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325 Heard Building
Phoenix, Arizona

October 21, 1943

Re: Docket No. ND-8552
Sherwood B. Owens

TULLY, ASST CHIEF, MINING DIVISION, RFC, WASHINGTON, D.C.

Enclosed please find two copies of Supervising
Engineer's Report, together with original applica-
tion and supporting data.

Encs.

WM. B. MAITLAND
Supervising Engineer

2 copies Sup. Eng. Report
1 copy original applica-
tion

WBM-b

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
REPORT OF SUPERVISING ENGINEER

Docket No. ND-8552
Date Author. for Exam. Recd. October 5, 1943
Date of Exam. October 10, 1943
Date of Report: October 21, 1943

After an examination of the mine had been made, it was found that this property, under a different applicant, had been examined on March 18, 1943, by Mr. Travis P. Lane and reported under Docket No. ND-5342 (John S. Madigan). Since there has been no new work done since the first examination, my report will be brief and only cover the factors affecting the new loan application.

1. NAME AND ADDRESS OF APPLICANT

Name: Sherwood B. Owens
Address: Box 769
City and State: Tucson, Arizona
Correspondent: Same

2. CHARACTER OF PROJECT

To develop by means of a shaft, and place on production, a fluorspar lode prospect.

3. LOCATION OF MINE

Name of mine: Turtle Spar Mine
Township, range: T. 17 S, R 11 E, G & S R B & M
Mining district, county, state: Papago Mining District,
Pima County, Arizona

Name and distance by road nearest railway station: Tucson,
a town on the Southern Pacific Railroad
is 40 miles northeast of the mine.

Condition and seasonal accessibility of road, mine to
Railway: Only the last six miles of this road are
unimproved, but since it traverses flat
desert country, the grading of this road
will be inexpensive. Also, the applicant
being a road contractor now owns all the
necessary bulldozers, graders and trucks
with which to improve and maintain the
road. The balance of the road to Tucson
is either paved or very well graded dirt
road.

4. APPLICANT:

Mr. Owens, the applicant is an energetic and intelligent man about 40 years old, and has been connected with the contracting business (roads and airports) for some years. He seems to be an extremely capable business man, although he does not profess to have any experience in mining. I believe he is capable to operate this project. He intends to hire an experienced miner to be in charge of the actual work.

5. LOAN REQUESTED:

Applicant requests \$5,000 and it is my opinion that the amount will be sufficient to put the property on production.

6. DESCRIPTION OF PROJECT:

A. Legal Considerations:

The applicant holds a lease and option on three unpatented mining claims (Turtle Spar #1, 2, 3). The purchase price is \$10,000 with an 8% royalty on production to apply against the purchase. Minimum work requirement is 30 man shifts per month for the first six months and 90 man shifts thereafter.

B. GENERAL CONSIDERATIONS:

Apparently there has been no work done on the property since the first examination was made, so it will not be necessary for me to re-describe the property. As shown by the attached map and assay sheets, the two sets of samples check fairly well. It is obvious from a study of the veins that only the vein found in the large open cut is of value, and since only a limited amount of development has been done, it is difficult to draw any conclusions as to the amount of ore that can be mined on this project.

The present applicant claims that when the mine was first opened up a few truck loads (30 tons) of high grade fluorspar was shipped to Los Angeles. The fine screened rejects represented by my sample No. 58 ran 56.19% Ca F₂ and 30.32% SiO₂ and this material was previously sampled by Mr. Lane in Dump Samples No. 6 and 7. My samples No. 56 and 57 are shown on the map, while Sample No. 59 represents picked shipping ore which the applicant claims he could produce by screening and cobbing.

This project was originally turned down because the vein seemed too low grade to be profitably worked at that time as the price then was \$13 per short ton f.o.b. Los Angeles for a minimum of 85% Ca F₂. Also the old application called for a loan of \$14,300.00 and the applicants had no mining experience.

The factors that warrant a reconsideration of a loan on this property are as follows:

1. The present applicant is a successful contractor who has all of the equipment necessary to operate the mine and is now employing an experienced mine foreman.

2. The amount of the loan necessary to put the project on production is small -- only \$5000.

3. The price for fluorspar has increased. As shown by the letter from the Continental Ore Co. and which is attached to the application, the present price is \$20 per ton f.o.b. Tucson for 85% CaF₂ with a maximum of 6% silica. My samples indicate that by screening and cobbing this grade of material could be produced.

It is well known that fluorspar veins as a rule do not outcrop on the surface and do not extend commercially to any great depth, so of necessity the tonnage in any ore deposit is limited. Also considerable hand picking of the ore is necessary, but at this particular property this does not present a problem as the mine is located near an Indian Reservation so unskilled cheap labor is available.

If \$20 per ton is obtained for the product, the following costs and profit are indicated:

Value per ton of ore 85% CaF ₂	\$ 20.00
Royalty 8%	\$ 1.60
Trucking 40 miles	3.00
Sorting and screening	2.00
Mining (2 tons rock for 1 ton of ore)	8.00
Total cost	\$ 14.60
Indicated net profit per ton	\$ 5.40

The applicant intends to open stope the vein from the surface so there will be no preparatory work nor deadwork necessary.

COMMENTS OF SUPERVISING ENGINEER:

No conclusions can be drawn as to the amount of ore available in this deposit, altho it is safe to estimate that the total production will not be large. However if fluorspar continues to be critically needed for the War effort, it would seem that a small loan as requested would be justified for this project.

Docket No. ND-8552

Sherwood B. Owens

Pima Co., Ariz

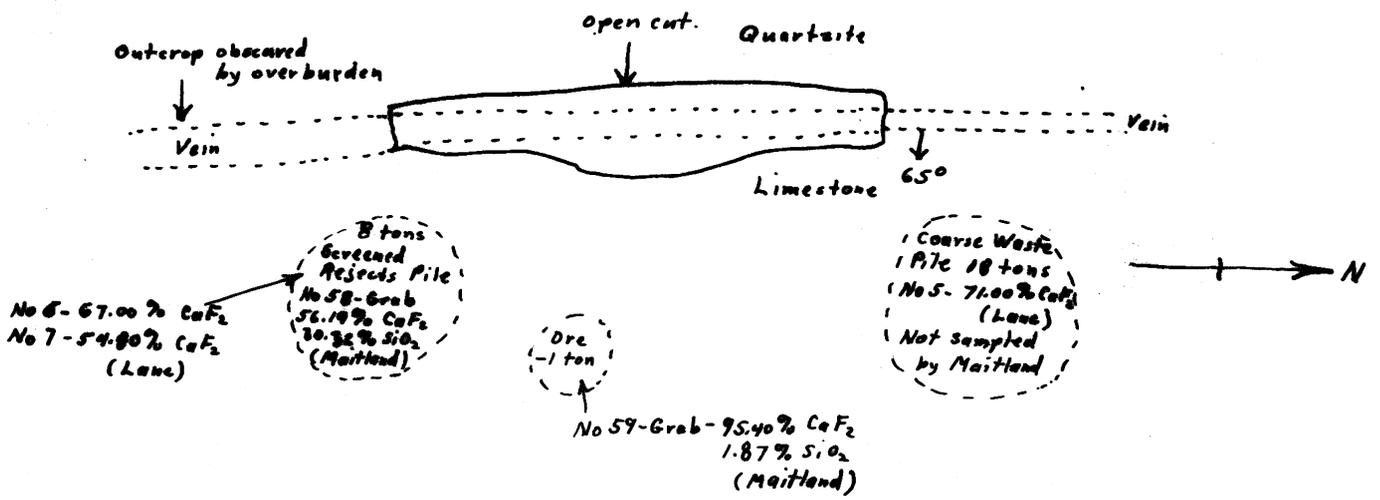
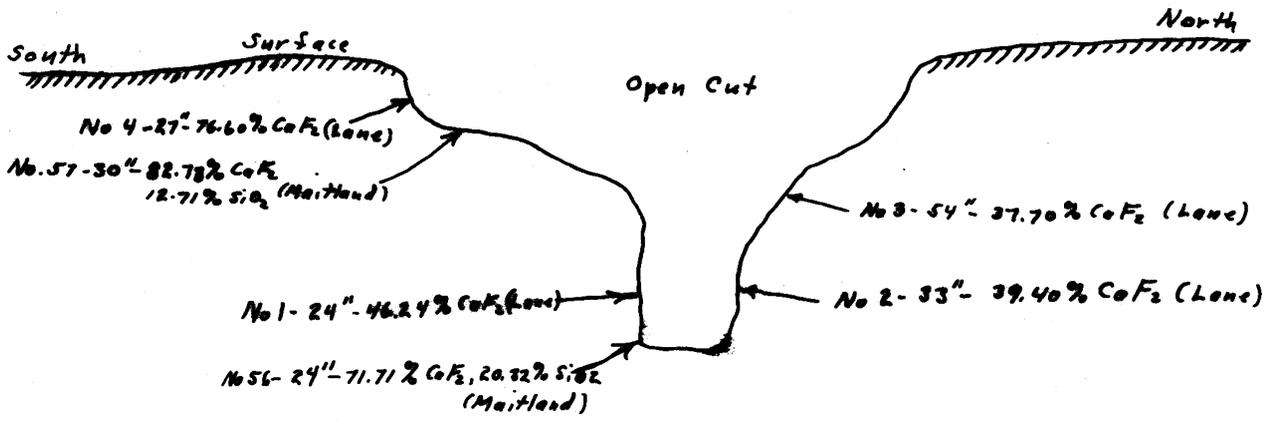
Scale 1"=10'

Oct 10, 1943.

Turtle Spar No 1 Claim

Wm. B. Maitland.

Section Along Plane of Vein



No. 387 Ma

Phoenix, Arizona,
Oct. 12, 1943.

CHAS. A. DIEHL

ARIZONA ASSAY OFFICE

Phone 3-4001

815 North First Street

P. O. Box 1148

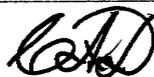
This Certifies That samples submitted for assay by **Mr. Wm. B. Maitland.**

contain as follows per ton of 2000 lbs. Avoir.

No.	MARKS	Width	SILVER		VALUE (Oz.)	GOLD		VALUE (Oz.)	TOTAL VALUE Of Gold and Silver	% PERCENTAGE %			REMARKS	
			Ounces	Tenths		Ounces	Hundredths			CaF ₂	Silica			
56		24"								71.71		20.32		
57		30"								82.73		12.71		
58		Grab								56.19		30.32		
59		Grab								95.40		1.87		

Charges \$ 28.00

Assayer ARIZONA ASSAY OFFICE



Report of Supervising Engineer

after an examination of the mine had been made it was found that this property under a different applicant had been examined on March 18, 1943 by Mr. Travis P. Lane and reported under Docket No ND 5342 (John S. Madigan). Since there has been no new work done since the first examination my report will be brief and only cover the factors affecting the new loan application.

Docket No ND 8552

Date Authorization for

Ryan Red Oct 5, 1943

Date of Exam Oct 10, 1943

Date of Report Oct. 1943

1. Name & Address of applicant

Name - Sherman B. Owens

Address - Box 769

City & State - Tucson, Ariz

Correspondent - Same.

2. Character of Project

① To develop ^{by means of a shaft} and place on production a fluorispar _{lode} prospect.

3. Location of mine

Name of mine - Turtle Spar Mine

Township, range, section - T17S, R11E, G+SRB+M

Mining district, County, State - Papago Mining

District, Pima Co., Ariz

Name and distance by road nearest railway station - Tucson a town on the Southern Pacific Railroad is 40 miles north east of the mine

Condition & seasonal accessibility of road, mine to Railway - Only the last six miles of this road are unimproved but since it traverses flat desert country the grading of this road will

be inexpensive. Also the applicant being a road contractor now owns all the necessary bulldozers, graders and trucks ~~to~~ with which to improve and maintain the road. The balance of the road to Suson is either paved or very well graded dirt road.

4. Applicant

Mr. Owens the applicant is an energetic and intelligent man about 40 years old and has been connected with the contracting business (roads and airports) for some years. He seems to be an extremely capable business man altho he does not profess to have any experience in mining. I believe he is capable to operate this project. He intends to hire an experienced miner to be in charge of ~~operations~~ the actual work.

5. Loan Requested

Applicant request \$5000 and it is my opinion that this amount will be sufficient to put the property on production.

6. Description of Project

A. Legal Considerations

The applicant holds a lease and option on three unpatented mining claims (Turtle Spar #1, 2, 3). The purchase price is \$10,000 with an 8% royalty on production to apply against the purchase. Minimum work requirement is 30 man shifts per month for the first six months and 90 man shifts thereafter.

B General Considerations

Apparently there has been no work done on the property since the first examination was made so it will ^{probably} be necessary for me re-describe the property. As shown by the attached map and assay sheets the two sets of samples check fairly well. It is obvious from a study of the veins that only the vein found in the large open cut is of value and since only a limited amount of development has been done it is difficult to draw any conclusions as to the amount of ore that can be mined on this project.

(3) (30 tons) The present applicant claims that when the mine was first opened up a ^{few} truck loads of high grade fluor spar was shipped to Los Angeles. The ^{fine} screened rejects represented by my sample No 58 ran 56.19% CaF_2 and 30.32% SiO_2 and this material was previously sampled by Mr Lane in Dump Samples No 6 and 7. My samples No 56 and 57 are shown on the map - while Sample No 59 represents picked ^{shipping} ore which the applicant claims he could ~~obtain~~ produce by screening and culling.

This project was originally turned down because the vein seemed too low grade to be profitably worked at that time as the price then was \$13 per short ton f.o.b. Los Angeles for a minimum of 85% CaF_2 . Also the old application called for a loan of \$14,300.00 and the applicants had no money.

experience.

The factors that warrant a reconsideration of ~~the~~ ^{a loan on this property} project are as follows: -

1. The ^{present} applicant is a successful contractor who has all of the equipment necessary to operate the ^{mine} project and is now employing a experienced mine foreman.

2. The amount of ~~the~~ the loan necessary to put the project on production is small - only \$5000.

3. The price for ~~the~~ fluorapatite has increased. As shown by the letter from the Continental Ore Co. and which is attached to the application the present price is \$20 per ton f.o.b. Tucson for 85% CaF_2 with a maximum of 6% silica. My samples indicate that by screening and cobbing the grade of material could be produced.

(4) It is well known that fluorapatite veins as a rule do not outcrop on the surface and do not extend commercially to any great depth so of necessity the tonnage in any one deposit is limited. Also considerable hand picking of the ore is necessary but at this particular ~~property~~ property this does not present a problem as the mine is located near a Indian Reservation so unskilled cheap labor is available.

If \$20 per ton is obtained for the product the following costs and profit are indicated:

Value per ton of ore 85% CaF ₂	\$20.00
Royalty 8%	\$1.60
Trucking 40 miles	3.00
Sorting and screening	2.00
Mining (2 tons rock for 1 ton ore)	8.00
Total cost	\$14.60
deducted net profit per ton	\$5.40

The applicant intends to open stops the vein ~~is~~ from the surface so there will be no preparatory work no deadwork ~~under-~~
~~ground~~ necessary.

Conclusions

Comments of Supervising Engineer

⑤

No conclusions can be drawn as to the amount of ore available in this deposit altho it is safe to estimate that the total production will not be large. However if fluor spar ^{is} needed for the War effort it would seem that a ~~small~~ small lease as requested ~~it~~ would be justified for this project.

Wm B Muntz

Turtle Seal Group

RECONSTRUCTION FINANCE CORPORATION
MINING SECTION
REPORT OF SUPERVISING ENGINEER

Docket No. ND-5342
Date Authority for Examination Received March 15, 1943
Date of Examination Inclusive March 18, 1943
Date of Report April 6, 1943

1. NAME AND ADDRESS OF APPLICANT

John S. Madigan Correspondent: Same
306 South El Molino Street
Pasadena, California

2. CHARACTER OF PROJECT

Development of Fluorspar Deposit

3. LOCATION OF MINE

The Mine is located in the Papago Mining District, Pima County, Arizona. The mine is 40 miles by road southwest from Tucson, Arizona, which city is the nearest rail point and supply center. The first 25 miles of this road is paved highway and the balance is fairly level, good, dirt road.

4. APPLICANT

Applicant was not present during the examination. He apparently has a partner, a Mr. S. A. Palmer, who is a civic official in Pasadena. Mr. Palmer's son, Mr. Walter Palmer, has been living in a tent on the property and has supervised a crew of Mexicans who worked about a month (up to within two weeks of the period of examination), cleaning out and making some extensions of the surface workings. They also screened and sorted a small tonnage of material from the most important workings in an attempt to bring it up to shipping grade. According to Mr. Walter Palmer, his father had furnished the money for the recent work on the property and although he had no definite knowledge of an agreement, he believes that his father and Mr. Madigan share equally in the enterprise. He described Mr. Madigan as an elderly man who is interested in the selling of various earth products, principally diatomaceous earth. He was formerly connected with the mining and sale of coal and coal products in the east. Apparently he has had no experience in the operation of metalliferous mines. Mr. Palmer, Sr., has had no mining experience and Mr. Palmer, Jr., had none prior to the time the present operation was begun, several months ago. His experience has been mostly along clerical lines. It would be necessary to bring in some party with a knowledge of mining to take charge of the proposed development.

5. LOAN REQUESTED

\$14,300.00

6. DESCRIPTION OF PROJECT

A. General Features

1. There are no mine workings, mill, etc., which are not

confined within the applicant's ownership.

2. The project would comply with State Compensation and Safety First Regulations.
3. There are no apparent legal discrepancies in the project.
4. There are no impeded right-of-way facilities.
5. There is no likelihood of surface or sub-surface trespass.

B. Existing Development

- a. The mine is opened by shallow shafts and open cuts.
- b. Samples were broken down with pick and moil and gathered on canvass.
- c. The workings are accessible and in good condition.
- d. General Features of Ore Deposit, etc.

The property comprises three unpatented claims known as the "Turtle Spar" group. The group of claims is owned by Arthur Bustamante of Tucson, Arizona and is operated by Mr. Madigan on a lease and option to purchase agreement. A copy of the agreement is included with the application for loan.

The topography of the region is one of low relief, represented by broad mesas and low rolling hills, cut by gentle drainage gulleys and washes. The country rock in the immediate vicinity is a vuggy silicified limestone. The bedding of the limestone strikes approximately N.S. and dips 60° East. A number of bands of more intensely silicified limestone course through the area, forming broad comb-like reefs which, at places, rise prominently above the general surface. Frequent bands of soft, nearly pure crystalline limestone occur in the mass of silicified limestone and thin beds of black calcite are common. Fluorspar occurs in grains and large crystals in fractured veins filled with quartz and gouge material. The veins containing Fluorspar mineralization generally occur along the contact between soft lime or calcite and a very hard silicified limestone hanging wall.

Following is a description of the workings and the sampling (See accompanying sketches):-

The workings on the Turtle Spar No. 1 Claim are the most extensive on the property and consist of a shaft 14' deep with a cut 26' long on the vein at its collar. The shaft and cut develop a quartz vein which conforms with the strike and dip of the enclosing limestone beds. The vein varies in width from 18" to 5'. The hanging wall is well defined and carries a clay gouge seam varying from several inches to 12" in width. Occasional thinner gouge seams occur irregularly at some distance from the hanging wall. Fluorspar occurs in grains and masses up to double fist size in the clay gouge and in detached masses in the quartz. The fluorspar is more heavily concentrated against the hanging wall and fades rapidly into the hard quartz of the vein toward the footwall which is very irregular. Sampling and assays in the

shaft and cut at this place are shown on a sketch accompanying this report. At Sample No. 4, the vein was composed largely of gouge and contained abundant coarse green crystals of Fluorspar. Samples of screened sorted dump material on the ground near the collar of the shaft assayed as follows:

Sample	Size of Material	Estimated Tons	% Ca F ₂
Dump #5	Plus 1"	18	71.00
" #6	" 3/8"	3-1/2	67.00
" #7	Fines	5	54.80

The Vein has not been opened on strike beyond the ends of the cut and its presence is not indicated by croppings or float material.

Barren or nearly barren material in discarded dumps is estimated at approximately 20 tons. It is apparent from the above that the total amount of material removed from the vein here would average below 40% CaF₂ and that this material cannot be raised to a shipping grade by sorting and screening. Also, because of the small size of the vein, its limited extent and the considerable amount of quartz gangue it contains, a milling proposition is not indicated.

At a distance of approximately 450' north from the above described working place, a cut and 12' tunnel have been driven into the bank of the wash and some 80' further north, a 6' pit has been sunk. This work was done on a narrow stringer 1 to 3" wide, containing quartz and clay, with abundant crystals of green (and lesser purple) Fluorspar. The stringer lies in the lime beds with hard silicified limestone as a hanging wall and black calcite as a foot-wall. The showing has no relation to the quartz vein previously described. Approximately 1/2 ton of sorted low grade Fluorspar material is piled at the tunnel and a hundred pounds or so is piled at the shallow pit. The showing offers nothing of interest and was not sampled.

At about the center of Turtle Spar No. 2, Claim, a shallow cut some 35' long has been made along a series of thin quartz and clay filled fractures in the bedding of the limestone. The cut shows only rare scattered crystals of green Fluorspar and the dump contains occasional coarse pieces showing a little green Fluorspar. There was nothing here worth sampling.

A cut 40' in length, by 3 to 10' in width and with an average depth of 4' has been made along the side line of Turtle Spar No. 2 Claim, some 240' East from the showing in the center of the claim. This work also has been done on quartz-clay stringers in limestone beds. The cut shows no Fluorspar, although several hundred pounds of picked material on the dump contains occasional crystals of Fluorspar. The Fluorspar is for the most part green in color, although some purple and amber crystals can be seen. There was nothing worth sampling at this place.

7. COMMENTS OF SUPERVISING ENGINEER

The best showing on the property is in the 14' shaft and cut on the Turtle Spar No. 1 Claim, but the vein here is too small and low grade to have conomic importance. In none of the other workings is there any indication of the probable economic

Docket No. ND-5342

presence of a worthwhile deposit of Fluorspar.

The samples submitted by the applicant must have been picked material, probably lying on the surface, since the workings are (with the exception of the shaft) all barren in the bottom.

A development loan is not recommended.

T. P. LANE
Supervising Engineer

1

Docket No.	ND-5342
Date Auth for Exam. Rec'd	Mar 15, 1943
Date of Exam. Incl.	Mar 18, 1943
Date of Report	April 6, 1943

1 Name and Address of Applicant
Name John S. Medigan
Address 306 So. El Medino St
Pasadena, Calif.

Correspondent Same

2 Character of Project
Development of Fluorspar deposit

3 Location of Mine.
The mine is located in the Papago
Mining District, Pima County, Arizona
~~Tucson, the nearest rail point and~~
~~supply center is 40 miles by road~~

Mr P

The mine is 40 miles by road south
west from Tucson, Arizona, ^{which city is the nearest rail point and supply center.} The first
25 miles of this road is paved highway
and the balance is good fairly level
good dirt road.

4 The applicant was not present
during the examination. He apparently
has a partner, a Mr S. A. Palmer, ^{who is} a
city official in Pasadena. Mr. Palmer:

(Mr. Walter Palmer)

son, has been living in a tent on the property, ~~assessing for~~ and had supervised ~~some cleanup and about a month's~~ work of a crew of Mexicans who ~~for~~ worked about ~~about~~ a month (to within 2 weeks of the period of examination) had ^{cleaning out} ~~cleaned out~~ the surface workings and ~~also~~ making some extensions of the surface workings. They also ~~and that~~ ^{and sorted} screened a ^{small tonnage} ~~for~~ of the material from the most important workings in an attempt ~~to~~ ^{to} bring it up to shipping grade. According to Mr. Palmer his father had ^{provided} ~~put up~~ the money for the ^{recent} ~~present~~ work on the property, and although he has no definite knowledge of an agreement he believes that ~~Mr. Mc~~ his father and Mr. Madigan share ~~equally~~ ^{equally} in the enterprise. He described Mr. Madigan as an elderly man ^{who is} interested in the selling out of various earth products, principally diatomaceous earth. He ~~was~~ ^{is} formerly connected with the mining and sale of coal and coal products in the east. Apparently he has had no experience in the operation of metalliferous mines. Mr. Palmer senior has had no mining experience and Mr. Palmer jr. ~~had some~~ ~~been interested in~~ had had ^{some} ~~mining experience~~ ^{prior to} ~~up to~~ the time the present operation was

with

begun ~~undertaken~~ several months ago. His experience has been mostly along clerical lines, and ~~he is intelligent and seems to think along practical lines.~~ and it would be necessary ^{to} bring in some party with a knowledge of mining ~~to~~ take charge of ^{the proposed} development.

5

Loan Requested
\$ 14,300

6

Description of Project

A. General Features

1. There are no mine workings, mill etc which are ^{not} confined within the applicants ownership.
2. The project would comply with state compensation and safety first regulations.
3. There are no apparent legal discrepancies in the project.
4. There are no impeded right-of-way facilities.
5. There ~~are~~ is no likelihood of surface or sub-surface trespass.

B. Existing Development

- a. The mine is opened by shallow shafts and open cuts.
- b. Samples were broken down with pick and maul and gathered on canvas.

c. The workings are accessible and in good condition.

d. General Features of Ore deposit etc
The property ^{comprises} ~~consists~~ of ^{unpatented} 3 claims known as the Turtle Spout group. The ^{group of} claims is owned by Arthur Bustariente of Tucson, Arizona, and ~~is~~ ^{is} operated ~~to~~ by Mr. Madigan on a lease and ~~lease~~ ^{is} option to purchase agreement. A copy of the agreement is ~~not~~ ^{is} included with the application for loan.

The topography of the region is one of low relief ^{represented by broad mesas and low rolling hills} and cut by gentle drainage ~~work~~ gulches and washes.

The ~~primary~~ ^{country rock in the immediate vicinity} formation is ~~a~~ a

^{at places} ~~roughly~~ ^{at places} ~~intensely~~ ^{intensely} silicified limestone. The bedding of the limestone ^{is} ~~is~~ ^{at an angle of approximately N 60° East} ~~is~~ ^{at an angle of} ~~more~~ ^{more} ~~intensely~~ ^{intensely} silicified ~~bands~~ ^{bands} of limestone course through the area ^{forming} ~~forming~~ broad ^{comb-like} ~~comb-like~~ reefs ~~which~~ ^{which} ~~stand~~ ^{stand} ~~prominently~~ ^{prominently} above the general ~~ground~~ ^{ground} surface. ~~Occasional~~ ^{Frequent} bands of 2 ft nearly pure crystalline limestone occur in the mass of ^{silicified limestone} ~~country rock~~ and ^{thin} beds of black calcite are common. Occasional quartz veins ^{occur in the} ~~occur in the~~ ~~with the limestone~~ ^{conforming in} ~~conforming in~~ ~~general~~ ^{general} ~~with~~ ^{with} Fluorite occurs in grains and ~~small~~ ^{small} ~~crystals~~ ^{crystals} in ~~quartz~~ ^{fracture} ~~veins~~ ^{veins} ~~filled~~ ^{filled} with quartz.

Vuggy

and gouge material. The ^{veins containing} fluorapatite mineralization generally occurs along the contact ~~of~~ between soft lime ^{and} calcite and ^{very hard} a ~~solidified~~ limestone hanging wall.

~~The workings consist of a shaft ^{with} ~~and~~ ^{see accompanying sketches} longitudinal cut ~~at its~~ collar, and a short tunnel and ~~with~~~~

Following is a description of the workings and the sampling (see accompanying sketches) in ~~one~~ ~~claim~~ ~~2~~ ~~1~~.

The workings on the Turtle Spa No 1 claim are the most extensive on the property and consist of a shaft 14 ft deep with a ~~longitudinal~~ ^{60 feet long} cut ~~on the~~ vein at its collar. The shaft and cut ~~are made~~ ^{develop} a quartz vein which ~~dips~~ ^{conforms with}

~~the strike with the limestone bedding and dip of the enclosing limestone beds with it at 60° toward the east.~~ The vein varies in width from 1 1/2" to 5 feet.

The hanging wall is well defined and carries a clay gouge seam ^{on the hanging wall} ranging from several inches to 12" in width. ~~The foot wall is~~ ^{occasional thumb size} seams occur ~~irregularly~~ ^{irregularly} at some distance from the hanging wall. The fluorapatite occurs in grains ~~upto~~ and masses up to double fist size in the clay gouge and in detached masses in the quartz. ~~Particularly~~ ^{fluorapatite} is more heavily concentrated ~~of~~ against the hanging wall and fades rapidly into the hard quartz of the vein toward the foot wall which is ~~extremely~~ ^{very irregular} irregular. Sampling and assays ^{in the} shaft and cut at this place are shown

on ~~the~~ ^a sketch accompanying this report, at Sample No. 4 the vein ~~was~~ ^{is} ~~composed~~ ^{comprised} ~~largely~~ ^{of} ~~gypsum~~ ^{and} ~~against~~ ^{the} ~~hanging~~ ^{wall} ~~with~~ ^{it} and contained abundant coarse green crystals of Fluorapatite. Samples of screened sorted dump material on the ~~surface~~ ^{ground} near the collar of the shaft assays as follows.

Sample	Size of Material	Estimated tons	% CaF ₂
Dump No. 5	plus 1"	18	71.00
✓ No. 6	plus 3/8"	3 1/2	67.00
✓ No. 7	finer	5	54.80

The vein has not been opened on strike beyond the ends of the cut and ~~open~~ ~~not to continue~~ its presence is not indicated by cropping or float material.

Barren ^{or nearly barren} material in discarded dumps is estimated at approximately 20 tons. It is apparent from the above that the total ~~material recovered from the vein here~~ ^{is} ~~from the cut~~ ^{would average} below 40% CaF₂ and that ~~the material~~ ^{material} ~~sorting~~ ^{sorting} it cannot be raised to a shipping grade by sorting and screening. ~~Also,~~ ^{Also,} because of ^{the} small size of the vein, ^{and} ^{its} ~~its~~ ^{limited} extent and the ^{considerable} amount of quartz gangue it contains ~~the~~ a milling proposition is not indicated.

~~A short tunnel~~

At a distance of approximately 400 ft north from the above described working place a ~~short tunnel~~ cut and ^{12 foot} tunnel ~~some~~ have been driven into the bank of the wash and some 80 feet further north a ^{6 foot} pit has been sunk. This work ~~has~~ ^{was} done on a narrow strigge ~~a~~ 1 to 3" wide containing quartz and clay with abundant ^(and lesser purple) crystals of green fluorapatite. This strigge ~~is~~ lies in the line beds with ~~a~~ hard silicified limonite as a hanging wall and block calcite as a foot wall. The showing has no relation to the quartz vein previously described. Approximately $\frac{1}{2}$ ton of ^{sorted} fluorapatite material is piled at the tunnel and a ~~small~~ hundred pounds ~~so~~ is piled at the shallow pit. The showing ~~is~~ offers nothing of interest and was not sampled.

At about the center of Turtle Spar No 2 claim a shallow cut some 35' long has been made along a series of ^{thin} quartz and clay filled fractures in the ^{bedding of the} limestone. The cut shows only ~~some~~ scattered crystals of green fluorapatite and the dump contains occasional coarse pieces ~~with~~ ~~containing~~ which showing a little green fluorapatite. There was nothing here worth sampling.

A cut 40 feet in length ~~and~~ 3 to 10 feet in width ^{and with an average depth of 4 feet} has been made

along the side line of Turtle Spa No. 2 claim some 240 feet east from the showing in the center of the claim. This work also has been done ^{quartz-~~of~~} ~~on~~ ^{struc-} ~~in~~ the limestone beds. The cut shows no fluorapatite ~~and~~ altho several hundred pounds of picked material on the dump contains occasional crystals of fluorapatite. ~~The~~ ^{fluorapatite is} ~~is~~ for the most part green in color although some purple and amber crystals can be seen. There was nothing ^{with} ~~nothing~~ which ~~warranted~~ sampling at this place.

Comments of Supervising Engineer

The best showing on the property is in ~~at~~ the 14 foot shaft ^{and out} on the Turtle Spa No. 1 claim, and ~~the~~ ^{the vein here} ~~this~~ is too small and low grade to have economic importance. ⁱⁿ None of the other workings ^{is} ~~shows~~ ~~any~~ ~~indication~~ ~~of~~ ~~the~~ ~~presence~~ of a worthwhile deposit of fluorapatite.

The samples submitted by the applicant must have been picked material, probably lying on the surface since the ^{workings} ~~cuts~~ are (with the exception of the shaft) all barren in the bottom. A development ^{is} ~~is~~ not recommended.