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Reconstruction Finance Corporation Arizona Records

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Indiana Mine
Silver Bell Dist. Pima Co

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
REPORT OF SUPERVISING ENGINEER

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1. NAME AND ADDRESS OF APPLICANT

Name:	Byrd & Dillard
Address:	P.O. Box #5226
City and State:	Tucson, Arizona
Correspondent:	A. R. Byrd, Jr.
Address:	P.O. Box #5226
City and State:	Tucson, Arizona

NOTE:

The applicant requested a development loan in the amount of $20,000 in June, 1943, but when I visited the mine shortly after that date I found that only a very small portion of the upper main workings was accessible, and the applicant then asked (letter forwarded to Washington) that action on the application be postponed until the 200 foot level was made accessible for examination. At the applicant's request I again visited the property on October 19th and 20th. I found the 200 foot level generally accessible, though in poor condition. I found also that the ore body had been worked out above this level and to some extent by underhand stoping below the level. The 300 foot level and the 400 foot level were not accessible. Each of these levels is reported to contain good exposures of ore, and apparently no stoping was done there. The applicant now requests that the amount of the loan requested be amended from $20,000 to $5,000, this smaller sum to be used for the purpose of making the lower levels accessible.

2. CHARACTER OF PROJECT

Development of silver-lead-copper deposit

3. LOCATION OF MINE

The mine is located in the Silver Bell mining district Pima County, Arizona. The nearest rail point is Naviska, Arizona, 24 miles easterly by good dirt road from the mine; and the nearest supply center is Tucson, 48 miles southeasterly from the mine by good dirt road, part of which is paved highway.

4. APPLICANT

The Applicant is a partnership composed of Mr. A. R. Byrd and Mr. George Dillard. Mr. Byrd is the principal in the enterprise and Mr. Dillard is to have direct charge of the work. Mr. Byrd is operating the Silver Hills mine, some 2 miles distant from the subject property, under R.F.C. loan granted in September, 1942, (Docket No. B-ND-4061), and reference is made to that docket regarding his character and qualifications. Mr. Dillard is now superintendent of operations at the Silver Hills mine.

5. LOAN REQUESTED

$5,000, for accessibility Purposes (see Preface Note).

6. DESCRIPTION OF PROJECT

The property comprises 14 patented claims and 1 townsite, all held by the applicant under a lease and option to purchase agreement with the owners. A copy of the agreement accompanies the application.

The mine is located in a low hill area near the south end of the Silver Bell Mountains. The topography in the immediate vicinity of the mine is quite rugged. The country rock is an east-west trending belt of sedimentary formation - chiefly limestones. Occasional bands of schist and lime-shales and quartzite are present and the whole has been subject to an intense movement resulting in a complicated pattern of fault fissures.

Development on the property has been performed principally in a broad fracture zone which strikes roughly NE-SW and cuts through alternate bands of shale limestone and quartzite. A vertical shaft has been sunk some 400 feet in this fracture zone, and a number of levels turned off from it, and a substantial amount of ore was stoped and shipped from the workings. Several tunnels have been driven on other veins in the immediate vicinity of the shaft. These veins are similar in character to the main vein and strike and dip approximately parallel with it. None of the development in these other veins approaches the main vein development in importance and further work on them is not contemplated at the present time.

The application contains a fragmentary history of the mine operation, dating from about 1900, as given to the applicant by parties connected with its operations at various times in the past. Apparently the greater part of the production was made during the earliest development period, although a substantial production, with considerable development, was made during 1923, 1924, and 1925. Since that time activity at the property has been confined to occasional small scale leaser operations and some sorting and shipment of dump material. No records are available regarding past production, but it is stated that several thousand tons were shipped and that the grade of the ore was high (20 oz ag - 20 % lead, or better). Judging by the size of the mine openings, and the size of the residual dump and its value, the statement appears to be reasonably correct.

Early this year (1944) the applicant sampled the mine dump and moved in a gas shovel and commenced shipping the dump. After shipping approximately 700 tons of the dump, averaging 7.7 oz Ag - 5.6% Pb - .90% Cu, it was found that there was no profit margin in the operation with only an "A" premium for lead, and the work was discontinued pending attempts to obtain a "B" premium for lead. After considerable delay, this additional premium was granted, with a monthly quota, however, which, at a practical rate of shipping, nullified the effect of the increased price. The applicant is now corresponding with the Quota Committee requesting that the "B" premium now applying to dump be transferred to mine ore and that the quota be reduced to zero.

The dump ore shipped was loaded without sorting and was taken from several places in the dump. The dump is estimated to contain approximately 4,000 tons and the grade of material shipped together with sampling indicates that most of the material would hold to very nearly the grade of the above shipments, and about 1,500 tons would certainly do so.

The shaft, in which the present interest in the property is centered, is sunk vertically in a broad fracture zone. The fracture zone at this place cuts a shaly lime rock. The zone is some 10 to 15 feet wide, with poorly defined walls, and strikes NE-SW and dips slightly from the vertical toward the NW. The zone is mineralized throughout, and the ore body which

6. DESCRIPTION OF PROJECT (Cont)

was mined in the upper part of the shaft workings occurred as a more heavily mineralized band 2 to 4 feet wide in about the center of the fracture zone. The zone is competely oxidized in the upper part of the mine with sulphides beginning to appear at about the 180 foot level. It is reported that the mineralization is all sulphide on the two lower levels and this statement is corroborated by the dump material from those levels. Lead predominates in the top of the mine with copper content of the ore increasing with depth and predominating on the 400 foot level, according to reports, and to dump material.

The shaft contains 1½ wall compartments (the hoisting compartment measures only 31" x 40" in the clear). Levels are turned off at 50 feet, 100 feet, 180 feet, 300 (?) feet and 400 (?) feet. The ground is firm, and while the timbering is light and rather crudely placed, it adequately serves its principal purpose of supporting guides and a ladderway in the ½ size manway compartment. The shaft is in good shape and the timber intact to the 180 foot level, except for the need for replacing occasional pieces of lagging, lining, and ladders. Below the 180 foot level the shaft can be seen to be open and in good condition, but it contains no timbers. A man was lowered by rope to the 300 foot level just prior to my visit to the property. He was not able to see all of the level nor to sample properly because of the extremely bad condition of the air. He reported that no safe landing was available at the 300 foot level, and the hole was open to water and refuse timber at 20 feet below the level. I did not consider the set-up safe and therefore did not attempt to go down.

The applicant submits a sketch showing samples taken just previous to my visit, and I am attaching to this report a rough sketch which I made showing the workings and my samples. It will be seen that while occasional samples show a fair grade of ore, no mineable ore body can be said to be available and it is obvious that the ore shoot is worked out above the 180 foot level and slightly below the level.

The vein on the northeast end of the 180 foot level breaks up against a limestone body. A small amount of good silver-lead ore is claimed to have been mined above and below the level along the contact and in a fracture in the limestone. The applicant presents samples from the roof here and from a winze. The working places were open but no means for staging and sampling was available. In any event, no important amount of ore is available above the level at this place.

The possibilities in the property would appear to depend upon the continuance of the main ore shoot below the 180 foot level, and the character of the whole fracture zone in the sulfide horizon. Among the several 300 foot level samples which the applicant submits is one (No. 38) taken across a band of ore 36" wide. I talked with the man, whom I believe to be reliable, who took this sample. He described the ore as being all sulphide, chiefly iron and lead, in a well-defined shoot some 80 feet long with ore continuing in the face. He reported heavy iron in the balance of the vein which he was able to inspect, and he said that drifting on the level in both directions from a shaft crosscut totals about 150 feet.

Reports regarding a good width of copper ore in the bottom of the shaft are persistent. One of the parties who makes this claim, (Mr. Higgins), is the same person who, before it was made accessible, described the 180 foot level fairly accurately, and thus there would seem to be some basis for believing that the description of the situation at the bottom of the shaft is about correct. He states that a crosscut was driven 20' in ore

6. DESCRIPTION OF PROJECT (Cont)

at 400 feet. No drifting was done. Two carloads of ore were produced in the last of the shaft work and the crosscut. He states that the first carload was shipped without sorting and assayed 4 % copper and that the second carload was sorted to 9 % Cu, and the ore in both lots contained good silver values. My sample No. 6A was a grab taken from a pile of fine heavy sulphide material on the dump which undoubtedly came from either the 300 or the 400 foot level.

7. COMMENTS AND RECOMMENDATIONS

I believe that the chances for finding an extension of the main ore shoot into the 300 foot level are sufficiently attractive to justify the necessary expense of making this level accessible. Whether the amount of loan funds requested would suffice to reach the 400 foot level would depend upon the conditions of the shaft below the present water level. The shaft which is sunk on a ridge and is reported not to have made much water; and there is no record of waste material having been dumped into the shaft. The job of making the lower level accessible therefore would appear to consist principally of bailing and removing timbers which had fallen in from above and the placing of a sufficient number of stulls to permit hanging ladders to reach and inspect the bottom.

In commenting favorably upon this project, I would point particularly to the impressive size and grade of the dump. Although this dump is made up of sorting discards, together with all the development material from the shaft workings, it falls only little short of being of ore grade. The vein is quite strong and is well mineralized in its upper oxidized portion, and would seem to offer especially attractive possibilities in the sulphide zone.

T. P. LANE
Supervising Engineer

TPL/sbm

1—038 a

ENCLOSURE 2803723

DEPARTMENT OF THE INTERIOR

GPO

6—6945

XXXXXXXXXXXXXXXXXX

325 Heard Building
Phoenix, Arizona
May 10, 1945

TULLY - Asst. Chief - Mining Section - RFC - Washington 25, DC

Re: Byrd and Dillard - Docket No. ND-5999

Please find enclosed herewith two copies of my Progress Report on captioned docket.

T. P. LANE
Supervising Engineer

TPL:sbm

Enc:
2c - Progress Report
w/ attachments

RECONSTRUCTION FINANCE CORPORATION
MINING SECTION
PROGRESS REPORT OF SUPERVISING ENGINEER
****

Borrower: Byrd and Dillard
Docket No: MD-5999
Date of Visit: April 28, 1945
Date of Report: May 9, 1945

The captioned Borrower-partnership was granted a loan in the sum of $5,000 in November, 1943. The loan funds have been exhausted and the Borrower has spent several thousand dollars in addition, and expects to lay out another thousand dollars or so before realizing any sizeable returns from ore shipments. In view of the above the Borrower has requested RFC to waive the requirement of the agreement presently in force and instead permit the operations to be carried forward on a royalty agreement with the Borrower paying RFC $2.00 per ton for all ore shipped. The letter requesting this change was forwarded to RFC in Washington by Mr. Gohring on May 1, 1945.

Following is a description of the work performed at the property since the date of granting the loan and the present condition of the mine.

The shaft was repaired to the No. 2 Level (depth 180 feet) and a headframe with bin installed. A hoist house, change house and three tent houses and a superintendent's house were constructed. The shaft is equipped with a cage and a counterbalance. Surface equipment includes a 320 cu. ft. portable compressor, and an automobile engine driven hoist. In addition miscellaneous tools and some timber were purchased; also a certain amount of road work was done. In the mine rehabilitation of the northeast end of the 100 foot level and of the 180 foot level was in progress at the time of this visit. The Borrower intends to ship old stope gob material from these places and to mine pillars and fringe material in the end of the old stope. Because of the present condition of the workings and the irregularity of the ore showings, it is not possible to estimate with any degree of accuracy the amount and grade of shippable material available. It seems probable, however, that several carloads of gob material can be shipped and a certain amount mined from pillars and from the northeast end of the stope, and possibly from the southwest end of the 180 foot level. The Borrower states that the property has been granted a "B" premium, zero quota, on ore from the mine. (Dump ore has a "B" premium with a tonnage quota). The attached photos show some of the above-mentioned improvements, and the dump.

The original purposes of the loan were to rehabilitate the shaft and the 300 foot level and, if possible, the 400 foot level. No work was done, however, toward these objectives, but instead the property was equipped to mine and ship ore from the upper levels, and underground work was directed toward this objective. Work at the property has, until recently, been intermittent and because of the probable early termination of the premium price program emphasis has been placed on mining of ore rather than upon the rehabilitation of the lower levels. The Borrower also plans to ship select dump material and has already sent out two cars (returns not yet available).

The 300 foot level (actual depth 265 feet) was entered by descending in a bucket below the 180 foot level. There are no shaft timbers below the 180 foot level, and no landing is set at the 265 foot level. The bucket, however, could be swung over into the crosscut at this level. The shaft could be seen to be blocked with dry muck 12 to 15 feet below the level. It was not apparent whether the shaft here is bridged with muck or is filled to bottom; and the water which was formerly present has dried up or has receded below the top of the muck.

Crosscuts have been driven southeast and northwest from the shaft on the 265 foot level. The southeast crosscut is short and is entirely in the country rock of the vein. The northwest crosscut is approximately 65 feet long and passes through the fracture zone or vein. As on the levels above the zone is broad with poorly defined walls, particularly on the southeast where parallel fracturing in diminishing intensity continues to the edge of the shaft. The northwest wall is fairly definite at approximately 40 feet from the shaft, and dips 5° to 10° from the vertical in a northwest direction. Drifts are turned off in a northeast and southwest direction at about the center of the fracture zone where mineralization in the zone is most intense. The drifts are open and in good condition, with no timber supports, and the better showings of mineralization were sampled. The location and results of the sampling are shown on the accompanying map. The mineralization is principally pyrite which is generally abundant, frequently occurring as soft granular masses along gouge planes in the vein fractures. Some copper is present as chalcopyrite, and a fair amount of galena, and silver, is present in an irregular narrow stringer beginning just northeast of the crosscut and continuing to the southwest face of the drift.

The indifferent ore showings and large amount of pyrite in the 265 foot level drifts beneath the area stoped above is disappointing and suggests that the ore shoot bottoms somewhere between this level and the 180 foot level. There is a possibility, however, that the ore shoot rakes northeast beyond the present northeast face of the drift, or that it might be present in the southeast wall near the end of the northeast drift. The Borrower plans to explore both these possibilities, and also to break into the galena stringer with the hope that it will make into a worthwhile body of ore above the level.

T. P. LANE
Supervising Engineer

TPL:sbm

Attachments:
Map
Assay Certificate
Photos

No. 205 La

Phoenix, Arizona,
Oct. 24, 1944.

CHAS. A. DIEHL

ARIZONA ASSAY OFFICE

Phone 3-4001 — 815 North First Street — P. O. Box 1148

This Certifies That samples submitted for assay by Mr. T. P. Lane. contain as follows per ton of 2000 lbs. Avoir.

INDIANA MARKS No.	Width	SILVER Ounces	SILVER Tenths	VALUE (Oz.)	GOLD Ounces	GOLD Hundths	VALUE (Oz.)	TOTAL VALUE Of Gold and Silver	% PERCENTAGE COPPER	% PERCENTAGE LEAD	REMARKS
1 A	30"	16.	5			.01	$.35		12.44	.10	
2 A	32"	13.	7			.02	$.70		2.40	3.00	
3 A	27"	9.	5			.01	$.35		2.21	4.89	
5 A	9"	2.	1		Trace				.85	8.21	
6 A	Muck	9.	1			.01	$.35		2.16	3.20	
7 A	50"	4.	6			.02	$.70		.25	.40	
7 B	53"	6.	0			.02	$.70		.25	2.82	
8 A	50"	5.	3			.02	$.70		.14	.40	
9 A	Dump	7.	4			.01	$.35		2.44	5.61	
10		8.	4		Trace				1.90	2.70	

Charges $ 25.00

Assayer ARIZONA ASSAY OFFICE

CAD

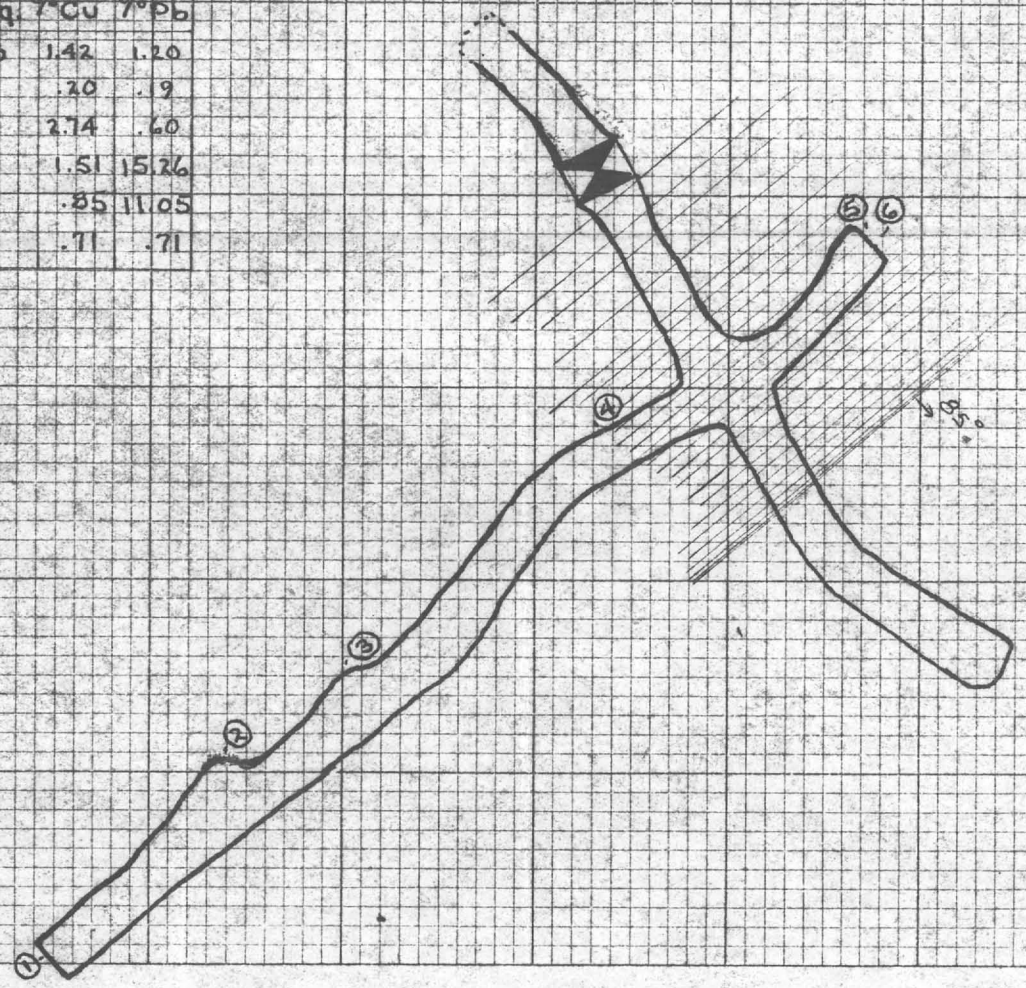
DOCKET NO. ND-5999

265 FT. LEVEL-INDIANA MINE

Scale: 1" = 20'

Apr. 28, 1945

Sample	Width	Oz Au.	Oz Ag.	% Cu	% Pb
No. 1 C	42"	.01	8.8	1.42	1.20
2 C	44"	.01	1.0	.20	.19
3 C	24"	.01	3.7	2.74	.60
4 C	17"	.01	14.5	1.51	15.26
5 C	20"	.06	13.2	.85	11.05
6 C	30"	.01	3.0	.71	.71



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DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
SOUTHWEST EXPERIMENT STATION

ARIZONA DISTRICT
WESTERN REGION

BOX 4097
UNIVERSITY STATION
TUCSON, ARIZONA

May 16, 1945

Mr. T. P. Lane,
325 Heard Bldg.,
Phoenix, Arizona.

Dear Mr. Lane:

Thanks very much for the copy of your Progress Report on the Indiana mine (Byrd and Dillard), which I return herewith.

Yours very truly,

Thomas C. Denton

Thomas C. Denton, Mining Engineer,
For J. H. Hedges, Chief, Tucson Division,
Mining Branch.

Enclosure 2803723

B

No. 190 La

Phoenix, Arizona,

June 12, 1944.

CHAS. A. DIEHL

ARIZONA ASSAY OFFICE

Phone 3-4001 — 815 North First Street — P. O. Box 1148

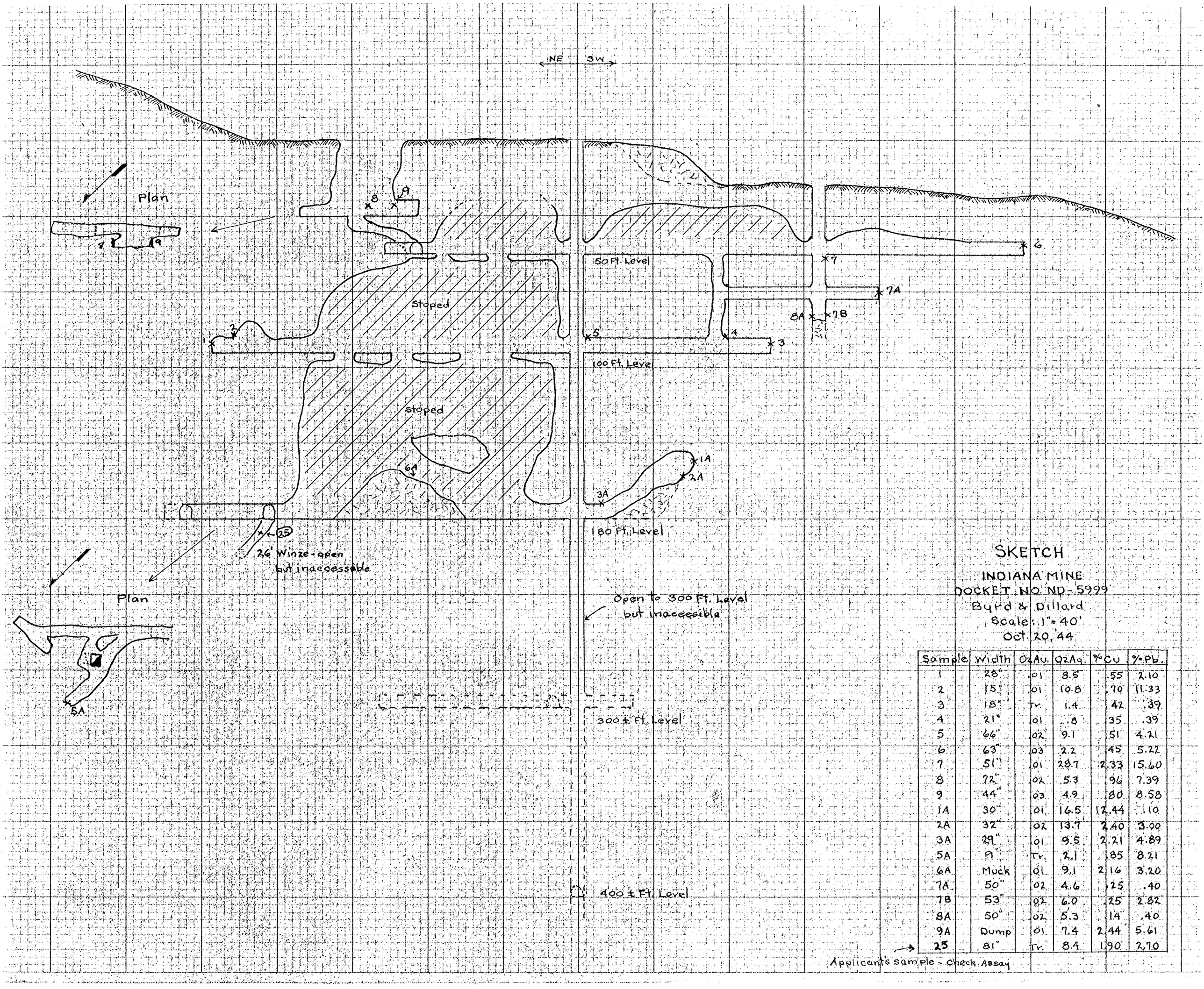
This Certifies *That samples submitted for assay by* Mr. T. P. Lane. *contain as follows per ton of 2000 lbs. Avoir.*

BYRD-INDIANA

No.	Width	SILVER Ounces	SILVER Tenths	VALUE (Oz.)	GOLD Ounces	GOLD Hundths	VALUE (Oz.)	TOTAL VALUE Of Gold and Silver	PERCENTAGE LEAD	PERCENTAGE COPPER		REMARKS
1	28"	8	.5			.01	$.35		2.10	.55		
2	15"	10	.8			.01	$.35		11.33	.70		
3	18"	1	.4		Trace		--		.39	.42		
4	21"		.8			.01	$.35		.39	.35		
5	66"	9	.1			.02	$.70		4.21	.51		
6	63"	2	.2			.03	$1.05		5.22	.45		
7	51"	28	.7			.01	$.35		15.60	2.33		
8	72"	5	.3			.02	$.70		7.39	.96		
9	44"	4	.9			.03	$1.05		8.58	.80		

Charges $ 22.50

Assayer ARIZONA ASSAY OFFICE



SKETCH

INDIANA MINE
DOCKET NO. ND-5999
Byrd & Dillard
Scale: 1" = 40'
Oct. 20, '44

Sample	Width	OzAu.	OzAg.	% Cu	% Pb.
1	28"	.01	8.5	.55	2.10
2	15"	.01	10.8	.70	11.33
3	18"	Tr.	1.4	.42	.39
4	21"	.01	.8	.35	.39
5	66"	.02	9.1	.51	4.21
6	63"	.03	2.2	.45	5.22
7	51"	.01	28.7	2.33	15.60
8	72"	.02	5.3	.96	7.39
9	44"	.03	4.9	.80	8.58
1A	30"	.01	16.5	12.44	.10
2A	32"	.02	13.7	2.40	3.00
3A	29"	.01	9.5	2.21	4.89
5A	9"	Tr.	2.1	.85	8.21
6A	Muck	.01	9.1	2.16	3.20
7A	50"	.02	4.6	.25	.40
7B	53"	.02	6.0	.25	2.82
8A	50"	.02	5.3	.14	.40
9A	Dump	.01	7.4	2.44	5.61
→ 25	81"	Tr.	8.4	1.90	2.70

Applicant's sample - Check Assay