HR

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

July 23, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 4148 (Uranium), Cinderella Uranium and Oil, Inc., (Lucky Strike claims), Larimer County, Colorado

Enclosed are the original and nine copies of a joint examination report on the subject property by Carl Seiser, Bureau of Mines, and Frank B. Moore, Geological Survey, in which denial of the application is recommended.

The applicant requested assistance to explore, by drilling and driving an adit, several small uranium-bearing pegmatite dikes.

We concur with the conclusions that the uranium is syngenetic with the pegmatite and that appreciable quantities of ore are not likely to be discovered by further exploration on this property, and with the recommendation that the application be denied.

for W. R. King
John F. Shaw
Superintendent of the Denver
Experiment Station

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

enclosures (10)
RUKingjmp

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 4148

Cinderella Uranium and Oil, Inc.

Lucky Strike Claims

Larimer County, Colorado

Uranium

Joint Engineering and Geological Report

by

Frank B. Moore, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

July 23, 1956

CONTENTS

	Page
Introduction and Summary	1
Acknowledgments	2
Location, Topography, and Climate	2
History and Production	3
Ownership and Extent	3
Present Status	4
Exploration and Development	4
Mining and milling equipment and other facilities	4
Geology	4
Proposed Exploration and Costs	7
Conclusions and Recommendations	9

ILLUSTRATIONS

Figure	Follows page
1. Location map, Lucky Strike claims, Cinderella Uranium and Oil, Inc., Larimer County, Colorado. DMEA 4148	2
2. Map showing general geology, location of claims, and locations of proposed drill holes, Lucky Strike claims, Larimer County, Colorado. DMEA 4148	3
3. Geologic map of the Lucky Strike No. 2 prospect adit, Larimer County, Colorado. DMEA 4148	5

DMEA 4148

CINDERELLA URANIUM AND OIL, INC.,
LUCKY STRIKE CLAIMS
LARIMER COUNTY, COLORADO

INTRODUCTION AND SUMMARY

Cinderella Uranium and Oil, Inc., 905 McBurnett Building, San Angelo, Texas, applied, on December 29, 1955, to the Defense Minerals Exploration Administration for aid to explore for uranium on the Lucky Strike claims. The applicant requested aid in drilling 3,600 feet of holes and an unstated amount of cross-cutting at a total estimated cost of $64,220. The cost of the crosscutting is not included in the application.

The claims were examined on July 5, 1956, by an examining team from the Federal Bureau of Mines and the U. S. Geological Survey.

The property consists of six contiguous unpatented claims on the north side of Cache La Poudre River in secs. 9 and 10, T. 8 N., R. 75 W., 6th. P.M., Larimer County, Colorado, at altitudes ranging from 8,300 feet to 9,300 feet. Development work consists of a 32-foot adit and several shallow surface cuts. No production has been made from the property or from the area.

The uranium occurs in small (1- to 6-foot) pegmatite dikes that cut Precambrian schists and granite. No uranium minerals have been identified.

Although one sample out of four was of ore grade, it is not believed that any appreciable quantity of ore can be developed on the property. It is, therefore, recommended that the application be denied.

ACKNOWLEDGMENTS

The examining team was accompanied by H. H. Enochs, Robert L. Tucker, E. Otto Williams, and Solomon Schlager. Mr. Enochs is field representative for Cinderella Uranium and Oil, Inc.

The Atomic Energy Commission was consulted before the examination was made.

Memorandums of W. P. Williams and John E. Crawford were noted.

LOCATION, TOPOGRAPHY, AND CLIMATE

The property consists of six unpatented claims in a solid block in secs. 9 and 10, T. 8 N., R. 75 W., 6th. P. M., Larimer County, Colorado (fig. 1).

The claims extend northward from the Cache La Poudre River up a steep hillside; altitudes range from 8,300 to 9,500 feet. A good graveled road, State Highway 14, follows the river and connects with U. S. Highway 287 at Ted's Place, 44 miles to the east. From Ted's Place it is 8 miles east to Fort Collins. Labor and supplies can be obtained from Fort Collins. The nearest railroad is the Colorado and Southern at Ted's Place or at Fort

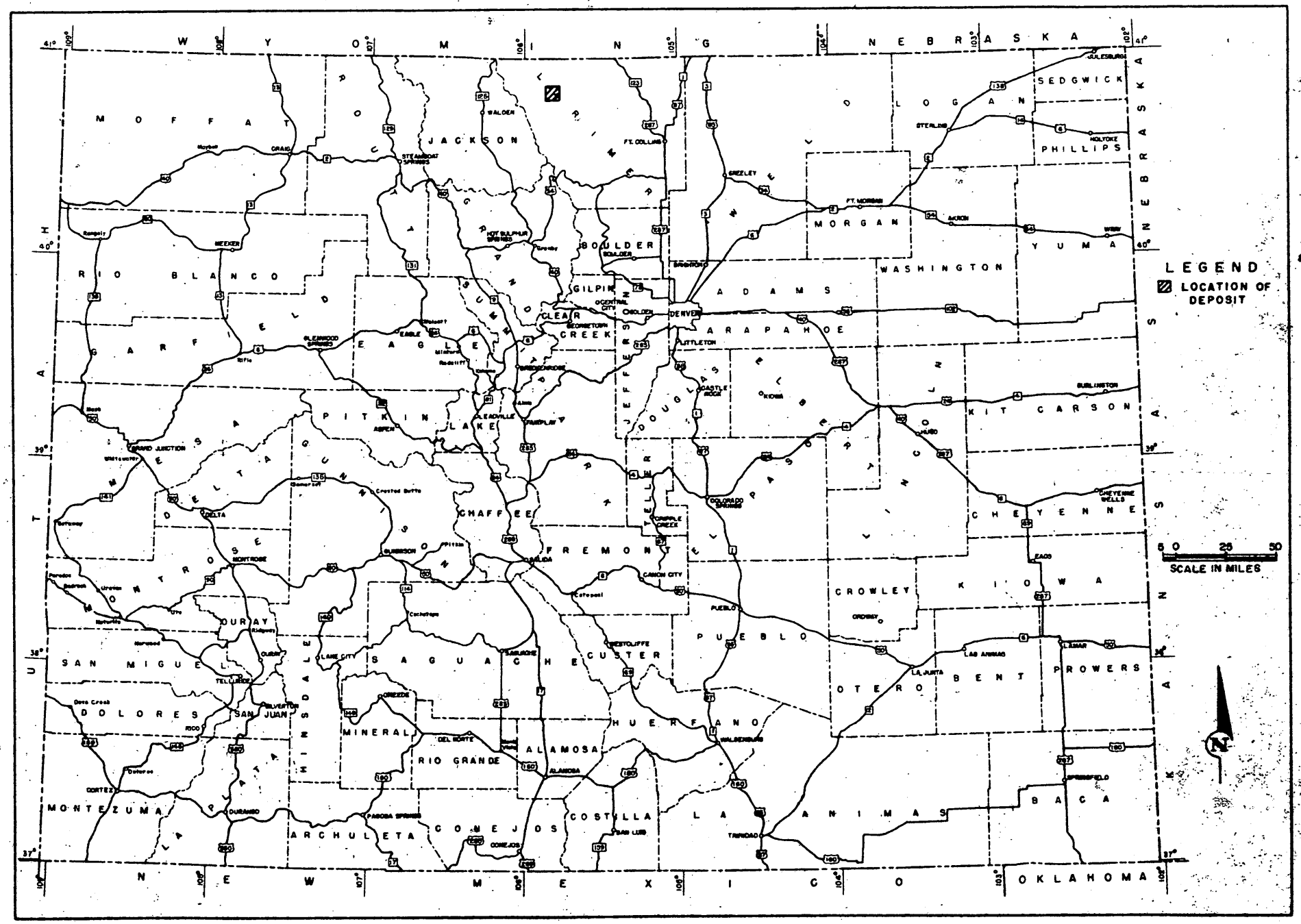


FIGURE 1 - LOCATION MAP, LUCKY STRIKE CLAIMS, CINDERELLA URANIUM AND OIL, INC., LARIMER COUNTY, COLO. DMEA 4148

Collins, and the nearest buying depot for uranium ores is probably Salt Lake City, Utah.

The climate is somewhat severe in winter for outside work and some interruptions can be expected following severe storms.

HISTORY AND PRODUCTION

The area was prospected for gold before 1900. The Lucky Strike claims were located in July 1955 and leased to the applicant in August 1955. No production has been made from the property to this time.

OWNERSHIP AND EXTENT

The Lucky Strike claims are recorded in the records of the County Clerk and Recorder of Larimer County, Colorado as follows:

Claim	Book	Page	Date Located	Date Recorded	Locator			
Lucky Strike 1	1022	440-1	7/15/55	9/15/55	Ira L.	Scott &	Solomon	Schlagel
Lucky Strike 2	1002	442-3	"	"	"	"	"	"
Lucky Strike 3	1002	444-5	"	"	"	"	"	"
Lucky Strike 4	1002	446-7	"	"	"	"	"	"
Lucky Strike 5	1002	448-9	"	"	"	"	"	"
Lucky Strike 6	1002	450-1	"	"	"	"	"	"

On August 25, 1955, a lease was signed between the locators of the claims and the Cinderella Uranium and Oil, Inc.

About one-half of Lucky Strike 3 claim is on patented land, otherwise the claims appear to be in good order.

PRESENT STATUS

Exploration and Development

The claims have been partly explored by a 32-foot adit and several small surface cuts.

Mining and milling equipment and other facilities

There is no mining or milling equipment on the property.

GEOLOGY

The Lucky Strike group of claims is near the contact between Precambrian schist and Precambrian granite. The contact, as shown in figure 2, is taken from the state geologic map and, of necessity, is much generalized. Rocks observed on the Lucky Strike No. 2 and No. 3 claims, the only ones examined, include schist, granite, quartz diorite, and pegmatite. The radioactive deposits are associated with the pegmatites which cut all other rocks.

The pegmatites occur as small dikes from a few inches to 6 feet wide. The larger dikes (over 2 feet wide) appear to strike either N. 35° W., or N. 60° E; many smaller dikes crisscross the area in all directions.

Five prospects were examined - one on the Lucky Strike No. 2 claim and four on the Lucky Strike No. 3 claim. For purposes of

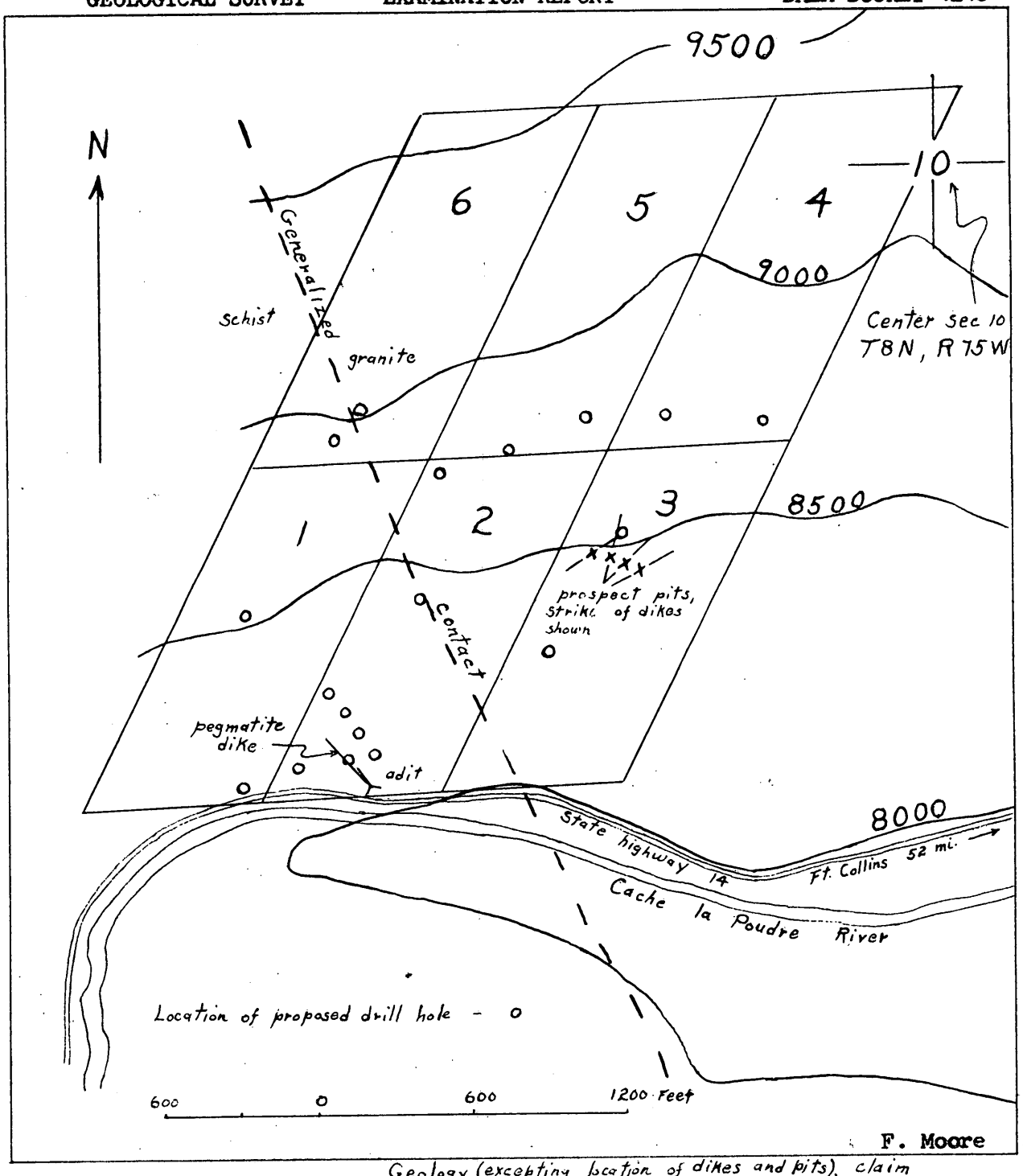
description, they will be called the No. 2 and, from east to west, the number 3a, 3b, 3c, and 3d prospects. The locations of the prospects on No. 3 claim, as shown on figure 2, have been estimated by the authors.

Lucky Strike prospect No. 2

A 2- to 3-foot wide pegmatite dike has been prospected by an adit 32 feet long. The wall rock is quartz diorite or possibly a very biotite-rich facies of the Precambrian granite. At the portal the pegmatite strikes N. 35° W. and dips 88° SW but 10 feet from the portal the dike turns toward the west and was not followed by the adit. A pegmatite on the left wall at the face may be part of the same dike. On the surface the dike can be followed up the hill to the northwest for perhaps 200 feet.

The highest radioactivity seen on the Lucky Strike group was at the portal of the adit where a count of 0.3 to 0.5 MR/hr was obtained. Several spots along the dike on the surface gave readings of 0.3 MR/hr and all the dike has radioactivity of several times background. The highest radioactivity occurs in the biotite-rich portion of the pegmatite. A sample taken by the examiners, of the most radioactive material in the pegmatite near the portal of the adit (fig. 3) contained 0.04 percent eU.

The dike is composed chiefly of orthoclase, plagioclase, quartz, and biotite in crystals as much as 1 inch in diameter.



Geology (excepting location of dikes and pits), claim boundries, and drill holes from applicants map

FIGURE 2 - MAP SHOWING GENERAL GEOLOGY, LOCATION OF CLAIMS, AND LOCATIONS OF PROPOSED DRILL HOLES, LUCKY STRIKE CLAIMS, LARIMER COUNTY, COLORADO.

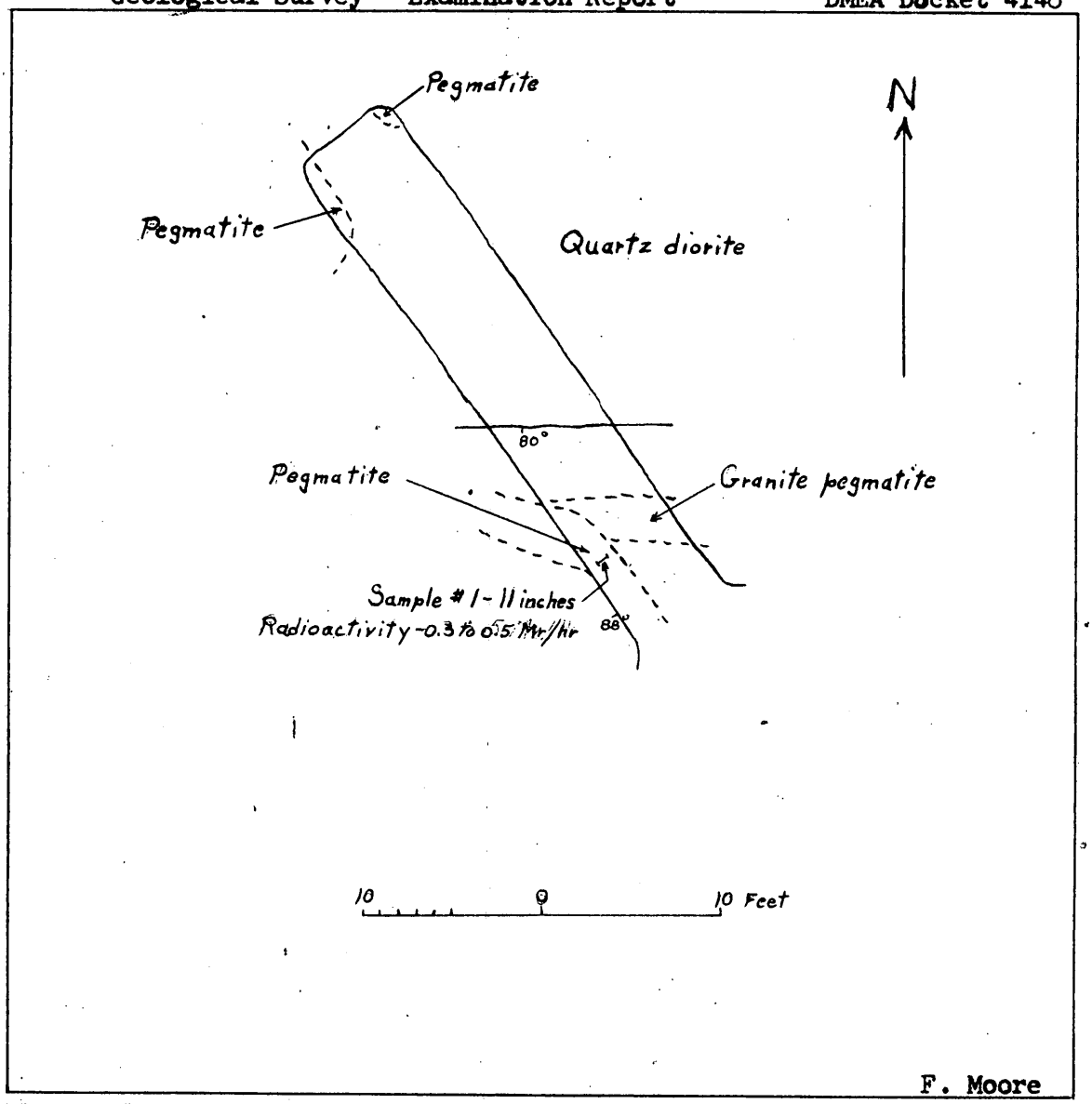


FIGURE 3 - Geologic map of the Lucky Strike No. 2 prospect adit, Larimer County, Colorado.

No uranium minerals have been identified by the operators nor were any seen during the examination. Study of a 3-pound sample under the binocular microscope also failed to reveal any uranium minerals Trace amounts of molybdenum and pyrite are present.

Three samples collected by the operators and assayed by Charles O. Parker contained the quantities of uranium indicated below. Samples 1 and 3 were taken near where the portal is now; sample 2 was taken about 200 feet to the northwest.

	Percent	
	eU_3O_8	U_3O_8
Sample no. 1 - chips taken across the dike	0.06	0.063
Sample no. 3 - 6" in center of the dike	0.15	0.130
Sample no. 2 - chips taken across the dike	0.01	0.013

A fourth sample, taken from rock since removed in making the portal, assayed 0.76 percent U_3O_8 but is believed to have been selected for grade.

Lucky Strike prospect No. 3a

A 4-foot wide pegmatite dike that strikes N. 60° E. and dips NW 45 to 55° is explored by a shallow pit. The dike cuts schist and is similar to the dike described above except for a reddish color due to weathering. The radioactivity of the dike in the pit is 0.1 MR/hr. A sample of the material in the pit, collected by the examiners, contained 0.01 percent eU.

Lucky Strike prospect No. 3b

A shallow pit at prospect 3b exposes a 2- to 3-foot wide, reddish, pegmatite that is similar to 3a. The dike strikes

N. 45° E. and dips 30 to 45° northwest. The country rock is quartz diorite. In the pit the dike gave a radioactivity reading of 0.1 MR/hr.

Lucky Strike prospect No. 3c

This dike is exposed at the back of a 12-foot trench. If the trench followed the pegmatite, the strike would be N. 15° E., but it may be as much as N. 50° E. The dip is 55° northwest. The dike is 1 to 2 feet wide and cuts schist country rock. The radioactivity of the dike is 0.1 MR/hr.

Lucky Strike prospect No. 3d

The prospect is on a 2- to 3-foot wide pegmatite that strikes N. 60° E. and dips 45° NW. A shallow pit exposes the pegmatite. Radioactivity at the pit is 0.5 MR/hr.

PROPOSED EXPLORATION AND COSTS

The applicant proposed an exploration program consisting of about 1 mile of difficult access road, 3,600 feet of core drilling, and an undisclosed amount of adit at a total estimated cost of $64,220. The costs follow:

Independent contracts

Bulldozing 60 days at $104/day	$ 6,240.00	
3,600 feet core drilling at $5/ft.	18,000.00	
Compressor, drills, & men for road building, 60 days $100/day	6,000.00	
Adit driving - no costs stated	_____	
Total independent contracts		$30,240.00

Labor and supervision

Field representatives, 12 months at $600/mo.	$ 7,200.00	
Assistant field representative 12 months at $600/mo.	7,200.00	
Geologist, 7 months at $50/day	10,500.00	
Engineering	1,000.00	
Ground scintillation grid survey	1,500.00	
Total labor and supervision		$27,400.00

Operating material and supplies

Explosives for road	$ 500.00	
Safety devices	200.00	
Fuel & operating expenses for vehicles	1,500.00	
Total operating material & supplies		$ 2,200.00

Operating equipment (rental)

Station wagon, 12 months at $4/day	$ 1,440.00	
Jeep, 12 months at $4/day	1,440.00	
Total operating equipment		$ 2,880.00

Rehabilitation and repairs

None

New buildings, improvements, installations

None

Miscellaneous

Secretarial work	$ 500.00	
Total miscellaneous		$ 500.00
Chemical analyses	$ 1,000.00	
Total estimated cost for 3,600 feet of drilling		$64,220.00
Estimated cost per foot		$ 17.84

The proposed amount of adit and the cost per foot were not stated by the applicant and were not included in the totals.

CONCLUSIONS AND RECOMMENDATIONS

The prospect at the adit on claim No. 2 is the best of the five examined. However, all the prospects are similar geologically - uranium-bearing minerals sparsely scattered through pegmatites that cut Precambrian rocks.

In all the occurrences the following factors are believed to be unfavorable for the formation of a commercial ore deposit: first, pegmatites in general have not been productive of commercial uranium ore; second, all the pegmatites examined were small - less than 6 feet wide at best - therefore eliminating the chance for

concentrations of uranium in favorable zones; and third, the grade of the deposits as shown by samples assayed and as indicated by radioactivity is not commercial (one sample probably selected for grade did assay 0.76 percent U_3O_8). There is little reason to expect that the grade will increase appreciably at depth. In veins where solutions circulate freely, uranium can be leached out of near surface parts but in this type of deposit where the uranium minerals are scattered through the rock, leaching would take place only at the surface.

For the above reasons it is recommended that the application by Cinderella Uranium and Oil, Inc., for DMEA assistance to drill for uranium on the Lucky Strike claims, Larimer County, Colorado, be denied.