

SILICA CITY

SILICA DEPOSIT POTTER COUNTY TEXAS

GEOLOGICAL and ECONOMIC REPORTS









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INTRODUCTION

Industrial sand and gravel, often called "silica," "silica sand," and "quartz sand," includes sands and gravels with high silicon dioxide (SiO2) content. Some examples of end uses for these sands and gravels are in abrasives, filtration, foundry, glassmaking, hydraulic fracturing, and silicon metal applications. The specifications for each use differ, but silica resources for most uses are abundant. In almost all cases, silica mining uses open pit or dredging methods with standard mining equipment. Except for temporarily disturbing the immediate area while operations are active, sand and gravel mining usually has limited environmental impact.

Silica City, located in the Texas Panhandle, 22 miles northwest of Amarillo, is one of the most significant silica deposits to ever be discovered in America. On this 323.14 acre site, there are proven reserves of 54 million tons of high grade silica, averaging 96.5% SiO2.

The site is easily accessed by 21 miles of paved highway and one mile of county maintained unpaved all weather roadway. The main line of the Burlington Northern Railroad is contiguous to the property's western border. It consists of one mile of rail with an adjacent work spur. Major three phase power is within one mile; natural gas within one-half mile; and water and telephone is available.

Within a 300 mile radius of the deposit, in excess of 1,000,000 tons of container glass, fiberglass, plate glass and foundry sand is consumed. This deposit has logistical advantage to these consumers over all other present producers.

All successful industrial mineral operations depend on certain criteria, which include the following:

- A. Ability to be mined and processed economically.
- B. Having near access to key utilities.
- C. Having a transportation advantage to a large customer base.

Silica City possesses all of the above criteria.

This deposit has undergone extensive geological drilling, metallurgical testing and market evaluation to determine its economic potential. All the elements are present for a successful financial investment.

Section 1 Investment Synopsis Executive Summary Deposit Review Mining

Permits

Project History



INVESTMENT SYNOPSIS**

\$10,000,000 SALES PRICE *

54,000,000 TONS SILICA RESERVES

CURRENT SILICA SALES PRICE, A MINIMUM OF \$40/TON

\$12.00 TOTAL PROJECTED MINING COST/TON

\$28.00 PROJECTED PRETAX PROFIT/TON

800,000 TONS ANNUAL PRODUCTION

\$22,400,000 PROJECTED ANNUAL PRETAX PROFIT

LIFE OF RESERVES IS 67.5 YEARS

PROJECTED TOTAL PRETAX PROFITS FOR 67.5 YEARS

\$1,512,000,000.00

Seller owns the fee simple surface of the land upon which this deposit is located, as described in Exhibit A. Seller also owns the working interest in all silica and sand leases which will be assigned to the Buyer upon the date of sale.

Seller reserves and excepts from this assignment of this 323.14 acre deposit an overriding royalty on all of the silica and sand produced and removed from the Leases equal to the difference, if any, between the total royalty burdens of record as of the date of this Assignment and Six Percent (6%), thereby delivering to the Purchaser a net revenue interest in and to the Leases of Ninety-Four Percent (94%). This overriding royalty shall be free and clear of all costs, claims, charges, expenses and taxes, except production or severance taxes and shall be delivered in the same manner as provided in the Leases for calculation and payment or delivery of royalty therein reserved to the Lessor. The overriding royalty interests herein reserved under the Leases shall never be less than Two Dollars and Fifty Cents (\$2.50) per ton for each and every ton of silica and sand removed from the Leases.

**SELLER'S ESTIMATES ARE BASED ON ANALYSIS OF EXPERTS REFERENCED THROUGHOUT THIS PROSPECTUS.

Subject Property: The property is three hundred and twenty three acres (323.14 acres) located in Potter County, Texas approximately 22 miles northwest of Amarillo, Texas. It is one of the largest deposits of high grade silica (average 96.5% to 97.5% SiO2) in the United States.

Seller owns the fee simple surface of the land upon which this deposit is located, as described in Exhibit A. Seller also owns the working interest in all silica and sand leases which will be assigned to the Buyer upon the date of sale.

Reserve Study: The entire property has been drilled and cored over 100 times and samples are available for evaluation. The reserve study was done by Lloyd W. Krumrey, Jr., a mining geologist, and confirmed by the Northwest Resources Company. Independent qualitative and quantitative analyses by the geology departments of the Colorado School of Mines, University of Texas at El Paso and North Carolina State University have confirmed the quality and quantity of these reserves.

Reserve Quantity: Fifty-four million tons (54,000,000) of high-grade silica. This is a sufficient amount of silica to justify a mining operation for over 65 years.

Location Advantage: The location and its proximity to the adjacent railroad line will provide a \$5.00 to \$10.00 per ton price differential advantage in the silica market since transportation expenses are borne by the purchaser. Also close to the deposit is the City of Amarillo, which has a major airport and connecting interstate highways.

Other Important Site Features:

- Railroad. Burlington Northern's main line runs along the west boundary of the Property, with a spur contiguous to the main line.
- 2. Power/Water. There is an El Paso Natural Gas line and a High Tension, three phase power line just east of the property. Water is available.
- **3. Roads**. The site is on a county maintained road adjacent to the property and a short distance from FM 1064 and Interstate 40.
- **4. Labor**. Amarillo is a short distance away with a population of over 190,000 as of 2010 census.

Economics: Market Demand: The fiberglass industry located in Amarillo and Wichita Falls uses over 500,000 tons annually. The aluminum and iron foundry industries along the border uses several million tons annually. Sand is presently imported to these users from Oklahoma and as far away as the Great Lakes Region.

EXECUTIVE SUMMARY



DEPOSIT REVIEW

The data generated was re-examined and verified by offset drilling of the original drill sites. Additional testing resulted in the verification of all data by numerous companies, including:

- 1. Kentucky Tennessee Clay Co.
- 2. Northwestern Resources Co.
- 3. Vitro Chemical, Fibers and Mining, S.A. of Monterey, Mexico.

Deposit Review

Acreage 323.14 acres.

Proven Reserves 54,000,000 tons

Average Grade 96.5% SiO2

Overburden 4 feet average of soil horizon

Ore Thickness 20 to 80 feet

Mining Method Open Pit (silica sandstone contains

no cementation, is extremely friable and reduces to individual sand grains with minimal attrition). Ripping with a bulldozer and loading and transport

via scrapers.

Processing to 99% De-lumping, s

De-lumping, screening of plus 60 mesh product (2=%); Hydro-cyclone desliming minus 200 mesh material (contains bulk of impurities), attrition scrubbing and desliming to upgrade

for multiple products.



Access 21 miles paved highway with one

mile of unpaved all weather county

maintained road.

Railroad Western edge of deposit is bordered

by the main line of the Burlington Northern RR. This border consists of a one mile stretch of rail and an

adjacent work spur.

Utilities Water and phone lines on the

property. Natural gas pipeline and three phase power lines within one

mile of the property.

Producible Products 99+% SiO2 sized at minus 60 plus 200

mesh at a recovery of 85+%, various purity will be suitable for aluminum foundry sand, fiberglass, container

and plate glass products.



MINING

Silica City can be mined by the simplest open-pit method. The overburden consists of a soil horizon, varying from zero to a maximum of eight feet and would average four. The physical characteristic of the ore zone enables easy ripping with a dozer. There is no cementation of the individual grains. The size distribution of the silica particles provides a propping effect, enabling the formation of pit slopes ranging from 45 to 90 degrees. The entire deposit is extremely friable, thus no blasting is required.

The silica deposit is located at a topographic high striking nearly north - south and grades gently west to the Burlington Northern railroad siding. The topographic high contains the greatest thickness of silica averaging close to 80 feet. Weathering has gently eroded the silica thickness to the west topographic high, resulting in an average silica thickness of 20 feet near the rail tracks. All mining can be accomplished without creating a hole below the general horizon. This will facilitate reclamation and local visual impact.

Mining will be accomplished with scrapers and a dozer. Overburden can be removed entirely by scrapers. The mining plan would be to strip the overburden beginning in the northwest portion of the property near the railroad tracks.



The Texas Natural Resource Conservation Commission (TNRCC) permits the State of Texas natural resources. A mining operation such as this is classified by their regulations in the same classification as a sand and gravel pit. A mining permit is not required; however standard air and water permits would need to be secured because of the washing process used for the sand.

Registration with Mine Safety and Health Administration (MSHA) will be required. If the pit extends within 200 feet of a public road, a berm must be established sufficient to stop a vehicle from driving into the pit. This requires registration with the Texas Railroad Commission (TRC).

Permits for the processing plant are minimal. Water use is not regulated by any agency if not consumed from a public utility. If there is no prior severance of water rights, the water rights are owned and controlled by the surface owner and can be produced and consumed as the owner requires. Water discharge is regulated if chemicals are involved and interfere with other entities. No chemicals are used in this project and discharge would be minimal with maximum reuse of the water from reclamation. When wells are drilled, a log and potential production rate will be registered with the county. Any ponds or reservoirs utilized in the processing are required to be approved by the TNRCC.

Air quality permits will be required in conjunction with the dryer system. All gas fired dryers will be required to comply with the local emissions standard of the county it is operated. Potter County has no air quality problems. The dryer will have to conform to the normal exhaust of particulate elements produced by modern dryers. Dryer manufacturer certification of compliance is the only requirement.

PERMITS



MARKET REVIEW

Company	Location	Product	Tonnage
Owens Corning Fiberglass	Amarillo, Texas	Fiberglass	200,000
Grouse Hines	Amarillo, Texas	Alum Foundry	15,000
Certainteed	Wichita Falls, Texas	Fiberglass	140,000
PPG	Wichita Falls Texas	Plate Glass	150,000
Guardian	KIngman, Arizona	Fiberglass	200,000
Coors-Rocky Mountain Bottling	Golden, Colorado	Container Glass	200,000
Owens Corning Fiberglass	Santa Clara, CA	Fiberglass	100,000
CMI Texas	Nuevo Laredo, Mexico	Alum Foundry	300,000
Cirfina	Monterrey, Mexico	Alum Foundry	150,000

The silica products that will be produced will be for the Fiberglass, Glass Bottling and Foundry Industries.

May 16,2012

Subject: Evaluation of the Potter County, Texas Amarillo Silica Deposit.

I have been directly involved in the development of the Amarillo, Texas silica deposit since it's inception in 1982. This included all field studies through the final drilling and deposit testing. The development work was completed in 1988. The property consisted of seven individual but continuous properties that required consolidation under one ownership entity. This was finally accomplished in 1995.

The Amarillo Silica Deposit is a unique silica glass sand deposit. It represents a barrier island system within a fresh water lake of Triassic Age. Exploration was initiated in 1982 and extended through final completion in 1988. Numerous small deposits were discovered that proved insufficient for commercial mining and processing but provided data for the final discovery of this primary deposit.

Previous exploration indicated this is the only economic glass sand deposit within the confines of the Texas Panhandle, Western Oklahoma, New Mexico and Southern Colorado. The only regional commercial deposits are located in Southeastern Oklahoma and west in Nevada.

Due to the unique depositional environment, drilling on a tight pattern was accomplished to delineate the exact structure of the deposit. This was determined to be 400 foot centers established on a grid bearing north - south by east - west. Over 100 drill holes explored the deposit. Drilling was accomplished by a Fehling 1000 drill rig using six inch auger and an internal two inch wire line core barrel.

The glass sand has limited to minimal cementation which resulted in a core recovery of less than 10 per cent. Samples were therefore extracted by the auger at ten foot intervals. The glass sand outcrops on the surface have an average of four feet of soil over burden. The mineable deposit thickness extends from 20 feet to over 80 feet. The deposit extends across the total area of 320 acres and is adjacent to the main north south Burlington Northern Santa Fe railroad with an adjacent service spur.

INDUSTRIAL MINERALS EXPLORATION, DEVELOPMENT, MINING & PROCESSING

LLOYD W. KRUMREY, JR.

QUALIFICATIONS:

Bachelor of Science Geology with Minor in Extractive Metallurgy University of Texas at El Paso, Texas

Master of Science Mining Engineering University of Missouri, Rolla, Missouri

PROFESSIONAL AFFILIATIONS:

American Mining Congress, Society of Mining Engineers AIME, International Industrial Minerals Forum Certified Professional Geologist

EXPERTISE

Exploration, Development, Feasibility Evaluation, Environmental Impact Studies, Mining (underground and open-pit), Processing Plant Design, Product Development & Marketing

> KRUMREY INDUSTRIAL MINERALS, LLC

KRUMREY INDUSTRIAL MINERALS, LLC

The resultant development drilling and testing proved the deposit to contain a mineable tonnage of 54,000,000 tons.

Dr. Philip C. Goodell, Professor of Economic Geology, University of Texas at El Paso, was provided with all geologic data on this deposit to formulate a reserve study. His work corroborated the initial findings of 54,000,000 tons of silica reserves.

Drill samples were split and composited to provide and average mine run grade. 1000 pounds were sent to the Colorado School of Mines Research Institute for complete analysis and bench process studies. The resultant analysis results provided an average grade of 96.5 % SiO2. Additional studies were accomplished at the Phos Laboratories located in Lakeland, Florida under the direction of Theodore T. Biddle, a renowned industrial minerals extractive metallurgist, further refining the process study. The resultant studies and analysis enabled the establishment of a plant flow sheet.

Bulk samples were extracted and sent to the U S Bureau of Mines Metallurgical Research Center located at the University of Alabama, Tuscaloosa. Under the direction of Mr. Biddle, a pilot plant based on the developed plant flow chart, successfully upgraded the mine run glass sand to 99 plus per cent SiO2 demonstrating the production of alass sand from this deposit.

Vitro Fibers and Chemicals of Mexico initiated examination of the deposit in September, 1995. Their mining division accomplished a detailed sampling and testing program extending to plant testing. Recommendations to continue this project were initiated. A major devaluation of the peso and problems with their Anchor Glass division resulted in termination of their interest.

Northwestern Resources, Inc., a major coal producer, decided to expand their mining scope by expanding into glass sand in 1997. They undertook a detailed sampling and drilling verification program. Seven randomly chosen drill sites were established resulting in the verification of the initial drilling. Management recommended going forward however the board of directors decided to go in a different business direction.

The Amarillo Silica Deposit has been fully developed through drilling, sampling, detailed analytical studies, metallurgical testing and detailed market studies. This has been accomplished by prominent research facilities and expert personnel. The data generated is available for review.

It should be noted that market research has indicated multiple market places for this product. The primary market is for the fiber glass and glass industry. Within a 300 mile radius of the deposit, market consumption is in excess of 600,000 tons per year. An additional market is foundry sand. This is local consumption extending to the Mexican foundry industry which consumes in excess of 1,000,000 tons per year primarily supplied from the United States.

Respectfully Submitted: Lloyd W. Krumrey, Jr. President

KRUMREY INDUSTRIAL MINERALS, LLC

Section 2

OTHER INFORMATION

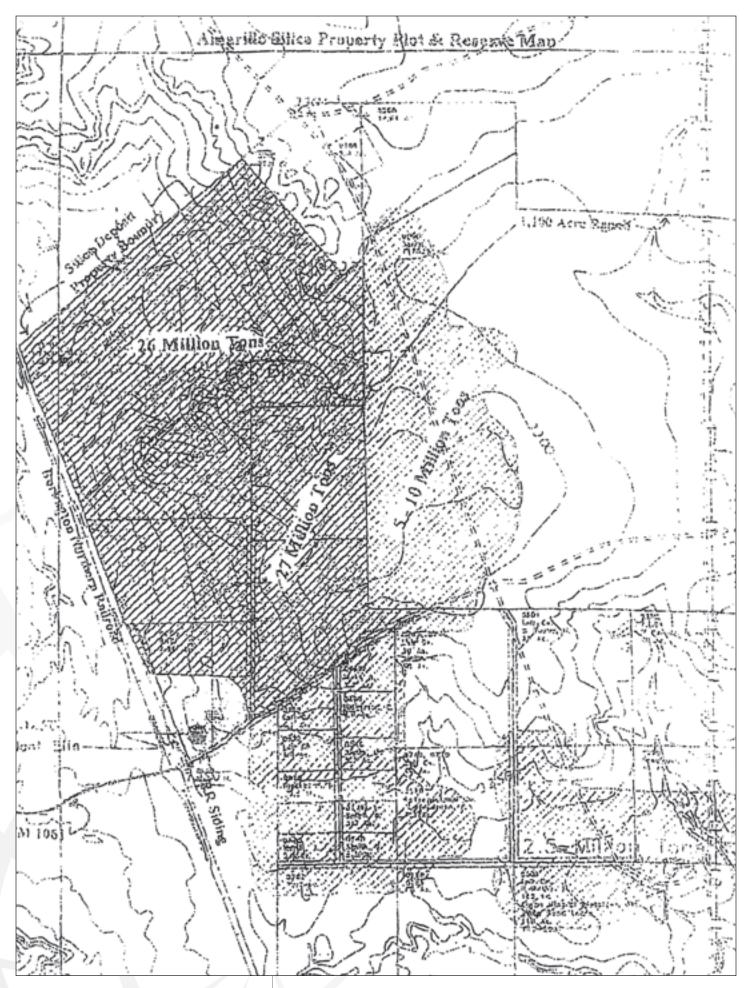
Location Map

Site Map

Photos

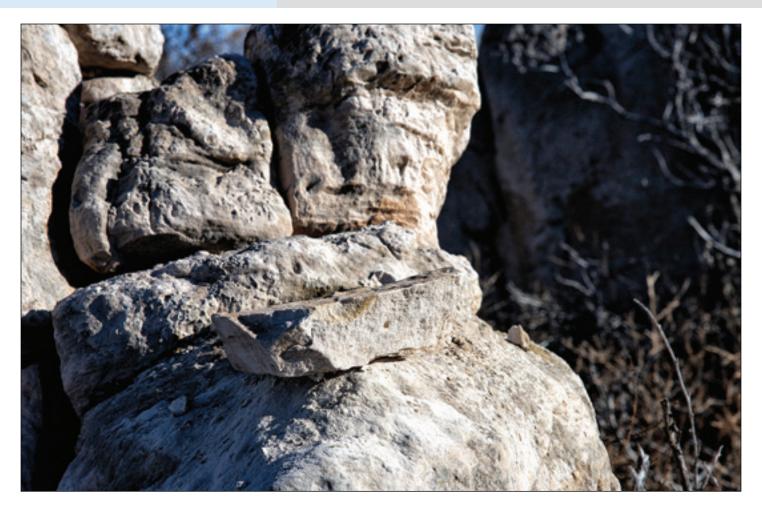
Lab Analysis



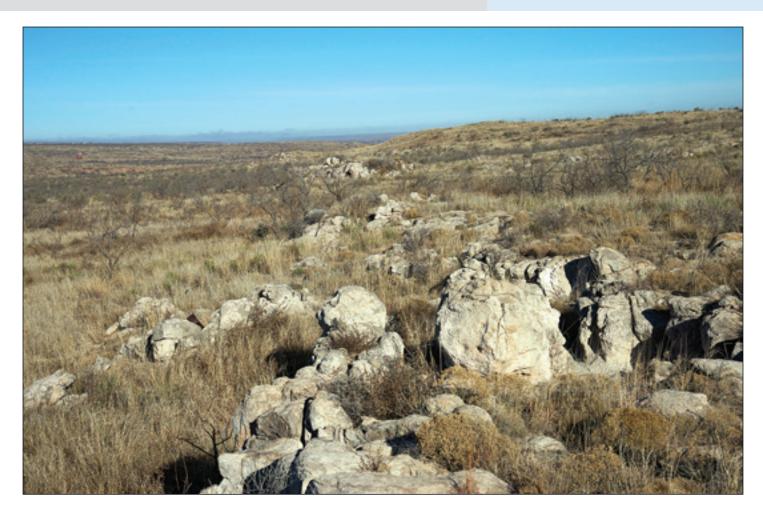




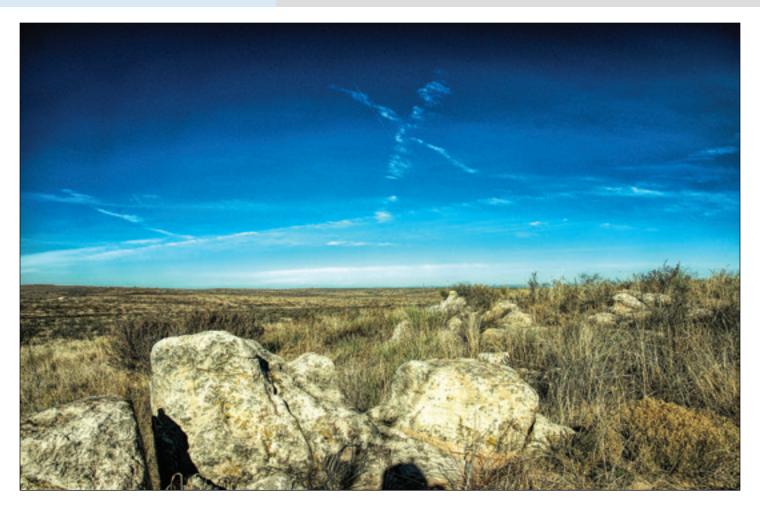




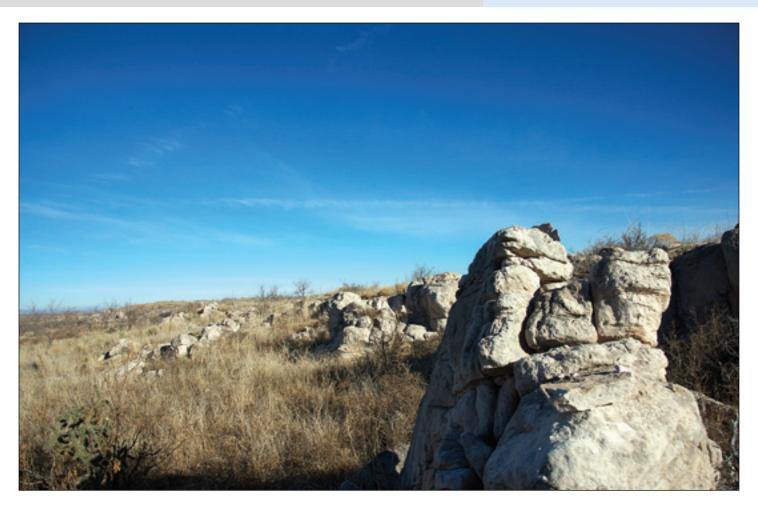




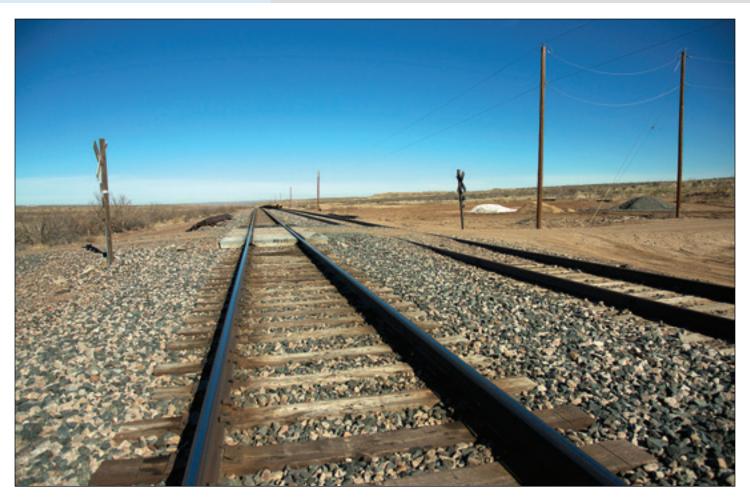




















LLOYD W. KRUMREY, JR.

Consulting Mining Geologist Industrial Minerals Exploration, Evaluation, Feasibility Mine & Plant Design The following are the results of the metallurgical testing of the randomly selected silica from the 323.14 acre Potter County deposit. The bulk testing results of the 50 tons were processed at the US Bureau of Mines Research facility located at the University of Alabama.

Further information can be provided upon request.

Respectfully, Lloyd W. Krumrey, Jr. President



Attrition Scrub Bench Test, April 3, 1990

	SiO2 %	FeO3%	Al2O3 %	LOI %
Mine Run Feed	97.67	0.16	1.30	0.91
Amarillo Feed Scrub No. 1	99.14	0.022	0.16	0.24
Amarillo Feed Scrub No. 2	99.20	0.021	0.16	0.22

PHOSLAB,.INC.

806 WEST BEACON ROAD LAKELAND, FLORIDA 33803 (813)682-5897

TO: EMRC, INC, 10541 Texwood El Paso, Texas 79925

DATE; April 10, 1990

P. O. No.:

Project: Amarillo Sand Reference; Biddle Test No. 1

ATTN: Lloyd Krumrey, Jr. Theodore F. Biddle



PHOSLAB,.INC.

806 WEST BEACON ROAD LAKELAND, FLORIDA 33803 (813)682-5897

> TO: EMRC, INC, 10541 Texwood El Paso, Texas 79925

DATE; April 22, 1990

P. O. No.:

Project: Amarillo Sand Reference: Biddle Test

ATTN: Lloyd Krumrey, Jr. Theodore F. Biddle

Attrition Scrub Bench Test, April 14, 1990

	SiO2%	Fe2O3%	Al2O3%	LOI%
Mine Run Feed	97.46	0.14	1.33	0.91
Test No. 13, + 200 Mesh	99.67	0.016	0.084	0.10
Test No. 13 with - 200 Mesh	99.15	0.020	0.19	0.17
No. 1 Scrub	98.15	0.033	0.19	0.18
No. 2 Scrub	98.77	0.058	0.27	0.20
No. 3 Scrub	99.35	0.029	0.15	0.20

US Bureau of Mines Research Facility University of Alabama at Tuscaloosa 50 Ton Bulk Attrition Scrub Test

	SiO2	Re203	AJ2O3	LOI
Tuscaloosa Fines	98.67	0.060	0.27	0.18
Tuscaloosa Coarse	99.08	0.051	0.22	0.16
2nd Stage	99.14	0.028	0.21	0.31
3rd Stage	99.18	0.029	0.17	0.30
No. 22nd Stage U/Flow	99.21	0.024	0.15	0.22
No. 32nd Stage U/Flow	99.30	0.024	0.16	0.17
No. 42nd Stage U/Flow	99.10	0.027	0.16	0.29
No. 52nd Stage U/Flow	99.26	0.029	0.15	0.26
No. 62nd Stage U/Flow	99.17	0.029	0.23	0.15
No. 72nd Stage U/Flow	99.22	0.027	0.19	0.13

Chemist

PHOSLAB,.INC.

806 WEST BEACON ROAD LAKELAND, FLORIDA 33803 (813)682-5897

TO: EMRC, INC, 10541 Texwood El Paso, Texas 79925

DATE; March 12, 1992

P. O. No.:

Project: Amarillo Sand Reference: Pilot Plant Test

ATTN: Lloyd Krumrey, Jr.

Larry Hartness



PHOSLAB,.INC.

806 WEST BEACON ROAD LAKELAND, FLORIDA 33803 (813)682-5897

> TO: EMRC, INC 10541 Texwood EL Paso, Texas 79925

DATE: June 8, 1992

P. O. No.:

Project: Amarillo Sand Reference: Product Comparison

ATTN; Lloyd Krumrey, Jr.
Theodore T- Biddle
Larry Hartness

	PG5 Supersil	Oklahoma 5 - Micron	Amarillo Micronized
SiO2	99.35	98.97	99.23
Fe203	0.065	0.068	0.11**
A1203	0.10	0.19	0.16
TiO2	0.022	0.023	0.027
CaO	0.013	0.032	0.11
MgO	0.0063	0.031	0.010
LOI	0.23	0.59	0.18
As	0.001*	0.001*	0.001*
Mo	"	И	"
Sb	"	И	"
Sr	"	И	"
Со	u.	И	И
Ba	u,	И	И
Sn	"	И	и
\vee	"	"	И
Cr	"	"	И
Se	"	"	И
Cr	"	"	И
Za	"	"	И
Cd	"	"	И
Cu	"	"	И
Pb	"	"	И
Ni	"	"	"
Ag	"	"	"
Hg	"	"	"
Mn	"	И	"

- * Less Than
- ** Sample contaminated by collection cyclone. Fe2O3 was less than 0.03% by weight prior to grinding and collection.

Chemist



