CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
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http://www.azgs.az.gov
inquiries@azgs.az.gov

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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED 06-16-2006

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: BAGDAD PUMICE

ALTERNATE NAMES:
- AGRO-LITE
- VISTA
- DOUBLE J
- WHITE DICK
- SPONGE ROCK
- CRESTA BLANCA

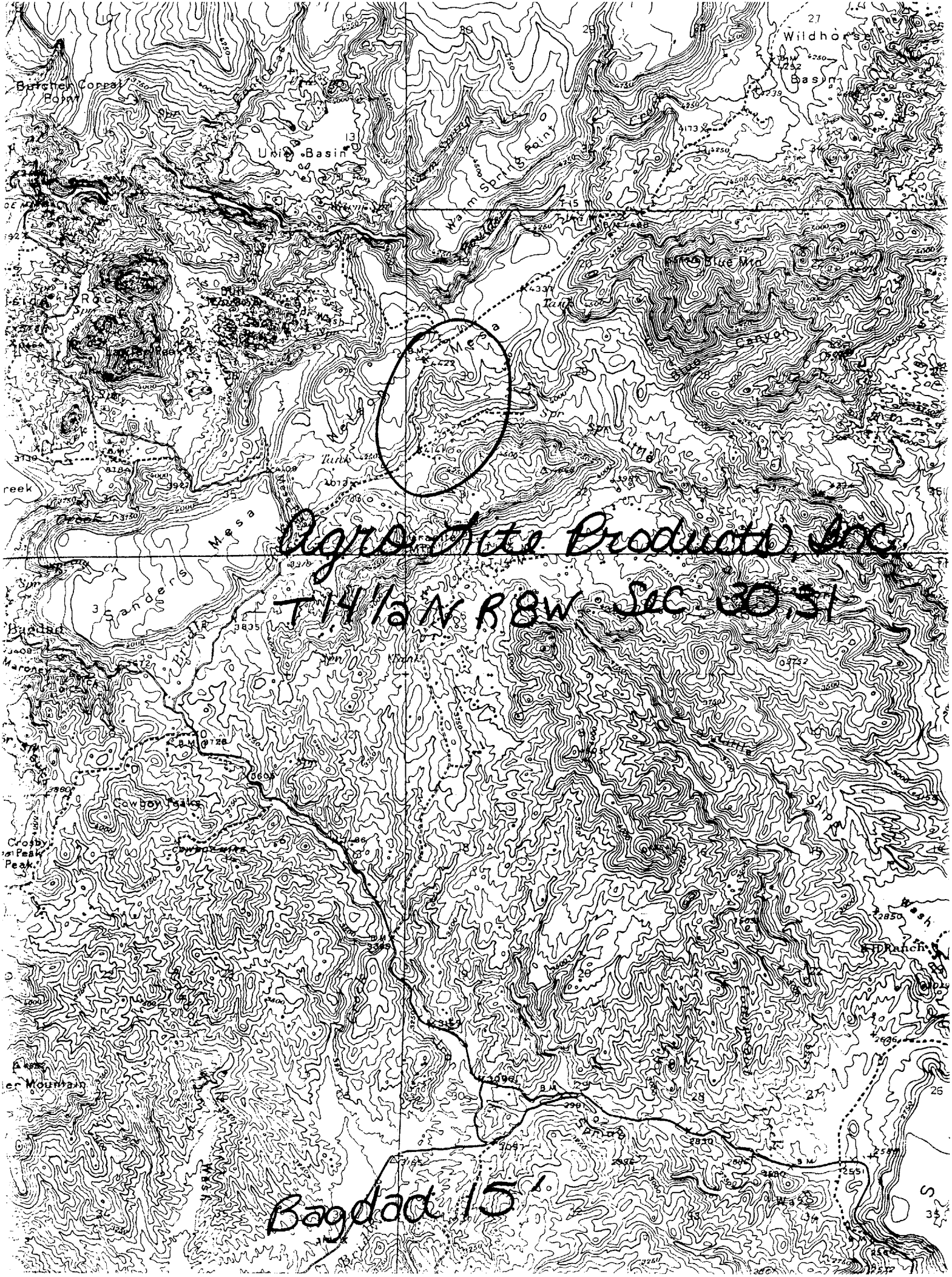
YAVAPAI COUNTY MILS NUMBER: 137

LOCATION: TOWNSHIP 14.5N RANGE 8 W SECTION 30 QUARTER E2
LATITUDE: N 34DEG 36MIN 35SEC LONGITUDE: W 113DEG 08MIN 30SEC
TOPO MAP NAME: BAGDAD - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- PUMICE

BIBLIOGRAPHY:
- ADMMR BAGDAD PUMICE FILE


Agro-Site Products, Inc.
T14½N R8W Sec. 30,31
Bagdad 15'
Wildhorse Basin
Butcher Corral Point
Unio Basin
Warm Spring Point
Blue Mtn
Blue Canyon
Little Blue Canyon
Mesa
Sanders Mesa
Bagdad
Cowboy Peaks
Crosby Peak
Kid Ranch
Spring

Bagdad Permit

Yavapai COLLEGE | Community Campus

The Leadership Center • 500 South Marina Street • Prescott, Arizona 86303-4326
(520) 776-2027 • FAX: (520) 771-1511 • Email: ycvision@yavapai.cc.az.us

October 27, 1999

Diane Bain
Dept. of Mines & Mineral Resources
1502 West Washington
Phoenix, AZ 85007

Dear Diane Bain:

Congratulations! It wouldn't have been possible without **you**!

The Leadership Center at Yavapai College is proud to announce that the Bagdad Kitty Litter Mine Clean Up Project was selected as the recipient of the 1999 Governor's Pride in Arizona Award!

We, at the Leadership Center, are very excited about this award and hope that you are just as pleased. All of the partners put a lot of time and effort into the Bagdad Kitty Litter Mine Clean Up and it is nice to be recognized for our efforts. I believe that the most important outcome of our project was the partnership and the friendships created during the project. Those partnerships enabled us to have a successful clean up and led to our winning the Governor's Pride Award. The Governor's Pride Award is a very prestigious award and it is an honor to have been selected as one of this year's winners.

Again, I would like to thank you all for your support the Bagdad Kitty Litter Mine Clean Up Project. I have enclosed the letter announcing our win and the information about the award ceremony luncheon. I would love to see some of our partners there. The date, location, and prices of the luncheon are also enclosed. Unfortunately, since our funding comes from the taxpayers of Yavapai County, we cannot pay for your attendance at the luncheon or the workshops. But if your budget allows, we would love you to attend. Let us know if you're coming so we can arrange to be at the same table. If you have any questions, please call my office at (520) 776-2027.

I hope that we can continue to keep all of the partnerships that have been created through this project. I look forward to working with all of you again! (Who knows, maybe we can win next year's Governor's Pride Award!)

Sincerely,

Susan E. Adams
Director
The Leadership Center at
Yavapai College

Date Printed: 07/09/98

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **John Brennan and Gene Targosz**

Company: Raod Chemical, Inc.

Address: 2547 N. Champlain Ave.
City, State ZIP: Tempe, Arizona 85281
Phone: 602-946-8159

MINE: **Bagdad Pumice**

ADMMR Mine File: Bagbad Pumice
County: **Yavapai**
AzMILS Number: 137

SUMMARY

John Brennan, Road Chem, Inc., 2547 N. Champlain Ave., Tempe, Arizona 85281, phone (602)-946-8159 fax (602)-425-1384 visited and reported that he holds claims on the Bagdad Pumice Deposit, Yavapai AZMILS No. 137.

Gene Targosz, President, Aztec Specialty Chemicals, Inc., 2241 S. 15th Place, Phoenix, Arizona 85034, phone (602) 340-1341, fax (602) 340-1358 is assisting Mr. Brennan in attempting to find uses for the large resource of white tuffaceous material. They have initially contacted Ted Eyde, a consulting geologist specializing in industrial minerals for functional filler and value added applications. He has done some initial screen analysis and water vapor sorbtion tests. He also proposed a reconniansance field examination of the property toward making a recommendation of either going ahead with a detailed investigation and estimate of the work and cost required or dropping the property. A copy of the data and letter has been provided for the files.

A bag of the unwelded tuff from the proterty, finely crushed, labelled"Go*Cat*Go", and produced by Joshua Tree Mining Company was provided. This was appearently produced at the deposit in the late 1980's or early 1990's.

Ken A. Phillips, Chief Engineer Date: July 8, 1998

Date Printed: 08/11/98

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Housing Management for Cyprus Bagdad**

Company:

Address:
City, State ZIP: Bagdad, Arizona
Phone:

MINE: **Bagdad Pumice**

ADMMR Mine File: Bagdad Pumice
County: **Yavapai**
AzMILS Number: **137**

SUMMARY

The residential housing management company for the Cyprus Bagdad mine called and asked about ownership of the Pumice Deposit, Yavapai AZMILS No. 137. I gave him Mr. Brennan's business phone number.

The housing company would like to talk someone into cleaning up the abandoned mess left by attempted operators in the 1970's

Ken A. Phillips, Chief Engineer Date: August 11, 1998

AGRO-LITE PRODUCTS, INC. (Mine File) YAVAPAI

KP/WR 7/24/79 - Information was obtained from the Arizona Corporation Commission that Agro-lite Products Inc. is a defunct corporation.

RRB WR 1/9/81: Joel Theis, P.E. (Mechanical), 5437 E. Sweetwater Avenue, Scottsdale, Arizona 85254, phone 996-5074, working for Western Garden Marketing, Suite C, 54205 Lake Shore Drive, Tempe, Arizona 85283, is acquiring the Agro-Lite Products, Inc. property from Herschell and Ethel McDaniels. He is checking the claims on federal land and leases on state land for the property located approximately three miles northeast of Bagdad, Yavapai County. They intend to produce Kitty Litter, potted plant soil, etc.

RRB WR 9/25/81: Vic Randolph, phone 277-7879 reported that his company is taking over the Vista, Double J and White Dice claims near Bagdad. (ARGO-Lite Products file) Part of the property is state land and the lease is about to expire and the state land department says they won't renew the lease because pumice is a common variety and therefore must be put up for bid.

NJN WR 10/9/81: Vic Randolph, 3550 N. Central, Suite 1700, Phoenix, 85012 brought in some samples of pumicite reportedly from a state lease property. (See Agro-Lite file). He is looking for unique qualities in the material so that when the present lease expires, the property won't be open to competitive bidding. the property is not producing now but the pumicite would apparently meet Safeway's specifications for Kitty Litter. When this matter is cleared up his client (Western Garden Marketing) would like to supply Safeway and have a bagging operation at Kingman.

NJN WR 8/19/85: Joe Langlois mining engineer with the State Dept. of Revenue reported that Western Garden Marketing (c) is operating the Agro-Lite Products mine (f). Victor Randolph is the principal person involved. The mine is listed on the stae's tax role this year. Their product is called Robinson's Cat Litter and is currently the cheapest cat litter in the Phoenix market.

NJN WR 9/25/87: Vic Randolph (card) of Ramhed Mining Company (card) Bagdad Pumice (file) Yavapai County reported that the production volume is too low to be very profitable. They need to find more markets to supply to increase their sales.

JOEL THIES, P.E.
CONSULTANT ENGINEER

January 21, 1981

Mr. Tom Adikes
Mr. Joe Yrigoyen
Western Garden Marketing, Inc.
5420 S. Lakeshore Drive
Suite C
Tempe, AZ 85283

Gentlemen:

On January 16th, pumice samples were collected from four separate locations at the Bagdad site. The specific locations were:

1. In the evcavated area on top of the hill, adjacent to the deserted shack.

2. In the excavated area near the top of the hill, where the tunnel shaft had been dug. Samples were collected on both southerly (2a), and northerly (2b) facing veins.

3. Along the cliff face, south of the present processing site.

4. In an area south of the present grizzley location. This was excavated by front-end loader.

The samples (18 total) were taken at depths of 16 - 18" into the veins via an auger bit and brace. The purpose of these tests was to determine moisture contents of the mineral within the vein wall, and to compare these results with previous data obtained from samples collected closer to the vein's surface.

The samples were recovered in air-tight plastic bags and tested by methods detailed in my report of December 1, 1980. The results are as follows:

Area #1 (by the shack)

Moisture Content (% weight)

23.5	23.3	25.3	Average = 24.3%
23.5	25.1	25.0	

5437 E. SWEETWATER • SCOTTSDALE, ARIZONA 85254 (602) 996-5074

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine: Agro-Lite Product, Inc. Date: July 9, 1975

District: Bagdad Engineer: Ken Phillips

Subject: Mine and plant visit and interviews with owners, Herschell D. McDaniel, 524 North 42nd Street, Phoenix, and James Farmer, 3546 East Melvin, Phoenix.

Location Portions of Secs. 19,30,31, T14½N, R8W and Secs. 24,25,35,36, T15N, R9W 28 claims - 3/4 miles NE of Bagdad

Property Vista 1-4, Double J 1-9, White Dick 1-4, Spong Rock Group 1-7,9,12 and Cresta Blanca 1&2 in the Eureka District, Yavapai

Minerals Tuff (Pumice)

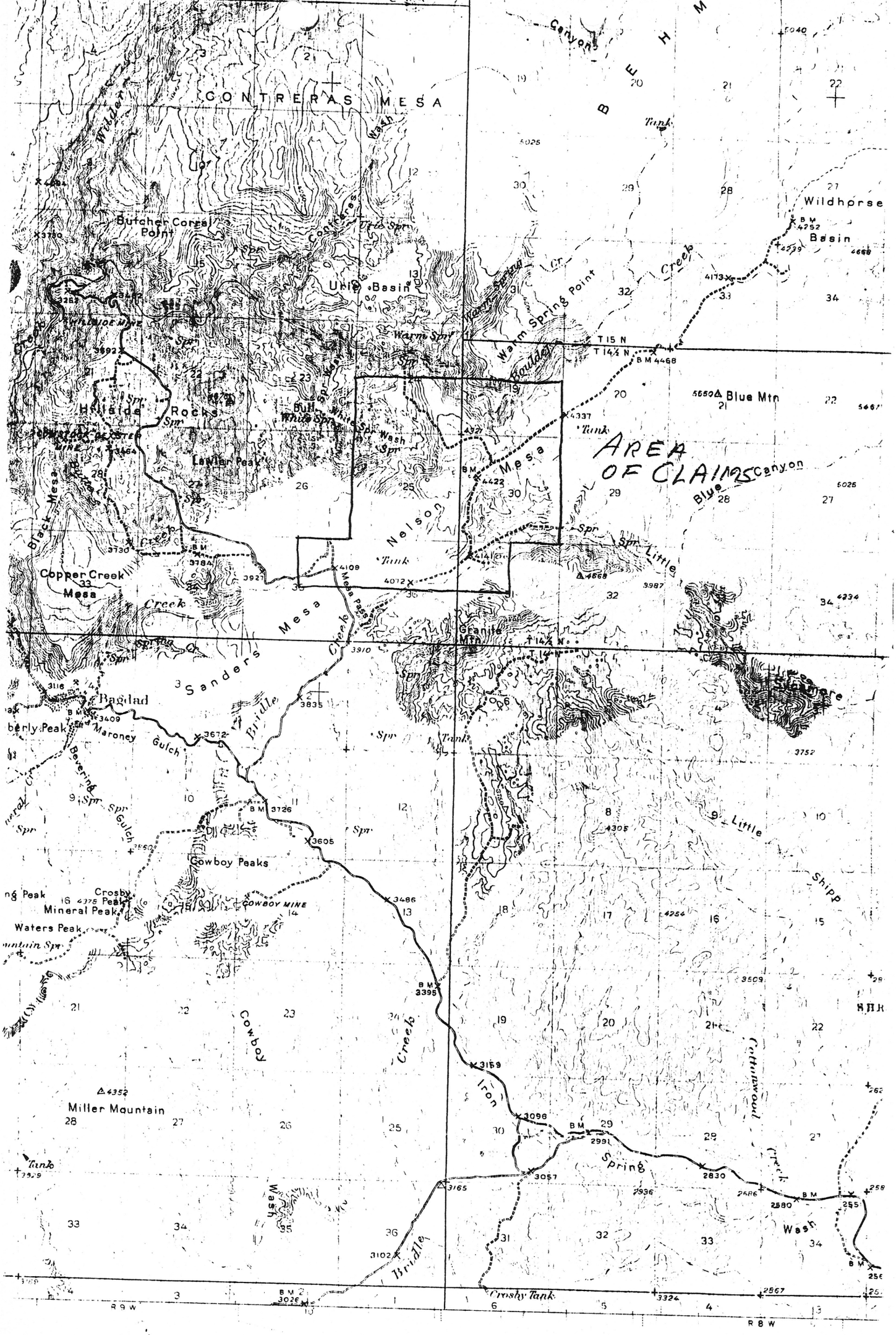
In the company of James Farmer and Steve Martin, a potential investor and business manager, I visited the above described property. The primary purpose of the trip was for Messrs. Farmer and McDaniel (McDaniel joined us in Bagdad) to acquaint Mr. Martin with the property and plant.

The property consists of 28 claims on outcrops of white tuff or pumice. On a number of claims the tuff has been exposed by dozer cuts. Thicknesses of the horizontal bed ranges from 10 to 50 feet. (See USGS P.P. 278 for details of geology). The tuff is generally capped with fractured basalt and experience has shown that the basalt overburden can be removed by ripping and dozing adjacent to the tuff outcrops. Reserves of the tuff are extensive when compared to the size of the intended operation. The tuff is presently mined, sized, dryed, sorted and bagged for use as a floor sweep, oil and water absorbent, pet litter, insulation material and a light weight aggregate.

Mining proceeds by initially stripping the basalt, conglomerate and rhyolite overburden (seldom more than 15 feet) and pushing the tuff into piles with a rented dozer. Stripping and piling is carried on only a few times each year to stockpile material at the various pits. Mined material is loaded with a skip loader into a 2½ ton dump truck and trucked a distance of ¼ to 2 miles to the mill. The rock is dumped over a 1½ inch vibrating screen into a feed bin; oversize is stockpiled.

The minus 1½ inch material is belt fed into a 20' rotary Butane fired dryer fired from the feed end. Dust is collected from the discharge of the dryer and the feed belt to the screening plant. The dryed material is fed to a 5 deck screening plant where the +5/8 material is discarded, the -5/8+3/16 material is fed to one bin as lightweight aggregate and insulation material. The -3/16+100 mesh material is fed to two bins for bagging as pet litter and floor sweeping compound. The owners rate the mill at 20 tons of bagged material per 8 hour shift using one employee with knowledge of the operation and two unskilled laborers. Electric power is supplied by a butane electric generator. A number of storage sheds and laborer cabins are located at the mill.

Mr. McDaniel is presently operating the property to fill small orders as they are received. Mr. Farmer stated that many orders would be placed if they were able to deliver, but at present they lack even the money to purchase paper bags and fuel. They are trying to arrange for enough money (as much as $50,000) to pay expenses of some repairs and bring the plant into full scale operation. The plant has been producing material to fill small orders since the early 1960's.



SCALE 1:62500

CONTOUR INTERVAL 50 FEET

Bagdad Pumice (f)
Yavapai County

GSA Resources Inc.

P.O. Box 509
(520) 744-8845

Cortaro, Arizona 85652
Fax (520) 744-7770

July 1, 1998

John Brennan
Road Chem Inc.
2547 Champlain Ave.
Tempe, Arizona 85281

Bagdad, Arizona Pumice Deposit

Dear Mr. Brennan:

After talking with you last week, I did a screen analysis, and a sorption analysis on the pumice. The results are attached to this letter. The objective of the X-ray diffraction, screen and sorption analyses were to try to determine what might be salable applications of the pumice. The sorption analysis showed that most of the clay is in the -40 mesh, which is the smallest particle size fraction.

The questions are: What are the potential applications for the pumice and does the deposit have the consistent quality and tonnage required to supply these applications. Metallic deposits such as gold, silver, and copper have a ready market for their product provided the price of the metal is sufficiently higher than the cost of product to make profit. The producer, however has no

control of the price of the metal. Conversely, industrial minerals or nonmetallics usually have no ready market, consequently, the producer has to recognize the unique properties of the product and develop his markets. In most cases the producer can charge what the market will bear for the product.

Ideally, the mineral product will have a high value added application and also a commodity type application. For example perlite is used in surface modified engineering filler applications which are high value added specialty applications. However, most of the production may be for loose fill insulation and soil amendments which are low value added commodity applications.

My recommendations are:

1. Preliminary Field Examination which will include sampling, mapping, and land status check. This will take an estimated 2 to 3 days of professional time plus transportation and living expenses.

2. Analytical work which will include: a wet screen analysis, chemical and mineralogical analysis of the major fractions, oil and water absorption, bulk density, and hardness.

One of the objectives of the analytical work is to determine whether the pumice has some property which gives it distinct and

special value. Unless the Bagdad pumice has a distinct and special value the deposit cannot be acquired by staking mining claims.

The field examination will cost between $2000 and $2500. After I complete the field examination I will recommend either going ahead with the investigation and an estimate of the cost of the work required or dropping the property. The criteria for my recommendation is simply "would I be willing to invest my money in this property"? If the answer is no my recommendation will be to drop it; if it is yes then in my judgement there is a reasonable expectation that the deposit can be developed. Give me a call if you need anything.

Best regards,

Ted H. Eyde

Ted H. Eyde

THE/mce

Screen Analysis

Mesh	Percent retained
+4	3.8%
-4 +8	20.1%
-8 +20	38.9%
-20 +40	16.0%
-40	21.2%
	100.0%

Water Vapor Sorption Analysis

100 hours @ 75°F and 40% Relative Humidity

Mesh	Wt. Percent Sorbed
+4	4.9%
-4 +8	5.1%
-8 +20	5.1%
-20 +40	3.9%
-40	8.3%

ØWT-ØWT÷ØWT | HUMIDITY | SUBJECT

DATE

BY: _____ PG OF

DISH	SAMPLE	MESH	TARE	WET	DRY THI.	DRY-TARE	WT%	TOTAL	-TARE	WT%	TOTAL	-TARE	WT%	TOTAL	-TARE	WT%
E		-40	2.78	10.0	12.78			12.20	9.42	5.8	11.95	9.17	8.3			
TA			2.80			12.80		12.83	10.03	.3						
N		20x40	2.74	10.0	12.74			12.26	9.52	4.8	12.35	9.61	3.9			
CQ			2.34	10.0		12.34		12.36	10.02	.2						
AT		8x20	2.35	10.0	12.35			11.77	9.42	5.8	11.84	9.49	5.1			
BT			2.36	10.0		12.36		12.36	10.0	0						
WX		+4	2.78	10.0	12.78			12.17	9.39	6.1	12.29	9.51	4.9			
PC			2.76	10.0		12.76		12.76	10.0	0						
AB		4x8	2.34	10.0	12.34			11.73	9.39	6.1	11.83	9.49	5.1			
DC			2.35	10.0		12.35		12.37	10.02	.2						
Z	EMC STD	3x30	2.75	10.0	12.75			12.54	9.79	2.1	13.29	11.31	13.1			
GZ			2.84	10.0		12.84		13.57	10.73	7.3						

Area 2a (by tunnel, southerly-facing)

Moisture Content (% weight)

23.8	23.4	26.5	Average = 24.6%
23.2	25.9		

Note: No previous test data for comparison.

Area 2b (by tunnel, northerly-facing, by shaft opening)

Moisture Content (% weight)

21.5	21.7	20.9	Average = 21.3
21.6	20.8		

Note: The "western" exposure surface test data reported previously was 28%.

Area 3 (south of existing precessing site, on cliff face)

Moisture Content (% weight)

20.0	15.6	19.2	14.6	Average = 18.3%
20.2	17.0	18.8	14.7	
17.6	17.1	22.7		
18.1	17.4	22.7		

Note: Previously reported values at this location were 22%, average.

Area 4 (uncovered by front-end loader)

Moisture Content (% weight)

18.9	19.1	19.1	Average = 18.9%
19.4	19.1	18.0	

Note: The test results obtained by excavation compare very closely with those cored from the vein wall in area 3.

On the same visit, I collected approximately 50 pounds of material from a stockpile, primarily for density and absorbility testing. This was because the classification range was contemplated to change from 1/16 - 1/4, to 1/32 - 1/4". The moisture content of these classified samples is as follows:

Grade	1/32 - 1/4	1/16 - 1/4	1/32 -	1/16 -
Average Moisture (% wt)	13.5	13.0	11.2	11.5

Summary of moisture content testing

The test results indicate that within any particular area we can expect a variation of plus or minus 3 to 4 percentage points. It thus appears that the "as-mined" moisture content of the material south of the processing site will range from 18 to 22%, and that if we stockpile this material for an extended period of time before processing, the moisture content will drop to 11 - 14%. It was noted in areas 2b and 3, that the surface material previously reported contained more moisture than that deep-seated, and that material that was directly exposed to the sun's rays contained more moisture than that with a northerly exposure. This information would appear to be contrary to common sense judgement, but is explained as follows:

- Direct sun's rays impingement appears to form a "crust" over the material which disallows drying of the interior material.
- It had rained in the Bagdad area since December 8th, and the effects of rain absorption into the veins are not known.
- Moisture content is dependent on particle size, within any one sample area.

In any event, I do feel that the results of these tests are sufficiently accurate to provide a basis for drying and processing operations.

Density testing

Portions of the classified (stockpiled) material were rendered to a "bone-dry" condition and subjected to density testing per that described in my report of December 1st. The results are as follows:

Grade	1/32 - 1/4	1/16 - 1/4	1/32 -	1/16 -
Average Density (lbs/cu ft)	25.8	25.2	31.1	30.1
Previously reported	--	21.5	--	23.7

The previously reported data was not based on "bone-dry" material, but rather an average moisture content of 4.7% was subtracted to account for the water present. Also, the differences in the degree of screening that occurred when Joe and I classified the first material samples, as opposed to when I screened the second samples will obviously account for a portion of the error. Density measurements are very dependent upon the amount of "fines" in the mixture, and therefore I suggest that we defer judgement on density until we have identified the screens that will be used on the system (please note my letter of January 20th, regarding standard screen sizes). For the purposes of discussion however, I think we can safely say that a screening range of approximately 1/64" and 3/32" will provide a material density in the 26 to 27 pound per cubic foot range.

Absorbability testing

The "bone-dry" classified material was tested for absorbability via previously reported methods. The results are as follows:

Grade	1/32 - 1/4	1/16 - 1/4	1/32 -	1/16 -
Absorbability (% weight)	54.1	49.7	54.7	52.6
Previously reported	--	42.0	--	48.4

Again the variations appear because of screening methods and assumptions of residual moisture. The results are weighted in our favor, however we should be very careful in deciding amounts of drying, based on probable absorbability predictions.

Continued testing

Additional testing for moisture content, density and absorption should be conducted on the operating system at Bagdad. In reviewing Safeway's specifications for Cat Box Absorbent, I find the methods quite simple to follow, and the necessary equipment can be obtained for a very nominal cost. I suggest that we equip ourselves accordingly, and be prepared to conduct extensive tests in parallel with our start-up operations.

Sincerely,

Joel Thies

Joel Thies
AZ registration # 12516

EXHIBIT A

The Property consists of the Double J placer mining claims located on Federal land in Sections 30 and 31, Township 15 N. R 8 W., G+SRB+M, numbered one through eight, recorded in Book 193 at pages 463 To 470, Records of Yavapai County, Arizona; Double J No. 9 placer mining claim, subsequently located in the West ½ of the NW¼ NW¼ said Sec. 30;

The Vista placer mining claims located on federal land covering the West ½ of the SE¼ of Sec. 24, T. 15 N., R. 9 W.; and the White Dice placer mining claims numbered one through four, located in the West ½ of the SW¼, Sec 30, and the N½ NW¼ NW¼, Sec 31, T 15 N, R 8 W.; and

Those certain Arizona State Land Department leases numbered 1568, 1569, 1570, 1571, 1572, 1573, 1574 and 2286, now leased to Ethel A McDaniel

Claims being acquired by Western Gardens Marketing from Horsehell + Ethel McDaniels. Old Agro-Lite Products Inc. property

ART INC (AR)

DKT 10734 PG 1042

176435

STATE OF ARIZONA

Corporation Commission

To all to Whom these Presents shall Come, Greeting:

I, GEORGE M. DEMPSEY, SECRETARY OF THE ARIZONA CORPORATION COMMISSION, DO HEREBY CERTIFY THAT the annexed is a true and complete copy of the ARTICLES OF INCORPORATION

of

AGRO-LITE PRODUCTS, INC.

which were filed in the office of the Arizona Corporation Commission on the 10th day of July, 1974, as provided by law.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED THE OFFICIAL SEAL OF THE ARIZONA CORPORATION COMMISSION, AT THE CAPITOL, IN THE CITY OF PHOENIX, THIS 10th day of July, 1974

INCORPORATED UNDER THE LAWS

OF THE STATE OF ARIZONA

AGRO-LITE PRODUCTS, INC.

Authorized 5,000,000 Shares at 10¢ Par Value Each

This Certifies that _____ is the owner of

_____ Shares of the Capital Stock of

AGRO-LITE PRODUCTS, INC., fully paid and non assessable,

transferable only on the books of the Corporation by the holder hereof in person or by Attorney upon surrender of this Certificate properly endorsed.

IN WITNESS WHEREOF, the said Corporation has caused this Certificate to be signed by its duly authorized officers and its Corporate Seal to be hereunto affixed

This _____ day of _____ A.D. 19__

SECRETARY

PRESIDENT

© GOES FOH

ARTICLES OF INCORPORATION

OF

AGRO-LITE PRODUCTS, INC.

KNOW ALL MEN BY THESE PRESENTS:

That, we the undersigned, having associated ourselves together for the purpose of forming a corporation under and by virtue of the laws of the State of Arizona, hereby adopt the following Articles of Incorporation.

ARTICLE I

The name of the corporation shall be:

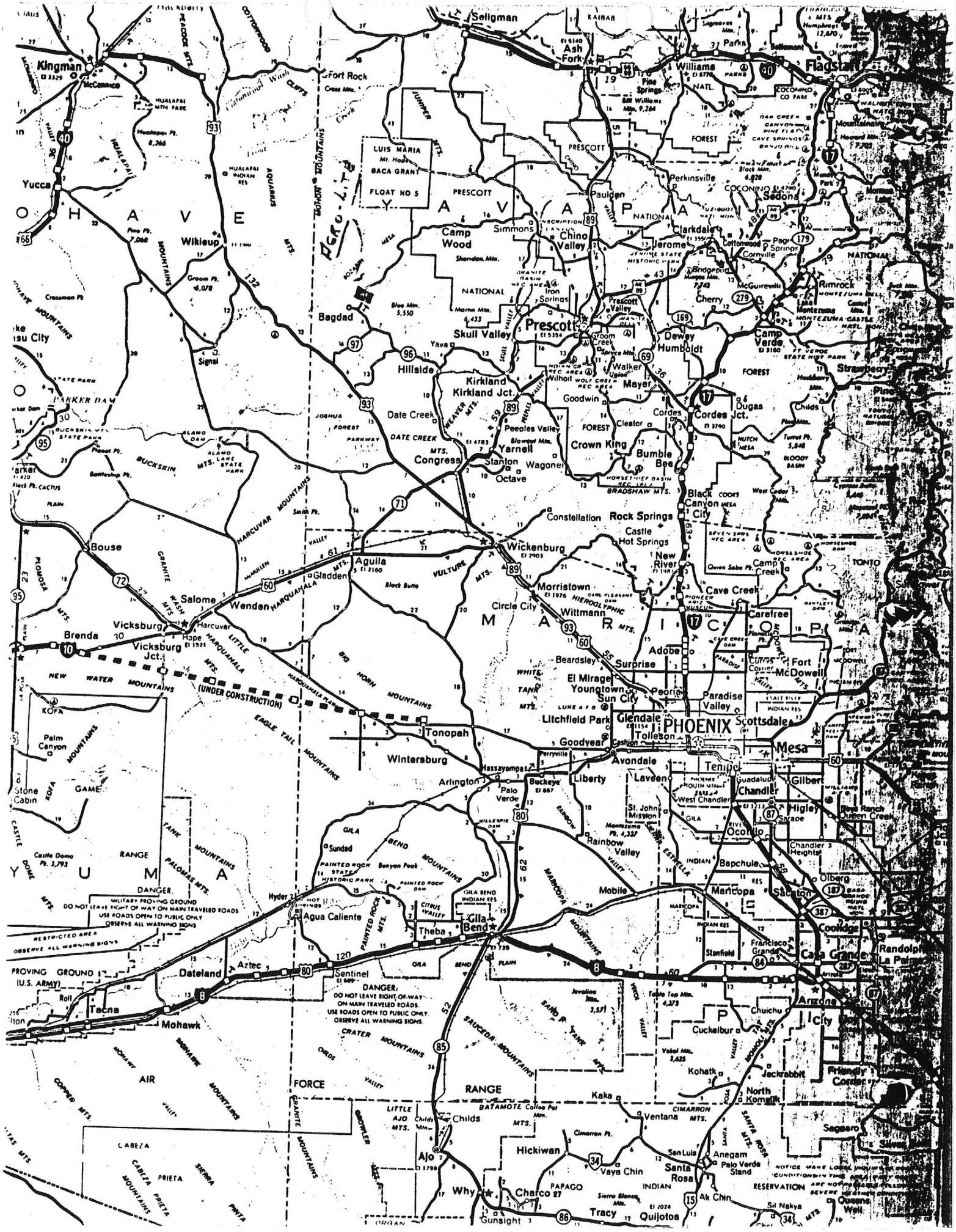
AGRO-LITE PRODUCTS, INC.

Its principal place of business in Arizona shall be 524 N. 42nd Street, Phoenix, but other places of business may be established and maintained within or without the State of Arizona as the Board of Directors may designate, where business of the corporation, including meetings of stockholders and directors, may be conducted.

ARTICLE II

The names, residences and addresses of the incorporators are as follows:

JAMES FARMER	3546 East Melvin Phoenix, Arizona
HERSCHELL D. McDANIEL	524 N. 42nd Street Phoenix, Arizona
JOHN BRENNAN	4156 East Mc Donald Road Paradise Valley, Arizona


Seligman
Kingman
McConnico
Yucca
Wikieup
Signal
Bagdad
Hillside
Skull Valley
Prescott
Prescott Valley
Dewey
Humboldt
Camp Verde
Cordes Jct.
Cordes
Mayer
Kirkland
Kirkland Jct.
Date Creek
Congress
Yarnell
Stanton
Octave
Wagoner
Peeples Valley
Crown King
Bumble Bee
Cleator
Goodwin
Walker
Wilhoit
Jerome
Clarkdale
Cottonwood
Cornville
Sedona
Rimrock
McGuireville
Cherry
Camp Wood
Simmons
Chino Valley
Paulden
Perkinsville
Ash Fork
Williams
Flagstaff
Parks
Bellemont
Pine Springs
Fort Rock
Bouse
Salome
Wenden
Aguila
Gladden
Vicksburg
Vicksburg Jct.
Brenda
Hope
Harcuvar
Wickenburg
Morristown
Circle City
Wittmann
Constellation
Rock Springs
Castle Hot Springs
New River
Cave Creek
Carefree
Black Canyon City
Camp Creek
Fort McDowell
Adobe
Surprise
Beardsley
El Mirage
Youngtown
Sun City
Peoria
Paradise Valley
Litchfield Park
Glendale
PHOENIX
Scottsdale
Tolleson
Goodyear
Cashion
Avondale
Tonopah
Wintersburg
Hassayampa
Arlington
Palo Verde
Buckeye
Liberty
Laveen
Tempe
Mesa
Guadalupe
Chandler
West Chandler
Gilbert
Higley
Sacaton
Ocotillo
St. John Mission
Rainbow Valley
Bapchule
Mobile
Maricopa
Olberg
Coolidge
Casa Grande
Randolph
Arizona City
Stanfield
Francisco Grande
Chuichu
Cuckelburr
Kohatt
Jackrabbit
North Komelik
Kaka
Ventana
Sagaro
Sundad
Hyder
Agua Caliente
Theba
Gila Bend
Sentinel
Aztec
Dateland
Tacna
Mohawk
Childs
Ajo
Why
Charco 27
Gunsight
Tracy
Quijotoa
Hickiwan
Vaya Chin
Santa Rosa
San Luis
Anegam
Palo Verde Stand
Ak Chin
Sil Nakya
Queens Well
Friendly Corner
Cimarron
Batamote
Coffee Pot Mtn.
Table Top Mtn.
Sierra Blanca Mts.
Cimarron Pt.
Vekol Mts.
Iron Springs
Prescott Valley
Groom Creek
Yava
Blue Mtn.
Martha Mtn.
Sheridan Mtn.
Bill Williams Mtn.
Humphreys Pt.
Mountainair
Howard Mtn.
Black Mtn.
Turret Pt.
Childs
Strawberry
Pine
Pleasant Valley
Camp Verde
Montezuma Castle Nat. Mon.
Lake Montezuma
Cottonwood
Oak Creek Canyon
Mine Flat
Cave Springs
Banjo Bill
Sedona
Coconino Co Park
Coconino Nat. Park
Kaibab
Sugarloaf Mtn.
Parks
Bellemont
Mountainair
Kingman
Yucca
Wikieup
Bouse
Salome
Wenden
Aguila
Gladden
Vicksburg
Brenda
Hope
Harcuvar
Wickenburg
Morristown
Circle City
Wittmann
Constellation
Rock Springs
Castle Hot Springs
New River
Cave Creek
Carefree
Black Canyon City
Camp Creek
Fort McDowell
Adobe
Surprise
Beardsley
El Mirage
Youngtown
Sun City
Peoria
Paradise Valley
Litchfield Park
Glendale
PHOENIX
Scottsdale
Tolleson
Goodyear
Cashion
Avondale
Tonopah
Wintersburg
Hassayampa
Arlington
Palo Verde
Buckeye
Liberty
Laveen
Tempe
Mesa
Guadalupe
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Oak Creek Canyon
Mine Flat
Cave Springs
Banjo Bill
Sedona
Coconino Co Park
Coconino Nat. Park
Kaibab
Sugarloaf Mtn.
Parks
Bellemont
Pine Springs
Fort Rock
Cross Mtn.
Hualapai Mtn Park
Hualapai Pt.
Groom Pt.
Crossman Pt
Parker Dam
Buckskin Mts. State Park
Alamo Dam
Alamo Lake State Park
Planet Pt.
Bottleshop Pt.
Smith Pt.
Black Pt.
Cactus Plain
Palm Canyon
Stone Cabin
Kofa Game Range
Castle Dome Mts.
Castle Dome Pt. 3,793
Tank Mts.
Palomas Mts.
Big Horn Mountains
Eagle Tail Mountains
New Water Mountains
Harquahala Mts.
Harquahala Valley
Little Harquahala Mts.
Vulture Mts.
Weaver Mts.
Date Creek Mts.
Bradshaw Mts.
Bucksin Mts.
Harcuvar Mountains
Granite Wash Mts.
Plomosa Mts.
Mohon Mountains
Aquarius Mts.
Hualapai Mts.
Cottonwood Cliffs
Peacock Mts.
Joshua Forest Parkway
Tonto
Bloody Basin
Horseshoe Dam
Horseshoe Rec Area
Bartlett Dam
Pioneer Arizona Museum
Hieroglyphic Mts.
Carl Pleasant Dam
Cave Creek Dam
Paradise
Curtis Corner
Lake Pleasant
Indian Res
Maricopa Mts.
Estrella Mts.
Sierra Estrella
Rainbow Valley
Gila Bend Mts.
Gila Bend Indian Res
Painted Rock Dam
Painted Rock State Historic Park
Citrus Valley
Painted Rock Mts.
Saucedo Mts.
Crater Mts.
Childs Valley
Granite Mts.
Growler Mts.
Little Ajo Mts.
Batamote Mts.
Cimarron Mts.
Santa Rosa Mts.
Papago Indian Reservation
Cabeza Prieta Mts.
Sierra Prieta
Organ Pipe Cactus Nat. Mon.
Gila Bend Air Force Range
Military Proving Ground
Proving Ground (U.S. Army)
Danger. Do not leave right of way on main traveled roads. Use roads open to public only. Observe all warning signs.
Restricted Area
Observe all warning signs
(Under Construction)

AGRO - LITE PRODUCTS INC.

A Corporation formed under Arizona Laws by:

Mr. James W. Farmer
as President
3546 E. Melvin St.
Phoenix Arizona - 85008

Mr. Herschel D. McDaniel
as Sec. and Treasure
542 No. 42 Street
Phoenix Arizona - 85008

Stock issue of 5,000,000 shares at par
value of $0.10 cents

The offering price of ONE DOLLAR ($1.00) per share, has been established, by the company and at this time, will release a total of FIFTY THOUSAND (50,000), shares of common stock.

The total assets of the Corporation is represented by:

1. - Nine (9) unpatented, mining claims, (20 acres) each, located approximate (3) miles, north of the City of Bagdad Arizona, as a part of sec. 30 T14 1/2N, R8W, Gila & Salt River Meridian, Yavapi, County, Arizona, known as the Double J, claims.

2. - A planned small scale development program, has been in progress, since the year, 1960, exposeing new material for mining, as well as establishing a plant, housing and mill sites.

3. - A small Pilot Plant, has been assembled, on the mill site, capable of producing, twenty (20) tons per day, of dehydrated, sized and packaged material, for the consumer markets, in 10 - 25 - 50, pound packages.

4. - All packaged material is being marketed locally, through various outlets, such as Auto Parts - Houses, Super Markets, Service Stations, Guarages. Usual purchases by outlets, are in increments of one to five tons each.

NOTE:

The proceeds from sales, (outlined in Item 4), on a smaller scale, has paid for all developement, including existing equipment, wages, plus, the serch and development of new products. There is no indebtedness of any kind against the Corporation.

In the year of 1961, the well known and accepted Mining and Engineering firm of King And King, of Los Angeles, was engaged, to make a preliminary evaluation. This report, was

very encouraging, showing at that time some 200,000 tons, of a very good grade Pumice, exposed by erosion and ready for mining. Through further development, there is now, readily available, some 600,000, tons of proven quality Pumice, ready for mining, processing and shipping. A copy of the King and King report is attached.

Mr. Herschel D. McDaniel, has lived in Arizona, for over 40 years and became interested in the above described mining property in 1957 and after checking the market potential, started filing on these claims in 1958.

All assessment work and taxes, has been kept current, each year, in accordance, to State and Federal Laws.

Mr. James W. Farmer, a native of Arizona, and being active in the construction field, became interested in these properties with Mr. McDaniel, for the use of Pumice Materials, as an aggregate, to make light weight concrete, now used in all parts of the Construction Field. Mr. Farmer, started running a series of tests, through the local Testing Laboratories, as well as the Phoenix Cement Company, plus, after receiving the approval from F.H.A., made actual pours, on various projects in Arizona, with excellent results. During this same period, an absorbant floor sweep product, plus a Cat Litter product, was developed and put on the market.

"PUMICE AS A LIGHT WEIGHT PRODUCT"

A rock froth, formed by the extreme puffing up (vesiculation) of liquid lava, by expanding gases, liberated from solution in the lava, prior to and during solidification.

Formerly used for abrasive powder, for polishing metal, glass and wood, also dentifrices.

LARGEST USES TODAY

Concrete Aggregate
Accoustic plaster
Insecticide carrier
Bricks
Solvents
Insulation
Filtration
Paint filler
Poulterylitter
Cat litter
Road surfacing
Soil conditioner
Lt. weight concrete
PreCast concrete block
PreCast panels
Filter Acids
Loose fill insulation
Cosmetics
Roofing material
Sweeping compound

Crushed Pumice, weighs 1/3 to 2/3 the weight of regular sand.

Pumice, has a hardness of 5.5 to 6.0

K - FACTOR (Insulation ability)

Loose Pumice - roof and floor fill	0.98
Pumice, as structual concrete	2.0
against	
Concrete with Cinder aggregate	4.9
Concrete with reg., sand & rock	12.0
Regular Brick	5.0

Pumice concrete, is six (6) times as effective as an insulation, as ordinary concrete and is six (6) times as resilent.

Because Pumice, has such high elasticity, it can withstand movement and handling without cracking.

Pumice concrete, will hold nails, can be sawed and chiesled, is inert to insects, fungi and most chemicals.

Pumice concrete, has less tendency to sweat or to condense moisture.

Reference, is made to todays, "ENERGY CRISES", along with the cost of Construction, going up each day, on standard building materials, such as Cement block, Bricks, etc, when it is a proven fact, that Building Block, manufactured from Pumice Aggretate, would cut the cost of heating and cooling, a minimum of 33-%, over the regular sand and rock, or cinder blocks, now being used. It is also now mandatory, that the (voids), in all building block, be filled with a loose fill insulation material. With proper sizeing, Pumice, becomes a perfect, loose fill insulation. Due to the availability, the material called (vermiculite or Zonolite), is now being used. The K-Factor, of these materials, as an Insulation, against Pumice, is no comparison, as the K - Factor of Vermiculite or Zonolite stands at 3.73, against Pumice at 1.46.

Pumice, as a building material, has been accepted and used for over 2000 years, as a light weight aggregate and passes all standards of A.S.T.M. and today, is being mined and widely used in all types of Construction in California and New Mexico, due to being near to the source of supply. With no one in Arizona, mining to furnish this material, all Light Weight Aggregate, is being shipped in from out side of the State, even from Old Mexico, making it very expensive, therefore the Architects try to bypass this need because of this cost, however, as soon as we are in a position, to guarantee delivery, of these materials, the Architects will again start to include this in their plans.

The Loan, we are requesting, would enable this Corporation, to revamp the present plant and get into production, on a volume scale enough to handle this market as well as other products, we now have calls for. The Corporation at present, have letters of intent, enough to cover the total capacity of the mill, plus a large volume of pre-sized pit run material.

The Milling Plant, is currently producing, on a very small scale, a Floor Sweep product and a Cat Litter product, in 10 - 25 and 50 pound packages, as there is a ready market, with a good margin of profit.

Freight is a determining factor, in establishing markets in volume uses and since Arizona does not have a supplier, of these products, it is being shipped in from out of State.

The existing milling plant, on the property, consists of the following equipment.

1. - Viberating grizzly and feed bin
2. - Belt conveyer to feed bin
3. - Wisconsin gas engine to power feed belt
4. - 20' - Butane fired dryer - electric drive
5. - Honeywell electric control switch panel
6. - Dust collector - electric drive
7. - Belt conveyer, dryer to screening plant
8. - Multi-Deck, screening and sizeing plant
9. - 3 - Steel storage bins, for sized materials
10. - 1 - Semi-automatic bagging maching
11. - 1 - Bag Tyer
12. - Butane fired - electric generating plant
13. - Butane storage tank, 1000 gal. cap.
14. - 1 - 8'X40' Steel materials and supply storage room
15. - 1 - Lincoln electric welding machine
16. - Misc. small tools, drills, etc.
17. - 4 - Wingfoot, 8'X24' 2 room cabins

A cost projection, based on the production and shipment, of 20 tons, of packaged material per day, utilizing, one skilled and two unskilled labors, is as follows -

Direct labor cost per ton	$ 3.50
Tractor to strip, rip material, and push to stockpile	1.50
Fuel - Butane to dryer	4.50
Containers, paper bags	9.00
Depletion	.10
Assessment work	.10
Maintenance	.50
Re-Serch new products	.50
Depreciation on equipment	.50
Reserve	.50
Advertising	.25

Insurance, medical	$ .50
Office supplies	.25
Taxes - State - Federal - County	.50
Overhead	5.50
Interest on investment	.25
Hotel - travel - promotion	1.00
	$28.95
Unforseen - 10 %	2.89
Estimated cost at Mine	$31.84
Freight to Phoenix, "by own truck"	7.50
	39.34
Sales commission - 10% on cost	3.18
Total estimated cost - Phoenix	$ 42.52
Sales price to Distributors, Phoenix	$ 60.00
Estimated cost, Phoenix	42.52
Gross profit, Phoenix	$ 17.48
Estimated gross profit, based on 20-working days month = $17.42 X 20 tons X 20 days	$ 6,992.00
Estimated delivery 1st. 6 months pre-sized pit run material, 4000 cu. yds. at $ 0.50 per cu. yd. gross profit	2,000.00
	$ 8,992.00

Estimated total profit 1st. year
$ 8,992.00 X 12 months = $ 107,904.00

The above estimated figures, are based on the output of the present mill capacity, on an 8 hour day. Later, to increase the daily tonnage, we would set up to operate a second shift, doubling our present capacity.

An estimated amount of TWO DOLLARS AND FIFTY CENTS ($2.50), per ton on packaged material, would produce a monthly payment of ONE THOUSAND DOLLARS ($1,000.00), minimum, against the retirement of this loan.

As per letters of intent, (copyies attached), we will be operating the second shift, by the end of the first six month period.

MONIES FROM THIS LOAN TO BE USED AS FOLLOWS

1. - Legal fees	$ 1,000.00
2. - Run A.S.T.M. and U.L. test	2,500.00
3. - Order paper bag containers	6,000.00
4. - Rent D-8 tractor & ripper - 1 wk.	4,000.00
5. - Rent portable screening plant	2,500.00
6. - Repair, to update existing bagger	500.00

7. - Purchase 3/4 ton Pickup & canopy	$	4,500.00
8. - Printing stationary and litature		250.00
9. - Cost to C.P.A. to set up books		150.00
10. - Replace screens in existing Screening plant		500.00
11. - Purchase sales car		4,000.00
12. - Purchase used 2-bed room trailor to house labors on site		3,000.00
13. - Repair existing truck for the hauling of packaged materials		1,000.00
14. - Purchase one new gravity flow bagging machine		1,750.00
15. - Purchase used 40 cu. yd. trailor for bulk materials		3,500.00
16. - Set up deposit, industrial Ins.		500.00
17. - Set up deposit, Pub. Liab. policy		500.00
18. - Gas -- Fuels -- oils for 60 day period		2,500.00
19. - Labor 10 men for 60 days		8,000.00
20. - Hotel -- travel --promotion of sales		2,500.00
	$	49,150.00

With the above loan in hand, estimated time needed to start production, would be FOURTY FIVE DAYS (45), as all paper companys, require this much time to deliver bags.

Statement of Financial Condition

9 - Mining Claims (20 acrs each), with development showing an excess of 600,000 tons material, exposed and ready to process--- 600,000 tons X $0.25 per ton	$	150,000.00
Equipment and milling plant intact and in operating condition, in excess of		100,000.00
Net worth of Corporation to date	$	250,000.00

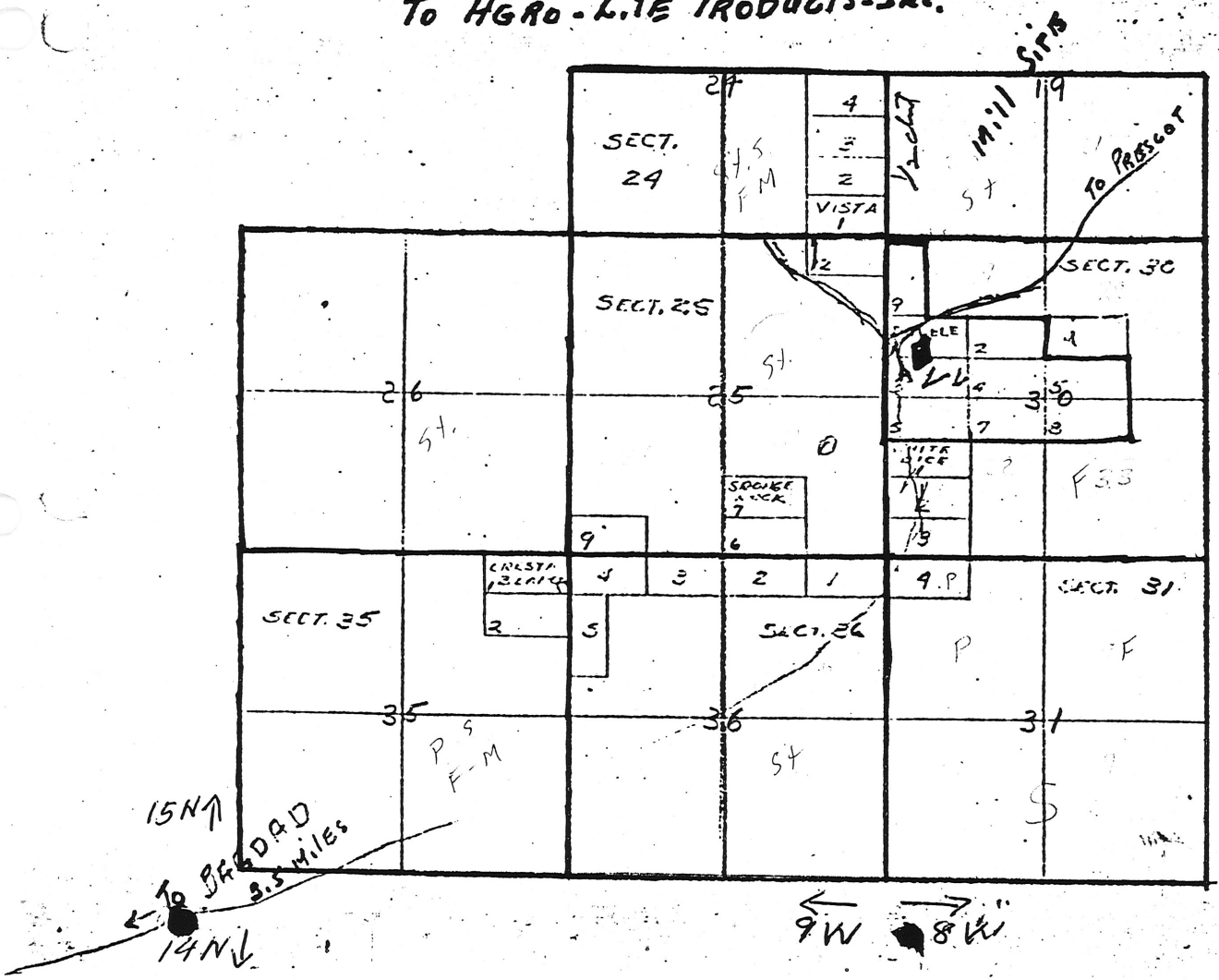
There is no outstanding obligations, at this time.

James W. Farmer

Mr. James W. Farmer, Pres.

McDANIEL CLAIMS ✓
YAVAPAI COUNTY ARIZ.
28 CLAIMS - 20 ACCES EACH
TOTAL - 560 ACRES

9- Double J. Claims
Outlined- Transford To Agro-Lite Products-Inc.



SECTION-24-T15N-R9W
VISTA GROUP-1-4 ✓

SECTION-30-T14½N-R8W
DOUBLE J GROUP-1-9 ✓

SECTIONS 30-T14½N-R8W &
31-T14N-R9W
WHITE DICK GROUP-1-4 ✓

SECTIONS-25-T15N-R9W &
36 T15N-R9W ✓
SPONGE ROCK GROUP-1-7 & 9 & 12

SECTION-35 T15N-R9W ✓
CRESTA BLANCA GROUP-1 & 2

EXAMINATION VALUATION PLANT DESIGN DEVELOPMENT

KING & KING

MINING ENGINEERS

P.O. BOX 2157, LOS ANGELES, CALIFORNIA

[illegible]
[illegible]
GARDENA CITY, CALIF.
TORRANCE [illegible]

[illegible]
[illegible]
WHITTIER, CALIF.
[illegible]

Feb. 11, 1961

Messrs.: A. M. Hubbard,
J. D. Robinson,
A. F. Maas, Jr.,
2435 E. 37th St.,
Los Angeles 54, Calif.;

Gentlemen:

Herewith my preliminary report upon the McDaniel pumice deposit and claims near Bagdad, Yavapai County, Arizona.

Briefly, my conclusions and recommendations regarding this deposit, and the advisability of financing a business venture thereon, are:

1) The pumice is of exceptionally good grade, and specialty, high-priced markets might be developed for it.

2) The deposit is reasonably located with respect to good roads, but the distance to possible markets is such that truck freight will cost about $11 per ton to Los Angeles; $5.25 to Phoenix; and $9.90 to Tucson.

3) I estimate that mining, drying, processing, (screening), bagging, and other preparation for marketing will cost about $7.50 per ton, bagged at mine. Upon the above cost estimates, selling price in Los Angeles will have to be a minimum of $25 per ton on a scale of at least 600 to 1000 tons per month to justify even a relatively small capital investment in the venture.

4) I recommend that a small amount of money and time be spent in a search for one or more specialty markets meeting the minimum required sales price, say not over $1,000.

5) If such market research proves one or more high-priced specialty markets for the material; then adequate development of the property and plant design expense is warranted; probably amounting to about $5,000. Upon this work the total capital investment required to get to the point of a going business can be accurately estimated.

Very truly yours,

Clarence R. King, Jr.
KING & KING.

CRK/vr
enc.

PRELIMINARY REPORT UPON THE McDANIEL PUMICE DEPOSIT.

Location and Access.

The Double J placer claims, owned by Mr. H. D. McDaniel, are in Section 30, T14 1/2N, R8W, Gila&Salt River Meridian, Yavapai County, Arizona; five miles by good graded dirt road, northeast of the town of Bagdad. Pavement extends from Bagdad to other cities and towns in and out of the state.

It is 25 miles from Bagdad to Hillside, the nearest rail point, (A. T. &S. F. railway). It is 300 miles by highway from Bagdad to Los Angeles; 140 miles to Phoenix; and 265 miles to Tucson.

Ownership and Title.

The claims visited were properly monumented and documented, and it was possible to tie in their location within Sec. 30, by U. S. G. S. benchmark No. H43, located in the Double J No. 3 claim, and within Sec. 30. The claims cover the following subdivisions of Sec. 30, and are recorded in the following records at Prescott, the County Seat of Yavapai County:

Claim name	Section sub.	Book	Page
Double J No. 1	N 1/2, SW 1/4, Nw 1/4	193	463
Double J No. 2	N 1/2, SE 1/4, NW 1/4	193	464
Double J No. 3	S 1/2, SW 1/4, NW 1/4	193	465
Double J No. 4	S 1/2, SE 1/4, NW 1/4	193	466
Double J No. 5	S 1/2, SW 1/4, NE 1/4	193	467
Double J No. 6	N 1/2, NW 1/4, SW 1/4	193	468
Double J No. 7	N 1/2, NW 1/4, SE 1/4	193	469
Double J No. 8	N 1/2, NW 1/4, SE 1/4	193	470

All of the above claims are recorded in the names of H. D. McDaniel and Dona McDaniel, August 8th, 1960. In addition, a Proof of Labor is recorded (dated). Nov. 4th, 1960, covering discovery and assessment work on the above claims in Book 202, page 332 of Mining Records.

The only conflicting markings noted on the ground were placer notices and monuments called the Tonto claims, located in August, 1953, by Olson, Thomas, and Lewes. Mr. McDaniel stated that these locators never returned to the claims nor did any assessment work since 1953; further, Mr. McDaniel had not disturbed the monuments or papers therein. The section in which the claims are located is apparently public domain and open for location of lode and/or placer claims. However, before spending money in development of the deposit, title should be further checked in Prescott; a matter which I considered unnecessary during this preliminary examination, in view of the prima facie evedence of title shown me by Mr. McDaniel, and the fact that a U. S. G. S. benchmark enabled the identification of the section in which the claims purported to be located, as the actual section described in the location notices.

Description of the Pumice Deposit.

In several different sections near Sec. 30, parts of a bed of pumice outcrop where erosion has removed a cover of basalt lava flow. Upon Sec. 30, especially on the Double J No.'s 1, 3, 4, and 5 claims, most or all of the basalt has been removed by erosion, and the pumice bed might be mined without too high a stripping cost.

Upon the claims examined, very little stripping or exploration work has been done, and the existence of the pumice bed can be traced only by small scattered outcrops. However, in view of the exposures in nearby sections, (near the airport and to the west of the Double J No. 1 claim), it may be inferred that the same general thickness and character of pumice exists under light soil cover upon the No. 1, 2, 3, 4, and 5 Double J claims. The pumice bed or lenses, lies upon a red clay bed; is about twenty feet thick; is very well sorted into two types: about 15 feet of basal material varying from about 1" to 1 8" pieces, and a top 5 feet of finer material that would be classed as pumicite. The pumice bed underlies a basalt flow which varies from nothing to about fifty feet thick, (erosional removal of the basalt accounts for its variable thickness).

The pumice shows some evidence of deposition under water, but might have originated as wind blown dunes accumulating on playa lake surfaces. In any case, the material occurs in sufficient quantity within the claims, in locations where mining may be done quite cheaply by quarry methods, to supply any reasonable market for many years, but the deposit should be opened by trenching in the most accessible places in order to get representative samples before any time and money is spent on market research and plant construction. - CORE DRILL

Estimated size of deposit and Costs.

For purposes of this preliminary report, a minimum of 200,000 cubic yards of pumice is indicated by outcrops; of a character similiar to that exposed in the pits to the southwest and west of the claims. This is sufficient to supply a reasonable market for some time, if proved by a few 'dozer trenches and cuts. It is probable that the above estimated yardage will be more than doubled if developed, before overburden depth gets excessive and strippings cost rises appreciably.

The pumice in place averages nearly 50% moisture. When dried and sized to plus 20, minus 6 mesh, the material has a bulk density of 32.9 pounds per cubic foot, or 60.8 cu. ft. per short ton, or 890 lbs. per cubic yard. A large semi rig might haul a maximum of 60 yards of the bagged material, which would weigh about 25 tons when dried and bagged. If it is assumed that a trucking contractor would figure 50¢ per mile as cost of operating a rig, plus his profit; then the following truck haulage costs would apply:

Mine to Los Angeles:	Per yard: $5.00;	per ton: $11.22
Mine to Phoenix:	Per yard: $2.33,	per ton: $ 5.24
Mine to Tucson:	Per yard: $4.41;	per ton: $ 9.90

The probable costs at the mine are estimated as:

	Per yard	Per ton
Stripping, mining, haul to plant on property:	$0.50	$ 1.12
Drying, (oil fuel only, 10 gal. ton @18¢):	$0.80	$ 1.80
Bags, (assume 100 lb. bags):	$1.00	$ 2.25
Labor, mat'ls. & supplies at plant:	$0.50	$ 1.12
Mine & plant overhead, taxes, dep., etc.:	$0.50	$ 1.12
Estimated total cost of sized material, in bags, plant:	$3.30	$ 7.41
Estimated cost, in bags, at Los Angeles:	$8.30	$18.66
Estimated cost, in bags, Phoenix area:	$5.63	$12.65
Estimated cost, in bags, Tucson area:	$7.71	$17.31

EL PASO GAS LINE?

The foregoing estimates of cost to mine and prepare for specialty uses demanding a relatively high market price are predicated upon a relatively low-tonnage operation. Because of high truck and or rail freight costs from the relatively inaccessible location of the deposit, the large volume, low price market for good grade pumice in the building trades is not considered in this preliminary report. If a profitable venture is indicated, the market must absorb, say, 600 to 1000 tons per month at a selling price of about $25 per ton; which would give a gross profit margin of between $3,600 and $6,000 per month; which would be the minimum to warrant even a small business.

Conclusions.

The pumice deposit is large enough to warrant some study upon markets where the sale price, delivered in the Los Angeles area or commensurate Phoenix and/or Tucson areas is such that an adequate margin of profit can be made over total costs at the property of about $7.41 per ton plus truck freight to market.

The grade of the pumice is such that specialty uses may be found which might demand a relatively high sales price; which is essential to overcome high freight costs.

The deposit will require about $2,000 worth of 'dozer work in stripping and trenching before information upon thickness and grade and sizing of the material can be proved, and upon which market research can be done using representative tonnage samples.

If a reasonably sure market at a sales price of at least $25 per ton, f.o.b. Los Angeles, and/or equivalent markets in Phoenix and Tucson, cannot be developed at relatively small outlay in cash and time; then no further thought should be given to the venture. If such a market is proved to exist, then a few thousand dollars spent in trenching the property, checking title, and designing a plant commensurate with scale of operations would be justified.

Respectfully submitted,

C. R. King

Clarence R. King, for:
KING & KING.

CRK/vr

CONSOLIDATED CONCRETE & SUPPLY, LTD.
1820 WEST BROADWAY • PHOENIX, ARIZONA 85041 • TELEPHONE 264-8700

16

July 30, 1974

James Farmer
3546 East Melvin Street
Apartment #1
Phoenix, Arizona

Dear Mr. Farmer

Enclosed are the results of tests performed on aggregate submitted by your firm. Aggregate samples represent material from your pit identified as the Bagdad Pumice Pit.

The purpose of the tests was to determine the acceptability of the aggregate for light-weight concrete.

AGGREGATE TESTING PROCEEDURES

Two seperate "trial batches" were designed, mixed proportionally, and cast into (6" X 12") test cylinders. These test cylinders were cured and tested for compressive strength in accordance with A.S.T.M. standards. The results of these tests are shown on the enclosed laboratory test reports.

Aggregate graduation and unit weight (dry-rodded) tests were performed. Test results were summarized and presented as follows for your review.

PER CENT PASSING

SCREEN SIZE	COARSE AGGREGATE	FINE AGGREGATE
3/8	100	100
1/4	89	100
#4	57	100
#8	3	95
#16	2	70
30	1	30
50		10
100		3
200		2
Unit Weight Lbs. -1 Cubic Ft.	55.5	44.5

CONSOLIDATED CONCRETE & SUPPLY, LTD.
1820 WEST BROADWAY • PHOENIX, ARIZONA 85041 • TELEPHONE 264-8700

CONCRETE TESTING PROCEEDURES

Also enclosed are representive strength-gain plots indicating the relation between age in days and compressive strengths.

The concrete mix design proportions which resulted in the above mentioned test results are summarized as follows:

DESIGN #1

MATERIAL	WEIGHT -CU. YD.	VOLUME -CU. FT.
Cement - 5.0 sack	470	2.39
Water - 36 gal.	300	4.80
Fine Aggregate	773	9.91
Coarse Aggregate	928	9.90
TOTAL	2471	27.00

Wet plastic weight - 91.5 lbs. cu. ft.

DESIGN #2

MATERIAL	WEIGHT -CU. YD.	VOLUME -CU. FT.
Cement - 7.0 sack	658	3.35
Water - 38.0 gal.	317	5.07
Fine Aggregate	768	9.85
Coarse Aggregate	817	8.73
TOTAL	2560	27.00

Wet plastic weight - 94.8 lbs. cu. ft.

COMPRESSIVE STRENGTH TESTS SUMMARY

MIX #	7 - DAY STRENGTH	14 - DAY STRENGTH	28 - DAY STRENGTH	28 - DAY STRENGTH
Mix #1	570	710	920	970
Mix #2	1130	1540	2030	2030

CONSOLIDATED CONCRETE & SUPPLY, LTD.
1820 WEST BROADWAY • PHOENIX, ARIZONA 85041 • TELEPHONE 264-8700

CONCLUSIONS

Based on our test results and visual observations the aggregate, as tested, exhibits the potential to pass the requirements for a light-weight concrete for insulation or topping.

Unfortunately, we did not have enough time or equipment to determine other applications for use of this aggregate.

We would appreciate the opportunity to test your aggregate extensively in the near future. There is a need for a local light-weight aggregate source and we would like to help develop the market and supply.

If we may be of further service, please contact me at your earliest possible convenience.

Sincerely,

John R. Anderson
Vice President
General Manager

JRA/vaw

ATL Testing Laboratories
A Division of R & D Engineering Associates, Inc.
817 West Madison • Phoenix, Arizona 85007 • Telephone 254-6181

19

June 19, 1974
June 5, 1974

RECEIVED
JUN 27 1974
C.C.S. CONST.

For: Consolidated Concrete & Supply
1820 W. Broadway
Phoenix, Arizona 85041

Date: May 29, 1974

Received: 5-29-74 Project: --------

Submitted by: Dave Downs Address of Project: -----

Sampled by: Dave Downs Source of Sample: : Lab

Contractor: ----- Mix: ---- 3/8"

Arch./Engr.: ------ Admix: + 3500 Concrete Temp. ----

Concrete Co.: ----- Batch Size: ------

Ticket No.: Test A Water Added: -----

Time in Mixer: ---- Time Sampled: ----

REPORT OF CONCRETE CYLINDER TESTS

Lab. No.	Ident. No.	Slump (In.)	Date Made	Date Tested	Age (Days)	lbs./sq. in.
	Set #5					
1176		2"	5-22-74	5-29-74	7	570
1177		2"	5-22-74	6-5-74	14	710
1178		2"	5-22-74	6-19-74	28	920
1179		2"	5-22-74	6-19-74	28	970

Respectfully submitted,

ATL TESTING LABORATORIES

Arthur L. Moss

Arthur L. Moss

ATL Testing Laboratories
Division of R & D Engineering Associates, Inc.
817 West Madison • Phoenix, Arizona 85007 • Telephone 254-6181

RECEIVED
JUL 18 1974
C.C.S. CONST.

July 5, 1974
June 20, 1974
June 13, 1974

For: Consolidated Concrete & Supply
1820 W. Broadway
Phoenix, Arizona

Date:

Received: 6-11-74

Project: ------

Submitted by: Dave Downs

Address of Project: ------

Sampled by: Dave Downs

Source of Sample: : Test Sample B

Contractor: -----

Mix: -----

Arch./Engr.: ------

Admix: 3700

Concrete Temp.: ----

Concrete Co.: -----

Batch Size: -----

Ticket No.: ------

Water Added: ------

Time in Mixer: -------

Time Sampled: -----

REPORT OF CONCRETE CYLINDER TESTS

Lab. No.	Ident. No.	Slump (In.)	Date Made	Date Tested	Age (Days)	lbs./sq. in.
	Set #6					
1364		1½"	6-6-74	6-13-74	7	1130
1365		1½"	6-6-74	6-20-74	14	1540
1366		1½"	6-6-74	7-5-74	29	2030
1367		1½"	6-6-74	7-5-74	29	2030

Respectfully submitted,

ATL TESTING LABORATORIES

Donald E. Green

Donald E. Green, E.I.T.

TEL. AP-5-5866
JOHN D. HESS
PRESIDENT

PHOENIX TESTING LABORATORIES

3515 WEST CLARENDON AVE.
PHOENIX, ARIZONA

MATERIALS ENGINEERING
APPLIED SOIL MECHANICS
ENGINEERING GEOLOGY
FOUNDATION INVESTIGATIONS
REPORTS

PRINCIPALS ARE MEMBERS OF
AMERICAN SOCIETY OF CIVIL ENGINEERS
AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN CONCRETE INSTITUTE
AMERICAN GEOPHYSICAL UNION
AMERICAN INSTITUTE MINING, METALLURGICAL AND PETROLEUM ENGINEERS

T.N.T. Cement Contractors
Laboratory No. 2857
April 26, 1963

THERMAL CONDUCTIVITY (K-FACTOR) OF LIGHTWEIGHT CONCRETE

Specimen: Portland cement, aluminum powder, and lightweight aggregate.

Test Results:

Thermal Conductivity
(K-Factor) ..... 1.43 B.t.u. per hour
per square foot,
per degree Fahrenheit,
per inch of thickness

800 LB. PER Yd Pumice
7 sk Cem. Type 2
1% Alum. Powder.

cc: (4) T.N.T.

RESPECTFULLY SUBMITTED,
PHOENIX TESTING LABORATORIES
BY John D. Hess, President

ARIZONA TESTING LABORATORIES
A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.
PHONE 254-6181 817 WEST MADISON ST. P. O. BOX 1888 PHOENIX 85001

Chemists . . . Engineers

For: Farmer Construction Company
2801 North 32nd Street
Phoenix, Arizona

Date: February 22, 1964

Lab. No.: 109099

Sample: Pumice

Marked: No Mark

Received: -----

Submitted by: Mr. Jim McDaniel

Report of Laboratory Tests

-#325 Sieve, %	99.8 %
Silica (SiO_2)	70.6 %
Iron oxide (Fe_2O_3)	1.29 %
Alumina (Al_2O_3)	11.7 %
Calcium Oxide (CaO)	Nil
Magnesium Oxide (MgO)	0.70 %
Alkalies as Sodium Oxide (Na_2O)	15.7 %
Pozzalanic Index	R 220 mm/1 S 235 mm/1 R + 2/3S = 377

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean

Claude E. McLean, Jr.

PRESIDENT

23

PHOENIX TESTING LABORATORIES

MATERIALS ENGINEERING

3515 West Clarendon Ave. PHOENIX, ARIZONA Telephone AP-8-8868

REPORT OF COMPRESSION TESTS

DATE 1-25-62 (7 Days)

JOB: Trial Lab. Mixes

ADDRESS:

OWNER: TNT Cement Contractors

ARCHITECT:

ENGINEER:

CONTRACTOR: TNT

☒ CONCRETE Lightweight
☐ MORTAR
☐ GROUT
☐ GUNITE
☐ GYPSUM

LABORATORY NUMBER	2067	2067	2067	2067
MARK ON SPECIMEN	A-1	A-2	A-3	A-4
LOCATION IN STRUCTURE	Trial Mixes			
BRAND OF CEMENT USED	Arizona Portland Type 2			
BRAND AND TYPE OF ADMIXTURE	Darex			
SOURCE OF SAND	Pumicite unsized Jim Farmer			
SOURCE OF ROCK				
MIX PROPORTIONS OR NUMBER	1 : 5 0 By Volume			
SUPPLIER (CONCRETE OR _____)	Lab Trial Mix			
TRUCK NO. & TICKET NO.				
SLUMP OR KELLY BALL	5"			
TEMPERATURE OF AIR °F				
TEMPERATURE OF MIXTURE °F				
SPECIMENS MADE BY	Laboratory—in The Laboratory			
DATE MADE	1-18-62	1-18-62		
DATE RECEIVED	1-18-62	1-18-62		
DATE TESTED	1-25-62	1-25-62	2-15-62	2-15-62
AREA, SQUARE INCHES	28.27	28.27	28.27	28.27
ULTIMATE LOAD, LBS.	10,500	10,500	23,300	21,200
CRUSHING STRENGTH LBS. PER. SQ. IN.	370	370	820	750
AGE TESTED, DAYS	7	7	28	28
~~XXX~~ WEIGHT, LBS. ~~XXXXXXXX~~ Cyls.	15.1	14.7		
SPECIFIED STRENGTH				

REPORTED TO:

(4) TNT Cement Contractors

RESPECTFULLY SUBMITTED,

PHOENIX TESTING LABORATORIES

BY _____

John D. Hess, President

24

T n T CEMENT CONTRACTORS
4339 W. Monterey Way
Phoenis Ariz. 85031

29 Jan. 1975

AGRO-LITE PRODUCTS Inc.
3546 E. Melvin St.
Phoenix Ariz. 85008

RE: Bagdad Pumice

Att: Mr. James Farmer, Pres.

Gentlemen:

The Pumice rock you are producing at your Bagdad mine, checks out to be a very good light weight aggregate, for Semi-Structual, light weight concrete. It has a moderate expansive element and care should be taken to allow for moderate expansion and contraction joints. We have used this material quite extensivelly on F. H. A. projects, requiring a light weight mix 110 to 115 lbs. per cu. ft. with 3000 p. s. i. concrete.

You must note, that the strength can be raised or lowerd by the amount of this material you use. Due to the makeup of this material, 3000 lb. sq. in., is the top strength you can achieve. It can be finished to a very hard and dense surface and unlike most light weight concrete, you can work this mixture continously eliminating a large amount of cracks.

Also to point out, the pumping qualities of this material are excelent.

If further information is needed, please do not hesitate to call me.

Respectfully yours,

Tom Freeland, owner

Tom Freeland

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TNT Cement Contractor

[illegible] WEST MONTEREY WAY . . . AL 6-7773
TOM FREELAND
PHOENIX, ARIZONA

8-10-62

PUMICE AGGREGATE MINUS 1"

Federal Housing Authority
E L Farmer Construction Co
Re. Montebello Garden Apts Inc.

Gentlemen:

We are requesting a change in the type of lightweight concrete to be used in the construction of the aboved named project. The plans call for a leightweight concrete equal to elastzeel. The elastzeel method is done by adding a air entraned liquid into the mix causing voids in the mix which reduces the unit weight.

The type we intend to use is primarily the same principle except we use Aluminum powder which creates a sulfuric gas that bubles causing void that reduce the unit weight. All the agregates & the aluminum are checked & measured by a independent testing labatory.

The advantages of this lightweight are : the high workability of the mix thus leaving anice smooth finnish, it was designed for our high temp-ture low humidity climate, the gas keeps building up until the finnal set reducing cracks caused by shrinkage. This has been done for several years & we have aprox one million sq. ft laid in phoenix with verry satisfactory results.

Trusting you will take care of this request in the verry near future we remain

respectfully yours

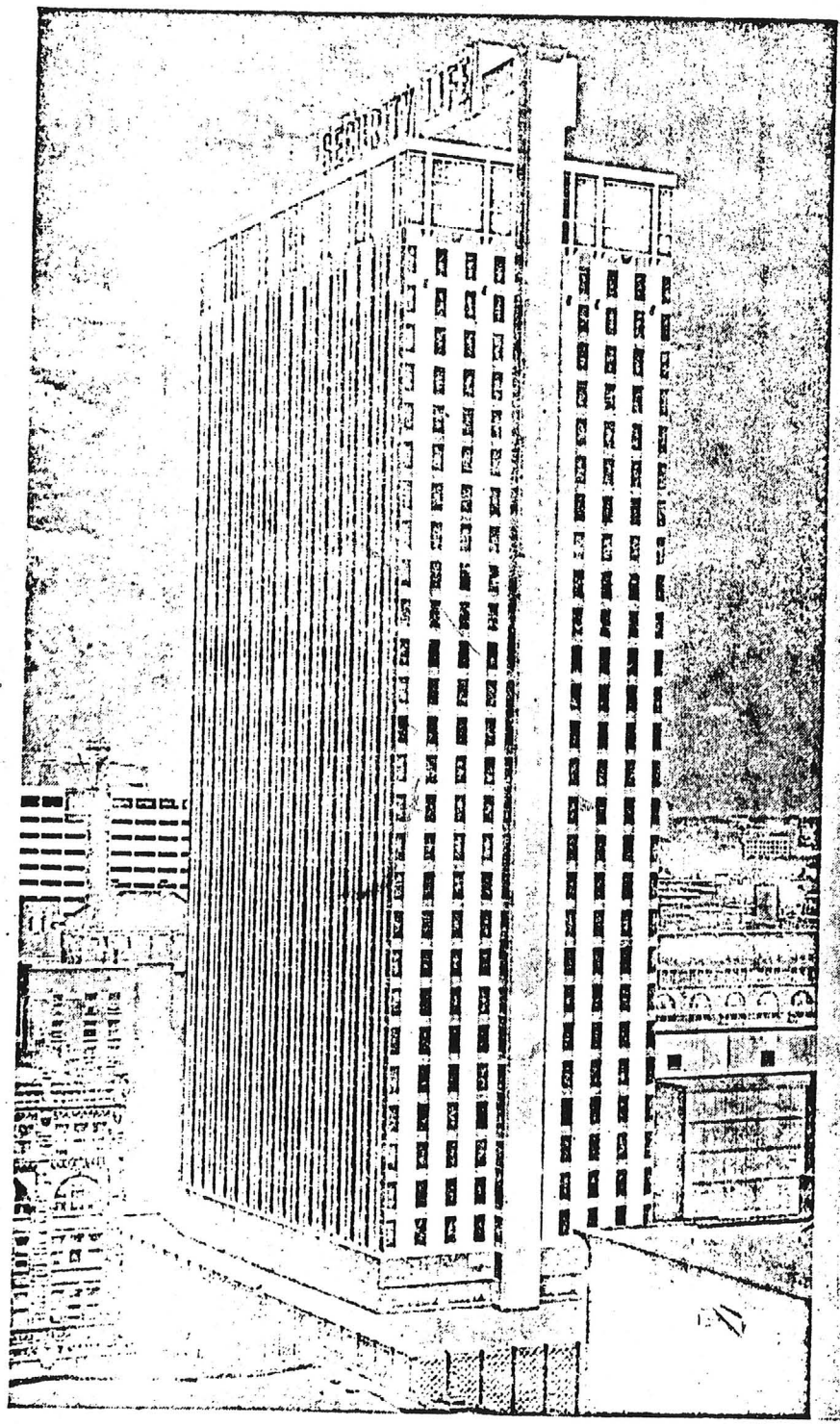
Thomas Freeland

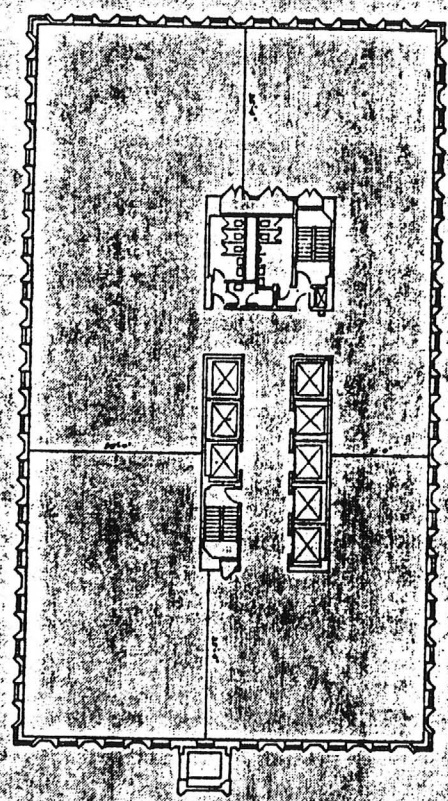
IDEALITE

made it practical to design column-free floors

Sorey, Hill & Sorey, architect

The unique design of the 31-story Security Life Building in Denver would not have been practical without lightweight concrete. The building, constructed of Idealite, is completely column-free between the interior core and perimeter walls. Such a design enables the office space to be tailored to the needs of the tenants without the obstruction of interior permanent support columns and walls. If you are considering the construction of an office, warehouse, apartment, parking garage or other such structure, investigate the advantages of Idealite concrete. It's strong, yet light in weight; 30% less than normal concrete. It offers superior insulating and acoustical properties, as well as low moisture absorption and low shrinkage.





Owner, Mid-America Building Corporation
Builder, Harmon Construction Company

LIGHTWEIGHT CONCRETE IDEALITE AGGREGATE

IDEALITE

Producers of Idealite Lightweight Aggregate for Concrete and Concrete Products

806 Boston Building • Phone 534-5144
Denver, Colorado 80202

27

COATING'S FOR INDUSTRY

THIOKOL SEALANTS
EPOXY COATINGS
ACID & CORROSION RESISTANT MATERIALS
TELEPHONES
ANS. SER. 946-7288
WHSE. & BUS. ~~[illegible]~~ 255-9114
~~21—WEST LINCOLN~~
PHOENIX, ARIZONA ~~[illegible]~~

May 29, 1964

Mr. Tom Freeland
4339 West Monterey Way
Phoenix, Arizona

Dear Tom:

These are the sizes of panels that are required for the ULTRA SAUNA windo wall unit I am having built by Frank Kadish.

Four panels	48" by 72"
Three panels	28½" by 72"
Two panels	22¼" by 36 15/16"

Make them 1½" thick and cast with compression. I will get the floor frame and roof frame made this next week by Frank Kadish and get them to you so we can get those cast.

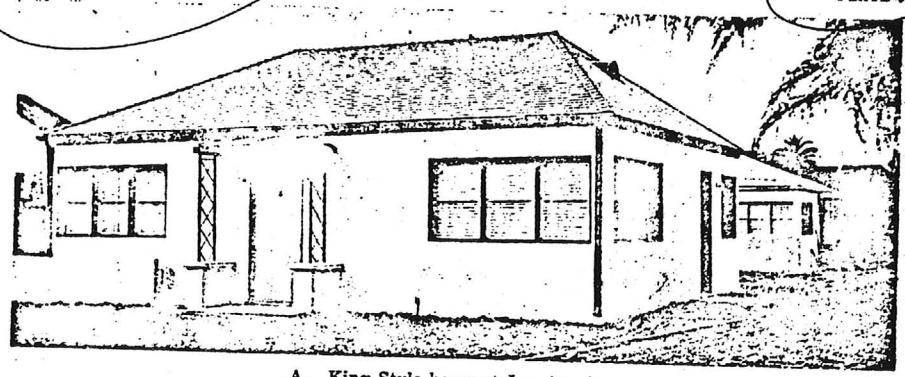
Sincerely,

Dick

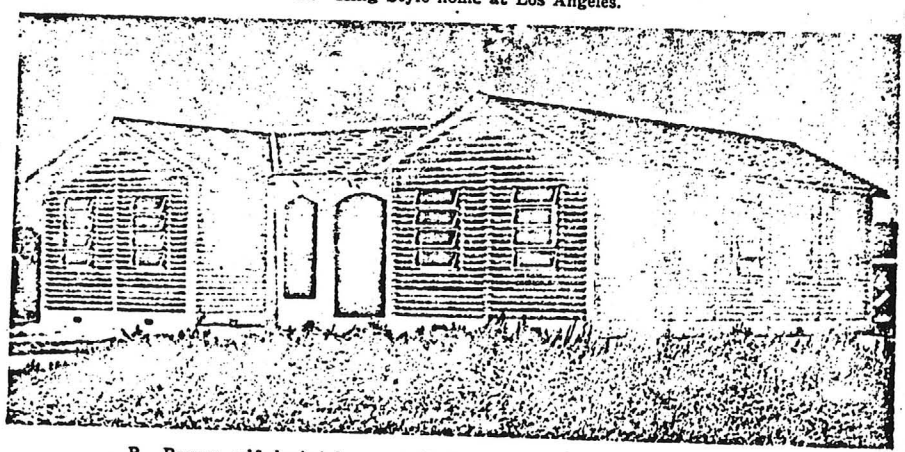
Dick

rsh:eml

PUMICE AND CEMENT = 6" SLUMP -



A. King Style home at Los Angeles.



B. Brauer self-shaded house at Rockport, Texas, built for test purposes.

PREFABRICATED HOMES

PUMICE POWDER IN PLACE

the consistency of powder.

FIREPLACE STAINS — To clean smoke - stained areas on brick or stone fireplaces, cover with a paste made of concentrated ammonia and powdered pumice. Let remain for about two hours, then scrub off with hot water and soap, rinse with clear water, and let dry.

SHOE POLISH — Don't discard

29

NEW ROOFING REPAIRING

Carnes Enterprises, Inc.

ROOFING DIVISION

3700 EAST ANNE STREET PHONE 268-8830
PHOENIX, ARIZONA 85040

Carnes

Agro-Lite Products
3546 E. Melvin Street
Phoenix, Arizona 85008

Attention: Mr. Jim Farmer

January 17, 1975

Dear Mr. Farmer:

Thank you for the Pumice samples. We have looked them over and have run preliminary tests to determine its use as roof aggregate material. I feel that it is a product superior to some colored rock now being used. I will forward to you the results of the tests now under way, which I am sure will prove your material to be useful to the roofing industry.

As you know, I am involved in the roofing of residential, commercial and industrial buildings and many of these buildings are designed with gravel roofs. I know that I will have no problem changing over to your material, because of its light weight and attractiveness.

Sincerely,

J. R. Carnes

J. R. CARNES

JRC:nw

BIRD ROOFING SHINGLES—WIND SEAL JET, ARCHITECT MARK 25, FIRE SCREEN
BIRD VINYL PRODUCTS—SOLID VINYL SIDINGS, SOLID VINYL GUTTER SYSTEMS, SHUTTERS, ROOF EDGINGS
10364-W

30

TRIPLE I SUPPLY OF ARIZONA

Phone: 602 - 269-3391 • ~~1601 S. 35TH AVENUE~~ • PHOENIX, ARIZONA 85009
3315 W. Buckeye Rd.

January 24, 1975

Agro-Lite Products
3546 E. Melvin Street
Phoenix, Az. 85008

Attn: Mr. Jim Farmer

Gentlemen:

We are interested in becoming state-wide dtributor for you for the states of Arizona and Utah, for your horticulture, attic fill and block pour products.

Triple I is a sales-distributor of a wide varity of insultion products. As such we call on and now sell a vast number of lumber dealers as well as nurserymen.

If details can be worked out to the benefit of all concerned we believe that we can do an excellent job for you.

Very truly yours,

C. L. Flowers

Clifford L. Flowers
President

NORTH PACIFIC COAST FREIGHT BUREAU
PACIFIC SOUTHCOAST FREIGHT BUREAU

W. R. WATSON, Chairman
North Pacific Coast Freight Bureau
315 Union Station
Seattle, Washington 98104
Telex 3-20287

CYRIL A. SPRENGELMEYER, Chairman
Pacific Southcoast Freight Bureau
717 Market Street
San Francisco, California 94103
Telex 3-4338

May 23, 1974

JT.-1131

PUMICE AGGREGATE, Hillside, AZ to
Portland, OR and Seattle, WA

Mr. James W. Farmer, Manager
Arizona Mining Company
530 North 42ND Street
Phoenix, AZ 85008

Dear Mr. Farmer:

Please be advised that in connection with the above joint docket, the Freight Traffic Committee has approved rates as outlined in attached memorandum.

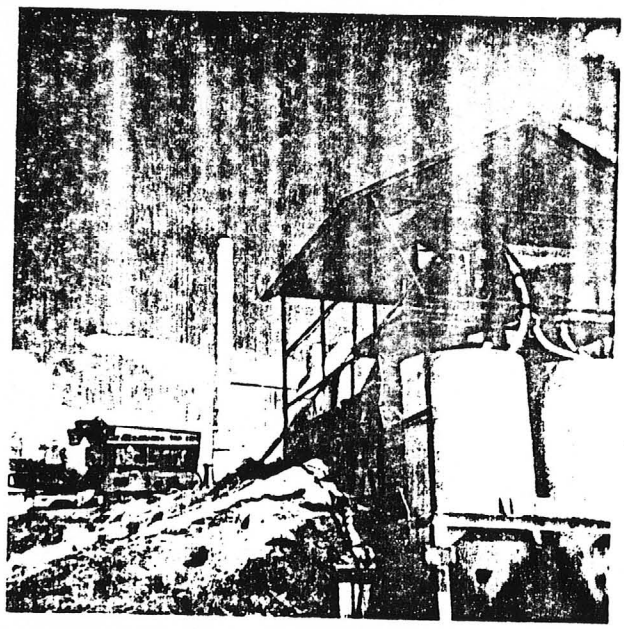
Publication will be progressed on statutory notice, and you will be advised effective date in the near future.

Yours very truly,

W R Watson
W. R. WATSON

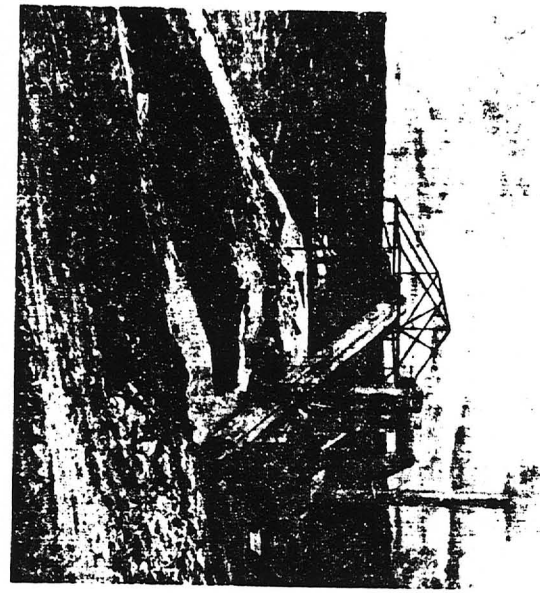
C A Sprengelmeyer
C. A. SPRENGELMEYER

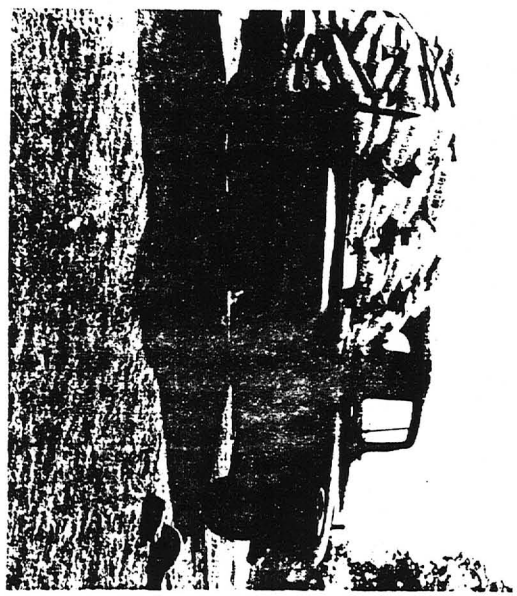
JL-36-W-40
(27)
Attachment
mjd



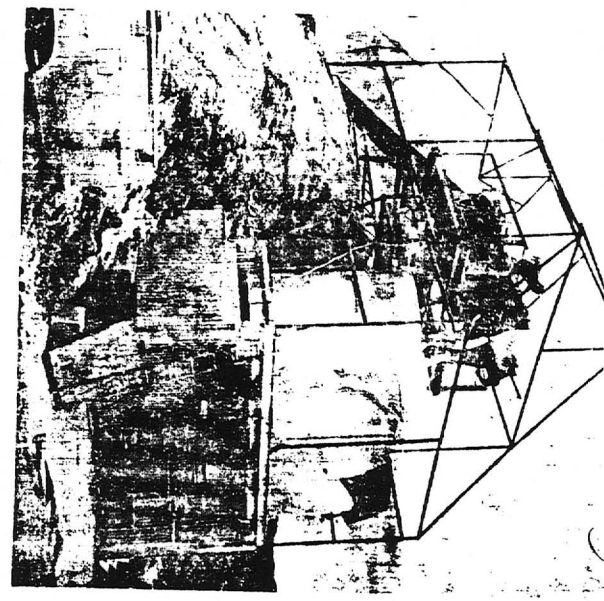
FEB 67

FEB 67





FEB 67



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