

REPORT ON THE EXAMINATION OF URANIUM CLAIMS AT MUDDY GAP

Introduction and Location

On January 30, 1954, eight lead claims belonging to Mr. Henry K. Diehl of Lamont, Wyoming and Mr. Irving Hays of Rawlins, Wyoming, were examined by the author in the company of Mr. W. G. Bell, graduate student in geology at the University of Wyoming. The claims are in parts of Sections 28, 29, 30, 32, 33, T. 28 N., R. 89 W., Carbon and Fremont Counties, Wyoming. Access to the claims is gained by the first road west of Three Forks Junction leading south off Wyoming Route 287.

The claims lie in a Northwest striking band of pre-Cambrian crystalline rocks which are bounded on the southwest by northeast dipping reverse fault which brings the pre-Cambrian rocks in contact with Mesozoic and Paleozoic sediments. These sedimentary rocks are steeply dipping and form a series of prominent northwest striking ridges. The pre-Cambrian rocks are in a physiographic low between the ridges of sedimentary rocks on the southwest, and the plateau of flat lying Miocene and Oligocene boulder deposits on the northeast. The most common pre-Cambrian rock is quartz-diorite which contains a small amount of biotite. Amphibolites and a small amount of microcline pegmatite are also present.

Observations

Pit. No. 1. Radioactivity as high as seven tenths mr/hr milleroentgens/ per hour was detected in a gouge filled crush or shear zone. This zone is two feet wide and strikes N 60 E and dips 70 N. The pit is 10' x 10' x 10' and is excavated in gray diorite or gneiss. Most of the rock is kaolinized and friable, however patches are still well integrated. A small amount of galena is present as veinlets in the rock.

Pit. No. 2. An east-west striking, gouge filled zone which strikes 65° south, has five tenths mr/hr radioactivity. A black powder coats the walls of the gouge filled zone; the highest radioactivity came from this coating. Green streaks are present in the gouge. Gray gneiss or diorite similar to the rock in pit No. 1 is the rock into which the pit has been excavated. The pit is roughly 10' x 10' x 10'.

Pit. No. 3. Twenty-five hundredths mr/hr radioactivity was detected in a shallow bulldozer trench, however the source of radioactivity could not be discerned.

Pit. No. 4. Two tenths mr/hr radioactivity was detected associated with an unidentified green mineral. Galena occurs as veinlets in northwest striking vertical crushed zone. This zone is about a foot wide and the galena veinlets are about 1/4" wide and several inches long. Graphic granite was observed in this pit; however, the predominant rock is the kaolinized diorite or gneiss. The pit is roughly 10' x 10' x 10'.

Pit. No. 5. Fifteen hundredths mr/hr radioactivity was noticed on a slickensided fracture in a 10' x 10' x 10' pit which has been excavated in highly kaolinized shattered diorite or gneiss.

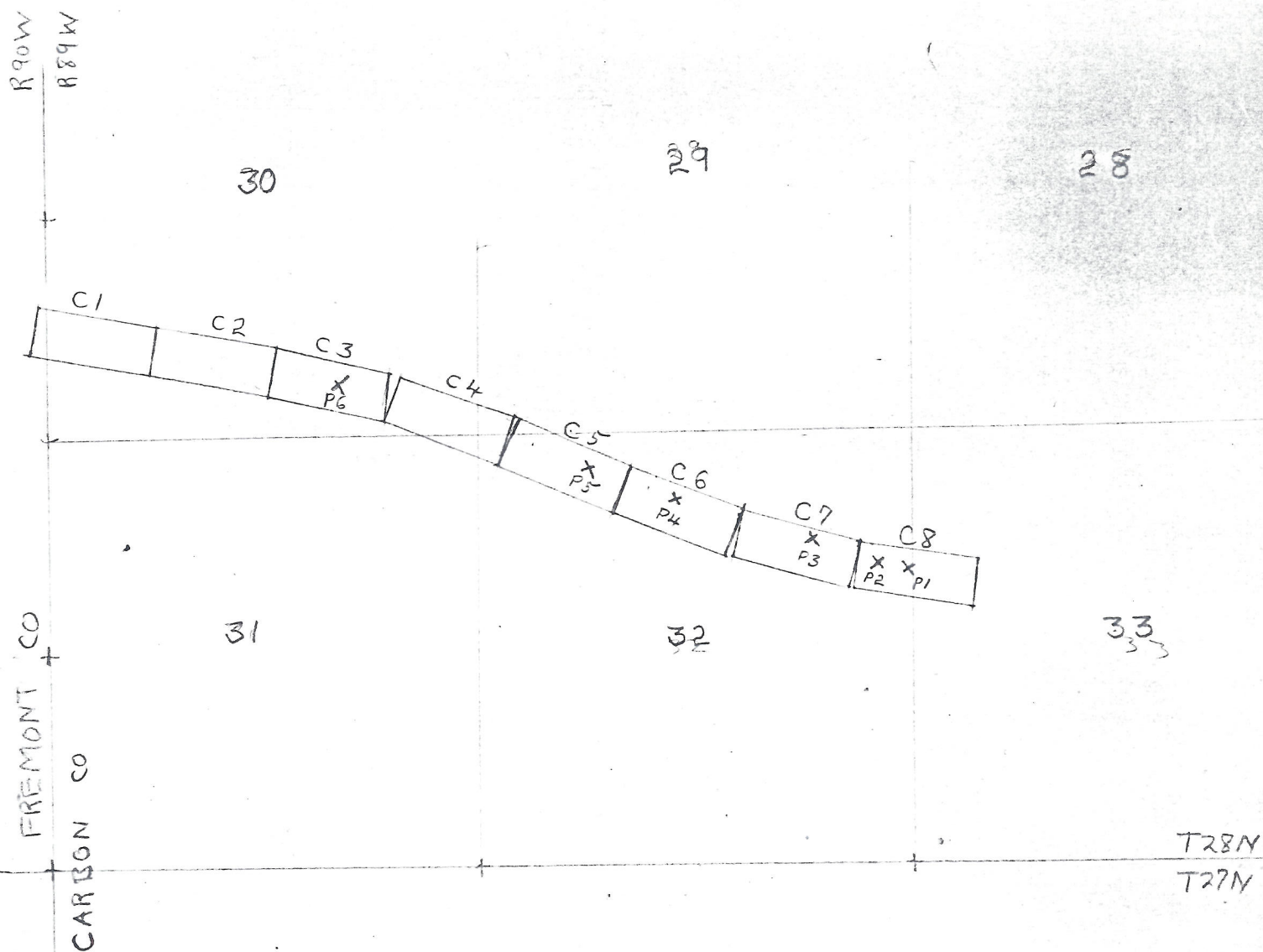
Pit. No. 6. No radioactivity was detected.

Conclusions

The uranium deposits occur in crushed zones, which probably are genetically connected with the Tertiary reverse fault east of the prospect pits. A knowledge of the origin of the deposits, whether by hydrothermal solutions or downward percolating ground water would be useful in predicting extension of the deposits. If the deposits originated by hydrothermal solutions there would be some reason to expect enrichment in depth. Deposits from ground water would not be expected to enrich in depth. If the age of the galena deposits could be determined, the age of the latest hydrothermal activity could be determined. If Tertiary hydrothermal activity could be proven in the area, there would be some reason to expect the uranium deposits to be of hydrothermal origin.

Whatever the age or origin of the deposits, the existence of richer deposits in depth will have to be proven by exploration.

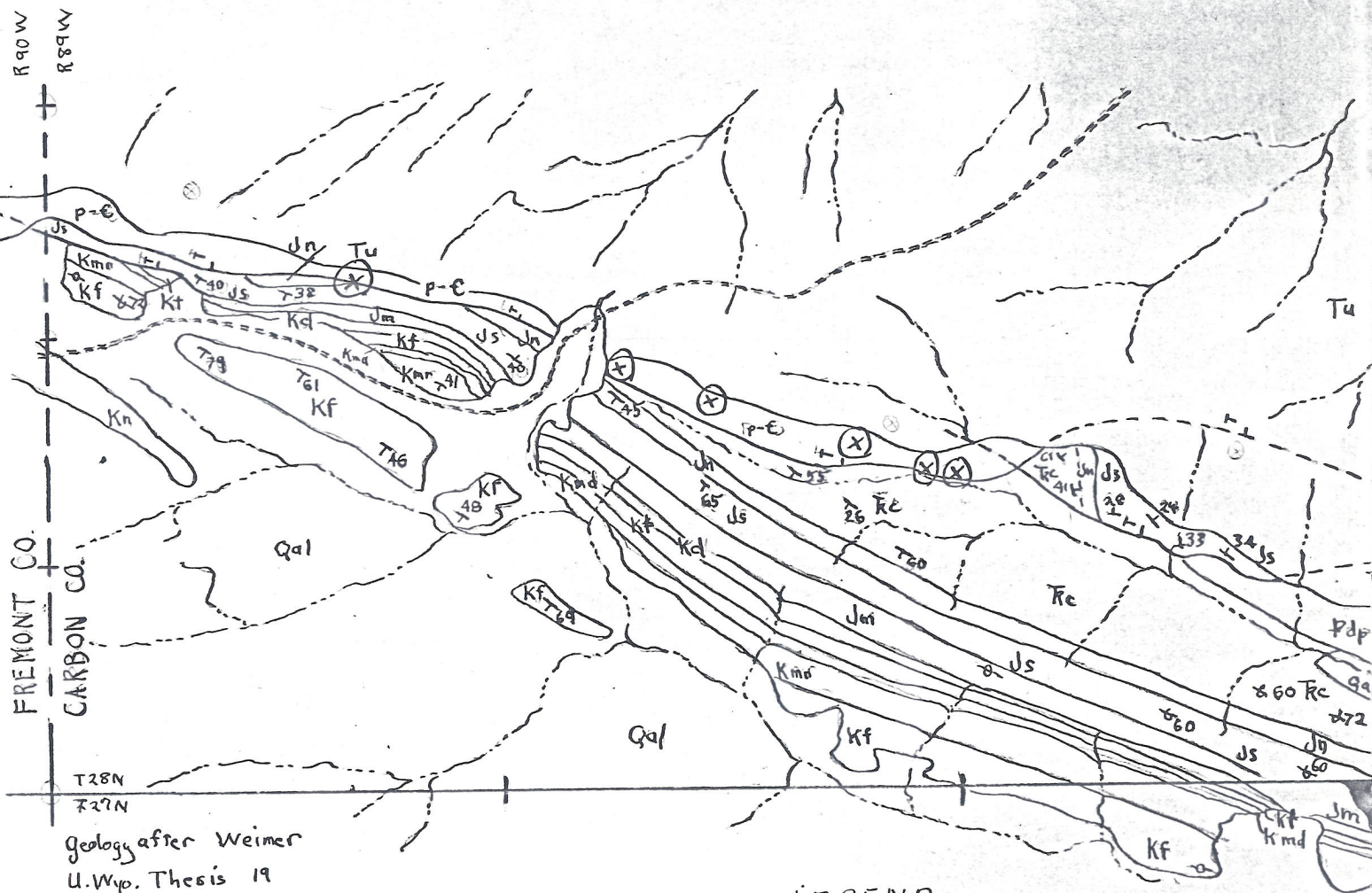
APPROXIMATE LOCATIONS DIEL-HAYS LEAD CLAIMS



C1 means claim number one

P1 means, first pit examined
Jan 31

PROSPECT PIT LOCATIONS DIEHL-HAYS URANIUM CLAIMS IN RELATION TO THE GEOLOGY



LEGEND

age	Formations
Quaternary - Qal	Quaternary alluvium
Tertiary - Tu	Tertiary undivided mostly Oligocene and Miocene
Cretaceous	Kf - Frontier
	Kmr - Mowry
	Kmd - Muddy
	Kt - Thermopolis
	Kcl - Cloverly
Jurassic	Jm - Morrison
	Js - Sundance
	Jn - Nuggett
Triassic - Tr	Chugwater
Permian - Pdp	Dinwoody & Phosphoria

Symbols

⊗ prospect pit location

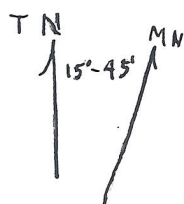
--- fault showing
direction of dip

~ formation boundary

~ stream

== road

λ dip symbol



Scale

2000' = 1"