



## **CONTACT INFORMATION**

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: K D MINE

ALTERNATE NAMES:

QUARTZITE  
DUMORTURITE

LA PAZ COUNTY MILS NUMBER: 243

LOCATION: TOWNSHIP 3 N RANGE 19 W SECTION 5 QUARTER C  
LATITUDE: N 33DEG 37MIN 32SEC LONGITUDE: W 114DEG 14MIN 29SEC  
TOPO MAP NAME: QUARTZSITE - 15 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:

KYANITE  
KYANITE DUMORTIERITE  
KYANITE PYROPHYLLITE  
TALC PYROPHYLLITE  
GEMSTONE DUMORTIERITE

BIBLIOGRAPHY:

WILSON, E.D., 1929, AMERICAL MINERAL, VOL. 14  
P. 373-381  
ELEVATORSKI, E.A. 1978, AZ INDUSTRIAL MINERALS  
ADMMR MINERAL RPT. NO. 2, P. 70.  
ADMMR K D MINE FILE

DEPARTMENT OF MINERAL RESOURCES

State of Arizona

MINE OWNER'S REPORT

Date June 1, 1958

1. Mine: K-D Mine
2. Location: Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ Range \_\_\_\_\_ Nearest Town Quartzsite Distance 4 1/2 miles  
 Direction South Nearest R.R. Blythe or Bouse Distance 25 miles  
 Road Conditions Paved all but last two miles but they are fair
3. Mining District and County: LaPlamosa Yuma County
4. Former Name of Mine: None
5. Owner: Harry L. Duty  
 Address: 121 W. 11th Ave Escondido, California
6. Operator: none  
 Address: \_\_\_\_\_
7. Principal Minerals: Kyanite, Dumortierite and pyrophyllite also has gypsum and potas
8. Number of Claims: Lode 3 Patented 0 Unpatented 3  
 Placer 0 Patented \_\_\_\_\_ Unpatented \_\_\_\_\_
9. Type of Surrounding Terrain: Claims are level can quarry mine
10. Geology and Mineralization: Chemical analysis by U.S. Bureau of Mines (attached)  
Dumortierite is beautiful blue color. Kyanite is green.
11. Dimension and Value of Ore Body: Dumortierite vein is 60 feet wide. Needs concentrating for ceramics but ideal as is to put on building roofs. Kyanite is in several stringers 2 to 6 inches wide. Is shipable as is.

Please give as complete information as possible and attach copies of engineer's reports, shipment returns, maps, etc. if you wish to have them available in this Department's files for inspection by prospective lessors or buyers.

12. Ore "Blocked Out" or "In"  $\frac{1}{2}$  million tons

Ore Probable: millions

13. Mine Workings—Amount and Condition:  $\infty$

No.	Feet	Condition
Shafts 1	65	Good with ladder
Raises		
Tunnels		
Crosscuts 20	3 to 60	Good
Stopes		

14. Water Supply: Water 100' Can be hauled from Quartzsite 4 miles

15. Brief History: One car load of ore shipped for walks on miniature golf course.

16. Remarks: Beautiful blue color makes it ideal to crush for roofs, walks etc.

17. If Property for Sale, List Approximate Price and Terms: \$50,000<sup>00</sup> or 10% royalty  
very liberal terms - will negotiate

18. Signature: Harry L. Duty Harry L. Duty  
121 W. 11th Ave. Escondido, Calif.

MD-15

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine DUMORTIERITE-KYANITE

Date Oct. 30, 1940.

District Plomosa, Yuma Co.

Engineer Elgin B. Holt

Subject:

SYNOPSIS REPORT

RECORDED  
INDEXED  
OCT 31 1940  
PLOMOSA YUMA CO. ARIZONA

OWNER: Harry L. Duty, U. S. Bureau of Reclamation, Redding, Calif.

Non-metallics: Dumortierite and Kyanite mixed.

LOCATION: Three miles south of Quartzite, Ariz.

NOTE: I visited this property on Sept. 13, 1940. It is reached by a good road from Quartzite.

TOPOGRAPHY: Level to rolling mesas.

GEOLOGY: Country rock is composed of mica schist, in which the Dumortierite-Kyanite occurs in fairly large masses.

DEVELOPMENT WORK: Open cuts to 12 feet deep show bands of schistosed Dumortierite-Kyanite material of good-looking grade, from 12 to 20 feet wide; but deposits seem to be much wider and could no doubt be worked by open pit and power shovels.

COMPOSITION: Dumortierite: A basic aluminum borosilicate, used in the manufacture of porcelain for spark plugs and for other uses. Kyanite, known also as Cyanite and Disthene, is an aluminum silicate,  $Al_2SiO_5$  or  $Al_2O_3SiO_2$ , like Andalusite and Sillimanite. Blue color.

Note to J. S. Coupal: Suggest you submit this property to Manufacturer of refractories, who is in the market for a dependable supply of high grade Kyanite and put him in touch with owner, who can give full details, no doubt, of or regarding analyses of this material. See your memorandum to Field Engineers, dated October 15, 1940.

*E. B. Holt*  
Elgin B. Holt.

*1. plomosa  
write notes*

✓ KYANITE - DUMORTIERITE PROPERTY  
3 miles south of Quartzsite  
Yuma County, Arizona.

Harry L. Duty, sole owner

~~Address, c/o U. S. D. R.~~ 121 W. 11th Ave  
~~Redding, California~~ Escandido, Calif

Chemical analysis as made by the United States Bureau of Mines showed the following:

51.26% SiO<sub>2</sub>, 44.09% Al<sub>2</sub>O<sub>3</sub>, 1.29% Fe<sub>2</sub>O<sub>3</sub>, 0.65% CaO,  
0.30% MgO, 0.28% Na<sub>2</sub>O, 0.14% K<sub>2</sub>O, and 2.57% ignition  
loss.

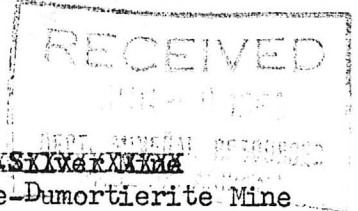
Pure kyanite has an approximate formula of 36% SiO<sub>2</sub>  
and 64% Al<sub>2</sub>O<sub>3</sub>. Pyrophyllite has the formula 67% SiO<sub>2</sub>,  
28% Al<sub>2</sub>O<sub>3</sub>, with 5% H<sub>2</sub>O. Kyanite has a specific gravity  
of 3.6; pyrophyllite 2.8.

To obtain the most nearly pure grains of kyanite it is  
necessary to crush the ore to 100 mesh. However, some  
fairly pure grains are liberated at a coarser size.

The Bureau of Mines report states "A qualified ceramist  
states that the sample tested by the Bureau would be  
suitable for refractory use without treatment or concen-  
tration. As described it was found possible to remove  
much of the pyrophyllite either by gravity concentration  
or flotation, thus reducing the silica content."

Sample of Dumortierite submitted assayed 72.08% SiO<sub>2</sub>,  
18.83% Al<sub>2</sub>O<sub>3</sub>, 2.09% Fe<sub>2</sub>O<sub>3</sub>, 0.70% CaO, 0.51% MgO, 0.13%  
Na<sub>2</sub>O, 2.67% K<sub>2</sub>O, with an ignition loss of 2.18%.

Harry L. Duty  
121 West 11th Avenue  
Escondido, California



RE: ~~VARIOUS GOLD SILVER MINES~~  
K-D Mine - Kyanite - Dumortierite Mine

*June*  
July 3, 1958

State of Arizona  
Department of Mineral Resources  
Mineral Building, Fairgrounds  
Phoenix, Arizona

Attention: Lee Hammons-Field Engineer

Gentlemen:

Reference is made to your letter relative samples taken on my mining property. I have personally owned this property for over twenty years and have no objection to your having taken samples.

The Dumortierite, being blue, is particularly advantageous at this time to crush and place on roofs of houses. By renting a crusher, operations could get under way for as little as \$1,000 or less. The property is near the paved highway and one can drive all over the sixty acres.

I am getting on in years and cannot operate it myself and am most anxious to dispose of it at the earliest opportunity. Thank you very much for any assistance you may give me.

Sincerely yours,

*Harry L. Duty*  
Harry L. Duty

Attachments: Questionnaire from Dept. Min. Resources  
Chemical Analysis made by U. S. Bureau of Mines

*Also have a Gold -  
Silver mine -*

Miss Shunkel

Mancos, Colorado,  
January 28, 1942.

Mr. Sam Coupal,  
528 Title & Trust Bldg.,  
Phoenix, Arizona.

Dear Mr. Coupal:

I promised to let you know if and when we got the kyanite property near Quartzsite, started. The Cincinnati, Ohio outfit are still testing and have just finished some additional exploratory work on the mine. The ore at depth seems to have turned to pyrophyllite and therefore more difficult for them to use in refractory products, however we have developed a very large vein of pyrophyllite. If and when this company takes over and starts shipping to their plants at Cincinnati, Ohio and Taylor, Kentucky, I will advise you and let you be the first to use the news.

Four other associates and myself have taken over two very good mica properties, book and scrap, about 48 miles north of Santa Fe, New Mexico and I would like to market this mica as advantageously as possible. If I can I would like to negotiate directly with users of mica and not go through middlemen. Do you know of any users who would purchase direct on a guaranteed tonnage? If not will you kindly furnish me with the names of some reliable brokers? Many thanks.

I am enclosing a check for my dues. Also a little news bulletin that might be of interest to others who like a little "low Grade" now and then.

With best wishes and kindest regards, I am,

Very truly yours,

Harry L. Duty,  
c/o U. S. B. R.,  
Mancos, Colorado.



STATE OF ARIZONA  
DEPARTMENT OF MINERAL RESOURCES  
MINERAL BUILDING, FAIRGROUNDS  
PHOENIX, ARIZONA



May 27, 1958

Mr. Harry L. Duty  
121 W. 11th Avenue  
Escondido, California

Dear Mr. Duty:

I visited your K D Mine recently to collect some specimens for the museum. I am writing to thank you for the privilege of collecting on your dumps.

I noticed that your property is for sale.

If you will fill out the enclosed Mine Owner's Report form and return it to us, we will keep it in our files where it will be available for prospective buyers to consult.

Sincerely yours,

LEE HAMMONS,  
Field Engineer.

Enc.

LH:lp

C  
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P  
Y

RADIO FLASH.

It was officially announced over the London short wave station G. S. D. this A. M. that the German's have taken Castoria.

The British War Office admits it, but doubts their ability to hold it. A later dispatch states that the strain on the rear is tremendous.

The British have caught them on the run several times while they were trying to evacuate along the lines and several flank maneuvers have been taken, while the action at times resemble a gas attack.

The Germans tried to suppress the report but it leaked out and the Allies got wind of it.

The Secretary of War expressed the opinion that the Germans will now realize the value of a scrap of paper.

HARRY L. DUTY

U. S. BUREAU OF RECLAMATION  
MANCOS, COLORADO