet on the N45°E axis has been calculated for a 20,000 ton orebody with an average thickness of five feet. The grid pattern is oriented for locating the maximum number of holes along the N45°W axis or across the trend.

Independent contractors will be used for all drilling and angledozer work. Reference is made to Appendix C to substantiate the estimated drilling costs. It should be noted that all drilling done so far on this property has been done with water.

At present the applicant is negotiating with the Climax Uranium Company for the right to conduct an exploration program on the six Cherry Creek claims. Should these negotiations prove unsuccessful, then 5195 feet and $11,864.50 should be subtracted from the figures shown below.

The total cost of this 32,855-foot exploration drilling program is estimated to be $80,852.00 (Table V). The applicant wishes to borrow from the Defense Minerals Exploration Administration the authorized 75 percent of this sum, or $62,889.00, to be repaid out of future production from the property. With two drilling rigs

in continuous service, the program should be completed within six months after its starting date.

Phases I & IA:

Phase I includes all drilling from the Brushy Basin benches. The average drill depth is 333 feet. As a supplement to the drilling program, and to be conducted simultaneously with it, is 100 hours of angledozer work along the rim. This angledozer work is called Phase IA.

There are 35 holes or 11,600 feet of drilling in Phase I (Table IV). The bottom 100 feet of each hole is to be cored. If and when it is possible to exercise good control, the coring interval should be reduced to 75 feet or less. The spacing is 600 feet between holes on the N45°W axis of the grid pattern and 800 feet between holes on the perpendicular axis. The holes on the former are staggered so that the group effect is a hole every 300 feet across the trend. The grid pattern is not precise because advantage has been taken of existing drill holes.

The total estimated cost of Phases I & IA is $25,737.25. Two and a half months should be sufficient to complete this phase.

PHASE II:

Phase II includes all drilling from the top of the Burro Canyon formation. The average depth of the 25 holes in this phase is 619 feet. The total footage amounts to 15,465 feet of which 2500 feet is core. The total estimated cost of Phase II is $34,146.25, and it should be completed in two and a half months.

TABLE IV

PROPOSED EXPLORATION DRILL HOLES

Drill Hole No.	Phase I Estimated Collar Elevation	Estimated Depth	Drill Hole No.	Phase II Estimated Collar Elevation	Estimated Depth
B1-1	7420	290	B2-1	7690	580
B1-2	7480	370	B2-2	7560	475
B1-3	7420	325	B2-3	7750	670
B1-4	7450	370	B2-4	7690	635
B1-5	7420	340	B2-5	7620	590
B1-6	7400	350	B2-6	7640	580
B1-7	7430	370	B2-7	7610	580
B1-8	7380	395	B2-8	7560	560
B1-9	7330	365	B2-9	7650	620
B1-10	7220	275	B2-10	7580	580
B1-11	7270	325	B2-11	7560	585
B1-12	7130	240	B2-12	7690	685
B1-13	7200	290	B2-13	7610	635
B1-14	7320	375	B2-14	7660	685
B1-15	7330	390	B2-15	7560	615
B1-16	7270	345	B2-16	7610	660
B1-17	7330	410	B2-17	7520	580
B1-18	7220	325	B2-18	7380	490
B1-19	7210	315	B2-19	7340	475*
B1-20	7160	290	B2-20	7590	725*
B1-21	7160	315	B2-21	7550	715
B1-22	7200	330	B2-22	7490	680
B1-23	7240	345	B2-23	7530	695
B1-24	7330	435	B2-24	7500	690
B1-25	7210	340	B2-25	7490	680
B1-26	7150	310			
B1-27	7210	340			
B1-28	7240	370			
B1-29	6920	130*			
B1-30	7020	200			
B1-31	7170	340			
B1-32	7200	360			
B1-33	7110	330			
B1-34	7130	320			
B1-35	7250	440*			
Total	35 Holes	11,660	Total	25 Holes	15,465
	Average depth 333'			Average depth 619'	

* Either the deepest or the shallowest hole.

The grid pattern for Phase II is the same as described in Phase I except that the hole spacing is increased. The spacing for this phase on the N45°W axis is 1200 feet staggered from one row to the next, resulting in a hole every 600 feet across the trend. The distance between these rows of holes is maintained at 800 feet.

Phase III:

The purpose of Phase III is to offset mineralized or ore holes on 200-foot centers and thereby roughly delineate any mineralized zones, and/or to offset into zones of favorability indicated by the drilling done on Phases I and II. Twelve holes are planned with an estimated total footage of 5730 feet. This is based on six holes with an average depth of 335 feet and six holes with an average depth of 620 feet. Because it should be possible to maintain good control on this phase, the coring interval is set at 50 feet. The estimated cost of this phase is $10,968.00, and it should take no longer than a month.

The zones of favorability into which the offset drilling will be done shall be determined numerically. Favorability contour lines of the type shown in Fig 4 will be used to mark these zones. Holes would be offset into those zones indicating a favorability of 15 or better.

Phase III should commence after the completion of Phase I if sufficient favorability is indicated. However, only six Phase III holes should be drilled in the Phase I area before the completion of Phase II. After the completion of Phase II the remaining six offset holes should be drilled in those areas in which they will serve the greatest value.

TABLE V

PROPOSED EXPLORATION PROGRAM --- COST BREAKDOWN

Item	Flanders			Climax			Pociask			Total		
	Holes	Footage	Cost	Holes	Footage	Cost	Holes	Footage	Cost	Holes	Footage	Cost
Phase I	22	P 4760 C 2200 T 6960	7616.00 7150.00 14,766.00	10	P 2705 C 1000 T 3705	4328.00 3356.25 7684.25	3	P 695 C 300 T 995	1112.00 975.00 2087.00	35	P 8160 C 3500 T11,660	13,056.00 11,481.25 24,537.25
Phase IA	100 hr	Dozer	1200.00							100 hr	Dozer	1,200.00
Phase II	23	P12,010 C 2300 T14,310	19,973.25 11,611.25 31,584.50	2	P 955 C 200 T 1155	1573.00 988.75 2561.75				25	P12,965 C 2500 T15,465	21,546.25 12,600.00 34,146.25
Phase III	11	P 4845 C 550 T 5395	8007.00 2342.50 10,349.50	1	P 285 C 50 T 335	456.00 162.50 618.50				12	P 5130 C 600 T 5730	8,463.00 2,505.00 10,968.00
Miscel *			8700.00			1000.00			300.00			10,000.00
Total	55	P21,615 C 5050 T26,665	35,596.25 21,103.75 66,600.00	13	P 3945 C 1250 T 5195	6357.00 4507.50 11,864.50	3	P 695 C 300 T 995	1112.00 975.00 2387.00	72	P26,255 C 6600 T32,855	43,065.25 26,586.25 80,851.50

P --- plug, C --- core, T --- Total: * Distribution purely arbitrary

Independent Contractors: Drilling - 32,855 ft. - $69,651.50
Angeldozer - 280 hrs - 3,360.00

Total $73,011.50

Miscellaneous:

The breakdown of the $10,000.00 miscellaneous charge shown in Table V is as follows:

Standby-time - ½hr/hole @ $12/hole	$ 432.00
Survey (Closed traverse survey carrying elevations around the property into which all drill holes could be tied.) - 26,940 ft @ 28¢/ft	750.00
Assaying - 1/hole @ $3.50 U_3O_8 & $1.50 V_2O_5	360.00
Probing - $10.00/hole	720.00
Core boxes - 132 AX size boxes @$6.15ea	811.80
Angledozer - 2½hr/hole @ $12/hr	2,160.00
Supervision - 6 mos @ $750/mo	4,500.00
Other	266.20
TOTAL	$ 10,000.00

REFERENCES

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Stratigraphy of the Morrison and Related Formations, Colorado Plateau Region. A Preliminary Report. Geological Survey Bulletin 1009 E, L. C. Craig.

Criteria for outlining areas favorable for Uranium Deposits in parts of Colorado and Utah. Geological Survey Bulletin 1009 T, E. J. McKay.

Geologic guides to prospecting for Carnotite Deposits on Colorado Plateau. Geological Survey Bulletin 988 B, Doris Blachman Weir.

Regional tectonics of the Colorado Plateau and relationship to the orgin and distribution of Uranium. Vincent C. Kelley.

Guidebook to the geology of Utah. No. 9, Utah Geological Society 1954.

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APPENDIX A

Flanders Mining Company - - - Pacific Uranium Mines Company

I Mining Lease

II Amendment to Mining Lease

III Amendment 2 to Option Purchase Agreement

Pociask - - - Pacific Uranium Mines Company Lease and Option Agreement

Climax Uranium Company - - - Pacific Uranium Mines Company Farm-out Agreement

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MINING LEASE

THIS AGREEMENT, made and entered into this _____day of August, 1955, by and between FLANDERS MINING COMPANY, a copartnership composed of Frederick L. Anderson, Leo Van Aken, Lawrence Davis, and E. P. Hogel, and SOUTHWESTERN URANIUM TRADING CORPORATION, A Delaware Corporation, hereinafter referred to as "LESSORS", and PACIFIC URANIUM MINES COMPANY, A Nevada Corporation, hereinafter referred to as "LESSEE".

Reference is made to paragraph one (1) of Exhibit "C" of that Special Warranty Deed (attached hereto and made a part hereof and hereinafter referred to as "said Deed") recorded on October 4, 1954, in book 620, page 59, of the records of the County Clerk and Recorder of Mesa County Colorado, said Deed providing for the conveyance of certain mining claims as listed therein by the Gateway Mining and Development Company, Inc., to the Flanders Mining Company. Said paragraph one (1) of Exhibit "C" of said Deed provides for the payment of $2,000,000.00 to the Gateway Mining and Development Company, Inc., out of 18% of the gross value of all ores, metals, or minerals mined and sold from all the mining claims listed therein.

WITNESSETH:

That for and in consideration of the premises and the mutual covenants and agreements herein contained, the parties agree as follows, to-wit:

1. The Lessors do hereby let, lease and demise unto the Lessee the following described unpatented lode mining claims situated in the Gateway (unorganized) Mining District, Mesa County, Colorado, (said claims being sometimes hereinafter referred to as the "Gateway group"), to-wit:

CLAIM NAME	Described in the records of Mesa Co., Colorado. Book	Page
John Brown 5	511	14
John Brown 9	511	16
John Brown 10	511	18
John Brown 11	511	20
John Brown 23	511	22
John Brown 24	511	24
John Brown 25	511	26
John Brown 26	511	27

	Book	Page
John Brown #3	625	Sub
Robert	597	24
	617	1,03
Charlotte	597	11
	617	1,57
Charlotte Extension	617	1,40
Lita Fractions	619	4

(said claims being located in sections 11 and 12, township 30 north, range 13 west, New Mexico Prime Meridian)

for a term of five (5) years beginning on this date and for so long a time thereafter the Lessee is fulfilling the requirements of this lease, unless said lease is sooner terminated as hereinafter provided.

2. The Lessee agrees to pay as payment for rental of said premises a 20% royalty on the gross value of all ores, metals and minerals extracted from said premises until such time as a total of 20,000 tons have been mined and marketed; thereafter, Lessee agrees to pay a 25% royalty on the gross value of all ores, metals, and minerals extracted from said premises; PROVIDED, however, that said 20% or 25% royalty, whichever it may be at the time, shall be reduced by 16% whenever the Gateway Mining and Development Company, Ltd., shall have received a total of $1,000,000.00, said payment being more fully described in paragraph 1 of "Exhibit "G" of the said Deed attached hereto. Said percentages shall include similar percentages of all premiums or bonuses that may be paid by the United States Atomic Energy Commission, or any other governmental agency, but shall not include any development or haulage allowances received by the Lessee for ores extracted from said premises, it being the agreement of the parties that development and haulage allowances paid to the Lessee shall be kept and retained by it as its sole and separate property. It is agreed between the parties that the rentals to be paid to the Lessor shall be paid by the buyer or buyers of ore produced from said premises and this agreement shall constitute the authority of said buyer or buyers of ore produced from said premises to deduct the amount of rentals due the Lessors from the purchase price of any ore and to remit same to the Lessors at their Grand Junction office.

3. The parties hereto agree that all parties shall have the benefit of any depletion allowances now provided by statute or which may be hereafter provided by statute as their interests may appear.

4. The Lessee agrees to commence a drilling program on said claims prior to September 10, 1955, and to drill not less than thirty-six (36) holes on said claims prior to March 1, 1956, during

through the estimated ore sands, unless said drilling program shall be halted as hereinafter provided. Lessee agrees that it will drill a minimum of five (5) holes a month so long as said program is continuing. If at any time during the drilling program the Lessee elects to cease drilling and to commence mining operations, either by sinking a shaft or incline, or by driving a drift, then it may terminate the drilling program and concentrate all its efforts on mining; PROVIDED, however, that in the event the drilling program is so terminated, then the Lessee shall drill at least one (1) drill hole per year on each of the claims not being actively mined, and on each of the claims not surrendered back to the Lessors as hereinafter provided. Said yearly periods shall commence on the date of the termination of the original program.

5. Beginning with the date that the drilling program has been completed, or that it has been terminated under the provisions of paragraph four (4) above, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below) during the term of this lease for labor and equipment to be used for the purpose of exploration for and development of ore on said mining claims, or to extract from within the limits of said mining claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said claims (said drilling to include the minimum commitments described in paragraph three (3) above), sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims.

6. In the event the Lessee elects to surrender back to the Lessors any of the claims included in the lease, then the commitment relative to expenditures for exploration and development and the value

of the ore mined shall be reduced at the rate of $2,000.00 per claim surrendered per quarter, provided, however, that at no time will said exploration-development-mining commitment be reduced below $5,000.00 per quarter. In order for the said three month commitment to be so reduced, the surrender of any claim or claims must be made prior to the three (3) month period or during the first thirty days of any three month period. If the surrender is made during the last sixty (60) days of any three month period, then no reduction in the exploration, development, and mining shall occur until the following period.

7. The Lessee further agrees that in the event commercial ore is discovered on said claims, it will proceed with due diligence and in good miner-like fashion to develop and mine said ore in as great quantities as is consistent with good mining procedure and practice.

8. It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an Option Purchase Agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within thirty (30) days after the completion of 36 holes on the Gateway group, but prior to the time when any mining operations shall commence on the Gateway group and in no event later than seven (7) months from the date of this agreement, or that it will surrender both its option on the Western Slope group to Flanders Mining Company and this lease on the Gateway group to the Lessors.

9. Lessors agree that in the event the Western Slope option is exercised, and in the event that a commercial ore body is discovered on the Western Slope group, then they will grant the Lessee whatever right-of-way it may require through the Gateway group, whether the claim or claims on which said right-of-way must be placed has (have) been surrendered back to the Lessors or not.

10. Lessee agrees to allow the Lessors or their agent, from time to time, to enter upon said premises or into the shaft and drift entry to said premises for the purpose of inspection, survey, or

all geological data pertinent to said mining claims obtained by the exploration, development, or mining thereof, and to furnish upon request adequate proof that the terms of paragraph four (4), five (5) six (6) and seven (7) above have been complied with.

11. Lessee agrees to comply with all requirements of the state and federal mining inspectors and to do no act or thing to cause either the federal or state mine inspector to close the mine located upon said premises.

12. Lessee shall and hereby does assume all responsibility in case of accident or injury of its employees or their persons who may become injured in or about said property, and agrees to indemnify and save Lessors harmless therefor, and to carry such public liability insurance which will so protect Lessors.

13. Lessee agrees to promptly pay all bills and expenses incurred by it and by said prompt payment to prevent the filing of any and all liens of miners, mechanics or materialmen against said leased premises, and to pay all Federal and State taxes and exactions levied or assessed in connection with the removal of ore from said mining claims, including taxes or stock, lied ore, whether such taxes be property, occupation or other taxes; PROVIDED that this shall not apply to any income taxes payable by Lessors on royalties or income received by them from said claims or from ore mined and removed therefrom. Further, if a production or severance tax is levied or assessed against production from the property herein at any time during the term of this lease, Lessee shall pay such tax but Lessors shall pay Lessee a proportionate share of the same based on the Lessor's royalties as herein stated.

14. Lessee agrees at all times to comply fully with the provisions of the Workmen's Compensation Laws of the State of Colorado and a failure at any time to so fully comply with said provisions shall automatically render this lease null and void.

15. Lessee agrees that it will keep posted upon the premises above described, in a conspicuous place, a notice in the following form, to-wit:

NOTICE TO ALL EMPLOYEES ON THIS PROPERTY AND TO ALL OTHERS WHOM IT MAY CONCERN:

NOTICE IS HEREBY GIVEN TO ALL PARTIES PERFORMING LABOR OR FURNISHING SKILL, MATERIALS, MACHINERY, OR OTHER FIXTURES OR SUPPLIES OF ANY KIND, IN, TO OR OF ANY MINE OR MILL UPON THIS

PROPERTY, OR IN, TO OR ON SAID PROPERTY OF ANY PART THEREOF THAT THE UNDERSIGNED, THE OWNERS OF SAID PROPERTY, ARE NOT AND WILL NOT BE RESPONSIBLE FOR ANY LABOR PERFORMED OR SKILL, MATERIALS, MACHINERY, FIXTURES, OR SUPPLIES OR ANY KIND FURNISHED IN, TO OR UPON SAID PROPERTY OR ANY PART THEREOF, NOR SHALL THE INTEREST OF SAID OWNERS BE SUBJECT TO ANY LIEN FOR SAME. ALL PERSONS ARE HEREBY NOTIFIED THAT THE PROPERTY AFORESAID IS BEING OPERATED BY PACIFIC URANIUM MINES COMPANY TO WHOM ALL PERSONS MUST LOOK FOR PAYMENT.

16. Lessee agrees that it shall at all times during the term of this agreement comply with the provisions of the laws now existing or which may be hereafter enacted relative to the performing of annual labor and improvements upon the above-described unpatented lode mining claims and agrees to keep and file all necessary affidavits of assessment work so done by it not later than April 15 of each year.

17. Lessee agrees that if it returns any or all of said claims to the Lessors, whether because of cancellation of the lease as hereinafter provided or because of voluntary surrender, then it shall return the tunnels, drifts, and mine workings on said claims to the lessors in good condition unless said workings have been damaged by unbeidable accident, PROVIDED, however, that the Lessee shall be entitled to keep in its possession and for its use whatever right-of-way it may require in order to reach whatever commercial ore on the Western Slope group it may be actively mining.

18. IT IS MUTUALLY AGREED between the parties hereto that Lessee shall have the right to surrender this lease at any time upon giving Lessors at least 30 days written notice sent by registered mail to their office in Grand Junction, Colorado, and, upon such surrender or cancellation as hereinafter provided, Lessee shall have the right, within 30 days, to remove its machinery, equipment, and personal property from said claims PROVIDED that all royalty payments have been paid in full.

19. The Lessee is hereby given the right to assign this lease to third parties of its own choosing. Upon making said assignment, Lessee shall be fully and finally discharged and relieved of any and all liability hereunder, only PROVIDED, however, that it has been in full compliance with the provisions of this lease agreement up to the date of said assignment.

20. The Lessors make no warranty as to title except as to persons claiming by, through, or under them. Lessee has made its own inquiry and investigation as to title and is satisfied with regard thereto,

and Lessors make no warranties except as to those specifically contained herein.

21. The performance of any obligations, covenants, conditions or terms, either express or implied hereunder, may be delayed or suspended at any time while, but only so long as the party upon whom the burden of performance may rest shall be hindered in or prevented from performance by an Act of God, accident, strike, lock-out, operation of law, war or national emergency, governmental agency regulation, weather conditions which would prevent or render performance abnormally expensive or difficult, unavailability of labor or materials in the open market, or any cause, whether similar or dissimilar, beyond such party's reasonable control.

IT IS MUTUALLY AGREED between the parties hereto that upon violation by Lessee of any of the covenants in this lease, the term thereof shall, at the option of Lessors, expire, and the same and said mining claims shall become forfeited to Lessors and Lessors may thereupon enter upon said mining claims and dispossess all persons occupying same or, at its option, Lessee and all persons found in occupation thereof may be proceeded against as guilty of unlawful detainer; PROVIDED, however, that if said lease is forfeited upon the election of Lessors by reason of the failure of Lessee to perform any covenant thereof, Lessors shall give Lessee at least 30 days notice in writing, by registered mail sent to it at its Grand Junction, Colorado, office, notifying it of such failure and setting out in such notice the substantial facts as to any such default or breach, and upon failure or refusal by Lessee to cure and correct such default within 30 days from the receipt of such notice, Lessee shall surrender and deliver up possession of said mining claims, and its rights under this lease shall thereupon cease and determine.

This is of the essence of this agreement and all covenants and conditions contained herein, express or implied, shall extend to and be binding upon the heirs, executors, administrators, successors and lawful assigns of all of the parties hereto.

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

FLANDERS MINING COMPANY, A co-partnership

By _____
Partner Lessor

ATTEST

_____
Secretary

SOUTHWESTERN URANIUM TRADING CORP.

By_____
Lessor

ATTEST:

_____
Secretary

PACIFIC URANIUM MINES COMPANY

By_____
Lessee

STATE OF COLORADO)
) SS
COUNTY OF MESA)

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by_____for and on behalf of Flandors Mining Company, a co-partnership.

_____
Notary Public

STATE OF)
) SS
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by _____for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corporation.

_____
Notary Public

STATE OF)
) SS
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of _____, 1955, by_____for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

_____
Notary Public

OPTION PURCHASE AGREEMENT

THIS AGREEMENT is entered into as of this _____ day of August, 1955, by and between Flanders Mining Company, a co-partnership composed of Frederick L. Anderson, Leo Van Atta, Emma P. Siegel, and Lawrence Duerig, hereinafter called "First Party", and Pacific Uranium Mines, Company, a Nevada Corporation of Grand Junction, Colorado, hereinafter called "Second Party".

Reference is made to that certain Mining Lease Agreement between Flanders Mining Company and Southwestern Uranium Trading Corporation, as Lessors, and Pacific Uranium Mines Company, as Lessee, wherein said Lessee takes under lease a certain group of twelve (12) unpatented lode mining claims located in Section 11 and 12, Township 50 north, range 20 west, NMPM, said claims being hereinafter referred to as the "Gateway group", said Mining Lease Agreement being attached hereto and made a part hereof.

Reference is further made to that certain group of twenty-seven (27) unpatented lode mining claims lying contiguous to and directly south of the Gateway group, said claims being hereinafter referred to as the "Western Slope group", and being more specifically described as follows, to-wit:

Claim Name			Described in the records of Mesa County, Colorado Book	Page
Rosy 36			625	32
Rosy	Rosy		625	31
Rosy	Rosy	1	578	128
"	"	2	578	129
"	"	3	578	130
"	"	4	578	131
"	"	5	596	174
"	"	6	625	25
"	"	7	625	27
"	"	8	625	26
"	"	9	596	178
"	"	10	596	179
"	"	11	619	506
"	"	12	619	507
"	"	13	625	28
"	"	14	625	29
"	"	15	625	30
"	"	16	619	508
"	"	17	619	509
January		1	598	515
"		5	598	519
"		6	598	520
"		7	598	521
"		14	598	528
"		15	598	529
"		16	598	530
"		17	598	531

parties hereby enter into an option purchase agreement on

said Western Slope group, mutually agreeing as follows:

1. First Party hereby grants Second Party an option to purchase said Western Slope group for a total of [illegible],000.00, to be paid either in cash or in the stock of Pacific Uranium Mines Company, of Los Angeles, California, said stock to be valued at market price on the date this agreement is executed. Said purchase shall be for a 100% interest in said Western Slope group, except that the First Party shall retain a royalty amounting to 5% of the gross value of all ores, metals, and minerals extracted and marketed from said group.

2. It is mutually agreed that this Option Purchase Agreement and the mining lease agreement attached hereto shall be executed concurrently and that neither agreement shall become effective until the other has been executed by all parties. It is further mutually agreed that unless this Option Purchase Agreement is exercised as hereinafter described, then the Second Party shall automatically surrender its rights acquired under the Mining Lease Agreement, and deliver to the Lessors of that agreement a reconveyance of the mining claims listed therein, this obligation, however, being subject to the provisions of paragraph 6 of this Option Purchase Agreement.

3. This Option Purchase Agreement shall be exercised within 30 days after the completion of 30 drill holes on the Octoroy group, but prior to the time when any mining operations shall commence either on the Octoroy group or the Western Slope group, but in any event not later than seven (7) months from the date of this agreement.

4. First Party agrees to permit Second Party to explore the Western Slope group in any manner it may choose prior to the time this Option must be exercised provided, however, that no mining operations shall commence until the option is exercised, and that no exploration activities shall commence until the Second Party has been informed by the First Party that the First Party has accepted title to and purchased said Western Slope group.

5. In the event the Option Purchase Agreement is exercised, a commercial ore discovered in the Western Slope group shall be mined in as great quantities as is consistent with good mining practice procedure.

6. First Party is currently in the process of examining title

on the Western Slope group. Said title examination is being made in detail by Mr. Thomas K. Younge of the law firm of Eelman, Younge and Hockenmaith of Grand Junction, Colorado. In the event that the First Party accepts title to said claims, it will warrant said title only as to persons claiming through, by, or under First Party. Second Party hereby agrees that in the event First Party accepts title, then it also will accept said title. However, First Party agrees that in the event it rejects title on the Western Slope group, then it will release Second Party from the obligations contained in paragraph 2 of this agreement and paragraph 7 of the Mining Lease Agreement, wherein the Second Party is obligated to exercise its option on the Western Slope group if it elects to continue exploration or commence mining on the Gateway group following the completion of the original drilling program on the Gateway group. In this event, First Party agrees to allow Second Party to keep in effect its lease on the said Gateway group.

Time is of the essence in this agreement and all covenants and conditions contained herein, expressed or implied, shall extend to and be binding upon the heirs, executors, administrators, successors and lawful assigns of all the parties hereto.

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

FLANDERS MINING COMPANY, A co-partnership

BY _____
Partner First Party

ATTEST:

PACIFIC URANIUM MINES COMPANY, A Nevada Corporation

_____
Secretary

BY _____
Second Party

ATE OF)
NTY OF) SS

The foregoing instrument was acknowledged before me this _____ of _____, 1955, by _____ for and on behalf Flanders Mining Company, a co-partnership.

_____
Notary Public

STATE OF
COUNTY OF } SS

The foregoing instrument was acknowledged before me this _____ Day of _____, 1977, by _____ for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

_____
Notary Public

AMENDMENT TO MINING LEASE

WHEREAS Flamoro Mining Company, a co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAWRENCE G. LUERIG, and MAZEN P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, a Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation, as "Lessee" did enter into a Mining Lease agreement dated September 15, 1955; and

WHEREAS it is the mutual desire of both Lessors and Lessee to amend said agreement;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #1 of said agreement is amended to include in addition to the mining claims already listed the following mining claims:

Claim Name	Described in the Records of Mesa Co., Colorado	Book	Page
John Brown #1	July 10, 1950	520	490
John Brown #2	" "	"	489
John Brown #3	Aug. 23, 1950	531	191
John Brown #4	" "	"	192
John Brown #6	" "	"	194
John Brown #7	" "	"	195
John Brown #8	" "	"	196
Babbie	" "	"	390
Babbie Extension	Sept. 23, 1954	619	35

The mining claims listed in the original Mining Lease agreement shall hereinafter be referred to as "Group A". The mining claims listed in this amendment shall hereinafter be referred to as "Group B".

2. The first sentence of Paragraph #2 of said agreement is amended to read as follows:

"The Lessee agrees to pay as payment for rental of said Group A and Group B mining claims a 20% royalty ....."

3. Paragraph #4 of said agreement is amended in its entirety to read as follows:

"The Lessee agrees to commence a drilling program on said Group A claims prior to October 1, 1955, and to drill not less than thirty-six (36) holes on said claims prior to March 21, 1956, and to commence a drilling program on said

Group B. claims prior to March 1, 1956, and to drill not less than thirty-two (32) holes on said claims prior to July 1, 1956, unless either of said drilling programs shall be halted as hereinafter provided. Lessee agrees that it will drill a minimum of five (5) holes a month so long as said programs are continuing, and to core all holes through the ostimated ore horizons. If at any time during either of the two drilling programs on the separate groups the Lessee elects to cease drilling on one group to commence mining operations on said group, either by sinking a shaft or incline, or by driving a drift, then it may terminate the drilling program on that group and concentrate all its efforts on mining, PROVIDED, HOWEVER, that it informs Lessor to this effect by registered mail sent to them at P. O. Box 561, Grand Junction, specifying in said notice the date of termination of the drilling, and further PROVIDED that in the event the drilling program on said group is so terminated, then the Lessee shall drill one (1) drill hole per year on each of the claims in said group not being actively mined, and on each of the claims not surrendered back to the Lessors as hereinafter provided. Said yearly periods shall commence on the date of the termination of the original program. It is mutually agreed that the two drilling programs on Group A and B shall be considered separately, and that the termination of drilling and commencement of mining on one group shall not mean that drilling on the other group shall be terminated unless mining shall be commenced on that group also".

5. Paragraph #5 of said agreement is amended in its entirety to read as follows:

"Beginning with the date that the last of the two drilling programs has been completed, or that they have been terminated under the provisions of paragraph four (4) above, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this Lease on both A and B Groups for labor and equipment to be used for the purpose of exploration for and development of ore on said Group A and Group B mining claims, or to extract

for which the lessee of said mining claims during each three (3) month period are in the value of $24,000.00 said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.00 in exploration for and development of ore on said mining claims. Said exploration and development shall include drilling on said Group A and Group B claims (said drilling to include the minimum commitments described in paragraph three (3) above), sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blocking out of commercial ore on said claims."

6. Paragraph #8 of said agreement is amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of 36 holes on the Group A claims of the Gateway group, but prior to the time when any mining operations shall commence on the Group A claims of the Gateway group and in no event later than seven (7) months from the date of this agreement, or that it will surrender both its option on the Western Slope group to Flanders Mining Company and its lease on the Group A claims of the Gateway group to the Lessors".

7. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of November, 1955.

PLANDERS MINING COMPANY, A co-partnership

_____ Partner _____ Partner

ATTEST:

SOUTHWESTERN URANIUM TRADING CORP.

_____ Secretary

_____ President

ATTEST:

PACIFIC URANIUM MINES COMPANY

_____ Secretary

_____ President

STATE OF COLORADO }
COUNTY OF MESA } SS

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Planders Mining Company, a co-partnership.

_____ Notary Public

STATE OF }
COUNTY OF } SS

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Southwestern Uranium Trading Corporation, A Delaware Corp.

_____ Notary Public

STATE OF }
COUNTY OF } SS

The foregoing instrument was acknowledged before me this _____ day of November, 1955, by _____ for and on behalf of Pacific Uranium Mines Company, A Nevada Corporation.

_____ Notary Public

AMENDMENT TO OPTION PURCHASE AGREEMENT
NO. 2

WHEREAS Flandors Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DURRIO, and HAZEN P. SLAGEL, as "First Party", and Pacific Uranium Mines Company, a Nevada Corporation of Grand Junction, Colorado, as "Second Party", did enter into an Option Purchase Agreement dated Sept. 15, 1955, whereby Second Party obtained an option to purchase twenty-five mining claims known as the "Western Slope Group" from First Party; and

WHEREAS said parties did enter into an agreement dated November _____, 1955, amending said Option Purchase Agreement; and

WHEREAS Flandors Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Option Purchase Agreement and Amendment to Option Purchase Agreement, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the promises and mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. The following two mining claims shall be added to the Western Slope Group, and shall become subject to all the provisions of the said Option Purchase Agreement:

Claim Name	Described in the Records of Mesa County, Colo. Book	Page
January	661	118
January 4	"	142

2. Paragraph (3) of said Option Purchase Agreement shall be amended in its entirety to read as follows:

"This Option Purchase Agreement shall be exercised within thirty (30) days after the completion of the last hole to be drilled under a proposed Defense Minerals Exploration Administration project, application for which is to include both the Gateway group and the Western Slope group, or, in the event the said DMEA loan application is rejected, within thirty (30) days after the completion of the drilling of 20 additional core holes by Lessee".

3. It is mutually agreed that all other provisions of the said Option Purchase Agreement and Amendment to Option Purchase Agreement shall remain in full force and effect, and be applicable to said Western Slope Group.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____day of _____, 19___.

AMENDMENT TO MINING LEASE NO.

WHEREAS Flanders Mining Company, a Co-partnership composed of FREDERICK L. ANDERSON, LEE VAN ATTA, LAURENCE G. DUERIG, AND HAZEN P. SLAGEL and SOUTHWESTERN URANIUM TRADING CORPORATION, a Delaware Corporation, as "Lessors", and PACIFIC URANIUM MINES COMPANY, a Nevada Corporation, as "Lessees", did enter into a Mining Lease dated September 15, 1955; and

WHEREAS the same parties did enter into an agreement dated November _____, 1955, amending said Mining Lease; and

WHEREAS Flanders Mining Company, a Co-partnership, did assign all of its right, title and interest derived from said Mining Lease and Amendment to Mining Lease over to Flanders Mining Company, a Nevada Corporation, by a certain General Assignment and Assumption of Liabilities dated December 28, 1956; and

WHEREAS said Mining Lease and Amendment to Mining Lease do prescribe that Lessor shall perform certain minimum exploration requirements on the said claims listed therein within certain prescribed periods of time or surrender said claims back to Lessors; and

WHEREAS Lessee did complete a portion of the said minimum exploration requirements; and

WHEREAS it is the mutual desire of all parties to amend said agreements;

NOW THEREFORE, that for and in consideration of the premises and the mutual covenants and agreements herein contained, it is mutually agreed as follows, to-wit:

1. Paragraph #4 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"The Lessee agrees to submit to the Defense Minerals Exploration Administration (hereinafter called "DMEA") prior to March 1, 1956, an application for a loan for the purpose of continuing exploratory drilling on the Group A and Group B claims (hereinafter called "said claims") said loan application to request that a minimum of $20,000.00 be furnished by the DMEA to conduct said additional drilling. Relative to said loan application, it is mutually agreed as follows:

a) If said loan is granted, Lessee shall be absolutely and unconditionally obligated to undertake the payment of all costs of the loan project not paid by the DMEA, said costs

include those incurred by the normal maintenance of the claims while the loan project is being carried on. Lessee further agrees not to surrender any of the said claims back to Lessor until the loan project has been completed.

b) If said loan is granted and if the production of uranium ore results, Lessee shall pay the DMEA the full amount of the royalty due under the DMEA contract, but Lessors shall reimburse Lessee monthly for one-half (1/2) of the amount paid by the Lessee to the DMEA.

c) If said loan is not granted by the DMEA, Lessee shall surrender said Group A and Group B claims back to Lessors within thirty (30) days after the rejection of said loan application, or shall within thirty (30) days of said rejection commence an exploration program of its own as hereinafter described in paragraph 5 of this Mining Lease".

2. Paragraph #5 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"Beginning on the date thirty (30) days after the last drill hole of the said DMEA loan project has been completed or thirty (30) days after the said loan application has been rejected, the Lessee agrees to expend not less than $24,000.00 during each three month period (said amount being subject to reduction under the provisions of paragraph six (6) below during the term of this lease on said claims for labor and equipment to be used for the purpose of exploration for and development of ore on said claims, or to extract from within the limits of said claims during each three (3) month period ore in the value of $24,000.00, said value to exclude any development or haulage allowances or bonus payments received by the Lessee from sale of said ore, or in the event the value of said ore mined in a given three (3) month period is less than $24,000.00 to expend the difference between the value of the ore mined and $24,000.0 in exploration for and development of ore on said mining claims Said exploration and development shall include drilling on said claims, sinking a shaft on said claims, drifting on or directly toward said claims, and in other exploration and development directly related to and associated with the finding and blockin out of commercial ore on said claim. Lessee further agrees th

in the event he commences an actual mining operation on any of the said claims, then the minimum requirements as outlined above shall include the drilling of one core hole a year to ore horizon depth on each of the said claims not being actively mined and on each of the claims not surrendered back to Lessors as hereinafter provided, said minimum requirement to prevail whether sufficient ore to fulfill the ninety (90) day dollar commitment is produced or not."

3. Paragraph #6 of said Mining Lease is hereby amended to include the following at the end of the paragraph:

"This paragraph is subject to the provisions of paragraph 4 a) above".

4. Paragraph #8 of said Mining Lease as amended is hereby further amended in its entirety to read as follows:

"It is further understood and agreed that concurrently with the signing of this agreement Flanders Mining Company and the Lessee shall jointly sign an option purchase agreement, attached hereto and made a part hereof, referring to that certain group of Western Slope claims located contiguous to and south of the Gateway group, and listed in said Option Purchase Agreement. It is further agreed that the Lessee shall exercise its option on said Western Slope group within (30) days after the completion of the last drill hole of the DMRA project, but prior to the time when any mining operations shall commence on the claims of the Gateway group or that it will surrender both its option on the Western Slope group back to Flanders Mining Company and its lease on the Gateway group back to Lessors. In the event the above described DMRA loan is rejected, and provided Lessee commences an exploration program on the said claims as hereinabove described in paragraph 5, it is agreed that said option on the Western Slope group may be exercised within thirty (30) days after the completion of an additional twenty (20) drill holes by Lessee on the Gateway group.

5. Paragraph #18 of said Mining Lease is amended to include the following after the words "to surrender this lease at any time" in line 2 of the said paragraph:

5. continued

".....after the completion of the above described DMEA loan project or after the rejection of said DMEA loan application ".

6. It is mutually agreed that all other provisions of the said Mining Lease agreement shall remain in full force and effect, and be applicable to both Group A and Group B claims.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this _____ day of February, 1956.

_____
Lessor

_____

LEASE AND OPTION AGREEMENT

THIS AGREEMENT, Made and entered into this _____ day of March, A. D. 1955, by and between ARTHUR POCIASK and ROBERT POCIASK, hereinafter known as Parties of the First Part, and JOHN P. KELLOGG, hereinafter known as Party of the Second Part,

W I T N E S S E T H

THAT for and in consideration of the sum of one dollar and other valuable consideration, cash in hand paid, parties of the first part hereby lease to party of the second part the following described unpatented mining claims located in the Gateway District, Mesa County, Colorado, to-wit:

Pociask, recorded in Book 585, Page 463
Pociask Extension, in Book 634, Page 453

The term of this lease shall commence on this date and terminate on March 9, 1960, unless sooner terminated as herein provoded.

In the event party of the second part performs all of the covenants herein agreed to be performed by him, second party shall have the right to renew this lease for a further term of five (5) years from and after March 9, 1960 upon giving to first parties written notice of his intention so to do at least six (6) months prior to the end of the primary term.

Party of the second part agrees to perform sufficient assessment work each year to maintain the claims as valid claims under the Mining Laws and to file Affidavits of Annual Labor each year

thereafter, reciting that sufficient assessment work has been done. Second party agrees to perform sufficient assessment work before July 1, 1955 so that an Affidavit of Annual Labor may be properly filed on or before July 1, 1955.

Party of the second part further agrees to drill two (2) holes per year to a sufficient depth to properly explore the within mentioned claims, such drilling may be considered as assessment work as provided for in the preceding paragraph.

It is understood and agreed that party of the second part shall have the right to terminate this agreement at any time upon giving to first parties forty-five (45) days notice of his intention so to do, except that second party shall have no right to terminate said agreement until he has performed the necessary assessment work and filed the Affidavit of Annual Labor on or before July 1, 1955, and provided further that second party shall be bound to do said assessment work for subsequent years unless second party gives notice of termination to first parties of his intention to terminate this agreement at least 45 days prior to the end of the assessment term or work year.

Party of the second part agrees to pay to first parties 15 per cent of any and all Government bonuses and allowances, except the development allowance, and except also the transportation allowance, together with 15 per cent of the net mill returns on any and all ore removed from the leased premises assaying .25 per cent or more of U-308 ore and 12½ per cent of the net mill returns on any and all ore assaying .24 per cent or less of U-308 ore. The royalty payments will be based on the average grade for all shipments made in one calendar month and settlement shall be made on or before the 15th day of the following month.

Party of the second part is hereby granted the option to purchase the leased premises at any time on or before January 1, 1956 by paying to first parties $15,000.00, and in the event of

such purchase first parties shall be deemed to have, own and retain an overriding royalty commensurate with and equal to the royalty to be paid to them under the lease herein provided.

Party of the second part agrees to furnish to parties of the first part, upon request and at all times, all drilling locations, assays, geologic and hole location maps and any and all other pertinent data regarding exploration work performed by second party on the within described mining claims.

In the event party of the second part fails to perform any agreements or covenants herein agreed to be performed by him, first parties shall have the right to terminate this agreement upon giving to second party, or his assigns ten (10) days written notice of their intention so to do.

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

Anthony Poriaska (SEAL)

Robert Poriaska (SEAL)

Parties of the First Part.

John P. Kellogg (SEAL)

Party of the Second Part.

CLIMAX URANIUM COMPANY - PACIFIC URANIUM MINES COMPANY FARM-OUT AGREEMENT

Will be forwarded if and when negotiations have been successfully completed on the six Cherry Creek claims. This report was submitted prior to the completion of these negotiations because of an agreement with the Flanders Mining Company to apply for a DMEA loan by March 1, 1956.

APPENDIX B

Drill Hole Logs

P-1 thru 3

JB-1 thru 20, 22 & 23

M-126

DRILL HOLE LOG

Logged For

Type of Drill: Dr. Cam Drilling Co Valtrona Corporation
EX core

COORDINATES

Drill-hole No. Pos. A
Total depth 275
Collar elev 5853 T. [illegible] P
Area Bearing Mesa, Colorado

North ... East ...
Tie 70' S 35° W of EX Pos

Claim Peabody
Date started 25 May 55
Date completed 30 May 55
Logged by J. Jones

Summary of log Sand-favorable, OBSS 140-160, 225-266.5 Thick 40, 41.5 SS color Lt Br, Lt Br; MS Gn, Rd; Cbn ..., OBSS Rd

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	140					Plug
140	150	SS	Lt Br	C		
150	160	SS	Lt Br	F		
160	185	MS	Gn, Rd			R MS [illegible]
185	190	MS	Rd			
190	200	MS	Rd			
200	205	SS	Lt Br	F		
205	220	MS	Rd			
220	225	MS	Pp			
225	230	MS	R			
230	231.5	SS	Lt Br			Lime - w/ yellow stains (Uran)
231.5	246.5	SS	Lt Br, Rd			SS fractured - interbedded Gy SS
246.5	255	SS	Lt Br			Dark Rd MS balls
255	264.5	SS	Lt Br			w/ large Rd MS balls
264.5	275	MS	Rd			

Y-Ray Log 0 — 1000

SAMPLE Hole	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. Pos. A

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COLORADO PRINTING CO.

DRILL HOLE LOG

Howard Binkley

Type of Drill: Portadrill
NX core

Logged For: Pacific Uranium Mines Company

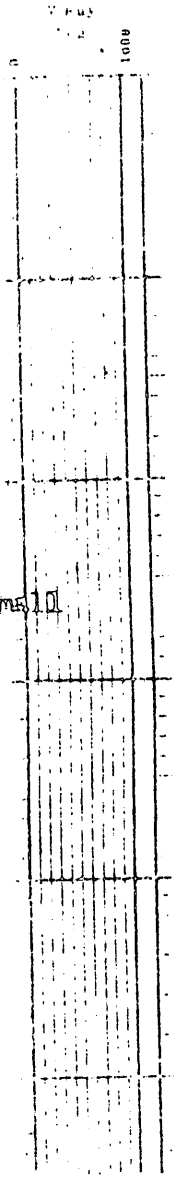
Drill-hole No. Poc #2
Total depth. 360
Collar elev. 6067 Assumed
Area: Beaver Mesa, Colorado
Summary of log: Semi-favorable

COORDINATES
North – East –
Tie 280' N35°00'E fr SHX Poc

Claim: Pociask
Date started: 22 Aug 55
Date completed: 30 Aug 55
Logged by: L. Jaynes

210-250	Clay 40	Br-LtBr	MS	Rd	N-S
270-380	70	Rd-LtBr	Sandstone	Rd	N-S

DEPTH From	To		DESCRIPTION Color	Grain	Hardness	REMARKS
0	210					Plug
210	215	SS	Br	F	S	some Gn SH
215	220	SS	LtBr	F		w/ Gn SH
220	230	SS	LtBr	F	S	
230	235	SS	LtBr, Rd	M		some pebbles
235	240	SS	Br	F		w/ limey spots & Gn SH
240	250	SS	Br	M-F		has Rd MS & Gn SH
250	260	MS	Rd			some interbedded RdBr SS
260	270	MS	Rd			
270	275	SS	Rd	F		
275	280	SS	Br	F		w/ Gn SH
280	282	SS	Rd			w/ limestone & Bl clay
282	285	SS	Rd	F		w/ mud galls M seams
285	289.5	SS	LtBr	F	S	carbon in seams
289.5	290	SS	limey		S+	C O 289.8 SS w/ Gn SH galls
290	297	SS	Br			w/ quartz – Rd Ms galls – small
297	300	SS	LtBr		S	
300	302	SS	Br	F		
302	303.5	SS	limey			w/ Gn SH
303.5	309.8	SS	Wh			w/ Rd MS galls
309.8	310	SS	LtBr			iron stain
310	311	SS	Gy, limey			w/ Gn Sh & Rd M galls
311	317	SS	Br		S	w/ seams of R MS
317	317.5	MS	Rd			
317.5	327	SS	Br			
327	327.3	SH	Gn		S	band SH w/ M galls & C
327.3	340	SS	LtGyBr		S	SS w/ interbedded SH Gn
340	360	MS	Rd, Gy SH			



SAMPLE BASE	THICK	LAB ASSAY U3O8		FIELD ASSAY U3O8	

Abbreviations

Wh white
Br brown
R red
Gy gray
Bl blue
Gn green
Ye yellow
Bk black
Pp purple
Car carl
OBS

G
S
L
S
L
S
A
SS

Hole No. Poc #2

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Mayhew 1000 Special Rotary NX

Drill-hole No. P # 3
Total depth 284.5
Collar elev. 5963.2' T assumed P
Area Beaver Mesa, Colorado

COORDINATES
North = East =
Tie 282' 576° 50' W Fr nex Pociask

Claim Pociask
Date started Oct 20, 1955
Date completed Oct 30, 1955
Logged by H. W. Evans

Summary of log Unfavorable : OBSS 253-268 Thick 15' ; SS color Wh, Br ; MS under OBSS R ; Cbn. S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	193					193' Plug
193	196	SS	R, Br, & Wh	F	N	6' Minute black specks in sand, Mottled red & Gn at base.
199	200.5	MS	R	F	N	1.5' Soft & easily decomposed
200.5	202.5	ST	Br, Gy, Gn	VF	N	2' Dense mud hard
202.5	203	MS	R	F	N	0.5' Very soft
203	208	St	R, Wh, & Gy	F	N	5' Very dense & hard, Mostly R with some grayish-white streaks
208	220	MS, SS, & ST	Gn, R, Wh, Gy	F	N	12' Intermixed seams of mudstone, sandstone, & siltstone with no definite cut offs.
220	223	SS	R, Br, & Wh	F	S(?)	3' Many fine mud seams running thru sand, Considerable fine black specks in sand.
223	232	SS	R, Br, & Wh	F, VF	S	9' Dense w/Bk & Gn specks
232	237	ST	Gr, Wh	VF		5' Greenish mud galls w/depth limy.
237	238.5	MS	R	VF		1.5' Grading into silt stone
238.5	253	SS	R, Wh, & Br	F		4.5' Many thin mud seams
253	268	SS	Wh, Br	M		15' Crystal clear sand, Some mud inclusions with depth
268	270	MS	R, Wh	F		2'
270	283	SS	Br, Wh	F	S	13' Milky white sand
283	284.5	MS	R, Gn	F		1.5' Containing some limy ST
						Core pulled -86.3
						Cored -91.5
						Percent core recovery = 94.3

y-Ray Log 0 2000

All core checked for anamolous radioactivity. None shown
Most of the core effervesced when tested with HCL sol'n: high lime content.

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. P # 3

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COLORADO PRINTING CO

DRILL HOLE LOG

Logged For: Flanders Mining Company

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No.: JB #1

Total depth: 404'

Collar elev.: 5972 Tassumed P

Area:

COORDINATES

North: – East: –

Tie 140' S 14° 00' W fr NEX JB #5

Claim: John Brown #5

Date started:

Date completed:

Logged by:

Summary of log: unfavorable ; OBSS 378–397 Thick 19' ; SS color Gr,Br ; MS under OBSS R ; Cbn. S – 388–9'

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	300					Plug
300	305	MS	Gr,Br			5')
305	314	MS	Gr,Rd			9') 17'
314	317	MS	Rd,Gr			3')
317	319.5	SS	Gr	M–F		2.5' Light green
319.5	324	MS	Rd			4.5'
324	334	MS–SS	Rd,Br			10'
334	345	MS	Gr,Gy	F		11' Small amt. of F, SS
345	347	SS	Gr,Gy	M–F		2'
347	354	MS	Gr,Gy			7'
354	378	MS	Rd			24' Gr near bam
378	397	SS	Gr,Br	M–F	S	19' Some carbon streaks 388' – 9'
397	404	MS	R			7'

Total footage cored 104.0
Total core pulled 100.5
Per Cent Recovery 93.5
Hole was probed, and there was no count in the core (?).

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Approx. copy only! hwe

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #1

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DRILL HOLE LOG

Logged For

Type of Drill Mayhew 1000 Special Rotary NX — Pacific Uranium Mines Co.

Drill-hole No. JB #2
Total depth 420'
Collar elev. 6114.5 T assumed P
Area Beaver Mesa, Colorado

COORDINATES
North — East —
Tie 144' 585° 10'W of swx Pociask E, sex LL Fr

Claim John Brown # 24
Date started Oct. 11, 1955
Date completed Oct. 15, 1955
Logged by H. W. Evans

Summary of log Unfavorable; OBSS 323-350, 351-381; Thick 27', 30'; SS color Red; MS under OBSS Green; Cbn. S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	305					305' Plug
305	323	MS	R, Wh, & Gy	F	N	18' Mottled in color, dense, some sandy seams.
323	350	SS	R, Br, & Wh	M	N	27' Color tends towards Wh with depth. Sandy mud near top & some mud galls included thru out. Streaks of black & Gn interspersed with sand near base. Sand peppered with fine black mineral.
350	351	MS	R	F	N	1'
351	381	SS	R, Wh	M	S	30' Black, white, & green specks in sand. Thin R mud seams run thru sand near top give banded appearance. Darker Gn mud balls near base.
381	385	MS	Gr, Br, & R	F	N	4' Changing from Gn to R with depth.
385	420	MS	R, Br, & Gn	F		35' Plug

Total footage cored 80'
Total core pulled 80'
Percent core recovered 100 %

All core checked for anamolous radioactivity - None Shown

γ-Ray Log 0 — 300

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

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Hole No. JB #2

COLORADO PRINTING CO.

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #3

Total depth: 339

Collar elev. 5983 Tabulated P

Area: Beaver Mesa, Colorado

COORDINATES

North — East —

Tie 296' N 36° 40' E

fr SW JB #11

Claim: John Brown #11

Date started: 11 Nov. 1955

Date completed: 23 Nov. 1955

Logged by: M. M. Fran

Summary of log: Acid-favorable OBSS 251-256 Thick. 5'; SS color Gn-Wh.; MS Gn strip.; Cbn. S
256-305 39' L, Wh, Gy, Gr under OBSS Dark R-Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	220					220' Plug
220	251	MS	R-Br-Gn	VF	N	31' Mottled R & Gn after 220 with darker colors and becoming greener with depth. All Gn after 245. Some ST.
251	256	SS	Gn-Wh	F to M	S	5' Some red seen. SS appears bleached.
256	266	M	R	F	N	10' Gn strip at bun
266	305	SS	R, Wh, Gy	M-C	S	39' R & Gn thin red seen in SS 280-290. Very. fossiferous 286-7'. Nu-brown thin dark mineralized streaks 290-305. 0.2' dark red seen 310.
305	339	MS	Br, Gn, Rd, Gy	F	N	34' Very dark MS at top becoming lighter with depth.

Sparse to abundant lim.

Total footage cored - 119
Total core pulled - 118.1
Per Cent Recovery - 99.1

All core checked for anomalous radioactivity - None found

Probe: 245.4 - 255.8 showed anomalous radioactivity. Highest counts @ 245.4, 247.0, 251.2 all here Ext 2, Scale 0.1. Reading 7 on a Universal Counter.

y-Ray Log 0 — 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
—	—	—	—	—	—

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #3

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DRILL HOLE LOG

Logged For

Type of Drill: Mayhew 1000 Special Rotary NX (2 5/16")

Pacific Uranium Mines Co.

Drill-hole No. JB #4

Total depth 320'

Collar elev. 5949 Tentured P

Area Beaver Mesa, Colorado

COORDINATES

North – East –

Tie 350' S 51° 45' E fr NX JB #11

Claim John Brown #11

Date started 30 Oct. 55

Date completed 11 Nov. 55

Logged by H. W. Ewan

Summary of log Unfavorable; OBSS 268 – 269 Thick 1'; SS color Gr-Wh.; MS R; Cbn N

276 – 279 3' R, Br, Wh under OBSS

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
268	269	SS	Gr, Wh	F	N	1' Lity
269	276	MS	R	VF	N	7' Lity becoming a mottled red and green at bot. Six-inch seam only showed no lim
276	279	SS	R, Br, Wh	VF	N	3' Lity and drum
279	280	MS	R	VF	N	1' Lity and drum
280	320	MS	R	–	–	40' Plugged due to loss of dia. bit. Info. based on driller. Some SS stringers only.

Total footage cored 12.0'
Total core pulled 12.0'
Per Cent Recovery 100%
All core checked for anomalous radioactivity – None shown
161 – 172.5' showed a reading of 7 with Universal Counter set at .1 and Ext. 2.

y-Ray Log 0 – 300

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations Probed to 218'

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #4

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No.: JB #5

Total depth: 327'

Collar elev.: 5965 T. assumed P

Area: Beaver Mesa, Colorado

COORDINATES

North: – East: –

Tie: 240' S 21° 09' E fr MX JB #11

Claim: John Brown #11

Date started: 8 Nov. 55

Date completed: 11 Nov. 55

Logged by: H. W. Brown

Summary of log: Unfavorable; OBSS 274 – 293.5 thick 9.5' SS color Wh, Gy; MS under OBSS R; Cbn. S – A
300 – 320 20'

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
250	255	MS	R	VF	N	5' Some lim & sand
255	263	M–SS	R	F	N	8' Thin layers of sand & mudstone
263	270	SS	Wh, Br	MF	S to A?	7' Containing a large amount of black specks
270	274	M–SS	R, Wh, Br	VF–M	S	4' A sand & mud mixture
274	293.5	SS	Wh, Gy	M	S	9.5' Good looking sand with a low lim content. An almost vertical fracture shown fr 292 – 293.5. Also, many fractures on bedding plane
293.5	294	MS	R	VF	N	0.5'
294	296	SS	Wh, R	F	S to A?	2'
296	300	MS, St	R, Gr	VF	N	4' Color blending fr R to Gr with depth
300	320	SS	R, Wh	VF	S	20' With more and more red seen towards the bun
320	323	MS	R	VF	N	3'
323	325	SS	R, Wh	F	N	2' Dean
325	327	MS	R, Wh	F	N	2'

Total footage cored 77'
Total core pulled 66.2
Per cent Recovery 98%
All core checked for anomalous radioactivity – None shown
No anomalous radiometric count recorded. Probed to 294'

γ-Ray Log: 0 – 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #5

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB 16
Total depth: 270
Collar elev.: 5927 Tabulated P
Area: Beaver Mesa, Colorado

COORDINATES
North: – East: –
Tie: 600' S 56° 00' E fr. MU JB 11

Claim: John Brown #11
Date started: 11 Nov. 55
Date completed: 23 Nov. 55
Logged by: H. V. Brown

Summary of log: valvarable (borderline); OBSS: 220–250.5 Thick. 30.5 SS color R, Wh, Gr; MS Gn (thin) under OBSS; Cbn.

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	200					200' Plug
200	220	MS–ST	R, Gn	VF	N	20' Vert. fracture 200–1'. ST seam of fr 1 to 2' thick only
220	250.5	SS	R, Wh, Gn	M to F	S	30.5' Some vert. fracturing & R & Gn mud galls fr 243–5'. Sand redder than middle portion
250.5	270	MS	R, Gn	F – VF	N	19.5' Some ST seam. Thin Gn mud seam at bun of red zone
						Abundant lim throughout core
						Note: 190–200 core plugged
						Total footage cored 70
						Total core pulled 66.9
						Per Cent Recovery 95.5%
						All core checked for non-low radioactivity – None shown
						Poorly: No truly non-low high

y-Ray Log: 0 – 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB 16

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DRILL HOLE LOG

Scott Bros.

Type of Drill Mayhew 1000 Special
NX Core

Logged For
Pacific Uranium Mines Co.

Drill-hole No. JB #7
Total depth 183.5
Collar elev. 5826 T assumed P
Area Beaver Mesa, Colorado
Summary of log Semi-favorable

COORDINATES
North – East –
To 750' N 13° 30' W fr
SEX JB #9

Claim John Brown #9
Date started 12 Nov. 55
Date completed 23 Nov. 55
Logged by H. W. Evans

BSS 104-47 Thick 43 ; SS color R MS R, Gn Cbn N
150-64 14 Wh, Br under CBSS R, Gn S

DEPTH From	To	Rock	Color	Grain	Carbon	Thick	REMARKS
0	90					90'	Plug
90	100	SS	R, Br, Wh	F-M	S	10'	Gn mud galls at base
100	104	MS	R, Gn	F	N	4'	Mottled
104	147	SS	R	F-M	N	43'	Thin blended R & Gn mud seam @ 124'. Vert. fracture 129 - 132' and 143 - 144'. Sand is whiter below 130' but still tinged with R.
147	150	MS	R, Gn	F	N	3'	
150	164	SS	Wh, Br	M-C	S	14'	Some R & Gn mud galls, also some black mineralized streaks. Hor. fractures 161 - 162'
164	183.5	MS	R, Gn	F	N	19.5'	Top portion mostly R the base mostly Gn

Lime content of sand somewhat lower than previous holes tested

Total footage cored 93.5
Total Core Pulled 86.7
Per Cent Recovery 92.8%

All core checked for anomalous radioactivity - None shown

Probe: No truly anomalous highs

V-Ray Log 0 1000

SAMPLE BASE	THICK	LAB ASSAY % U_3O_8	V	FIELD EST. % U_3O_8	V
–	–	–	–	–	–

Abbreviations

Wh	white	CG	conglomerate
Br	brown	SS	sandstone
R	red	MS	mudstone
Gy	gray	ST	siltstone
Bl	blue	F	fine
Gn	green	M	medium
Yw	yellow	C	coarse
Bk	black	N	none
Pu	purple	S	sparse
Cbn	carbon	A	abundant
CBSS	ore bearing sandstone		

Hole No. JB #7

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #8
Total depth 290
Collar elev. 5960 T assumed P
Area Beaver Mesa, Colorado

COORDINATES
North — East —
Tie 18' S 3° 30' E fr. DM JB #10

Claim John Brown #5
Date started 28 Nov. 55
Date completed 6 Dec. 55
Logged by H. W. Evans

Summary of log: Unfavorable; OBSS 183-193, Thick 10', SS color Wh, MS Gn, Cbn. S
203-216, 13', Wh, Rd; under OBSS Rd, S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS		γ-Ray Log 0 – 1000
0	183					183'	Plug	
183	193	SS	Wh	M	S	10'	Some Gn MS inclusions and limonite coloring	
193	203	MS	Gn, Rd	VF-F	N	10'	Gn MS on top, otherwise mottled.	
203	216	SS	Wh, Rd	F-M	S	13'	Some dark mineralized streaks at 214'	
216	260	MS	Rd, Gn	VF	N	44'	Some thin ST seams Generally mottled in color.	
260	265	SS	R	F	N	5'	Dense	
265	270	MS	Gn, Gy, Rd	F	N	5'		
270	277	SS	Gy, Wh	F-M	N	7'	Dense with mud seam	
277	290	MS	Gy, Gn, Rd	VF	N	13'	Dark colors becoming redder with depth	
						Lime content average		
						Total footage cored	107	
						Core Pulled	105.8	
						Per Cent Recovery	98.7%	
						All core checked for anomalous radioactivity - None shown		
						Prove: Highest count @ 271.7 showed 6 on External 2 & setting .1 of a Universal Counter		

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
—	—	—	—	—	—

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant

OBSS—ore bearing sandstone

Hole No. JB #8

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #9
Total depth 305'
Collar elev. 5981 ~~measured~~ P
Area: Beaver Mesa, Colorado

COORDINATES
North — East —
Tie 700' S 41° 00' W fr NEX JB #5

Claim: John Brown #5
Date started: 23 Nov. 55
Date completed: 1 Dec. 55
Logged by: H. W. Evans

Summary of log: Unfavorable; OBSS 210–216 Thick 6'; SS color R, Wh; MS Gn, R; Cbn. N
233–245 12' Br, R, Wh under OBSS R, Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	210					210' Plug
210	216	SS	R, Wh	M	N	6' Some Gn MS inclusions
216	233	MS	R, Gn	F	N	17' Mottled
233	245	SS	Br, Rd, Wh	MF	S	12' Containing fine red and green which show many black mineral particles. 0.6' dark Rd and green at 243'
245	283	MS	R, Gn	F	N	38' Mottled but mostly red
283	288	ST	Gn, Gy	VF	N	5' Dark colors
288	305	MS	R, Gn	F	N	17'

Abundant lime except for 280 – 290'

Total footage cored 95
Total Core Pulled 93.7
Per Cent Recovery 98.6%

All core checked for anomalous radioactivity – None shown

Probe: No truly anomalous radioactivity

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
—	—	—	—	—	—

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #9

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

Drill-hole No.: JB #10

Total depth: 300

Collar elev.: 5947 T. assumed P

Area: Beaver Mesa, Colorado

North: – East: –

Tie: 580' S 36° 15' E fr NWX JB #11

Claim: John Brown #11

Date started: 16 Nov. 55

Date completed: 30 Nov. 55

Logged by: H. M. Evans

Summary of log: Unfavorable; OBSS 240 – 259 Thick 19'; SS color R, Wh; MS R, Gn; Cbn. N–S
280 – 294 14' R, Wh under OBSS R, Gn S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	180					180' Plug
180	240	MS	R, Gn	VF	N	60' Mostly R but some mottled Gn and a few Gn ST seams
240	259	SS	R, Wh	MF–M	N–S	19' Many red and green thin SS near top. Whiter SS towards bottom, with some Fe mineralized streaks
259	280	MS	R, Gn	F	N	21' Blends into mud at bottom
280	294	SS	R, Wh	M	S	14' Whiter towards bottom. There are some red and dark mineralized streaks near the bottom
294	300	MS	R, Gn	F	N	6' Some thin Gn MS seams
						Abundant lime throughout core
						Note: Top 20' core-plugged
						Total footage cored 100
						Total Core Pulled 93.2
						Per Cent Recovery 93.2%
						All core checked for anomalous radioactivity – None shown
						Probe: 265–269.2 abnormally high. Highest count on Universal Counter M 267.3 – Ext 2, Scale 0.1, Reading 6.0

y-Ray Log: 0 – 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #10

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

Drill-hole No. JB #11
Total depth 320
Collar elev. 5973 Taximed P
Area Beaver Mesa, Colorado

North – East –
Tie 640' N 76° 45' E fr
Sta JB #11

Claim John Brown #10
Date started 21 Nov. 55
Date completed 28 Nov. 55
Logged by H. W. Evans

Summary of log Semi-favorable OBSS 264 - 304 Thick 40'; SS color Gy, Wh, Br & R; MS Dark Gn under OBSS; Cbn. S-A

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	220					220' Plug
220	231	MS	R, Gr	VF	N	11' Mottled Gn near base
231	233	ST	Gn, Gy	VF	N	2'
233	250	MS	R	VF	N	17' Some mottled Gn
250	252	ST	Gy, Br	VF	N	2'
252	255	MS	R	VF	N	3'
255	258	ST	Gy, Gn	VF	N	3' Dark Gn-Br near top with dark R-Br streak near base
258	264	MS	R, Gn	VF	N	6' Mud blends into mud. More Gn near base
264	304	SS	Gy, Wh, Br, & R	M	S-A	40' Some black mineralized (?) streaks fr 264-290'. Vert. fractures fr 296-298'. Sand becomes redder towards base
304	320	MS&ST	Gn, R	VF	N	16' Dark Gn at top becoming redder towards base

Abundant lime throughout core

Note: 210-220' core-plugged
Total Footage Cored 100
Total Core Pulled 98.2
Per Cent Core Recovery 98.2%

All core checked for anomalous radioactivity - None shown
Probe: 193-196.9' abnormally high
Highest at 194' External 2, Scale 0.1
Rading 9.5 on Universal Counter

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #11

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #12
Total depth 305
Collar elev. 5951 Assumed P
Area Beaver Mesa, Colorado

COORDINATES
North – East –
Tie 180' N 36° 00' W fr NEX JB #5

Claim John Brown #7
Date started 6 Dec. 55
Date completed 10 Dec. 55
Logged by H. W. Evans

Summary of log: Semi-favorable OBSS 204–229 Thick 25; SS color Wh; MS Gn; Cbn S–A
270–301.5 31.5 Rd, Wh under OBSS R N–S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	200					200' Plug
200	204	MS	Rd, Wh, Gn	F	N	4' Some sand in mud
204	229	SS	Wh	M	S–A	25' Mud seam near top. Good porous sand; Vertical fracture at 225'. Thin Gn MS seam at base
229	260	MS	Rd, Gn	VF	N	31' Dense and mostly red
260	265	SS	R	F	N	5' Dense
265	270	MS	R	F	N	5' Sandy
270	301.5	SS	Rd, Wh	F–M	N–S	31.5' Many Rd MS to 279. Thin Gn MS seam @ 279. Horizontal fractures at 287. Sand becomes whiter and more porous with depth. Thin Gn MS seams at base.
301.5	305	M	R	F	N	3.5'

Lime content average

Total footage cored 105
Total core pulled 103.3
Per Cent recovery 98.5%

All core checked for anomalous radioactivity – None shown

Probe: No truly anomalous high

y-Day Log

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
–	–	–	–	–	–

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB # 12

DRILL HOLE LOG

Logged For

Type of Drill Sprague & Henwood — Pacific Uranium Mines Co.

Drill-hole No. JB #13
Total depth 290
Collar elev. 5934T assumed P
Area Beaver Mesa, Colorado

COORDINATES
North - East -
Tie 280' N 13° 30' W fr SEX JB #10

Claim John Brown #10
Date started 6 Dec. 55
Date completed 15 Dec. 55
Logged by H. W. Evans

Summary of log favorable OBSS 236-279 Thick 43' ; SS color Rd. to Wh ; MS under OBSS Gn ; Cbn. S-A

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	190					190' Plug
190	201	MS	Rd	VF	N	11' Little to no Gn coloring
201	208	ST-SS	Rd-Gn	F	N	7' Very dense
208	232	MS	Rd, Gn	F	N	24' Mottled green w/some ST seams
232	235	SS	Rd, Wh, Br	F	N	3' Dense
235	236	MS	Rd	F	N	1'
236	279	SS	Rd, Wh	F-M	S-A	43' Varying fr porous to dense and then back to porous. Rd at top blends into Wh towards base. Sample #1 taken of 250.6-252.3 interval because of dark color despite no count. Gn MS galls towards base
279	280	MS	Gn	VF	N	1'
280	290	MS	Rd	VF	N	10' Dense ST seams. Gn at top becoming mostly red with depth. Lime slightly lower in SS

Total footage cored - 100
Total core pulled - 99.1
Per Cent Recovery - 99.1

All core checked for anomalous radioactivity - None shown

Probe: Highest count 27 3-4' 7 to 9 on External 2 & Setting 0.1 of Universal counter. No check in the core

y-Ray Log 0 — 100

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. U_3O_8	FIELD EST.
252.6	1.7			0.0%	0.03%

Abbreviations

Wh - white
Br - brown
R - red
Gn - green
Bl - blue
Yw - yellow
Bk - black
Pp - purple
Clay - clay
CG - conglomerate
SS - sandstone
MS - mudstone
ST - siltstone
F - fine
M - medium
C - coarse
N - none
S - sparse
A - abundant
OBSS - ore bearing sandstone

Hole No. JB #13

DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #14
Total depth 305
Collar elev. 5933 T. assumed P
Area Beaver Mesa

COORDINATES
North - East -
Tie 150' N 17° 30' W fr. SEX JB #8

Claim: John Brown #8
Date started 16 Dec. 55
Date completed 20 Dec. 55
Logged by H. W. Evans

Summary of log Favorable ; OBSS 270-300 Thick 30 ; SS color rd, wh, ga ; MS under OBSS ga ; Cbn. S-A

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	180					180 Plug
180	190	SS	Wh	M	S	10 Fairly porous. Much lime
190	229	MS	Rd, Ga, Gy	VF	N	39 Mottled with some ST seams. Lime varies fr S to A
229	240	SS & MS	Gy, Ga, Rd	F	N	11 Vertical fractures at 236 & 240. 2-3' MS & SS seams. Lime fr S to A
240	270	MS	Rd, Ga	F	N	30 Mottled but quite a bit of Ga and becoming very sandy at the base.
270	300	SS	Rd, Wh, Ga	M	S-A	30 Some Rd MS seams near top containing many Fe mineral particles. Ga MS seams near base in a porous sand. Lime S-A
300	302	MS	Ga	F	N	2 Appeared to be bleached
302	305	MS	Rd	F	N	3

Total footage cored 125.0
Total Core Pulled 122.1
Per Cent Recovery 97.7

All core checked for anomalous radioactivity - None shown

Probe: 206-209 showed anomalous radioactivity - at 0.3 and Ex. 2 on a Universal County the following readings were taken:

205'	1	or	.01% U_3O_8
207'	3.5	or	.03% "
208'	4.5	or	.04% "
209'	3.5	"	.03% "

These readings were not verified by the core

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #14

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB # 15
Total depth 335
Collar elev. 5931 T assumed
Area Beaver Mesa, Colorado

COORDINATES
North — East —
Tie 85' N 24° 0' W fr SEX JB/7

Claim: John Brown #7
Date started: 20 Dec. 55
Date completed: 3 Jan. 56
Logged by: H. W. Evans

Summary of log: Unfavorable ; OBSS 286-310 Thick. 24 ; SS color Wh ; MS under OBSS Rd & Gn ; Cbn. N

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	250					250 Plug
250	286	MS	Rd & Gn	F	N	36 Mottled Rd & Gn and becoming very sandy towards the base
286	310	SS	Wh	MF to M	N	24 Porous with Rd & Gn and galls at base. Vertical fracture both. 300 & 303. Lime content fairly low
310	313	MS	Gn & Rd	F	N	3 More Gn than Rd
313	319	MS	Rd & Gn	F	N	6 Mottled
319	322	SS	Rd	F	N	3 Dense
322	335	MS	Rd & Gn	F	N	13 Mottled but colors generally dark

Total footage cored 85
Total core pulled 83.7
Per Cent Recovery 98.5%

All core checked for radioactive anomalies - None shown

Probe: No radioactive highs detected.

γ-Ray Log: 0 — 2030

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh - white	CG - conglomerate
Br - brown	SS - sandstone
R - red	MS - mudstone
Gy - gray	ST - siltstone
Bl - blue	F - fine
Gn - green	M - medium
Yw - yellow	C - coarse
Bk - black	N - none
Pp - purple	S - sparse
Cbn - carbon	A - abundant
OBSS ore bearing sandstone	

Hole No. JB #15

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood

Drill-hole No. JB #16
Total depth 230
Collar elev. 5873 T P
Area Beaver Mesa, Colorado

COORDINATES
North - East -
Tie 585' N 1° 0' E fr SW JB 9

Claim John Brown 9
Date started 1/3/56
Date completed 1/6/56
Logged by H. W. Evans

Summary of log Favorable ; OBSS 153-221 Thick 68 ; SS color Rd-Wh ; MS under OBSS Rd ; Cbn. S
(thickness to carbon only)

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	120					120 Plug
120	133	MS	Rd	F	N	13
133	135	ST	Gn	F	N	2
135	153	MS	Rd	F	N	18 Some Gn MS seams at top. Becoming very sandy at base.
153	221	SS	Rd-Wh	MF to MC	S	68 Muddy sand at top. Sand becomes whiter to coarser towards base. The carbon is concentrated in streaks. There appears to be some limonite staining in the sand. Vert. Fract. (45° A) @ 155'. Many MS seam in sand.
221	230	MS	Rd	F	N	9 Some Gn MS seams

Total footage cored 110
Total core pulled 109.5
Per Cent Core Recovery 99.5

Core checked for anomalous radioactivity - none shown.

Hole probed: No anomalous radioactivity recorded

y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #16

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines Co.

Type of Drill: Sprague & Henwood

Drill-hole No.: JB # 17

Total depth: 350

Collar elev.: 5950 P

Area: Beaver Mesa

COORDINATES

North: East:

Tie: 297' N 76° 0' E fr

Site JB # 4

Claim: John Brown #4

Date started: 1/3/56

Date completed: 1/7/56

Logged by: H. V. Evans

Summary of log: Favorable; OBSS 302.5–310 Thick 7.5; SS color Gy, Br; MS Gn; Cbn. N–S
(Mud color & radioactivity only) Gn under OBSS

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	250					250 Plug
250	302.5	MS	Gn–Rd			52.5 Considerably more Gn than Rd. Sandy and drab at top. Color settled.
302.5	304	SS	Gy, Bk	F	S	1.5 Purplish-red tinge to colors indicated. Appeared mineralized. Small fuzz.
304	310	SS	Gy, Gn	F	N–S	6 Drab and muddy
310	311.7	MS	Gn	F	N	1.7 Thin Rd MS seam at base
311.7	318	SS–MS	Gn	F	N	6.3
318	350	MS	Rd, Gn	F	S	32 Some H mottled SS seam reddish in color & drab in section.
						Total footage cored 100
						Total core pulled 92.0
						Per Cent Recovery 92.0%
						Core indicated higher background radioactivity betw. 301 & 304. Ex 2, .1 = 1.5 or 0.015%
						Probe with Universal counter showed following readings:
						95.4 Ex. 2, .1 = 6 or 0.09% U3O8
						122.0 Ex. 2, .1 = 5 or 0.08% U3O8
						301.0 Ex. 2, .1 = 5 or 0.08% U3O8
						301.6 Ex. 2, .1 = 9 or 0.09% U3O8
						50% + Gn MS in hole

y-Ray Log

SAMPLE DATE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
304	1.5			0.015%	?

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #17

DRILL HOLE LOG

Logged For

Type of Drill Spraque & Henwood Diamond AX — Pacific Uranium Mines

Drill-hole No. JB #18
Total depth 370
Collar elev. 6142 (assumed)
Area Beaver Mesa, Colo

COORDINATES
North - East -
Tie 175' S40°00'E fr N
C/L JB #25

Claim John Brown #25
Date started Jan 4, 1956
Date completed Jan 11, 1956
Logged by H. W. Evans

Summary of log Unfavorable; OBSS 270-325, 337-350; Thick 55, 13; SS color Rd-Wh, Rd; MS under OBSS Rd; Cbn. N-S, N-S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	270					270' Plug
270	273	SS	Rd	F-M	S	3' Plugged into sand
273	275	MS	Rd	VF	N	2'
275	296	SS	Rd-Wh	F-M	S-A	21' Whiter and more porous towards base. Some Bk mineralized streaks. MS seams towards base.
296	297	MS	Rd	VF	N	1'
297	325	SS	Rd, Wh, Gn	F-M	N-S	28' Dense at top becoming whiter with larger grain size towards base. Many thin Rd MS seams to 310. Many Gn MS seams with Bk mineralized particles 310 to 322.
325	328	ST	Rd	F	N	3' Dense
328	338	MS	Rd	F	N	10' Sandy
338	350	SS	Rd	F-M	N-S	12' Dense
350	370	MS-ST	Rd, Gn	F	N	20' Two thick ST seams

Less lime in sand than in mud

Total footage cored - 100
Core pulled - 95.3
Percent recovery - 95.3

No radioactivity in core

Probe: High count 142.1-145'
Universal counter: Ext 2.
Set 0.3 -- 144.6 Read 5.0
or 0.05% U_3O_8

γ-Ray Log 0 — 2030

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #18

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #19
Total depth 400
Collar elev. 6152 (assumed)
Area Beaver Mesa, Colo.

COORDINATES
North - East -
Tie 30' N45°00'E fr DM JB #25

Claim John Brown 24
Date started Jan 7, '56
Date completed Jan 20, '56
Logged by H. W. Evans

Summary of log: Favorable ; OBSS 303-323 Thick 20 ; SS color Gn-Wh ; MS Rd ; Cbn. N-S
335-355 20 Rd-Wh under OBSS Rd S-A
361-396 35 Rd, Wh, Gn Rd S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	300					300' Plug
300	303	MS	Rd	F	N	3'
303	323	SS	Gn &Wh	VF	N	20' Some Gn MS seams & gall at base
323	335	MS	Rd	F	N	12'
335	355	SS	Rd &Wh	F-M	S-A	20' Muddy at top with mud seams at base. Many Bk mineralized streaks.
355	361	MS	Rd	F	N	6' Sandy at base
361	396	SS	Rd, Gy, Gn Wh	F-M	S	35' Muddy at top. Some Gn MS galls and seams up towards base. One-foot Limestone seams at 379 & 386.
396	400	MS	DrRd & Gn	VF	N	4' Dense

Lime mostly sparse in SS except for seams noted. Abundant in MS.

Total footage cored - 100
Core pulled - 98.5
Percent Recovery - 98.5

No anomalous radioactivity indicated in core.

Probe: No high count

Y-Ray Log 0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #19

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DRILL HOLE LOG

Logged For: Pacific Uranium Mines

Type of Drill: Sprague & Henwood Diamond AX

Drill-hole No. JB #20
Total depth 330
Collar elev 6155 (assumed)
Area Beaver Mesa, Colo.

COORDINATES
North - East -
Tie 410' S58°00'W fr SWX JB #25

Claim John Brown #26
Date started Jan 12, '56
Date completed Jan 20, '56
Logged by H. N. Evans

Summary of log Unfavorable. OBSS 240-253? Thick 13'; SS color Wh; MS under OBSS Rd; Cbn. N

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS	y-Ray Log
0	250					250' Plug	
250	253	SS	Wh	F	N	3' Dense (Plugged thru at least 10' SS)	
253	309	MS	Rd &Gn	F	N	56' Mottled color. Many ST seams fr 1-1½' in width.	
309	311	SS	Rd	F	N	2' Dense	
311	330	MS	Rd &Gn	F	N	19' Sandy at top	
						Lime abundant	
						Total footage cored = 80	
						Core pulled = 70.8	
						Percent recovery = 88.5	
						No anomalous radioactivity shown in core	
						Irdo: High count from 104.9-111.2	
						Universal counter: Ext 2, Set 0.3 -- 104.9 = 1.0	
						109.1 = 4.5	
						111.2 = 2.0	
						Note: 4.5 reading indicates 0.045% U_3O_8	

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #20

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DRILL HOLE LOG

Logged For: Pacific Uranium Minos

Type of Drill: Sprague & Henwood Diamond AX

COORDINATES

North — East —

T125' N10°00'W fr S

C/L JB #3

Drill-hole No. JB #22

Total depth 349

Collar elev. 5916 Tassumoff

Area Beaver Mesa, Colo.

Claim John Brown #3

Date started Jan 9, '56

Date completed Jan 13, '56

Logged by H. W. Evans

Summary of log Unfavorable; OBSS 267-279 Thick 12'; SS color Rd-Wh; MS under OBSS Rd & Gn; Cbn. S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	250					250' Plug
250	256	MS	Rd	F	N	6'
256	259	ST	Gn	F	N	3'
259	267	MS	Rd	F	S	8' Last 5' very sandy
267	279	SS	Rd-Wh	F-M	S	12' Muddy at top & dense near base. Some Bk mineralized streaks
279	330	MS	Rd & Gn	F	N	51' Some ST seams
330	335	SS	Gy-Gn	F	N	5' Dense
335	349	MS	Rd	F	N	14'

Lime abundant except in portion of two sands

Total footage cored - 99
Core pulled - 97.6
Percent recovery - 98.5

No anomalous radioactivity in core

Probe: High count at 322'
Universal counter: Ext 2, Set 0.1 -- 4.5

γ-ray log

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS—ore bearing sandstone	

Hole No. JB #22

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DRILL HOLE LOG

Logged For

Type of Drill Sprague & Henwood Pacific Uranium Mines
Diamond AX

Drill-hole No. JB #23
Total depth 235
Collar elev 5823 (assumed)
Area Beaver Mesa, Colo.

COORDINATES
North - East -
Tie 130' N45°30'E fr WC
25' E fr NE Babbie

Claim John Brown #2
Date started Jan 17, '56
Date completed Jan 21, '56
Logged by H. W. Evans

Summary of log Unfavorable; OBSS 163-176 Thick 13; SS color Rd-Wh; MS under OBSS Rd; Cbn. S

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	160					160' Plug
160	163	MS	Rd	F	N	3'
163	176	SS	Rd, Br, Wh	F-M	S	13' Becoming whiter & denser towards base
176	182	MS	Rd	F	N	6'
182	185	SS	Gn & Wh	F	S	3' Very dense
185	187	MS	Rd	F	N	2'
187	197	SS	Rd & Gn	F	S	10' Very dense with many MS seams
197	202	MS	Rd & Gn	F	N	5' Mottled color
202	207	SS	Rd & Wh	F	S	5' Dense and muddy
207	235	MS	Rd, Wh, Gn	F	N	28' With some dense and muddy SS seams

Lime with rare exception abundant

Total footage cored - 75'
Core pulled - 73.8'
Percent recovery - 98.5%

No anomalous radioactivity in core

Probe: no high count areas

γ-Ray Log
0 1000

SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5
-	-	-	-	-	-

Abbreviations

Wh—white	CG—conglomerate
Br—brown	SS—sandstone
R—red	MS—mudstone
Gy—gray	ST—siltstone
Bl—blue	F—fine
Gn—green	M—medium
Yw—yellow	C—coarse
Bk—black	N—none
Pp—purple	S—sparse
Cbn—carbon	A—abundant
OBSS - ore bearing sandstone	

Hole No. JB #23

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COLORADO PRINTING CO.

DRILL HOLE LOG

Type of Drill: Diamond Core

Logged For: Climax Uranium Company

Claim: Cherry Creek 2

Drill-hole No.: M 123

Total depth: 203

Collar elev.: 7220 Topo: P

Area: Beaver Dam, Colo.

COORDINATES

North: – East: –

Tie: Between & just North of DH's of CC2 & CC1 on CC2

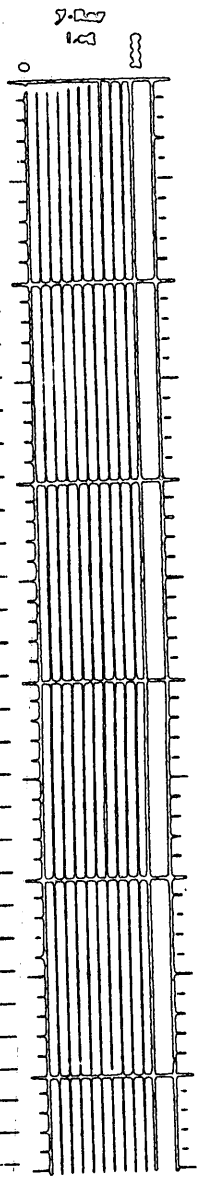
Date started:

Date completed: 21 Apr 54

Logged by: J. P. Conroy

Summary of log: ; OBSS: Thick.: ; SS color: ; MS color: ; Cbn:

DEPTH From	DEPTH To	Rock	Color	Grain	Carbon	REMARKS
0	115	MS	Rd			115' Plug
115	116	MS	Rd			1' Sandy
116	115	SS	Rd-Lbr			29' Greenish Rd MS grills & limonite spots from core. of Br mineral in [illegible] 0 1%
115	116	SS	Rd			1'
116	152	MS	Rd			6' Sandy
152	169	SS	Rd	F		17' Some Rd MS Grills, 0 bars
169	170	SS	Gn			1'
170	171	MS	Rd			1' Sandy
171	176	SS	Rd			2'
176	191	SS	Rd-Lbr		S	15' Rd MS grills
191	194	MS	Rd			3'
194	196	SS	Lbr			2'
196	205	MS	Rd			9'



SAMPLE BASE	SAMPLE THICK	LAB ASSAY (%) U_3O_8	LAB ASSAY (%) V_2O_5	FIELD EST. (%) U_3O_8	FIELD EST. (%) V_2O_5

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OBSS—ore bearing sandstone	

Hole No.

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COLORADO PRINTING CO

APPENDIX C

RECEIVED
MAR - 8 1956

Spraque & Henwood Drilling Cost Estimate

MANUFACTURERS OF
DIAMOND DRILLS
DRILLING EQUIPMENT
DIAMOND BITS

BRANCH OFFICES
NEW YORK PITTSBURGH
PHILADELPHIA
GRAND JUNCTION COLO

EXECUTIVE OFFICES & PLANT
50 W. E. STREET
SCRANTON, PA

SPRAGUE & HENWOOD INC.

CONTRACTORS FOR
DIAMOND DRILLING

SHOT DRILLING · SOIL SAMPLING · PRESSURE GROUTING
WATER WELLS & CHURN DRILLING

PLEASE REPLY TO
P. O. BOX 645
GRAND JUNCTION, COLO.
TELEPHONE 034

RECEIVED
MAR - 8 1956

February 10, 1956

Pacific Uranium Corp.
1924 White Ave.
Grand Junction, Colo.

Gentlemen:

In accordance with our conversations with your Mr. Evans, we are pleased to submit the following prices for drilling on your Beaver Mesa property. It is our understanding these prices are submitted in conjuction with your application for DMEA loan for drilling a 3 phase program; 1st phase to consist of 35 holes totaling 11,660 ft. - 2nd phase consisting of 25 holes totaling 15,465 ft. - 3rd phase consisting of 12 holes totaling 5,730 ft.

PROPOSAL

Non-Core Drilling

Item 1 - From surface to 400 ft. depth....$1.60 per ft.
Item 2 - From 400 ft. to 600 ft. depth....$1.85 per ft.
Item 3 - From 600 ft. to 800 ft. depth....$3.00 per ft.

Core Drilling

Item 4 - From surface to 400 ft. depth....$3.25 per ft.
Item 5 - From 400 ft. to 600 ft. depth....$4.50 per ft.
Item 6 - From 600 ft. to 800 ft. depth....$6.00 per ft.

Delays

Item 7 - Delays required by customer for logging etc.....$12.00 per hr.

Casing

Item 8 - Casing left in holes at request of customer or casing abandoned after reasonable effort to retrieve by using such equipment normally capable of retrieving such casing, will be charged to customer at the present market value.

Grand Junction, Colorado
February 10, 1956

(Cont. Page -2-)

This proposal is subject to our normal provisions which would be included in our formal quotation at a later date, should we be awarded this work. It is brought to your attention that this proposal is not binding and that a formal contract for this work would depend upon availability of crews and equipment at such time your program would commence.

We thank you for the opportunity of submitting this proposal and we are most happy to be of service to you in any way in respect to your DMEA application.

Very truly yours,

SPRAGUE & HENWOOD, INC.

Vincent D. Nourse

VDN:be

CC: Scranton
File

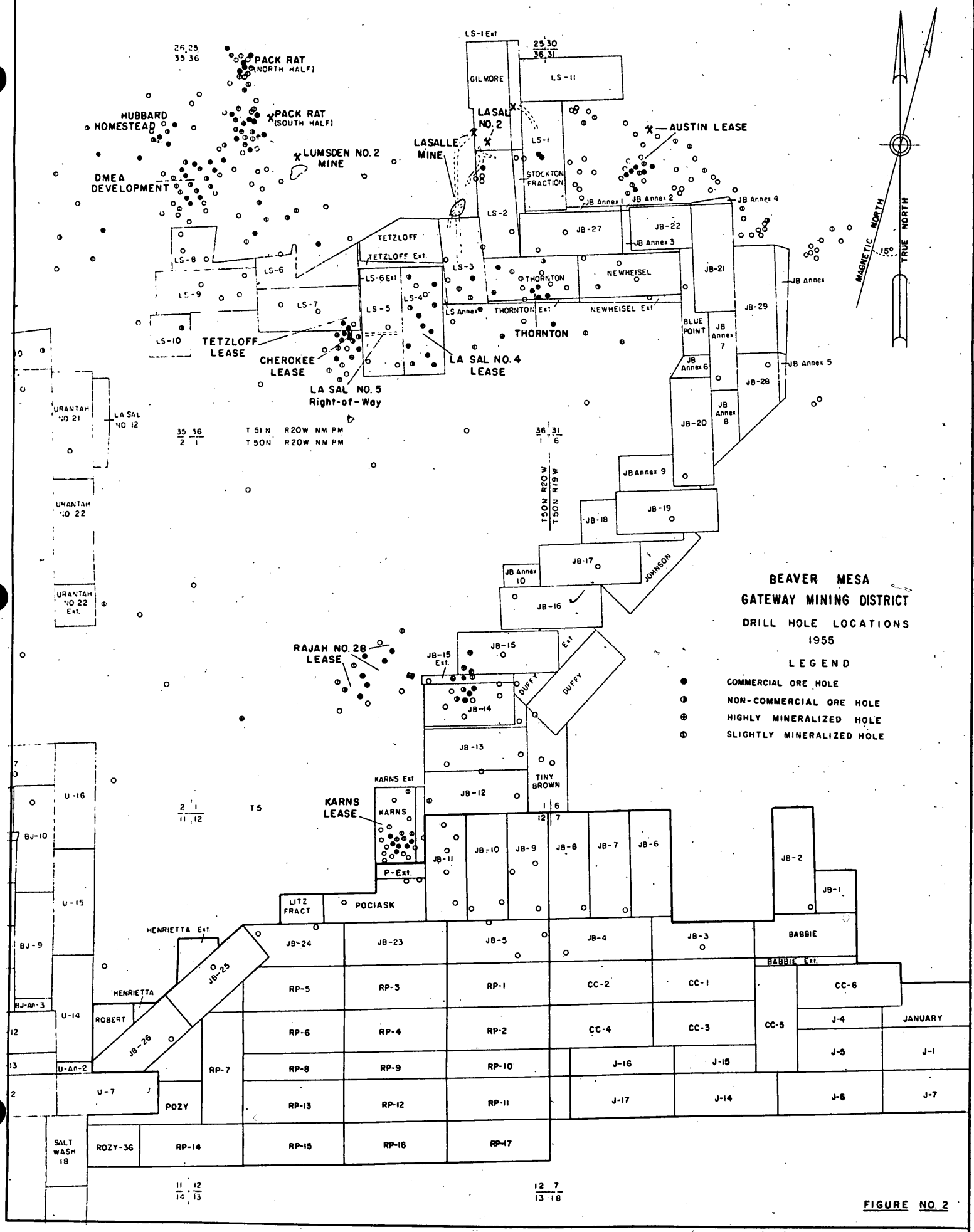
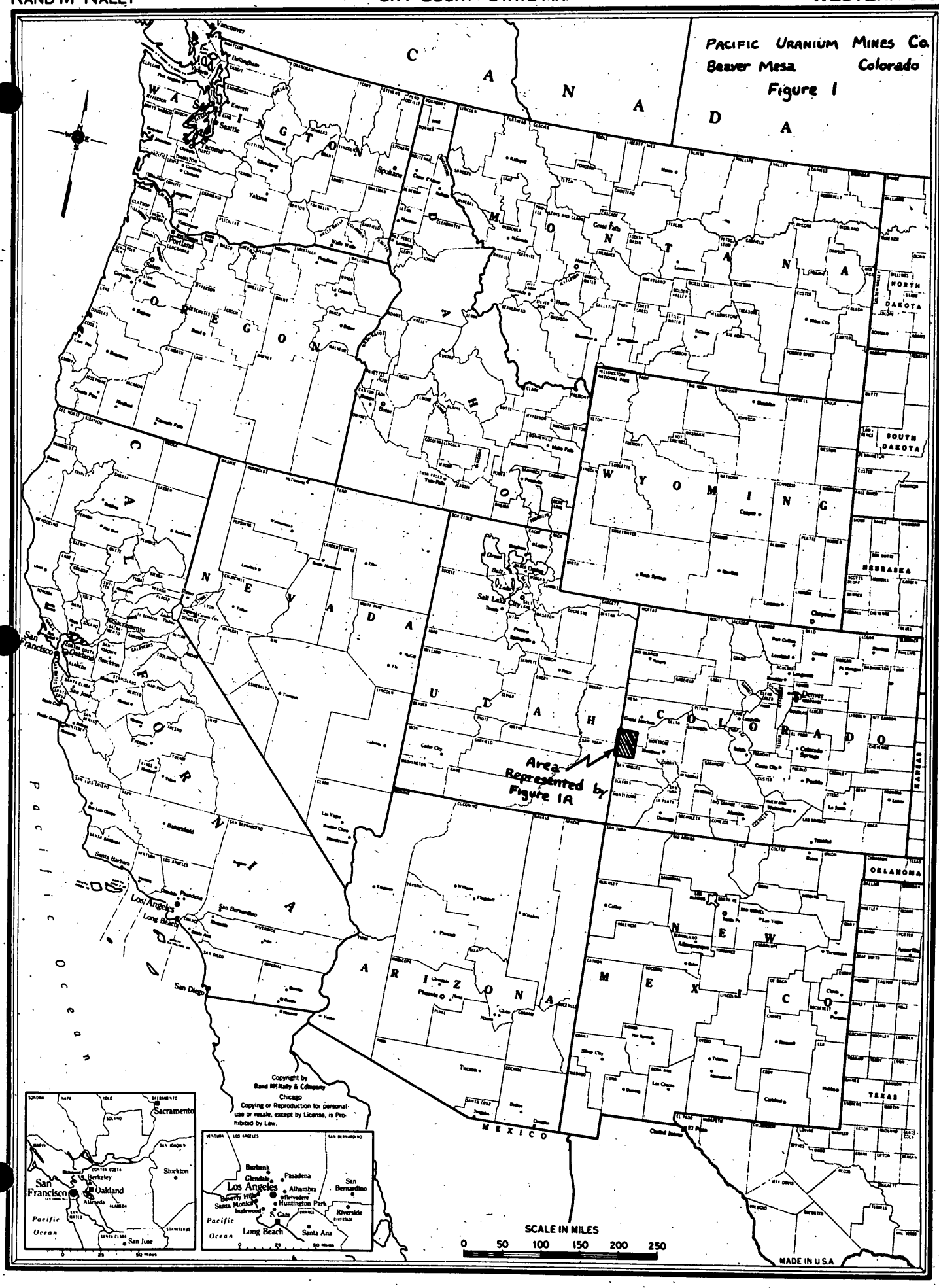

BEAVER MESA
GATEWAY MINING DISTRICT
DRILL HOLE LOCATIONS
1955
LEGEND
COMMERCIAL ORE HOLE
NON-COMMERCIAL ORE HOLE
HIGHLY MINERALIZED HOLE
SLIGHTLY MINERALIZED HOLE
MAGNETIC NORTH
TRUE NORTH
15°
PACK RAT (NORTH HALF)
PACK RAT (SOUTH HALF)
HUBBARD HOMESTEAD
DMEA DEVELOPMENT
LUMSDEN NO. 2 MINE
LASALLE MINE
LASAL NO. 2
AUSTIN LEASE
TETZLOFF LEASE
CHEROKEE LEASE
LA SAL NO. 4 LEASE
LA SAL NO. 5 Right-of-Way
THORNTON
RAJAH NO. 28 LEASE
KARNS LEASE
T 51 N R20W NM PM
T 50N R20W NM PM
T50N R20W
T50N R19W
T5
GILMORE
LS-11
LS-1
STOCKTON FRACTION
LS-2
JB-27
JB-22
JB-21
JB-29
JB-28
JB-20
JB-19
JB-18
JB-17
JB-16
JB-15
JB-14
JB-13
JB-12
JB-11
JB-10
JB-9
JB-8
JB-7
JB-6
JB-2
JB-1
JB-3
JB-4
JB-5
JB-23
JB-24
JB-25
JB-26
NEWHEISEL
BLUE POINT
JOHNSON
DUFFY
TINY BROWN
KARNS
POCIASK
LITZ FRACT
BABBIE
JANUARY
CC-1
CC-2
CC-3
CC-4
CC-5
CC-6
RP-1
RP-2
RP-3
RP-4
RP-5
RP-6
RP-7
RP-8
RP-9
RP-10
RP-11
RP-12
RP-13
RP-14
RP-15
RP-16
RP-17
J-1
J-4
J-5
J-6
J-7
J-14
J-15
J-16
J-17
POZY
ROZY-36
SALT WASH 18
ROBERT
HENRIETTA
U-7
U-14
U-15
U-16
BJ-9
BJ-10
URANTAH NO 21
URANTAH NO 22
LA SAL NO 12

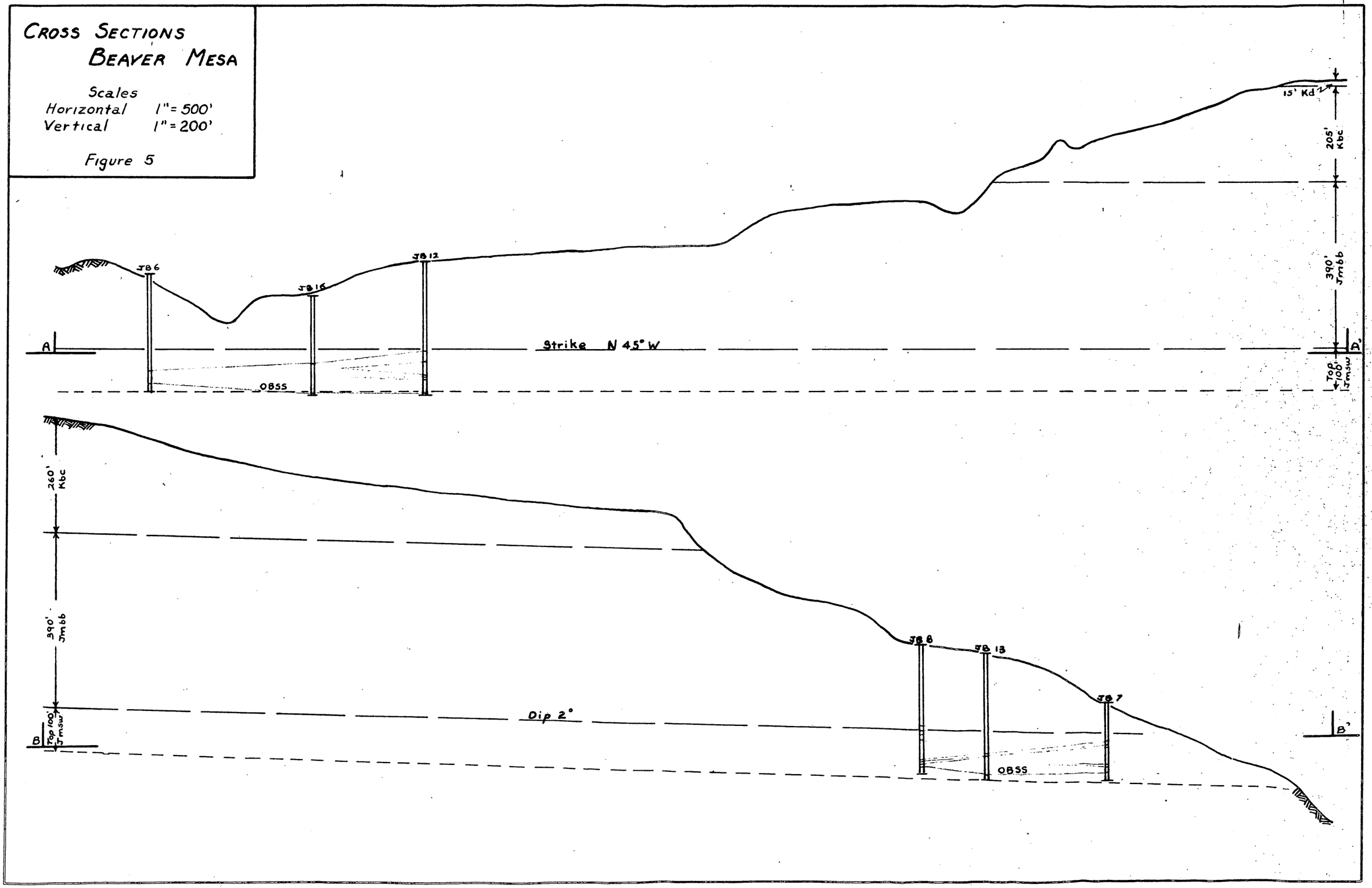
FIGURE NO. 2

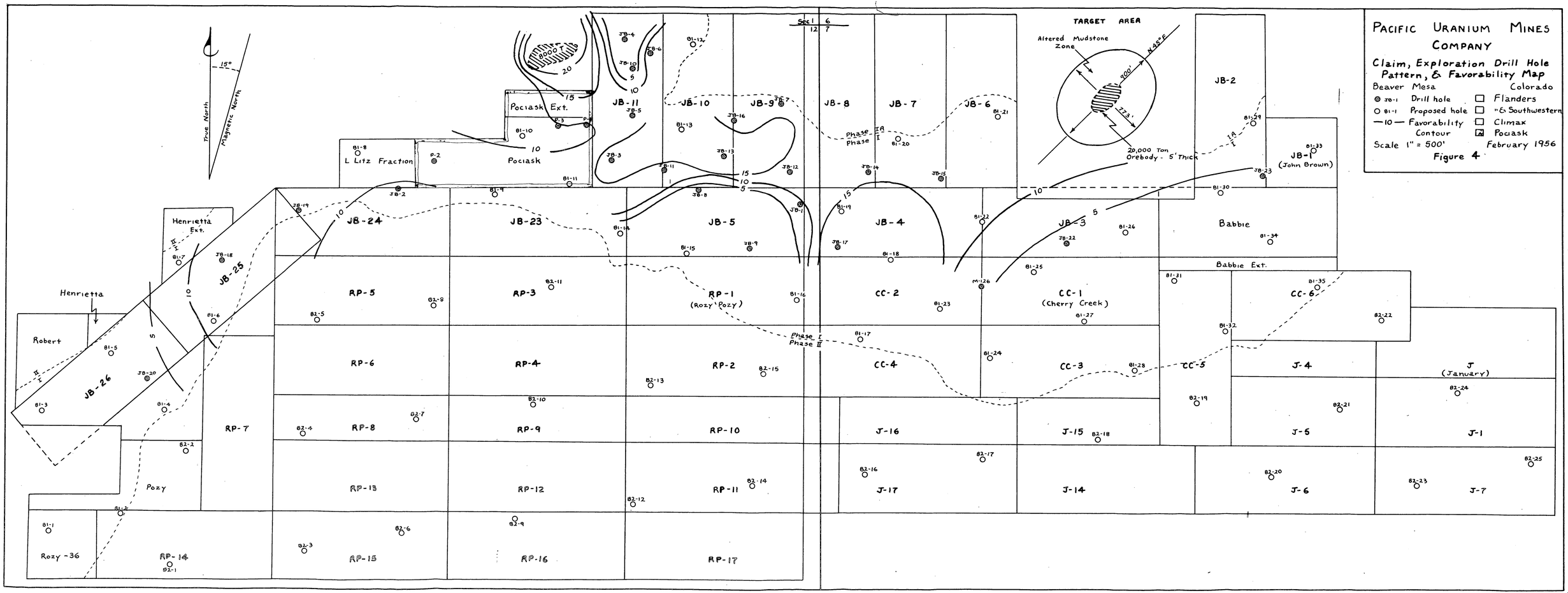

PACIFIC URANIUM MINES Co.
Beaver Mesa Colorado
Figure 1
CANADA
WASHINGTON
OREGON
IDAHO
MONTANA
NORTH DAKOTA
SOUTH DAKOTA
WYOMING
NEBRASKA
CALIFORNIA
NEVADA
UTAH
COLORADO
KANSAS
OKLAHOMA
TEXAS
ARIZONA
NEW MEXICO
MEXICO
Pacific Ocean
Area Represented by Figure 1A
Salt Lake City
Denver
Los Angeles
San Francisco
Oakland
Sacramento
Stockton
San Jose
San Diego
Long Beach
Copyright by
Rand McNally & Company
Chicago
Copying or Reproduction for personal use or resale, except by License, is Prohibited by Law.
SCALE IN MILES
0 50 100 150 200 250
MADE IN U.S.A.

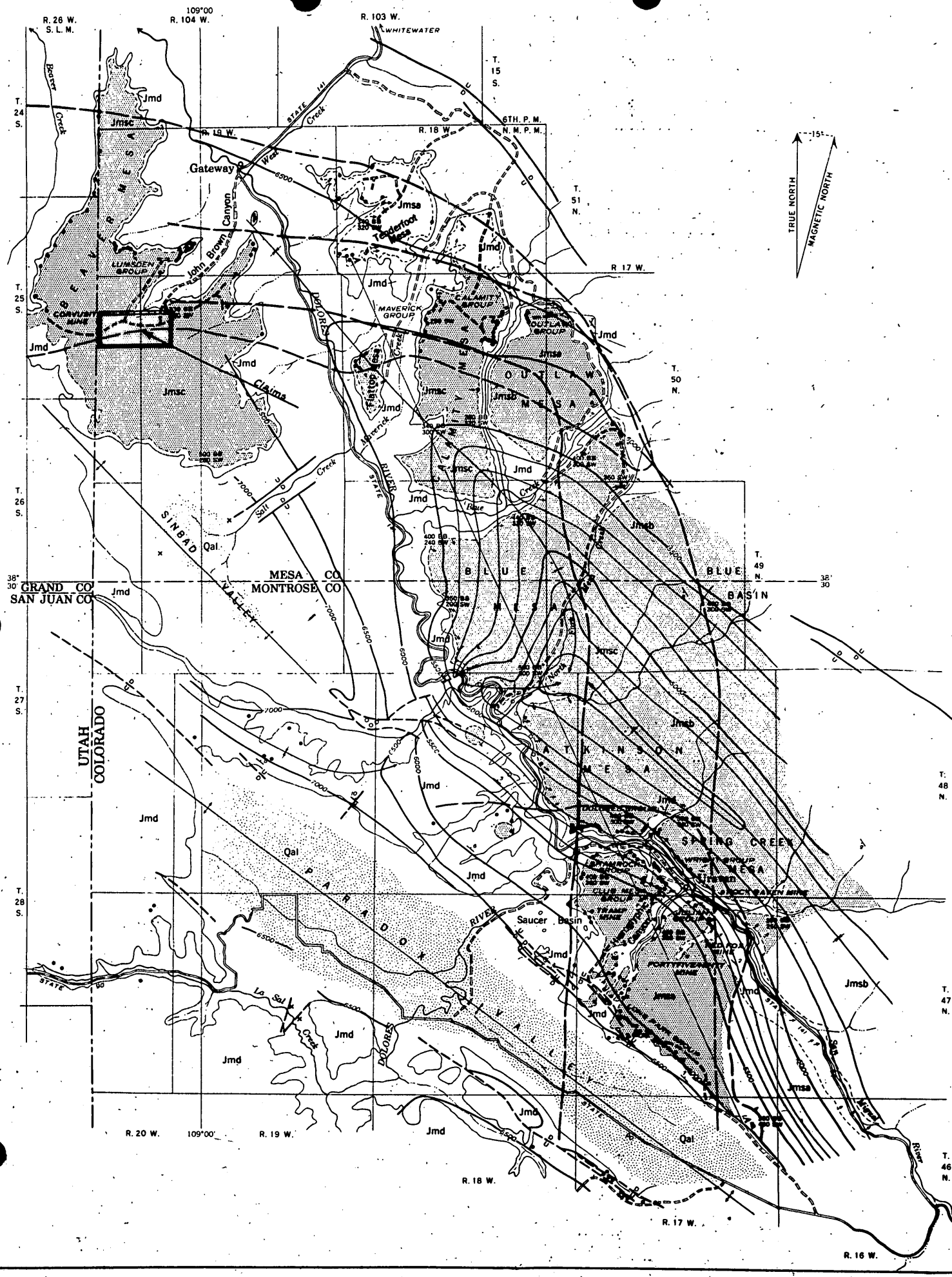
Cross Sections
Beaver Mesa

Scales
Horizontal 1" = 500'
Vertical 1" = 200'

Figure 5




PACIFIC URANIUM MINES COMPANY
Claim, Exploration Drill Hole Pattern, & Favorability Map
Beaver Mesa Colorado
JB-1 Drill hole
81-1 Proposed hole
—10— Favorability Contour
Flanders
"& Southwestern
Climax
Pociask
Scale 1" = 500'
February 1956
Figure 4
TARGET AREA
Altered Mudstone Zone
N 45° E
900'
773'
20,000 Ton Orebody - 5' Thick
Sec 1
6
12
7
True North
Magnetic North
15°
Pociask Ext.
Pociask
L Litz Fraction
Henrietta Ext.
Henrietta
Robert
Pozy
Rozy - 36
JB-1 (John Brown)
JB-2
JB-3
JB-4
JB-5
JB-6
JB-7
JB-8
JB-9
JB-10
JB-11
JB-23
JB-24
JB-25
JB-26
Babbie
Babbie Ext.
CC-1 (Cherry Creek)
CC-2
CC-3
CC-4
CC-5
CC-6
RP-1 (Rozy Pozy)
RP-2
RP-3
RP-4
RP-5
RP-6
RP-7
RP-8
RP-9
RP-10
RP-11
RP-12
RP-13
RP-14
RP-15
RP-16
RP-17
J (January)
J-1
J-4
J-5
J-6
J-7
J-14
J-15
J-16
J-17
Phase I
Phase IA
Phase II



EXPLANATION

Qal
Alluvium

Jmsa | Jmsb | Jmsc
Jmd
Morrison formation

Rocks younger than Salt Wash member of the Morrison not shown: dashed line shows base of principal ore-bearing sandstone stratum of the Salt Wash member in areas of detailed mapping: Jmsa, *light-brown ore-bearing sandstone underlain by mudstone altered to greenish gray for as much as 6 feet below contact:* Jmsb, *mottled red and light-brown ore-bearing sandstone underlain by mudstone altered in places to greenish gray for as much as 6 inches below contact;* Jmsc, *reddish-brown barren sandstone underlain by unaltered mudstone except within 300 feet of ore deposits on Beaver and Flattop Mesas;* Jmd, *Morrison formation, undifferentiated. Dominantly lenticular ore-bearing sandstone shown by red stipple pattern. Data based on drilling records and outcrop measurements*

QUATERNARY

JURASSIC

Pre-Morrison formations

JURASSIC OR OLDER

Contact

U D
Fault, dashed where approximately located
U, *upthrown side.* D, *downthrown side*

Axis of anticline

Axis of syncline, showing direction of plunge

Strike and dip of beds

Sedimentary structure trend of prominent sandstone lenses in upper sandstone stratum of Salt Wash member of the Morrison formation

5000
Structure contours drawn on top of Entrada sandstone
Datum is mean sea level. Data from U.S.G.S. geologic quadrangle maps in preparation. Contour interval 100 feet

440 BB
Outcrop thickness of the Brushy Basin member of the Morrison formation

360 SW
Outcrop thickness of the Salt Wash member of the Morrison formation

Disseminated carnotite deposits or groups of deposits

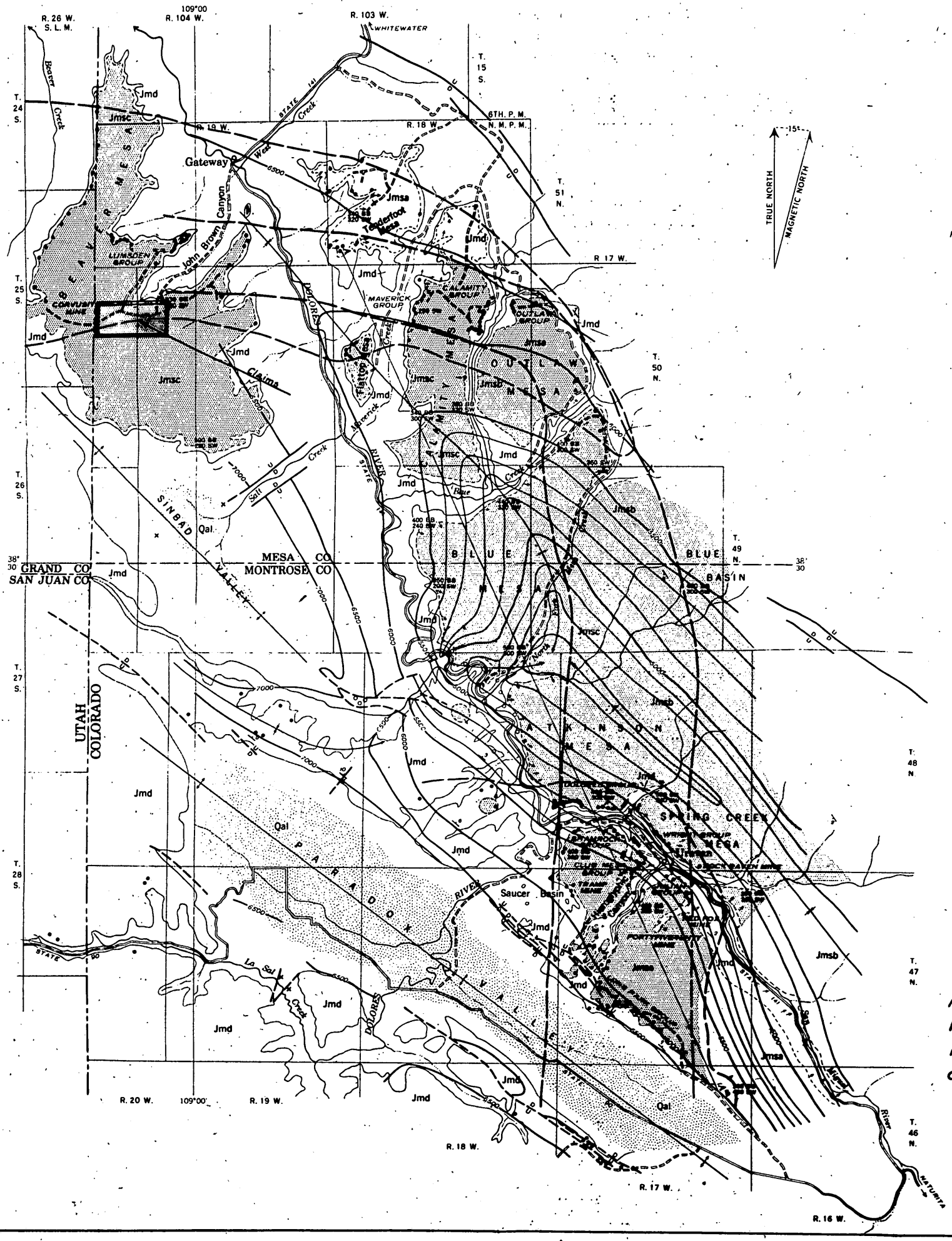
Copper-uranium-vanadium deposit on group of deposits controlled by fracture or fault

Vein copper deposit

Boundary of Uravan mineral belt

Approximate boundary of area favorable for uranium deposits

Area outlined indicates location of Pacific Uranium Mines Company claims on Beaver Mesa, Colo.
Figure 1A



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JURASSIC

Pre-Morrison formations

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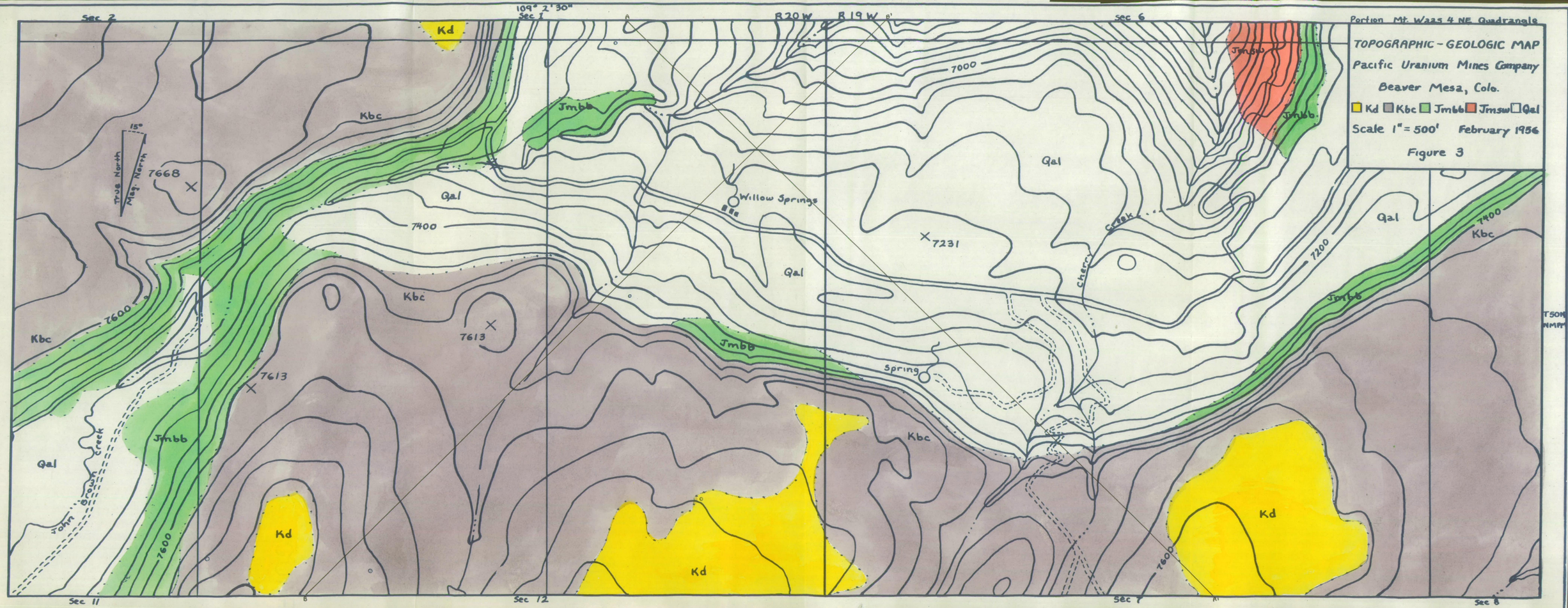
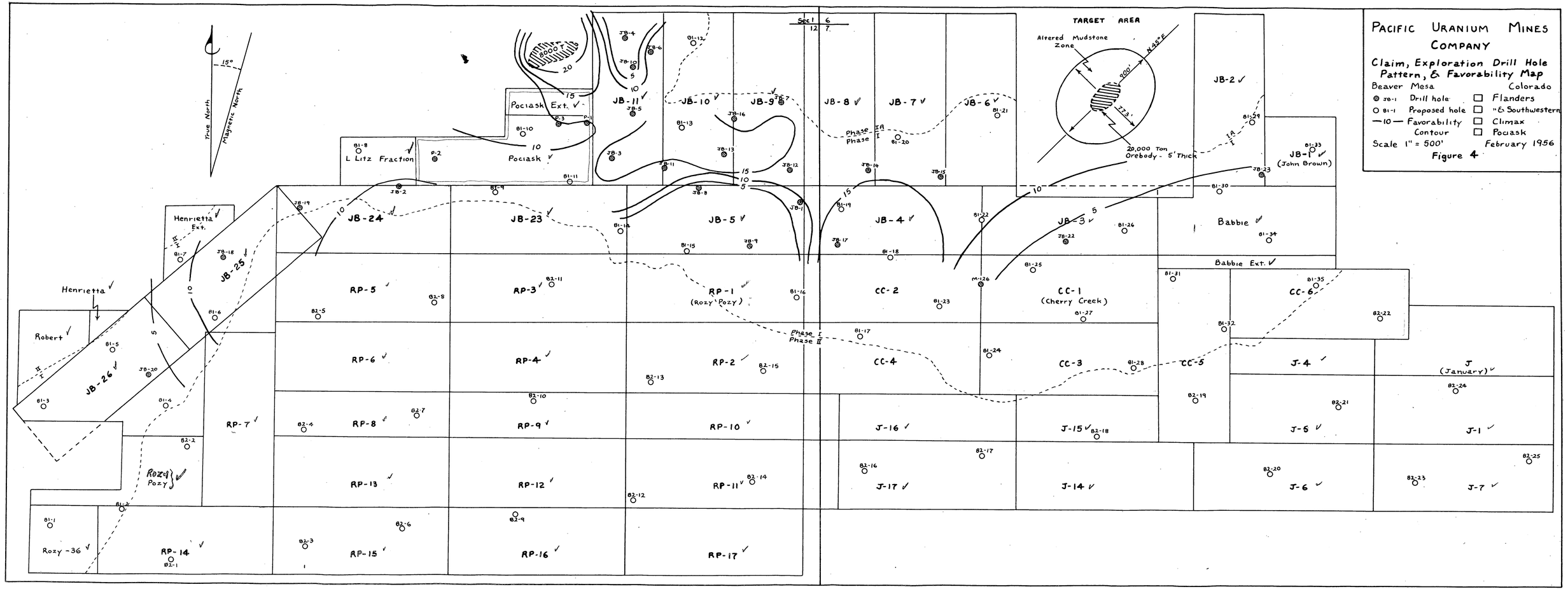

Portion Mt. Waas 4 NE Quadrangle
TOPOGRAPHIC - GEOLOGIC MAP
Pacific Uranium Mines Company
Beaver Mesa, Colo.
Kd Kbc Jmbb Jmsw Qal
Scale 1" = 500'
February 1956
Figure 3
109° 2' 30"
R20W
R19W
Sec 2
Sec 1
Sec 6
Sec 11
Sec 12
Sec 7
Sec 8
T50N
NMPM
UTAH
COLORADO
15°
True North
Mag. North
7668
7613
7613
7231
7000
7400
7600
7200
Willow Springs
Spring
Cherry Creek
John Brown Creek
Kd
Kbc
Jmbb
Jmsw
Qal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B1-1 Proposed hole
—10— Favorability Contour
Flanders
"& Southwestern
Climax
Pociask
Scale 1" = 500'
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N 45° E
900'
773'
20,000 Ton Orebody - 5' Thick
True North
Magnetic North
15°
Sec 1 6
12 7
Pociask Ext.
Pociask
L Litz Fraction
Henrietta Ext.
Henrietta
Robert
Rozy Pozy
Rozy-36
Phase I
Phase II
Phase IA
Phase I
JB-1 (John Brown)
JB-2
JB-3
JB-4
JB-5
JB-6
JB-7
JB-8
JB-9
JB-10
JB-11
JB-23
JB-24
JB-25
JB-26
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Babbie Ext.
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CC-2
CC-3
CC-4
CC-5
CC-6
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RP-2
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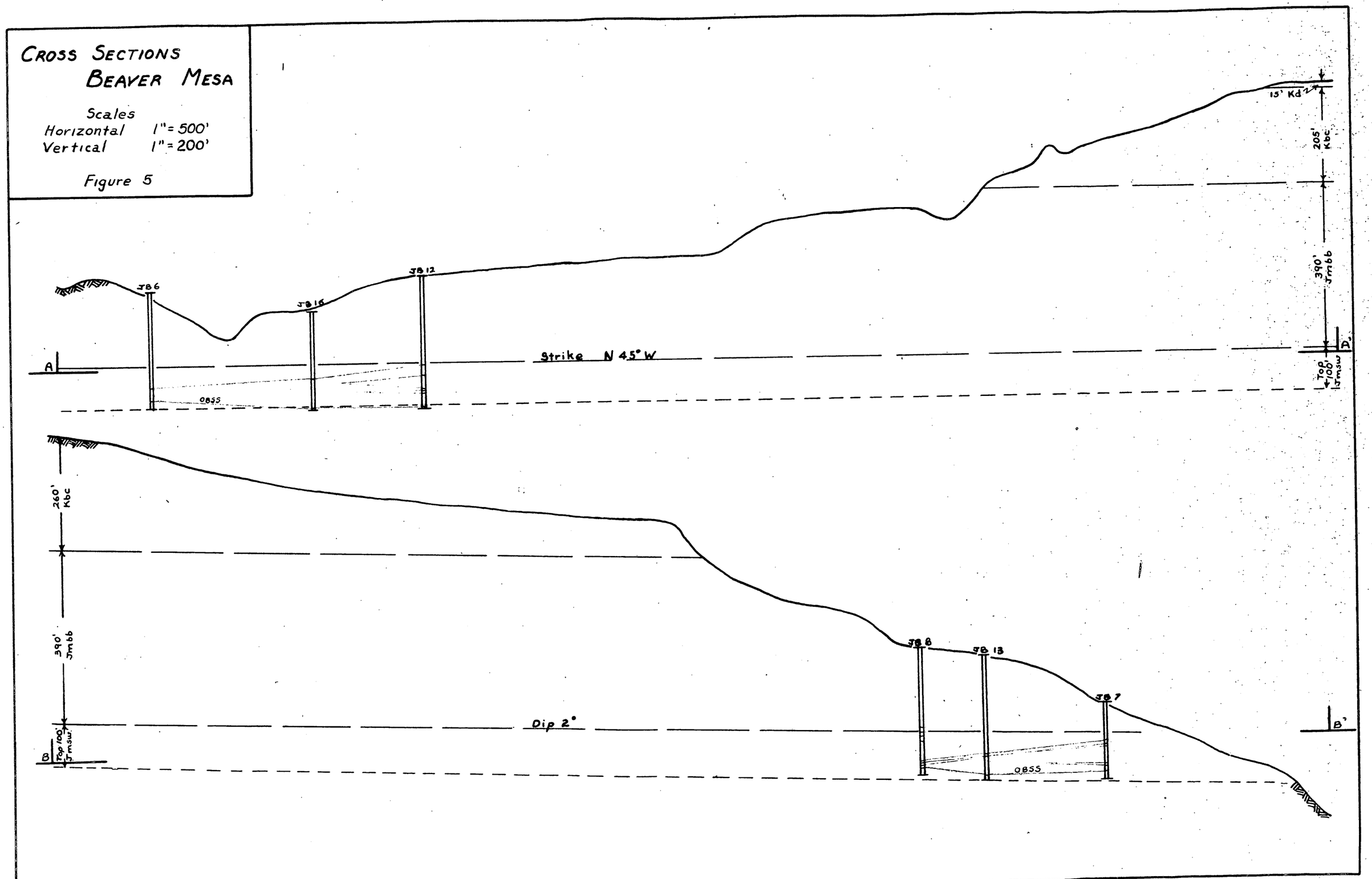
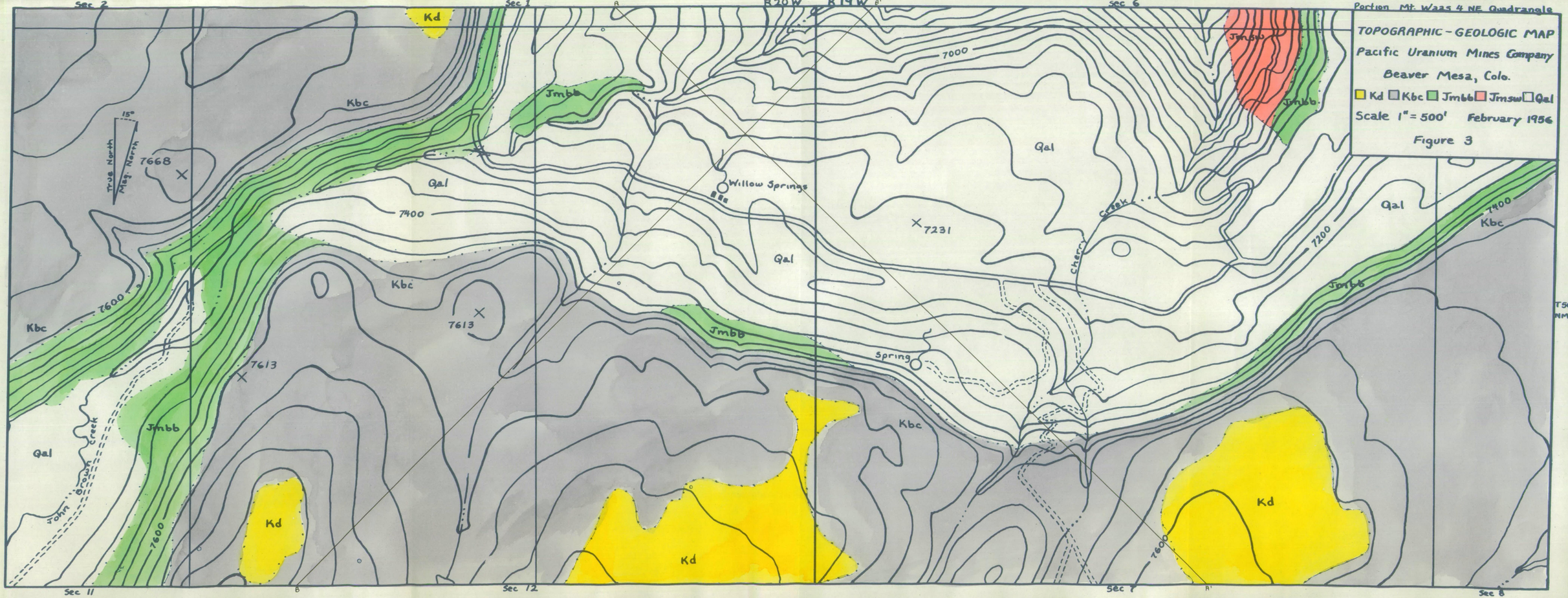
RP-5
RP-6
RP-7
RP-8
RP-9
RP-10
RP-11
RP-12
RP-13
RP-14
RP-15
RP-16
RP-17
J (January)
J-1
J-4
J-5
J-6
J-7
J-14
J-15
J-16
J-17

Cross Sections
Beaver Mesa

Scales
Horizontal 1" = 500'
Vertical 1" = 200'

Figure 5

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MAR - 8 1956