

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

USGS-PFR NO. M-1455

TRACE ELEMENTS PRELIMINARY RECONNAISSANCE REPORT

DATE: March 18, 1954

EXAMINED BY: F. C. Armstrong, P. L. Weis, V. C. Fryklund, U.S.G.S.
Garth Crosby, Day Mines, Inc.

STATE: Idaho

DATE EXAMINED: March 11, 1954

COUNTY: Shoshone

DISTRICT: Svolution

- 1. NAME OF PROPERTY: Galena mine sec. 29 T. 48 N. R. 4 E.
- 2. DIRECTIONS TO PROPERTY: West of Wallace 1.7 mi.. up Lake Creek 1 mi.
- 3. OWNER OR LESSEE: American Smelting and Refi
ADDRESS: Wallace, Idaho
- 4. PUBLISHED REFERENCES: Ransome, F. L. and Calkins, F. C., 1903, Geology and ore deposits of the
Coeur d'Alene mining district, Shoshone Co., Idaho: U.S. Geol. Survey
Prof. Paper 62; Shenon, P. J., and McConnell, R. H., 1939, The silver belt of the Coeur
d'Alene district, Idaho: Idaho Bur. of Mines and Geol., Pamphlet No. 50.
- 5. MINE WORKINGS: 3,000-foot shaft. Approximately 10,000 feet of workings.
- 6. TYPE OF EXAMINATION: Reconnaissance for radioactivity.

- 7. RADIOACTIVE DEPOSIT: TYPE AND AGE: Vein—Age, probably pre-Cambrian
WALL ROCKS: Revett quartzite of the pre-Cambrian Golt series
ORE MINERALS, PRIMARY: Pitchblende
ORE MINERALS, SECONDARY: None
GANGUE MINERALS: Quartz and pyrite
ORE-GANGUE RELATIONSHIP: Intimately mixed
ATTITUDES: Strike approximately E-W. Dip 80° ± S. SHAPE: Thin veinlets
LENGTH (STRIKE OR OTHER): Maximum 3 to 8 feet WIDTH: Maximum 7 feet THICKNESS: Knife
edge to 2 1/2 inches
- 8. COUNTER TYPE: Precision Radiation Instruments Scintillator Mod. III.
BACKGROUND READING: 0.02 - 0.022 mr/hr AVERAGE READING FOR DEPOSIT: 0.26 mr/hr
Max. 20 mr/hr

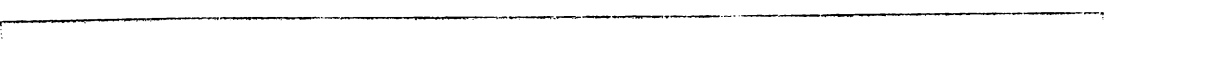
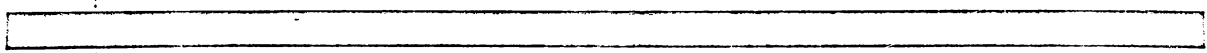
9. SAMPLE INFORMATION

SAMPLE NO.	LOT NO.	TYPE AND MATERIAL SAMPLED	CU	CHEM. ASSAY (PERCENT)	LOCATION
W125A		Veinlet 2 1/2" thick	10.26		NW wall S4E 13X-CN 2800' level
W129A		do 1 1/2" do	0.38		NW wall S4E 13X-CN 2800' level
*W130A		do 10" do	3.02		SE wall S4E 13X-CN 2800' level
W131A		do 5" do	0.51		S wall S103 E69DE 2800' level

(Spokane)

*Four 3/4 to 3/4-inch veinlets
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10. UNPUBLISHED REFERENCES: None



14. PROOF OF OWNERSHIP RECEIVED: Yes

15. SUPPLEMENTAL REPORT TO FOLLOW: Yes

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U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

USGS-PFR M-1155 210

TRACE ELEMENTS PRELIMINARY RECONNAISSANCE REPORT
SUPPLEMENTARY LABORATORY DATA

DATE OF REP. March 18, 1954

DATE OF GLD. August 22, 1954

STATE Idaho

REPORT BY F. C. Armstrong and P. L. Weis

COUNTY Shoshone

DISTRICT Evolution

1. NAME OF PROPERTY: Galena mine sec. 29 T. 48 N. R. 4 E.

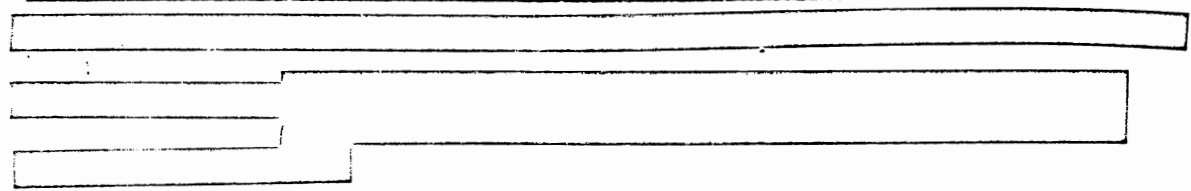
2. OWNER OR LESSEE: American Smelting and Refining Company, and Day Mines, Inc.
ADDRESS: Wallace, Idaho

3. ASSAYS				U			
SAMPLE NO.	LOT NO.	TYPE OF SAMPLE	MATERIAL SAMPLED	CU percent	(PERCENT)	(PERCENT)	(PERCENT)
W-128A	1685	Channel	Veinlet of quartz, pyrite, and pitchblende	0.34	0.33		
			Small piece of W-128A	32.0	27.1	X-ray identification run on this sample	
W-129A	1685	Channel	Same veinlet. 4 small vein-	0.36, 0.46	0.39		
W-130A)	1685	Channel)	lots of quartz,	10.2	(14.0, 13.5		
W-130B)	1685	Channel)	pyrite and pitch-	9.1	(11.7, 11.0		
			blende.				
W-131A	1685	Channel	Veinlet of quartz, pyrite and pitchblende	1.3	1.3		

4. MINERALOGY

See attached sheet 2

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6. SUPPLEMENTAL REPORT TO FOLLOW: No

14627

DISTRIBUTION

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(1) MIN. DEP., BOZEMAN	(1) MIN. DEP., (GEOLOGICAL)	(1) MIN. DEP., BUTTE
(1) MIN. DEP., BUTTE	(1) MIN. DEP., (GEOLOGICAL)	(1) MIN. DEP., BUTTE
(1) MIN. DEP., BUTTE	(1) MIN. DEP., (GEOLOGICAL)	(1) MIN. DEP., BUTTE
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(1) MIN. DEP., BUTTE	(1) MIN. DEP., (GEOLOGICAL)	(1) MIN. DEP., BUTTE
(1) MIN. DEP., BUTTE	(1) MIN. DEP., (GEOLOGICAL)	(1) MIN. DEP., BUTTE

V.G.

PRR M-1455 SID
August 22, 1954

Galena mine
SHEET 2

An X-ray diffraction pattern for that part of sample W-128A indicated above showed uraninite and galena to be present in the highly radioactive material separated from the channel sample.

Sample W-128A was cut $2\frac{1}{2}$ inches thick and along about 6 inches of strike of a quartz-pyrite-pitchblende veinlet at its most radioactive part. Sample W-129A was cut $1\frac{1}{2}$ inches thick along the same veinlet along about 18 inches of strike. Samples W-128A and W-129A were cut side by side with W-128A being the more northeasterly of the two. W-128A was cut immediately adjacent to the fault shown on the map. The veinlet from which these samples were cut is about $2\frac{1}{2}$ inches thick next to the fault; it thins along the strike and disappears about 8 feet from the fault. The wallrock adjacent to the veinlet is silicified and red; this alteration extends about 6 inches into the hanging wall, and about 12 inches into the footwall of the veinlet.

Sample W-130 was cut 10 inches long across silicified and slightly red wallrock. In that 10 inches the sample cut two $\frac{1}{2}$ -inch and two $\frac{3}{4}$ -inch veinlets of quartz, pyrite and pitchblende. The sample was cut in the southeast wall near the bottom of the drift. The veinlets could be traced for only 2 to 3 feet along the strike.

Other veinlets similar to those sampled were seen in the back and northwest wall of the excavant. These veinlets are from $\frac{1}{4}$ inch to a knife edge thick. They are thickest near the fault. None of them exceeded 3 feet in length, and most are discontinuous. Their distribution in the back and walls is not uniform.

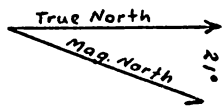
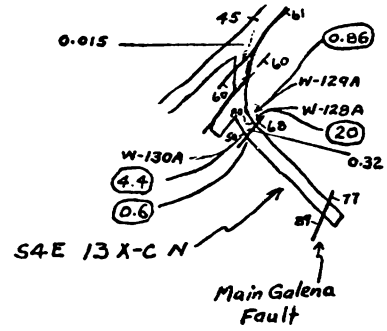
None of these veinlets were seen in the hanging wall of the fault. Only one spot showing abnormal radioactivity was found in the hanging wall of the fault. It is on the southeast wall immediately above the fault, but the cause of the abnormal radioactivity is not apparent. The rock is not silicified or red.

The attitude of the veinlets suggests that they are filled tension cracks genetically related to the fault. If they are filled tension cracks, veinlets should occur in the hanging wall of the fault. However, in the exposure in S4E 13X-G1 the veinlets are restricted to the footwall of the fault.

A zone a few feet on either side of the fault should be prospected. If the veinlets occur with regularity and in sufficient abundance there may be uranium ore along the fault.

Sample W-131A was cut in the south wall of S10E E69DE. At this spot quartz-pyrite-pitchblende veinlets occur in red, silicified Revett quartzite. The veinlets are about $\frac{1}{8}$ inch thick and are irregular and discontinuous. Locally there are swellings in the veinlets that measure as much as 5 inches by 5 inches. It was from such a swelling that sample W-131A was cut. The zone of veinlets, which is probably not over 12 inches thick, can be traced in the south wall for a strike length of about 6 feet. The west end of the zone is cut off by a fault. The Company reports that when S10E E69DE was being driven pieces of quartz-pyrite-pitchblende veinlet were found in this fault where it cut the Silver vein. This same fault cuts a quartz-siderite vein. The quartz-siderite vein does not appear to be part of the Silver vein, but rather a branch vein that runs into the hanging wall of the Silver vein. The uranium-bearing veinlets approximately parallel the Silver vein whereas the quartz-siderite vein parallels the Silver vein for 6 feet east of the fault and then branches off to the southeast. This branching of the quartz-siderite vein forms the eastern end of the uranium-bearing veinlets. The uranium-bearing veinlets also appear to terminate up-dip against the quartz-siderite vein. The radioactive occurrence in S10E E69DE does not warrant more exploration at this time.

It appears from a brief look at the company's maps that the occurrence in S10E E69DE is below the "EW(?)" strand of the Galena fault and the occurrence in S4E 13X-G1 is above the "EW(?)" strand, and, therefore, that a projection cannot be made from one occurrence to the other even though they appear to line up pretty well on a map.



EXPLANATION

60
Fault, showing dip

60
Strike and dip of beds

85
Vein, showing dip

W-129A —
Sample number and location
0.015

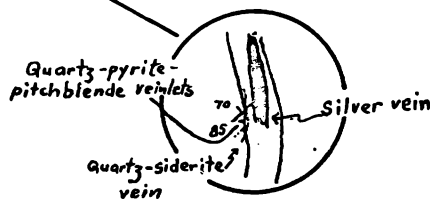
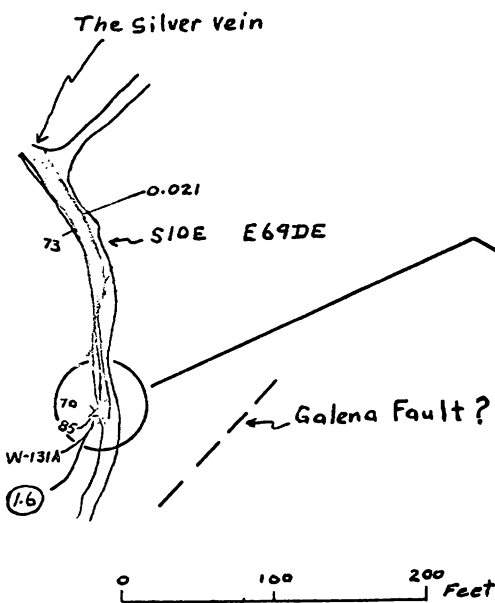
Milliroentgens per hour. Background
in drift with "Scintillator" held in
center of drift

(20)

Milliroentgens per hour; with
"Scintillator" held against
feature indicated

S4E 13 X-C N

Number of mine working place



14627

GEOLOGIC AND RADIOMETRIC MAP SHOWING THE RADIOACTIVE OCCURRENCES ON THE 2800-FOOT LEVEL OF THE GALENA MINE, SHOSHONE COUNTY, IDAHO