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Arizona Department of Mines and Mineral Resources Mining Collection

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PART 2 OF 2

PRINTED: 02/01/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MICA MULE

ALTERNATE NAMES:
SILVER MICA
BLACK CANYON MICA
AZCO MICA

YAVAPAI COUNTY MILS NUMBER: 867

LOCATION: TOWNSHIP 8 N RANGE 2 E SECTION 7 QUARTER C
LATITUDE: N 34DEG 03MIN 06SEC LONGITUDE: W 112DEG 11MIN 42SEC
TOPO MAP NAME: BLACK CANYON CITY - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
MICA
GOLD

BIBLIOGRAPHY:
ADMMR MICA MULE FILE
BLM AMC FILE 30086
CLAIMS ALSO IN SEC. 18 T8N-R2E & SEC. 12 AND
13 T8N-R1E

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

YAVAPAI COUNTY

BLACK CANYON CITY

MICA MULE MINE

MILS # 867
1-AKA
Mica Mule (file)

MM-6421 MICA (MUSCOVITE)
MM-6422 MICA (MUSCOVITE)
MM-6423 MICA (MUSCOVITE)

MICA MULE

YAVAPAI COUNTY

KAP WR 10/19/84: Herman Harrison called to report he has contacted some new potential buyers/developers for his Mica Mule Mine (f). He wanted the Department to be aware we might be receiving some inquiries and that the property was still available.

KAP WR 7/26/85: Contacted Hermon Harrison regarding the status of his Mica Mule Mine (file), Yavapai County. He reported he has formed a corporation named Harrision Mining and Exploration within which he handles the affairs of the mining property. The property is currently optioned to a Canadian firm known as ~~Universal Resources~~ (name not listed in the Canadian Mines Handbook) who is supposed to develop the mica deposit; however, Mr. Harrision reported that so far Universal has spent only a little effort trying to prove the property as a precious metal deposit and they are reporting values averaging 0.067 tr. oz. Au/ton. Purportedly Universal is also developing an operation to recover precious metals from the fines produced when screening cinders. Ron Killmer (sp?) and John Zimbra (sp?) have been the contacts with Universal. Mr. Harrision said that when Tanner Companies abandoned their operation they left a stockpile of 20,000 tons of mica bearing pegmatite. He and Nick Carter have discussed setting up a poor boy operation to produce mica on a samll scale. He also reported that Amax Exploration had sampled the property and might have an interest in further evaluation. A copy of Amax's report was provided to Norman "Mike" Majercin who is the Secretary of Harrision Mining and Exploration (phone work 249-1133, home 946-0188) who is supposed to make it available to us to copy. Mr. Harrison went on to report that E.M. Sience would buy some mica from him if he produced it himself but they did not want to acquire the deposit.

UNITED LIBERTY RES.

NJN WR 10/25/85: It was reported that a United Liberty Resources, 730, 789 W. Pender St., Vancouver, B.C. Canada V6C 1H2 has an option to buy the Mica Mule (f), Yavapai County. They are evaluating the property as a precious metal pospect.

KAP WR 4/4/86: Tim Whitney reported that a new group of people are trying to promote the Mica Mule Mine (file), Yavapai County. The companies are Tropicana Resources LTD. and United Liberty Resources LTD, 730, 789 W. Pender St., Vancouver, B.C. Canada V6C 1H2. Harvey Smith is somehow involved as a Phoenix area contact, (or perhaps as a local consultant). The property is reportedly being touted as a mica deposit ready for development. The price of admission is rumored at $4,000,000.

MICA MULE YAVAPAI COUNTY

KAP WR 6/17/83: William Kao of E. M. Industries has set up June 28, 1983 as a date to accompany Herman Harrison to the Mica Mule MIne to obtain 3 samples of 1,000 pounds each which would represent mica from the property.

KAP WR 7/1/83: In the company of William Kao, E. M. Industries of Cincinnati, Ohio and Heinz Reichel of Merck of West Germany and together with Herman Harrison, owner of the Mica Mule Mile, Yavapai County, three bulk samples of pegmatite mica were obtained for shipment to Germany. A separate report will be written.

KAP WR 9/30/83: Herman Harrison reported he has not yet heard anything from E. M. Industries regarding the bulk mica samples from the Mica Mule Mine. Resoults are however, expected at anytime.

KAP WR 11/18/83: Dr. Kao of E. M. Science reported on the status of mica samples from the Mica Mule Mine, Yavapai County (see report of July 1, 1983 by Ken Phillips). No final results are available. He went on to say the samples were delivered to West Germany. There, they have so far crushed the bulk samples and sorted the mica by size. Dr. Kao also explained the position of a Dr. Pearlstine whom Herman Harrison (Mica Mule owner) refers to as his contact with E. M. Science and its parent company Merc of West Germany. Dr. Pearlstine once worked for E. M. Science but is no longer directly associated with the company. He does however, sometimes act as an independent broker-agent-consultant type in trying to find raw material sources for E. M. Science.

KAP WR 2/17/84: G.David DeLozier, P.C. reported he has an option to purchase the Mica Mule Mine, Yavapai County. He was inquiring about possible markets for the mica and about the Department's mica sampling program for E. M. Industries. Both were explained, along with a brief history of the property. He also inquired about potash which was in reality the K_2O content of the feldspar form the Mica Mule property. The potash content of feldspar has no present commercial value.

MICA MULE

Yavapai County

CJH WR 7/18/80: Richard E. Mieritz, Consultant, 2940 N. Casa Tomas, Phoenix, Arizona 85016, phone 277-6053; Dean Van Dyk, Plant Manager, Arizona Mica Co., 2538 East University Drive, Suite 150, Phoenix, 85034, phone 273-0575; and John L. Fowler, VicePresident, Special Products Div., Tanner Co., phone 273-0575 (phoenix) 386-5792 (Buckeye). Mieritz is the consultant for Mr. Fowler. He will be evaluating the Arizona Minerals feldspar properties at Kingman and Yarnell for possible acquisition by Tanner Co. Tanner Co. has put in a new air pulverizer and storage bins at Buckeye and they need a source of feldspar and mica. This mill is distinct from the other mill at Buckeye and they will buy either 90% purity muscovite or K feldspar. The Mica Mule is down. It is not economic. The plant superintendent at Buckeye (Baseline Road at Oglesby) is Rick Boehme. Department engineers are welcome to visit.

KAP WR 11/28/80: Mr. R.L. Root of J.M. Hubner Company, reported that he, along with some of his company engineers, plan an extensive visit to the Mica Mule Mine. They are potentially interested in the property. The Mica Mule Mine is also known as the Arizona Mica Company operation.

RRB/WR 11/28/81: Mr. Joe Durek of Kaiser Engineers reports that they have dropped consideration of the Mica Mule. 1/16/81 a.p.

NJN WR 4/16/82: Mr. Foote was in looking at the Mica Mule Mine, Yavapai County. He had just visited the property and we discussed mica benefication.

KAP WR 5/7/82: Bob Bissel, Sunrise Technology, reported that in his search for a nonmetallics grinding plant he found that the Arizona Mica Company's (subsidiary of Tanner Companies) grinding plant in Buckeye is down and not useable for grinding.

KAP WR 5/6/83: It was learned from an usually reliable source that the Arizona Mica Company has sold the Arizona Mica Plant building in Buckeye (note - This is not the same as the Buckeye Mica Plant or Buckeye Mica Company.) The Equipment has reportedly been removed and is for sale. The Arizona Mica Company was partially owned and controlled by the Tanner Companies.

MICA MULE MINE YAVAPAI CO.

KP WR 4/27/79 - Mr. Schupp of G.M.S. Mica reported that the joint venture on the Mica Mule Mine was with Western Ash, 2538 E. University, Suite 150, Phoenix. Mr. Schupp reported that Western Ash is part of the Tanner Company's.

KP/WR 10/30/79 - Mr. Dan Clifton reported he is running a road grader building the new access road to the Mica Mule Mine.

KP/WR 11/6/79 - Markets for mica and pending operations at the Mica Mule Mine by Arizona Mica Company were discussed with Mr. McKellar at John K. Bice and Company.

KAP WR 4/1/80: John Fowler of Arizona Mica Company, Phoenix, phone 273-0575 (2538 East University Drive, Phoenix, Arizona 85034), reported that they have had some difficulties in the start up of the Mica Mule Mine. As yet the mine has produced no saleable production, and the problem is reportedly been isolated to the electrostatic concentrator. The logging or lodging of fine particles in the electrostatic concentrator appear to have reduced their effectiveness. Arizona Mica is presently evaluating other concentration methods. Mr. Fowler went on to report that although Mr. Shupp still maintains an economic interest in the venture as a partner, he is not involved in the management or technical supervision of the project.

KAP WR 2/14/80: Jerry Schupp of Arizona Mica Company reported their Mica Mule Mine is operating and the concentrator is making grade but the quantity of concentrate produced is low due to ore grade and processing difficulties. They are interested in custom mica concentrate for their grinding plant at Buckeye. They are evaluating mill circuit changes at the mine.

KAP WR 6/13/80: Joe Durek, Chief Geologist for Kaiser Aluminum & Mineral Corp., reported that Jim Craddock, a real estate salesman in Glendale, has a listing for a large operating mica mine in southern Yavapai County. I suspect it is Mica Mule property and suggested Mr. Durek call John Fowler at the Arizona Mica Company.

KAP WR 6/20/80: Joe Durek and G.A. Logtin of Kaiser Aluninum & Chemical Co. were in to check file on Mica Mule Mine. Ken Phillips talked with them also.

KAP WR 7/18/80: Mr. Fowler of Arizona Mica Company (Tanner Companies) was in and discussed the status of the Mica Mule Mine, Yavapai County, and the Arizona Mica Grinding Plant in Buckeye. The mine is still down and they are continuing to research potential recovery systems. The grinding plant in Buckeye is grinding feldspar from the Monte Christo or Dixie Queen Mine in Yavapai County and is shipping the material to California buyers.

MICA MULE MINE YAVAPAI CO.

KP/WR 7/8/75 - The old Mica Mule claims, now called the Silver Mica claims, NE of John Tyler claims, the owners are planning to ship mica to the Buckeye Mica Co. 11/6/78 a.p.

KP/WR 2/14/77 a.p. - The Buckeye Mica Company Plant, the Mica Mule Mine and B.A.R.R. 4 Mica have reportedly all been merged and sold to a concern known as Econ Limited, Tolleson, Az. Econ limited is reportedly headed by a Frank Largo; Al Guthier, owner of B.A.R.R. 4, reported that Econ Limited has a 1,000,000 ton purchase contract from a Japanese group for mica. Al Guthier is to receive $1.00 per ton for crushed mica-bering rock from his property, and he will also be hired as Superintendent of the mine. Frank Largo has been involved in a variety of businesses, of which one, a lumber and building supply business, is in receivership. The Buckeye Mica Plant was visited, but no one was available. 11/6/78 a.p.

KP/WR 7/26/78 - G.M. Schupp, G.M.S. Mica Co., planned operators of the Mica Mule Mine, Yav. Co., said the Securities Division of the Arizona Corp. Comm. was going to meet with them to discuss markets for the mica. Schupp reported the property was ready to selectly mine. 11/24/78 a.p.

******* ----------

KP/WR 10/2/78 - Herman Harrison, owner of Mica Mule claims explained the G.M.S. Mica is going ahead with private financing to develop the property. He says they have three bulk samples of 1,800 pounds, 1,600 pounds, and 2,400 lbs. using air classification. He thinks they can thus produce a 70% product. 6/6/79 a.p.

KP/WR 2/6/79 - Mr. Schupp, G.M.S. Mica Co., reported on continuing progress for the design of a mica processing facility for the Mica Mule Mine. Probable plans call for crushing and benefication at the mine and pulverising and bagging at a Phoenix sight near the railroad. Electrostatic separation methods have been improved to produce a 34% recovery (95% product) while gravity ionization and magnetic separation combined produce a 94% recovery. 5/21/79 a.p.

KP/WR 3/15/79 - Gerald Schupp reported that the G.M.S. Mica Company's Mica Mule Mine is progressing toward a planned startup in the Fall. 4/26/79 a.p.

GM/WR 4/13/79 - Talked with Jerry Schupp, Mica Mule Property, Phone: 275-8822. Mr. Shupp wanted to know what he had to do before he starts his mining operation at the Mica Mule Property. He wants Ken and I to meet with him. 4/26/79 a.p.

********CH/WR 8/7/78, G.M.S. has leased 48 "Mica Mule" mining claims on Federal land in the Bradshaw Mtns. in Yavapai County.

To: John H. Jett, Director
From: Ken A. Phillips, Chief Engineer
Subject: Current status of the Mica Mule Mine(file), Yavapai County
Date: July 22, 1985

Contacted Hermon Harrision regarding the status of his Mica Mule Mine (file), Yavapai County. He reported he has formed a corporation named Harrision Mining and Exploration within which he handles the affairs of the mining property. The property is currently optioned to a Canadian firm known as Universal Resources (name not listed in the Canadian Mines Handbook) who is supposed to develop the mica deposit; however, Mr. Harrision reported that so far Universal has spent only a little effort trying to prove the property as a precious metal deposit and they are reporting values averaging 0.067 tr.oz.Au/ton. Purportedly Universal is also developing an operation to recover precious metals from the fines produced when screening cinders. Ron Killmer(sp?) and John Zimbra(sp?) have been the contacts with Universal. Mr. Harrision said that when Tanner Companies abandonded their operation they left a stockpile of 20,000 tons of mica bearing pegmatite. He and Nick Carter have discussed setting up a poor boy operation to produce mica on a small scale. He also reported that Amax Exploration had sampled the property and might have an interest in further evaluation. A copy of Amax's report was provided to Norman "Mike" Majercin who is the Secretary of Harrision Mining and Exploration [phone: work 249-1133, home 946-0188] who is supposed to make it available to us to copy. Mr. Harrision went on to report that E.M.Science would buy some mica from him if he produced it himself but they did not want to acquire the deposit.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine: Mica Mule

Date: July 1, 1983

District: Yavapai County

Engineer: Ken A. Phillips

Subject: Property visit

In the company of Dr. William Kao, E. M. Industries of Cincinnati, Ohio and Heinz Reichel, Merck of West Germany and together with Herman Harrison, owner of the Mica Mule Mine, Yavapai County, three bulk samples of pegmatite mica were obtained for shipment to Germany.

E. M. Industries (the U. S. Subsidiary of E. Merck) and E. Merck (West Germany) have been and continue to be on a world wide search for sources of muscovite mica which will meet some very exacting requirements of the company. A separate report has been written regarding their interest in mica.

E. M. Industries initially became aware of the Mica Mule mine through real estate brokers operating as agents for Herman Harrison, owner of the Mica Mule Claim Group. Information and history regarding the property was reviewed with the Department of Mineral Resources by Dr. William Kao.

Heinz Reichel made a visit to the property in the spring of 1983 and collected hand samples (5 pounds each), from 9 points. The samples were analyzed for quality of the contained mica. The mica was tested for brightness before and after calcining, trace impurities and grinding characteristics. Three of the samples passed these initial tests.

Bulk samples were taken from the three locations of the samples which passed initial tests. Each sample weighed about 1500 pounds. To obtain the samples a local contractor was hired to drill and blast each of the three sample points. About 4,000 pounds of the shot pegmatite from each site was loaded and hauled to a concrete slab left at the property from a previous operation. The "as mined" rock was broken by workers using double jacks to minus 8" before each sample was split down to 1500 pounds. The 1500 pound samples were then bagged, delivered to a truck terminal in Phoenix for shipment to South Carolina where they would load onto a ship and be sent to West Germany for testing.

The bulk samples will be benificated to recover the mica. The mica will be ground and tested both in the laboratory and by test application. Important factors will include the yield of usable mica obtained from the mine run pegmatite.

The sampling required three days, three hired men, jack leg drill, compressor, tractor loader, dump truck, explosives plus the time and expenses of Dr. Kao and Mr. Reichel. As a representative of the state I assisted in determining the sample location to assure they were representative and helped by hauling the samples to the truck terminal to assure the integrity of the samples after they had been bagged.

For: Mica Mole File

majac

Majac Division
Donaldson Company, Inc.
P.O. Box 43217
St. Paul, Minnesota 55164

612/631-0351
Telex: 29-7400

July 10, 1978

GMS Company, Inc.
P. O. Box 1443
Scottsdale, AZ 85252

Attention: Mr. Gerry Schupe

Dear Mr. Schupe:

Enclosed is the test report which covers the recent pulverization of your muscovite mica.

The test data indicates that the Majac Jet Pulverizer is capable of pulverizing your muscovite mica. However, because the feed size of the material was quite large for the size mill used accurate throughputs and product control were not obtained.

We are currently seeking a vendor who has the capabilities of milling the material and screening it so a large percentage of the quartz and feldspar would be separated from the mica. The mica would then be milled in our machine and throughputs along with product control established.

If you have any questions concerning this report or desire additional information, please contact me.

Sincerely,

Dwaine Garrick

Dwaine Garrick
Sales Engineer

RECEIVED
GMS COMPANY, INC.
JUL 13 1978

DG/jmh

Encl: Test Report

2840-50

majac

Majac Division
Donaldson Company, Inc.
P.O. Box 43217
St. Paul, Minnesota 55164

612/631-0351
Telex: 29-7400

TEST REPORT

July 10, 1978

G. M. SCHUPE, INC.
P. O. Box 1443
Scottsdale, AZ 85252

MATERIAL: Muscovite Mica

FEED MATERIAL RECEIVED: 12 inch X 6 inch pieces feed material consisting of mica, feldspar and quartz

OBJECTIVE: The object of the test was to pulverize the feed material to approximately 60 percent less than 325 mesh and 80 percent less than 60 mesh.

TESTING: The feed material received was too large for the Majac Jet Pulverizer so the material was precrushed to approximately 1/2 inch X 3/4 inch. Tests were performed using the Size 1 Majac Jet Pulverizer. Several tests were performed in an attempt to increase the amount of product remaining on a 60 mesh screen. Based on the material fed to the mill the following is optimum for grinding:

RUN NUMBER	CLASSIFIER RPM	CLASSIFIER AIR SCFM	PRODUCT	RATE LBS/HR	LBS/HR PER H.P.
5699-15	950	635	64.5 percent less than 325 mesh and 3.9 percent greater than 60 mesh	180	5.14

CONCLUSIONS: This test was performed with a feed material size of 1/2 inch X 3/4 inch. The Size 1 Majac Jet Pulverizer is not designed to accept a feed material this large. The larger Majac mills will accept this feed size. If the feed size was smaller, approximately 1/4 inch, the throughputs through the Size 1 machine could have been much higher. It is also possible that better product control could have been maintained. The test data indicates the Majac Jet Pulverizer is capable of milling this material.

Dwaine Garrick Sriitly pu

Dwaine Garrick
Sales Engineer

Elred

DG/jmh

DATA SUMMARY SHEET

JET PULVERIZATION AND AIR CLASSIFICATION

DATE 5/11/78

MATERIAL Mica CUSTOMER GMS Co GUN AIR (SCFM) 144 MILL SIZE #1 & #1

RAW FEED + 1½" 16.59 + 20 96.99 + 200 98.41 - 325 .69 DESIRED PRODUCT 80% - 60 Mesh 60% - 325 Mesh REFERENCE SAMPLE None

RUN		PRODUCT ANALYSIS % + 60	% + 325	% - 325	FEED RATE (LB/HR)	PRODUCT RATE (LB/HR)	CLASSIFIER SETTING RPM	STRIP AIR (SCFM)	FEED AIR (SCFM)	Top Rotor Gap	Cone Rotor Gap	Remarks
699-1		T.R	4.1	95.9	150	30	4500	460	108	1/8"	Even with cone	
" -2		T.R	3.2	96.8	75	78	3500	460	108	"	"	
" -3		T.R	8.5	91.5	90	86	2500	460	108	"	"	
" -4		T.R	6.5	93.5	150	132	2500	510	108	"	"	
" -5		T.R	21.0	79.0	150	120	2500	580	108	3/16"	"	
" -6		.3	12.6	87.0	150	150	1500	580	108	"	"	
" -7		.4	13.4	86.5	150	150	1500	610	108	"	"	
" -8		2.6	20.0	77.0	150	150	950	625	108	1/4"	"	
" -9		2.2	20.4	77.4	150	150	950	635	108	"	"	Changed shroud to 13" I.D (rubber)
" -10		3.8	24.5	71.7	150	132	950	635	108	Even with shroud	"	
" -11		3.4	25.1	71.6	150	120	950	635	108	½" below shroud	"	
" -12		5.6	25.0	69.4	150	132	950	635	108	"	1"	Lower cone ratio
" -13		5.7	23.0	71.3	150	144	950	635	108	"	"	Changed f to f to 4½" (4 dia)
" -14		3.8	20.0	76.2	150	186	950	635	108	"	"	Removed shroud
" -15		3.9	31.6	64.5	180	186	950	635	108	"	"	Changed tip dis to 1½" Ø

DONALDSON COMPANY, INC.
MAJAC DIVISION SIEVE ANALYSIS DATA

COMPANY YMS Co.

MATERIAL Mica

METHOD OF ANALYSIS: ☐ RO-TAP ☐ DRY BRUSH ☒ WET-WASH

MT-NO. 5699 OPERATOR L.K.

DESIRED PRODUCT 60% -325 mesh, 80% -60 mesh

SPECIAL COMMENTS OR INSTRUCTIONS

U.S. STANDARD SIEVE SERIES

DATE	SAMPLE NUMBER	WT. OF SAMPLE	LENGTH OF TIME			% + 60	% + 325				% + 60	% + 325			% + 60	% + 325	
	-RF									5699							
5/10/78	5699-1	10g	—			TR.	4.1 ~~3.5~~		5/11/78	-12	6.6	25.0					
"	" -2	"	—			—	3.2		5/11/78	-13	5.7	23.0					
"	" -3	"	—			TR	8.5		5/11/78	-14	3.8	20.0					
"	" -4	"	—			TR	6.5		"	-15	3.9	31.6					
"	" -5	"	—			TR	21.0										
"	" -6	"	—			0.3	13.6										
"	" -7	"	—			0.4	13.4										
"	" -8	"	—			2.6	20.0										
5/11	" -9	"	—			2.2	20.4										
5/11	" -10	"	—			3.8	24.5										
5/11	" -14	"	—			3.4	25.1										

MAJAC, DIVISION, DONALDSON COMPANY

DATA SHEET

Customer GMS Co, Inc Date 5/10/78

Material MICA Pulverizer Size #1

Majac Number 5699 Classifier Size #1

Contract Number 7-41650

Product Desired 60% -325 Mesh & 80% -60 Mesh

Run Number	P	1	2	3	4	5	6	7	8	9
Gun Pressure (psig)	95	95	95	95	95	95	95	95	95	95
Gun Temperature (°F)	65°	63°	60°	60°	60°	60°	60°	65°	65°	65°
Gun Housing Pressure ("H2O)	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Grinding Fluid Used	Gold	→	→	→	→	→	→	→	→	→
Classifier RPM	4500	4500	3500	2500	2500	2500	1500	1500	950	950
Classifier Amps	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Classifier Pressure ("H2O)	22.5	23.0	17.0	12.0	14.0	13.5	11.0	12.0	10.0	10.0
Outlet Pressure ("H2O)	2.0	2.0	2.5	4.0	3.5	3.5	3.75	4.75	5.0	5.0
Outlet Temperature (°F)	—	—	—	—	—	—	—	—	—	—
Fan Static ("H2O)	34.0	33.5	33.5	33.0	33.0	33.0	33.0	33.0	32.0	32.0
Strip Air Temperature (°F)	100°	105°	105°	105°	110°	110°	105°	100°	110°	95°
Strip Air Diff. ("H2O)	15.0	15.0	15.0	15.0	20.0	25.0	25.0	27.5	29.0	30.0
Strip Air Orifice (In. Dia.)	2 3/4	→	→	→	→	→	→	→	→	→
Feeder Speed (Sec. per Rev.)	—	—	—	—	—	—	—	—	—	—
Feed Material	RF	→	→	→	→	→	→	→	→	→
Injector Temperature (°F)	65°	63°	60°	60°	60°	60°	60°	65°	65°	65°
Injector Pressure (psig)	85	85	85	85	85	85	85	85	85	85
Classifier Inlet Press. ("H2O)	23.0	24.0	19.5	14.5	17.0	17.0	16.5	17.0	17.5	17.0
Collector Pr. Drop ("H2O)	.5	.75	1.5	2.0	3.0	3.0	2.0	1.0	2.0	.5
M.C.O. Removed at End										
Operator	J.R.	→	→	→	→	→	→	→	→	→
Date	5/10	→	→	→	→	→	→	→	→	5/11
Pounds Fed	50	50	50	60	25	25	23	25	25	25
Pounds Collected (Bag)										
Pounds Collected (Drum)	2.0	10.0	52	57.5	22	20	25	25	25	25
Time Feed On	7:50	8:00	8:35	10:05	11:10	11:40	1:00	3:45	3:10	8:12
Time Feed Off	8:00	8:20	9:15	10:40	11:20	11:50	1:10	3:55	3:20	8:22
Length of Run (Mins.)	10	20	40	40	10	10	10	10	10	10
Length of Run (Secs.)										

Special Notes on Set-Up

SET-UP

Classifier No. 1501 - steel lined
Shroud Size and Clearance 12 3/4" I.D
Cone Size 18 1/2" OD x 10" I.D x 5" deep
Top Rotor Size 12 1/2" OD x 6" x 7" (32 blades)
Inter. Rotor Size
Top To Inter. Dist. (in)
Cone Rotor Size 12 1/2" Ø
Cone Size
Cone To Rotor Distance (in) even with cone
Bottom Air Cap Distance (in) 3/16"
Downcomer I.D. (in) 4"
Downcomer Material steel

Grinding Section No. #1
Gun Nozzle Dia. (in) 7/32"
Gun Nozzle Tip Distance (in) 1 Ø
Gun Barrel I.D. (in) 1 1/8"
Gun Barrel Length (in) 7 1/2"
Gun Barrel Material steel
Face-To-Face Distance (in) 3"
Depth of Balls (in)
Ball Size (in)
Ball Material
Basket Material
Riser Pipe I.D. (in) 2 1/2"
Riser Pipe Material P.V.C
Riser Pipe Position Bottom tangential with rotation

Feeder Size & Type Sutron
How Fed: Injector
Direct

Feed To: Classifier ✓
Gun Housing
Impact Zone

Feed Screw Plug (in)
Inj. Nozzle Dia. (in) 9/32"
Inj. Nozzle Tip Dist. (in) 1 1/2 Ø
Inj. Barrel I.D. (in) 1 1/2"
Inj. Barrel Length 7 1/2
Inj. Barrel Material steel
Feed Pipe I.D. 1 1/2"
Feed Pipe Material P.V.C
Feed Pipe Position #3 dead leg with rotation

Strip Air Line Size (in) 5"
Strip Air Orifice (in) 2 3/4"

Product Collector T.D 573

Special Notes on Set-Up

MAJAC, D[illegible]ON, DONALDSON COMPANY

DATA SHEET

Customer GMS Co, Inc Date 5/11/78

Material Mica Pulverizer Size #1

Majac Number 5699 Classifier Size #1

Contract Number 7-4650

Product Desired 60% -325 Mesh & 80% -60 Mesh

Run Number	10	11	12	13	14	15				
Gun Pressure (psig)	95	95	95	95	95	95				
Gun Temperature (°F)	65°	65°	65°	65°	70°	70°				
Gun Housing Pressure ("H_2O)	0/0	0/0	0/0	0/0	0/0	0/0				
Grinding Fluid Used	Cold	→	→	→	→	→				
Classifier RPM	950	950	950	950	950	950				
Classifier Amps	3.0	3.0	3.0	3.0	3.0	3.0				
Classifier Pressure ("H_2O)	10.0	10.0	10.0	10.0	10.0	10.0				
Outlet Pressure ("H_2O)	5.0	5.0	5.0	5.0	5.0	4.5				
Outlet Temperature (°F)	—	—	—	—	—	—				
Fan Static ("H_2O)	32.0	32.0	32.0	32.0	32.0	32.0				
Strip Air Temperature (°F)	100°	105°	105°	105°	100°	105°				
Strip Air Diff. ("H_2O)	30.0	30.0	30.0	30.0	30.0	30.0				
Strip Air Orifice (In. Dia.)	2 3/4	→	→	→	→	→				
Feeder Speed (Sec. per Rev.)	—	—	—	—	—	—				
Feed Material	R.F.	→	→	→	→	→				
Injector Temperature (°F)	65°	65°	65°	65°	65°	70°				
Injector Pressure (psig)	85	85	85	85	85	85				
Classifier Inlet Press. ("H_2O)	17.0	17.0	17.0	17.0	17.0	17.0				
Collector Pr. Drop ("H_2O)	1.0	1.0	1.0	1.0	.5	.5				
M.C.O. Removed at End										
Operator	T.R.	→	→	→	→	→				
Date	5/11	→	→	→	→	→				
Pounds Fed	12.5	12.5	12.5	12.5	12.5	6.0				
Pounds Collected (Bag)										
Pounds Collected (Drum)	11	10	11	12	15.5	6.1				
Time Feed On	9:45	10:23	10:40	11:05	1:16	1:50				
Time Feed Off	9:50	10:28	10:45	11:10	1:15	2:10				
Length of Run (Mins.)	5	5	5	5	5	20				
Length of Run (Secs.)										

Special Notes on Set-Up

DONALDSON COMPANY, INC. Majac Division PARTICLE SIZE ANALYSIS

ORGANIZATION: [illegible] Company 5/11/78

OPERATOR: [illegible]

EQUIPMENT: TA II

SAMPLE: 5699-12 2% DACH/H_2O TX-100/US

-400 mesh

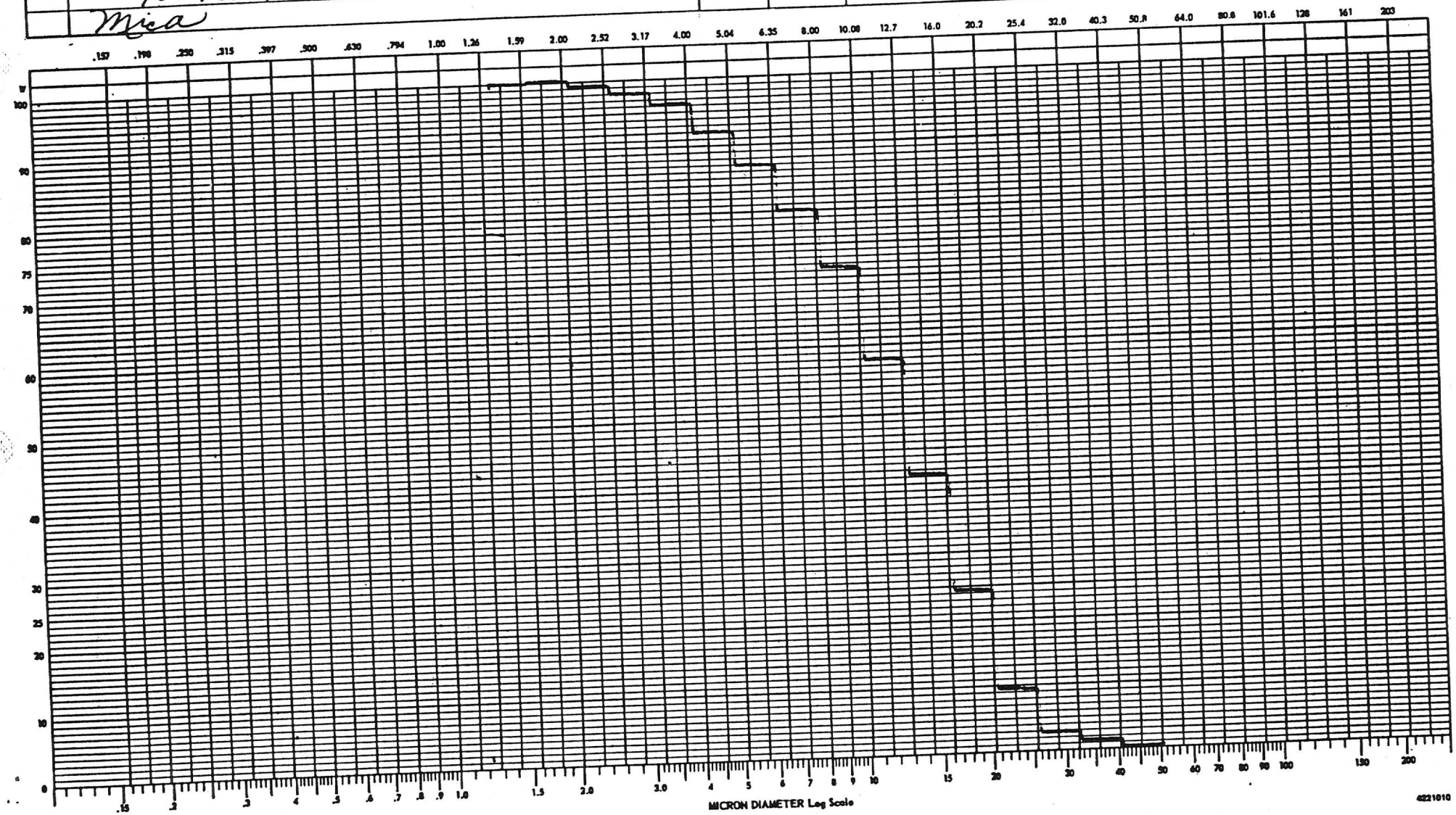
Mica

$d = d\sqrt[3]{\frac{W}{2}}$ FOR MODEL T

$\frac{A_2}{A_1} = \left(\frac{d_2}{d_1}\right)^3$ when $W_2 = W_1$

$\frac{A_2}{A_1} = \left(\frac{d_1}{d_2}\right)^3$ when $W_2 = W_1$ FOR MODEL TA

				PART DIA.	W	W/A	A	SAMPLE SETTINGS DIA.	W	W/A	A
AFTER MILL	BEFORE										
1004											



4221010

DONALDSON COMPANY, INC. Majac Division

PARTICLE SIZE ANALYSIS

.15 – 200μ
X PERCENT

Majac Division, Donaldson Industrial Group
P. O. Box 43217, St. Paul, Minnesota 55164

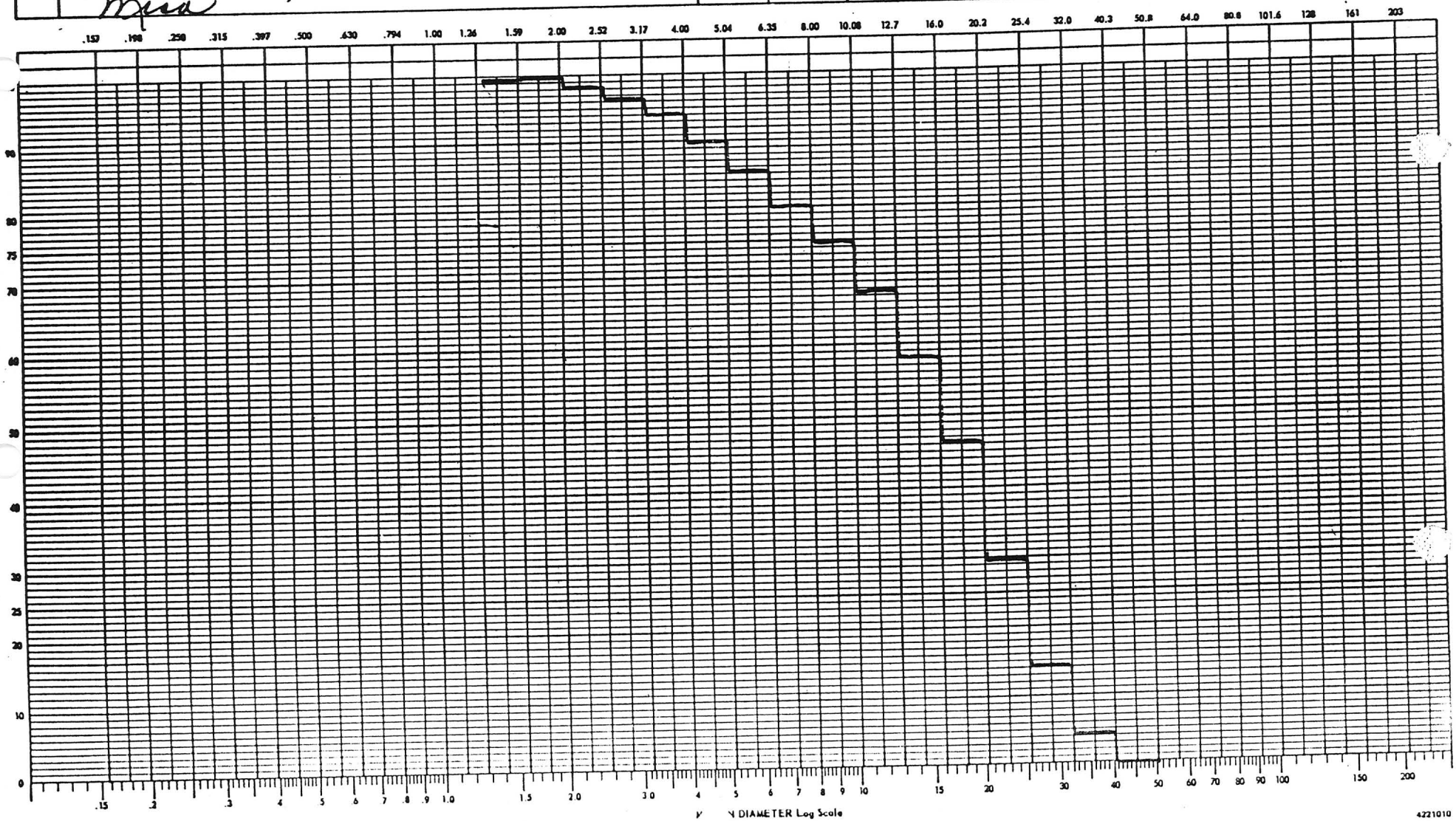
ORGANIZATION: Gn dC.
OPERATOR: LR — 5/11/78
EQUIPMENT: TA II
SAMPLE: 5699-12 — ELECTROLYTE: 2% NaCl/H_2O — DISPERSANT: Tx-100/us
-325 (400) screen
Mica

$t = d\sqrt[3]{2w}$ FOR MODEL T

$\frac{A_2}{A_1} = \left(\frac{d_2}{d_1}\right)^3$ when $W_2 = W_1$

$\frac{A_2}{A_1} = \left(\frac{d_1}{d_2}\right)^3$ when $W_2 = W_1$ FOR MODEL TA

APER. SIZE	SERIAL		PART DIA.	W	±IA	A	SAMPLE SETTINGS DIA.	W	±IA	A
100μ										



4221010

MAJA DIVISION, DONALDSON COMPANY

DATA SHEET

Customer G.M.S. Co., Inc. Date 5/10/[illegible]

Material Silica Pulverizer Size #1

Majac Number 3699 Classifier Size #1

Contract Number 7-4450

Product Desired 60% -325 Mesh & 80% -60 Mesh

Run Number	P	1	2	3	4	5	6	7	8	9
Gun Pressure (psig)	95	95	95	95	95	95	95	95	[illegible]	[illegible]
Gun Temperature (°F)	65°	63°	60°	60°	60°	60°	60°	65°	[illegible]	[illegible]
Gun Housing Pressure ("H_2O)	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	[illegible]	[illegible]
Grinding Fluid Used	Cold	→	→	→	→	→	→	→	[illegible]	[illegible]
Classifier RPM	4500	4500	3500	2500	2500	2500	1500	1500	[illegible]	[illegible]
Classifier Amps	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	[illegible]	[illegible]
Classifier Pressure ("H_2O)	22.5	23.0	17.0	12.0	14.0	13.5	11.0	12.0	[illegible]	[illegible]
Outlet Pressure ("H_2O)	2.0	2.0	2.5	4.0	3.5	3.5	3.75	4.75	[illegible]	[illegible]
Outlet Temperature (°F)	—	—	—	—	—	—	—	—	[illegible]	[illegible]
Fan Static ("H_2O)	34.0	33.5	33.5	33.0	33.0	33.0	33.0	33.0	[illegible]	[illegible]
Strip Air Temperature (°F)	100°	105°	105°	105°	110°	110°	105°	100°	[illegible]	[illegible]
Strip Air Diff. ("H_2O)	15.0	15.0	15.0	15.0	20.0	25.0	25.0	27.5	[illegible]	[illegible]
Strip Air Orifice (In. Dia.)	2 3/4	→	→	→	→	→	→	→	[illegible]	[illegible]
Feeder Speed (Sec. per Rev.)	—	—	—	—	—	—	—	—	[illegible]	[illegible]
Feed Material	RF	→	→	→	→	→	→	→	[illegible]	[illegible]
Injector Temperature (°F)	65°	63°	60°	60°	60°	60°	60°	65°	[illegible]	[illegible]
Injector Pressure (psig)	85	85	85	85	85	85	85	85	[illegible]	[illegible]
Classifier Inlet Press. ("H_2O)	23.0	24.0	19.5	19.5	17.0	17.0	16.5	17.0	[illegible]	[illegible]
Collector Pr. Drop ("H_2O)	.5	.75	1.5	2.0	3.0	3.0	2.0	1.0	[illegible]	[illegible]
M.C.O. Removed at End										
Operator	T.R.	→	→	→	→	→	→	→	[illegible]	[illegible]
Date	5/10	→	→	→	→	→	→	→	[illegible]	[illegible]
Pounds Fed	50	50	50	60	25	25	25	25	[illegible]	[illegible]
Pounds Collected (Bag)										
Pounds Collected (Drum)	2.0	10.0	52	57.5	22	20	25	25	[illegible]	[illegible]
Time Feed On	7:50	8:00	8:55	10:05	11:20	11:40	1:00	3:45	[illegible]	[illegible]
Time Feed Off	8:00	8:20	9:15	10:40	11:30	11:50	1:10	3:55	[illegible]	[illegible]
Length of Run (Mins.)	10	20	20	40	10	10	10	10	[illegible]	[illegible]
Length of Run (Secs.)										

Special Notes on Set-Up

MA[illegible], DIVISION, DONALDSON COMPANY

DATA SHEET

Customer [illegible] Date [illegible]

Material [illegible] Pulverizer Size #1

Majac Number [illegible] Classifier Size #1

Contract Number [illegible]

Product Desired [illegible] -325 Mesh [illegible] -40 Mesh

Run Number	10	11	12	13	14	15				
Gun Pressure (psig)	[illegible]	95	95	95	95	95				
Gun Temperature (° F)	65°	65°	65°	65°	70°	70°				
Gun Housing Pressure ("H_2O)	[illegible]	0/0	0/0	0/0	0/0	0/0				
Grinding Fluid Used	Cold	→	→	→	→	→				
Classifier RPM	[illegible]	950	950	950	950	950				
Classifier Amps	3.0	3.0	3.0	3.0	3.0	3.0				
Classifier Pressure ("H_2O)	10.0	10.0	10.0	10.0	10.0	10.0				
Outlet Pressure ("H_2O)	5.0	5.0	5.0	5.0	5.0	4.5				
Outlet Temperature (° F)	—	—	—	—	—	—				
Fan Static ("H_2O)	32.0	32.0	32.0	32.0	32.0	32.0				
Strip Air Temperature (° F)	100°	105°	105°	105°	100°	105°				
Strip Air Diff. ("H_2O)	30.0	30.0	30.0	30.0	30.0	30.0				
Strip Air Orifice (In. Dia.)	2 3/4	→	→	→	→	→				
Feeder Speed (Sec. per Rev.)	—	—	—	—	—	—				
Feed Material	RF	→	→	→	→	→				
Injector Temperature (° F)	65°	65°	65°	65°	65°	70°				
Injector Pressure (psig)	85	85	85	85	85	85				
Classifier Inlet Press. ("H_2O)	17.0	17.0	17.0	17.0	17.0	17.0				
Collector Pr. Drop ("H_2O)	1.0	1.0	1.0	1.0	.5	.5				
M.C.O. Removed at End										
Operator	T.R.	→	→	→	→	→				
Date	[illegible]	→	→	→	→	→				
Pounds Fed	12.5	12.5	12.5	12.5	12.5	6.0				
Pounds Collected (Bag)										
Pounds Collected (Drum)	11.	10	11	12	15.5	6.1				
Time Feed On	9:45	10:23	10:40	11:05	1:16	1:50				
Time Feed Off	9:50	10:28	10:45	11:10	1:15	2:10				
Length of Run (Mins.)	5	5	5	5	5	20				
Length of Run (Secs.)										

Special Notes on Set-Up

G. David DeLozier, P.C.
ATTORNEY AT LAW
4226 N. PARKWAY
SCOTTSDALE, ARIZONA 85251
(602) 946-4421

February 15, 1984

Ken
See John

MICA MULE MINE
(file)

Department of Mineral Resources
Universal Building
Fairgrounds
Phoenix, AZ 85007

Attention: Ken Phillips

Dear Mr. Phillips:

I spoke to Mr. John Jett on February 14, 1984. He advised me that you were currently examining properties with mica deposits for certain users of it. He advised that I could submit the reports on our property for your consideration. Enclosed please find a feasibility report prepared by Mr. Joe Wilkins, geologist, on our Yavapai County property.

I am hand delivering the above referenced document to your department at Mr. Jett's request. I understand you will be in your office on Friday, February 17, 1984. I should be pleased to visit you then, if it is convenient to you. Further, I shall be pleased to have you and your staff visit the mining sites anytime next week.

I look forward to hearing from you.

Very truly yours,

G. David DeLozier

enclosure