

FILE NE-D-8

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY H. W. Hodson
DATE(S) EXAMINED Dec. 10-13, 17-19, 22, 23, 1952
Jan. 7, 1953

2. STATE Idaho COUNTY Shoshone

DISTRICT None

1. SAMPLES NUMBER	TYPE AND WIDTH	RADIOACTIVITY	
		POISSON	GM
FE719	Mineralized zone in amphiboleous quartzite (D.H. 17 level)	.029	.020
FE402	PbS-rich mineralized zone. 8.0 feet. (D.H. 18 level)	.053	.045

NEAREST TOWN Kellogg, Idaho

PROPERTY Barker Hill Mine

LOCATION:
SECTION 12, T. 18 N., R. 22 E.,
S. 23, 24

3. TYPE OF EXAMINATION:
Underground radiometric and geologic.
Helium Model 939 Scintillation
EL-Scintics Model ST-3 Geiger counter.

4. DIRECTIONS TO DEPOSIT:
The mine is entered through the Kellogg Tunnel, whose portal is within the town of Kellogg. Other tunnels and shafts are located near the head of Gardner Gulch.

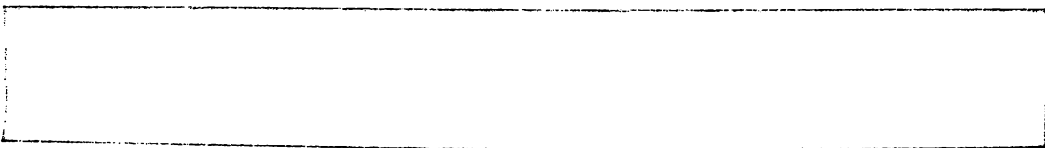
5. OWNER OR OPERATOR: Barker Hill & Sullivan Mining & Concentrating Co.
ADDRESS: Kellogg, Idaho

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS:
Production started in the late 1890's. Normal production at present is about 2000 tons per day (2 shifts). Approximately 62 miles of tunnel workings, more than 200 miles total open workings.

7. RADIOACTIVITY:
Average underground Sr entire mine approx. 40 counts per second on Scintillation. 17 level or level near #3 shaft. 300 counts/second on Scintillation (Sample # FE719). 18 level or level in #3 crosscut near junction with the New Mine crosscut. 500 counts per second on Scintillation. (Sample # FE402).

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

- A. Mine lies below N-S-trending ridge of the Coeur d'Alene Mountains, immediately west of Gardner Gulch.
- B. The radioactive material sampled appeared to be a leached secondary deposition in minor fractures and fissures of a granite-rich mineralized zone. Much of the post-mining oxide deposition on the drift and crosscut walls throughout the mine shows slight radioactivity. All occurrences were in the St. Regis or Parott members of the Belt Series quartzites.
- C. The ore minerals are galena and sphalerite in a siderite-quartz gangue. Pyrite, chalcocite and tetrahedrite are present in minor quantities.

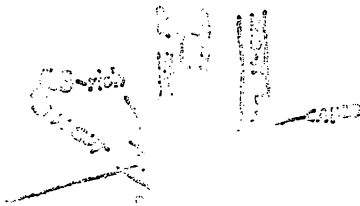


11. PROOF OF OWNERSHIP RECEIVED? No
PERMISSION TO PUBLISH RECEIVED? No

13. OTHER INFORMATION

See attached

12. MAP:



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PRELIMINARY RECONNAISSANCE REPORT

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19. OTHER INVESTIGATIONS:

1. U.S.G.S. Professional Paper 62, 1903-1907.
2. U.S.G.S. Survey Bulletin #26, pp. 274-305, 1905.
3. U.S.G.S. Survey Bulletin #752, 1923.
4. Occurrence of the Silver-Lead Ores in the Wardner District.
O. H. Hershey, Mining & Scientific Press, Vol. 104, June 1, 8, 13, 1912.
5. Origin of Lead, Zinc and Silver in the Cour d'Alencas.
O. H. Hershey, Mining & Scientific Press, Vol. 107, Sept. 27, Oct. 4, 1913.
6. Origin and Distribution of Ore in the Cour d'Alencas; O. H. Hershey
Bunker Hill's Ore Deposits in Complex Fractures; R. H. McConnell
Mining and Mining Journal, pp. 40-42, August 1939.
Geological Investigation of the Lead-Silver Ores of the
Bunker Hill & Sullivan Mine at Kellogg, Idaho.
John H. Moore (M.Sc.), Queen's University, 1940-41.
Origin of Ore Deposits of the Wardner District, O. H. Hershey, 1911.
Origin and Mineralization of the Bunker Hill Mine.
U. S. Geological Report, September 25, 1943.
20. Review of Geological Problems Related to the Bunker Hill Mine.
U. S. Geological Report, September 16, 1944.

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SUPPLEMENT TO PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY: D. J. Hakland and J. Barlow
DATE(S) OF THIS EXAMINATION: February 13, 1956

SUPPLEMENT NO. 1
DATE OF THIS REPORT: February 11, 1956
DATE OF PREVIOUS REPORT: January 7, 1953

1. SAMPLE DATA

NUMBER	ASSAY (% U_3O_8)		OTHER ELEMENTS CHEMICAL
	RADIOMETRIC	CHEMICAL	
Bunker Hill			
B.H. 4220	0.14		Radioassayer
B.H. 4221	0.50		"
B.H. 4222	0.18		"
B.H. 4223	0.35		"
no number	2.7		"
AEC			
44334			
44335			
44336			

2. STATE Idaho **COUNTY** Shoshone

DISTRICT Yreka

NEAREST TOWN Kellogg, Idaho

PROPERTY Bunker Hill Mine

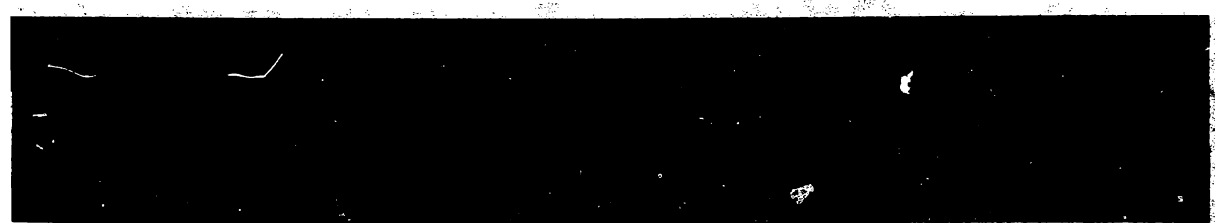
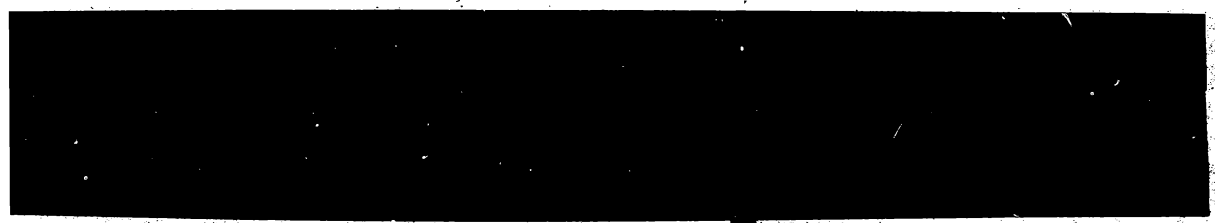
LOCATION:
SEC. 11, 12, 13 **R.** 2E
13, 14

3. OWNER OR OPERATOR: Bunker Hill & Sullivan Mining & Concentrating Co.
ADDRESS: Kellogg, Idaho

4. ADDITIONAL INFORMATION ON MINERALOGY, RADIOACTIVITY, GEOLOGY, MINING, ETC.

Since the previous investigation considerable exploration has been completed on the 1900 level. This exploration is along the Gate fault which has a general North trend and dips steeply to the West. Locally the fault has an East-West trend and dips to the South. A Northwest drift along the footwall of the Gate fault had to be abandoned because of caving and heavy ground. A x-cut was then driven westward from a parallel drift which intersected the Gate fault 30' N. of the caved face. Drifting was then continued to the North along the hanging wall side of the fault, and it was in this area that significant radioactivity was encountered. Heavy ground has again been encountered and the operators are spiling but the drift may again have to be abandoned. Uraninite occurs as blebs and small veinlets in the metasediments of the Revett or St. Regis member of the Belt series (Precambrian). Other minerals present are pyrite, galena, tetrahedrite and chalcopyrite in a siderite and quartz gangue. The zone appears to be approximately 10' wide and goes off into the west wall at an acute angle with the drift. The exposed length of the radioactive zone is about 50'. The entire zone is cribbed and prevented thorough sampling and evaluation of the zone. The previously caved face which was abandoned 30' to the South was then checked and indicated 3 times background. A select sample from this muck pile tested by a radioassayer at the Bunker Hill smelter assayed 0.14% eU_3O_8 .

B.G. 0.03 MR/HR Precision 111 Scintillator
Average in radioactive zone - 1.2 MR/HR
Maximum 3.0 MR/HR



7. TO BE FOLLOWED BY:
ADDITIONAL SUPPLEMENTARY REPORT X **MEMORANDUM REPORT** _____ **SOUND REPORT** _____

8. THIS IS FINAL REPORT. NO