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(1)

Re: H.H. and Shuck (2-36)
Docket No B-ND-3740

W. B. Goking

Pursuant your request I have reviewed the situation ~~in connection~~ regarding the application for ~~applic~~ additional loan submitted by the above captioned borrower. The granting of additional ~~metal~~ premium metal prices to the project, particularly with respect to zinc, places the project in a more favorable position that that shown in my previous reports. The applicant proposes to ship to the custom milling plant of the U.S. Smelt, Refining & Mining Co at Salt Lake and lists the various blocks of ore and computations regarding costs and anticipated profits. I would call attention to ~~the~~ ~~fact of~~ the possibility that the ore might be ~~purchased at a stockpile or~~ handled locally at the plant of the Tennessee-Schuylkill Mining Co. This company ~~has~~ at the present time has some ~~ore~~ milling capacity ~~in their mill~~ beyond what ~~they~~ it is able to furnish from ~~their~~ its mine and has significant a willingness ~~in some instances~~ in some instances to accept small lots of ~~milling~~ ore on a custom milling basis. Also, the company has applied for a Defense Plant Corporation loan for the purpose of rehabilitating and increasing the capacity of ~~the~~ its plant and the plant encourages custom milling of local ores. In the event that this ~~a~~ local milling outlet materializes, the subject property would of course benefit in large measure.

~~Commenting upon~~

I would comment upon the project and the application for additional loan as follows:

Development:

The lower or No 5 level development proved disappointing in that the short ~~developed~~ opened on the No 4 level above was not proven to continue with commercial values down to this horizon. However, since my last visit to the property, and just prior to shutting down the ~~end of the drift~~ ~~[illegible]~~ applicant reported encountering 20 feet of ore in the end of the main drift which, according to his assays, averages:

Width	Oz Au	Oz Ag	% Pb	% Zn
29"	.085	5.47	4.47	11.62

From my knowledge of the applicant's character and the general efficiency of the conduct of his work I believe that ~~[illegible]~~ the above sampling can be accepted as essentially correct.

A raise which was driven between ~~the~~ levels No 5 and No 4 exposed an irregular stringer of ore, described in my progress report dated Jan 30, 1943, with average metal contents as follows:

Width	Oz Au	Oz Ag	% Cu	% Pb	% Zn
30"	.01	1.54	.41	1.39	7.24

The ground through which most of the No 5 level development passed is badly broken and irregular (unlike the condition on No 4 level) and it is possible that this last development presages a return to a normal vein condition.

Ore
Values and Reserves

I do not have a copy of the map to which the applicant refers in his calculations regarding ore blocks available in the mine and therefore I cannot comment specifically upon them at this time.

The samples which were taken by Mr. Rockwood at the time of the original examination of the project indicate an average in the then developed portion of the mine on the 4th level, and just above and below that level as follows:

~~Width Oz Au Oz Ag~~

~~developed portion of the mine, on the No 4 level and just above [illegible], as follows:~~

Width	Oz. Au.	Oz. Ag.	% Pb	% Zn
30"	.03	6.21	1.63	10.4

~~Copper is not present in appreciable amounts and was not assayed.~~

Ore of the above grade would have a net value at the mine, assuming that it is shipped to the U.S. Smelter, Ref. and Min. Co. at Salt Lake, as follows:

Gold .02 x .75 x $31.818	=	$ .48
Silver (6.21 − 1) x .75 x .71	=	2.77
~~Copper, lead — No pay~~		
Zinc 208 x .60 x .42 x $.0825	=	4.32
Premium: 208 x .77 x .0825	=	13.21
		20.78
Less: trucking $1.50		
Freight 5.50		
Treatment 3.25		
		10.25
Net value at mine.		$ 10.53

After allowing for some dilution, and mining cost estimated ~~at~~ at $4.00 per ton, a ~~would be available~~ profit of around $5.00 per ton ~~would be available on the same~~ is indicated.

No TP It is difficult to estimate the tonnage of ore of this grade which is available here. The vein on the No 3 level is almost completely oxidized and therefore not practically millable, and the No 4 level values do not extend into the No 5 level below. The block sampled is approximately 160 feet long, and if it is assumed that it extends with similar values 25 feet above and below the level, there is available in the block approximately 1600 tons of ore. If milled locally the ore would net the mine an additional $6.50, represented by the savings in freight and the gain per ton of the trucking cost if it were shipped to Salt Lake.

The ore indicated by the sampling in the raise could not be profitably shipped to Salt Lake. As noted in my progress report, referred to above, this ore is irregular and would need to be mined selectively and would tend to maintain the grade of the sampling. It seems probable that a small tonnage is available here which would yield a profit if milled locally.

~~Insufficient work has been done in the end of the No 5 level to permit~~

While it seems probable that some ore of good grade will be available in the end of the No 5 level insufficient work has been done ~~here~~ to estimate ~~assign any~~ a probable tonnage to be derived from this place.

Conclusion:

A small ~~moderate~~ tonnage of ore which could be shipped at modest profit to Salt Lake appears to be assured and if, as seems probable, a local milling outlet ~~is available~~ becomes available this ore ~~material~~ would yield a substantial profit and other lower grade material ~~would become be~~ in the mine could be profitably handled.

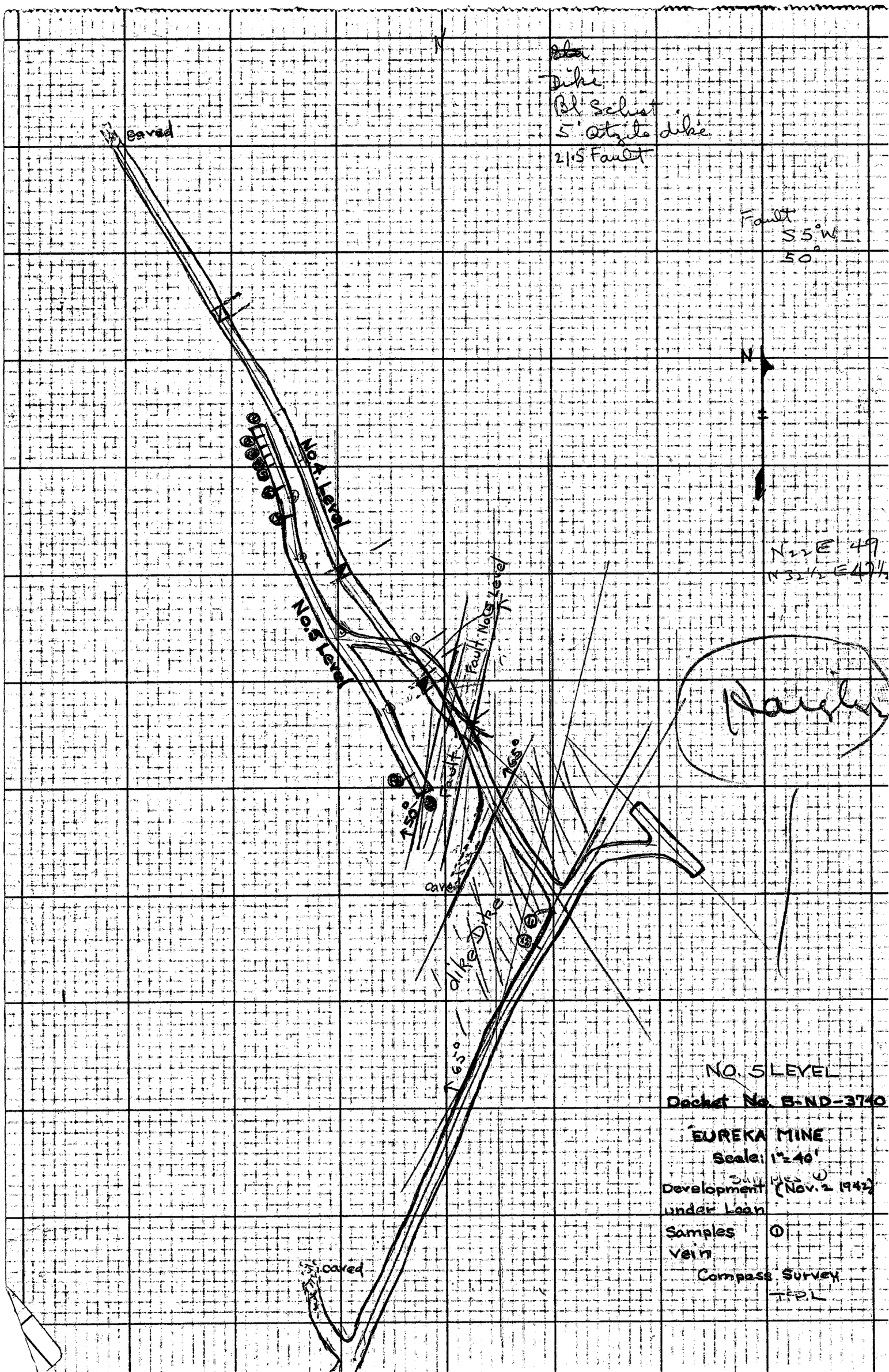
The ore showing in the end of the No 5 ~~Because of the substantial~~ level merits further development.

I believe that the situation ~~holds offers~~ is sufficiently attractive to justify granting an additional loan to the project.

T. P. Lane
Sup. Engineer

~~I believe that a further project would result in at least partial payment of the loan funds already advanced to the project.~~

~~I believe that the situation is sufficiently attractive to justify the belief~~



N
Dike
Bl Schist
5' Qtzite dike
21.5 Fault
caved
Fault
S 5° W
50°
N
No.4 Level
No.5 Level
Fault No.5 Level
N22E 49
N32½E 47½
Fault
65°
50°
caved
dike Dike
65°
caved
NO. 5 LEVEL
Docket No. B-ND-3740
EUREKA MINE
Scale: 1"=40'
Samples ①
Development (Nov. 2 1942)
under Loan
Samples ①
Vein
Compass Survey
T.P.L.

F. D. Shuck.

			Au	Ag	Cu	Pb	Zn	Insol	Fe	S	CaO	Tons	Ag	Cu	Pb	Zn	R. Shipper	Bonus
8-4	44	1	.01	6.6	.65	4.5	13.4	42.2	11.9	16.7	3.1	34,689	242.1	4.50	3302	9833	70.28	1326.00
8-23	"	2	.01	5.1	.55	3.8	11.7	41.1	9.6	14.2	2.0	37,339	191.4	4.10	2091	8737	28.27	147.91
10-27	"	3	.01	6.3	.70	4.15	10.4	52.1	10.85	12.55	0.8	38,258	240.0	5.36	3175	7958	48.47	67.90
1-12	45	4	.015	7.7	.68	4.05	10.2	53.8	10.4	13.9	–	32,306	248.8	6.98	2617	6590	44.61	611.16
2-2	"	5	.012	7.8	.65	4.85	11.25	40.8	14.1	17.0	2.0	41,273	322.7	8.69	4013	9209	139.56	515.49
4-25	"	6A	.02	10.3	1.23	5.95	12.4	43.1	14.0	16.8	1.9	25,105	261.6	8.03	4177	8706	196.84	707.07
6-30	"	7	.015	8.05	.99	5.98	10.3	50.0	12.0	14.2	2.7	29,086	236.1	5.56	3314	5786	74.49	57.68
			.011	7.36	.89	4.55	11.42					249,156	1832.7	44.12	22,689	56,919	604.02	791.31
																		78.92
																		493.64
																		4826.68

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