DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 4252

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Cys. BM, GS

Routing Slip

To:	700	Date	4/16/56
To:	Operating Com.	Date	4/25/56
To:	" "	Date	4/29/56
To:	Mr Mittendorf	Date	4-30-56
To:	Oper. Com	Date	8-7-56
To:	D.E. Johnson	Date	8-8-56
To:	Coon	Date	8-8-56
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MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 12/6/56

REFERRED TO:

1. ~~Miss Curtin~~
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DMEA-4252

Sent detach

FOR:

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..... Comment	..... Referring to .....
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..... Instructions	..... Suggestions
..... Investigation	..... Your information
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..... Previous correspondence	

REMARKS: Catherine: Attached original set for M&R; 3 sets referred to GCSelfridge & Division w/request USBM & USGS be furnished with set. We are not treating as a field report—no recommendations fm. FT. Field

Check (X) before the items needing attention. (back)

George C. Selfridge
Initials of sender.

GPO 16—63815-1

will have to submit recommendations if and when Gibralter submits an application for work on property.

Hazel

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 4 DEC 1956

REFERRED TO:

1. H. Berry
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REMARKS: .....

Check (X) before the items needing attention.

CWS
Initials of sender.

GPO 16—63815-1

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 12/3

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FOR:

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REMARKS:

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Check (X) before the items needing attention.

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Initials of sender.

GPO 16—63815-1

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

RECEIVED DEC 5 1956 DMEA

224 New Customhouse
Denver 2, Colorado

December 3, 1956

C O R R E C T E D

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Docket DMEA 4252 (Uranium) Monarch Exploration Company (Lookout et al claims) Saguache County, Colorado

Enclosed are the original and three copies of a joint memorandum on the subject docket from D. H. Richter, Geologist, USGS, and E. W. Buel, Mining Engineer, USBM, through their respective supervisors, E. N. Harshman, member Region III Field Team, and John F. Shaw, Supervising Mining Engineer.

On July 26, 1956, we forwarded you a joint Report of Examination recommending denial of the application without prejudice. The Administrator, on August 8, 1956, notified the Applicant to that effect.

This memorandum is furnished you for informational purposes only, in anticipation of a new application which is pending from the Gibralter Minerals Company, at present operating the Monarch Exploration Company.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

C O R R E C T E D D[illegible]et DMEA 4252

December 3, 1956

Substitute for copies of memorandum, same subject, dated November 30, 1956.

W. M. Traver

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

224 New Customhouse
Denver 2, Colorado

November 30, 1956

RECEIVED
DEC 3 1956
D.M.E.A.

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Docket DMEA 4252 (Uranium) Monarch Exploration Company (Lookout et al claims) Saguache County, Colorado

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DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20
Denver Federal Center
Denver 2, Colorado
November 26, 1956

DMEA
DEPARTMENT OF THE INTERIOR
NOV 28 1956
REGION III
DENVER, COLORADO

REGION III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman, Member
Field Team

John F. Shaw
Supervising Mining Engineer

RECEIVED
DEC 3 1956
D.M.E.A.

From: D. H. Richter
E. W. Buel

Subject: Docket DMEA 4252 (Uranium) Monarch Exploration Company (Lookout et al. claims), Saguache County, Colorado

During an interim and monthly examination of the Vulcan Silver-Lead property (DMEA 4225, Idm-E984), made on October 22, 1956, Mr. Fred Howell, of Monarch Exploration Company, requested us to re-examine that portion of Monarch's property (DMEA 4252) that was denied Government assistance, without prejudice, on August 8, 1956. Basis for the re-examination was a reportedly new and significant discovery of uranium mineralization on the Lookout group of claims. Therefore, on the afternoon of October 24, 1956, in the company of Mr. G. Zareski, geologist, Gibraltar Minerals Company, we made a brief examination of the new showing.

The uranium mineralization occurs on a steep western slope, a few hundred feet above Harry Creek, in an area underlain by Precambrian schist and gneiss that dip between 50° and 70° to the east. The known area of ore-grade mineralization is small (20 by 50 feet), but fabulously rich. In the center of this small area is a zone covering approximately 40 square feet and averaging 2 to 3 feet thick, containing masses of pure uraninite, weighing as much as 150 pounds, cemented in a matrix of yellow-green secondary uranium minerals. Away from this highly enriched zone, granitic and quartzose fragments are present in the ore body, which evidently grades into a normal, although radioactive sub-soil. A bull-dozer cut across the ore body ideally exposes the following vertical section:

Description	Thickness
Top soil. Fine- to coarse-grained sand and rock fragments with abundant clay and humic material. No radioactivity.	1/2 - 2 feet
Sub-soil. Granite, quartz, and minor schist fragments up to 5 inches in diameter in a clay-silt matrix. The rich uranium ore body occurs in this zone.	2 - 4 feet
Weathered schist. Fractured and broken schist bedrock, slightly altered in place. Minor uranium mineralization (torbernite) along fractures and foliation in the schist.	1 - 2 feet
Schist. Quartz-feldspar-mica schists with no uranium mineralization and apparently no radioactivity.	3 - feet

Although we are not in the position to discuss at length the possible mode of origin of this unique deposit, we can point out a few of the salient features that may be helpful in determining the merit of the property should a new application be forthcoming. The rich uranium mineralization is restricted to a sub-soil stratum, with no apparent downward continuation through the schistose bedrock. Furthermore, there are no known structural disconformities in the immediate vicinity which could have acted as channelways for ascending mineralizing solutions and, in fact, there is little evidence, other than the extreme richness of the deposit and nature of the uraninite, to indicate a primary hydrothermal origin. The weight of available evidence therefore seems to point toward surficial meteoric waters as the transporting media. Whether this speculated media was vadose or static groundwater, however, is a moot point.

The original source of the uranium is possibly the Chester fault, a north-south trending high-angle reverse fault, approximately 2,000 to 3,000 feet west of the deposit. This fault, which is radioactive throughout most of its exposed length, contains at least two zones of ore grade uranium mineralization and is presently the target of a number of exploration programs in the vicinity.

The uniqueness of the deposit, however, lies not entirely in the mode of origin of the uranium and depositing solutions, but also in the nature of the sub-soil which apparently controlled the deposition and extreme concentration of the uranium. Certainly a number of factors contributed to the formation of this deposit and, with further study probably some new ideas of uranium mineralization will be realized.

Discussions held with Mr. Zareski disclosed that Gibraltar Minerals Company will soon resubmit an application for Government assistance.

D. H. Richter

D. H. Richter
Geologist
Geological Survey

E. W. Buel

E. W. Buel
Mining Engineer
Bureau of Mines

cc 9
ENHarshman
DMEA 4252
Chron

/ph

700

FILE COPY
Surname:
Ching
Elton
Land
Martin
Hyman

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

AUG - 8 1956

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Re: Docket No. DMEA-4252 (Uranium)
Lookout, et al., Claims
Saguache 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, although noting some uranium mineralization on your property, 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.

Such denial, however, is made without prejudice to the property. In the event further work on your part discloses new and more favorable evidence of ore deposition on the claims, we shall be pleased to consider a new application.

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

Sincerely yours,

G. O. Mittendorf

Administrator

MChing/izm 8-7-56
cc to: Docket
Code 700
Mr. Ching
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224; JOHosted, Rm. 3210, GSA
DMEA Field Team, Reg. III (2)

Copy to: Roy Simmons
600 Munsey Building
Washington 4, D. C.

A.C.S.

Docket Copy

700

Ching

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-4252

Commodity: Uranium

Applicant: Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Property: 83 unpatented lode mining claims: Lookout Nos. 15-34, Hidy and Hidy Nos. 1-4, Sparky Nos. 1-10, Ranger Nos. 1-34 and 37-50, situated in secs. 15, 21, 22, 27, 28, 29, 32, and 33, T. 48 N., R. 6 E., NMPM&B., Saguache County, Colorado. Applicant is the owner.

Date of Application: April 10, 1956

Amount of Application: $51,116.50

Work Proposed: On Lookout Nos. 34 claim explore for vein deposits with a 150-foot drift and two 50-foot crosscuts. Also prepare access roads and cut surface trenches across two other veins by bulldozer. Explore a major fault zone running through the Lookout No. 28 and Ranger Nos, 4, 6, 5, and 7 claims, and a radioactive outcrop on Ranger No. 11 claim, by 10 diamond drill holes and 15 trenches. Estimated costs follow:

250 ft. drifting & crosscutting @ $38.13/ft.	$9,532.50	
Bulldozer work on roads, drill sites & trenches	5,560.00	
2,000 ft. core drilling @ $12/ft.	24,000.00	
Labor, supervision, consultants	6,250.00	
New buildings	1,400.00	
Other costs	4,374.00	
TOTAL		$51,116.50
Government Participation @ 75%		$38,337.38

Field Team Report: July 10, 1956, Robert M. King, USGS & Edward W. Buel, USBM:

Paleozoic sedimentary rocks and Precambrian crystalline rocks underlie the subject property. Ore deposits of this general area occur as bedded deposits of uranium in sandstone and vein deposits of uranium and copper in crystalline rocks. At several places on the property radioactivity anomalies range from twice background to as much as 1.2 mr/hr in Paleozoic sedimentary rocks and in shear zones in granite pegmatite. Secondary uranium minerals were observed at two exposures. The anomalies in the sedimentary rocks are weak andtheir relationship to mineralization in the host rocks is not apparent. The Harding sandstone, which is the favorable host rock on adjoining properties, does not crop out on the subject property, nor has it been prospected at depth by drilling. The anomalies in the crystalline rocks appear to be related to syngenetic deposits in pegmatite masses in granite.

On the Ranger No. 5 claim weak radioactivity anomalies occur along the foot wall of the Chester Fault, a north-trending, high angle, reverse fault that crosses about the middle of the property. A few small flakes of a secondary fluorescent uranium mineral, probably autunite, are visible in shale within 10 feet of the fault at one point. A fractured and limonite-stained quartz pegmatite dike crops out on this claim and is mildly radioactive. A sample of this material from a shallow pit contained 0.03% U_3O_8.

On Lookout No. 34 claim, three prospect holes showed rather significant radioactivity in association with quartz pegmatites. The Applicant believes this radioactivity is related to an inferred northeasterly trending shear zone that includes the pitchblende-bearing breccia-vein recently discovered in the Brinkerhoff Prospect to the northeast. However, too little prospecting has been done to establish such a relationship. A sample taken across the shear zone in one of the holes contained 0.04% U_3O_8, and 0.007% U_3O_8. This result did not confirm the results of a sample taken by the Applicant from the same hole which assayed 0.72% U_3O_8. It is concluded that the deposit at this point is either very small or the mineralization is erratically and sparsely distributed.

There ~~has~~ have been no known uranium shipments from this area. Two DMEA projects have been approved nearby, Dockets Nos. 4225 and 4251. Because so little is known of the geology and uranium occurrences in the area it is recommended that the application be denied without prejudice to the property.

Commodity Group Comments:

USGS, N. E. Nelson, August 2, 1956:

The area is new and the showings are scattered. The examiners were unable to find material of near ore grade and could not relate the various showings to one another or to the meagre showings on adjoining properties. Concurs with the examiner's recommendation that the application be denied without prejudice to the property.

USBM, John E. Crawford, August 3, 1956:

Discussed the report of examination with the AEC representative. Concurs with the recommendation for denial without prejudice to the property.

Rare & Miscellaneous Metals Div., Michael Ching, Aug. 7, 1956:

The showings to date have not demonstrated that the property has a worthwhile potential. Some further evidence that significant mineralization may occur in the known potential ore-bearing structures and sediments is needed.

Conclusions and Recommendations:

Insufficient work has been done on the property to demonstrate its possibilities. It is recommended that the application be denied without prejudice to the property.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

8/7/56

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

RECEIVED
AUG - 6 1956

August 3, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Report of Examination, DMEA Docket 4252 (Uranium)
Monarch Exploration Company (Lookout et al. claims)
Saguache County, Colorado

I have reviewed the report of examination, DMEA Docket 4252, Monarch Exploration Company (Lookout et al. claims) Saguache County, Colorado, dated July 10 and received in this office July 31, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Field Team recommend that the application be denied without prejudice because insufficient prospecting has been done to date to determine the geologic relationship or to permit an evaluation of the uranium occurrences.

We concur in the recommendation that the application for exploration assistance be denied without prejudice.

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

John E. Crawford
John E. Crawford

8/3/56 gla

IN REPLY REFER TO:

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

Aug. 2, 1956

Re: DMEA 4252
Monarch Exploration Company
Lookout and Ranger Groups
Saguache Co., Colo.
$51,116.50 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

The applicant requested assistance in exploring two adjoining groups of claims. The applications were combined under the number 4252. The two groups adjoin the large property of Vulcan Silver Lead Co. and are in the same general locality as another Monarch Exploration Co. group, on which, as on the Vulcan group, DMEA assisted work has been recommended.

The area is new and the showings are as yet scattered. Two types of mineralization have been found, a) uranium-bearing Harding sandstone and b) uranium in shear or fault zones in crystalline rocks.

Radioactivity has been found at several places in the referenced property but the examiners were unable to find material of near ore grade and could not relate, with certainty, the various showings one to another or to the meagre showings on adjoining properties.

The examiners and the Field Team recommend denial of the application without prejudice. Perhaps the results of prospecting, by the applicant, on the referenced property and DMEA assisted work on the adjoining and neighboring properties will justify an exploration project on the Lookout-Ranger claims.

I concur with the recommendation of the examiners and the Fiel Team.

N. E. Nelson

N. E. Nelson

8/2/56

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

RECEIVED
JUL 30 1956

July 26, 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 4252 (Uranium)
Monarch Exploration Company (Lookout et al. claims),
Saguache County, Colorado

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

The field examiners found that this property is still in the prospecting stage, and little is known of the geology and of uranium occurrences in the area. They recommend that the application be denied without prejudice. We concur in this recommendation.

Additional work by the Applicant may reveal more data for evaluation and if so, another application by the Applicant would receive proper consideration.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8/1/56
(Date)

TRANSMITTED

JUL 26 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
July 19, 1956

RECEIVED
JUL 30 1956
DMEA
Date Rec'd.
JUL 23 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: Docket No. DMEA 4252 (Uranium)
Monarch Exploration Company
Lookout, Hidy, Sparky & Ranger claims
Saguache County, Colorado

Enclosed are the original and nine copies Joint Engineering and Geologic Report by Robert U. King, Geologist and Edward W. Buel, Mining Engineer covering Docket No. DMEA 4252.

Monarch Exploration Company, Houston, Texas applied for DMEA assistance to explore the Lookout, Hidy, Sparky & Ranger Claims for uranium by drifting, bulldozer trenching, and core drilling at an estimated cost of $51,116.50.

The property was examined on May 22, 1956 by Robert U. King and Edward W. Buel. Several radioactivity anomalies have been discovered on the applicant's property, but the prospecting that has been done has not permitted an evaluation of the uranium potential of the property.

Little is known of uranium occurances in the area and additional data is required before this property can qualify for DMEA assistance. It is recommended that the application be denied without prejudice.

for Robert U. King
E. N. Harshman
Member Field Team

John F. Shaw
John F. Shaw
Supervising Mining Engineer

JFS:sh

cc: 9
DMEA 4252
Chron.

Received by
[illegible]
8/1/56

TRANSMITTED

JUL 26 1956

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

RECEIVED
JUL 30 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 4252

Monarch Exploration Company

Lookout Et. Al. Claims

Saguache County, Colorado

Uranium

Joint Engineering and Geologic Report

by

Robert U. King, Geologist
Geological Survey

Edward W. Buel, Mining
Engineer, Bureau of Mines

July 10, 1956

Reviewed by
DMEA OPERATING COMMITTEE
8/1/56
(date)

RECEIVED
JUL 30 1956

DMEA 4252

MONARCH EXPLORATION COMPANY
LOOKOUT ET. AL. CLAIMS
SAGUACHE COUNTY, COLORADO

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Joint engineering and geologic report — Page

Summary 1
Introduction 1
Location and accessibility 2
Geography 3
Property 3
History and production 4
Present status 4
Sampling and ore estimates 5
Applicant's proposal and discussion 6
Geology 6
Ore Deposits 7
Conclusions and recommendations 10

ILLUSTRATIONS

Figure — Follows Page

1. Index map of the Lookout et al. claims, Monarch Exploration Company, Saguache County, Colorado. DMEA 4252 2

2. Property ownership map, Lookout et al. claims, Monarch Exploration Company, Saguache County, Colorado. DMEA 4252 10

DMEA 4252

MONARCH EXPLORATION COMPANY
LOOKOUT ET AL. CLAIMS
SAGUACHE COUNTY, COLORADO

RECEIVED
JUL 30 1956

SUMMARY

Monarch Exploration Company of Houston, Texas, applied for Defense Minerals Exploration Administration assistance to explore for uranium on their Lookout et al. claims, Saguache County, Colorado. The exploration program is estimated to cost $51,116.50.

Radioactivity anomalies occur in Paleozoic sedimentary rocks and in Precambrian crystalline rocks on the applicant's claims. The applicant proposes to explore for uranium by drifting, bulldozer trenching and core drilling.

It is concluded that insufficient prospecting has been done to date to determine the geologic relationship or to permit an evaluation of the uranium occurrences.

It is recommended that the application be denied without prejudice.

INTRODUCTION

Monarch Exploration Company requested DMEA assistance to explore for uranium on the Lookout, Hidy, Sparky, and Ranger claim groups in Saguache County, Colorado. The amount requested is $51,116.50.

The claims were examined by Robert U. King, Geological Survey, and Edward W. Buel, Bureau of Mines, in company with Fred W. Howells, Vice President of Monarch Exploration Company, on May 22, 1956.

The Monarch Exploration Company's claim groups are bounded by claims leased to Vulcan Silver-Lead Corporation and by claims owned

by Uncompaghre Exploration Company. These companies are currently exploring uraniferous showings. Vulcan Silver-Lead Corporation has applied for DMEA assistance (DMEA Docket 4225).

The AEC was consulted in regard to the merits of the uranium occurrences on the property.

The applicant originally requested DMEA assistance for two exploration programs, one for the Ranger et al. claims (DMEA Docket 4254) and one for the Lookout et al. claims (DMEA Docket 4252). The estimated costs of the exploration programs were $34,994.00 and $16,122.50, respectively. These dockets were eventually consolidated as the Lookout et al. claims, DMEA Docket 4252, and as such are discussed in this report. The company also submitted an application on the Indian Creek et al. claims nearby, Docket 4251, which was recommended for approval in four exploration projects estimated to cost about $55,000.00.

LOCATION AND ACCESSIBILITY

The property is in secs. 15, 21, 22, 27, 28, 29, 32, and 33, T. 48 N., R. 6 E., N.M.P.M., Saguache County, Colorado and is approximately six miles southeast of Sargents (fig. 1). The property lies along the east side of a divide between Indian Creek and Harry and Marshall Creeks.

The property is accessible from Sargents over the old roadbed of the Denver Rio Grande and Western Railroad which follows along Marshall Creek to Chesterville, a distance of about nine miles. From the railway roadbed at Chesterville, a road crosses over Marshall Creek and follows along the southeast and east sides of the property (fig.)

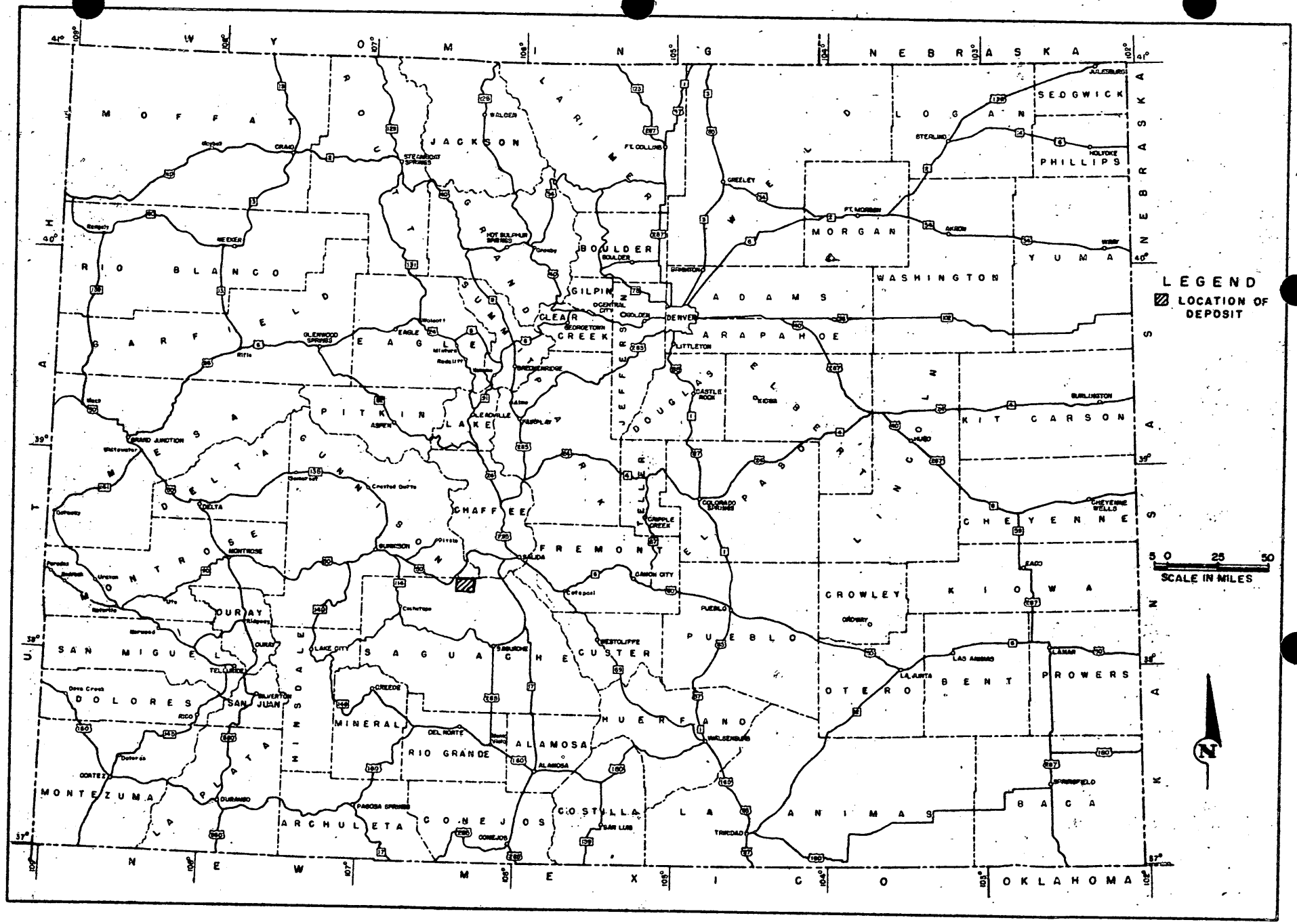

FIGURE 1 - INDEX MAP OF THE LOOKOUT ET. AL. CLAIMS, SAGUACHE COUNTY, COLO. DMEA 4252

GEOGRAPHY

The topography within the general area is one of moderate relief; narrow valleys with moderate to steeply sloping hillsides and small mesas are typical of the area.

The climate consists of relatively dry summers and cold severe winters. Snowfall in the area is not excessive and ordinarily it is possible to conduct surface exploration the year round.

Sufficient timber and water for exploration and mining is available on the property.

Mining supplies and labor can be obtained from Salida, Gunnison, and other nearby communities.

All power needs would have to be furnished by portable equipment.

PROPERTY

The property comprises 83 unpatented lode claims, covering approximately 1,790 acres, which are included in four claim groups as follows: Lookout, Hidy, Sparky, and Ranger (fig. 2).

Claim information and recording data from Saguache County Court House are tabulated as follows:

Claims	Date Recorded	Book	Pages
Lookout 15 to 34	July 26, 1955	263	370 to 408
Hidy & Hidy 1 to 4	October 26, 1955	272	390 to 398
Sparky 1 to 10 *	---	---	---
Ranger 1 to 25	July 18, 1955	262	
Ranger 26 to 34	" "	263	1 to 17
Ranger 37 to 50	" "	263	19 to 45

* Data not obtained

All the listed claims are owned by Monarch Exploration Company, 511 San Jacinto Building, Houston 2, Texas.

HISTORY AND PRODUCTION

The Marshall and Harry Creek area has not been extensively prospected for minerals, but the remains of exploratory adits and shallow prospect pits are visible in the area.

Radioactive anomalies were detected in the Indian Creek area northwest of the applicant's claims during the Spring of 1955. Shortly after, pitchblende was found along Harry Creek just east of the applicant's claims, at the Brinkerhof property (Uncompaghre Exploration Company). During the summer and fall of 1955, Monarch Exploration Company staked claims in the Marshall and Harry Creek area based on their discovery of several radioactivity anomalies. Prospect holes were sunk on three of these anomalies.

There have been no known uranium shipments made from the Brinkerhof or from any other property in the general region.

PRESENT STATUS

The property has been but superficially prospected by a few inaccessible short adits and shallow pits. Adjoining properties, held by Vulcan Silver-Lead Corporation and Uncompaghre Exploration Company, are currently being explored by bulldozer stripping on favorable showings of pitchblende and secondary uranium minerals. Vulcan has applied for Government assistance (DMEA Docket 4225).

The property is more than 100 miles from any mill or uranium buying station. It is anticipated that a mill or buying station will be established on the basis of the Los Ochos mine, at Gunnison which is 42 miles from the property.

Monarch Exploration Company has not undertaken any additional prospecting and/or exploratory work on the property pending the outcome of the DMEA application. Conversations held with Monarch's geologist, Mr. Fred W. Howells, indicate that the company will do additional work on the property. The nature and amount of work, however, is not known.

SAMPLING AND ORE ESTIMATES

Sample information submitted by the applicant is given as follows:

Location	Length	U_3O_8%
Lookout Claim #34) Prospect Hole 1)	3½ ft.	0.15
Lookout Claim #34) Prospect Hole 2)	Grab	0.72

Two samples collected by the DMEA examining team gave the following assays:

Sample	Description	Length	U_3O_8%	eU_3O_8%
EB-14	Ranger Claim #5 (?) Shattered quartz pegmatite, much limonite staining.	Grab from 3-foot pit	0.033	0.04
EB-15	Lookout Claim #34 Prospect Hole 2 1-foot wide shear zone in Granite Pegmatite	Grab from 2-foot pit	0.007	0.04

Inasmuch as the applicant's assay of 0.72 percent U_3O_8 of material from Prospect hole 2, Lookout No. 34 claim, was not confirmed by the results of DMEA sampling it is concluded that the uranium deposit is either very small or that the uranium minerals are erratically and sparsely distributed through the deposit.

No uranium reserves are calculated for the Lookout et al. claims.

APPLICANT'S PROPOSAL AND DISCUSSION

The applicant requested DMEA assistance for $51,116.50 to explore for uranium on the Lookout and Ranger claims. The proposed exploration on the Lookout No. 34 claim consists of driving a 150-foot drift and two 50-foot crosscuts from the drift; and bulldozer work in the form of 1,900 feet of access roadway and stripping to further expose the veins.

Work proposed for the Ranger claims Nos. 4, 5, 7, 8, and 11, and Lookout claim No. 28 consists of 13 bulldozer trenches spaced at intervals of 400 feet along a major north-south fault; two trenches are also proposed to explore a radioactive conglomerate outcrop. In addition to the trenching, the applicant proposes core drilling two 200-foot holes at the conglomerate area and eight 200-foot holes at favorable locations along the fault.

A review of the applicant's proposed exploration project suggests that it is chiefly prospecting.

The applicant's cost estimates seem rather high for most items, especially drilling costs.

GEOLOGY

Paleozoic sedimentary rocks and Precambrian crystalline rocks underlie the applicant's claims (Lookout et al.) along Marshall and Harry Creeks in Saguache County, Colorado. Tertiary volcanic rocks cover all of the older formations to the south and west of the property.

Paleozoic rocks that occupy the west half of the property range in age from Ordovician to Pennsylvanian. They consist of the Ordovician Manitou dolomite, Harding sandstone, and Fremont limestone; Devonian sandstones, shales, and dolomites of the Chaffee formation; and Pennsylvanian sandstone, grit, and carbonaceous shale.

The Precambrian rocks that occupy the east half of the property are chiefly made up of pink, coarse-grained granite, but include small bodies of biotite schist, and considerable pegmatite.

The sedimentary rocks strike north to northeasterly and dip gently east and southeast. A north-trending high angle reverse fault that crosses about the middle of the property has displaced the sedimentary formations on the west or foot wall side down against granite on the east side. Displacement on the fault is estimated to be more than 2,000 feet. This fault is inferred to be the southerly extension of the Chester fault from the adjacent property to the north. The Chester fault is only approximately located with respect to the applicant's claims.

ORE DEPOSITS

The ore deposits of the Marshall Creek district consist of bedded deposits of uranium in sandstone and vein deposits of uranium and copper in crystalline rocks.

On properties to the west, uranium occurs in bedded deposits in the Ordovician Harding sandstone (Monarch Exploration Company, DMEA 4251 and Vulcan Silver-Lead Corporation, DMEA 4225); to the north and east uranium occurs in vein deposits along the Chester

Fault (Vulcan Silver-Lead Corporation, DMEA 4225, and in granite (Brinkerhoff prospect - Uncompaghre Exploration Company).

At several places on the applicant's property radioactivity anomalies range from twice background to as much as 1.2 mr/hr. in Paleozoic sedimentary rocks and in shear zones in shattered granite pegmatite. Secondary uranium minerals were observed at two exposures.

The anomalies in the Paleozoic sedimentary rocks are weak and their relationship to mineralization in the host rocks is not apparent. The Harding sandstone, which is the favorable host rock for uranium on adjoining properties does not crop out on the applicant's claims, nor has it been prospected at depth by drilling. The anomalies in the Precambrian crystalline rocks appear to be related to syngenetic deposits in pegmatite masses in granite.

Weak radioactivity anomalies occur along the foot wall of the Chester Fault in highly broken black carbonaceous shale and sandstone on the Ranger No. 5 claim. A few small flakes of a secondary fluorescent uranium mineral probably autunite, are visible in shale within 10 feet of the fault, where it is exposed in a road cut.

A fractured and limonite stained quartz pegmatite dike is mildly radioactive where it crops out on the Ranger No. 5 claim. A sample (EB-14) of the material from a 2 x 6 - foot pit, contained 0.04 percent equivalent U_3O_8 by radiometric assay and 0.033 percent U_3O_8 by chemical assay. Nearby, other pegmatite veins have been prospected for the copper content. Radioactivity of the copper-bearing veins is negligible.

The radioactivity anomalies at Prospect holes 1, 2, and 3, on Lookout claim No. 34 are, however, of sufficient intensity to be of some significance.

Radioactive quartz-magnetite pegmatite is exposed by a 2-foot deep pit on Lookout No. 34 claim (Prospect hole 3, fig. 2). Radioactivity over a 10-square foot area amounted to 0.3 mr/hr.

The radioactivity of a 1-foot wide shear zone in quartz pegmatite at Prospect hole 2, 100 to 200 feet north of Prospect hole 3, amounts to about 1.0 mr/hr. The shear zone consists largely of shattered granite and gouge with limonite and hematite. Sample EB-15 taken across the shear contains 0.04 percent equivalent U_3O_8 and 0.007 percent U_3O_8 by chemical assay. The cause of the radioactive disequilibrium is not known.

At Prospect hole 1, 200 feet north of Prospect hole 2, radioactivity amounting to 1.2 mr/hr. is associated with quartz vein material and pegmatite on the dump of a caved adit. The vein material contains sparsely disseminated autunite and pyrite in a fine-grained quartz gangue.

The applicant postulates that the radioactive deposits exposed in Prospect holes 1, 2, and 3 are related to an inferred north-northeastward trending shear zone 300-600 feet wide that includes the pitchblende-bearing breccia-vein recently discovered in the Brinkerhoff Prospect. Although such a projection is entirely within the realm of geologic possibilities, too little prospecting has been done on the known radioactive localities to determine the attitudes or geologic relationships of individual occurrences.

CONCLUSIONS AND RECOMMENDATIONS

The several radioactivity anomalies that have been discovered on the applicant's property (Lookout, etc. claims) have not been sufficiently prospected to permit reasonable determination of the geologic relationships nor an evaluation of the uranium potential of the property. It is possible that the several anomalies are related and may represent the surface expressions of a major shear zone. The relationship of other anomalies being explored in the area to radioactivity anomalies on the applicant's property is not apparent.

Uranium was discovered in this area relatively recently, and properties are in the prospecting and exploration phase of development. There has been no production. Two of the properties being explored, including one by the applicant, have been recommended for a DMEA project.

Because of little being known of the geology and of uranium occurrences in the area and because exploration will soon reveal additional data for evaluation, the application is recommended for denial, without prejudice.

7/30/56

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

July 26, 1956

[illegible] Rear Customhouse
Denver 2, Colorado

RECEIVED
JUL 30 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA [illegible] (Uranium)
Monarch Exploration Company (Lockhart et al. claims),
Saguache County, Colorado

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

The field examiners found that this property is still in the prospecting stage, and little is known of the geology and of uranium occurrences in the area. They recommend that the application be denied without prejudice. We concur in this recommendation.

Additional work by the Applicant may reveal more data for evaluation and if so, another application by the Applicant would receive proper consideration.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8/1/56
(date)

RECEIVED
JUL 3 0 1956

TRANSMITTED
JUL 26 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
July 19, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

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

Subject: Docket No. DMEA 4252 (Uranium)
Monarch Exploration Company
Lookout, Hidy, Sparky & Ranger claims
Saguache County, Colorado

Enclosed are the original and nine copies Joint Engineering and Geologic Report by Robert W. King, Geologist and Edward W. Buel, Mining Engineer covering Docket No. DMEA 4252.

Monarch Exploration Company, Houston, Texas applied for DMEA assistance to explore the Lookout, Hidy, Sparky & Ranger Claims for uranium by drifting, bulldozer trenching, and core drilling at an estimated cost of $51,116.50.

The property was examined on May 22, 1956 by Robert W. King and Edward W. Buel. Several radioactivity anomalies have been discovered on the applicant's property, but the prospecting that has been done has not permitted an evaluation of the uranium potential of the property.

Little is known of uranium occurrences in the area and additional data is required before this property can qualify for DMEA assistance. It is recommended that the application be denied without prejudice.

for Robert W. King
E. N. Harshman
Member Field Team

John F. Shaw
John F. Shaw
Supervising Mining Engineer

JFS:sh

cc: 9
DMEA 4252
Chron.

8/1/56

TRANSMITTED

JUL 26 1956

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

RECEIVED
JUL 30 1956

DMEA 4252

Monarch Exploration Company

Lookout Et. Al. Claims

Saguache County, Colorado

Uranium

Joint Engineering and Geologic Report

by

Robert U. King, Geologist
Geological Survey

Edward W. Buel, Mining
Engineer, Bureau of Mines

July 10, 1956

Reviewed by
DMEA OPERATING COMMITTEE
8/1/56
(date)

DMEA 4252

RECEIVED
JUL 3 0 1956

MONARCH EXPLORATION COMPANY
LOOKOUT ET. AL. CLAIMS
SAGUACHE COUNTY, COLORADO

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Joint engineering and geologic report — Page

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Ore Deposits 7
Conclusions and recommendations 10

ILLUSTRATIONS

Figure — Follows Page

1. Index map of the Lookout et al. claims, Monarch Exploration Company, Saguache County, Colorado. DMEA 4252 2

2. Property ownership map, Lookout et al. claims, Monarch Exploration Company, Saguache County, Colorado. DMEA 4252 10

DMEA 4252

MONARCH EXPLORATION COMPANY
LOOKOUT ET AL. CLAIMS
SAGUACHE COUNTY, COLORADO

RECEIVED
JUL 3 0 1956

SUMMARY

Monarch Exploration Company of Houston, Texas, applied for Defense Minerals Exploration Administration assistance to explore for uranium on their Lookout et al. claims, Saguache County, Colorado. The exploration program is estimated to cost $51,116.50.

Radioactivity anomalies occur in Paleozoic sedimentary rocks and in Precambrian crystalline rocks on the applicant's claims. The applicant proposes to explore for uranium by drifting, bulldozer trenching and core drilling.

It is concluded that insufficient prospecting has been done to date to determine the geologic relationship or to permit an evaluation of the uranium occurrences.

It is recommended that the application be denied without prejudice.

INTRODUCTION

Monarch Exploration Company requested DMEA assistance to explore for uranium on the Lookout, Hidy, Sparky, and Ranger claim groups in Saguache County, Colorado. The amount requested is $51,116.50.

The claims were examined by Robert U. King, Geological Survey, and Edward W. Buel, Bureau of Mines, in company with Fred W. Howells, Vice President of Monarch Exploration Company, on May 22, 1956.

The Monarch Exploration Company's claim groups are bounded by claims leased to Vulcan Silver-Lead Corporation and by claims owned

by Uncompaghre Exploration Company. These companies are currently exploring uraniferous showings. Vulcan Silver-Lead Corporation has applied for DMEA assistance (DMEA Docket 4225).

The AEC was consulted in regard to the merits of the uranium occurrences on the property.

The applicant originally requested DMEA assistance for two exploration programs, one for the Ranger et al. claims (DMEA Docket 4254) and one for the Lookout et al. claims (DMEA Docket 4252). The estimated costs of the exploration programs were $34,994.00 and $16,122.50, respectively. These dockets were eventually consolidated as the Lookout et al. claims, DMEA Docket 4252, and as such are discussed in this report. The company also submitted an application on the Indian Creek et al. claims nearby, Docket 4251, which was recommended for approval in four exploration projects estimated to cost about $55,000.00.

LOCATION AND ACCESSIBILITY

The property is in secs. 15, 21, 22, 27, 28, 29, 32, and 33, T. 48 N., R. 6 E., N.M.P.M., Saguache County, Colorado and is approximately six miles southeast of Sargents (fig. 1). The property lies along the east side of a divide between Indian Creek and Harry and Marshall Creeks.

The property is accessible from Sargents over the old roadbed of the Denver Rio Grande and Western Railroad which follows along Marshall Creek to Chesterville, a distance of about nine miles. From the railway roadbed at Chesterville, a road crosses over Marshall Creek and follows along the southeast and east sides of the property (fig.)

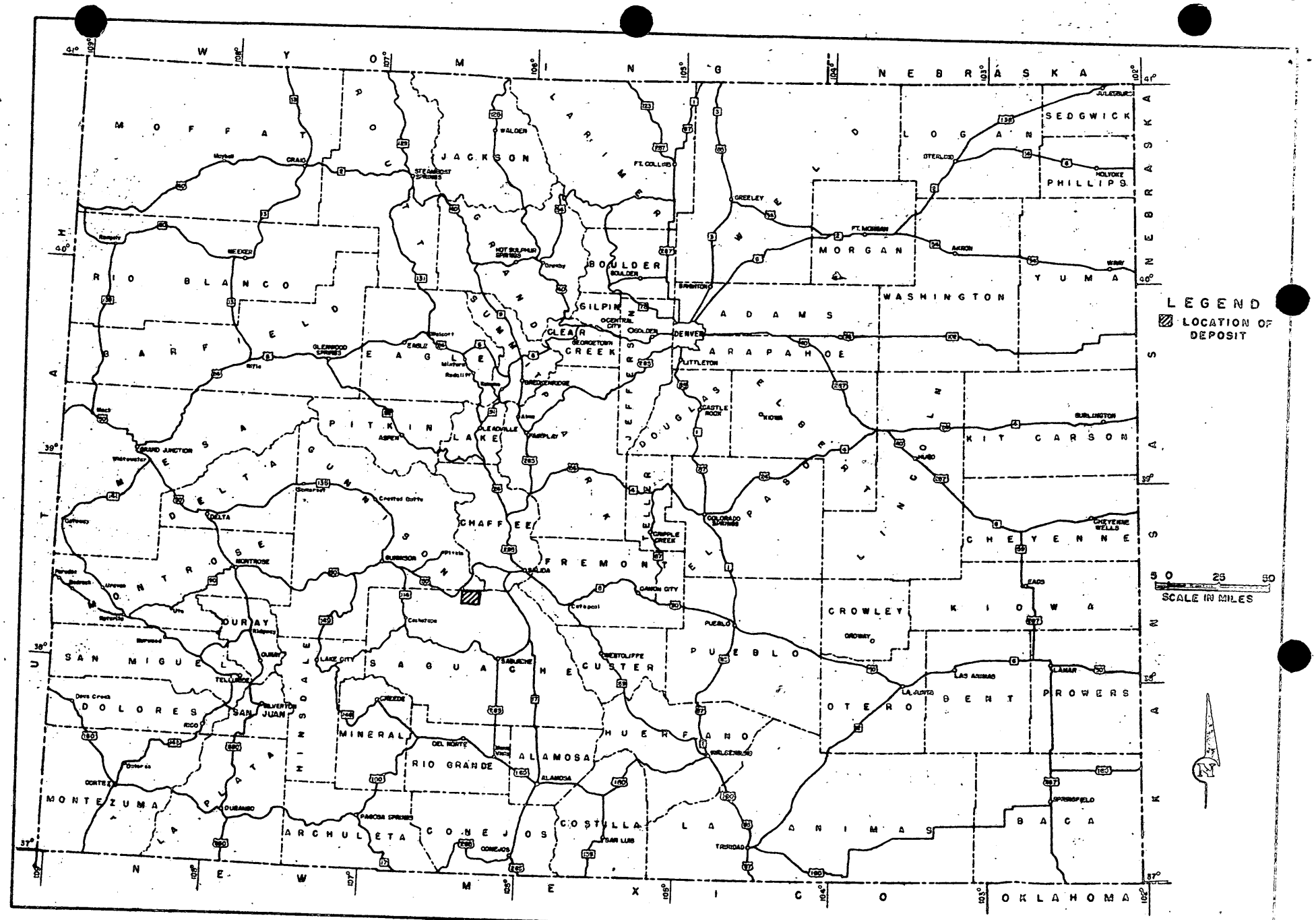

FIGURE 1 - INDEX MAP OF THE LOOKOUT ET. AL. CLAIMS, SAGUACHE COUNTY, COLO. DMEA 4252

RECEIVED
JUL 30 1956

GEOGRAPHY

The topography within the general area is one of moderate relief; narrow valleys with moderate to steeply sloping hillsides and small mesas are typical of the area.

The climate consists of relatively dry summers and cold severe winters. Snowfall in the area is not excessive and ordinarily it is possible to conduct surface exploration the year round.

Sufficient timber and water for exploration and mining is available on the property.

Mining supplies and labor can be obtained from Salida, Gunnison, and other nearby communities.

All power needs would have to be furnished by portable equipment.

PROPERTY

The property comprises 83 unpatented lode claims, covering approximately 1,790 acres, which are included in four claim groups as follows: Lookout, Hidy, Sparky, and Ranger (fig. 2).

Claim information and recording data from Saguache County Court House are tabulated as follows:

Claims	Date Recorded	Book	Pages
Lookout 15 to 34	July 26, 1955	263	370 to 408
Hidy & Hidy 1 to 4	October 26, 1955	272	390 to 398
Sparky 1 to 10 *	---	---	---
Ranger 1 to 25	July 18, 1955	262	
Ranger 26 to 34	" "	263	1 to 17
Ranger 37 to 50	" "	263	19 to 45

* Data not obtained

All the listed claims are owned by Monarch Exploration Company, 511 San Jacinto Building, Houston 2, Texas.

HISTORY AND PRODUCTION

The Marshall and Harry Creek area has not been extensively prospected for minerals, but the remains of exploratory adits and shallow prospect pits are visible in the area.

Radioactive anomalies were detected in the Indian Creek area northwest of the applicant's claims during the Spring of 1955. Shortly after, pitchblende was found along Harry Creek just east of the applicant's claims, at the Brinkerhof property (Uncompaghre Exploration Company). During the summer and fall of 1955, Monarch Exploration Company staked claims in the Marshall and Harry Creek area based on their discovery of several radioactivity anomalies. Prospect holes were sunk on three of these anomalies.

There have been no known uranium shipments made from the Brinkerhof or from any other property in the general region.

PRESENT STATUS

The property has been but superficially prospected by a few inaccessible short adits and shallow pits. Adjoining properties, held by Vulcan Silver-Lead Corporation and Uncompaghre Exploration Company, are currently being explored by bulldozer stripping on favorable showings of pitchblende and secondary uranium minerals. Vulcan has applied for Government assistance (DMEA Docket 4225).

The property is more than 100 miles from any mill or uranium buying station. It is anticipated that a mill or buying station will be established on the basis of the Los Ochos mine, at Gunnison which is 42 miles from the property.

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Inasmuch as the applicant's assay of 0.72 percent U_3O_8 of material from Prospect hole 2, Lookout No. 34 claim, was not confirmed by the results of DMEA sampling it is concluded that the uranium deposit is either very small or that the uranium minerals are erratically and sparsely distributed through the deposit.

No uranium reserves are calculated for the Lookout et al. claims.

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The applicant requested DMEA assistance for $51,116.50 to explore for uranium on the Lookout and Ranger claims. The proposed exploration on the Lookout No. 34 claim consists of driving a 150-foot drift and two 50-foot crosscuts from the drift; and bulldozer work in the form of 1,900 feet of access roadway and stripping to further expose the veins.

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ORE DEPOSITS

The ore deposits of the Marshall Creek district consist of bedded deposits of uranium in sandstone and vein deposits of uranium and copper in crystalline rocks.

On properties to the west, uranium occurs in bedded deposits in the Ordovician Harding sandstone (Monarch Exploration Company, DMEA 4251 and Vulcan Silver-Lead Corporation, DMEA 4225); to the north and east uranium occurs in vein deposits along the Chester

Fault (Vulcan Silver-Lead Corporation, DMEA 4225, and in granite (Brinkerhoff prospect - Uncompaghre Exploration Company).

At several places on the applicant's property radioactivity anomalies range from twice background to as much as 1.2 mr/hr. in Paleozoic sedimentary rocks and in shear zones in shattered granite pegmatite. Secondary uranium minerals were observed at two exposures.

The anomalies in the Paleozoic sedimentary rocks are weak and their relationship to mineralization in the host rocks is not apparent. The Harding sandstone, which is the favorable host rock for uranium on adjoining properties does not crop out on the applicant's claims, nor has it been prospected at depth by drilling. The anomalies in the Precambrian crystalline rocks appear to be related to syngenetic deposits in pegmatite masses in granite.

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Radioactive quartz-magnetite pegmatite is exposed by a 2-foot deep pit on Lookout No. 34 claim (Prospect hole 3, fig. 2). Radioactivity over a 10-square foot area amounted to 0.3 mr/hr.

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CONCLUSIONS AND RECOMMENDATIONS

The several radioactivity anomalies that have been discovered on the applicant's property (Lookout, etc. claims) have not been sufficiently prospected to permit reasonable determination of the geologic relationships nor an evaluation of the uranium potential of the property. It is possible that the several anomalies are related and may represent the surface expressions of a major shear zone. The relationship of other anomalies being explored in the area to radioactivity anomalies on the applicant's property is not apparent.

Uranium was discovered in this area relatively recently, and properties are in the prospecting and exploration phase of development. There has been no production. Two of the properties being explored, including one by the applicant, have been recommended for a DMEA project.

Because of little being known of the geology and of uranium occurrences in the area and because exploration will soon reveal additional data for evaluation, the application is recommended for denial, without prejudice.

6-28-56

Per Telegram of June 27, 1956 from Mr. Patrick W. Brady, President of Company. Mr. Roy Simmons ~~it~~ is now their Washington representative and any information relative to Monarch Exploration Company claims may be furnished to him. Mr. Simmons telephone No. is Sterling 3-1000.

Address: 600 Munsey Building
Washington 4, D.C.

DMEA-4251 Docket Code 700
DMEA-4252 Docket Code 700
DMEA-4253 (Original of Telegram in Docket)

5/10/56

RECEIVED
MAY 10 1956

May 4, 1956

Memorandum

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

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4252 (Uranium), Monarch Exploration Company, (Lookout et al claims), Saguache County, Colorado

The subject application was received in this office on May 4, 1956.

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

JOHN F. SHAW
John F. Shaw

cc: W. M. Traver (3)
E. N. Harshman
J. F. Shaw
Sec. Op. Com (2)

SEE DOCKET NO. 4251 FOR TRAVER MEMO OF MAY 3, 1956 IN WHICH HE SUBMITTED THE APPLICANT'S BIDS.

DMEA-4252
4253

5/8/56

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

May 3, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
MAY 7 - 1956

Memorandum

To: J. F. Shaw (2) (With brochure)
E. N. Harshman

From: Field Team, Region III

Subject: Docket DMEA 4252 (Uranium) Monarch Exploration Company, (Lookout et al claims), Saguache County, Colorado

Enclosed is the subject application which, you will note from the attached copy of a letter from the Chairman, Operating Committee dated April 30, 1956, has been combined into one application in lieu of the two submitted by the Applicant. A field examination and suitable report are required.

The Applicant stated that he would inform this office when these claims will be free of snow and a field examination can be made.

Attached also are copies of memoranda of review of the combined applications by N. E. Nelson and John E. Crawford and a copy of a letter to the Applicant from the Administrator.

Please return the brochure with the Report of Examination.

Copies of three drilling bids applicable to this docket were forwarded you with DMEA Docket 4253.

DMEA Field Team, Region III

W. M. TRAVER

Enclosures

By W. M. Traver
Executive Officer

EMC:ab

cc: Chair. Op. Comm. (2)
Docket 4252
Chron.

700

FILE COPY
Surname:
Cheng
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 NewCustomhouse Building
Denver 2, Colorado

Re: Dockets Nos. DMEA-4252 and DMEA-4254
(Uranium)
Monarch Exploration Company
Lockout, et al., claims
Saguache County, Colorado

Dear Mr. Traver:

The subject applications are being referred to you for investigation, a field examination if warranted, and recommendations. A copy of each application was retained by your office.

Copies of memoranda, dated April 18, by N. E. Nelson, USGS, and dated April 23 and 24, 1956, by John E. Crawford, USBM, relating to the applications, are enclosed.

Please refer to the Administrator's letter of even date to the Applicant, combining these two applications. Hereafter, please process the combined applications under Docket No. DMEA-4252, and consider Docket No. DMEA-4254 cancelled.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JB)

Enclosures

APPROVED:

P. F. Yopes (JB)
Member, Bureau of Mines

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

MCheng
~~FMMurphy~~/izm 4-27-56 4252
cc to: Docket No. ~~5252~~ Docket # 4254
Code 700
Mr. ~~Murphy~~ Cheng
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Surname copy
DMEA-4252

700

Ching
F. Hudson

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

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

Re: Dockets Nos. DMEA-4252 and DMEA-4254
(Uranium)
Monarch Exploration Company
Lockout, et al. Claims
Saguache County, Colorado

Dear Mr. Trawer:

The subject applications are being referred to you for investigation, a field examination if warranted, and recommendations. A copy of each application was retained by your office.

Copies of memoranda, dated April 18, by N. E. Nelson, USGS, and dated April 23 and 24, 1956, by John E. Crawford, USBM, relating to the applications, are enclosed.

Please refer to the Administrator's letter of even date to the Applicant, suggesting that these two applications be combined into one. If the suggestion is approved, please process the combined applications under Docket No. DMEA-4252, and consider Docket No. DMEA-4254 cancelled.

Sincerely yours,

Chairman, Operating Committee

Enclosures

MChing/gla
4-25-56
cc to: Admr.'s Reading File
Operating Committee
Docket No. DMEA-4252
" " " 4254
JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Ching

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

700

Ching
Selfridge
Yager
Nelson
Ellis

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

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Re: Dockets Nos. DMEA-4252 and DMEA-4254
(Uranium)
Lookout, et al., claims
Mesa County, Colorado

Gentlemen:

The applications for assistance in exploring your properties, under the captioned docket numbers, have been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. They have been referred to:

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

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

As it is DMEA policy to combine applications for projects on contiguous lands held by the same applicant, we are consolidating the two dockets into one, DMEA-4252 (Uranium). Please identify all future correspondence relating to these two dockets by Docket No. DMEA-4252 (Uranium) only.

Sincerely yours,

C. O. Mittendorf

Administrator

FMChing/GCSelfridge/izm/esf
(4/30/56)
cc to: Docket No. 4252
Docket No. 4254
Code 700
Mr. Ching
Admr. Reading File
Mr. Selfridge
DMEA Field Team, Region III (2)

700

FILE COPY
Surname: Chang

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

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Re: Dockets Nos. DMEA-4252 and DMEA-4254
(Uranium)
Lookout, et al., claims
Saguache County, Colorado

Gentlemen:

The applications for assistance in exploring your properties,, under the captioned docket numbers, have been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. They have been referred 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 in regard to your projects if additional information is required.

Inasmuch as all 83 claims covered by the two subject applications are owned by your corporation and form one contiguous group, in the interest of simplicity and better over-all planning and supervision, the two applications and related programs are being combined into one.

Accordingly, we are placing the combined applications under Docket No. DMEA-4252 and cancelling Docket No. DMEA-4254.

Sincerely yours,

Administrator

FMChing/izm 4-27-56
cc to: Docket No. 4252
Docket No. 4254
Code 700
Mr. Ching
Adrm.'s Reading File
DMEA Field Team, Region III (2)

Surname copy
D[illegible]-4252 700

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

Ching
J Kuwate

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Re: Dockets Nos. DMEA-4252 and DMEA-4254
(Uranium)
Lookout, et al. Claims
Saguache County, Colorado

Gentlemen:

The applications for assistance in exploring your properties under the captioned docket numbers have been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. They have been referred to the Executive Officer of Region III at the following address:

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

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

Inasmuch as all 83 claims covered by the two subject applications are owned by your corporation and form one contiguous group, it is suggested that, in the interest of simplicity and better overall planning and supervision, the two applications and related programs be combined into one.

If this suggestion meets with your approval, please so advise Mr. Traver and this office promptly, and we shall place the combined applications under Docket No. DMEA-4252 and cancel Docket No. DMEA-4254.

Sincerely yours,

Administrator

MChing/gla 4-25-56
cc to: Admr.'s Reading File
Docket No. DMEA-4252
" " " 4254
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

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

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Re: Dockets Nos. DMEA-4252 and DMEA-4254
(Uranium)
Lookout, et al. Claims
Saguache County, Colorado

Gentlemen:

The applications for assistance in exploring your properties under the captioned docket numbers have been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. They have been referred to the Executive Officer of Region III at the following address:

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

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

Inasmuch as all 83 claims covered by the two subject applications are owned by your corporation and form one contiguous group, it is suggested that, in the interest of simplicity and better overall planning and supervision, the two applications and related programs be combined into one.

If this suggestion meets with your approval, please so advise Mr. Traver and this office promptly, and we shall place the combined applications under Docket No. DMEA-4252 and cancel Docket No. DMEA-4254.

Sincerely yours,

Administrator

MChing/gla 4-25-56
cc to: Admr.'s Reading File
Docket No. DMEA-4252
" " " 4254
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

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

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Re: Dockets Nos. DMEA-1252 and DMEA-1254
(Uranium)
Lookout, et al. Claims
Saguache County, Colorado

Gentlemen:

The applications for assistance in exploring your properties under the captioned docket numbers have been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. They have been referred to the Executive Officer of Region III at the following address:

Mr. W. W. Trayer
Executive Officer
DMEA Field Team, Region III
254 New Customhouse Building
Denver 2, Colorado

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

Inasmuch as all 83 claims covered by the two subject applications are owned by your corporation and form one contiguous group, it is suggested that, in the interest of simplicity and better overall planning and supervision, the two applications and related programs be combined into one.

If this suggestion meets with your approval, please so advise Mr. Trayer and this office promptly, and we shall place the combined applications under Docket No. DMEA-1252 and cancel Docket No. DMEA-1254.

Sincerely yours,

Administrator

MChing/gla 4-25-56
cc to: Admr.'s Reading File
Docket No. DMEA-1252
" " " 1254
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

4-25-56

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

RECEIVED
APR 24 1956

April 24, 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 4252, Monarch Exploration Company, Lookout, Hidy and Hidy, and Sparky Claims, Saguache County, Colorado.

I have reviewed the attached application, DMEA Docket 4252, Monarch Exploration Company, Saguache County, Colorado, dated April 10, 1956 and received in this office April 16, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Hidy and Hidy claims (1 - 4), Sparky claims (1 - 10), and Lookout claims (15 - 24) are contiguous to the Ranger claims (1 - 10) and Lookout claims (25 - 29) for which exploration aid under Docket 4254 (Ranger claims 1 - 34 and 37 - 50, and Lookout claims 25 - 29) is requested. Work conducted to date on the Lookout, Hidy and Hidy, and Sparky groups of claims consists of initial prospecting, location of surface radiometric anomalies, examination of surface geology, and sampling of two prospect holes. Samples taken from the two holes assayed 0.15 and 0.72 percent U_3O_8, respectively. The proposed work includes; 54 hours of bulldozing access roads at $12.00 per hour; drilling, shooting and mucking for 12 days at $2.50 per hour for two men; and 250 feet of drifting and cross-rutting at $38.13 per foot.

We recommend that the application be sent to the Field Team and that they consult with D. L. Everhart, Acting Chief, Atomic Energy Commission, Denver, Colorado. It is also recommended that consideration be given to the consolidation of DMEA Dockets 4252 and 4254 since the respective subject claims are adjacent.

John E Crawford
John E. Crawford

Attachment

4-25-56

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

RECEIVED
APR 24 1956

April 23, 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 4254, Monarch Exploration Company, Ranger and Lookout Claims, Saguache County, Colorado

I have reviewed the attached application, DMEA Docket 4254, Monarch Exploration Company, Saguache County, Colorado, dated April 10, 1956 and received in this office April 16, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Ranger claims and the Lookout claims are contiguous to other claims for which exploration assistance has been requested under DMEA Docket 4252. Several anomalies have been discovered on the Ranger and Lookout groups of claims but there is no evidence that mineralization exists on the property.

It would be advisable that the applicant conduct more prospecting work on the claims in order to establish more definitely that an exploration program merits consideration.

We recommend that DMEA Docket 4254 be combined with DMEA Docket 4252, inasmuch as the claims under both dockets are contiguous.

John E Crawford
John E. Crawford

Attachment

4-19

IN REPLY REFER TO:

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

RECEIVED
APR 1 8 1956

April 18, 1956

Re: DMEA 4254
Monarch Exploration Co.
Ranger group, etc. claims
Sagauche County, Colo.
$34,994.00 - Uranium

Memorandum

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

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

Subject: Review of application

This application for assistance pertains to a group of slightly prospected claims adjoining the Lookout group, subject of application 4252, and southeast of the Big Indian group, subject of application 4251.

Except for the north-south Chester fault and surface anomalies showing up to 9 times background, only hypothetical considerations support the application. The fault mapped is probably a projection of the fault showing on the Vulcan Silver Lead property to the north from which uranium-bearing samples have been taken. No samples have been taken from the places on the claims showing anomalous readings. By inference the group is underlain, at unknown depth, in large part, by the Harding sandstone from whose outcrops on Indian Creek several samples of uranium-bearing material have been taken.

The proposed work consists of bulldozing to establish the fault and core drilling, 1,600 feet, to test the anomalous areas and the fault zone.

A staged work program may be warranted.

Referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

4-19-56

IN REPLY REFER TO:

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

RECEIVED
APR 20 1956

April 18, 1956

Re: DMEA 4252
Monarch Exploration Co.
Lookout, etc., groups
Saguache County, Colo.
$16,122.50 - Uranium

Memorandum

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

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

Subject: Review of application

This application for assistance concerns a group of claims that adjoins the large group of the Vulcan Silver Lead Co., the subject of application No. 4225. The group also adjoins the Ranger group of the Monarch Exploration Co., which is the subject of application No. 4253. Four groups of claims are now the subjects of applications as:

Docket No.	Applicant	Estimated Cost
4225	Vulcan Silver Lead Corp.	$300,056.28
4251	Monarch Expl. Co. (Big Indian)	44,045.70
4252	Monarch Expl. Co. (Lookout)	16,122.50
4254	" " " (Ranger)	34,994.00
	Total	$395,218.48

Total acreage 7,968 (applicants' maps.)

A limited amount of work has been done on the four groups and interest in the area, to this time, derives in large part from several samples of uranium-bearing Harding sandstone, samples related to a fault structure on the Vulcan group and to samples from shallow prospect holes in sheared Precambrian rocks near the boundary of the referenced group (Lookout, 4252).

Hypothetical considerations, rather than findings, are relied upon to bolster the applications, and much of the proposed work is prospecting. However, the area is new and untried and some work appears justified.

Referral to the Field Team, along with the other applications, is recommended.

N. E. Nelson

N. E. Nelson

April 16, 1956
Subject: DMEA-4254
Re: Exploration Assistance
Ranger Claims 1-34 & 37-50
Lookout Claims 25-29

Monarch Exploration Company
511 San Jacinto Building
Houston 2, Texas

Gentlemen:

The receipt of your application dated April 10, 1956, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4254 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

April 16, 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 - 4254 Monarch Exploration Company

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

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

RECEIVED
APR 13 1956

April 11, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium), Monarch Exploration Company, (Ranger claims 1-34 and 37-50, and Lookout claims 25-29), Saguache County, Colorado

Enclosed are three copies of the subject application in the amount of $34,994.00. One copy of the application is being retained in our file.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

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

RECEIVED
APR 1 1956

April 11, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium), Monarch Exploration Company, (Ranger claims 1-34 and 37-50, and Lookout claims 25-29), Saguache County, Colorado

Enclosed are three copies of the subject application in the amount of $34,994.00. One copy of the application is being retained in our file.

DMEA Field Team, Region III

W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Form Approved
Budget Bureau No. 42-R1035.2.
APR 10 1956

RECEIVED
APR 13 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-4252
Metal or Mineral Uranium
Date Received 4-13-56
Estimated Cost $16,122.50
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: Monarch Exploration Company
511 San Jacinto Bldg.
Houston, Texas
See Supplement

(*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 Lookout Claims 18-24 and 30-34; Hidy and Hidy Claims 1-4; and Sparky Claims 1-10. See supplement

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

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

(*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.

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

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

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

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

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

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

(*c*) The work will start within 60 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:

(*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)? Yes

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

☒ Money ☐ Use of equipment owned by you ☐ 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 April 10, 1956

MONARCH EXPLORATION COMPANY
(Applicant)

By F. W. Howells

F. W. Howells

Vice President

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

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

RECEIVED
APR 13 1953

DEFENSE MINERALS

EXPLORATION ADMINISTRATION

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

Lookout Claims 15 - 24 and 30 - 34

Hidy & Hidy Claims 1 - 4

Sparky Claims 1 - 10

Located in Saguache County, Colorado

SUPPLEMENT

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

- -

S U P P L E M E N T

1. Name of Applicant:

(b) Monarch Exploration Company - a corporation incorporated in the State of Texas, authorized to do business in the State of Colorado.

(c) Company:

President	Patrick W. Brady 511 San Jacinto Building Houston, Texas
Vice-President	Fred W. Howells 511 San Jacinto Building Houston, Texas
Vice-President & Secretary-Treasurer	Jack Trotter 904 Citizens State Bank Bldg. Houston, Texas
Assistant Secretary-Treasurer	Ellis F. Morris 904 Citizens State Bank Bldg. Houston, Texas

3. Applicant's Property Rights:

(a) Unpatented Mining Claims:

Lookout Claims 15 - 24 and 30 - 34, Saguache County, Colorado; Sections 21, 22, 27 and 28, T-48N R-6E; N.M.P.M.

Midy & Midy Claims 1 - 4, Saguache County, Colorado; Section 22; T-48N R-6E; N.M.P.M.

Sparky Claims 1 - 10, Saguache County, Colorado; Sections 15 and 22; T-48N R-6E; N.M.P.M.

(b) The properties listed in 3(a) above are all unpatented mining claims, and to date are not associated with any mine or mines.

3. Applicant's Property Rights (continued):

(c) Lookout Claims 15 - 24 and 30 - 34: Monarch Exploration Company - Owner.

Hidy & Hidy Claims 1 - 4: Monarch Exploration Company - Owner.

Sparky Claims 1 - 10: Monarch Exploration Company - Owner.

(c) There are no liens or encumbrances on the following unpatented claims which are owned by Monarch Exploration Company:

Lookout Claims 15-24 and 30-34
Hidy & Hidy 1 - 4
Sparky 1 - 10

(2) Monarch Exploration Company - Lookout Claims 15-24 & 30 - 34, Saguache County, Colorado:

Name of Claim	Date Recorded	Book	Page
Lookout #15	July 26, 1955	263	370
Lookout #16	July 26, 1955	263	372
Lookout #17	July 26, 1955	263	374
Lookout #18	July 26, 1955	263	376
Lookout #19	July 26, 1955	263	378
Lookout #20	July 26, 1955	263	380
Lookout #21	July 26, 1955	263	382
Lookout #22	July 26, 1955	263	384
Lookout #23	July 26, 1955	263	386
Lookout #24	July 26, 1955	263	388
Lookout #30	July 26, 1955	263	400
Lookout #31	July 26, 1955	263	402
Lookout #32	July 26, 1955	263	404
Lookout #33	July 26, 1955	263	406
Lookout #34	July 26, 1955	263	408

Locator: Monarch Exploration Company.

Monarch Exploration Company - Hidy & Hidy Claims 1 - 4, Saguache County, Colorado:

Name of Claim	Date Recorded	Book	Page
Hidy	October 26, 1955	272	390
Hidy #1	October 26, 1955	272	392
Hidy #2	October 26, 1955	272	394
Hidy #3	October 26, 1955	272	396
Hidy #4	October 26, 1955	272	398

Locator: Monarch Exploration Company.

3. Applicant's Property Rights (continued):

Monarch Exploration Company - Sparky Claims 1 - 10, Saguache County, Colorado:

Name of Claim	Date Recorded	Book	Page
Sparky #1			
Sparky #2			
Sparky #3			
Sparky #4			
Sparky #5			
Sparky #6			
Sparky #7			
Sparky #8			
Sparky #9			
Sparky #10			

Locator: Monarch Exploration Company.

4. Physical Description:

(a) The Lookout Claims numbered 15-24 and 30-34, the Hidy and Hidy Claims numbered 1 - 4, and the Sparky Claims numbered 1-10, are located on the north and west side of Marshall Creek Drainage in Saguache County, Colorado. The Lookout Claims lie to the north and west of Marshall Creek. The Hidy & Hidy Claims numbered 1-4 lie north of the Lookout Claims, and tie on to the Lookout Claims. The Sparky Claims lie north of and tie on to the Hidy Claims. The Hidy and Sparky Claims lie on the divide between Marshall and Indian Creeks. See Plate I.

To reach the property (see Figure 1), one may travel west 32 miles from Salida, Colorado, on U. S. Highway 50 to Sargents, Colorado, and turn left up the old County road. Proceed 5 miles up the old County road to the old railroad siding of Buxton, at which point the road crosses over Marshall Creek on to the old railroad bed. Chestervillo is approximately 4 miles up the old railroad bed from Buxton, at which point Monarch's new access road takes off to the left from the old railroad grade. The Lookout Claims begin 1-1/2 miles up the new access road from Chestervillo. The old railroad bed has been traveled extensively by car since the removal of the railroad tracks three months ago; however, jeeps or trucks are more adaptable to the old railroad bed.

To date, no mining operation has been conducted upon any of Monarch Exploration Company's Claims in the Marshall Creek area. As far as known, there are no mines of any type in this immediate area. Exploration has consisted of initial prospecting, location of surface radiometric anomalies, examination of surface geology, and sampling of two prospect holes. Two shallow prospect holes on two separate veins

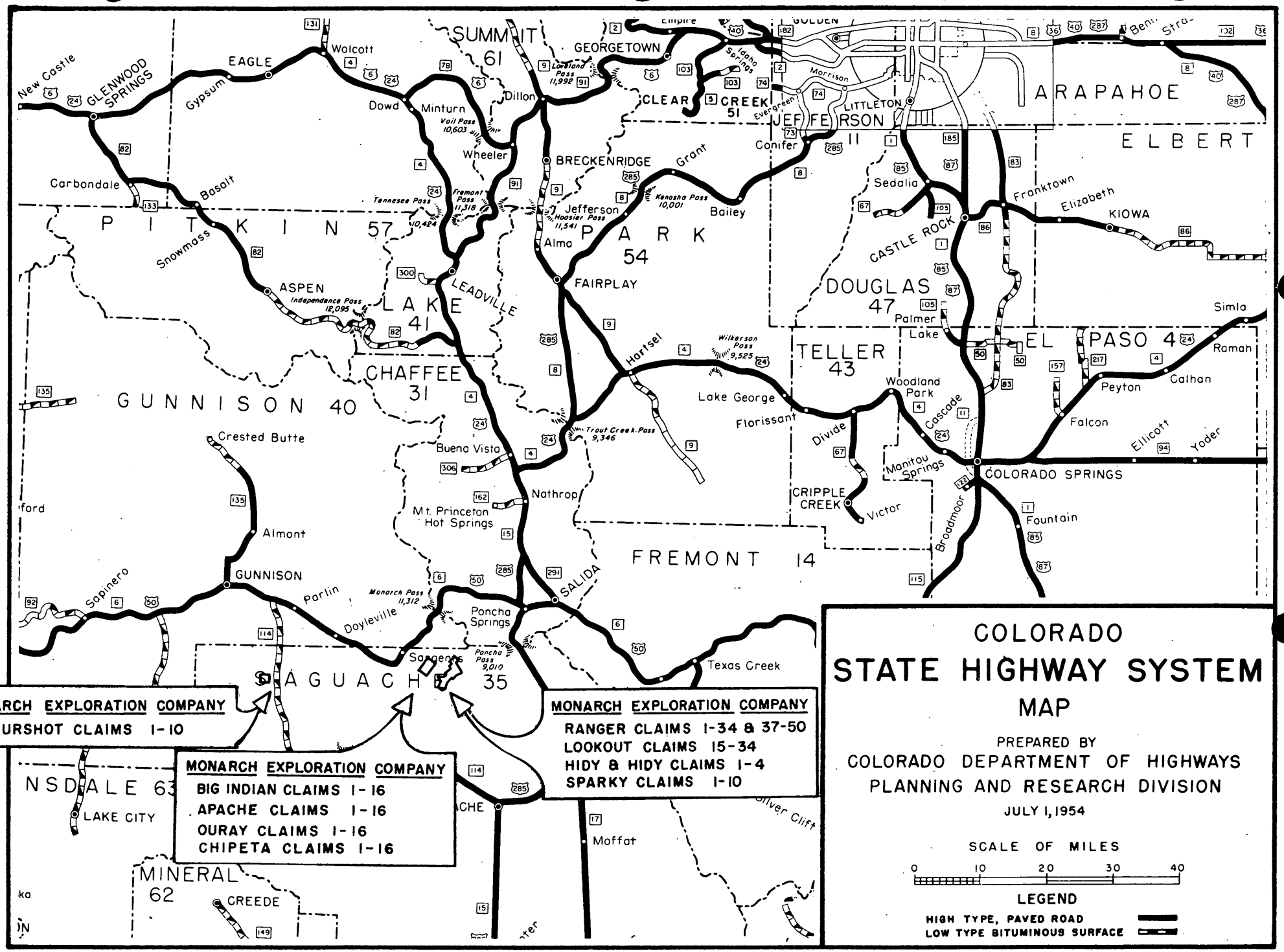

COLORADO
STATE HIGHWAY SYSTEM
MAP
PREPARED BY
COLORADO DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH DIVISION
JULY 1, 1954
SCALE OF MILES
0 10 20 30 40
LEGEND
HIGH TYPE, PAVED ROAD
LOW TYPE BITUMINOUS SURFACE
MONARCH EXPLORATION COMPANY
SHURSHOT CLAIMS 1-10
MONARCH EXPLORATION COMPANY
BIG INDIAN CLAIMS 1-16
APACHE CLAIMS 1-16
OURAY CLAIMS 1-16
CHIPETA CLAIMS 1-16
MONARCH EXPLORATION COMPANY
RANGER CLAIMS 1-34 & 37-50
LOOKOUT CLAIMS 15-34
HIDY & HIDY CLAIMS 1-4
SPARKY CLAIMS 1-10
SUMMIT 61
GEORGETOWN
CLEAR CREEK 51
JEFFERSON 11
ARAPAHOE
ELBERT
PITKIN 57
PARK 54
LAKE 41
CHAFFEE 31
GUNNISON 40
DOUGLAS 47
TELLER 43
EL PASO 4
FREMONT 14
SAGUACHE 35
MINERAL 62
GLENWOOD SPRINGS
EAGLE
Wolcott
Gypsum
New Castle
Dowd
Minturn
Dillon
Vail Pass 10,603
Wheeler
Carbondale
Basalt
Snowmass
ASPEN
Independence Pass 12,095
Tennessee Pass 10,424
Fremont Pass 11,318
Leadville Pass 11,992
BRECKENRIDGE
Jefferson
Hoosier Pass 11,541
Alma
FAIRPLAY
Kenosha Pass 10,001
Bailey
Grant
Conifer
Evergreen
Morrison
LITTLETON
Sedalia
CASTLE ROCK
Franktown
Elizabeth
KIOWA
Simla
Ramah
Calhan
Peyton
Falcon
Ellicott
Yoder
Palmer Lake
Woodland Park
Cascade
Divide
Florissant
Lake George
Wilkerson Pass 9,525
Hartsel
Trout Creek Pass 9,346
Buena Vista
Nathrop
Mt. Princeton Hot Springs
Crested Butte
Almont
GUNNISON
Sapinero
Parlin
Doyleville
Monarch Pass 11,312
Poncha Springs
Poncha Pass 9,010
Sargents
SALIDA
Texas Creek
CRIPPLE CREEK
Victor
Manitou Springs
COLORADO SPRINGS
Broadmoor
Fountain
Moffat
Silver Cliff
LAKE CITY
CREEDE

FIGURE 1

4. Physical Description (continued):

located on Lookout Claim No. 34, sampled for uranium, assayed 0.15% and 0.72% U_3O_8. Other radiometric anomalies located on the Lookout Claims have not been sampled to date.

After leaving U. S. Highway 50 at Sargents, Colorado, the access road to the Lookout Claims is fair to good for the average vehicle. The last two miles of access road from Chestorville on through the Ranger Claims to the Lookout Claims is a new road, excellent for mine purposes, having been built in November, 1955.

The average elevation of these claims is from 9,300 to 10,500 feet.

(b) To date, there has been no production from these properties, and there are no ore reserves blocked out.

(c) The Lookout Claims, as far as known, lie entirely on Pre-Cambrian rocks. See General Geologic Map, Plate No. II. The Pre-Cambrian rocks consist of granite, granitic-type rocks carrying magnetite, sills or dikes of quartz carrying large quantities of magnetite and schist. Numerous contacts of the schist and granitic-type rocks occur in each pattern so as to suggest a zone of shearing cutting across the Lookout Claims in a northeast-southwest direction. Roughly, the strike of this shear zone is North 35°- 40° East. To the southwest this shear zone probably intersects the major north-south fault on the Ranger Claims. To the northeast, it is not known how far the shear continues, but it is continuous for at least another 1/4 to 1/2 mile. The magnetite, whether associated with quartz or granitic-type rocks, gives high radioactive readings of 6 to 9 times background at various places related to the shear.

On Lookout Claim No. 34 (see Claim Plate and Assay Map, Plate No. I) is a shear fault in which schist makes contact with granitic-type rock. The shear fault has been exposed by a prospect hole dug 4 to 5 feet below the surface. This prospect hole is designated as Prospect Hole No. 1 (see Figure 2). A chemical assay of a 30-pound sample taken from this prospect assayed 0.15% U_3O_8 across a 3-1/2 foot face, and was out of balance only slightly. The count was a little higher than uranium content.

One of the uranium minerals present is autunite, which occurs as flaky coatings on fracture surfaces, and as space filling between crystal faces. Another uranium mineral occurs in this shear fault, the identification of which is not certain. It is a black mineral which also occurs as fracture filling. Some of the uranium-bearing rocks from this shear assay radiometrically 1% U_3O_8 or better. The black uranium-bearing fracture filling material could possibly be uraninite or pitchblend. As yet, no sample has been sent for mineral identification.

4. Physical Description (continued):

Thirty-five feet southwest of the above prospect hole and across a small spring, the same vein has been exposed by removing about 2 feet of overburden. Here the vein likewise is about 3-1/2 feet across, and has count similar to the above prospect hole. No chemical assays have been obtained from the latest vein exposure.

In removing the overburden from this exposure, a highly radioactive, 50-pound granitic-type rock was encountered. Pieces of this granitic-type rock assay radiometrically from 0.5% to 1.0% e U_3O_8. The above rock was found loose, so may or may not have been in place. At this exposure the uranium-bearing vein is approximately 10 to 15 feet from an old prospectors drift, which has long been completely closed by caving. It is possible that the above 50-pound uranium-bearing sample came out of the old prospectors drift, or is float from a higher outcrop which has mixed with the loose overburden material. Snow conditions that developed shortly after the above exposure was made, prevented the work necessary to solve the above problem.

Approximately 200 feet down slope from Prospect Hole No. 1 is Lookout Prospect Hole No. 2. Here there is a very high surface radiometric anomaly. A prospect hole dug about 2-1/2 feet laterally into slope surface has revealed another vein, the true attitude of which is not determinable at present because of lack of outcrop exposure. A sample from this prospect hole has a chemical assay of 0.72% U_3O_8.

Approximately 150 feet down slope from Prospect Hole No. 2 is another prospect hole, designated No. 3. Here there is also a very high surface anomaly on which the prospect hole was dug. The prospect hole, about 1-1/2 feet deep, has revealed a vein, the true attitude of which cannot be determined for lack of outcrop exposure. No sample from this prospect hole has been assayed.

The shear zone continues to the northeast from the Lookout Claims to the adjoining claims owned by Uncompahgre Exploration Company. In exploration work consisting of shallow prospect holes along the shear zone, large pieces (6 inches by 8 inches) of uranium-bearing rock which radiometrically assay from 1% to 15% e U_3O_8 have been encountered. The appearance of this uranium-bearing rock and the relation of the mineralization to shearing suggests hydrothermal vein filling in which primary uranium mineralization occurs in veins, systems of veinlets and as disseminated grains in the rock near veins.

In conjunction with this report, no exploration program is planned for the Hidy and Sparky Claim groups. From very limited surface examination, the Hidy and Sparky Claims appear to have similar geology to that of the Lookout group.

4. Physical Description (continued):

(d) Present access roads are adequate for any exploration or small scale mining that might be undertaken on the Lookout Claims.

At present, the Lookout Claims are more than 100 miles from any mill or buying station. However, a mill or buying station is tentatively planned for Gunnison, Colorado, located 42 miles away.

The Lookout Claims are about equidistant between Gunnison, Colorado (population 3,000) and Salida, Colorado (population 5,000). Gunnison is located 42 miles west of the property on U. S. Highway 50, and Salida is located 43 miles east of the property on U. S. Highway 50.

(e) Equipment, manpower, materials, and supplies related to caving are available within the area. The most likely source for the above is Montrose, Colorado, located 103 miles west on U. S. Highway 50, or the Salida, Colorado area, located 43 miles east on U. S. Highway 50.

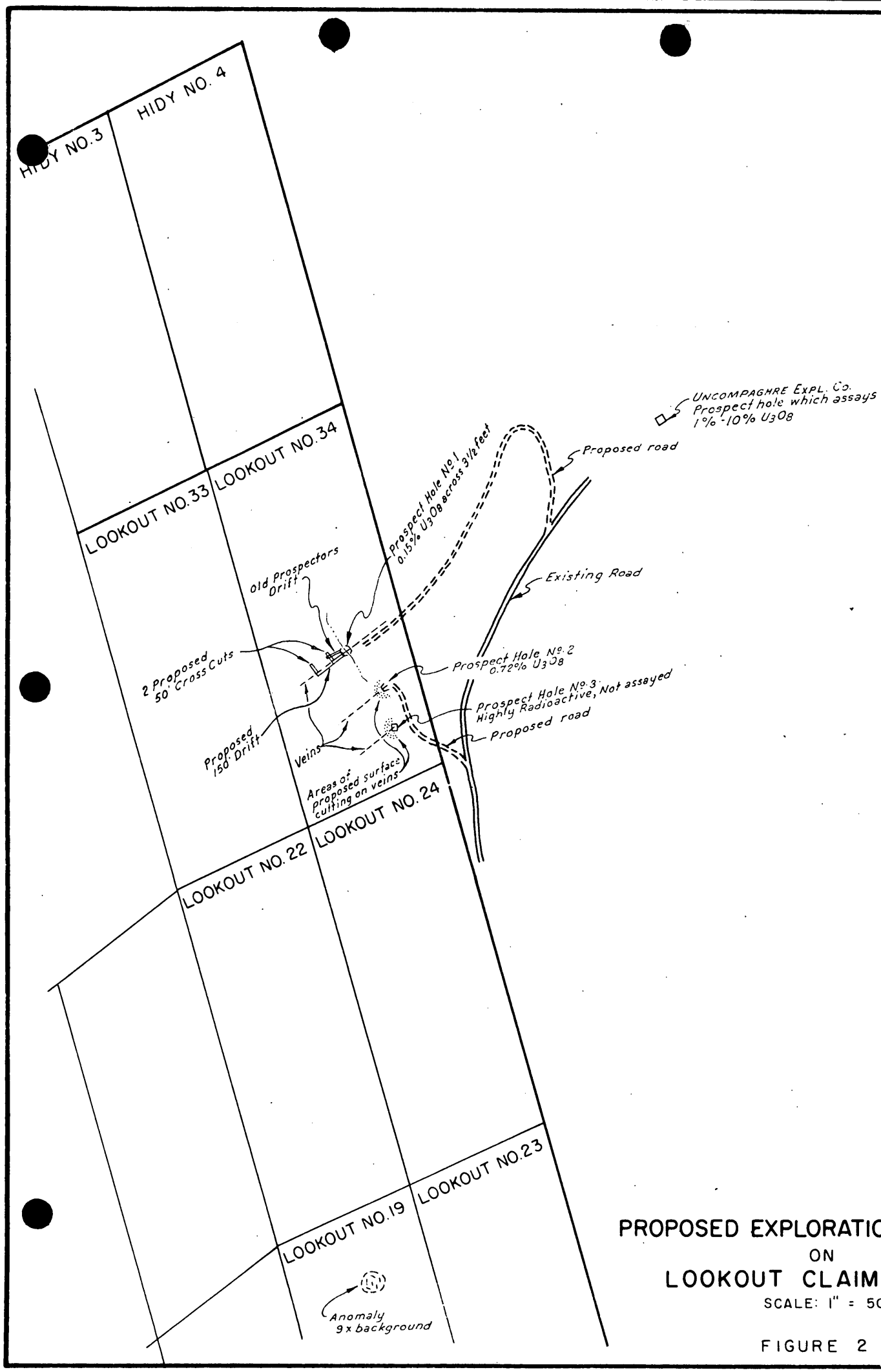
Equipment, necessary manpower, materials, and supplies for a mining operation are available in Salida or Gunnison, Colorado. The nearest high power line is 10 miles away.

Water is available from Merry and Marshall Creeks, which flow by and through the properties. Also, there are springs that originate on the properties.

5. The Exploration Project:

(b) On the Lookout Claims it is planned to drive an exploratory drift on one vein and explore two other veins by surface work, consisting of drilling, shooting, and mucking the face of the veins.

On Lookout Claim No. 34 (see Figure 2), it is planned to drive a 150-foot exploratory drift along a vein and make two 50-foot cross cuts. A chemical assay from Prospect Hole No. 1, 3.5 foot across the vein assayed 0.15% U_3O_8. The vein strikes approximately S 60° W and dips to northwest, the degree of which has not been determined. It will be necessary to do some shooting and mucking with a bulldozer before the dip of the veins can be determined. The vein appears, from limited exposures, to be related to a shear with a dip near to vertical. About 15 feet north of vein exposure, there is an entrance to an old prospector's drift, which has long been closed by caving. From the apparent caving pattern of this old drift, it appears that it diverges away from the strike of the uranium vein at an angle of 5 degrees. The old prospector's drift possibly has 75 feet of workings when the caving pattern and volume of dump material is considered.



PROPOSED EXPLORATION PROGRAM
ON
LOOKOUT CLAIM NO. 34
SCALE: 1" = 500'

FIGURE 2

5. The Exploration Project:

See Figure 2 for diagram of Vein, Old prospector's drift, and the proposed drift and cross cuts.

Approximately 1,500 feet of additional road will be necessary for mining equipment to have access to the exploratory drift. This access road to the drift will start from the present mine road, which was completed in November of 1955. From point of take-off, the proposed access road rises approximately 200 feet of elevation. Some blasting may be necessary to give the road enough width to be of service.

Also on Lookout Claim No. 34, it is planned to open two other veins to evaluate the existing uranium potential. This work is to be done where there are now two shallow prospect holes. On Figure 2, these prospect holes are designated No. 2 and No. 3. Prospect Hole No. 2 has a chemical assay of 0.72% U_3O_8. This assay is from samples picked from the bottom of the hole and is not representative of any given width. Prospect Hole No. 3 has very high count but not as high as Prospect Hole No. 2. No samples from Prospect Hole No. 3 have been assayed. Drilling, shooting and mucking the waste rock with a small cut is the method proposed to open up the veins on Prospect Holes No. 2 and No. 3.

Approximately 400 feet of access road will have to be built to make drilling equipment accessible to Prospect Holes No. 2 and No. 3.

(c) The most efficient exploration season for this area, elevation 9,500 to 10,500 feet, is from May 15th through November. Exploration projects in this area should be started soon enough to be completed in November for the most efficient cost ratios, unless there are underground operations.

(d) The applicant, Monarch Exploration Company, has been organized eighteen months. The company was organized to explore for and develop uranium and other mineral properties. The management is well versed on exploration techniques, having had extensive experience related to petroleum, sulphur and mineral exploration.

This operation would be under the supervision of Fred V. Howells, who has a B. A. Degree in Geology from the University of Colorado, 1940, and who has completed 21 hours of graduate work in Geology and Geophysics at the Universtion of Houston, Houston, Texas. While attending the University of Colorado, Mr. Howells was associated with Frank Ellis Brown, Colorado Springs, Colorado, an eminent mining and hard rock geologist, from whom he gained extensive experience related to uranium, rare earths and mining geology.

6. Estimate of Cost:

(a) Independent Contractors:

Cost of moving D-7 cat from Gunnison to unloading point at Sargents, Colorado. Distance of 32 miles at $1.00 per mile	$ 32.00
Estimate 6 hours to walk cat to Lookout Claim No. 34 at $12.00 per hour	72.00
Estimate 48 hours D-7 cat work to 1500 feet of access road to site of exploratory drift. Above time includes waiting time for drilling and blasting if such is necessary. 48 hours at $12.00 per hour	576.00
A separate contract is to be let for the 150-foot exploratory drift and the two 50-foot cross cuts. One bid for this contract from Walter Burleson, mining engineer, Salida, Colorado, is here included. His bid is an average cost of $34.67 per foot for the 150-foot drift. His bid was for 150 feet of drift only, but it is assumed that the additional two 50-foot cross cuts would have the same average cost per foot. Prices on the included estimate are based upon going prices existing during the Fall of 1955. From the included estimate of $34.67 per foot, and allowing 10% for price increases from the Fall of 1955 until the time work is started in the Summer of 1956, the average cost per foot will be $38.13. One 150-foot drift and two 50-foot cross cuts for a total of 250 feet at $38.13 per foot	9,532.50
Estimate for opening up veins on Prospect Holes No. 2 and No. 3. Estimate 8 hours D-7 cat work to build 400 feet of access road to Prospect Holes No. 2 and No. 3 on Lookout Claim No. 34, at $12.00 per hour	96.00
Estimate 6 days of drilling, shooting, and mucking in opening up vein on Prospect Hole No. 2, and same for Prospect Hole No. 3. Two men - 8-hour days for 12 days at $2.50 per hour	480.00
Estimate 600 pounds of powder at $25.00 per 100 pounds	150.00
600 ft. fuse at $2.50 per 100 feet	15.00
100 caps	4.00
Estimate rental on monthly basis for compressor, jack hammer and leg, and 100 foot air hose	425.00
Bits: 400 at 25¢ each	100.00

6. Estimate of Cost (continued):

(b) Labor, Supervision, Consultants:

Labor supplied under above estimates.

Supervision - Company man - salary of $600.00 per month. Project to take two months to complete	$1,200.00
Consultants - Estimate 6 days consulting fees on proposed work on Lookout Claim No. 34 at $100.00 per day, plus expenses of $25.00 per day, which will include mileage	
Six days consulting fees at $100.00 per day	600.00
Six days expenses at $25.00 per day	150.00

(c) Operating materials and supplies - None.

(d) Operating equipment - Jeep or pickup truck at $5.00 per day plus $4.00 per day for gas and oil, for 60 work days	540.00

(e) Rehabilitation and repairs - None.

(f) New buildings, improvements, installations:

Combination tool and change house	1,200.00
Powder house	100.00

(g) Miscellaneous:

Accounting costs for project	500.00

(h) Contingencies:

Chemical analysis - 50 samples at $5.00 per sample	250.00
Ten Spectrographic analysis at $10.00 each	100.00

6. Estimate of Cost (continued):

SUMMARY OF COSTS

(a)	$ 32.00
	72.00
	576.00
	9,532.50
	96.00
	480.00
	150.00
	15.00
	4.00
	425.00
	100.00
(b)	1,200.00
	600.00
	150.00
(d)	540.00
(f)	1,200.00
	100.00
(g)	500.00
(h)	250.00
	100.00
Total	$16,122.50

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd.
APR 10 1956

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

RECEIVED
APR 13 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-4254
Metal or Mineral Uranium
Date Received 4-13-56
Estimated Cost $34,994.00
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: Monarch Exploration Company,
511 SanJacinto Building
Houston 2, Texas See supplement.

(*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 Ranger Claims 1-34 and 37-50, and Lookout Claims 25-29. See supplement.

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

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

(*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.

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

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

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

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

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

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

(*c*) The work will start within 60 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:

(*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)? Yes.

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

[X] Money [ ] Use of equipment owned by you [ ] 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 April 10, 1956

MONARCH EXPLORATION COMPANY
(Applicant)

By F. W. Howells

F. W. Howells

Vice President

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

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

RECEIVED
APR 1 3 1966

DEFENSE MINERALS

EXPLORATION ADMINISTRATION

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

Ranger Claims 1 - 34 and 37 - 50

Lookout Claims 25 - 29

Located in Saguache County, Colorado

SUPPLEMENT

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

- -

RECEIVED
APR 1 3 1955

SUPPLEMENT

1. Name of Applicant:

(b) Monarch Exploration Company - a corporation incorporated in the State of Texas, authorized to do business in the State of Colorado.

(c) Company:

President	Patrick W. Brady 511 San Jacinto Building Houston, Texas
Vice-President	Fred W. Howells 511 San Jacinto Building Houston, Texas
Vice-President and Secretary-Treasurer	Jack Trotter 904 Citizens State Bank Bldg. Houston, Texas
Assistant Secretary-Treasurer	Ellis F. Morris 904 Citizens State Bank Bldg. Houston, Texas

3. Applicant's Property Rights:

(a) Unpatented Mining Claims:

Ranger Claims 1 - 34 and 37 - 50, Saguache County, Colorado; Sections 27, 28, 29, 32 and 33, T-48N R-6E; N.M.P.M.

Lookout Claims 25 - 29, Saguache County, Colorado; Sections 21, 22, 27 and 28; T-48N R-6E; N.M.P.M.

(b) The properties listed in 3(a) above are all unpatented mining claims, and to date are not associated with any mine or mines.

(c) Ranger Claims 1 - 34: Monarch Exploration Company - Owner
Ranger Claims 37 - 50: Monarch Exploration Company - Owner
Lookout Claims 25 - 29: Monarch Exploration Company - Owner

3. Applicant's Property Rights (continued):

(d) There are no liens or encumbrances on the following unpatented claims which are owned by Monarch Exploration Company:

Ranger Claims 1 - 34
Ranger Claims 37 - 50
Lookout Claims 25 - 29

(f)

Monarch Exploration Company
Ranger Claims 1-34 & 37-50, Saguache County, Colorado

Name of Claim	Date Recorded	Book	Page
Ranger #1	July 18, 1955	262	431
Ranger #2	July 18, 1955	262	433
Ranger #3	July 18, 1955	262	435
Ranger #4	July 18, 1955	262	437
Ranger #5	July 18, 1955	262	439
Ranger #6	July 18, 1955	262	441
Ranger #7	July 18, 1955	262	443
Ranger #8	July 18, 1955	262	445
Ranger #9	July 18, 1955	262	447
Ranger #10	July 18, 1955	262	449
Ranger #11	July 18, 1955	262	451
Ranger #12	July 18, 1955	262	453
Ranger #13	July 18, 1955	262	455
Ranger #14	July 18, 1955	262	457
Ranger #15	July 18, 1955	262	459
Ranger #16	July 18, 1955	262	461
Ranger #17	July 18, 1955	262	463
Ranger #18	July 18, 1955	262	465
Ranger #19	July 18, 1955	262	467
Ranger #20	July 18, 1955	262	469
Ranger #21	July 18, 1955	262	471
Ranger #22	July 18, 1955	262	473
Ranger #23	July 18, 1955	262	475
Ranger #24	July 18, 1955	262	477
Ranger #25	July 18, 1955	262	479
Ranger #26	July 18, 1955	263	1
Ranger #27	July 18, 1955	263	3
Ranger #28	July 18, 1955	263	5
Ranger #29	July 18, 1955	263	7
Ranger #30	July 18, 1955	263	9
Ranger #31	July 18, 1955	263	11
Ranger #32	July 18, 1955	263	13
Ranger #33	July 18, 1955	263	15
Ranger #34	July 18, 1955	263	17
Ranger #37	July 18, 1955	263	19
Ranger #38	July 18, 1955	263	21
Ranger #39	July 18, 1955	263	23
Ranger #40	July 18, 1955	263	25
Ranger #41	July 18, 1955	263	27

3. Applicant's Property Rights (continued):

Name of Claim	Date Recorded	Book	Page
Ranger #42	July 18, 1955	263	29
Ranger #43	July 18, 1955	263	33
Ranger #44	July 18, 1955	263	33
Ranger #45	July 18, 1955	263	35
Ranger #46	July 18, 1955	263	37
Ranger #47	July 18, 1955	263	39
Ranger #48	July 18, 1955	263	41
Ranger #49	July 18, 1955	263	43
Ranger #50	July 18, 1955	263	45

Locator: Monarch Exploration Company.

Monarch Exploration Company
Lookout Claims 25-34, Saguache County, Colorado

Lookout #25	July 26, 1955	263	390
Lookout #26	July 26, 1955	263	392
Lookout #27	July 26, 1955	263	394
Lookout #28	July 26, 1955	263	396
Lookout #29	July 26, 1955	263	398

Locator: Monarch Exploration Company.

4. Physical Description:

(a) The Ranger Claims numbered 1-34 and 37-50, and the Lookout Claims numbered 25-29, are located on the north and west side of Marshall Creek drainage in Saguache County, Colorado. The Ranger Claims are a continuous block lying north of Marshall Creek, beginning at a point below the old railroad siding of Chesterville, and continuing easterly upstream to Mill Switch Creek. The Lookout Claims numbered 25-29 tie on to the north line of the Ranger group. See Plate I.

To reach the property (see Figure 1), one may travel west 32 miles from Salida, Colorado, on U. S. Highway 50 to Sargents, Colorado, and turn left up the old County road. Proceed 5 miles up the old County road to the old railroad siding of Buxton, at which point the road crosses over Marshall Creek on the old railroad bed. Chesterville is approximately 4 miles up the old railroad bed from Buxton, at which point the Ranger Claims begin. The old railroad bed has been traveled extensively by car since the removal of the railroad tracks during the summer of 1955; however, jeeps or trucks are more adaptable to the old railroad bed.

To date, no mining operation has been conducted upon any of Monarch Exploration Company's claims in the Marshall Creek area. As far as known, there are no mines of any type in this immediate area. Exploration has consisted of initial

4. Physical Description (continued):

prospecting, location of surface radiometric anomalies, and examination of surface geology. A prospect hole on Ranger Claim No. 5, sampled for copper, assayed 0.25% copper. Other radiometric anomalies located on the Ranger Claims have not been sampled to date.

After leaving U. S. Highway 90 at Sargents, Colorado, the access road to the Ranger and Lookout Claims is fair to good for the average vehicle. The last 2 miles of access road from Chesterville on through the Ranger Claims to the Lookout Claims is a new road, excellent for mine purposes, having been built in November, 1955.

The average elevation of these claims is from 9300 to 10,500 feet.

(b) To date, there has been no production from these properties, and there are no ore reserves blocked out.

(c) The most striking geologic feature on the Ranger Claims is the major fault trending north-south, which cuts the eastern end of the claims. There is approximately 4800 feet of this major fault trace on the Ranger and Lookout Claims. See General Geologic Map, Plate No. I. The fault zone brings the Paleozoic sediments to the west in contact with the Pre-Cambrian rocks to the east. The magnitude of fault throw is not known, but could be in excess of 1000 feet. Immediately to the south and east lie Tertiary volcanics. There is evidence of faulting on the southwest part of the Ranger Claims, but there have not been enough studies to date for details.

On Ranger Claim No. 11 is an outcrop of brown conglomerate on which exists a radiometric anomaly of nine times background. See Claim Plat and Assay Map, Plate No. I. This anomaly is approximately 2,000 feet west of the major north-south fault that cuts the east end of the Ranger Claims. The age or name of this brown conglomerate has not been determined. If the attitude of the Ordovician sediments on Indian Creek is continuous to the Ranger Claims on Marshall Creek, then the conglomerate is Post-Harding sandstone in age, and is possibly a member of the Chaffee formation. Assuming the brown conglomerate is of Post-Harding deposition, then the Harding sandstone, if deposited and not eroded away, should underlie most of the Ranger Claims

The anomaly on Ranger No. 11 is significant as it may be related to a cross fault coming off the major north-south fault to the east. To date, no core drilling or digging on this radioactive anomaly has been undertaken.

The above-mentioned major trending north-south fault strikes across Ranger Claim No. 7. The fault zone on the south and of Ranger Claim No. 7 has a radiometric anomaly of two times

4. Physical Description (continued):

background on the surface. This anomaly became known after road building work had removed 4 feet of loose overburden from the fault zone. This anomaly, though low, is significant when analyzed with the uranium discovery of Calahan Zinc located on the same fault system approximately 1-1/2 miles to the north. This discovery of Calahan Zinc's is located on one of their Erie Claims, and is shown on the General Geologic Map, Plate No. II. Prior to this discovery, radiometric surveying along the obscured fault zone had turned up radioactivity of approximately two times background. Bulldozer work, consisting of long cuts across the fault zone, was undertaken to better pin down the fault zone which, in places, may be as much as 100 feet or more wide. In one of the open cuts, after removing 10 to 12 feet of unconsolidated overburden, uranium mineralization with a chemical assay of better than 1% U_3O_8 was encountered. This uranium mineralization is uranophane in the fault zone located within a few feet of the granite contact.

Prior to the Calahan Zinc's discovery of uranium in the fault zone, they had found several pieces of high-grade uranium as float at a considerable distance down slope from the fault zone. This high-grade float consists of black silicious rocks with some possible fault breccia silicified to it. The largest piece found was approximately four inches by six inches, and assayed chemically 14.0% + U_3O_8. This float, from visible examination, is associated with faulting in which uranium-bearing, silicaous, fault-filling material has been deposited. If it is found that the source is the major fault that strikes across the Ranger and Lookout Claims, or an adjustment fault to the major fault, then this would be a highly significant discovery and be directly related to the Monarch Exploration Company claims in this area. This would be particularly true since anomalies are known to exist on both sides of this major fault on the Ranger and Lookout Claims.

Two other radiometric anomalies are known to exist on the Ranger Claims. See Claim Plat and Assay Map, Plate I. One, of five times background, is located on Ranger Claim No. 23. The other, of eight times background, is located on Ranger Claim No. 1. The latter anomaly lies approximately 1200 feet east of the major fault, and is on the south end of the claim. This anomaly is in granitic-type rocks, and appears to be associated with fracturing or shear faulting in the Pre-Cambrian rock. To date, no core drilling or digging has been undertaken on this anomaly. Other radiometric anomalies have been encountered on the Ranger Claims, but there has not been enough information obtained for details.

(d) Present access roads are adequate for any exploration or small scale mining that might be undertaken on the Ranger or Lookout Claims.

4. Physical description (continued):

At present the Ranger and Lookout Claims are more than 100 miles from any mill or buying station. However, a mill or buying station is tentatively planned for Gunnison, Colorado, located 42 miles away.

The Ranger and Lookout Claims are about equidistant between Gunnison, Colorado - population 3,000 - and Salida, Colorado - population 5,000. Gunnison is located 42 miles west of the property on U. S. Highway 50, and Salida is located 43 miles east of the property on U. S. Highway 50.

(e) Equipment, manpower, materials, and supplies related to coring are available within the area. The most likely source for the above is Montrose, Colorado, located 108 miles west on U. S. Highway 50, or the Salida, Colorado area, located 43 miles east on U. S. Highway 50.

Equipment, necessary manpower, materials and supplies for a mining operation are available in Salida or Gunnison, Colorado.

Water is available from Harry and Marshall Creeks, which flow by and through the properties. Also, there are springs that originate on the properties.

5. The Exploration Project:

The proposed work will consist of exploratory surface cutting with bulldozer and core drilling on the Ranger Claims Nos. 4, 5, 7, 8 and 11, and Lookout Claim No. 28. The bulldozer work on the Ranger Claims will be done on the radiometric anomaly located on the south end of Ranger Claim No. 11 and on the major north-south fault that strikes across the eastern part of the claim block. See Figure 2.

On Ranger No. 11, the radiometric anomaly is on an outcrop of brown conglomerate which is possibly a member of the Chaffee formation.

The attitude of the brown conglomerate cannot be definitely established from the present outcrop. Two bulldozer open cuts, located approximately 100 feet and 250 feet north of the outcrop, should be sufficient to determine structure relationships. Two 200-foot core holes are proposed to test this anomaly. The location of the core holes and angle will be determined after structural interpretations of the open cuts.

On the major north-south fault that strikes across Ranger Claims Numbers 4, 5, 6, and 7, see Figure 2, thirteen bulldozer open cuts are planned. These thirteen open cuts would be on centers of approximately 400 feet, starting where the access road zone goes over the fault, and the cuts would be

5. The Exploration Project:

across the fault zone. The fault trace relative to the ground surface should be obtained from studies of the thirteen open cuts. Eight 200-foot core holes are to be drilled, the locations of which will be based relative to the surface trace of the fault. The eight 200-foot core holes are to be located so as to penetrate the fault zone and intersect the fault contact on the granite side at a depth of approximately 150 feet.

(c) The most efficient exploration season for this area, elevation 9,500 to 10,500 feet, is from May 15th through November. Exploration projects in this area should be started soon enough to be completed in November for the most efficient cost ratios, unless they are underground operations.

(d) The applicant, Monarch Exploration Company, has been organized eighteen months. The company was organized to explore for and develop uranium and other mineral properties. The management is well versed on exploration techniques, having had extensive experience relating to petroleum, sulphur, and mineral exploration.

This operation would be under the supervision of Fred W. Howells, who has a B. A. degree in Geology from the University of Colorado, 1949, and who has completed 21hours of graduate work in Geology at the University of Houston, Houston, Texas. While attending the University of Colorado, Mr. Howells was associated with Frank Ellis Brown, Colorado Springs, Colorado, an eminent mining and hard rock geologist, from whom he gained extensive experience related to uranium, rare earths and mining geology.

6. Estimate of Cost:

(a) Independent Contractors:

Cost of moving D-7 cat from Gunnison to unloading point at Sargents, Colorado. Distance of 32 miles @$1.00 per mile

$32.00

Estimate 6 hours to walk cat to Ranger Claim No. 11 at $12.00 per hour $72.00
Estimate 48 hours D-7 cat work to bulldoze two open cuts on radiometric anomaly located on Ranger Claim No. 11 at $12.00 per hour $576.00
Estimate 6 hours D-7 cat work preparing two angle core hole drill sites on radiometric anomaly on Ranger Claim No. 11 at $12.00 per hour $72.00

Estimate, based upon experience of other similar coring projects of this type in this general area, that coring from angle hole can be contracted to depths of 200 for

6. Estimate of Cost (continued):

$12.00 per foot, for which the contractor furnishes all equipment. Two 200-foot core holes located on Ranger Claim No. 11 for a total of 400 feet of coring at $12.00 per foot $4,800.00

Estimate 312 hours D-7 cat work to bulldoze thirteen open cuts across major fault zone on Ranger Claims Nos. 4, 5, 6, and 7, and Lookout Claims No. 28, at $12.00 per hour $3,744.00

Estimate 24 hours D-7 Cat work preparing drill site location for the eight angle core hole drill sites located on Ranger Claims 4, 5, 6 and 7, and Lookout Claim No. 28, at $12.00 per hour $ 288.00

Estimate, based upon experience of other similar coring projects in this general area, that coring from angle hole to depths of 200 feet can be contracted for $12.00 per foot, for which the contractor furnishes all equipment. Eight 200-foot core holes for a total of 1600 feet at $12.00 per foot $19,200.00

(b) Labor, Supervision, Consultants:

Labor supplies under above estimates.

Supervision - Company - Salary $600.00 per month. Project to take three months to complete $ 1,800.00

Consultants - Estimate 20 days consulting fees on the ten core holes on Ranger Claims Nos. 4, 5, 6, 7 and 11, and Lookout Claim No. 28, at $100.00 per day plus expenses of $25.00 per day which will include mileage:

20 days consulting fees @ $100 per day $ 2,000.00

20 days expenses @ $25 per day $ 500.00

(c) Operating materials and supplies - None.

(d) Operating equipment - Jeep or pickup truck at $5.00 per day plus $4.00 per day for gas and oil for 90 work days $ 810.00

(e) Rehabilitation and repairs - None.

(f) New buildings, improvements, installations - None.

(g) Miscellaneous:

Accounting costs of project $ 500.00

6. Estimate of Cost (continued):

(h) Contingencies:

Chemical analysis, 100 samples at $5.00 per sample	$500.00
Ten Spectrographic analyses at $10.00 each	$100.00

Summary of Costs

(a)		$ 32.00
		72.00
		576.00
		72.00
		4,800.00
		3,744.00
		288.00
		19,200.00
(b)		1,800.00
		2,000.00
		500.00
(d)		810.00
(g)		500.00
(h)		500.00
		100.00
	Total	$34,994.00

4-16

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd.
APR 10 1956
BUREAU OF MINES
Denver, Colorado

Form Approved.
Bureau No. 43-R1035.2.

RECEIVED
APR 13 1956

Not to be filled in by applicant

Docket No. DMEA-4254
Metal or Mineral Uranium
Date Received 4-13-56
Estimated Cost $34,994.00
Participation (Government %)

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

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: Monarch Exploration Company,
511 Sandjacinto Building
Houston 2, Texas See supplement.

(*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.

25-29

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 Ranger Claims 1-34 and 37-59, and Lookout Claims 25-29. See supplement.

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

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

(*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.

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

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

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

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

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

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

(*c*) The work will start within 60 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:

(*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)? Yes.

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

☒ Money ☐ Use of equipment owned by you ☐ 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 April 10, 1956

MONARCH EXPLORATION COMPANY
(Applicant)

By F. W. Howells

F. W. Howells

Vice President

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

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

RECEIVED
APR 1 0 1975

DEFENSE MINERALS

EXPLORATION ADMINISTRATION

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

Ranger Claims 1 - 34 and 37 - 50

Lookout Claims 25 - 29

Located in Saguache County, Colorado

SUPPLEMENT

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
APR 13 1953

SUPPLEMENT

1. Name of Applicant:

(b) Monarch Exploration Company - a corporation incorporated in the State of Texas, authorized to do business in the State of Colorado.

(c) Company:

President	Patrick W. Brady 511 San Jacinto Building Houston, Texas
Vice-President	Fred W. Howells 511 San Jacinto Building Houston, Texas
Vice-President and Secretary-Treasurer	Jack Trotter 904 Citizens State Bank Bldg. Houston, Texas
Assistant Secretary-Treasurer	Ellis F. Morris 904 Citizens State Bank Bldg. Houston, Texas

3. Applicant's Property Rights:

(a) Unpatented Mining Claims:

Ranger Claims 1 - 34 and 37 - 50, Saguache County, Colorado; Sections 27, 28, 29, 32 and 33, T-48N R-6E; N.M.P.M.

Lookout Claims 25 - 29, Saguache County, Colorado; Sections 21, 22, 27 and 28; T-48N R-6E; N.M.P.M.

(b) The properties listed in 3(a) above are all unpatented mining claims, and to date are not associated with any mine or mines.

(c) Ranger Claims 1 - 34: Monarch Exploration Company - Owner
Ranger Claims 37 - 50: Monarch Exploration Company - Owner
Lookout Claims 25 - 29: Monarch Exploration Company - Owner

3. Applicant's Property Rights (continued):

(d) There are no liens or encumbrances on the following unpatented claims which are owned by Monarch Exploration Company:

Ranger Claims 1 - 34
Ranger Claims 37 - 50
Lookout Claims 25 - 29

(f)

Monarch Exploration Company
Ranger Claims 1-34 & 37-50, Saguache County, Colorado

Name of Claim	Date Recorded	Book	Page
Ranger #1	July 18, 1955	262	431
Ranger #2	July 18, 1955	262	433
Ranger #3	July 18, 1955	262	435
Ranger #4	July 18, 1955	262	437
Ranger #5	July 18, 1955	262	439
Ranger #6	July 18, 1955	262	441
Ranger #7	July 18, 1955	262	443
Ranger #8	July 18, 1955	262	445
Ranger #9	July 18, 1955	262	447
Ranger #10	July 18, 1955	262	449
Ranger #11	July 18, 1955	262	451
Ranger #12	July 18, 1955	262	453
Ranger #13	July 18, 1955	262	455
Ranger #14	July 18, 1955	262	457
Ranger #15	July 18, 1955	262	459
Ranger #16	July 18, 1955	262	461
Ranger #17	July 18, 1955	262	463
Ranger #18	July 18, 1955	262	465
Ranger #19	July 18, 1955	262	467
Ranger #20	July 18, 1955	262	469
Ranger #21	July 18, 1955	262	471
Ranger #22	July 18, 1955	262	473
Ranger #23	July 18, 1955	262	475
Ranger #24	July 18, 1955	262	477
Ranger #25	July 18, 1955	262	479
Ranger #26	July 18, 1955	263	1
Ranger #27	July 18, 1955	263	3
Ranger #28	July 18, 1955	263	5
Ranger #29	July 18, 1955	263	7
Ranger #30	July 18, 1955	263	9
Ranger #31	July 18, 1955	263	11
Ranger #32	July 18, 1955	263	13
Ranger #33	July 18, 1955	263	15
Ranger #34	July 18, 1955	263	17
Ranger #37	July 18, 1955	263	19
Ranger #38	July 18, 1955	263	21
Ranger #39	July 18, 1955	263	23
Ranger #40	July 18, 1955	263	25
Ranger #41	July 18, 1955	263	27

3. Applicant's Property Rights (continued):

Name of Claim	Date Recorded	Book	Page
Ranger #42	July 18, 1955	263	29
Ranger #43	July 18, 1955	263	33
Ranger #44	July 18, 1955	263	33
Ranger #45	July 18, 1955	263	35
Ranger #46	July 18, 1955	263	37
Ranger #47	July 18, 1955	263	39
Ranger #48	July 18, 1955	263	41
Ranger #49	July 18, 1955	263	43
Ranger #50	July 18, 1955	263	45

Locator: Monarch Exploration Company.

Monarch Exploration Company
Lookout Claims 25-34, Saguache County, Colorado

Lookout #25	July 26, 1955	263	390
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Locator: Monarch Exploration Company.

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(a) The Ranger Claims numbered 1-34 and 37-50, and the Lookout Claims numbered 25-29, are located on the north and west side of Marshall Creek drainage in Saguache County, Colorado. The Ranger Claims are a continuous block lying north of Marshall Creek, beginning at a point below the old railroad siding of Chesterville, and continuing easterly upstream to Mill Switch Creek. The Lookout Claims numbered 25-29 tie on to the north line of the Ranger group. See Plate I.

To reach the property (see Figure 1), one may travel west 32 miles from Salida, Colorado, on U. S. Highway 50 to Sargents, Colorado, and turn left up the old County road. Proceed 5 miles up the old County road to the old railroad siding of Buxton, at which point the road crosses over Marshall Creek on the old railroad bed. Chesterville is approximately 4 miles up the old railroad bed from Buxton, at which point the Ranger Claims begin. The old railroad bed has been traveled extensively by car since the removal of the railroad tracks during the summer of 1955; however, jeeps or trucks are more adaptable to the old railroad bed.

To date, no mining operation has been conducted upon any of Monarch Exploration Company's claims in the Marshall Creek area. As far as known, there are no mines of any type in this immediate area. Exploration has consisted of initial

4. Physical Description (continued):

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The average elevation of these claims is from 9300 to 10,500 feet.

(b) To date, there has been no production from these properties, and there are no ore reserves blocked out.

(c) The most striking geologic feature on the Ranger Claims is the major fault trending north-south, which cuts the eastern end of the claims. There is approximately 4800 feet of this major fault trace on the Ranger and Lookout Claims. See General Geologic Map, Plate No. I. The fault zone brings the Paleozoic sediments to the west in contact with the Pre-Cambrian rocks to the east. The magnitude of fault throw is not known, but could be in excess of 1000 feet. Immediately to the south and east lie Tertiary volcanics. There is evidence of faulting on the southwest part of the Ranger Claims, but there have not been enough studies to date for details.

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The above-mentioned major trending north-south fault strikes across Ranger Claim No. 7. The fault zone on the south and of Ranger Claim No. 7 has a radiometric anomaly of two times

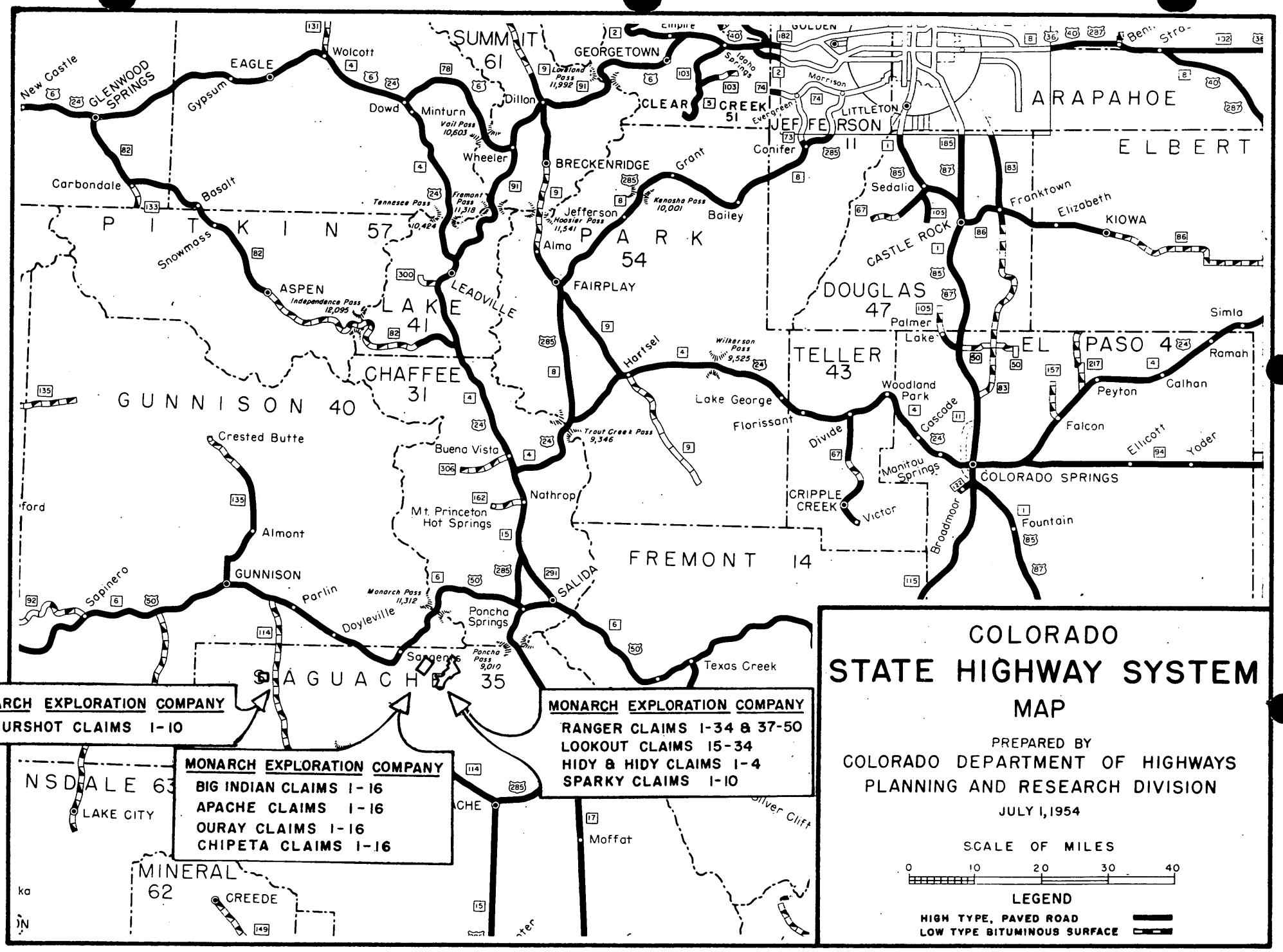

COLORADO
STATE HIGHWAY SYSTEM
MAP
PREPARED BY
COLORADO DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH DIVISION
JULY 1, 1954
SCALE OF MILES
0 10 20 30 40
LEGEND
HIGH TYPE, PAVED ROAD
LOW TYPE BITUMINOUS SURFACE
MONARCH EXPLORATION COMPANY
SHURSHOT CLAIMS 1-10
MONARCH EXPLORATION COMPANY
BIG INDIAN CLAIMS 1-16
APACHE CLAIMS 1-16
OURAY CLAIMS 1-16
CHIPETA CLAIMS 1-16
MONARCH EXPLORATION COMPANY
RANGER CLAIMS 1-34 & 37-50
LOOKOUT CLAIMS 15-34
HIDY & HIDY CLAIMS 1-4
SPARKY CLAIMS 1-10
SUMMIT 61
GEORGETOWN
CLEAR CREEK 51
JEFFERSON 11
ARAPAHOE
ELBERT
PITKIN 57
PARK 54
LAKE 41
CHAFFEE 31
GUNNISON 40
DOUGLAS 47
TELLER 43
EL PASO 4
FREMONT 14
SAGUACHE 35
MINERAL 62
GLENWOOD SPRINGS
EAGLE
Wolcott
Gypsum
Dowd
Minturn
Dillon
Wheeler
BRECKENRIDGE
Jefferson
Alma
FAIRPLAY
Bailey
Conifer
Sedalia
CASTLE ROCK
Franktown
Elizabeth
KIOWA
Simla
Ramah
Calhan
Peyton
Falcon
Ellicott
Yoder
COLORADO SPRINGS
Fountain
Manitou Springs
Broadmoor
Woodland Park
Palmer Lake
Cascade
Divide
CRIPPLE CREEK
Victor
Florissant
Lake George
Hartsel
Buena Vista
Nathrop
Mt. Princeton Hot Springs
Poncha Springs
Sargents
SALIDA
Texas Creek
Moffat
Silver Cliff
Almont
GUNNISON
Crested Butte
Parlin
Doyleville
Sapinero
ASPEN
LEADVILLE
Snowmass
Basalt
Carbondale
New Castle
LAKE CITY
CREEDE
Vail Pass 10,603
Tennessee Pass 10,424
Fremont Pass 11,318
Hoosier Pass 11,541
Loveland Pass 11,992
Kenosha Pass 10,001
Wilkerson Pass 9,525
Trout Creek Pass 9,346
Independence Pass 12,095
Monarch Pass 11,312
Poncha Pass 9,010

FIGURE 1

4. Physical Description (continued):

background on the surface. This anomaly became known after road building work had removed 4 feet of loose overburden from the fault zone. This anomaly, though low, is significant when analyzed with the uranium discovery of Calahan Zinc located on the same fault system approximately 1-1/2 miles to the north. This discovery of Calahan Zinc's is located on one of their Erie Claims, and is shown on the General Geologic Map, Plate No. II. Prior to this discovery, radiometric surveying along the obscured fault zone had turned up radioactivity of approximately two times background. Bulldozer work, consisting of long cuts across the fault zone, was undertaken to better pin down the fault zone which, in places, may be as much as 100 feet or more wide. In one of the open cuts, after removing 10 to 12 feet of unconsolidated overburden, uranium mineralization with a chemical assay of better than 1% U_3O_8 was encountered. This uranium mineralization is uranophane in the fault zone located within a few feet of the granite contact.

Prior to the Calahan Zinc's discovery of uranium in the fault zone, they had found several pieces of high-grade uranium as float at a considerable distance down slope from the fault zone. This high-grade float consists of black silicious rocks with some possible fault breccia silicified to it. The largest piece found was approximately four inches by six inches, and assayed chemically 14.0% + U_3O_8. This float, from visible examination, is associated with faulting in which uranium-bearing, silicaous, fault-filling material has been deposited. If it is found that the source is the major fault that strikes across the Ranger and Lookout Claims, or an adjustment fault to the major fault, then this would be a highly significant discovery and be directly related to the Monarch Exploration Company claims in this area. This would be particularly true since anomalies are known to exist on both sides of this major fault on the Ranger and Lookout Claims.

Two other radiometric anomalies are known to exist on the Ranger Claims. See Claim Plat and Assay Map, Plate I. One, of five times background, is located on Ranger Claim No. 23. The other, of eight times background, is located on Ranger Claim No. 1. The latter anomaly lies approximately 1200 feet east of the major fault, and is on the south end of the claim. This anomaly is in granitic-type rocks, and appears to be associated with fracturing or shear faulting in the Pre-Cambrian rock. To date, no core drilling or digging has been undertaken on this anomaly. Other radiometric anomalies have been encountered on the Ranger Claims, but there has not been enough information obtained for details.

(d) Present access roads are adequate for any exploration or small scale mining that might be undertaken on the Ranger or Lookout Claims.

4. Physical description (continued):

At present the Ranger and Lookout Claims are more than 100 miles from any mill or buying station. However, a mill or buying station is tentatively planned for Gunnison, Colorado, located 42 miles away.

The Ranger and Lookout Claims are about equidistant between Gunnison, Colorado - population 3,000 - and Salida, Colorado - population 5,000. Gunnison is located 42 miles west of the property on U. S. Highway 50, and Salida is located 43 miles east of the property on U. S. Highway 50.

(e) Equipment, manpower, materials, and supplies related to coring are available within the area. The most likely source for the above is Montrose, Colorado, located 103 miles west on U. S. Highway 50, or the Salida, Colorado area, located 43 miles east on U. S. Highway 50.

Equipment, necessary manpower, materials and supplies for a mining operation are available in Salida or Gunnison, Colorado.

Water is available from Harry and Marshall Creeks, which flow by and through the properties. Also, there are springs that originate on the properties.

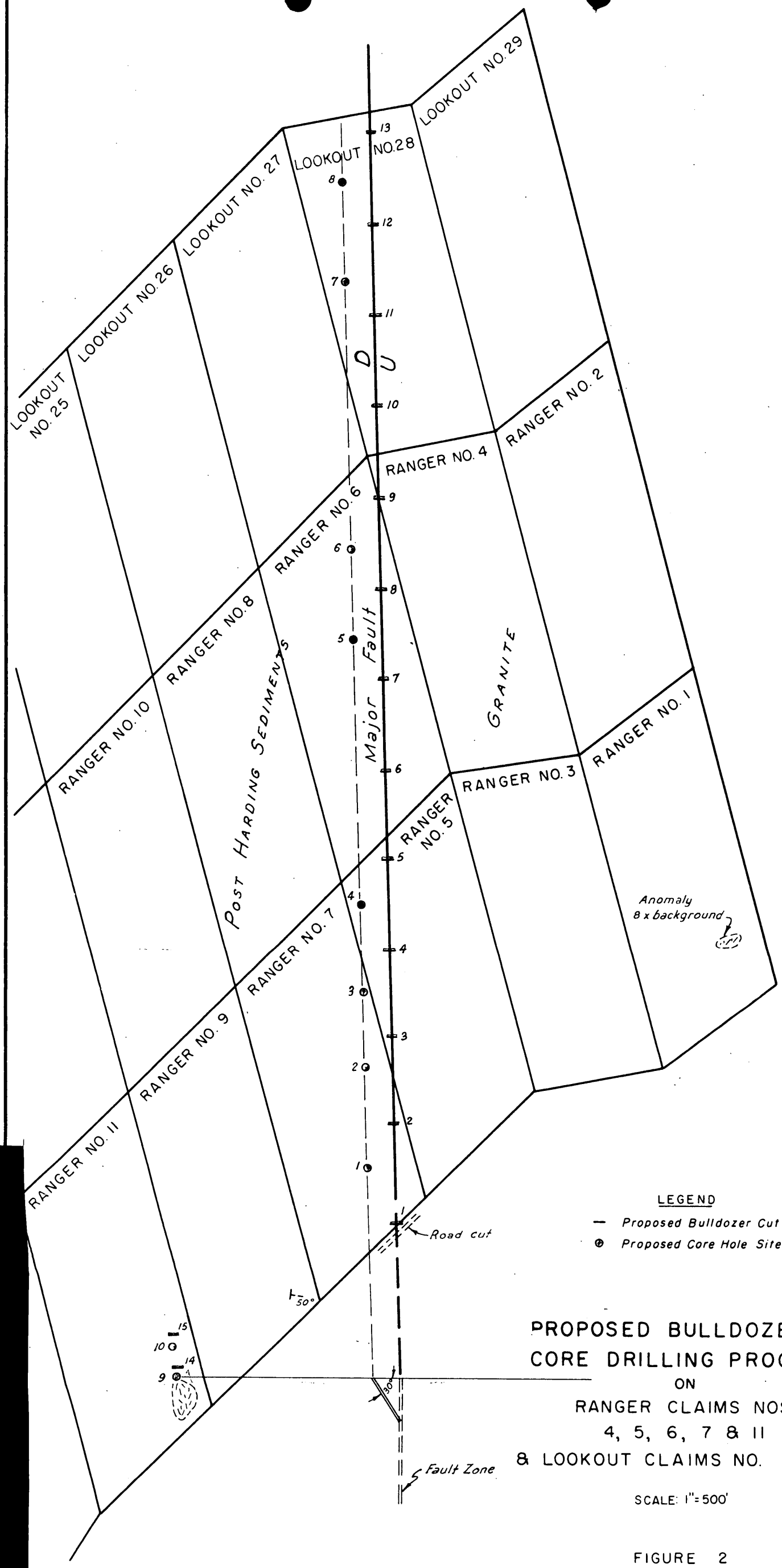
5. The Exploration Project:

The proposed work will consist of exploratory surface cutting with bulldozer and core drilling on the Ranger Claims Nos. 4, 5, 7, 8 and 11, and Lookout Claim No. 28. The bulldozer work on the Ranger Claims will be done on the radiometric anomaly located on the south end of Ranger Claim No. 11 and on the major north-south fault that strikes across the eastern part of the claim block. See Figure 2.

On Ranger No. 11, the radiometric anomaly is on an outcrop of brown conglomerate which is possibly a member of the Chaffee formation.

The attitude of the brown conglomerate cannot be definitely established from the present outcrop. Two bulldozer open cuts, located approximately 100 feet and 250 feet north of the outcrop, should be sufficient to determine structure relationships. Two 200-foot core holes are proposed to test this anomaly. The location of the core holes and angle will be determined after structural interpretations of the open cuts.

On the major north-south fault that strikes across Ranger Claims Numbers 4, 5, 6, and 7, see Figure 2, thirteen bulldozer open cuts are planned. These thirteen open cuts would be on centers of approximately 400 feet, starting where the access road zone goes over the fault, and the cuts would be



PROPOSED BULLDOZER & CORE DRILLING PROGRAM ON RANGER CLAIMS NOS. 4, 5, 6, 7 & 11 & LOOKOUT CLAIMS NO. 25-29

SCALE: 1" = 500'

FIGURE 2

5. The Exploration Project:

across the fault zone. The fault trace relative to the ground surface should be obtained from studies of the thirteen open cuts. Eight 200-foot core holes are to be drilled, the locations of which will be based relative to the surface trace of the fault. The eight 200-foot core holes are to be located so as to penetrate the fault zone and intersect the fault contact on the granite side at a depth of approximately 150 feet.

(c) The most efficient exploration season for this area, elevation 9,500 to 10,500 feet, is from May 15th through November. Exploration projects in this area should be started soon enough to be completed in November for the most efficient cost ratios, unless they are underground operations.

(d) The applicant, Monarch Exploration Company, has been organized eighteen months. The company was organized to explore for and develop uranium and other mineral properties. The management is well versed on exploration techniques, having had extensive experience relating to petroleum, sulphur, and mineral exploration.

This operation would be under the supervision of Fred W. Howells, who has a B. A. degree in Geology from the University of Colorado, 1940, and who has completed 21hours of graduate work in Geology at the University of Houston, Houston, Texas. While attending the University of Colorado, Mr. Howells was associated with Frank Ellis Brown, Colorado Springs, Colorado, an eminent mining and hard rock geologist, from whom he gained extensive experience related to uranium, rare earths and mining geology.

6. Estimate of Cost:

(a) Independent Contractors:

Cost of moving D-7 cat from Gunnison to unloading point at Sargents, Colorado. Distance of 32 miles @$1.00 per mile

$32.00 ✓

Estimate 6 hours to walk cat to Ranger Claim No. 11 at $12.00 per hour $72.00 ✓

Estimate 48 hours D-7 cat work to bulldoze two open cuts on radiometric anomaly located on Ranger Claim No. 11 at $12.00 per hour $576.00 ✓

Estimate 6 hours D-7 cat work preparing two angle core hole drill sites on radiometric anomaly on Ranger Claim No. 11 at $12.00 per hour $72.00 ✓

Estimate, based upon experience of other similar coring projects of this type in this general area, that coring from angle hole can be contracted to depths of 200 for

6. Estimate of Cost (continued):

$12.00 per foot, for which the contractor furnishes all equipment. Two 200-foot core holes located on Ranger Claim No. 11 for a total of 400 feet of coring at $12.00 per foot — $4,800.00 X

Estimate 312 hours D-7 cat work to bulldoze thirteen open cuts across major fault zone on Ranger Claims Nos. 4, 5, 6, and 7, and Lookout Claims No. 28, at $12.00 per hour — $3,744.00 ✓

Estimate 24 hours D-7 Cat work preparing drill site location for the eight angle core hole drill sites located on Ranger Claims 4, 5, 6 and 7, and Lookout Claim No. 28, at $12.00 per hour — $ 288.00 ✓

Estimate, based upon experience of other similar coring projects in this general area, that coring from angle hole to depths of 200 feet can be contracted for $12.00 per foot, for which the contractor furnishes all equipment. Eight 200-foot core holes for a total of 1600 feet at $12.00 per foot — $19,200.00 X

(b) Labor, Supervision, Consultants:

Labor supplies under above estimates.

Supervision - Company - Salary $600.00 per month. Project to take three months to complete — $ 1,800.00 ✓

Consultants - Estimate 20 days consulting fees on the ten core holes on Ranger Claims Nos. 4, 5, 6, 7 and 11, and Lookout Claim No. 28, at $100.00 per day plus expenses of $25.00 per day which will include mileage:

20 days consulting fees @ $100 per day — $ 2,000.00 ✓

20 days expenses @ $25 per day — $ 500.00 ✓

(c) Operating materials and supplies - None.

(d) Operating equipment - Jeep or pickup truck at $5.00 per day plus $4.00 per day for gas and oil for 90 work days — $ 810.00

(e) Rehabilitation and repairs - None.

(f) New buildings, improvements, installations - None.

(g) Miscellaneous:

Accounting costs of project — $ 500.00

6. Estimate of Cost (continued):

(h) Contingencies:

Chemical analysis, 100 samples at $5.00 per sample	$500.00
Ten Spectrographic analyses at $10.00 each	$100.00

Summary of Costs

(a)		$ 32.00
		72.00
		576.00
		72.00
		4,800.00
		3,744.00
		288.00
		19,200.00
(b)		1,800.00
		2,000.00
		500.00
(d)		810.00
(g)		500.00
(h)		500.00
		100.00
	Total	$34,994.00

April 16, 1956
Subject: DMEA-4252
Re: Exploration Assistance
Lookout Claims 15-24 & 30-34
Hidy & Hidy Claims 1-4 &
Sparky Claims 1-10

Monarch Exploration Company
511 San Jacinto Bldg.
Houston, Texas

Gentlemen:

The receipt of your application dated April 10, 1956, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4252 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

April 16, 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
- 4252 Monarch Exploration Company

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

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

RECEIVED
APR 1 3 1956

April 11, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium), Monarch Exploration Company, (Lookout 15-24 and 30-34, Hidy and Hidy 1-4, and Sparky 1-10 claims), Saguache County, Colorado

Enclosed are three copies of the subject application in the amount of $16,122.50. One copy of the application is being retained in our file.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

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

RECEIVED
APR 1 1 1956

April 11, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

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DMEA Field Team, Region III

W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd

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

APR 10 1956

RECEIVED
APR 9 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 4252
Metal or Mineral Uranium
Date Received 4-13-56
Estimated Cost $16,122.50
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: Monarch Exploration Company
511 San Jacinto Bldg.
Houston, Texas
See Supplement

(*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 Lookout Claims 15-24 and 30-34; Hidy and Hidy Claims 1-4; and Sparky Claims 1-10. See supplement

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

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

(*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.

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

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

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

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

5. *The exploration project.*—(*a*) State the mineral or minerals for which you will 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.

(*c*) The work will start within 60 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:

(*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)? Yes

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

[x] Money [ ] Use of equipment owned by you [ ] 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 April 10, 1956

MONARCH EXPLORATION COMPANY
(Applicant)

By F. W. Howells

F. W. Howells

Vice President

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

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

RECEIVED
APR [illegible] RECEIVED
APR [illegible] 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Lookout Claims 15 - 24 and 30 - 34

Hidy & Hidy Claims 1 - 4

Sparky Claims 1 - 10

Located in Saguache County, Colorado

SUPPLEMENT

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
APR 13 1956

SUPPLEMENT

1. Name of Applicant:

(b) Monarch Exploration Company - a corporation incorporated in the State of Texas, authorized to do business in the State of Colorado.

(c) Company:

President	Patrick V. Brady 511 San Jacinto Building Houston, Texas
Vice-President	Fred V. Howells 511 San Jacinto Building Houston, Texas
Vice-President & Secretary-Treasurer	Jack Trotter 904 Citizens State Bank Bldg. Houston, Texas
Assistant Secretary-Treasurer	Ellis F. Morris 904 Citizens State Bank Bldg. Houston, Texas

3. Applicant's Property Rights:

(a) Unpatented Mining Claims:

Lookout Claims 15 - 24 and 30 - 34, Saguache County, Colorado; Sections 21, 22, 27 and 28, T-48N R-6E; N.M.P.M.

Hidy & Hidy Claims 1 - 4, Saguache County, Colorado; Section 22; T-48N R-6E; N.M.P.M.

Sparky Claims 1 - 10, Saguache County, Colorado; Sections 15 and 22; T-48N R-6E; N.M.P.M.

(b) The properties listed in 3(a) above are all unpatented mining claims, and to date are not associated with any mine or mines.

3. Applicant's Property Rights (continued):

(c) Lookout Claims 15 - 24 and 30 - 34: Monarch Exploration Company - Owner.

Hidy & Hidy Claims 1 - 4: Monarch Exploration Company - Owner.

Sparky Claims 1 - 10: Monarch Exploration Company - Owner.

(e) There are no liens or encumbrances on the following unpatented claims which are owned by Monarch Exploration Company:

Lookout Claims 15-24 and 30-34
Hidy & Hidy 1 - 4
Sparky 1 - 10

(f) Monarch Exploration Company - Lookout Claims 15-24 & 30 - 34, Saguache County, Colorado:

Name of Claim	Date Recorded	Book	Page
Lookout #15	July 26, 1955	263	370
Lookout #16	July 26, 1955	263	372
Lookout #17	July 26, 1955	263	374
Lookout #18	July 26, 1955	263	376
Lookout #19	July 26, 1955	263	378
Lookout #20	July 26, 1955	263	380
Lookout #21	July 26, 1955	263	382
Lookout #22	July 26, 1955	263	384
Lookout #23	July 26, 1955	263	386
Lookout #24	July 26, 1955	263	388
Lookout #30	July 26, 1955	263	400
Lookout #31	July 26, 1955	263	402
Lookout #32	July 26, 1955	263	404
Lookout #33	July 26, 1955	263	406
Lookout #34	July 26, 1955	263	408

Locator: Monarch Exploration Company.

Monarch Exploration Company - Hidy & Hidy Claims 1 - 4, Saguache County, Colorado:

Name of Claim	Date Recorded	Book	Page
Hidy	October 26, 1955	272	390
Hidy #1	October 26, 1955	272	392
Hidy #2	October 26, 1955	272	394
Hidy #3	October 26, 1955	272	396
Hidy #4	October 26, 1955	272	398

Locator: Monarch Exploration Company.

3. Applicant's Property Rights (continued):

Monarch Exploration Company - Sparky Claims 1 - 10, Saguache County, Colorado:

Name of Claim	Date Recorded	Book	Page
Sparky #1			
Sparky #2			
Sparky #3			
Sparky #4			
Sparky #5			
Sparky #6			
Sparky #7			
Sparky #8			
Sparky #9			
Sparky #10			

Locator: Monarch Exploration Company.

4. Physical Description:

(a) The Lookout Claims numbered 15-24 and 30-34, the Midy and Midy Claims numbered 1 - 4, and the Sparky Claims numbered 1-10, are located on the north and west side of Marshall Creek Drainage in Saguache County, Colorado. The Lookout Claims lie to the north and west of Marshall Creek. The Midy & Midy Claims numbered 1-4 lie north of the Lookout Claims, and tie on to the Lookout Claims. The Sparky Claims lie north of and tie on to the Midy Claims. The Midy and Sparky Claims lie on the divide between Marshall and Indian Creeks. See Plate I.

To reach the property (see Figure 1), one may travel west 32 miles from Salida, Colorado, on U. S. Highway 50 to Sargents, Colorado, and turn left up the old County road. Proceed 5 miles up the old County road to the old railroad siding of Buxton, at which point the road crosses over Marshall Creek on to the old railroad bed. Chestervillo is approximately 4 miles up the old railroad bed from Buxton, at which point Monarch's new access road takes off to the left from the old railroad grade. The Lookout Claims begin 1-1/2 miles up the new access road from Chestervillo. The old railroad bed has been traveled extensively by car since the removal of the railroad tracks three months ago; however, jeeps or trucks are more adaptable to the old railroad bed.

To date, no mining operation has been conducted upon any of Monarch Exploration Company's Claims in the Marshall Creek area. As far as known, there are no mines of any type in this immediate area. Exploration has consisted of initial prospecting, location of surface radiometric anomalies, examination of surface geology, and sampling of two prospect holes. Two shallow prospect holes on two separate veins

4. Physical Description (continued):

located on Lookout Claim No. 34, sampled for uranium, assayed 0.15% and 0.72% U_3O_8. Other radiometric anomalies located on the Lookout Claims have not been sampled to date.

After leaving U. S. Highway 50 at Sargents, Colorado, the access road to the Lookout Claims is fair to good for the average vehicle. The last two miles of access road from Chesterville on through the Ranger Claims to the Lookout Claims is a new road, excellent for mine purposes, having been built in November, 1955.

The average elevation of these claims is from 9,300 to 10,500 feet.

(b) To date, there has been no production from these properties, and there are no ore reserves blocked out.

(c) The Lookout Claims, as far as known, lie entirely on Pre-Cambrian rocks. See General Geologic Map, Plate No. II. The Pre-Cambrian rocks consist of granite, granitic-type rocks carrying magnetite, sills or dikes of quartz carrying large quantities of magnetite and schist. Numerous contacts of the schist and granitic-type rocks occur in each pattern so as to suggest a zone of shearing cutting across the Lookout Claims in a northeast-southwest direction. Roughly, the strike of this shear zone is North 35°- 40° East. To the southwest this shear zone probably intersects the major north-south fault on the Ranger Claims. To the northeast, it is not known how far the shear continues, but it is continuous for at least another 1/4 to 1/2 mile. The magnetite, whether associated with quartz or granitic-type rocks, gives high radioactive readings of 6 to 9 times background at various places related to the shear.

On Lookout Claim No. 34 (see Claim Plate and Assay Map, Plate No. I) is a shear fault in which schist makes contact with granitic-type rock. The shear fault has been exposed by a prospect hole dug 4 to 5 feet below the surface. This prospect hole is designated as Prospect Hole No. 1 (see Figure 2). A chemical assay of a 30-pound sample taken from this prospect assayed 0.15% U_3O_8 across a 3-1/2 foot face, and was out of balance only slightly. The count was a little higher than uranium content.

One of the uranium minerals present is autunite, which occurs as flaky coatings on fracture surfaces, and as space filling between crystal faces. Another uranium mineral occurs in this shear fault, the identification of which is not certain. It is a black mineral which also occurs as fracture filling. Some of the uranium-bearing rocks from this shear assay radiometrically 1% U_3O_8 or better. The black uranium-bearing fracture filling material could possibly be uraninite or pitchblend. As yet, no sample has been sent for mineral identification.

4. Physical Description (continued):

Thirty-five feet southwest of the above prospect hole and across a small spring, the same vein has been exposed by removing about 2 feet of overburden. Here the vein likewise is about 3-1/2 feet across, and has count similar to the above prospect hole. No chemical assays have been obtained from the latest vein exposure.

In removing the overburden from this exposure, a highly radioactive, 50-pound granitic-type rock was encountered. Pieces of this granitic-type rock assay radiometrically from 0.5% to 1.0% o U_3O_8. The above rock was found loose, so may or may not have been in place. At this exposure the uranium-bearing vein is approximately 10 to 15 feet from an old prospectors drift, which has long been completely closed by caving. It is possible that the above 50-pound uranium-bearing sample came out of the old prospectors drift, or is float from a higher outcrop which has mixed with the loose overburden material. Snow conditions that developed shortly after the above exposure was made, prevented the work necessary to solve the above problem.

Approximately 200 feet down slope from Prospect Hole No. 1 is Lookout Prospect Hole No. 2. Here there is a very high surface radiometric anomaly. A prospect hole dug about 2-1/2 feet laterally into slope surface has revealed another vein, the true attitude of which is not determinable at present because of lack of outcrop exposure. A sample from this prospect hole has a chemical assay of 0.72% U_3O_8.

Approximately 150 feet down slope from Prospect Hole No. 2 is another prospect hole, designated No. 3. Here there is also a very high surface anomaly on which the prospect hole was dug. The prospect hole, about 1-1/2 feet deep, has revealed a vein, the true attitude of which cannot be determined for lack of outcrop exposure. No sample from this prospect hole has been assayed.

The shear zone continues to the northeast from the Lookout Claims to the adjoining claims owned by Uncompahgre Exploration Company. In exploration work consisting of shallow prospect holes along the shear zone, large pieces (6 inches by 8 inches) of uranium-bearing rock which radiometrically assay from 1% to 15% o U_3O_8 have been encountered. The appearance of this uranium-bearing rock and the relation of the mineralization to shearing suggests hydrothermal vein filling in which primary uranium mineralization occurs in veins, systems of veinlets and as disseminated grains in the rock near veins.

In conjunction with this report, no exploration program is planned for the Hidy and Sparky Claim groups. From very limited surface examination, the Hidy and Sparky Claims appear to have similar geology to that of the Lookout group.

4. Physical Description (continued):

(d) Present access roads are adequate for any exploration or small scale mining that might be undertaken on the Lookout Claims.

At present, the Lookout Claims are more than 100 miles from any mill or buying station. However, a mill or buying station is tentatively planned for Gunnison, Colorado, located 42 miles away.

The Lookout Claims are about equidistant between Gunnison, Colorado (population 3,000) and Salida, Colorado (population 5,000). Gunnison is located 42 miles west of the property on U. S. Highway 50, and Salida is located 43 miles east of the property on U. S. Highway 50.

(e) Equipment, manpower, materials, and supplies related to coring are available within the area. The most likely source for the above is Montrose, Colorado, located 108 miles west on U. S. Highway 50, or the Salida, Colorado area, located 43 miles east on U. S. Highway 50.

Equipment, necessary manpower, materials, and supplies for a mining operation are available in Salida or Gunnison, Colorado. The nearest high power line is 10 miles away.

Water is available from Harry and Marshall Creeks, which flow by and through the properties. Also, there are springs that originate on the properties.

5. The Exploration Project:

(b) On the Lookout Claims it is planned to drive an exploratory drift on one vein and explore two other veins by surface work, consisting of drilling, shooting, and mucking the face of the veins.

On Lookout Claim No. 34 (see Figure 2), it is planned to drive a 150-foot exploratory drift along a vein and make two 50-foot cross cuts. A chemical assay from Prospect Hole No. 1, 3.5 foot across the vein assayed 0.15% U_3O_8. The vein strikes approximately S 60° W and dips to northwest, the degree of which has not been determined. It will be necessary to do some shooting and mucking with a bulldozer before the dip of the veins can be determined. The vein appears, from limited exposures, to be related to a shear with a dip near to vertical. About 15 foot north of vein exposure, there is an entrance to an old prospector's drift, which has long been closed by caving. From the apparent caving pattern of this old drift, it appears that it diverges away from the strike of the uranium vein at an angle of 5 degrees. The old prospector's drift possibly has 75 foot of workings when the caving pattern and volume of dump material is considered.

5. The Exploration Project:

See Figure 2 for diagram of Vein, Old prospector's drift, and the proposed drift and cross cuts.

Approximately 1,500 feet of additional road will be necessary for mining equipment to have access to the exploratory drift. This access road to the drift will start from the present mine road, which was completed in November of 1955. From point of take-off, the proposed access road rises approximately 200 feet of elevation. Some blasting may be necessary to give the road enough width to be of service.

Also on Lookout Claim No. 34, it is planned to open two other veins to evaluate the existing uranium potential. This work is to be done where there are now two shallow prospect holes. On Figure 2, these prospect holes are designated No. 2 and No. 3. Prospect Hole No. 2 has a chemical assay of 0.72% U_3O_8. This assay is from samples picked from the bottom of the hole and is not representative of any given width. Prospect Hole No. 3 has very high count but not as high as Prospect Hole No. 2. No samples from Prospect Hole No. 3 have been assayed. Drilling, shooting and mucking the waste rock with a small cut is the method proposed to open up the veins on Prospect Holes No. 2 and No. 3.

Approximately 400 feet of access road will have to be built to make drilling equipment accessible to Prospect Holes No. 2 and No. 3.

(c) The most efficient exploration season for this area, elevation 9,500 to 10,500 feet, is from May 15th through November. Exploration projects in this area should be started soon enough to be completed in November for the most efficient cost ratios, unless there are underground operations.

(d) The applicant, Monarch Exploration Company, has been organized eighteen months. The company was organized to explore for and develop uranium and other mineral properties. The management is well versed on exploration techniques, having had extensive experience related to petroleum, sulphur and mineral exploration.

This operation would be under the supervision of Fred W. Howells, who has a B. A. Degree in Geology from the University of Colorado, 1949, and who has completed 21 hours of graduate work in Geology and Geophysics at the Universtion of Houston, Houston, Texas. While attending the University of Colorado, Mr. Howells was associated with Frank Ellis Brown, Colorado Springs, Colorado, an eminent mining and hard rock geologist, from whom he gained extensive experience related to uranium, rare earths and mining geology.

6. Estimate of Cost:

(a) Independent Contractors:

Cost of moving D-7 cat from Gunnison to unloading point at Sargents, Colorado. Distance of 32 miles at $1.00 per mile — $ 32.00

Estimate 6 hours to walk cat to Lookout Claim No. 34 at $12.00 per hour — 72.00

Estimate 48 hours D-7 cat work to 1500 feet of access road to site of exploratory drift. Above time includes waiting time for drilling and blasting if such is necessary. 48 hours at $12.00 per hour — 576.00

A separate contract is to be let for the 150-foot exploratory drift and the two 50-foot cross cuts. One bid for this contract from Walter Burleson, mining engineer, Salida, Colorado, is here included. His bid is an average cost of $34.67 per foot for the 150-foot drift. His bid was for 150 feet of drift only, but it is assumed that the additional two 50-foot cross cuts would have the same average cost per foot. Prices on the included estimate are based upon going prices existing during the Fall of 1955. From the included estimate of $34.67 per foot, and allowing 10% for price increases from the Fall of 1955 until the time work is started in the Summer of 1956, the average cost per foot will be $38.13. One 150-foot drift and two 50-foot cross cuts for a total of 250 feet at $38.13 per foot — 9,532.50

Estimate for opening up veins on Prospect Holes No. 2 and No. 3. Estimate 8 hours D-7 cat work to build 400 feet of access road to Prospect Holes No. 2 and No. 3 on Lookout Claim No. 34, at $12.00 per hour — 96.00

Estimate 6 days of drilling, shooting, and mucking in opening up vein on Prospect Hole No. 2, and same for Prospect Hole No. 3. Two men - 8-hour days for 12 days at $2.50 per hour — 480.00

Estimate 600 pounds of powder at $25.00 per 100 pounds — 150.00

600 ft. fuse at $2.50 per 100 feet — 15.00

100 caps — 4.00

Estimate rental on monthly basis for compressor, jack hammer and leg, and 100 feet air hose — 425.00

Bits: 400 at 25¢ each — 100.00

6. Estimate of Cost (continued):

(b) Labor, Supervision, Consultants:

Labor supplied under above estimates.

Supervision - Company man - salary of $600.00 per month. Project to take two months to complete	$1,200.00
Consultants - Estimate 6 days consulting fees on proposed work on Lookout Claim No. 34 at $100.00 per day, plus expenses of $25.00 per day, which will include mileage	
Six days consulting fees at $100.00 per day	600.00
Six days expenses at $25.00 per day	150.00

(c) Operating materials and supplies - None.

(d) Operating equipment - Jeep or pickup truck at $5.00 per day plus $4.00 per day for gas and oil, for 60 work days	540.00

(e) Rehabilitation and repairs - None.

(f) New buildings, improvements, installations:

Combination tool and change house	1,200.00
Powder house	100.00

(g) Miscellaneous:

Accounting costs for project	500.00

(h) Contingencies:

Chemical analysis - 50 samples at $5.00 per sample	250.00
Ten Spectrographic analysis at $10.00 each	100.00

6. Estimate of Cost (continued):

SUMMARY OF COSTS

(a)	$ 32.00
	72.00
	576.00
	9,532.50
	96.00
	480.00
	150.00
	15.00
	4.00
	425.00
	100.00
(b)	1,200.00
	600.00
	150.00
(d)	540.00
(f)	1,200.00
	100.00
(g)	500.00
(h)	250.00
	100.00
Total	$16,122.50

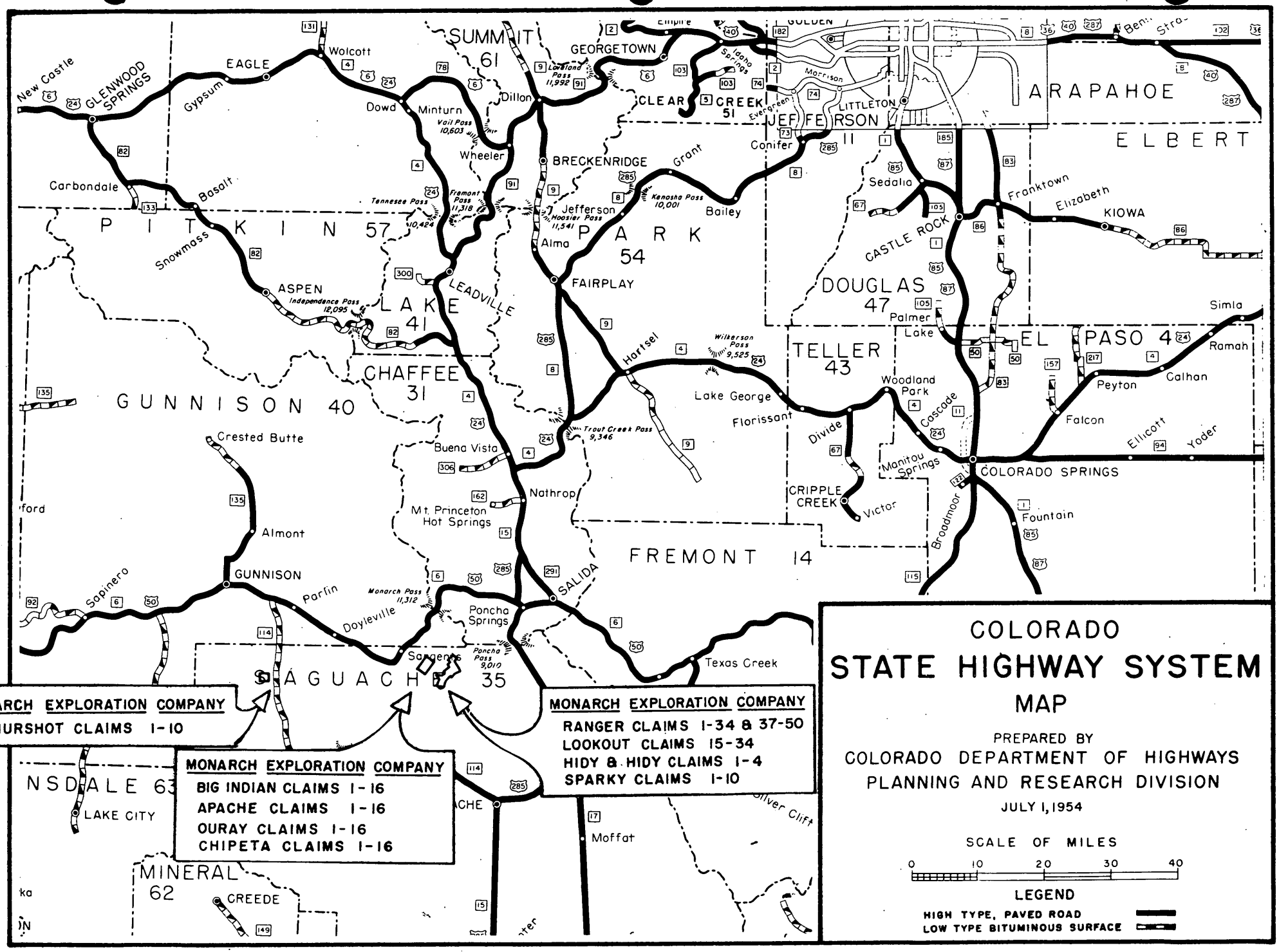
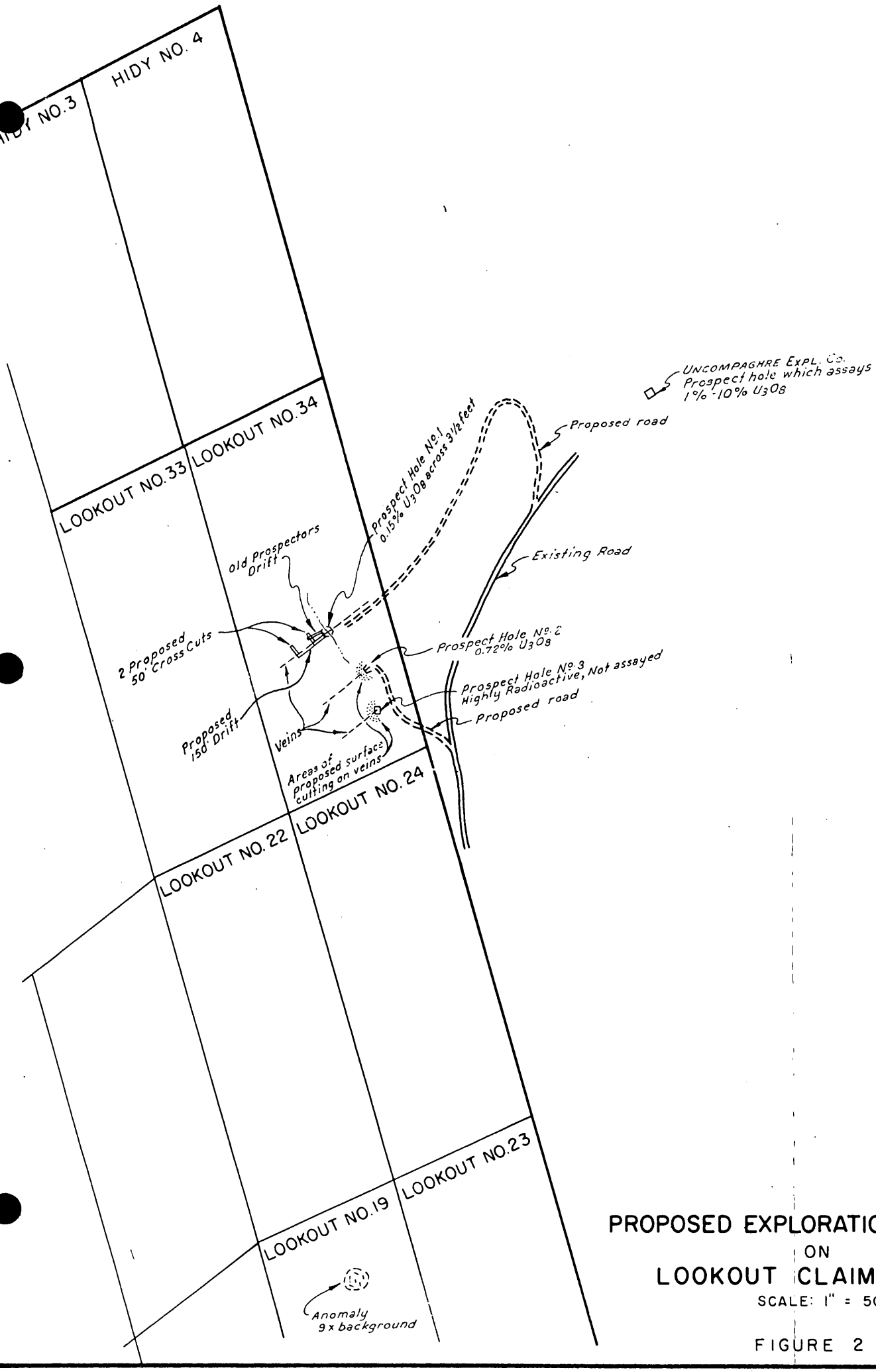

COLORADO
STATE HIGHWAY SYSTEM
MAP
PREPARED BY
COLORADO DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH DIVISION
JULY 1, 1954
SCALE OF MILES
0 10 20 30 40
LEGEND
HIGH TYPE, PAVED ROAD
LOW TYPE BITUMINOUS SURFACE
MONARCH EXPLORATION COMPANY
SHURSHOT CLAIMS 1-10
MONARCH EXPLORATION COMPANY
BIG INDIAN CLAIMS 1-16
APACHE CLAIMS 1-16
OURAY CLAIMS 1-16
CHIPETA CLAIMS 1-16
MONARCH EXPLORATION COMPANY
RANGER CLAIMS 1-34 & 37-50
LOOKOUT CLAIMS 15-34
HIDY & HIDY CLAIMS 1-4
SPARKY CLAIMS 1-10
SUMMIT 61
PITKIN 57
LAKE 41
CHAFFEE 31
GUNNISON 40
PARK 54
DOUGLAS 47
TELLER 43
EL PASO 4
ARAPAHOE
ELBERT
JEFFERSON 11
CLEAR CREEK 51
FREMONT 14
SAGUACHE 35
MINERAL 62
GLENWOOD SPRINGS
EAGLE
Wolcott
Gypsum
New Castle
Dowd
Minturn
Dillon
GEORGETOWN
Empire
GOLDEN
Idaho Springs
Morrison
LITTLETON
Evergreen
Conifer
Sedalia
Franktown
Elizabeth
KIOWA
Bailey
Grant
BRECKENRIDGE
Wheeler
Carbondale
Basalt
Snowmass
ASPEN
LEADVILLE
Alma
Jefferson
FAIRPLAY
Hartsel
Lake George
Florissant
Divide
CRIPPLE CREEK
Victor
Woodland Park
Cascade
Manitou Springs
COLORADO SPRINGS
Palmer Lake
CASTLE ROCK
Simla
Ramah
Calhan
Peyton
Falcon
Ellicott
Yoder
Fountain
Broadmoor
Crested Butte
Almont
GUNNISON
Sapinero
Parlin
Doyleville
Buena Vista
Nathrop
Mt. Princeton Hot Springs
Poncha Springs
SALIDA
Sargents
Texas Creek
Moffat
Silver Cliff
LAKE CITY
CREEDE
Vail Pass 10,603
Tennessee Pass 10,424
Fremont Pass 11,318
Hoosier Pass 11,541
Kenosha Pass 10,001
Independence Pass 12,095
Wilkerson Pass 9,525
Trout Creek Pass 9,346
Monarch Pass 11,312
Poncha Pass 9,010
Loveland Pass 11,992

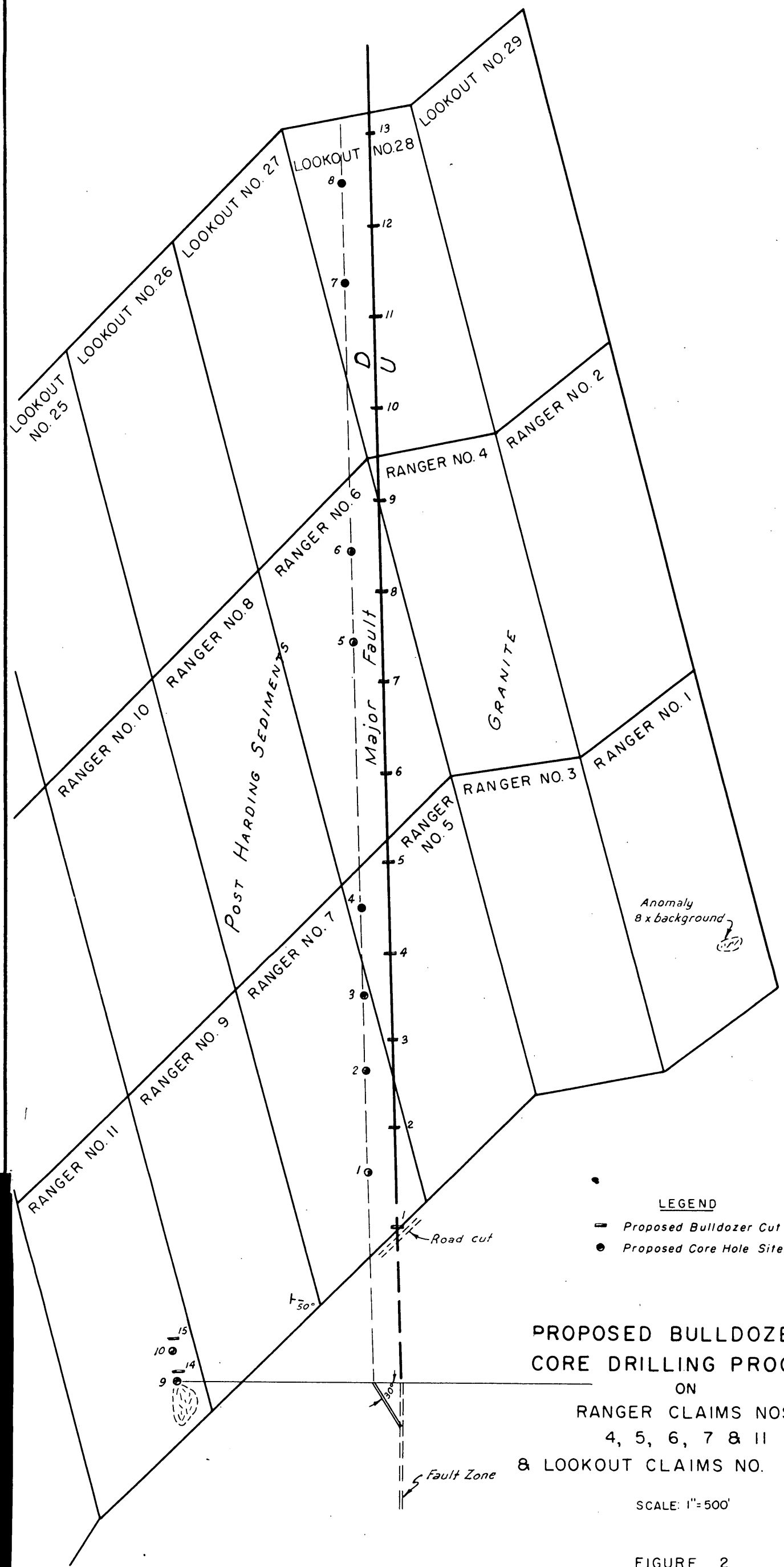
FIGURE 1



PROPOSED EXPLORATION PROGRAM
ON
LOOKOUT CLAIM NO. 34

SCALE: 1" = 500'

FIGURE 2



PROPOSED BULLDOZER & CORE DRILLING PROGRAM ON RANGER CLAIMS NOS. 4, 5, 6, 7 & 11 & LOOKOUT CLAIMS NO. 25-29

SCALE: 1" = 500'

FIGURE 2

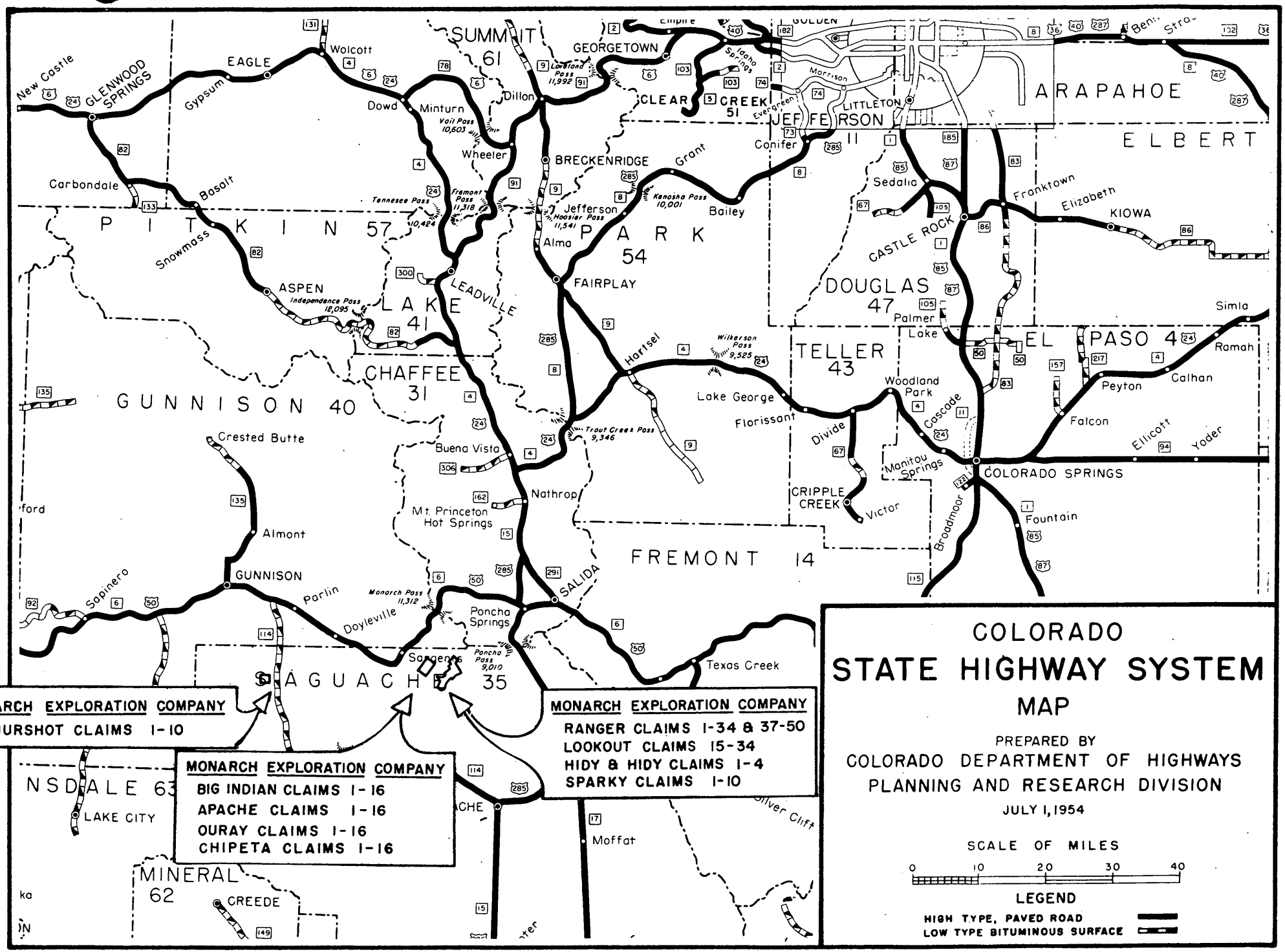
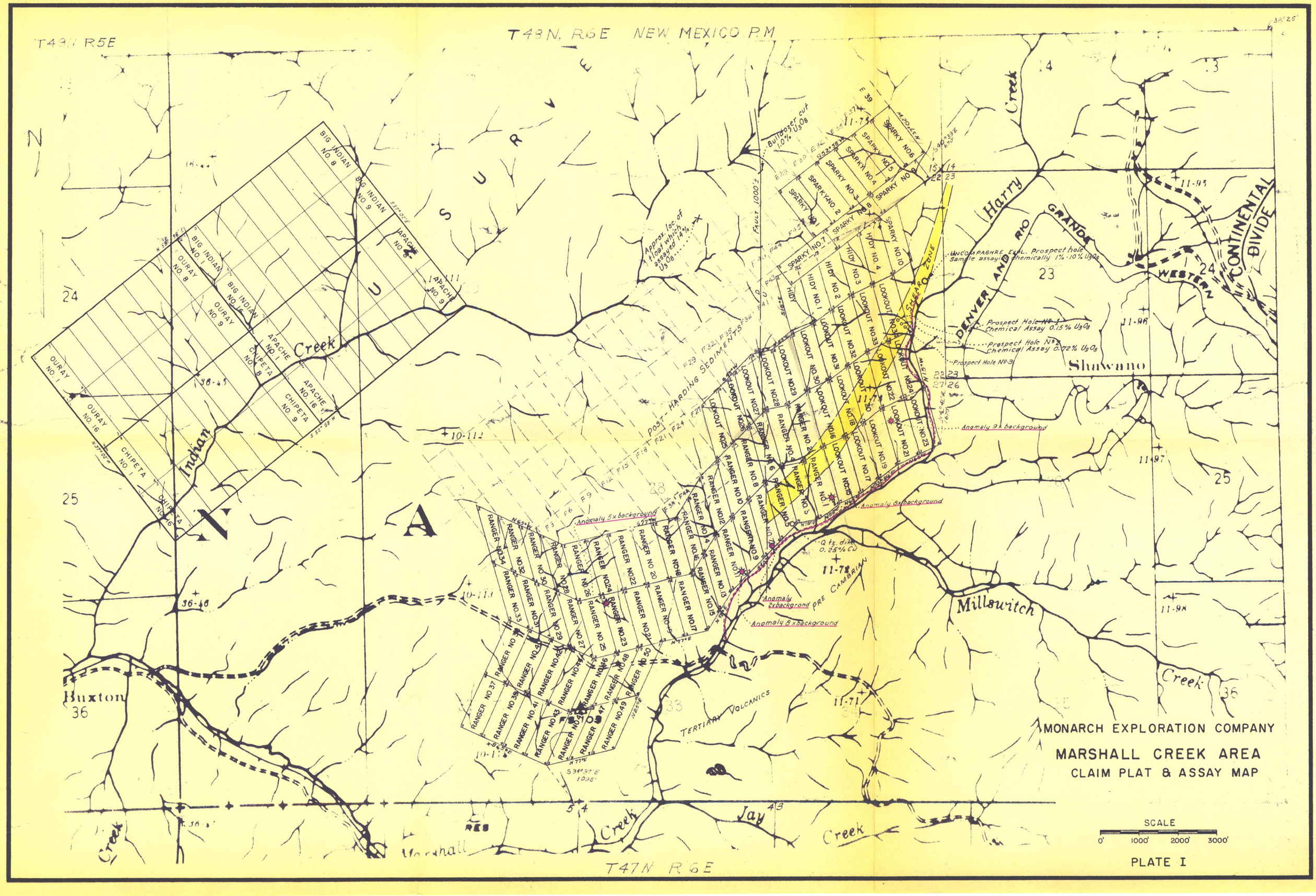

COLORADO
STATE HIGHWAY SYSTEM
MAP
PREPARED BY
COLORADO DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH DIVISION
JULY 1, 1954
SCALE OF MILES
0 10 20 30 40
LEGEND
HIGH TYPE, PAVED ROAD
LOW TYPE BITUMINOUS SURFACE
MONARCH EXPLORATION COMPANY
SHURSHOT CLAIMS 1-10
MONARCH EXPLORATION COMPANY
BIG INDIAN CLAIMS 1-16
APACHE CLAIMS 1-16
OURAY CLAIMS 1-16
CHIPETA CLAIMS 1-16
MONARCH EXPLORATION COMPANY
RANGER CLAIMS 1-34 & 37-50
LOOKOUT CLAIMS 15-34
HIDY & HIDY CLAIMS 1-4
SPARKY CLAIMS 1-10
SUMMIT 61
CLEAR CREEK 51
JEFFERSON 11
ARAPAHOE
ELBERT
PITKIN 57
PARK 54
LAKE 41
CHAFFEE 31
GUNNISON 40
DOUGLAS 47
TELLER 43
EL PASO 4
FREMONT 14
SAGUACHE 35
MINERAL 62
GLENWOOD SPRINGS
EAGLE
Wolcott
Gypsum
New Castle
Dowd
Minturn
Vail Pass 10,603
Wheeler
Dillon
GEORGETOWN
Loveland Pass 11,992
Empire
Idaho Springs
GOLDEN
Morrison
Evergreen
LITTLETON
Conifer
BRECKENRIDGE
Grant
Kenosha Pass 10,001
Bailey
Sedalia
Franktown
Elizabeth
KIOWA
CASTLE ROCK
Carbondale
Basalt
Tennessee Pass 10,424
Fremont Pass 11,318
Jefferson
Hoosier Pass 11,541
Alma
Snowmass
ASPEN
Independence Pass 12,095
LEADVILLE
FAIRPLAY
Hartsel
Wilkerson Pass 9,525
Palmer Lake
Simla
Ramah
Calhan
Peyton
Falcon
Ellicott
Yoder
Woodland Park
Cascade
Lake George
Florissant
Divide
Trout Creek Pass 9,346
Crested Butte
Buena Vista
Mt. Princeton Hot Springs
Nathrop
Almont
GUNNISON
Sapinero
Parlin
Doyleville
Monarch Pass 11,312
Poncha Springs
Poncha Pass 9,010
Sargents
SALIDA
Texas Creek
CRIPPLE CREEK
Victor
Manitou Springs
COLORADO SPRINGS
Broadmoor
Fountain
LAKE CITY
CREEDE
Moffat
Silver Cliff

FIGURE 1



MONARCH EXPLORATION COMPANY

MARSHALL CREEK AREA

CLAIM PLAT & ASSAY MAP

PLATE I

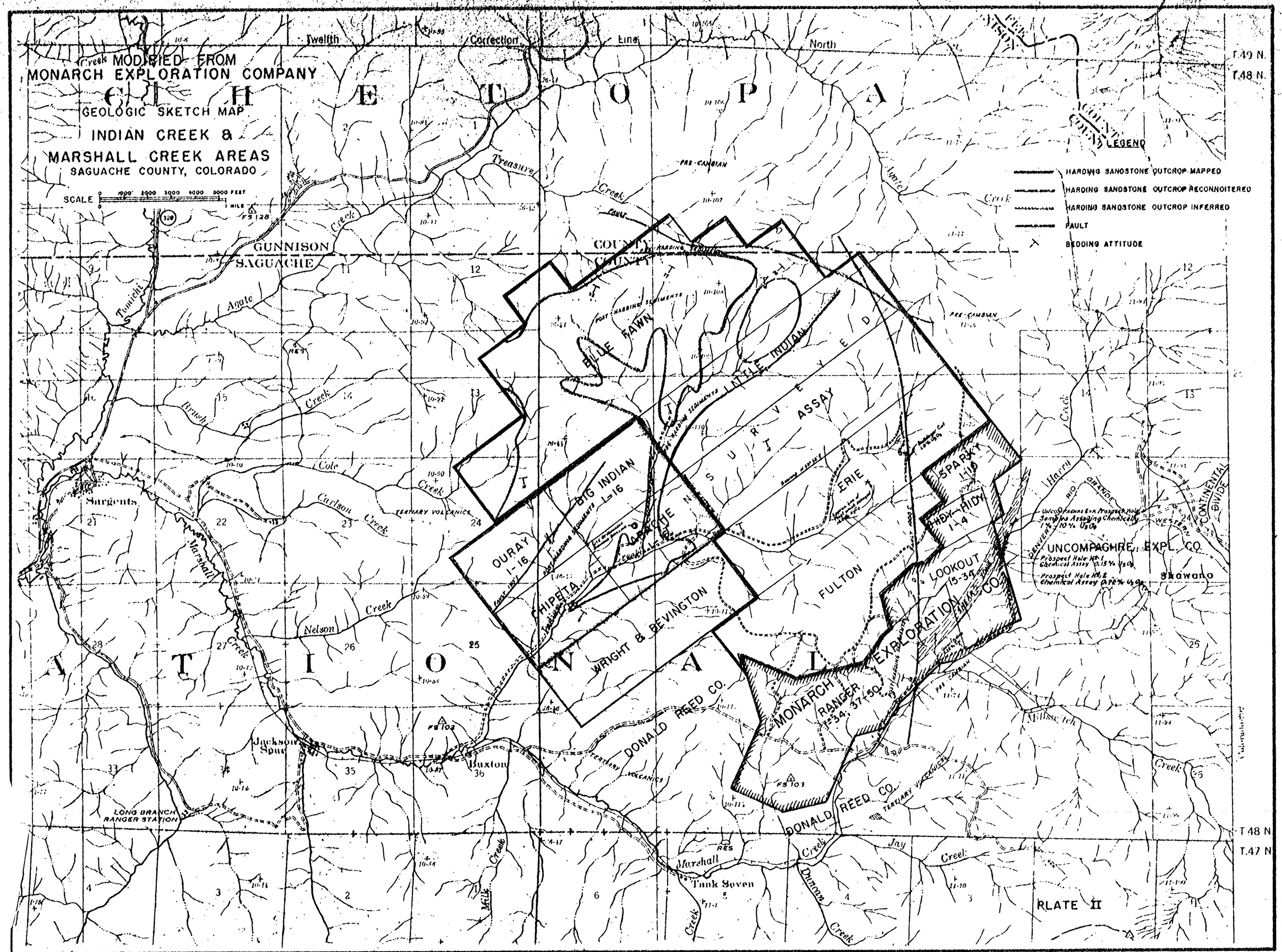
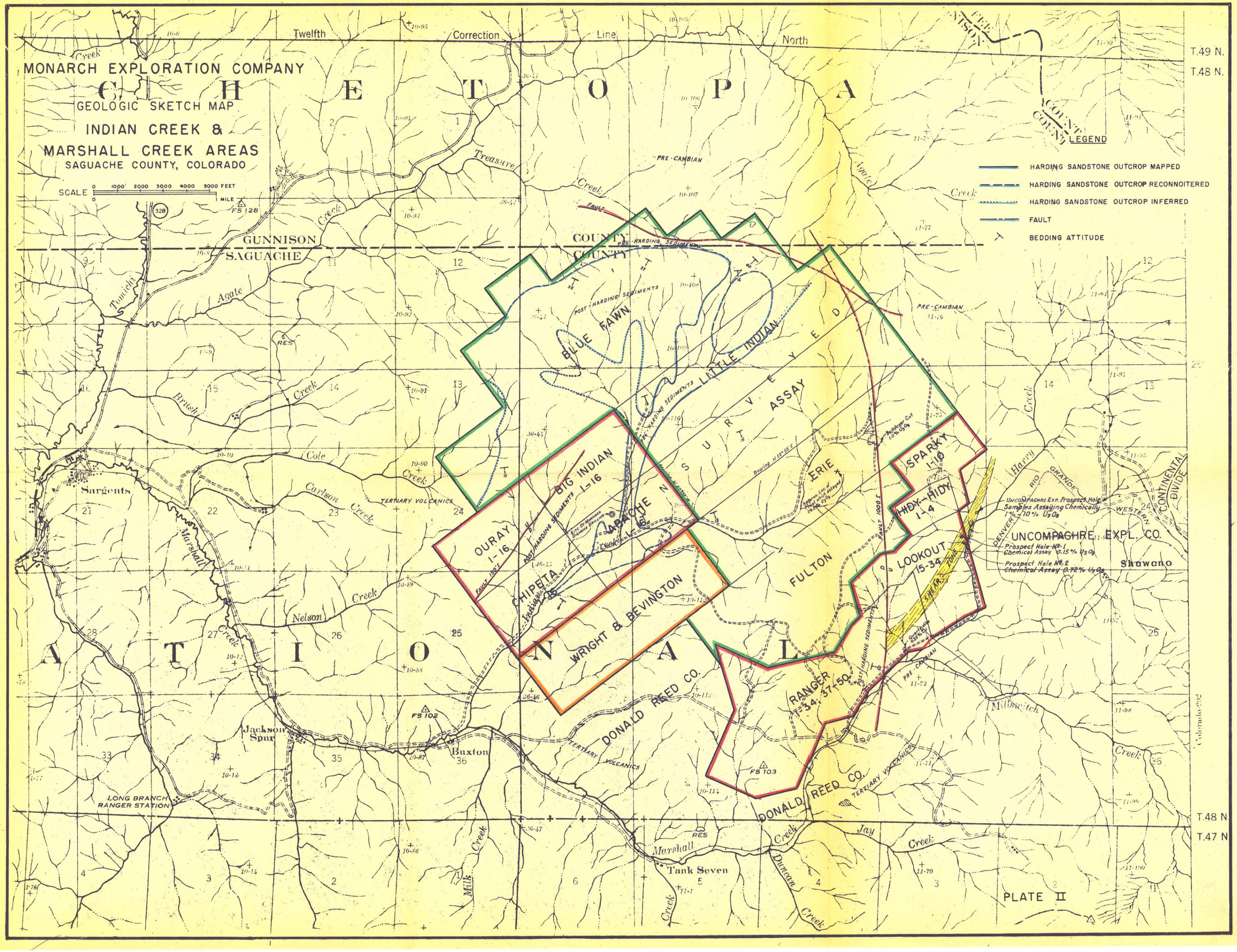


FIGURE 2 - PROPERTY OWNERSHIP MAP, LOOKOUT ET. AL. CLAIMS, MONARCH EXPLORATION COMPANY, SAGUACHE COUNTY, COLORADO. DMEA 4252


MONARCH EXPLORATION COMPANY
CHETOPA
GEOLOGIC SKETCH MAP
INDIAN CREEK &
MARSHALL CREEK AREAS
SAGUACHE COUNTY, COLORADO
SCALE 0 1000 2000 3000 4000 5000 FEET
1 MILE
Twelfth Correction Line North
T.49 N.
T.48 N.
T.48 N
T.47 N
GUNNISON COUNTY
SAGUACHE COUNTY
LEGEND
HARDING SANDSTONE OUTCROP MAPPED
HARDING SANDSTONE OUTCROP RECONNOITERED
HARDING SANDSTONE OUTCROP INFERRED
FAULT
BEDDING ATTITUDE
PRE-CAMBIAN
PRE-HARDING SEDIMENTS
POST-HARDING SEDIMENTS
TERTIARY VOLCANICS
BLUE FAWN
LITTLE INDIAN
SURVEYED
ASSAY
BIG INDIAN 1-16
OURAY 1-16
APACHE
CHIPETA
WRIGHT & BEVINGTON
FULTON
ERIE
SPARKY 1-10
HIDY-HIDY 1-4
LOOKOUT 15-34
RANGER 1-34, 37-50
DONALD REED CO.
UNCOMPAGHRE EXPL. CO.
Prospect Hole No. 1 Chemical Assay 0.15% U3O8
Prospect Hole No. 2 Chemical Assay 0.72% U3O8
SHEAR ZONE
Sargents
Jackson Spur
Buxton
Tank Seven
Shawano
LONG BRANCH RANGER STATION
Marshall Creek
Nelson Creek
Cole Creek
Carlson Creek
Tomichi Creek
Agate Creek
Brush Creek
Milk Creek
Duncan Creek
Jay Creek
Millswitch Creek
Harry Creek
Treasure Creek
Colorado
PLATE II

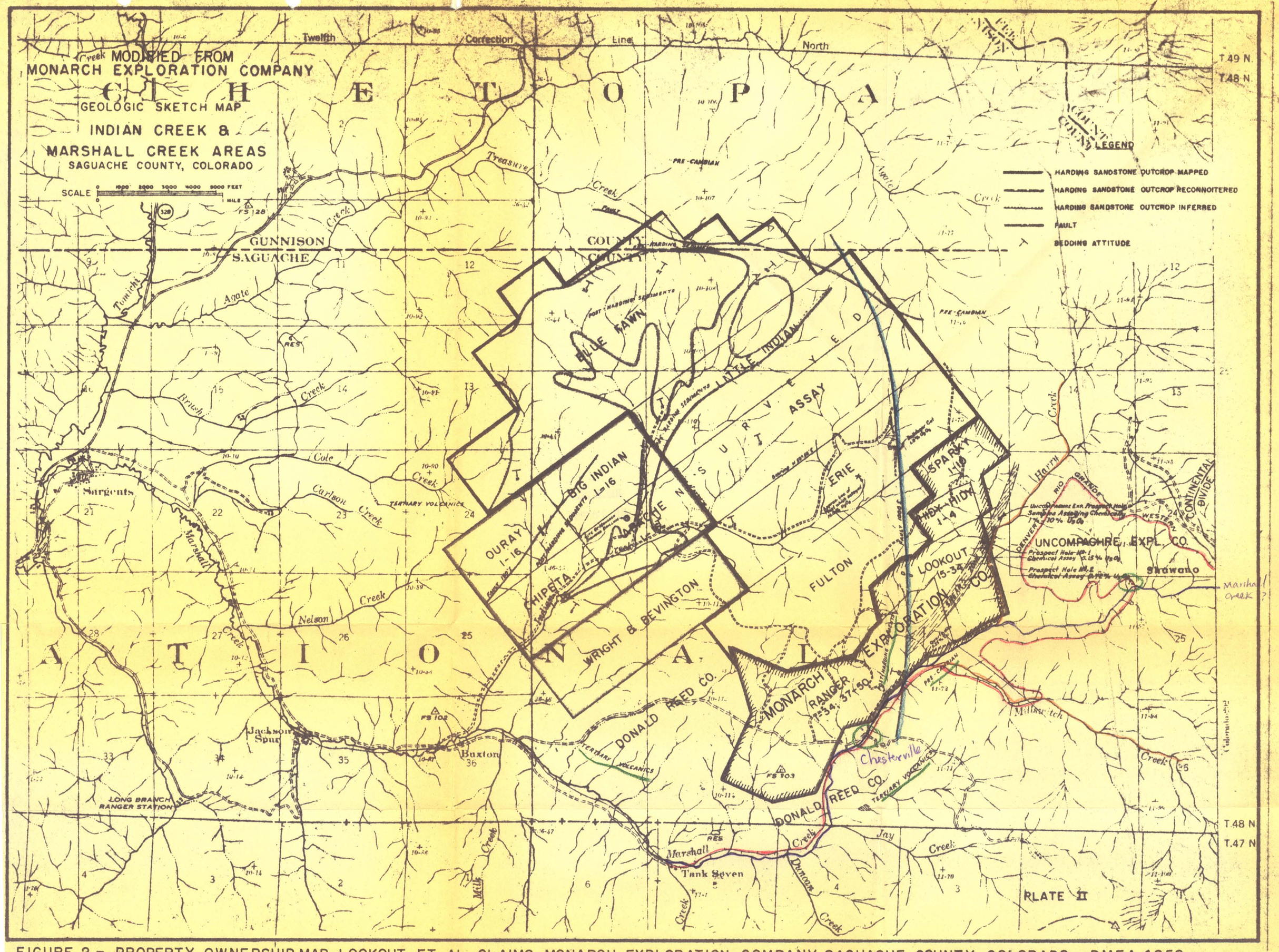
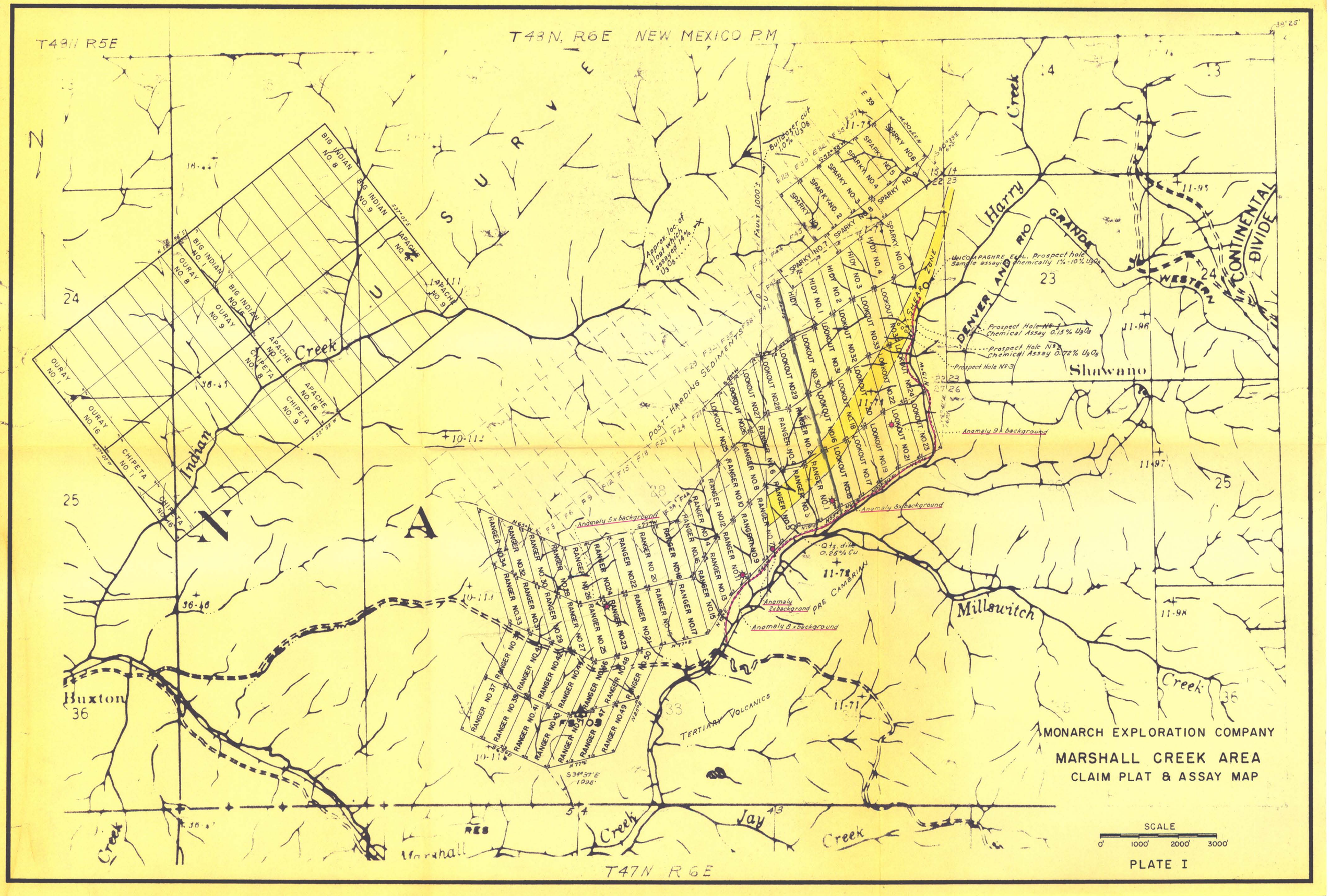


FIGURE 2 - PROPERTY OWNERSHIP MAP, LOOKOUT ET. AL. CLAIMS, MONARCH EXPLORATION COMPANY, SAGUACHE COUNTY, COLORADO. DMEA 4252


T49N R5E
T48N, R6E NEW MEXICO P.M.
T47N R6E
MONARCH EXPLORATION COMPANY
MARSHALL CREEK AREA
CLAIM PLAT & ASSAY MAP
SCALE
0' 1000' 2000' 3000'
PLATE I
BIG INDIAN NO 8
BIG INDIAN NO 9
BIG INDIAN NO 1
BIG INDIAN NO 2
OURAY NO 8
OURAY NO 9
OURAY NO 1
OURAY NO 16
APACHE NO 7
APACHE NO 9
APACHE NO 1
APACHE NO 16
CHIPETA NO 8
CHIPETA NO 9
CHIPETA NO 1
CHIPETA NO 16
SPARKY NO 6
SPARKY NO 5
SPARKY NO 4
SPARKY NO 3
SPARKY NO 2
SPARKY NO 1
SPARKY NO 7
SPARKY NO 10
HIDY NO 4
HIDY NO 3
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RANGER NO 1
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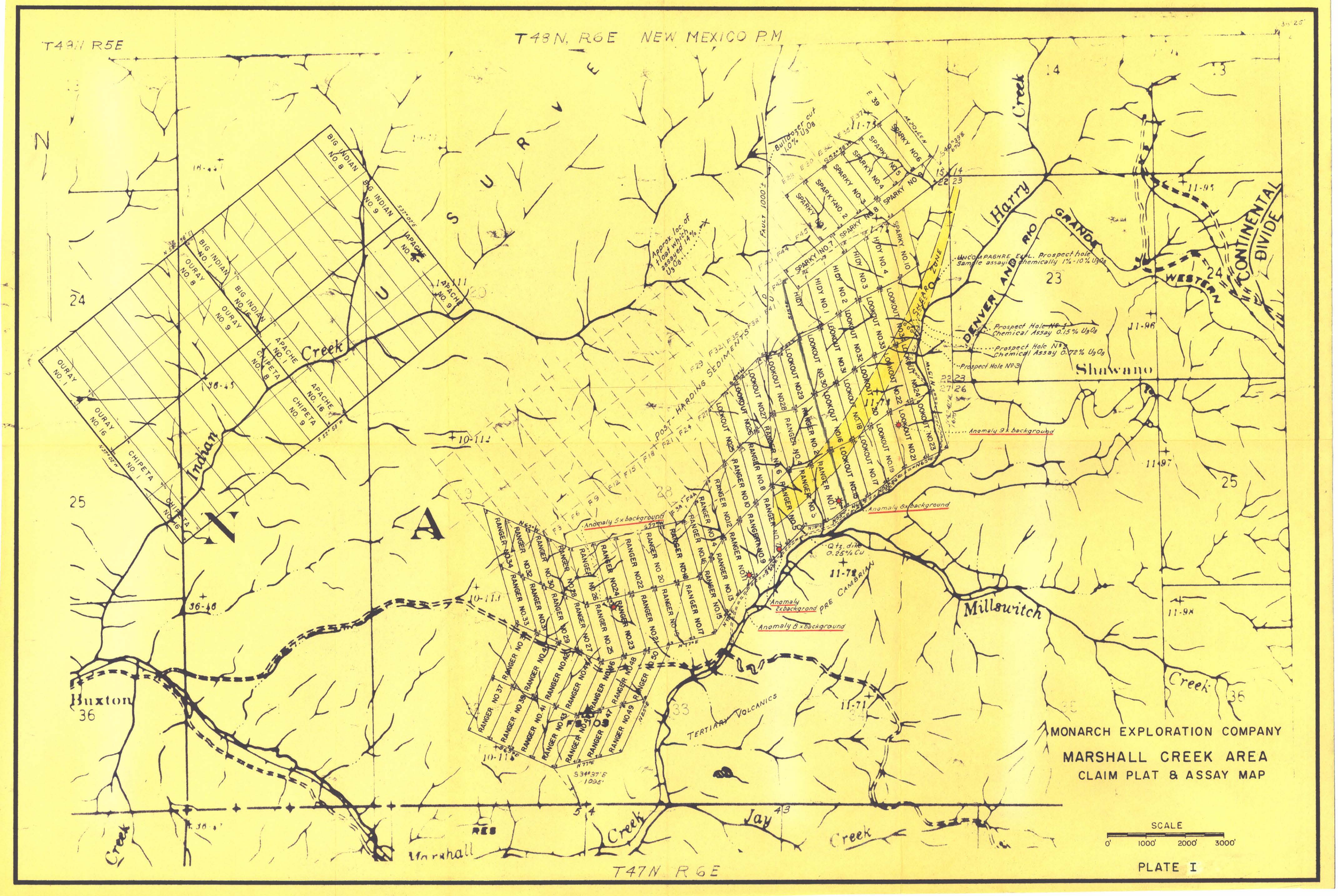
RANGER NO 48
RANGER NO 49
RANGER NO 50
Bulldozer cut 1.0% U3O8
Approx loc. of float which assayed 14% U3O8
FAULT 1000'
POST-HARDING SEDIMENTS
SHEAR ZONE
UNCOMPAGHRE EXPL. Prospect hole Sample assays chemically 1%-10% U3O8
Prospect Hole No 1 Chemical Assay 0.15% U3O8
Prospect Hole No 2 Chemical Assay 0.72% U3O8
Prospect Hole No 3
Anomaly 9x background
Anomaly 8x background
Anomaly 5x background
Anomaly 2x background
Qtz. dike 0.25% Cu
PRE CAMBRIAN
TERTIARY VOLCANICS
DENVER AND RIO GRANDE WESTERN
CONTINENTAL DIVIDE
Harry Creek
Shawano
Millsurich Creek
Indian Creek
Buxton
Marshall Creek
Jay Creek
S34°37'E 1096'


T49N R5E
T48N, R6E NEW MEXICO P.M.
T47N R6E
MONARCH EXPLORATION COMPANY
MARSHALL CREEK AREA
CLAIM PLAT & ASSAY MAP
SCALE
0' 1000' 2000' 3000'
PLATE I
Indian Creek
Harry Creek
Millswitch Creek
Marshall Creek
Jay Creek
Buxton
Shawano
DENVER AND RIO GRANDE WESTERN
CONTINENTAL DIVIDE
BIG INDIAN NO 8
BIG INDIAN NO 9
BIG INDIAN NO 1
BIG INDIAN NO 2
OURAY NO 8
OURAY NO 9
OURAY NO 1
OURAY NO 16
APACHE NO 1
APACHE NO 16
APACHE NO 9
CHIPETA NO 8
CHIPETA NO 9
CHIPETA NO 1
CHIPETA NO 16
SPARKY NO 1
SPARKY NO 2
SPARKY NO 3
SPARKY NO 4
SPARKY NO 5
SPARKY NO 6
SPARKY NO 7
SPARKY NO 10
HIDY NO 1
HIDY NO 2
HIDY NO 3
HIDY NO 4
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RANGER NO 48
RANGER NO 49
RANGER NO 50
Approx. loc. of float which assayed 14% U3O8
Bulldozer cut 1.0% U3O8
FAULT 1000'
POST-HARDING SEDIMENTS
SHEAR ZONE
UNCOMPAGHRE EXPL. Prospect hole Sample assay chemically 1%-10% U3O8
Prospect Hole No 1 Chemical Assay 0.15% U3O8
Prospect Hole No 2 Chemical Assay 0.72% U3O8
Prospect Hole No 3
Anomaly 9x background
Anomaly 8x background
Anomaly 5x background
Anomaly 2x background
Qtz. dike 0.25% Cu
PRE CAMBRIAN
TERTIARY VOLCANICS
S34°37'E 1095'