



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Socorro Office of Mineral Resources

Field Office

P. O. BOX 1423
SOCORRO, NEW MEXICO 87801

December 30, 1968

NM Mine File No. 227

Mr. Felix F. Mengis
Glenwood, New Mexico 88039

Dear Mr. Mengis:

I am sorry for the delay in sending the assay results, but the laboratories have been quite busy. We had each sample analyzed three ways: standard assays for certain elements like gold and silver, semiquantitative spectrographic analysis for 30 common elements, and atomic absorption analysis for tellurium.

Listed below are the 21 samples taken from your various claims. The sample numbers are the ones we use. As you know, one sample from a vein is not an average, but it will give an idea of the minerals present.

We will be back in the area as soon as the weather permits next spring. I hope to see you then.

Sample 5 was taken along 5 feet of the hanging wall on the lower cut near the middle of Lone Star 2. This was a real good one. I think this is where the Forest Service got 2.29 ounces of gold and 8.82 ounces of silver.

Sample 6 was across the vein. It was not as good as expected. I think the Forest Service got 0.837 ounces of gold and 2.67 ounces of silver.

Sample 7 was a grab sample of the dump near samples 5 and 6. The dump was better than the vein.

Sample 8 was from the inclined adit on Lone Star 2. This adit was partly filled with water. The sample was taken about head-high on the east wall.

Sample 9 was a grab sample of the dump near sample 8.

I would consider samples 5-9 to be worth looking into. Sample 10 was taken along the vein near Gold Hill at the northeast end of Lonestar 2.

Sample 17 was from the reddish rock in the Moose cut.

Sample 18 was from the white rock in the Moose cut.

Sample 19 was the black rock, probably basalt, from northeast of the Moose. This was the one that was supposed to be high in titanium.

Sample 20 was from the fluorspar outcrop north of Holt Tunnel.

Sample 21 was from around the portal of Holt Tunnel. We could not sample in the tunnel because of the water.

Sample 23 was a grab sample of the Red Shaft dump.

Sample 24 was from the Liberty Bell where you and your brother took us. This one looks good for silver and fluorspar.

Sample 25 was from Lone Star 3. For some reason it was not fire assayed for gold and silver. We will re-run it.

Sample 26 was taken from the Texas.

Sample 27 was from the Juniper vein in Holt Gulch. As you said, it may be spotty.

Sample 28 was from along the mine track on the Spar 1 claim on Little Whitewater Creek.

Sample 29 was from Log Cabin No. 2 north of Kitt Cabin, and on the slope near the Spar mine.

Sample 30 was from a prospect on the south slope above Kitt Cabin.

Sample 31 was from 5 prospects under the bluff south of Kitt Cabin and above sample 30.

Sample 32 was from the tunnel north of Kitt Cabin near the pipe coming down from the Spar mine.

As was expected, calcium assays were high for the samples containing large amounts of fluorspar (calcium fluoride). The slightly-above-normal amounts of cobalt, chromium, nickel, and scandium in the samples taken between Red Shaft and the Texas claim suggests that there might be a basic rock near the surface in that area. The amounts of those four metals are too small to consider mining, however. None of the samples assayed very high in copper, lead, or zinc. The rare earths--lanthanum and yttrium--were in higher-than-normal amounts in the high fluorspar

F. F. Mengis

- 3 -

12/30/68

samples. This is to be expected, usually, and if the fluorapatite deposits are ever worked, it would pay to consider recovering the rare-earths as byproducts. Samples 21 and 24 assayed above-normal molybdenum, but still far below commercial grade. The 15 other elements (iron, magnesium, etc.) occurred in amounts normally expected in most common rocks.

Atomic absorption analysis showed that only trace amounts of tellurium were present in all samples except No. 26 (Texas claim) where the sample assayed 0.0002 percent. This is still too small to consider mining.

Ronald B. Stotelmeyer

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Attachment

cc: W. A. Vogely *ret*
C. W. Merrill ***
O. M. Bishop *ret. Denver*
L. F. Heising
W. E. Burleson *x*
R. L. Lowrie *reg. director OSM*
H. C. Meeves *Denver*

Roberta Queen

Sample	5	6	7	8	9	10	17	18	19	20	21
Standard Assays											
gold--ounces	1.30	0.02	0.38	0.40	0.25	0.04	0.01	0.02	0.01	0.005	T
silver--ounces	7.90	0.44	0.92	0.56	0.20	0.22	0.15	0.08	0.07	0.08	0.26
fluorpar--percent							1.16	4.40		43.82	
Spectrographic Analysis (percent)											
iron	3.	5.	2.	5.	3.	3.	1.5	1.5	5.	2.	2.
magnesium	0.5	2.	0.5	2.	1.5	1.	0.05	0.07	0.05	1.	0.7
calcium	0.5	2.	0.7	0.7	5.	0.1	0.3	1.	0.05	plus 20	0.5
titanium	0.15	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0.2	0.15	0.2
manganese	0.05	0.1	0.05	0.07	0.07	0.05	0.03	0.03	0.02	0.15	0.03
silver--ounces	2.9	0.29	2.03	0.203	0.145	0.203	0.02	0.02	T	N	T
arsenic	N	N	N	N	N	N	N	N	N	N	N
gold--ounces	0.87	N	1.45	N	N	N	N	N	N	N	N
boron	N	N	N	N	N	T	T	T	T	T	T
barium	0.03	0.2	0.03	0.15	0.1	0.07	0.015	0.015	0.03	0.05	0.15
beryllium	T	T	T	T	T	T	T	T	T	T	T
bismuth	N	N	N	N	N	N	N	N	N	N	N
cadmium	N	N	N	N	N	N	N	N	N	N	N
cobalt	T	T	T	T	T	T	N	N	N	T	T
chromium	T	T	T	T	T	T	N	T	T	T	T
copper	0.005	0.01	0.03	0.005	0.005	0.003	0.003	0.01	0.003	0.001	0.002
lanthanum	N	0.003	N	0.003	0.002	N	0.003	0.003	N	0.005	0.003
niobium	0.005	0.001	0.005	0.001	0.003	0.005	N	N	T	N	0.01
nickel	N	T	T	T	N	T	0.001	0.002	T	N	0.001
lead	T	T	T	T	T	T	T	0.005	T	T	T
lead	0.005	0.05	0.05	0.015	0.007	0.005	0.007	0.005	0.003	0.002	0.007
antimony	N	N	N	N	N	N	N	N	N	N	N
scandium	T	T	T	T	T	T	N	N	0.002	0.001	T
tin	N	N	N	N	N	N	N	N	N	N	N
strontium	N	0.015	N	0.015	0.02	N	N	N	0.02	0.015	0.01
vanadium	T	0.02	0.003	0.015	0.01	0.01	0.001	0.002	0.02	0.015	0.005
tungsten	N	N	T	N	N	N	N	N	N	N	N
yttrium	0.001	0.002	0.001	0.002	0.002	0.001	0.002	0.002	0.002	0.001	0.001
zinc	N	0.07	0.1	N	N	N	N	N	N	N	N
zirconium	0.007	0.02	0.007	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.03

N: not detected

T: insignificant or trace amounts

Sample	23	24	25	26	27	28	29	30	31	32
Standard Assays										
-ounces	T	0.02	----	T	0.005	0.01	0.01	T	T	T
-ounces	0.16	16.16	----	0.2	0.22	0.20	0.28	T	T	T
-percent		52.60	----			21.60	35.32			40.54
Graphic Analysis										
(cent)										
	7.	5.	7.	10.	5.	1.	2.	3.	2.	2.
	0.5	1.	2.	1.5	1.	0.2	0.3	0.7	0.1	1.
	10.	10.	2.	0.05	0.5	20.	15.	1.	0.05	plus 20
	0.2	0.15	0.5	0.5	0.2	0.1	0.15	0.3	0.15	0.3
	0.03	0.1	0.1	0.03	0.05	0.02	0.1	0.07	0.05	0.1
-ounces	N	0.029	N	0.015	0.029	0.015	N	N	N	N
	N	N	N	N	N	N	N	N	N	N
-ounces	N	N	N	N	N	N	N	N	N	N
	T	T	T	T	T	T	T	T	T	T
	0.07	0.07	0.03	0.05	0.2	0.03	0.1	0.1	0.015	0.05
	T	T	T	T	T	T	T	T	T	T
	N	N	N	N	N	N	N	N	N	N
	N	N	N	N	N	N	N	N	N	N
	0.002	T	0.001	T	T	N	T	T	N	T
	0.007	T	0.005	0.015	T	T	N	N	T	T
	0.003	0.003	0.005	0.005	0.015	T	T	0.002	0.001	T
	0.002	0.003	0.003	0.002	N	0.005	0.005	0.005	0.002	0.007
	0.001	0.015	0.002	T	0.007	N	0.002	0.001	0.001	N
	0.001	0.001	0.001	T	T	N	T	T	0.001	T
	0.005	0.002	0.002	T	T	T	T	T	T	T
	0.002	0.003	0.005	0.005	0.015	0.003	0.003	0.007	0.001	0.002
	N	N	N	N	N	N	N	N	N	N
	0.002	0.001	0.001	0.001	T	N	T	T	N	T
	N	N	N	N	N	N	N	N	N	N
	0.05	N	0.01	N	N	N	N	N	N	N
	0.015	0.01	0.02	0.03	0.01	0.002	0.005	0.01	0.001	0.01
	N	N	N	N	N	N	N	N	N	N
	0.003	0.007	0.003	0.002	0.001	0.01	0.02	0.003	0.002	0.015
	N	N	N	N	N	N	N	0.03	N	N
	0.01	0.015	0.03	0.05	0.02	0.03	0.05	0.05	0.015	0.03