

CARBO CERAMICS INC

FORM 10-K (Annual Report)

Filed 03/16/98 for the Period Ending 12/31/97

Address	6565 MACARTHUR BOULEVARD SUITE 1050 IRVING, TX 75039
Telephone	2144010090
CIK	0001009672
Symbol	CRR
SIC Code	3290 - Abrasive, Asbestos, And Miscellaneous
Industry	Oil & Gas Operations
Sector	Technology
Fiscal Year	12/31

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 1997.

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

COMMISSION FILE NO. 0-28178

CARBO CERAMICS INC.

(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction of
incorporation or organization)

72-1100013
(I.R.S. Employer
Identification Number)

600 E. LAS COLINAS BOULEVARD
SUITE 1520
IRVING, TEXAS 75039

(Address of principal executive offices)

(972) 401-0090
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act: NONE

Securities registered pursuant to Section 12(g) of the Act:
COMMON STOCK, PAR VALUE \$0.01 PER SHARE

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

The aggregate market value of the voting stock held by non-affiliates of the Registrant, based upon the closing sale price of the Common Stock on March 6, 1998, as reported on the Nasdaq National Market, was approximately \$105,937,000. Shares of Common Stock held by each officer and director and by each person who owns 5% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 6, 1998, Registrant had outstanding 14,602,000 shares of Common Stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for Registrant's Annual Meeting of Shareholders to be held April 14, 1998 are incorporated by reference in Part III.

PART I

ITEM 1. BUSINESS

GENERAL

CARBO Ceramics Inc. is the world's largest producer and supplier of ceramic proppants for use in the hydraulic fracturing of natural gas and oil wells. Demand for ceramic proppants depends generally upon the demand for natural gas and oil and on the number of natural gas and oil wells drilled, completed or recompleted worldwide. More specifically, the demand for ceramic proppants is dependent on the number of oil and gas wells that are hydraulically fractured to stimulate production.

The hydraulic fracturing process consists of pumping fluids down a natural gas or oil well at pressures and flow rates sufficient to split the hydrocarbon bearing formation and create fractures in the formation. A granular material, such as ceramic proppant or sand-based proppant, is suspended in the fluid and packs the newly created fracture, keeping the fracture open once high-pressure pumping stops. The proppant-filled fracture creates a permeable channel through which the hydrocarbons can flow more freely from the formation to the well and then to the surface.

CARBO Ceramics was formed in 1987 for the purpose of purchasing the assets of Standard Oil Proppants Company Ltd. (SOPCO). SOPCO was a joint venture formed to operate the combined proppant businesses of the Carborundum Company and Dresser Industries. These proppants businesses were started in 1978 and 1984 respectively. While the Carborundum Company and Dresser Industries had primarily manufactured high strength, premium priced proppants for use in very deep wells, CARBO Ceramics has pursued a strategy of introducing new, lower-priced, lightweight, intermediate strength ceramic proppants to capture a greater portion of the large market for sand-based proppants.

The Company estimates that it supplies 60% of the ceramic proppants and 5% of all proppants used worldwide.

PRODUCTS

The Company's four product lines cover the entire spectrum of commercially available ceramic proppants. CARBOHSP(TM) and CARBOPROP(R) are premium priced, high strength proppants designed primarily for use in deep gas wells. CARBOHSP(TM), which was introduced in 1979, is the original ceramic proppant, formerly marketed as "Sintered Bauxite". CARBOHSP(TM) offers the highest level of strength and conductivity for use primarily in deep gas wells. CARBOPROP(R), which was introduced by the Company in 1982, is slightly lower in weight and strength than CARBOHSP(TM) and was developed for use in deep gas wells that do not require the strength of CARBOHSP(TM).

The CARBOLITE(R) and CARBOECONOPROP(R) products are lightweight, intermediate strength proppants designed for use in gas wells of moderate depth and shallower oil wells. The products are manufactured and sold to compete directly with sand-based proppants. CARBOLITE (R), introduced in 1984, is used in medium depth oil and gas wells, where the additional strength of ceramic proppants may not be essential, but where higher production rates can be achieved due to the products' roundness and uniform grain size.

CARBOECONOPROP(R), introduced in 1992 to compete directly with sand-based proppants, is the Company's lowest priced and fastest growing product. The introduction of CARBOECONOPROP(R) has resulted in ceramics being used in many new markets by end users that had not previously used ceramic proppants. The Company believes that many of the users of CARBOECONOPROP(R) had previously used sand or resin-coated sand. The Company further believes that its ability to continue to penetrate the market for sand-based proppants in 1997 was limited by its production capacity for lightweight ceramic proppants.

CUSTOMERS AND MARKETING

The Company's largest customers are, in alphabetical order, BJ Services Company, Dowell and Halliburton Company, the three largest participants in the worldwide petroleum pressure pumping industry.

These companies collectively accounted for approximately 84% of the Company's 1997 revenues. The Company's other customers include primarily foreign pumping service companies, that compete in the worldwide fracturing business. The end users of the Company's products, however, are the operators of natural gas and oil wells that engage pumping service companies to hydraulically fracture wells to improve the recovery of natural gas or oil wells, thereby enhancing the rate of return on the investment made in such wells. The Company works with the pressure pumping service companies to present the advantages of using ceramic proppants to the operators of natural gas and oil wells. The Company generally supplies its customers with products on a just-in-time basis, with transactions governed by individual purchase orders. Continuing sales of product depend on the Company's direct customers and the well operators being satisfied with both product and delivery performance.

The Company recognizes the importance of aggressive marketing when introducing a technically advanced and performance enhancing, but intrinsically more costly, product. The Company must market its products both to its direct customers and to owners and operators of the natural gas and oil wells. The Company's sales and marketing staff regularly calls on and keeps close contact with the people who are influential in the proppant purchasing decision: production companies, regional offices of well service companies that offer pressure pumping services, and various completion engineering consultants. The Company provides a variety of technical support services and has developed computer software that models the return on investment achievable by using the Company's ceramic proppants versus that of other proppants in the hydraulic fracturing of a natural gas or oil well.

The Company's Vice President of Marketing and Technology coordinates worldwide sales and marketing activities. The Company's export marketing efforts are conducted through its sales office in Aberdeen, Scotland and through two commissioned sales agents located in South America and Australia.

The Company's ceramic proppants are used worldwide by U.S. customers operating abroad and by foreign customers. Sales outside the United States accounted for 37%, 31% and 37% of the Company's sales for 1995, 1996 and 1997, respectively.

The distribution of the Company's export and domestic revenues is shown below, based upon the region in which proppants were used by the customer:

	1995	1996	1997
	-----	-----	-----
	(\$ IN MILLIONS)		
LOCATION			
United States.....	\$36.8	\$45.3	\$53.3
International.....	21.2	19.9	31.8
	-----	-----	-----
Total.....	\$58.0	\$65.2	\$85.1
	=====	=====	=====

COMPETITION AND MARKET SHARE

The Company's chief worldwide competitor is Norton-Alcoa Proppants ("Norton-Alcoa"). Norton-Alcoa is a joint venture of Compagnie de Saint-Gobain, a French glass and materials company, and Aluminum Company of America. Norton-Alcoa manufactures ceramic proppants that directly compete with each of the Company's products. In addition, Mineraco Curimbaba ("Curimbaba"), based in Brazil, manufactures a sintered bauxite product similar to the Company's CARBOHSP(TM), which is marketed in the United States under the name "Sinterball". The Company believes that Curimbaba has not expanded its U.S. product line to include a full range of ceramic proppants and is unlikely to do so in light of patents held by the Company and Norton-Alcoa. The Company believes that it supplies approximately 60% of the ceramic proppants and approximately 5% of all proppants used by the oilfield services companies that perform fracturing services worldwide.

Competition for CARBOHSP(TM) and CARBOPROP(R) includes ceramic proppants manufactured by Norton-Alcoa and Curimbaba. The Company's CARBOLITE(R) and CARBOECONOPROP(R) products compete with ceramic proppants produced by Norton-Alcoa and with sand-based proppants for use in the hydraulic fracturing of medium depth natural gas and oil wells. The leading suppliers of mined sand are

Unimin Corp., Badger Mining Corp., Wedron Silica Co., Ogelbay-Norton Company and Colorado Silica Sand, Inc. The leading suppliers of resin-coated sand are Borden Proppants Corp. and Santrol, a subsidiary of Fairmont Minerals Limited, Inc.

The Company believes that the most significant factors that influence a customer's decision to purchase the Company's products are: (i) price/performance ratio, (ii) on-time delivery performance, (iii) technical support and (iv) proppant availability. The Company believes that its products are competitively priced and that its delivery performance is excellent. The Company also believes that its superior technical support has enabled it to persuade customers to use ceramic proppants in an increasingly broad range of applications and thus increased the overall market for the Company's products.

Prior to 1997, the Company had generally maintained sufficient inventory to satisfy demand for its products. However, in 1997, it became obvious to the management of the Company that previous capacity additions were insufficient to satisfy demand in an improving market. The Company has addressed this issue through the construction of a new manufacturing facility in McIntyre, Georgia which is scheduled for completion in the fourth quarter of 1998.

The Company continually conducts testing and development activities with respect to alternative raw materials to be used in the Company's existing production methods and alternative production methods. The Company is not aware of the development of alternative products for use as proppants in the hydraulic fracturing process. The Company believes that the main barriers to entry for additional competitors are the patent rights held by the Company and certain of its current competitors and the capital costs involved in building production facilities of sufficient size to be operated efficiently.

DISTRIBUTION

The Company maintains finished goods inventories at its plants in New Iberia, Louisiana, and Eufaula, Alabama, and at six remote stocking facilities located in: Rock Springs, Wyoming; Oklahoma City, Oklahoma; San Antonio, Texas; Fairbanks, Alaska; Edmonton, Alberta, Canada; and Rotterdam, The Netherlands. The remote stocking facilities consist of bulk storage silos with truck trailer loading facilities. The Company owns the facilities in San Antonio, Rock Springs and Edmonton and subcontracts the operation of the facilities and transportation to a local trucking company. The remaining stocking facilities are owned and operated by local trucking companies under contract with the Company. The North American sites are supplied by rail, and the site in the Netherlands is supplied by container ship. In total, the Company leases 79 rail cars, and owns or leases 62 dedicated trailers. The price of the Company's products sold for delivery in the lower 48 United States and Canada includes just-in-time delivery of proppants to the operator's well site, which eliminates the need for customers to maintain an inventory of ceramic proppants.

The Company increased storage capacity at its remote storage facilities in San Antonio, Rock Springs and Edmonton in 1997 at a cost of approximately \$4.1 million.

RAW MATERIALS

Ceramic proppants are made from alumina-bearing ores (commonly referred to as bauxite, bauxitic clay or kaolin, depending on the alumina content), which are readily available on the world market. Bauxite is largely used in the production of aluminum metal, refractory material and abrasives. The main deposits of alumina-bearing ores in the United States are in Arkansas, Alabama and Georgia; other economically mineable deposits are located in Australia, China, Jamaica, Russia and Surinam.

The Company's New Iberia facility currently uses bauxite imported from Australia and bauxitic clay mined in Arkansas. The Company has decreased its dependence on imported bauxite and bauxitic clay as it has entered into a long-term contract for the processing and supply of Arkansas bauxite and bauxitic clay for use at the New Iberia facility. The Company believes that this agreement, which stipulates a fixed price, subject to annual upward adjustments in accordance with a producer price index, will provide a sufficient supply of bauxite and bauxitic clay to meet the requirements of the New Iberia facility through 1999.

The Company's Eufaula facility exclusively employs locally mined uncalcined kaolin, and the Company has entered into a contract requiring the supplier to sell to the Company up to 200,000 net tons of kaolin per year and the Company to purchase from the supplier 80% of the Eufaula facility's annual kaolin requirements, each through 2003. This agreement stipulates a fixed price, subject to annual adjustment in accordance with fluctuations (within an 8% annual limit) in the producer price index. Raw material costs for the Eufaula facility are substantially below those for the New Iberia plant, due to the Eufaula facility's proximity to raw material reserves and use of uncalcined raw materials.

The new production facility in McIntyre, Georgia will also utilize primarily locally mined uncalcined kaolin. The Company has entered into a long-term supply agreement for these raw materials which stipulates a fixed price subject to annual adjustments for changes in the producer price index and fuel costs. The supply contract provides for a twenty-year supply of raw materials.

PRODUCTION PROCESS

Ceramic proppants are made by grinding or dispersing ore to a fine powder, combining the powder into small, green (i.e., unfired) pellets and sintering the pellets at 2,500F to 3,000F in a rotary kiln.

The Company uses two different methods to produce ceramic proppants. The Company's plant in New Iberia, Louisiana, uses a dry process (the "Dry Process") which starts with bauxite or bauxitic clay which has been dried to remove both free water and water which was chemically bound within the ore. This drying process is referred to as calcining. The calcined ores are received at the plant and ground into a dry powder. Pellets are formed by combining the powder with water and binders and introducing the mixture into a high-shear mixer. The process is completed once the green pellets are sintered in a rotary kiln. The Company's competitors also use the Dry Process to produce ceramic proppants.

The Company's plant in Eufaula, Alabama, uses a wet process (the "Wet Process"), which starts with moist, uncalcined kaolin from local mines. The kaolin is dispersed with chemicals in a water slurry. With an atomizer, the slurry is sprayed like a mist into a dryer which causes the slurry to harden into green pellets. Finally, these green pellets are sintered in rotary kilns. The Company believes that the Wet Process is unique to its plant in Eufaula, Alabama.

The Company's plant in McIntyre, Georgia will use the Dry Process. However, the Company expects to maintain lower production costs at this facility by purchasing locally mined ore and performing the calcining process itself.

PATENT PROTECTION

The Company's ceramic proppants are made by processes and techniques that involve a high degree of proprietary technology, some of which is protected by patents.

The Company owns outright six issued U.S. patents and seven issued foreign patents; three of these U.S. patents and four of these foreign patents relate to the CARBOPROP(R) product produced by the Dry Process.

The Company jointly owns with A/S NIRO Atomizer ("NIRO"), the Danish designer and manufacturer of the spray atomizer device used in the Wet Process, three issued U.S. patents and 17 issued foreign patents. The patents owned jointly with NIRO generally relate to the Wet Process, and the products produced thereby (CARBOLITE(R) and CARBOECONOPROP(R)).

The current versions of the Company's six most important U.S. patents expire at various times in the years 2002 through 2009 with its two key product patents expiring in 2006 and 2009. The Company believes that these patents have been and will continue to be important in enabling the Company to compete in the market to supply proppants to the natural gas and oil industry. The Company intends to enforce and has in the past vigorously enforced its patents. The Company may be involved from time to time in the future, as it has been in the past, in litigation to determine the enforceability, scope and validity of its patent rights. Past disputes with its main competitor have been resolved in ways that permit the Company to continue to benefit fully from its patent rights. The Company and this competitor have cross-licensed certain of their respective

patents relating to intermediate and low density proppants on both a royalty-free and royalty-bearing basis. (Royalties under these licenses are not material to the Company's financial results.) The Company and NIRO have not granted any licenses to third parties relating to the use of the Wet Process. As a result of these cross licensing arrangements, both the Company and its main competitor are able to produce a broad range of ceramic proppants, while third parties are unlikely to be able to enter the ceramic proppants market without infringing on the patent rights held by the Company, its main competitor or both.

PRODUCTION CAPACITY

The Company believes that constructing adequate capacity ahead of demand while incorporating new technology to reduce manufacturing costs are important competitive strategies to increase its overall share of the market for proppants. Prior to 1993, the Company's production capacity was substantially in excess of its sales requirements. Since that time, however, the Company has been expanding its capacity in order to meet the generally increasing demand for its products. In October 1993, the Company increased the capacity of the Eufaula facility from 90 million pounds per year to 170 million pounds per year, in response to the increasing demand for the Company's CARBOLITE(R) and CARBOECONOPROP(R) products. In May 1995, the Company completed a 40 million pound per year capacity expansion at the New Iberia facility, intended to meet increasing demand for CARBOHSP(TM) and CARBOPROP(R). Most recently, in February 1996, the Company commenced operations of its second 80 million pound per year expansion of the Eufaula plant. Total annual capacity is currently 100 million pounds at the New Iberia facility and is 250 million pounds at the Eufaula facility.

In July 1997, the Company began construction of a new \$40 million manufacturing facility in McIntyre, Georgia. The plant is expected to be completed in the fourth quarter of 1998 and is expected to have initial capacity of 200 million pounds per year. The plant will be capable of producing all of the Company's product lines and has been designed to be expandable to a capacity of 400 million pounds per year.

The following table sets forth the date of construction of and recent expansion of the Company's manufacturing facilities:

LOCATION	YEAR OF COMPLETION	ANNUAL CAPACITY (MILLIONS OF POUNDS)	PRODUCTS
New Iberia, Louisiana			
Unit 1.....	1979	20	CARBOHSP(TM) and CARBOPROP(R)
Unit 2.....	1981	40	CARBOHSP(TM) and CARBOPROP(R)
1995 Expansion.....	1995	40	CARBOHSP(TM) and CARBOPROP(R)
Total.....		100	
Eufaula, Alabama			
Unit 3.....	1983	90	CARBOLITE(R) and CARBOECONOPROP(R)
1993 Expansion.....	1993	80	CARBOLITE(R) and CARBOECONOPROP(R)
1996 Expansion.....	1996	80	CARBOLITE(R) and CARBOECONOPROP(R)
Total.....		250	
McIntyre, Georgia(1)			
Units 1 and 2.....	1998	200	CARBOLITE(R), CARBOECONOPROP(R) CARBOHSP(TM) and CARBOPROP(R)

(1) The McIntyre, Georgia plant is expected to be completed in the fourth quarter of 1998, and is expected to have an initial installed capacity of 200 million pounds per year.

ORDER BACKLOG

The Company generally operates without any material backlog.

ENVIRONMENTAL AND OTHER GOVERNMENTAL REGULATIONS

The Company believes that its operations are in substantial compliance with applicable federal, state and local environmental and safety laws and regulations. The Company does not anticipate any significant expenditures in order to continue to comply with such laws and regulations.

EMPLOYEES

At December 31, 1997, the Company had 117 full-time employees. In addition to the services of its employees, the Company employs the services of consultants as required. The Company's employees are not represented by labor unions. There have been no work stoppages or strikes during the last three years that have resulted in the loss of production or production delays. The Company believes its relations with its employees are satisfactory.

FORWARD-LOOKING INFORMATION

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements. This Form 10-K, the Company's Annual Report to Shareholders, any Form 10-Q or any Form 8-K of the Company or any other written or oral statements made by or on behalf of the Company may include forward-looking statements which reflect the Company's current views with respect to future events and financial performance. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from such statements. This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 concerning, among other things, the Company's prospects, developments and business strategies for its operations, all of which are subject to certain risks, uncertainties and assumptions. These risks and uncertainties include but are not limited to, changes in the demand for oil and natural gas, the development of alternative stimulation techniques and the development of alternative proppants for use in hydraulic fracturing. The words "believe", "expect", "anticipate", "project" and similar expressions identify forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date the statement was made. The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

ITEM 2. PROPERTIES

The Company maintains its corporate headquarters (approximately 2,700 square feet of leased office space) in Irving, Texas, and owns its manufacturing facilities, land and substantially all of the related production equipment in New Iberia, Louisiana, and Eufaula, Alabama.

The facility in New Iberia, Louisiana, located on 24 acres of land owned by the Company, consists of two production units (approximately 85,000 square feet), a laboratory (approximately 4,000 square feet) and an office building (approximately 3,000 square feet). The Company also owns an 80,000 square foot warehouse on the plant grounds in New Iberia, Louisiana.

The facility in Eufaula, Alabama, located on 14 acres of land owned by the Company, consists of one production unit (approximately 111,000 square feet), a laboratory (approximately 2,000 square feet) and an office (approximately 1,700 square feet).

The Company's customer service and distribution operations are located at the New Iberia facility, while its quality control, testing and development functions operate out of both the New Iberia and Eufaula facilities. The Company owns distribution facilities in San Antonio, Texas, Rock Springs, Wyoming and Edmonton, Alberta, Canada.

ITEM 3. LEGAL PROCEEDINGS

The Company is not currently engaged in any material pending legal proceedings and is not currently aware of any claims that are likely to give rise to such proceedings.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the fourth quarter of fiscal year 1997.

EXECUTIVE OFFICERS OF THE REGISTRANT

Jesse P. Orsini (age, 57): Mr. Orsini, President and Chief Executive Officer, has served as President, Chief Executive Officer and a Director of the Company since its organization in 1987.

Paul G. Vitek (age, 39): Mr. Vitek has been the Vice President of Finance since February 1996 and has served as Treasurer and Secretary of the Company since 1988.

Terry P. Keefe (age, 49): Mr. Keefe has been Vice President of Manufacturing since July 1997. Prior to being elected Vice President of Manufacturing, Mr. Keefe was Plant Manager of the Company's Eufaula, Alabama plant since the organization of the Company in 1987.

Dr. C. Mark Pearson (age, 41): Dr. Pearson joined the Company as Vice President of Marketing and Technology in March 1997. Prior to joining the Company, Dr. Pearson served as Associate Professor of Petroleum Engineering at the Colorado School of Mines from December 1995 and held various engineering and management positions with Arco Petroleum Company from 1984 through December 1995.

All officers are elected at the Annual Meeting of the Board of Directors for one-year terms or until their successors are duly elected. There are no arrangements between any officer and any other person pursuant to which he was selected as an officer. There is no family relationship between any of the named executive officers or between any of them and the Company's directors.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED SHAREHOLDER MATTERS

(a) Market Information

The Company's Common Stock began trading on the NASDAQ National Market under the symbol CRBO upon completion of the Company's initial public offering on April 23, 1996. Per share stock prices for the quarterly periods during 1997 and 1996 as reported by NASDAQ were as follows:

	LOW -----	HIGH -----
1997		
First quarter.....	18 3/8	21 3/4
Second quarter.....	18 1/2	28 1/2
Third quarter.....	26	33 1/2
Fourth quarter.....	32	38 1/2
1996		
Second quarter.....	18 1/4	24 1/4
Third quarter.....	18 1/2	22 3/4
Fourth quarter.....	18 7/8	21

(b) Holders

The approximate number of shareholders of record of Common Stock on March 6, 1998 was 18. However, from available information, the Company believes that the total number of shareholders of Common Stock is approximately 1,100.

(c) Dividends

The Company paid quarterly cash dividends of \$0.075 per share on its Common Stock in 1997 and in the third and fourth quarters of 1996. The Company's current intention, subject to its financial condition, the amount of funds generated from operations and the level of capital expenditures, is to continue to pay quarterly dividends to shareholders of its Common Stock at the rate of \$0.075 per share.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data are derived from financial statements of the Company. The data should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and the financial statements and notes thereto included elsewhere in this Report.

	YEARS ENDED DECEMBER 31,				
	1997	1996	1995	1994	1993
	(IN THOUSANDS, EXCEPT PER SHARE DATA)				
STATEMENT OF INCOME DATA:					
Revenues.....	\$85,122	\$65,151	\$58,001	\$53,310	\$41,894
Cost of goods sold.....	42,186	34,517	29,297	26,630	20,613
Gross profit.....	42,936	30,634	28,704	26,680	21,281
Selling, general and administrative expenses(1).....	8,915	8,126	7,148	6,194	5,940
Operating profit.....	34,021	22,508	21,556	20,486	15,341
Other income, net.....	1,004	175	157	291	198
Income before income taxes.....	35,025	22,683	21,713	20,777	15,539
Income taxes.....	12,936	5,883	--	--	--
Net income.....	\$22,089	\$16,800	\$21,713	\$20,777	\$15,539
Earnings per share					
Basic.....	\$ 1.51				
Diluted.....	\$ 1.50				
PRO FORMA DATA(2):					
Income before income taxes.....		\$22,683			
Pro forma income taxes.....		8,393			
Pro forma net income.....		\$14,290			
Pro forma earnings per share(3)					
Basic.....		\$ 0.98			
Diluted.....		\$ 0.97			
	DECEMBER 31,				
	1997	1996	1995	1994	1993
	(\$ IN THOUSANDS, EXCEPT PER SHARE DATA)				
BALANCE SHEET DATA:					
Current assets.....	\$46,861	\$38,158	\$17,085	\$18,301	\$13,353
Current liabilities excluding bank borrowings.....	7,616	5,204	4,928	3,788	3,211
Bank borrowings-current.....	--	--	2,780	--	--
Property, plant and equipment, net.....	34,093	22,247	22,004	10,854	9,175
Total assets.....	80,954	60,405	39,089	29,154	22,527
Total shareholders' equity.....	70,942	53,234	31,381	25,366	19,316
Cash dividends per share(4).....	\$ 0.30	\$ 0.15			

(1) Selling, general and administrative expenses for the year ended December 31, 1996 include an incremental charge of \$877,225 relating to the accelerated recognition of compensation expense for the vesting of restricted stock in connection with the Company's initial public offering.

(2) Pro forma data reflects the effects on historical income statement data for the year ended December 31, 1996 as if the Company had been treated as a C Corporation for the entire year for income tax purposes, with an estimated effective income tax rate of 37%. The Company terminated its S Corporation election on April 23, 1996 prior to its initial public offering.

(3) The earnings per share amounts prior to 1997 have been restated as required to comply with Statement of Financial Accounting Standards No. 128, Earnings Per Share. For further discussion of earnings per share and the impact of Statement No. 128, see the notes to the consolidated financial statements beginning on page F-6.

(4) Cash dividends per share for 1996 is based on cash dividends declared subsequent to the Company's initial public offering and does not include S Corporation distributions paid prior to and in conjunction with the initial public offering.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

GENERAL BUSINESS CONDITIONS

CARBO Ceramics Inc. manufactures and sells ceramic proppants for use in the hydraulic fracturing of oil and natural gas wells. Hydraulic fracturing is the most common technique used to stimulate production from hydrocarbon bearing formations. The process involves pumping fluids into an oil or gas well at very high pressure in order to fracture the rock formation that contains the hydrocarbons. As the fracture is created, the fluids are blended with granular materials, or proppants, which fill the fracture and prop it open after the pressure pumping ceases. The proppant filled fracture creates a highly permeable channel that enables the oil or gas to flow more freely from the formation, thereby increasing production from the well.

Ceramic proppants are premium products that are sold at higher prices than sand or resin-coated sand, the two primary alternative proppants. The principal advantage of ceramic proppants is that they are stronger than sand-based proppants. The higher strength of ceramic proppants results in higher production rates in deep wells where sand or resin-coated sand may crush under high closure stress. Consequently, the Company's business is influenced by the level of deep drilling activity (generally defined as wells deeper than 7,500 feet). Ceramic proppants are also more uniform in size and shape than sand-based proppants. This uniformity can result in higher production rates than sand-based proppants when used in wells that do not otherwise need ceramics for their higher strength.

As deep drilling, particularly in North America, is typically focused on the production of natural gas, the Company's business is significantly impacted by the number of natural gas wells drilled in North America. In markets outside North America, sales of the Company's products are less dependent on natural gas markets but are influenced by the overall level of drilling activity. Furthermore, because the decision to use ceramic proppants is based on the present value economics of comparing the higher cost of ceramic proppants to the future value derived from increased production rates, the Company's business is secondarily influenced by the price of natural gas and oil.

From 1987 through 1996, the Company's revenues grew at a compound annual rate of 21% despite relatively modest growth in the total number of gas wells drilled. In 1997, the most active year for drilling activity in the last decade, the Company's revenues increased by over 30% from 1996.

From 1986 through 1996, the ceramic proppant industry has had productive capacity in excess of demand. The competitive pressure brought on by this excess capacity made it difficult for the Company to raise prices on its products. However, the Company continued to grow its revenues through the introduction of CARBOECONOPROP(R), a new product introduced in 1992, aimed at increasing the use of ceramic proppants in the fracturing of medium depth wells, which had previously been fractured with sand-based proppants. CARBOECONOPROP(R) has been widely accepted in the industry and has been the Company's fastest

growing product line over the past five years. The Company expects that CARBOECONOPROP(R) will continue to be the fastest growing product line in the future and, as a result, gross profit margins will decline slightly.

In the latter half of 1996, the industry began to operate near full capacity and product availability on certain product lines was limited. In 1997, demand for ceramic proppants continued to increase and availability of all products was limited. In light of this fact, the Company raised prices on its products by an average of 5% effective in the first quarter 1997. This price increase was the first across-the-board price increase that the Company had realized since 1991.

Future growth in the Company's revenues and net income are dependent on the future demand for natural gas in North America and the demand for hydrocarbons worldwide. Management believes that the demand for natural gas will continue to increase due to the abundance, relatively low cost and environmental benefits of natural gas as a source of energy. With this in mind, the Company initiated construction of a new manufacturing facility in McIntyre, Georgia in July 1997. The plant will cost approximately \$40 million to construct and is expected to be completed in the fourth quarter of 1998. Initial capacity of the plant is expected to be 200 million pounds per year, an increase of 57% over current manufacturing capacity.

IMPACT OF YEAR 2000

The Company has developed a plan to modify its information technology to be ready for the year 2000 and has begun converting critical data processing systems. The Company currently expects the project to be substantially complete by early 1999, to cost less than \$100,000 and have no significant effect on operations.

REVENUES

	1997	PERCENT CHANGE	1996	PERCENT CHANGE	1995
	-----	-----	-----	-----	-----
	(\$ IN THOUSANDS)				
Revenues.....	\$85,122	31%	\$65,151	12%	\$58,001

CARBO Ceramics Inc.'s 1997 revenues of \$85.1 million established a new annual record for the Company and were 31% higher than revenues in 1996. While sales volume increased 24% from 1996, revenues grew at a faster pace due to an increase in the average selling price that was the result of a price increase of approximately 5% which became effective in January 1997. Domestic volumes increased 13% from 1996 as strong demand for natural gas resulted in a 30% increase in drilling activity. Export volumes increased 51% as the Company's products became more widely accepted in the international oil markets. The fastest growing product during 1997 was CARBOLITE(R), which increased 47% from 1996. The largest part of this increase was in export sales, to Russia, Australia and the North Sea.

Revenues were \$65.2 million for the year ended December 31, 1996, an increase of 12% over 1995 revenues of \$58.0 million. While sales volume increased 15% from 1995, revenues grew at a slower pace because of a shift in the product mix toward CARBOECONOPROP(R), the Company's lowest price product, targeted at penetrating the market for sand and resin-coated sand. For the year ended 1996, CARBOECONOPROP(R) accounted for 43% of the Company's total sales volume, up from 40% in 1995. In addition, revenue growth lagged volume growth due to lower pricing in Europe and South Texas, as the Company protected its market share by matching lower prices established by its competitors.

GROSS PROFIT

	1997	PERCENT CHANGE	1996	PERCENT CHANGE	1995
	-----	-----	-----	-----	-----
	(\$ IN THOUSANDS)				
Gross Profit.....	\$42,936	40%	\$30,634	7%	\$28,704
Gross Profit %.....	50%		47%		49%

The Company's cost of goods sold consists of manufacturing costs and packaging and transportation expenses associated with the delivery of the Company's products to its customers. Variable manufacturing

expenses include raw materials, labor, utilities and repair and maintenance supplies. Fixed manufacturing expenses include depreciation, property taxes on production facilities, insurance and factory overhead.

Gross profit for 1997 increased \$12.3 million or 40% from 1996. Gross profit as a percentage of revenues increased from 47% to 50% due to the higher average selling price resulting from the 5% price increase which became effective in January 1997 and lower manufacturing costs in the New Iberia manufacturing facility. The lower costs achieved in New Iberia were primarily the result of improved efficiency due to increased production at the plant versus the previous year. Production volumes also increased at the Eufaula manufacturing facility due to a mid-year capacity expansion project but this was offset by higher raw material prices resulting from a consolidation of suppliers in the Eufaula area.

Gross profit for 1996 increased by \$1.9 million or 7% from 1995. Gross profit as a percentage of revenues decreased from 49% to 47% due to lower average selling prices for the Company's products and increases in raw materials and labor. Raw material costs at the New Iberia facility increased due to an increase in demand for CARBOHSP(TM) which requires a higher grade and higher cost raw material to produce than CARBOPROP(R). Raw material costs at the Eufaula facility increased due to the negotiation of a new supply contract that was necessitated by a consolidation of suppliers in the Eufaula area. Depreciation included in cost of goods sold increased by \$788,000 from 1995 due to the effect of the full year's depreciation on plant expansions completed during 1995.

SELLING, GENERAL & ADMINISTRATIVE EXPENSES

	1997	PERCENT CHANGE	1996	PERCENT CHANGE	1995
	-----		-----		-----
	(\$ IN THOUSANDS)				
SG&A.....	\$ 8,915	10%	\$ 8,126	14%	\$ 7,148
SG&A as a % of Revenues.....	10.5%		12.5%		12.3%

Selling, general and administrative expenses increased by \$789,000 in 1997 over 1996. While SG&A expenses decreased as a percentage of revenues, there was a substantial change in the composition of these expenses from 1996 to 1997. In connection with the initial public offering of the Company's Common Stock in 1996, the vesting of restricted stock previously granted to the Company's President and Chief Executive Officer was accelerated. This resulted in non-cash compensation expense of \$1,316,000 in 1996, where none was present in 1997. These reductions in 1997 were partially offset by new costs incurred in connection with regulatory filing costs, listing expenses and shareholder communication costs associated with being a publicly traded company. Other SG&A components that increased were those that vary with sales volume or profitability including warehouse and shipping expenses, commissions expense and incentive compensation.

Selling, general and administrative expenses increased by \$978,000 in 1996 over 1995. While SG&A expenses increased only slightly as a percentage of revenues, there was a substantial change in the composition of these expenses in 1996. Prior to the initial public offering of the Company's Common Stock, a consulting agreement with the Company's Chairman was terminated in April 1996. As a result, expenses recognized in connection with the consulting agreement decreased by \$717,000 in 1996 as compared to 1995. In connection with the initial public offering, the vesting of restricted stock previously granted to the Company's President and Chief Executive Officer was accelerated. This acceleration resulted in an incremental non-cash compensation expense of \$877,000 over 1995. Other increases in SG&A expenses in 1996 were variable expenses that increased due to higher sales volume. These variable expenses include warehouse charges, incentive compensation and franchise taxes.

LIQUIDITY AND CAPITAL RESOURCES

Cash and cash equivalents as of December 31, 1997 were \$8.9 million compared to \$17.4 million at the beginning of the year. The Company generated cash from operations of \$23.6 million. Cash used in investing and financing activities totaled \$32.1 million. As of December 31, 1997 the Company held \$13.9 million in investments expected to be held to maturity. These investments consisted solely of U.S. Government Securities.

Total capital expenditures for property, plant and equipment during 1997 were \$13.8 million. Spending on the new Georgia manufacturing facility scheduled to be completed by the 4th quarter of 1998 was \$7.8 million, expansion of the San Antonio storage facility -- \$1.8 million, acquisition of Rock Springs Terminal -- \$1.3 million, Canadian remote storage expansion -- \$1.1 million, Eufaula capacity expansion and kiln shell replacement -- \$1.3 million. The balance of \$.5 million was spent on the normal replacement of capital equipment. Other investing activities during the year involved the purchase of \$13.9 million of held-to-maturity investments (U.S. Government Securities).

The Company paid \$4.4 million in dividends during 1997.

The Company plans to spend approximately \$32 million for the completion of its new manufacturing facility in McIntyre, Georgia during 1998, with funding expected to be provided entirely by cash generated from operations. The Company's current intention, subject to its financial condition, the amount of funds generated from operations and the level of capital expenditures, is to continue to pay quarterly dividends to shareholders of its Common Stock at the rate of \$0.075 per share.

In 1997, the Company maintained an unsecured line of credit in the amount of \$9.0 million. As of December 31, 1997, there were no borrowings outstanding under this credit agreement. An amended and restated credit agreement under which the Company may borrow up to \$10.0 million through December 31, 2000 was executed on February 12, 1998.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in pages F-1 through F-14 of this Report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

Certain information required by Part III is omitted from this Report in that the Registrant will file a definitive proxy statement pursuant to Regulation 14A (the "Proxy Statement") not later than 120 days after the end of the fiscal year covered by this Report and certain information included therein is incorporated herein by reference. Only those sections of the Proxy Statement that specifically address the items set forth herein are incorporated by reference. Such incorporation does not include the Compensation Committee Report or the Performance Graph included in the Proxy Statement.

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Information concerning the Company's directors required by this Item is incorporated by reference to the Company's Proxy Statement. Information concerning executive officers is set forth in Part I of this Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the Company's Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the Company's Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the Company's Proxy Statement.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a) Consolidated Financial Statements:

The consolidated financial statements of CARBO Ceramics Inc. listed below are contained in pages F-1 through F-14 of this Report:

Report of Independent Auditors

Consolidated Balance Sheets at December 31, 1997 and 1996

Consolidated Statements of Income for each of the three years ended December 31, 1997, 1996 and 1995

Consolidated Statements of Shareholders' Equity for each of the three years ended December 31, 1997, 1996 and 1995

Consolidated Statements of Cash Flows for each of the three years ended December 31, 1997, 1996 and 1995

(b) Reports on Form 8-K:

There were no reports on Form 8-K filed during the fourth quarter of 1997.

(c) Exhibits:

The exhibits listed on the accompanying Exhibit Index are filed as part of, or incorporated by reference into, this Report.

(d) Financial Statement Schedules:

All schedules have been omitted since they are either not required or not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

CARBO CERAMICS INC.

By: /s/ JESSE P. ORSINI

Jesse P. Orsini
President and Chief Executive
Officer

By: /s/ PAUL G. VITEK

Paul G. Vitek
Vice President, Finance

Dated: March 16, 1998

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jesse P. Orsini and Paul G. Vitek, jointly and severally, his attorneys-in-fact, each with the power of substitution, for him in any and all capacities, to sign any amendments to this Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

SIGNATURE -----	TITLE -----	DATE -----
/s/ WILLIAM C. MORRIS ----- William C. Morris	Chairman of the Board	March 16, 1998
/s/ JESSE P. ORSINI ----- Jesse P. Orsini	President, Chief Executive Officer and Director (Principal Executive Officer)	March 16, 1998
/s/ PAUL G. VITEK ----- Paul G. Vitek	Chief Financial Officer (Principal Financial and Accounting Officer)	March 16, 1998
/s/ CLAUDE E. COOKE, JR. ----- Claude E. Cooke, Jr.	Director	March 16, 1998
/s/ WILLIAM A. GRIFFIN, JR. ----- William A. Griffin, Jr.	Director	March 16, 1998
/s/ JOHN J. MURPHY ----- John J. Murphy	Director	March 16, 1998
/s/ ROBERT S. RUBIN ----- Robert S. Rubin	Director	March 16, 1998

REPORT OF INDEPENDENT AUDITORS

The Board of Directors and Shareholders
CARBO Ceramics Inc.

We have audited the accompanying consolidated balance sheets of CARBO Ceramics Inc. as of December 31, 1997 and 1996, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 1997. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of CARBO Ceramics Inc. at December 31, 1997 and 1996, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 1997, in conformity with generally accepted accounting principles.

ERNST & YOUNG LLP

New Orleans, Louisiana
January 23, 1998

CARBO CERAMICS INC.

CONSOLIDATED BALANCE SHEETS

ASSETS

	DECEMBER 31,	
	1997	1996
	(\$ IN THOUSANDS)	
Current assets:		
Cash and cash equivalents.....	\$ 8,899	\$17,414
Investment securities.....	13,905	--
Trade accounts receivable.....	14,243	10,902
Inventories:		
Finished goods.....	4,347	4,478
Raw materials and supplies.....	4,034	3,907
Total inventories.....	8,381	8,385
Prepaid expenses and other current assets.....	661	608
Deferred income taxes.....	772	849
Total current assets.....	46,861	38,158
Property, plant and equipment:		
Land and land improvements.....	214	57
Buildings.....	4,536	4,536
Machinery and equipment.....	27,773	25,112
Construction in progress.....	11,382	401
Total.....	43,905	30,106
Less accumulated depreciation.....	9,812	7,859
Net property, plant and equipment.....	34,093	22,247
Total assets.....	\$80,954	\$60,405

LIABILITIES AND SHAREHOLDERS' EQUITY

Current Liabilities:		
Accounts payable.....	\$ 2,131	\$ 1,423
Accrued payroll and benefits.....	2,448	1,837
Accrued freight.....	851	659
Accrued utilities.....	422	326
Accrued income taxes.....	1,018	609
Other accrued expenses.....	746	350
Total current liabilities.....	7,616	5,204
Deferred income taxes.....	2,396	1,967
Shareholders' equity:		
Preferred stock, par value \$0.01 per share, 5,000 shares authorized: none outstanding.....	--	--
Common stock, par value \$0.01 per share, 40,000,000 shares authorized: 14,602,000 shares issued and outstanding...	146	146
Additional paid-in capital.....	42,919	42,919
Retained earnings.....	27,877	10,169
Total shareholders' equity.....	70,942	53,234
Total liabilities and shareholders' equity.....	\$80,954	\$60,405

The accompanying notes are an integral part of these statements.

CARBO CERAMICS INC.

CONSOLIDATED STATEMENTS OF INCOME

	YEARS ENDED DECEMBER 31,		
	1997	1996	1995

	(\$ IN THOUSANDS, EXCEPT PER SHARE DATA)		
Revenues.....	\$85,122	\$65,151	\$58,001
Cost of goods sold.....	42,186	34,517	29,297
	-----	-----	-----
Gross profit.....	42,936	30,634	28,704
Selling, general and administrative expenses.....	8,915	8,126	7,148
	-----	-----	-----
Operating profit.....	34,021	22,508	21,556
Other income (expense):			
Interest income, net.....	969	240	160
Other income, net.....	35	(65)	(3)
	-----	-----	-----
	1,004	175	157
	-----	-----	-----
Income before income taxes.....	35,025	22,683	21,713
Income taxes.....	12,936	5,883	--
	-----	-----	-----
Net income.....	\$22,089	\$16,800	\$21,713
	=====	=====	=====
Pro forma data:			
Income before income taxes.....		\$22,683	\$21,713
Income taxes.....		8,393	8,034
		-----	-----
Net income.....		\$14,290	\$13,679
		=====	=====
Earnings per share (pro forma for 1996 and 1995):			
Basic.....	\$ 1.51	\$ 0.98	\$ 0.94
	=====	=====	=====
Diluted.....	\$ 1.50	\$ 0.97	\$ 0.94
	=====	=====	=====

The accompanying notes are an integral part of these statements.

CARBO CERAMICS INC.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	COMMON STOCK	CLASS B COMMON STOCK	ADDITIONAL PAID-IN CAPITAL	UNEARNED COMPENSATION	RETAINED EARNINGS	TOTAL
	-----	-----	-----	-----	-----	-----
			(\$ IN THOUSANDS)			
BALANCES AT JANUARY 1, 1995.....	\$120	\$ 3	\$ 6,626	\$(1,754)	\$ 20,372	\$ 25,367
Net income.....	--	--	--	--	21,713	21,713
Amortization of unearned compensation.....	--	--	--	438	--	438
Cash distributions.....	--	--	--	--	(16,137)	(16,137)
	-----	-----	-----	-----	-----	-----
BALANCES AT DECEMBER 31, 1995.....	120	3	6,626	(1,316)	25,948	31,381
Net income.....	--	--	--	--	16,800	16,800
Amortization of unearned compensation.....	--	--	--	1,316	--	1,316
Distributions to shareholders paid prior to and in connection with initial public offering (\$2.67 per share).....	--	--	(2,455)	--	(30,389)	(32,844)
Conversion of Class B Common Stock to Common Stock.....	3	(3)	--	--	--	--
Deferred tax asset related to vesting of restricted stock.....	--	--	3,486	--	--	3,486
Net proceeds from initial public offering.....	23	--	35,262	--	--	35,285
Cash dividends (\$0.15 per share).....	--	--	--	--	(2,190)	(2,190)
	-----	-----	-----	-----	-----	-----
BALANCES AT DECEMBER 31, 1996.....	146	--	42,919	--	10,169	53,234
Net income.....	--	--	--	--	22,089	22,089
Cash dividends (\$0.30 per share).....	--	--	--	--	(4,381)	(4,381)
	-----	-----	-----	-----	-----	-----
BALANCES AT DECEMBER 31, 1997.....	\$146	\$ --	\$42,919	\$ --	\$ 27,877	\$ 70,942
	=====	=====	=====	=====	=====	=====

The accompanying notes are an integral part of these statements.

CARBO CERAMICS INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	YEARS ENDED DECEMBER 31,		
	1997	1996	1995
(\$ IN THOUSANDS)			
OPERATING ACTIVITIES			
Net income.....	\$ 22,089	\$ 16,800	\$ 21,713
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation.....	1,953	1,901	1,117
Amortization.....	--	1,316	438
Deferred income taxes.....	506	4,604	--
Changes in operating assets and liabilities:			
Trade accounts receivable.....	(3,341)	(2,119)	36
Inventories.....	4	(554)	(3,046)
Prepaid expenses and other current assets.....	(53)	(338)	13
Accounts payable.....	708	205	269
Accrued payroll and benefits.....	611	271	358
Accrued freight.....	192	53	(118)
Accrued utilities.....	96	44	(4)
Accrued income taxes.....	409	609	--
Other accrued expenses.....	396	(40)	156
Net cash provided by operating activities.....	23,570	22,752	20,932
INVESTING ACTIVITIES			
Purchases of investment securities.....	(13,905)	--	--
Purchases of property, plant and equipment.....	(13,799)	(3,010)	(11,788)
Net cash used in investing activities.....	(27,704)	(3,010)	(11,788)
FINANCING ACTIVITIES			
Proceeds from bank borrowings.....	--	7,180	2,780
Repayments on bank borrowings.....	--	(9,960)	--
Net proceeds from initial public offering.....	--	35,285	--
Distributions paid to shareholders.....	--	(32,844)	(16,137)
Dividends paid.....	(4,381)	(2,190)	--
Net cash used in financing activities.....	(4,381)	(2,529)	(13,357)
Net increase (decrease) in cash and cash equivalents.....	(8,515)	17,213	(4,213)
Cash and cash equivalents at beginning of year.....	17,414	201	4,414
Cash and cash equivalents at end of year.....	\$ 8,899	\$ 17,414	\$ 201
SUPPLEMENTAL CASH FLOW INFORMATION			
Interest paid.....	\$ --	\$ 92	\$ --
Income taxes paid.....	\$ 12,021	\$ 669	\$ --
Purchases of property, plant and equipment through accounts payable.....	\$ --	\$ --	\$ 866

The accompanying notes are an integral part of these statements.

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SIGNIFICANT ACCOUNTING POLICIES

DESCRIPTION OF BUSINESS

CARBO Ceramics Inc. (the "Company") was formed in 1987 and is a manufacturer of ceramic proppants. The Company has production plants in New Iberia, Louisiana and Eufaula, Alabama and primarily markets its proppant products through pumping service companies that perform hydraulic fracturing for major oil and gas companies.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of CARBO Ceramics Inc. and its wholly owned subsidiary, CARBO Ceramics Sales Corporation. CARBO Ceramics Sales Corporation was formed on July 31, 1996 under the laws of Barbados. All significant intercompany transactions have been eliminated.

CONCENTRATION OF CREDIT RISK

The Company performs periodic credit evaluations of its customers' financial condition and generally does not require collateral. Receivables are generally due within 30 days. The majority of the Company's receivables are from customers in the petroleum pressure pumping industry. Credit losses historically have been insignificant.

CASH EQUIVALENTS

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. The carrying amounts reported in the balance sheet for cash equivalents approximate fair value.

INVESTMENT SECURITIES

Management determines the appropriate classification of debt securities at the time of purchase and reevaluates such designation as of each balance sheet date. Debt securities are classified as held-to-maturity when the Company has both the positive intent and ability to hold the securities to maturity. Held-to-maturity securities are stated at amortized cost, adjusted for amortization of premiums and accretion of discounts to maturity. At December 31, 1997, all investment securities were classified as held-to-maturity. The fair value of the investments approximated the carrying value at December 31, 1997.

INVENTORIES

Inventories are stated at the lower of cost (first-in, first-out method) or market. Finished goods inventories include costs of materials, plant labor and overhead incurred in the production of the Company's products.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Depreciation is computed on the straight-line method for financial reporting purposes using the following estimated useful lives:

Buildings and improvements.....	15 years
Machinery and equipment.....	3 to 15 years

REVENUE RECOGNITION

Revenue is recognized when title passes to the customer.

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

1. SIGNIFICANT ACCOUNTING POLICIES -- (CONTINUED) INCOME TAXES

Income taxes have been provided using the liability method in accordance with FASB Statement No. 109, "Accounting for Income Taxes." Prior to April 24, 1996, the shareholders of the Company had elected S Corporation status under the Internal Revenue Code and certain comparable state tax laws. As a result, the Company's taxable income for federal and certain state jurisdictions where the Company had significant operations was reported on the tax returns of its shareholders.

EARNINGS PER SHARE

In 1997, the Financial Accounting Standards Board issued Statement No. 128, "Earnings per Share." Statement No. 128 replaced the calculation of primary and fully diluted earnings per share with basic and diluted earnings per share. Unlike primary earnings per share, basic earnings per share excludes any dilutive effects of options, warrants and convertible securities. Diluted earnings per share is very similar to the previously reported fully diluted earnings per share. All earnings per share amounts for all periods have been presented, and where appropriate, restated to conform to the Statement No. 128 requirements.

USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

2. BANK BORROWINGS

The Company has a Secured Revolving Credit Agreement (the "Credit Agreement") with a bank under which it may borrow up to \$9.0 million at 0.5% above the bank's Base Rate (as defined in the Credit Agreement) through January 31, 1998. The weighted-average interest rate on the Credit Agreement was 8.75% for 1996. There were no borrowings against the line of credit in 1997. Under the terms of the Credit Agreement, the Company is required to maintain certain bank accounts with the lender, with balances equal to transactional and investment-related charges. The terms of the Credit Agreement further provide for certain affirmative and negative covenants, including a restriction on capital expenditures.

3. LEASES

The Company leases railroad equipment under operating leases. Minimum future rental payments due under noncancelable operating leases with remaining terms in excess of one year as of December 31, 1997 are as follows (\$ in thousands):

1998.....	\$ 508
1999.....	345
2000.....	174
2001.....	108
2002.....	108

	\$1,243
	=====

Leases generally provide for renewal options for periods from one to five years at their fair rental value at the time of renewal. In the normal course of business, operating leases are generally renewed or replaced by other leases. Rent expense for all operating leases was \$920,000 in 1997, \$740,000 in 1996, and \$732,000 in 1995.

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

4. INCOME TAXES

Since its formation through April 24, 1996, the Company elected to be treated for federal and certain state income tax purposes as an S Corporation. As a result, earnings of the Company have been taxed directly to the shareholders of the Company rather than to the Company. Prior to the completion of its initial public offering, the Company terminated its S Corporation election and, accordingly, became subject to federal and state income taxes. The deferred tax effects of the change in tax status increased net income for 1996 by \$884,000. The Company also recorded a deferred tax asset of \$3.5 million with a corresponding increase in additional paid-in capital in 1996 related to the vesting of 800,000 restricted shares of Common Stock held by the Company's Chief Executive Officer upon the occurrence of the initial public offering. The Company realized the full benefit of this deferred tax asset during 1996.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities as of December 31, 1997 and 1996 are as follows (\$ in thousands):

	1997	1996
	-----	-----
Deferred tax assets:		
Employee benefits.....	\$ 271	\$ 288
Inventories.....	377	427
Other.....	124	134
	-----	-----
Total deferred tax assets.....	772	849
	-----	-----
Deferred tax liabilities:		
Depreciation.....	2,356	1,929
Other.....	40	38
	-----	-----
Total deferred tax liabilities.....	2,396	1,967
	-----	-----
Net deferred tax liabilities.....	\$1,624	\$1,118
	=====	=====

Significant components of the provision for income taxes for the years ended December 31, 1997 and 1996 are as follows (\$ in thousands):

	1997	1996
	-----	-----
Current:		
Federal.....	\$11,082	\$ 764
State.....	1,348	515
	-----	-----
Total current.....	12,430	1,279
	-----	-----
Deferred:		
Federal.....	451	4,481
State.....	55	123
	-----	-----
Total deferred.....	506	4,604
	-----	-----
	\$12,936	\$5,883
	=====	=====

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

4. INCOME TAXES -- (CONTINUED) The reconciliation of income taxes computed at the U.S. federal statutory tax rate to the Company's income tax expense for 1997 and pro forma income tax expense for 1996 is as follows (\$ in thousands):

	1997		1996	
	AMOUNT	PERCENT	AMOUNT	PERCENT
U.S. statutory rate.....	\$12,259	35.0%	\$7,712	34.0%
State income taxes, net of federal tax benefit.....	1,403	4.0	907	4.0
Foreign sales corporation benefit.....	(726)	(2.1)	(226)	(1.0)
	\$12,936	36.9%	\$8,393	37.0%
	=====	=====	=====	=====

5. SHAREHOLDERS' EQUITY

COMMON STOCK

Holders of Common Stock are entitled to one vote per share on all matters to be voted on by shareholders and do not have cumulative voting rights. Subject to preferences of any Preferred Stock that may be issued in the future, the holders of Common Stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available for that purpose. In the event of liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of Preferred Stock, if any, then outstanding. The Common Stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the Common Stock. All outstanding shares of Common Stock are fully paid and nonassessable.

Prior to 1996, the Company issued to its President and Chief Executive Officer shares of Common Stock, pursuant to restricted stock agreements, as compensation for future services. These shares had dividend rights; however, sale of the shares was restricted prior to vesting which was subject to the occurrence of certain events, including the initial public offering of the Company's Common Stock. The restricted stock vested upon the occurrence of the initial public offering on April 26, 1996 and the remaining balance of unearned compensation was recorded as compensation expense. Compensation expense totaled \$1.3 million in 1996 and \$438,000 in 1995.

Prior to April 17, 1996, the Company's authorized capital stock consisted of 20,000 shares of Common Stock, of which 6,001 shares were issued and outstanding, and 2,000 shares of Class B Common Stock, of which 150 shares were issued and outstanding. On April 17, 1996, the Company (i) caused the conversion of all issued and outstanding shares of its Class B Common Stock into shares of Common Stock, and (ii) effected a 2,000 for 1 split of the Common Stock. All capital amounts, share and per share data in the accompanying financial statements have been retroactively restated, where appropriate, to reflect the stock split.

On January 14, 1998, the Board of Directors declared a cash dividend of \$0.075 per share. The dividend is payable on February 15, 1998 to shareholders of record on January 30, 1998.

PREFERRED STOCK

The Company's charter authorizes the issuance of 5,000 shares of Preferred Stock. The Board of Directors has the authority to issue the Preferred Stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series or the designation of such series, without further vote or action by the Company's shareholders. No shares of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

5. SHAREHOLDERS' EQUITY -- (CONTINUED) Preferred Stock are currently outstanding, and the Company has no present plans to issue any shares of Preferred Stock.

6. STOCK OPTION PLAN

The Company has elected to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" (APB 25) and related Interpretations in accounting for its employee stock options because, as discussed below, the alternative fair value accounting provided for under FASB Statement No. 123, "Accounting for Stock-Based Compensation" (Statement 123), requires use of option valuation models that were not developed for use in valuing employee stock options. Under APB 25, because the exercise price of the Company's employee stock options equals the market price of the underlying stock on the date of grant, no compensation expense is recognized.

The Company's 1996 Stock Option Plan for Key Employees (the "Option Plan") has authorized the grant of options to purchase an aggregate of 1,000,000 shares of the Company's Common Stock to certain officers and key employees of the Company chosen by a committee appointed by the Board of Directors (the "Compensation Committee") to administer such plan. Under the Option Plan, all options granted have 10 year terms, and conditions relating to the vesting and exercise of options are determined by the Compensation Committee for each option. Options granted under the Option Plan are "nonstatutory options" (options which do not afford income tax benefits to recipients, but the exercise of which may provide tax deductions for the Company). Each option will have an exercise price per share equal to the fair market value of a share of Common Stock on the date of grant and no individual employee may be granted options to purchase more than an aggregate of 500,000 shares of Common Stock. The options vest annually over a four-year period.

Pro forma information regarding net income and earnings per share is required by Statement 123, and has been determined as if the Company had accounted for its employee stock options under the fair value method of that statement. The fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions for 1997 and 1996, respectively: risk-free interest rates of 5.34% and 6.19%; dividend yields of 1.0% and 1.5%; volatility factors of the expected market price of the Company's Common Stock of .337 and .300; and a weighted average expected life of the option of 5 years.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

For purposes of pro forma disclosures, the estimated fair value of the options (net of related expected tax benefits) is amortized to expense over the options' vesting period. Since the Company's options generally vest over a four-year period, the pro forma disclosures are not indicative of future amounts until Statement 123 is

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

6. STOCK OPTION PLAN -- (CONTINUED)

applied to all outstanding, nonvested options. The Company's pro forma information for 1997 and 1996 follows (\$ in thousands, except per share data):

	1997	1996
	-----	-----
Net income:		
As reported (pro forma in 1996).....	\$22,089	\$14,290
	=====	=====
Pro forma including the effect of options.....	\$21,539	\$13,870
	=====	=====
Basic earnings per share:		
As reported (pro forma in 1996).....	\$ 1.51	\$ 0.98
	=====	=====
Pro forma including the effect of options.....	\$ 1.48	\$ 0.95
	=====	=====
Diluted earnings per share:		
As reported (pro forma in 1996).....	\$ 1.50	\$ 0.97
	=====	=====
Pro forma including the effect of options.....	\$ 1.46	\$ 0.95
	=====	=====

The earnings per share amounts prior to 1997 have been restated to comply with Statement of Financial Accounting Standards No. 128, "Earnings per Share."

A summary of the Company's stock option activity, and related information for the years ended December 31, 1997 and 1996 follows:

	1997		1996	
	OPTIONS (000)	WEIGHTED-AVERAGE EXERCISE PRICE	OPTIONS (000)	WEIGHTED-AVERAGE EXERCISE PRICE
	-----	-----	-----	-----
Outstanding-beginning of year.....	700	\$17	--	
Granted.....	260	\$27	700	\$17
Exercised.....	--		--	
Forfeited.....	(110)	\$17	--	
	-----		-----	
Outstanding-end of year.....	850	\$20	700	\$17
	=====		=====	
Exercisable at end of year.....	148	\$17	--	--
Weighted-average fair value of options granted during the year.....	\$9.38		\$5.51	

Exercise prices for options outstanding as of December 31, 1997 ranged from \$17.00 to \$32.25. The weighted-average remaining contractual life of those options is 8.7 years.

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

7. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per share:

	1997	1996	1995
	-----	-----	-----
	(\$ IN THOUSANDS, EXCEPT PER SHARE DATA)		
Numerator for basic and diluted earnings per share:			
Net income (pro forma for 1996 and 1995)....	\$ 22,089	\$ 14,290	\$ 13,679
Denominator:			
Denominator for basic earnings per share -- weighted average shares (pro forma for 1996 and 1995).....	14,602,000	14,602,000	14,602,000
Effect of dilutive securities:			
Employee stock options (See Note 6).....	169,102	71,368	--
Dilutive potential common shares.....	169,102	71,368	--
Denominator for diluted earnings per share-- adjusted weighted-average shares.....	14,771,102	14,673,368	14,602,000
Basic earnings per share.....	\$ 1.51	\$ 0.98	\$ 0.94
Diluted earnings per share.....	\$ 1.50	\$ 0.97	\$ 0.94

For 1996 and 1995, pro forma weighted-average shares is based on 12,302,000 shares of Common Stock outstanding during the year increased by the assumed issuance of 2,300,000 shares of Common Stock to pay S Corporation distributions of \$29.1 million.

8. PRO FORMA NET INCOME

Pro forma net income for 1996 and 1995 reflects a provision for income taxes at an effective rate of approximately 37% to illustrate how historical net income might have been affected if the Company had not been an S Corporation for income tax purposes. The Company elected to be treated as an S Corporation pursuant to the Internal Revenue Code from June 23, 1987 through April 23, 1996, immediately after which it terminated its S Corporation election in conjunction with the initial public offering. As a result, the Company was not subject to federal income taxes during this period. By election of the shareholders, S Corporation status was also applicable to the state jurisdictions where the Company had significant operations.

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

9. QUARTERLY OPERATING RESULTS -- (UNAUDITED)

Quarterly results of operations for the years ended December 31, 1997 and 1996 were as follows:

	THREE MONTHS ENDED			
	MARCH 31	JUNE 30	SEPTEMBER 30	DECEMBER 31
(\$ IN THOUSANDS, EXCEPT PER SHARE DATA)				
1997				
Revenues.....	\$17,840	\$20,893	\$23,062	\$23,327
Gross profit.....	8,993	10,347	11,469	12,127
Net income.....	4,586	5,449	5,939	6,115
Earnings per share				
Basic.....	\$ 0.31	\$ 0.37	\$ 0.41	\$ 0.42
Diluted.....	\$ 0.31	\$ 0.37	\$ 0.40	\$ 0.41
1996				
Revenues.....	\$13,033	\$17,399	\$17,898	\$16,821
Gross profit.....	6,140	8,017	8,466	8,011
Net income.....	4,375	4,022	4,349	4,054
Pro forma net income (see Note 8).....	2,712	3,115	4,349	4,054
Pro forma earnings per share:				
Basic.....	\$ 0.19	\$ 0.21	\$ 0.30	\$ 0.28
Diluted.....	\$ 0.19	\$ 0.21	\$ 0.30	\$ 0.28

Quarterly data may not sum to the full year data reported in the Company's consolidated financial statements due to rounding. The 1996 and first three quarters of 1997 earnings per share amounts have been restated to comply with Statement of Financial Accounting Standards No. 128, "Earnings per Share."

10. SALES TO CUSTOMERS

The following schedule presents the percentages of total revenues related to the Company's three major customers for the three-year period ended December 31, 1997:

	MAJOR CUSTOMERS				
	A	B	C	OTHERS	TOTAL
1997.....	35.4%	27.8%	20.5%	16.3%	100%
1996.....	34.1%	28.6%	21.7%	15.6%	100%
1995.....	29.6%	27.3%	24.9%	18.2%	100%

The percentages of total revenues for two major customers have been combined for 1995 to reflect a combination of operations by those customers in 1995.

11. INTERNATIONAL SALES

The Company's ceramic proppants are used worldwide by U.S. customers operating abroad and by foreign customers. Sales outside the United States accounted for 37%, 31% and 37% of the Company's revenues for 1997, 1996, and 1995, respectively.

Location	1997	1996	1995
	-----	-----	-----
(\$ IN MILLIONS)			
United States.....	\$53.3	\$45.3	\$36.8
International.....	31.8	19.9	21.2
Total.....	\$85.1	\$65.2	\$58.0
	=====	=====	=====

CARBO CERAMICS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

12. BENEFIT PLANS

The Company has a defined contribution savings and profit sharing plan pursuant to Section 401(k) of the Internal Revenue Code. Employees who have completed one year of service are eligible to participate. Employees may contribute up to 15% of their monthly compensation.

For employee contributions up to 5% of monthly compensation, the Company matches the employee contribution at a rate of 50%. Additional contributions by the Company are discretionary and are determined annually by the Board of Directors. These discretionary contributions to the plan are allocated to the participants on a pro rata basis based on their respective salary levels.

Benefit costs recognized as expense under this plan consisted of the following:

	1997	1996	1995
	----	----	----
	(\$ IN THOUSANDS)		
Contributions:			
Profit sharing.....	\$209	\$189	\$194
Savings.....	116	107	106
	----	----	----
	\$325	\$296	\$300
	====	====	====

13. COMMITMENTS

In 1995, the Company entered into an agreement with a supplier to purchase 200,000 tons of green ore for its New Iberia, Louisiana plant at a specified contract price. The Company has purchased the minimum tonnage required by the agreement. All of the green ore purchased by the Company will be processed by the supplier at a specified price. The Company is required to purchase at least 80% of its estimated annual requirements of processed ore from the supplier until all green ore purchased under the agreement has been processed.

In 1995, the Company entered into an agreement with a supplier to purchase kaolin for its Eufaula, Alabama plant at a specified contract price. The term of the agreement is eight years commencing January 1, 1996. Beginning January 1, 1997, the agreement requires the Company to purchase from the supplier at least 80% of the Company's estimated annual requirements of kaolin for its Eufaula plant.

In 1997, the Company entered into an agreement with a supplier to purchase kaolin for its McIntyre, Georgia plant at a specified contract price. The term of the agreement is twenty years commencing on January 1, 1998. The Company has the right to purchase up to 2.5 million tons of kaolin during the term of the agreement. The agreement requires the Company to purchase from the supplier at least 80% of the Company's estimated annual requirements of kaolin for its McIntyre plant.

The Company was in compliance with the terms of all agreements through December 31, 1997.

The Company commenced construction in 1997 of a new manufacturing facility in McIntyre, Georgia at a total estimated cost of \$40 million. Construction in progress of \$11.4 million at December 31, 1997 includes \$7.8 million related to the new facility. The new facility is scheduled to be fully operational in the fourth quarter of 1998.

14. EMPLOYMENT AGREEMENT

The Company has an employment agreement with its President which expires June 30, 2000. The agreement provides for an annual base salary and an incentive bonus as defined in the agreement. In the event the President is terminated without cause prior to June 30, 2000, the Company will be obligated to pay the President two years base salary and a prorated incentive bonus. In addition, all nonvested stock options granted to the President will vest immediately and become exercisable. The agreement also contains a five-year non-competition covenant that would become effective upon termination for any reason.

EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION
3.1	-- Certificate of Incorporation of CARBO Ceramics Inc. (incorporated by reference to exhibit 3.1 to the registrant's Form S-1 Registration Statement No. 333-1884)
3.2	-- Bylaws of CARBO Ceramics Inc. (incorporated by reference to exhibit 3.2 to the registrant's Form S-1 Registration Statement No. 333-1884)
4.1	-- Form of Common Stock Certificate of CARBO Ceramics Inc. (incorporated by reference to exhibit to the registrant's Form S-1 Registration Statement No. 333-1884)
10.1	-- First Amended and Restated Credit Agreement dated as of February 12, 1998, between Brown Brothers Harriman & Co. and CARBO Ceramics Inc.
10.2	-- Form of Tax Indemnification Agreement between CARBO Ceramics Inc. and William C. Morris, Robert S. Rubin, Lewis C. Glucksman, George A. Wieggers, William A. Griffin, and Jesse P. Orsini (incorporated by reference to exhibit 10.2 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.3	-- Form of Employment Agreement between CARBO Ceramics Inc. and Jesse P. Orsini (incorporated by reference to exhibit 10.4 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.4	-- Purchase and Sale Agreement dated as of March 31, 1995, between CARBO Ceramics Inc. and GEO Specialty Chemicals, Inc., as amended (incorporated by reference to exhibit 10.5 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.5	-- Raw Material Requirements Agreement dated as of November 21, 1995, between CARBO Ceramics Inc. and C-E Minerals Inc. (incorporated by reference to exhibit 10.6 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.6	-- Incentive Compensation Plan (incorporated by reference to exhibit 10.8 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.7	-- CARBO Ceramics Inc. 1996 Stock Option Plan for Key Employees (incorporated by reference to exhibit 10.9 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.8	-- Form of Stock Option Award Agreement (incorporated by reference to exhibit 10.10 to the registrant's Form S-1 Registration Statement No. 333-1884)
10.9	-- Raw Material Supply Agreement dated as of November 18, 1997 between CARBO Ceramics Inc. and Arcilla Mining and Land Co.
23.1	-- Consent of Ernst & Young LLP
27.1	-- Financial Data Schedule

U.S. \$10,000,000

FIRST AMENDED AND RESTATED CREDIT AGREEMENT

Dated as of February 12, 1998

Between

CARBO CERAMICS INC.

as Borrower

and

BROWN BROTHERS HARRIMAN & CO.

as Lender

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**FIRST AMENDED AND RESTATED
CREDIT AGREEMENT**

Dated as of February 12, 1998

This First Amended and Restated Credit Agreement is made and effective as of February 12, 1998, by and between CARBO CERAMICS INC., a Delaware corporation (the "Borrower"), and BROWN BROTHERS HARRIMAN & CO., a New York limited partnership (the "Lender").

WITNESSETH:

WHEREAS, the Lender and the Borrower entered into a Credit Agreement dated December 27, 1993, as amended by a First Amendment to Credit Agreement dated as of April 3, 1995, as affected by certain waivers and modifications contained in that certain letter agreement dated as of April 3, 1996, and as further amended by a Second Amendment to Credit Agreement dated as of April 22, 1996, a Third Amendment to Credit Agreement dated as of December 31, 1997, and a Fourth Amendment to Credit Agreement dated as of January 30, 1998, by and between the Lender and the Borrower (as so amended and affected, the "Credit Agreement"), pursuant to which the Lender committed, among other things, to make loans, advances, and other credit facilities available to the Borrower;

WHEREAS, the parties desire to amend and restate the Credit Agreement in its entirety, as hereinafter set forth;

NOW, THEREFORE, in consideration of the foregoing, for other valuable consideration hereby acknowledged, and subject to the other terms and conditions hereof, the Lender and the Borrower agree that the Credit Agreement shall be and is hereby amended and restated in its entirety, effective the date hereof, as follows:

ARTICLE I
DEFINITIONS

SECTION 1.01. Definitions. As used in this Agreement, the following terms shall have the respective meanings indicated below (such meanings to be applicable equally to both the singular and plural forms of such terms).

"Adjusted LIBOR Rate" means, an interest rate per annum (rounded upwards, if necessary, to the next higher 1/100 of 1%) equal to the quotient obtained by dividing (a) the LIBOR Rate for such LIBOR Interest Period by (b) a percentage equal to one hundred percent (100%) minus the Eurodollar Reserve Percentage applicable during such LIBOR Interest Period (or, if more than one Eurodollar Reserve Percentage is so applicable, minus the daily average of such Eurodollar Reserve Percentage for those days in such LIBOR Interest Period during which any such Eurodollar Reserve Percentage may be so applicable).

"Advance" shall mean a disbursement by the Lender to or for the benefit of the Borrower, all as set forth in Section 2.01 hereof.

"Agreement" means this First Amended and Restated Credit Agreement, and all amendments, modifications, and supplements thereto.

"Applicable Contract Rate" means either the Base Rate or the LIBOR Fixed Rate, whichever is in effect during the particular time period in question pursuant to the provisions of this Agreement.

"Authorized Officer" means, with respect to any act to be performed or duty to be discharged by any entity which is not an individual, any officer or other representative thereof then authorized to perform such act or discharge such duty.

"Base Rate" means a fluctuating rate per annum which shall be equal to the rate of interest

established by the Lender in New York, New York, from time to time, as the Lender's base rate of interest charged by Lender to commercial borrowers in the United States of America.

"Base Rate Advance" means an Advance during such time as it bears interest, from time to time, at the Base Rate pursuant to the provisions of this Agreement.

"Business Day" means any day other than a Saturday, Sunday, or a public holiday or the equivalent for banks generally under the laws of the State of New York.

"Closing Date" means the date first shown herein, as of which this Agreement is executed and effective.

"Commitment" has the meaning set forth for such term in Section 2.01 hereof.

"Consequential Loss" means, with respect to the Borrower's payment or prepayment of the principal sum of a LIBOR Rate Advance on a day other than the last day of the Interest Period applicable to such LIBOR Rate Advance, any loss or expense incurred by the Lender in redepositing such principal sum, including, without limitation, the sum of (a) the interest which, but for such payment, the Lender would have earned at the applicable LIBOR Fixed Rate, in respect of such LIBOR Rate Advance so paid or prepaid, for the remainder of the LIBOR Interest Period; reduced, if the Lender is reasonably able to redeposit such principal sum so paid for the balance of such LIBOR Interest Period in a New York City bank, by the interest earned by the Lender as a result of so redepositing such principal sum, plus (b) any expense or penalty incurred by the Lender in redepositing the principal sum of such LIBOR Rate Advance.

"Conversion Date" has the meaning specified in Section 2.06(c)(2) hereof.

"Conversion Option" has the meaning specified in Section 2.06(c)(2) hereof.

"EBITDA" means the Borrower's earnings before deduction of interest, taxes, depreciation, and amortization.

"Employee Plan" means an employee benefit plan or other plan covered by Title IV of ERISA and maintained in whole or in part for employees of the Borrower.

"ERISA" means the Employee Retirement Income Security Act of 1974, together with the rules and regulations promulgated thereunder, as in effect from time to time.

"Eurodollar Reserve Percentage" means, as of the date of any determination, that reserve percentage actually required to be reserved by the Lender with respect to the Advances, which percentage is applicable during any LIBOR Interest Period (or if more than one such percentage is so applicable, the daily average of such percentages for those days in such LIBOR Interest Period during which any such percentage shall be applicable) under the regulations issued, from time to time, by the Board of Governors of the Federal Reserve System (or other governmental authority having jurisdiction with regard thereto or any successor), for determining the maximum reserve requirements (including, without limitation, basic, supplemental, transitional, emergency, or marginal reserve requirements) for the Lender in respect to liabilities or assets consisting of, or including, "Eurocurrency liabilities" as defined in Regulation D. It shall be assumed, for purposes of computing reserve costs hereunder, that the making and maintaining of the LIBOR Rate Advances have been accomplished by the Lender through the Lender's principal office in New York City, New York.

"Event of Default" means any of the events set forth in Section 6.01 hereof.

"Fixed Charges" means, for any applicable period specified in Section 5.01(c) hereof, the

aggregate of the Borrower's interest expense, lease expense, principal payments, dividends and anticipated annual maintenance capital expenditures of \$4,000,000.

"Increased Costs" shall have the meaning specified in Section 2.07(b) hereof.

"Indebtedness" means (i) all indebtedness or other obligations for borrowed money or for the deferred purchase price of property or services, (ii) all indebtedness or other obligations of another person for borrowed money, the deferred purchase price of property or services (except for accounts payable by the Borrower which have been incurred by the Borrower in the ordinary course of its business), or otherwise, the payment or collection of which the Borrower has guaranteed or in respect of which the Borrower has any direct or contingent liability which is reportable on the Borrower's financial statements in accordance with generally accepted accounting principles, (iii) all lease obligations that, in accordance with generally accepted accounting principles consistently applied, have been or should be capitalized on the books of the lessee and, for purposes hereof, the amount of such obligation shall be the capitalized amount thereof determined in accordance with such principles, and (iv) any equity or other interest which, by its terms, is convertible into a debt instrument.

"Interest Payment Date" means, as to either a Base Rate Advance or a LIBOR Rate Advance, the first (1st) day of each calendar month during the term of the Commitment.

"Interest Rate Option" has the meaning specified in Section 2.06(a) hereof.

"Internal Revenue Code" means the Internal Revenue Code of 1986, as amended.

"LIBOR Fixed Rate" means, during the applicable LIBOR Interest Period for a LIBOR Rate Advance, an interest rate per annum which shall be equal to the sum of (a) the LIBOR Rate

Margin plus (b) the Adjusted LIBOR Rate for such LIBOR Interest Period.

"LIBOR Interest Period" means, with respect to a LIBOR Rate Advance, a period commencing on the date specified by notice from the Borrower to the Lender and ending on (but excluding) the date which is 30, 60, or 90 days thereafter, as the Borrower shall elect.

"LIBOR Rate" during each applicable LIBOR Interest Period for a LIBOR Rate Advance, means an interest rate equal to the rate of interest per annum at which U.S. dollar deposits are offered by the Lender to prime banks in the London interbank market at 10:00 a.m. (London time) two Business Days prior to the first (1st) day of such LIBOR Interest Period for a period equal to such LIBOR Interest Period.

"LIBOR Rate Advance" means an Advance during such time as it bears interest, from time to time, at the LIBOR Fixed Rate pursuant to the provisions of this Agreement.

"LIBOR Rate Margin" means three-quarters of one percent (.75%) per annum.

"Loan Documents" means this Agreement, the Note, and all amendments, modifications, and supplements thereto.

"Maximum Rate" means the maximum rate of interest, if any, from time to time permitted under federal or Texas laws applicable to the indebtedness evidenced hereby.

"No-Default Certificate" means a certificate by an authorized officer of the Borrower, substantially in the form of Exhibit C hereto.

"Note" has the meaning set forth for such term in Section 2.11 hereof.

"Prohibited Transaction" has the meaning specified therefor in Section 4975 of the Internal Revenue Code or Title I of ERISA.

"Regulation D" means Regulation D of the Board of Governors of the Federal Reserve System, as from time to time in effect, and shall include any successor or other regulation relating to reserve requirements applicable to member banks of the Federal Reserve System.

"Reportable Event" has the meaning specified therefor in Title IV of **ERISA**.

"Rollover Notice" means a notice in the form of Exhibit B hereto.

"Termination Date" means December 31, 2000; provided, however, that such date may be extended by mutual consent for additional one-year periods; provided further, however, if so extended, such extended date may be shortened during any such one-year period to the end of any calendar quarter within such one-year period, beginning March 31, 2001, upon not less than thirty (30) days prior written notice from either party to the other party.

SECTION 1.02. Accounting and Other Terms. All accounting terms used in this Agreement which are not otherwise defined herein shall be construed in accordance with generally accepted accounting principles consistently applied unless otherwise expressly stated herein.

ARTICLE II AMOUNT AND TERMS OF THE COMMITMENT

SECTION 2.01. The Commitment. The Lender agrees, on the terms and conditions hereinafter set forth, to make Advances to the Borrower in an aggregate principal amount not to exceed Ten Million Dollars (\$10,000,000), as such commitment may be terminated pursuant to Section 2.04 hereof (the "Commitment"). Such Advances shall be made from time to time on any Business Day during the period from the Closing Date to the Termination Date. Each Advance

shall be in an amount not less than \$100,000 or an integral multiple thereof, except that an Advance may be in an amount equal to the entire unused Commitment. Within the limits of the Commitment, the Borrower may borrow, prepay pursuant to Section 2.08, and reborrow under this Section 2.01.

SECTION 2.02. Making the Advances. Each Advance shall be made on the same day the Borrower has given notice to the Lender, provided the Lender has received such notice by 12:00 p.m. (New York City time) on such date. Such notice shall be by telephone and shall be promptly confirmed by the Borrower in writing. All such notices shall specify the date and amount thereof. Upon fulfillment by the Borrower of the applicable conditions set forth in Article III, the Lender will make such Advance available to the Borrower in immediately available funds at the Lender's office at 59 Wall Street, New York, New York 10005.

SECTION 2.03. Commitment Fee. The Borrower agrees to pay to the Lender a commitment fee on the average daily unused portion of the Commitment from the Closing Date until the Termination Date at the rate of three-eighths (3/8) of one percent (1%) per annum, payable quarterly in arrears on the first Business Day of each fiscal quarter of the Borrower for the immediately preceding fiscal quarter of the Borrower in each year during such period, commencing April 1, 1998, and ending on the Termination Date.

SECTION 2.04. Optional Termination of the Commitment. The Borrower shall have the right, upon (i) at least thirty (30) days' notice to the Lender prior to the end of each fiscal quarter of the Borrower after the first anniversary of the Closing Date, and (ii) full repayment of all sums, both principal and accrued interest, then outstanding, to terminate the

Commitment in whole, but not in part. Simultaneously with any termination of the Commitment under this Section, the Borrower shall pay to the Lender the commitment fee earned through the Termination Date on the amount of the Commitment so terminated.

SECTION 2.05. Selection of Interest Options. Subject to Section 2.06, and provided that no Event of Default shall have occurred and is continuing, the outstanding principal balance of each Advance shall bear interest at the LIBOR Fixed Rate or the Base Rate, in accordance with the following:

(a) Interest on a Base Rate Advance. A Base Rate Advance shall bear interest on the unpaid principal balance thereof, from time to time outstanding, at a fluctuating interest rate per annum which shall, from day to day, be equal to the lesser of either: (1) the Base Rate; or (2) the Maximum Rate. Each change in either the Base Rate or the Maximum Rate (or any component of the Base Rate or the Maximum Rate) as the case may be, shall become effective, without notice to the Borrower (which notice is hereby expressly waived by the Borrower), on the date of each change in either of such interest rates (or any component of any of such interest rates).

(b) Interest on a LIBOR Rate Advance. A LIBOR Rate Advance shall bear interest, during each LIBOR Interest Period applicable thereto, on the unpaid principal balance thereof, from time to time outstanding, at an interest rate per annum which shall, from day to day, be equal to the lesser of either: (1) the applicable LIBOR Fixed Rate; or (2) the Maximum Rate. Each change in the Maximum Rate or any component of the Maximum Rate, as the case may be, shall become effective, without notice to the

Borrower (which notice is hereby expressly waived by the Borrower) on the date of each change in such interest rate or any component of such interest rate.

(c) Advance Deemed To Be Base Rate Advance. Unless the Borrower selects the LIBOR Fixed Rate as the Applicable Contract Rate with regard to an Advance, as provided for in this Article II, such Advance shall be deemed to be a Base Rate Advance for the purpose of computing interest thereon pursuant to this Agreement.

(d) Interest Recoupment. If, at any time, the Applicable Contract Rate then in effect shall exceed the Maximum Rate, thereby causing the Applicable Contract Rate to be limited to the Maximum Rate, any subsequent reductions in the Applicable Contract Rate shall not reduce the Applicable Contract Rate below the Maximum Rate until the total amount of interest accrued on the unpaid principal balance of the Advances from time to time outstanding during the term thereof, equals the amount of interest which would have accrued thereon if the various Applicable Contract Rates which are applicable to the unpaid principal balances of the Advances from time to time outstanding during the term of this Agreement, had at all times been in effect without the limitation of the Maximum Rate.

(e) Final Interest Payment. If on the date of the final payment of all Advances (whether on the Termination Date or otherwise), the total amount of interest actually paid, or accrued, under the provisions of the Loan Documents is less than the total amount of interest which would have accrued if the various Applicable Contract Rates had at all times been applicable to the principal balance of the Advances, from time to time

outstanding, during the term of this Agreement, the Borrower agrees to pay, to the extent permitted by applicable law, to the Lender an amount equal to the difference between: (1) the lesser of either (A) the amount of interest which would have accrued on the Advances if the Maximum Rate had at all times been in effect, or (B) the amount of interest which would have accrued on the Advances if the various Applicable Contract Rates had at all times been in effect without the limitation of the Maximum Rate; and (2) the amount of interest which has actually accrued or been paid on the Advances through the date of such final payment in accordance with the provisions of the Loan Documents.

(f) Interest After Maturity of the Advances. All delinquent payments of principal and/or interest on the Advances shall bear interest at a fluctuating rate per annum equal to the Base Rate plus four percent (4%) from the date due until paid.

(g) Interest Payment Dates. Interest on the aggregate principal balance of the Advances from time to time outstanding shall be payable as it accrues on each Interest Payment Date, beginning with the Interest Payment Date following the Closing Date, and continuing on each Interest Payment Date thereafter, until the maturity thereof.

(h) Payment on Business Day. If any payment of principal or interest to be made on the Advances shall become due on a day other than a Business Day, such payment may be made on the next succeeding Business Day (unless the result of such extension of time would be to extend the date for such payment into another calendar month, beyond the maturity date of the Advances or beyond the expiration of the applicable LIBOR Interest Period, in such event, said payment shall be made on the

Business Day immediately preceding the day on which such payment would otherwise have been due) and such extension of time shall in such case be included in computing of interest, if any, in connection with such payment.

(i) Additional Amounts Payable Upon Prepayments or Other Payments of LIBOR Rate Advances. If any LIBOR Rate Advance is to be prepaid, or if the Borrower makes any principal payments with respect to any such LIBOR Rate Advance on any date other than the last day of the LIBOR Interest Period for such LIBOR Rate Advance, the Borrower shall reimburse the Lender, on demand, for all Consequential Loss and Increased Costs incurred by Lender, plus all accrued, but unpaid, interest on the amount so prepaid to such prepayment or payment date, together with any other amounts owing to the Lender in connection with such prepayment or payment pursuant to the terms of this Agreement or any of the other Loan Documents. All prepayments (whether optional or otherwise) made pursuant to this Agreement shall be applied first to accrued, but unpaid, interest and then to principal. A certificate of the Lender setting forth the amount of any such loss or cost shall, in the absence of manifest error or bad faith, be final, binding, and conclusive for all purposes. Any conversion of any LIBOR Rate Advance to a Base Rate Advance on a day other than on the last day of the applicable LIBOR Interest Period shall be deemed a principal prepayment for the purpose of this Subsection 2.05(i).

SECTION 2.06 Interest Rate Options.

(a) Interest Rate Options. Subject to the provisions of this Section 2.06, and provided that no Event of Default has occurred and is continuing, the Borrower shall have

the option of having an Advance bear interest at the Base Rate or the LIBOR Fixed Rate (an "Interest Rate Option"); provided, however, that (i) the Borrower may not have more than three (3) Interest Rate Options which select the LIBOR Fixed Rate for the Advances in effect at any one time and (ii) no Interest Rate Option which selects the LIBOR Fixed Rate for any portion of the Advances shall be for an amount less than the principal amount of \$2,000,000 plus an integral multiple of \$100,000.

(b) Changes in Interest Rate Options. Each change in Interest Rate Options made pursuant to this Section 2.06 shall, for all purposes of this Agreement, be deemed both a payment of the Base Rate Advance or LIBOR Rate Advance, whichever is applicable, from which such change was made and a borrowing (notwithstanding that the aggregate unpaid principal of the Advances is not thereby changed) of the Base Rate Advance or LIBOR Rate Advance, whichever is applicable, into which such Advance is converted.

(c) Selection of Interest Rate Options. The Borrower may select an Interest Rate Option by giving the Lender a Rollover Notice in accordance with the provisions of subsections (1) or (2) below, as applicable, which notice shall specify a LIBOR Interest Period; provided, however, that (i) any LIBOR Interest Period which would otherwise end on a day which is not a Business Day shall be extended to the next succeeding Business Day, unless the result of such extension would be to extend such LIBOR Interest Period into another calendar month, in which event such LIBOR Interest Period shall end on the immediately preceding Business Day; (ii) any LIBOR Interest Period that begins

on the last Business Day of a calendar month shall end on the last Business Day of a calendar month; (iii) any LIBOR Interest Period which begins on a day for which there is no numerically corresponding day in the calendar month at the end of such LIBOR Interest Period shall end on the last Business Day of such calendar month; (iv) the length of each LIBOR Interest Period selected by the Borrower shall be irrevocable for the period so selected; and (v) no LIBOR Interest Period shall extend beyond the Termination Date.

(1) Selection at Expiration of LIBOR Interest Period. Before the termination of any LIBOR Interest Period, and provided that no Event of Default has occurred and is continuing, the Borrower shall give the Lender a Rollover Notice specifying the Interest Rate Option which shall be applicable to such LIBOR Rate Advance upon the expiration of such LIBOR Interest Period. Such Rollover Notice shall be given to the Lender at least three (3) Business Days before the termination of such LIBOR Interest Period. If the Borrower shall specify the LIBOR Fixed Rate, such Rollover Notice shall also specify the length of the succeeding LIBOR Interest Period selected by the Borrower. Each Rollover Notice shall be irrevocable and effective upon receipt thereof by the Lender. If the required Rollover Notice shall not have been timely received by the Lender as herein provided before expiration of the then relevant LIBOR Interest Period, the applicable LIBOR Rate Advance shall be automatically converted to a Base Rate Advance on the last day of the then current LIBOR

Interest Period for such LIBOR Rate Advance.

(2) Conversion Option. With respect to Base Rate Advances, and provided no Event of Default has occurred and is continuing, the Borrower shall have the option ("Conversion Option"), on any Business Day ("Conversion Date"), to convert from the Base Rate to the LIBOR Fixed Rate by giving the Lender a Rollover Notice specifying such Conversion Option at least three (3) Business Days prior to such Conversion Date.

SECTION 2.07 Special Provisions for LIBOR Rate Advances.

(a) Unavailability, Illegality, or Inadequacy of the LIBOR Fixed Rate. If at any time the Lender determines (which determination shall, for all purposes, be final, conclusive, and binding on the Borrower) that: (1) the Lender is unable, or that it has become unlawful for the Lender to obtain, or cause to be obtained, funds in the London interbank market in order to make, fund, or maintain the principal balances of any LIBOR Rate Advances during any applicable LIBOR Interest Period; or (2) the LIBOR Fixed Rate will not adequately and fairly reflect the cost to the Lender of making, maintaining, or funding LIBOR Rate Advances for such LIBOR Interest Period, the Lender shall so notify the Borrower by telephone or telex (to be confirmed in writing) of such determination, whereupon, until the Lender notifies the Borrower that the circumstances which have given rise to such notice no longer exist, (A) the obligation of the Lender to provide the LIBOR Fixed Rate with respect to such LIBOR Rate Advances shall be suspended, and (B) such LIBOR Rate Advances shall be made, continued as, or

converted to Base Rate Advances.

(b) Increased Costs. If due either to: (1) the introduction of, or any change (including, without limitation, any change by way of any imposition or increase of reserve requirements) in the interpretation of, any law or regulation, including, without limitation, Regulation D or (2) the compliance by the Lender with any guideline or request from any central bank or other governmental authority (whether or not having the force of law), there shall be any increase in the cost to the Lender of agreeing to make, fund, or maintain the LIBOR Rate Advances (such costs being herein collectively called "Increased Costs"), the Borrower shall, from time to time, upon demand by the Lender, pay to the Lender, such additional amounts as are sufficient to indemnify the Lender against such Increased Costs. Absent manifest error, a certificate as to the amount of such Increased Costs, submitted to the Borrower by the Lender shall, for all purposes, be final, conclusive, and binding on the Borrower. It shall be assumed for purposes of computing Increased Costs, that the making and maintaining of LIBOR Rate Advances has been by the Lender's principal office in New York City, New York.

(c) Indemnity. Without prejudice to any other provisions of this Agreement or any of the other Loan Documents, the Borrower shall indemnify the Lender against any loss or expense which the Lender (or its branches, subsidiaries, affiliates, or partners) may sustain or incur as a consequence of any Event of Default by the Borrower in making any payment when due of any amount due hereunder or in making any scheduled borrowing hereunder with respect to any LIBOR Rate Advance, including, without

limitation, any loss of profit, premium or penalty incurred by the Lender (or its branches, subsidiaries, affiliates, or partners) in respect of funds borrowed by the Lender (or its branches, subsidiaries, affiliates, or partners), for the purpose of maintaining such LIBOR Rate Advance, as determined by the Lender in the exercise of its sole, but reasonable, discretion. Absent manifest error, a certificate as to any such loss or expense submitted by the Lender to the Borrower shall, for all purposes, be final, conclusive, and binding on the Borrower.

SECTION 2.08. Prepayments. The Borrower shall have the right to prepay any principal amount of any Advance, in whole or in part, subject to the requirements of Sections 2.05(i) and 2.09, but otherwise without premium or penalty; provided, however, that each such partial prepayment shall be in an integral multiple of \$100,000, except that a prepayment may be in an amount equal to the entire outstanding principal balance of all Advances.

SECTION 2.09. Indemnity and Release. The Borrower shall indemnify the Lender against any loss or expense which the Lender may sustain or incur as a consequence of any failure by the Borrower to fulfill on the date of any Advance hereunder the applicable conditions set forth in Article III, any default in payment or prepayment of the principal amount of any Advance or any part thereof or interest accrued thereon, as and when due and payable (at the due date thereof, by irrevocable notice of prepayment, or otherwise), or the occurrence of any Event of Default. By its execution hereof, the Borrower hereby certifies to the Lender that as of the date hereof, (i) all representations and warranties heretofore made by it under any credit agreement, promissory note or other instrument or document related thereto which are amended

by or which relate to this Agreement are true in all material respects, (ii) the Borrower does not have or claim to have any offset, counterclaim, or defense to any of its obligations under any of such prior instruments or documents, and (iii) in consideration of and to induce the Lender's agreement to the terms of this Agreement, the Borrower, for itself and its successors and assigns, does hereby RELEASE, ACQUIT, and FOREVER DISCHARGE the Lender, its partners, officers, employees, agents, attorneys, other representatives and all other persons, (collectively, the "Indemnitees") who might be liable, from any and all claims, demands, liabilities, and causes of action of whatsoever nature, whether in contract or in tort, or arising under or by virtue of any statute, rule, regulation, or other laws, for all losses and damages, including but not limited to exemplary and punitive damages, that have accrued or may ever accrue to the Borrower and its successors and assigns, and which arise out of, result from, or are caused by any act or omission of any one or more of the Indemnitees on or prior to the date hereof in connection with the Loan Documents, or any matter or thing in connection therewith or related thereto. The Lender shall use its best efforts to mitigate any loss and to reduce any expense for which it is being indemnified pursuant to this Section.

SECTION 2.10. Payments and Computations. (a) The Borrower shall make each payment hereunder and under the Note not later than 12:00 noon (New York City time) on the day when due in lawful money of the United States of America to the Lender for the account of Borrower at the Lender's office at 59 Wall Street, New York, New York 10005, in same day funds.

(b) The Borrower hereby authorizes the Lender, if and to the extent payment for

interest, principal, or fees is not made when due hereunder or under the Note, to charge from time to time against any of the Borrower's accounts with the Lender any amount so due.

(c) Except to the extent the result would cause an interest rate to exceed the Maximum Rate, all computations of interest and of commitment fees hereunder shall be made by the Lender on the basis of a year of 360 days for the actual number of days (including the first day but excluding the last day) occurring in the period for which such interest or commitment fee is payable.

SECTION 2.11. Evidence of Debt. The indebtedness of the Borrower resulting from all Advances made from time to time shall be evidenced by a promissory note of the Borrower, in substantially the form of Exhibit A hereto (the "Note"), delivered to the Lender pursuant to Article III.

ARTICLE III CONDITIONS OF LENDING

SECTION 3.01. Condition Precedent to Initial Advance. The obligation of the Lender to make its initial Advance is subject to the fulfillment, in a manner satisfactory to the Lender, of each of the following conditions precedent:

(a) The making of the Commitment shall not contravene any law, rule, or regulation applicable to the Lender.

(b) No material adverse change in the condition or operations, financial or otherwise, of the Borrower, as reasonably determined by the Lender, shall have occurred

and be continuing since the date of the latest audited financial statements of the Borrower provided to the Lender, the representations and warranties contained in Section 4.01 shall be true and correct, and no event shall have occurred and be continuing, or would result from such Advance, which constitutes or could constitute an Event of Default, as set forth in a certificate from an Authorized Officer of the Borrower dated as of the Closing Date.

(c) The Lender shall have received on or before the Closing Date the following, in form and substance satisfactory to the Lender:

(i) the Note, duly executed by the Borrower;

(ii) a copy of the resolutions of the Borrower's Board of Directors, certified as of the Closing Date by an Authorized Officer thereof, authorizing (A) the transactions contemplated by the Loan Documents to which the Borrower is a party and (B) the execution, delivery, and performance by the Borrower of the Loan Documents;

(iii) a certificate, dated as of the Closing Date, of an Authorized Officer of the Borrower, certifying the names and genuine signatures of the officers of the Borrower authorized to sign on behalf of the Borrower the Loan Documents and the other documents to be executed and delivered by the Borrower in connection herewith, together with evidence of the incumbency of such Authorized Officer;

(iv) a copy of the Articles of Incorporation of the Borrower, recently certified by the Secretary of State of the State of Delaware;

(v) a copy of the By-laws of the Borrower, certified as of the Closing

Date by an Authorized Officer;

(vi) Certificates of Existence and Good Standing of the Borrower, issued by the appropriate government officials of the State of Delaware, the State of Texas and any other applicable jurisdiction, together with any other evidence satisfactory to the Lender that the Borrower has been duly formed, is validly existing and in good standing under the laws of the State of Delaware and has been duly qualified to do business and is in good standing under the laws of the State of Texas and each other jurisdiction where the Borrower does business;

(vii) a favorable written opinion of Thompson & Knight, P.C., counsel to the Borrower, dated the Closing Date, as to such matters as the Lender may reasonably request; and

(viii) payment of a closing fee of \$25,000.

SECTION 3.02. Conditions Precedent to All Advances. The obligation of the Lender to make each Advance shall be subject to the further conditions precedent that, on the date of such Advance (a) the Lender shall have received a notice of such Advance as required by Section 2.02 hereof, (b) the following statements shall be true, and by making or sending any such notice of an Advance, the Borrower shall be deemed to have made the following statements to the Lender as of the date on which such notice is made or sent to the Lender:

(i) The representations and warranties contained in Section 4.01 are true and correct on and as of the date of such Advance as though made on and as of such date, and

(ii) No event has occurred and is continuing, or would result from such Advance, which constitutes an Event of Default; and

(c) the Lender shall have received such other approvals, opinions, or documents as the Lender may reasonably request.

**ARTICLE IV
REPRESENTATIONS AND WARRANTIES**

SECTION 4.01. Representations and Warranties. The Borrower represents and warrants as follows:

(a) The Borrower is a corporation duly organized and validly existing under the laws of the State of Delaware. The Borrower is duly qualified to do business and in good standing in the States of Texas, Louisiana, Alabama, and every other jurisdiction in which the transaction of any material portion of its business (as now conducted and as currently contemplated) makes such qualification necessary.

(b) The execution, delivery, and performance by the Borrower of each Loan Document is within the Borrower's powers, has been duly authorized by all necessary action, does not contravene (i) the Borrower's charter or by-laws or (ii) any law or governmental regulation or contractual restriction binding on or affecting the Borrower or any of its properties, and does not result in or require the creation of any lien, security interest, or other charge or encumbrance upon or with respect to any of its properties.

(c) No authorization or approval or other action by, and no notice to or filing with, any governmental authority or regulatory body is required for the due execution,

delivery, and performance by the Borrower of any Loan Document to which it is or will be a party.

(d) This Agreement is, and each Loan Document to which the Borrower will be a party when delivered hereunder, will be the legal, valid, and binding obligations of the Borrower, legally enforceable against the Borrower in accordance with their respective terms.

(e) Except as set forth on Schedule I hereto, there is no action, suit, or proceeding pending or threatened against or otherwise affecting the Borrower before any court, arbitrator, or governmental department, commission, board, bureau, agency, or instrumentality, which may materially adversely affect the condition or operations, financial or otherwise, of the Borrower or the ability of the Borrower to perform its obligations under the Loan Documents.

(f) The financial statements of the Borrower heretofore provided to the Lender by the Borrower fairly present the financial condition of the Borrower as at the respective dates thereof, and the results of operations of the Borrower for the fiscal periods ended on such respective dates, all in accordance with generally accepted accounting principles consistently applied, subject to changes resulting from normal year-end audit adjustments, and, since December 31, 1996, there has been no material adverse change in such condition or operations.

(g) The Borrower is not engaged in the business of extending credit for the purpose of purchasing, carrying, or trading in securities (within the meaning of

Regulation T issued by the Board of Governors of the Federal Reserve System), and no proceeds of any Advance will be used to purchase, carry, or trade in any such securities or to extend credit to others for the purpose of purchasing, carrying, or trading in any such securities.

(h) All federal, state, and local tax returns and other material reports required by applicable law to be filed by the Borrower have been filed, and except with respect to any taxes, assessments, or other governmental charges being contested in good faith by the Borrower, all taxes, assessments, and other governmental charges imposed upon the Borrower or any of its properties which have become due and payable on or prior to the date hereof have been paid.

(i) Each Employee Plan, if any, of the Borrower has satisfied the minimum funding standards under the Internal Revenue Code and ERISA applicable thereto, and no Employee Plan, if any, has an accumulated funding deficiency thereunder. The Borrower has not incurred any liability under ERISA to the Pension Benefit Guaranty Corporation with respect to any Employee Plan, and no Reportable Event or other event has occurred which could constitute grounds for the termination of any Employee Plan by the Pension Benefit Guaranty Corporation or the appointment of a trustee to administer any Employee Plan. The Borrower has not participated in any Prohibited Transaction with respect to any Employee Plan or trust created thereunder, and the consummation of the transactions contemplated hereby will not involve any Prohibited Transaction. The Borrower is not in the process of terminating any Employee Plan, which could result in the creation of any

material liability for the Borrower.

(j) The Borrower has not violated its charter or by-laws or any law, governmental regulation, order, judgment, or any agreement or instrument binding on or affecting it or any of its properties in such a manner so as to result in a material adverse change to the condition or operations, financial or otherwise, of the Borrower.

(k) Except as set forth on Schedule II hereto, and except as may be created by statute, all of the real property owned by the Borrower, including any and all real property leasehold interests, is free and clear of all liens, security interests, and other charges and encumbrances.

(l) The Borrower has not made a material misstatement of or failed to disclose a material fact to the Lender at any time during the course of the negotiations related to this Agreement or in connection with the Advances.

(m) No proceeds of any Advance will be used to acquire any security in any transaction which is subject to Sections 13 and 14 of the Securities Exchange Act of 1934. All proceeds of the Advances will be used for general corporate and working capital purposes.

ARTICLE V
COVENANTS OF THE BORROWER

SECTION 5.01. Affirmative Covenants. So long as any principal of or interest on the Note shall remain unpaid or the Lender shall have any Commitment hereunder, the Borrower will, unless the Lender shall otherwise consent in writing:

- (a) Current Ratio. Maintain a ratio of its current assets to its current liabilities of not less than 2.5 to 1.0.
- (b) Minimum Tangible Net Worth. Maintain an amount of tangible net worth of at least \$60,000,000 at all times during its fiscal year 1998, and cause the amount of such capital to increase in each fiscal year thereafter by at least fifty percent (50%) of its net income in the immediately preceding fiscal year.
- (c) Earnings Ratio. Maintain a ratio of its EBITDA to its Fixed Charges greater than 2.5 to 1.0 calculated quarterly on a rolling four (4) quarter basis for the four (4) quarters immediately preceding the date of such calculation.
- (d) Ratio of Debt to Worth. Maintain a ratio of its total Indebtedness to its tangible net worth of less than 0.5 to 1.0.
- (e) Capital Expenditures. Maintain its level of capital expenditures in any fiscal year at a level not more than twice the amount of its EBITDA for the preceding fiscal year.
- (f) Reporting Requirements. Furnish to the Lender:
 - (i) as soon as available and in any event within 45 days after the end of each quarter of each fiscal year of the Borrower, (A) unaudited financial statements (including a balance sheet, income statement, and statement of cash flows) of the Borrower as of the end of such quarter, in reasonable detail, prepared in accordance with generally accepted accounting principles consistently applied and duly certified by the Treasurer of the Borrower as (1) fairly presenting

the financial condition of the Borrower at the end of such quarter and the results of the operations of the Borrower for such period (subject to changes resulting from normal year-end audit adjustments) and (2) having been prepared in accordance with generally accepted accounting principles consistently applied, together with a No-Default Certificate of such officer, together with (B) a copy of SEC Form 10-Q, as filed by the Borrower with the Securities and Exchange Commission for such quarter;

(ii) as soon as available and in any event within 90 days after the end of each fiscal year of the Borrower, (A) audited financial statements (including a balance sheet, income statement, and statement of cash flows) of the Borrower for such fiscal year, all in reasonable detail, prepared in accordance with generally accepted accounting principles consistently applied, accompanied by a report and opinion and a No-Default Certificate, based on an end-of-year review, each in form and substance reasonably satisfactory to the Lender, of a public accounting firm reasonably satisfactory to the Lender, together with (B) a copy of SEC Form 10-K, as filed by the Borrower with the Securities and Exchange Commission for such fiscal year;

(iii) as soon as possible and in any event within five (5) days after the occurrence of each Event of Default or event which, with the giving of notice or the lapse of time or both, would constitute an Event of Default, and which is continuing on the date of such statement, the statement of the Treasurer or the

President of the Borrower setting forth the details of such Event of Default or event and the action which the Borrower proposes to take with respect thereto;

(iv) promptly after the filing or receipt thereof, copies of all reports and notices, if any, which the Borrower either (A) files in respect of any Employee Plan under the Internal Revenue Code or ERISA with the Internal Revenue Service, the Pension Benefit Guaranty Corporation or the U.S. Department of Labor, or which the Borrower receives from any agency thereof, (B) furnishes to any holders of any Indebtedness of the Borrower, or (C) files with the Securities and Exchange Commission on SEC Form 8-K, if any of the information therein could form the basis of, or any dispute referred to therein which, if determined adversely to the Borrower, could constitute or give rise to, an Event of Default or an event which, with the giving of notice or the lapse of time or both, would constitute an Event of Default;

(v) within five Business Days after the knowledge of the Borrower of the commencement thereof, notice of each action, suit, or proceeding before any court, arbitrator, or governmental department, commission, board, bureau, agency, or instrumentality involving a claim which may materially adversely affect the condition or operations, financial or otherwise, of the Borrower;

(vi) as soon as available and in any event within 45 days after the end of each fiscal quarter of the Borrower, a quarterly summary setting forth any contingent liability (including but not limited to any liability as a guarantor,

surety, warrantor, or account party to a letter of credit) incurred, assumed, or created during such period and any material joint venture or partnership entered into by the Borrower; and

(vii) promptly upon request, such other information concerning the condition or operations, financial or otherwise, as the Lender may from time to time reasonably request.

(g) Maintenance of Existence, Compliance with Laws. Etc. Maintain its legal existence and permits and authority to do business in all jurisdictions where the nature of its business requires such permits and authority to be maintained, and comply in all material respects with all applicable laws, rules, regulations, and orders, such compliance to include, without limitation, compliance with ERISA and all applicable laws pertaining to the environment and workers' health and safety, paying before the same become delinquent all taxes, assessments, and governmental charges or levies imposed upon it or upon its income or profits or upon any of its properties, and paying all lawful claims which if unpaid might become a lien or charge upon any of its properties, except to the extent any such taxes, assessments, governmental charges or levies, and claims may be diligently contested by the Borrower in good faith and by appropriate proceedings, and for which adequate reserves have been established by the Borrower.

(h) Insurance. (i) Keep its insurable properties adequately insured at all times by financially sound and reputable insurers to such extent and against such risks, including fire and other risks insured against by extended coverage, as is customary with

companies similarly situated and in the same or similar businesses,

(ii) maintain in full force and effect public liability insurance against claims for personal injury or death or property damage occurring upon, in, about, or in connection with the use of any properties owned, occupied, or controlled by the Borrower, in such amount as shall be reasonably necessary, and (iii) maintain such other insurance as may be required by law. The amounts and types of insurance coverages and the insurers issuing such coverages shall be subject to the Lender's approval, which approval shall not be unreasonably withheld.

(i) Keeping of Records and Books of Account. Keep adequate records and books of account, with complete entries made in accordance with generally accepted accounting principles consistently applied, reflecting all of its financial transactions.

(j) Inspection Rights. Permit the Lender or any of its representatives or agents at any reasonable time and from time to time, upon reasonable notice, to examine and make copies of and abstracts from its records and books of account, to visit and inspect its properties and to discuss its affairs, finances, and accounts with any of the directors or officers thereof, all as the Lender may reasonably request.

SECTION 5.02. Negative Covenants. So long as any principal of or interest on the Note shall remain unpaid or the Lender shall have any Commitment hereunder, the Borrower will not, without the prior written consent of the Lender:

(a) Liens, Etc. Create or suffer to exist any lien, security interest, or other charge or encumbrance, or any other type of preferential arrangement, upon or with

respect to any of its properties, rights, or other assets, whether now owned or hereafter acquired, other than:

(i) liens existing as of the date hereof, as shown on Schedule II hereto; and

(ii) such other liens as may be mutually agreed upon by the Lender and the Borrower from time to time.

(b) Indebtedness. Create, incur, or suffer to exist any Indebtedness which would cause the ratio of its total Indebtedness to its tangible net worth to exceed the ratio specified in Section 5.01(d), above.

(c) Change in Nature of Business. Change the primary nature of its business from the manufacture of ceramic proppants.

(d) Sales, Etc. of Assets. Sell, assign, lease, or otherwise dispose of any of its assets, or any part thereof, including its receivables, except in the ordinary course of business.

(e) Consolidation, Merger, Etc. Consolidate with, merge into, or acquire any other entity or convey, transfer, or lease its properties, voting stock, and assets substantially as an entirety to any person or entity, or permit any entity to consolidate with, merge into, or acquire the Borrower or convey, transfer, or lease its properties, voting stock, or assets substantially as an entirety to the Borrower; provided, however, that the Lender's prior written consent shall not be required for any such transaction (i) in which the other party's principal business is the same as or functionally related to the

Borrower's principal business and (ii) which, when combined with all other such transactions consummated by the Borrower during any one of its fiscal years does not involve an aggregate payment by the Borrower of consideration in cash, securities, or otherwise, of more than \$40,000,000; provided further, that nothing in this subsection (e) shall be deemed to permit the Borrower to incur any Indebtedness not expressly permitted under subsection (b) of this Section 5.02.

**ARTICLE VI
EVENTS OF DEFAULT**

SECTION 6.01. Events of Default. If any of the following events ("Events of Default") shall occur and be continuing:

- (a) The Borrower shall fail to pay any principal amount of, or interest on, the Note when due; or
- (b) Any representation or warranty made by the Borrower (or any of its officers) under or in connection with any Loan Document shall prove to have been incorrect in any material respect when made; or
- (c) The Borrower (i) shall fail to perform or observe any covenant in subsections (c), (d), or (e) of Section 5.02 hereof, or (ii) shall fail to perform or observe any other term, covenant, or agreement contained in any Loan Document on its part to be performed or observed, and which failure continues for a period of fifteen (15) days or more, or
- (d) The Borrower shall (i) fail to pay any Indebtedness, including all currently

existing Indebtedness of the Borrower to the Lender, but excluding Indebtedness evidenced by the Note, of the Borrower, when due (whether by scheduled maturity, required prepayment, acceleration, demand, or otherwise) and such failure shall continue after the applicable grace period, if any, specified in the agreement or instrument relating to such Indebtedness, or (ii) fail to perform or observe any term, covenant, or condition on its part to be performed or observed under any agreement or instrument relating to any such Indebtedness, when required to be performed or observed, and such failure shall continue after the applicable grace period, if any, specified in such agreement or instrument; or any such Indebtedness shall be declared to be due and payable, or required to be prepaid (other than by a regularly scheduled required prepayment), prior to the stated maturity thereof; or

(e) The Borrower shall admit in writing its inability to pay its debts as they come due, or shall make a general assignment for the benefit of creditors; or any proceeding shall be instituted by or against the Borrower seeking reorganization, arrangement, adjustment, composition of it or its debts, or any other relief under any law relating to bankruptcy, insolvency, reorganization, or relief of debtors, or seeking appointment of a receiver, trustee, or other similar official for it or for any substantial part of its property; or the Borrower shall take any action to authorize any of the actions set forth above in this subsection (e); or

(f) The Borrower shall receive notice of termination of an Employee Plan by reason of the occurrence of a Reportable Event; or

(g) The Borrower shall fail to maintain all material licenses, authorizations, and approvals required to operate its business, which failure is not cured to the Lender's satisfaction within fifteen (15) days following the occurrence of such failure; or

(h) The Borrower shall liquidate, dissolve, or take any action in contemplation thereof, or there shall be any change in the material terms of Borrower's charter or by-laws without the prior written consent of the Lender, which consent shall not be unreasonably withheld; or

(i) The validity or the enforceability of any of the Loan Documents is contested by the Borrower; or

(j) The entry of a final non-appealable judgment or order against the Borrower for the payment of money of \$1,000,000 or more in excess of amounts covered by third-party insurance, and such judgment or order shall continue unsatisfied and in effect for a period of 60 consecutive days; or

(k) The failure of the persons who were the shareholders of the Borrower on March 31, 1996 to maintain their beneficial ownership, in the aggregate, of at least fifty-one percent (51%) of the outstanding voting stock of the Borrower; or

(l) Any action or proceeding shall be initiated by or against the Borrower or any of its properties wherein the validity of or the Borrower's right to use any patent, copyright, trademark, trade secret, right, permit, license, or any other form of intellectual property owned or held by the Borrower shall be contested, which action or proceeding is not diligently prosecuted in good faith by the Borrower in appropriate proceedings

deemed by the Lender to be satisfactory; or

(m) Any event which, in the good-faith judgment of the Lender, constitutes or could reasonably be expected to constitute or result in a material adverse change in the financial condition or business operations of the Borrower;

then, and in any such event, and the continuance thereof, the Lender may, by notice to the Borrower, (i) declare its obligation to make Advances to be terminated, whereupon the same shall forthwith terminate, and (ii) declare the principal balances of all Advances and the Note, all accrued but unpaid interest thereon, and other amounts properly payable under this Agreement to be forthwith due and payable, whereupon the principal balances of all Advances and the Note, all such interest, and all such amounts shall become and be forthwith due and payable, without presentment, demand, protest, or further notice of any kind, all of which are hereby expressly waived by the Borrower, (iii) take such other actions as may be permitted under the Loan Documents, and (iv) exercise any and all other remedies available under applicable law.

ARTICLE VII MISCELLANEOUS

SECTION 7.01. Amendments, Etc. No amendment or waiver of any provision of the Loan Documents, nor consent to any departure by the Borrower therefrom, shall in any event be effective unless the same shall be in writing and signed by the Lender, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

SECTION 7.02. Notices, Etc. Except as otherwise specifically provided herein, all

notices and other communications provided for hereunder shall be in writing (including telegraphic communication) and mailed or telegraphed or delivered, if to the Borrower, at its address at 600 East Las Colinas Boulevard, Suite 1520, Irving, Texas 75039, Attention: Mr. Paul G. Vitek; if to the Lender, at its address at 59 Wall Street, New York, New York 10005, Attention: Credit Department; or, as to each party, at such other address as shall be designated by such party in a written notice to the other party. All such notices and communications shall, when mailed or telegraphed, be effective when deposited in the mails or delivered to the telegraph company, respectively, addressed as aforesaid.

SECTION 7.03. No Waiver; Remedies. No failure on the part of the Lender to exercise, and no delay in exercising, any right under any Loan Document shall operate as a waiver thereof; nor shall any single or partial exercise of any right under any Loan Document preclude any other or further exercise thereof or the exercise of any other right. The remedies provided in the Loan Documents are cumulative and not exclusive of any remedies that may be available to the Lender at law, in equity, or otherwise. No notice to or demand on the Borrower in any case shall entitle the Borrower to any other or further notice or demand in similar or other circumstances.

SECTION 7.04. Costs, Expenses, and Taxes. (a) The Borrower agrees to pay on demand all costs and expenses reasonably incurred by the Lender in connection with the preparation, execution, delivery, filing, recording, and administration of the Loan Documents and the other documents to be delivered under the Loan Documents, including, without limitation, all fees and out-of-pocket expenses of counsel for the Lender with respect thereto and

with respect to advising the Lender as to its rights and responsibilities under the Loan Documents, and all costs and expenses, if any, in connection with the enforcement of the Loan Documents and the other documents to be delivered under the Loan Documents. In addition, the Borrower shall pay any and all stamp and other taxes, excluding taxes imposed on net income and all income and franchise taxes of the United States and any political subdivisions thereof (all such non-excluded taxes being herein referred to as "Taxes") and fees, if any, payable or determined to be payable in connection with the execution and delivery of the Loan Documents and the other documents to be delivered under the Loan Documents, and agrees to save the Lender harmless from and against any and all liabilities with respect to or resulting from any delay by the Borrower in paying or omission to pay such Taxes and fees.

SECTION 7.05. Right of Set-off. Upon the occurrence and during the continuance of any Event of Default, the Lender is hereby authorized at any time and from time to time, to the fullest extent permitted by law, to set off and apply any and all deposits (general or special, time or demand, provisional or final) at any time held and other indebtedness at any time owing by the Lender to or for the credit or the account of the Borrower against any and all of the obligations of the Borrower now or hereafter existing under this Agreement and the Note, irrespective or whether or not the Lender shall have made any demand under this Agreement or the Note and although such obligations may be unmatured. The Lender agrees to use its best efforts to notify the Borrower promptly after any such set-off and application, provided that the failure to give such notice shall not affect the validity of such set-off and application. The rights of the Lender under this Section are in addition to other rights and remedies (including, without

limitation, other rights of set-off) which the Lender may have.

SECTION 7.06. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Borrower and the Lender, and their respective successors and assigns, except that the Borrower shall not have the right to assign its rights hereunder or any interest herein without the prior written consent of the Lender. The Lender may, with the Borrower's consent, such consent not to be unreasonably withheld or delayed, assign to one or more banks or entities all or any part of, or may grant participations to one or more banks or other entities in or to all or any part of, any Advance or Advances and the Note, and to the extent of any such assignment or participation (unless otherwise stated therein), the assignee or participant of such assignment or participation shall have the same rights and benefits hereunder and under the Note as it would have if it were the Lender hereunder.

SECTION 7.07. Governing Law. The Loan Documents shall be governed by and construed in accordance with the laws of the State of Texas, except to the extent any law, rule, or regulation of the federal government of the United States of America may be applicable, in which case such federal law, rule, or regulation shall govern and control; provided that the provisions of Chapter 15 of the Texas Credit Code shall not be applicable to this Agreement.

SECTION 7.08 Merger of Agreements. THE LOAN DOCUMENTS REPRESENT THE FINAL AGREEMENT BETWEEN THE PARTIES HERETO AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES HERETO. THERE ARE NO UNWRITTEN ORAL AGREEMENTS AMONG THE PARTIES.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

CARBO CERAMICS INC.

ATTEST:

By: -----

Print Name: -----

Title: -----

per pro BROWN BROTHERS HARRIMAN & CO.

Print Name:

Title:

SCHEDULE I

Litigation

SCHEDULE II

Permitted Liens

The following liens, security interests, and other charges and encumbrances are expressly permitted under the terms of this Agreement, and the amounts of such liens, security interests and other charges and encumbrances described in (a), (b) and (c) below shall not exceed \$500,000 in the aggregate at any time during the term of this Agreement:

- (a) Statutory and Good Faith Deposits. (i) Pledges or deposits under workmen's compensation laws, unemployment insurance laws, the Social Security Act, or similar legislation, and (ii) deposits to secure public or statutory obligations of Borrower, surety, customs, appeal, or performance bonds to which Borrower is a party, or the payment of contested taxes or import duties of Borrower, each made and maintained in the ordinary course of business;
- (b) Statutory Liens. (i) Any lien which is imposed by law, such as those of carriers, warehousemen, and mechanics, if payment of the obligation secured thereby is not yet due, or the validity or amount of which is being contested by appropriate legal proceedings, or (ii) any lien for taxes, assessments, or other governmental charges of levies not yet subject to penalties for nonpayment or the validity or amount of which is being contested by appropriate legal proceedings;
- (c) Minor Title Defects. Minor survey exceptions, minor encumbrances, easements, or reservations of, or rights of others for, sewers, electric lines, telegraph and telephone lines, rights of way, and other similar purposes, or zoning or other restrictions as to the use of any real property; provided that all of the foregoing, in the aggregate, do not at any time materially detract from the value of said property or materially impair the use of such property in the operation of the business of Borrower.
- (d) Landlord's Liens. Security interests in favor of Cambridge/Las Colinas Limited Partnership, as lessor, on personal property of the Borrower now or hereafter attached or affixed to or used in or about the premises leased by the said lessor to the Borrower, as lessee, at Cigna Tower, 600 E. Las Colinas Blvd., Suite 1520, Irving, Texas 75039.
- (e) Equipment. Security interests in (i) a used Caterpillar 938F Wheel Loader in favor of Thompson Tractor Co., Inc., as described in that certain UCC-1 Financing Statement filed with the Secretary of State of the State of Alabama on December 6, 1996, file No. 96-51148 and (ii) a new Caterpillar 928F Wheel Loader in favor of Thompson Tractor Co., Inc., as described in that certain UCC-1 Financing Statement filed with the Secretary of State of the State of Alabama on February 24, 1997, file No. 97-07667.

REVOLVING CREDIT NOTE

U.S. \$10,000,000

Dated: February 12, 1998

FOR VALUE RECEIVED, the undersigned, CARBO CERAMICS INC., a Delaware corporation (the "Borrower"), HEREBY PROMISES TO PAY to the order of BROWN BROTHERS HARRIMAN & CO., a New York limited partnership (the "Lender") the principal amount of each Advance made by the Lender to the Borrower pursuant to the Credit Agreement (as hereinafter defined). All terms not otherwise defined herein shall have the meanings set forth for such terms in the Credit Agreement.

The Borrower promises to pay interest on the unpaid principal amount of each Advance from the date of such Advance until such principal amount is paid in full, at such interest rate, and payable at such times, as are specified in the Credit Agreement. In no event, however, shall the rate of interest charged hereunder exceed the Maximum Rate.

All agreements between the Borrower and the Lender, whether now existing or hereafter arising and whether written for oral, are hereby expressly limited so that in no event, whether by reason of acceleration of the maturity hereof or otherwise, shall the amount paid or agreed to be paid to the holder hereof for the use, forbearance or detention of the money to be loaned hereunder or otherwise exceed the Maximum Rate. In fulfillment of any provision hereof or of any loan agreement or other document evidencing or securing the loan evidenced by this Note, at the time performance of such provision shall be due, shall involve transcending the limit of validity prescribed by law, then, ipso facto, the obligation to be fulfilled shall be reduced to the limit of such validity; and if the holder of this Note shall ever receive anything of value deemed to be interest under applicable law which would exceed interest at the Maximum Rate, an amount equal to any such excessive interest shall be applied to the reduction of the principal amount owing hereunder and not to the payment of interest, or if such excessive interest exceeds the unpaid balance of principal hereof, such excess shall be refunded to the Borrower. All sums paid or agreed to be paid to the holder hereof for the use, forbearance, or detention of the indebtedness of the Borrower to the Lender shall, to the extent permitted by applicable law, be amortized, prorated, allocated, and spread throughout the full term of such indebtedness until payment in full so that the rate of interest of account of such indebtedness is uniform throughout the term thereof. The provisions of this paragraph shall control all agreements between the Borrower and the Lender.

Both principal and interest are payable for the account of Borrower in lawful money of the United States of America to the Lender at its offices at 59 Wall Street, New York, New York 10005, in same day funds. Each Advance made by the Lender to the Borrower and the maturity thereof, and all payments made on account of principal hereof, shall be recorded by the Lender and, prior to any transfer hereof, either endorsed on the grid attached hereto which is part of this Promissory Note or maintained in comparable form within the Lender's internal books and records (which may be electronic).

The Borrower hereby affirms and certifies to the Lender that the obligation evidenced by this note was not and will not be incurred for the purposes of purchasing, carrying, or trading in securities, as defined in Regulation T of the Board of Governors of the Federal Reserve System.

This Promissory Note is the Note referred to in, and is entitled to the benefits of, the First Amended and Restated Credit Agreement dated as of February 12, 1998 (the "Credit Agreement") between the Borrower and the Lender. The Credit Agreement, among other things, (i) provides for the making of advances (the "Advances") by the Lender to the Borrower from time to time in an aggregate amount not to exceed at any time outstanding the U.S. dollar amount first above mentioned, the indebtedness of the Borrower resulting from each such Advance being evidenced by this Promissory Note, and (ii) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events and also for prepayments on account of principal hereof prior to the maturity hereof upon the terms and conditions therein specified.

This Promissory Note shall be governed by and construed in accordance with the laws of the State of Texas, except to the extent any law, rule, or regulation of the federal government of the United States of America may be applicable, in which case such federal law, rule, or regulation shall govern and control; provided that the provisions of Chapter 15 of the Texas Credit Code shall not be applicable to this Promissory Note.

CARBO CERAMICS INC.

ATTEST:

By:
Print Name:

Title:

ADVANCES AND PAYMENTS OF PRINCIPAL

Date	Amount of Advance	Amount of Principal Payment	Unpaid Principal Balance	Notations Made By
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ROLLOVER AND CONVERSION NOTICE

DATE: _____, 19__

LENDER: Brown Brothers Harriman & Co.

BORROWER: Carbo Ceramics Inc.

This notice is delivered pursuant to that certain First Amended and Restated Credit Agreement dated as of February 12, 1998, between Brown Brothers Harriman & Co, a New York limited partnership (the "Lender"), and Carbo Ceramics Inc., a Delaware corporation (the "Borrower"). All the defined terms contained in the Agreement have the same meanings when used herein.

1. Please be advised that the Borrower currently has an outstanding principal indebtedness under an Advance in the amount of \$ _____, bearing interest at the _____ Rate (Base Rate or LIBOR Fixed Rate), [and the present LIBOR Interest Period for which ends on _____, 19__ (if such Advance presently bears interest at the LIBOR Fixed Rate).]

2. Effective as of _____, 19__ [which must be the last day of the present LIBOR Interest Period if the Advance bears interest at the LIBOR Fixed Rate], the Borrower requests that the principal indebtedness under such Advance bear interest at the _____ Rate (Base Rate or LIBOR Fixed Rate) [and (if such Advance is to bear interest at the LIBOR Fixed Rate) such balance shall have a LIBOR Interest Period ending on _____, 19__ (30, 60, or 90 days thereafter, but not later than the Termination Date).]

The Borrower hereby certifies to the Lender that on, and as of, the date hereof the representations and warranties made in all of the Loan Documents are, and will be, true and correct in all material respects, and no Event of Default or any event which, with notice or lapse of time or both, could become an Event of Default has occurred and is continuing.

Very truly yours,

CARBO CERAMICS INC.

By:
Print Name:

Title:

NO DEFAULT CERTIFICATE

Pursuant to Section 5.01(f) of that certain First Amended and Restated Credit Agreement dated as of February 12, 1998 (the "Credit Agreement"), between Carbo Ceramics Inc. (the "Borrower") and Brown Brothers Harriman & Co. (the "Lender"), the undersigned, being the Treasurer of the Borrower, hereby certifies to the Lender as follows:

On and as of the date hereof, no event has occurred which constitutes an Event of Default under the Credit Agreement or which, with the giving of notice or the lapse of time or both, would constitute an Event of Default under the Credit Agreement.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of _____, 199_.

, Treasurer

RAW MATERIAL REQUIREMENTS AGREEMENT

THIS AGREEMENT (herein called "Agreement") made as of _____, 1997, between Arcilla Mining & Land Co., a corporation organized and existing under the laws of the state of Georgia and having an office at P.O. Box 1371, Milledgeville, Georgia 31061 ("Seller"), and CARBO Ceramics Inc., a corporation organized and existing under the laws of the state of Delaware and having an office at 600 East Las Colinas Boulevard, Suite 1520, Irving, Texas 75039 ("Purchaser").

WITNESSETH:

WHEREAS, Purchaser desires to purchase a supply of kaolin, a naturally occurring mineral more particularly described (and meeting the specifications set forth) in Exhibit A hereto (the "Product"), and,

WHEREAS, Seller is able and desires to supply Purchaser with such Product,

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, the parties agree as follows:

1. TERM

The term of this Agreement shall be twenty (20) years commencing January 1, 1998, and ending December 31, 2017.

2. SELLER'S RESPONSIBILITIES

Seller shall be specifically responsible for the following (herein called the "Work"):

A. Obtaining and maintaining a valid mining permit from the State of Georgia and any other governmental body which requires Seller to have a license or permit to mine and remove Product from the Subject Properties pursuant to this Agreement.

B. Removing overburden from the Subject Properties in a manner so as to allow Purchaser unimpeded access to a minimum of 40,000 tons of Product at any given time.

C. Maintaining roads to, from and across the Property in a manner suitable to mine and remove from the Property the Product described in this Contract.

D. Reclaiming the Property in accordance with the permit(s) Seller has obtained.

E. Providing to Purchaser a site of location, size and character upon which to stockpile approximately 5,000 tons of the Product and Seller shall mine such stockpile of 5,000 tons of the Product at a cost to Purchaser of \$1.35 per ton to be paid upon completion of the stockpile. Seller shall maintain such stockpile at all times during this Agreement.

F. Seller shall mine sufficient quantities of the Product to fill orders made by Purchaser on an "as needed" basis.

G. Seller shall deliver to the Purchaser's manufacturing plant (the "Plant") in Wilkinson County, Georgia the quantities of the Product ordered by Purchaser.

3. QUANTITY

A. During the term of this Agreement, Seller shall make available for sale to Purchaser and Purchaser shall have the right to purchase from Seller up to 2,500,000 tons of the Product. For the purposes of this agreement, a "ton" shall be defined as a weight of 2000 pounds of wet, crude Product. "Wet" shall be defined as any moisture content up to and including the maximum amount specified in Exhibit A hereto.

B. In each year during the term of this Agreement, Purchaser shall be obligated to purchase from Seller, as a minimum, eighty percent (80%) of its actual annual requirements of the Product during such year for its operations in Wilkinson County, Georgia. In the event Seller fails to deliver Product in a timely manner which has been ordered by Purchaser and Purchaser purchases such Product from another source, Purchaser shall deduct the amount of such purchase from the minimum purchase requirements set out in the preceding sentence.

4. PRICE

A. The price for the Product purchased from Seller shall be \$6.00 per ton (the "Base Price Per Ton") delivered to Purchaser's plant in Wilkinson County, Georgia.

B. The Base Price Per Ton, as adjusted from time to time, shall be adjusted on May 1 of each year, beginning May 1, 1998, using the percentage change between the previous two calendar years' average monthly Producer Price Index ("PPI") for Kaolin and Ball Clay (Product Code 1455) as published by the U.S. Department of Labor, Bureau of Labor Statistics. (For an example of the calculation, see Appendix B.)

C. Beginning May 1, 1998, in addition to the Base Price Per Ton, for each ton of Product mined and delivered to Purchaser, Purchaser shall pay to Seller or Seller shall credit to Purchaser a fuel cost adjustment (the "Fuel Cost Adjustment"). The Fuel Cost Adjustment shall be \$1.20 multiplied by the sum of one plus the percentage change between 1997 and the year immediately preceding the calculation in the average monthly Producer Price Index ("PPI") for No. 2 Diesel Fuel (product code 2911-413) as published by the U.S. Department of Labor, Bureau of Labor Statistics, less \$1.20. (For an example of the calculation, see Appendix B.)

D. In addition to the Price Per Ton, Purchaser shall pay to Seller any royalty costs in excess of \$1.40 per ton of Product mined and delivered to Purchaser, which are payable by Seller pursuant to the terms of written agreements with the landowners of the Subject Properties in effect on the date hereof.

5. DELIVERY

A. Purchaser shall advise Seller within 180 days prior to the start-up of its Wilkinson County, Georgia, plant of the tonnage of its projected 1998 and 1999 purchases, and shall thereafter advise Seller on or before October 1 of each year, beginning October 1, 1999, of the tonnage of the Product it projects to purchase during the next calendar year. Such projections should be estimates only and Purchaser shall not be committed to purchase such amounts. Purchaser shall use reasonable efforts to advise Seller promptly in the event of any change in its annual purchase projections for any year.

B. Purchaser and Seller shall communicate regularly, and Seller shall ensure the availability of Product for sale hereunder on an "as needed" basis. Purchaser shall use its best efforts (to the extent feasible) to space evenly its actual purchases of the Product, and Seller shall be obligated to fill such orders.

C. Risk of loss and title shall pass to Purchaser upon delivery to Purchaser's plant in Wilkinson County, Georgia.

6. PAYMENT

Invoices for Product sold and delivered hereunder shall be sent to Purchaser on a monthly basis. Payment for the Product sold and delivered hereunder shall be net thirty (30) days from date of invoice.

7. ASCERTAINMENT OF WEIGHT

The weight of the Product delivered shall be determined by weighing on state-certified scales located at Purchaser's manufacturing facility in Wilkinson County, Georgia. Invoices shall include a copy of the weight- ticket covering the Product being invoiced.

8. WARRANTY

Seller warrants that the kaolin material when delivered to Purchaser's facility will conform to all chemical and physical properties for the Product listed in Exhibit A hereto. Seller warrants that the Product delivered hereunder shall be free of contaminants and other foreign substances rendering the Product unsuitable for the economic use of Purchaser. In the event that kaolin material delivered to Purchaser does not conform to all chemical and physical properties listed in Exhibit A hereto, or is contaminated with foreign substances, all such non-conforming kaolin material shall be removed by Seller and there shall be no invoice issued by Seller for the non-conforming kaolin material.

9. RESERVED ORE & SELLER'S REPRESENTATION OF TITLE AND INDUCEMENTS TO PURCHASER

Seller hereby represents that it holds title to or the right to mine crude Product located on the real property listed herein (herein called the "Subject Properties" or "Property") which will be reserved by Seller for sale to Purchaser:

Property	Tons of Product
-----	-----
(a) Approximately 70 acres described on Exhibit B	2,000,000+ tons
(b) 8 acres described on Exhibit C	500,000 tons

(c) 101.6 acres described on Exhibit D Back Up Tonnage Only

Seller covenants that it has a good and marketable title, in fee simple or leasehold estate, to the Subject Properties, that there are no liens, mortgages or encumbrances against the same and Seller warrants the title to all Product which Purchaser, its successors and assigns may remove or receive from the Subject Properties for processing and/or sale as against the lawful claims of all persons whomsoever. Seller shall provide to Purchaser evidence, such as a current title report or title insurance commitment, of (i) Seller's good and marketable title to the portions of the Subject Properties which Seller owns in fee simple and (ii) Seller's lessor's good and marketable title to the portions of the Subject Properties as to which Seller holds a leasehold estate. Also, Seller shall provide to Purchaser a copy of the lease agreement covering these portions of the Subject Properties as to which Seller holds a leasehold estate and letter signed by the lessor in the form of Exhibit E attached hereto. Seller further covenants that hereafter Seller will not create nor permit the existence of any liens or encumbrances against the minerals or surface which will in any way adversely affect the rights of Purchaser hereunder. Upon any default of Seller with respect to the covenants and warranties herein contained, it is agreed that the Purchaser shall have the privilege of paying-off, discharging and satisfying any such lien

or encumbrance and that the amount of any such payment or payments made by Purchaser for such purposes, together with interest thereon at the prime rate (as published in the Wall Street Journal on the date of default declaration) plus two (2) per cent per year, may be deducted by Purchaser from the payments herein provided to be paid to the Seller.

Seller further warrants that (a) Seller has a good and lawful right, and full power to convey the Product on the Subject Properties and to authorize entry for the purposes(s) herein set forth, that the same are free from all encumbrances; (b) the Subject Properties connect to adjacent public roads and all present exits and entrances to the Subject Properties via adjacent public roads are without restriction; (c) Seller is not a party to any litigation affecting the Subject Properties, the Product thereon, or Seller's rights to sell the Product on said Subject Properties or any interest therein and the Seller knows of no litigation or threatened litigation affecting the said Product and/or the Subject Properties; (d) Seller has no knowledge or information of any facts or circumstances that would adversely affect the use of the Subject Properties for mining operations that are not set forth herein; and (e) that Seller has not committed, except as otherwise set forth herein, nor will Seller in the future commit, any act or acts which will encumber or cause a lien to be placed against said Product and/or the Subject Properties.

10. INDEMNIFICATION

To the fullest extent permitted by law, the Seller shall indemnify and hold harmless the Purchaser, and agents and employees of Purchaser from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions or breach of this Agreement by the Seller or anyone directly or indirectly employed by Seller or anyone for whose acts Seller may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by the negligence of a party indemnified hereunder.

11. INSURANCE

The Seller shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Subject Properties are located such insurance as will protect the Seller from claims set forth below which may arise out of or result from the Seller's operations under the Agreement and for which the Seller may be legally liable, whether such operations be by the Seller or by a subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

A. claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts which are applicable to the Work to be performed;

- B. claims for damages because of bodily injury, occupational sickness or disease, or death of the Seller's employees;
- C. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Seller's employees;
- D. claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Seller, or (2) by another person;
- E. claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- F. claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and
- G. claims involving contractual liability insurance applicable to the Seller's obligations under Paragraph 10.

The insurance required by this paragraph shall be written for not less than limits of liability specified herein or required by law, whichever coverage is greater. Coverages shall be written on an occurrence basis and shall be maintained without interruption from date of commencement of the Work until date of termination of this Agreement.

Certificates of Insurance acceptable to the Purchaser shall be filed with the Purchaser prior to commencement of the Work. These Certificates and the insurance policies required by this Paragraph 11 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Purchaser. Seller shall provide evidence of continued insurance on the anniversary date of each policy of insurance.

Seller shall maintain worker's compensation in at least the minimum amount stipulated under the Georgia worker's compensation statutes, including Employers Liability with a limit of at least:

Statutory - Georgia Benefits	
Employer's Liability	\$100,000 Each Accident
	\$1,000,000 Disease - Policy Limit
	\$1,000,000 Disease - Each Employee

Seller shall maintain Commercial General Liability, written on an occurrence basis, including Seller's Liability; Independent Contractors Liability; Contractual Liability; Completed

Operations and Products Liability; Personal Injury Coverage and broad form Property Damage extended to apply to completed operations; and no property damage liability exclusions pertaining to loss by explosion, collapse or underground damage.

Bodily Injury and Property Damage Liability:

General Aggregate per Project	\$2,000,000
Products Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Each Occurrence	\$1,000,000

Products Completed Operations shall be maintained for a minimum period of one (1) year after final payment.

Umbrella/Excess Liability:

Annual Aggregate	\$5,000,000
Each Occurrence	\$5,000,000

Automobile Liability including non-ownership and hired car coverage as well as owned vehicles:

Bodily Injury and Property Damage:

Combined Single Limit \$1,000,000

Contractor shall not commence Work at the Subject Properties under this Agreement until it has obtained all required insurance and until such insurance has been approved by the Purchaser. Approval of the insurance by the Purchaser shall not relieve or decrease the liability of the Seller hereunder. Certificates of Insurance shall be filed with the Seller prior to commencing Work.

The required insurance shall be written by a Company licensed to do business in the state in which the Subject Properties are located, at the time the policy is issued. In addition, the Company shall be acceptable to the Owner. All liability insurance policies shall name Purchaser additional insured, IT BEING THE INTENT THAT SUCH POLICIES AFFORD SELLER AND PURCHASER COVERAGE AGAINST THEIR NEGLIGENCE ARISING OUT OF PERFORMANCE OF THE WORK, and shall provide that coverage of Purchaser thereunder is primary in the event of overlapping coverage which may be carried by Purchaser.

The Seller shall not cause any insurance to be canceled nor permit any insurance to lapse. All insurance policies shall include a clause to the effect that the policy shall not be canceled or reduced, restricted or limited until thirty (30) days after the Purchaser has received written notice. Certificates of insurance shall contain transcripts from the proper office of the insurer, evidencing in particular those insured, the extent of insurance, the location and operations in which the insurance applies, the expiration date and the above mentioned notice of cancellation clause. An acceptable Certificate of Insurance Form shall be insurance industry standard ACORD Form 27.

12. FORCE MAJEURE

A. The term "Force Majeure" as used herein shall mean acts of God, natural calamities, acts of the public enemy, blockades, insurrections, strikes, slowdowns, riots, wars, disorders, civil disturbances, fires, explosions, storms, floods, landslides, washouts, labor or material shortages, boycotts, breakdowns or damage to plants, equipment or facilities, interruptions to transport, embargoes, acts of military authorities, acts of local or federal governmental agencies or regulatory bodies, court actions, arrests and constraints and, without limitation by enumeration, any other cause or causes not reasonably within the control and without the fault or negligence of the party affected which wholly or partly prevents the mining, processing, loading or transportation of Product by Seller or the receiving, transporting, accepting or using of the Product by Purchaser.

B. If because of Force Majeure, either party hereto is unable to carry out its obligations under this Agreement and if such party shall promptly give to the other written notice of such Force Majeure, including a complete description thereof, then the obligation of the party giving such notice shall be suspended to the extent made necessary by Force Majeure and during its continuance; provided, however, that the party giving such notice shall use its best efforts to eliminate such Force Majeure insofar as possible with a minimum of delay. No event of Force Majeure shall relieve Purchaser of its obligation to make payments due for Product delivered by Seller under this Agreement.

13. EVENTS OF DEFAULT

In the absence of the existence of force majeure as defined in paragraph 12, if any of the following events ("Events of Default") shall occur and be continuing:

A. Any amount due hereunder, unless being disputed in good faith, shall remain unpaid for thirty (30) days after becoming due, and the party adversely affected shall have delivered a notice to the party owing such amount stating the amount due and unpaid, and the party owing (and not disputing same in good faith) shall not have paid such amount within thirty (30) days after the delivery of such notice; or

- B. Seller shall fail or refuse to provide to Purchaser the amount of Product as specified from time to time hereunder by Purchaser at the time requested by Purchaser; or
- C. Any deliveries of kaolin materials to Purchaser hereunder shall fail to meet the quality specifications provided in Exhibit A; or
- D. Any other covenant, obligation or agreement by either party hereunder shall not be performed or observed within twenty (20) days after written notice of the nonperformance thereof shall have been delivered to the nonperforming party by the other party; or
- E. Either party shall:
- (1) Fail to pay any judgment in an amount which would materially affect the net worth of such party within sixty (60) days after issuance of a writ of execution upon such final judgment;
 - (2) Apply for or consent to the appointment of a receiver, trustee or liquidator of such party or of all or a substantial part of its assets;
 - (3) Make a general assignment for the benefit of its creditors;
 - (4) Be adjudicated bankrupt or insolvent, or file a voluntary petition in bankruptcy;
 - (5) File a petition or an answer seeking reorganization under any insolvency law; or
 - (6) File an answer admitting the material allegations of, or consent to, or default in answering, a petition filed against it in any bankruptcy, reorganization or insolvency proceeding; or
- F. An order, judgment or decree shall be entered by any court of competent jurisdiction approving a petition seeking reorganization of such party or appointing a receiver, trustee or liquidator of a party or of all or a substantial part of its assets and such order, judgment or decree shall continue unstayed and in effect for a period of thirty (30) consecutive days;
- G. Any of the representations or warranties made by a party herein shall be or become untrue in any material respect; or
- H. Seller shall be in default under any lease of any portion of the Subject Properties after expiration of any cure periods permitted by the lease.

then the party adversely affected by such Event of Default shall, in addition to other remedies available to such party at law or in equity, have any one (1) or more of the following remedies:

(1) The party adversely affected by such Event of Default may by written notice delivered to the other party decline to perform under this Agreement until such Event of Default shall have been cured or shall no longer exist, without relieving the defaulting party of any of its obligations hereunder;

(2) The party adversely affected by such Event of Default may, effective upon twenty (20) days' written notice to such effect delivered to the other party, terminate this Agreement without relieving the other party from any liability which shall have accrued or attached on or prior to the effective date of such termination; and/or

(3) If Seller is in default for failure to deliver Product at the time requested or for delivering kaolin materials failing to meet quality specifications, Purchaser may recover all damages caused by such failure or Purchaser may purchase such quantities of Product from another source and Seller shall reimburse Purchaser within twenty (20) days from invoice for any additional cost incurred by Purchaser above the Price Per Ton provided herein and for any costs incidental to obtaining such other supply. Termination of this Contract for any of the causes herein contained shall be without prejudice to any other right or remedy provided by this Contract or at law or in equity. Failure of either Purchaser or Seller immediately to exercise its rights in any Event of Default will not constitute waiver of the injured party's rights. Both parties agree to use their best efforts to minimize the amount of damages that may be incurred as the result of an Event of Default.

14. NOTICE

All notices under this Contract required or permitted to be given by Purchaser to Seller and all payments to be made by Purchaser to Seller hereunder shall be delivered personally to Seller or sent to Seller at Seller's address: Arcilla Mining & Land Co., P.O. Box 1371, Milledgeville, Georgia 31061, or at such other address as Seller may hereafter furnish (by "Notice" as hereinafter described) to Purchaser.

All notices herein required or permitted to be given by Seller to Purchaser shall be sent by registered or certified United States mail, return receipt requested, addressed to Purchaser at CARBO Ceramics Inc., Attn. Paul G. Vitek, 600 East Las Colinas Boulevard, Suite 1520, Irving, TX 75039, or at such other address as Purchaser may hereafter furnish (by "Notice" as hereinafter described) to Seller.

15. ENTIRE AGREEMENT

This written instrument contains the entire agreement between the parties hereto concerning the subject matter hereof, and there are no other understandings or agreements between said parties or either of them in respect hereto. No change, addition to or waiver of the terms and provision hereof shall be binding upon either party unless approved in writing by an authorized representative of such party, and no modifications shall be effected by the acknowledgment or acceptance of forms containing other or different terms and conditions. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

16. ASSIGNMENT

This Agreement shall be binding on the legal successors of the parties hereto, but shall not otherwise be assignable by either party without the written consent of the other.

17. INDEPENDENT CONTRACTOR

Seller shall be considered an independent contractor and shall not be considered a partner, employee, agent or servant of Purchaser.

18. APPLICABLE LAW

This Agreement and the language used herein shall be construed and enforced in accordance with the laws of the State of Georgia.

19. MEMORANDUM OF THIS AGREEMENT

Seller and Purchaser agree to execute and record in the real property records of the county where the Subject Properties are located a memorandum of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

ARCILLA MINING & LAND CO.

By

Name:

Title:

CARBO CERAMICS INC.

By

Name:

Title:

EXHIBIT 23.1

CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 33-25845) pertaining to the CARBO Ceramics Inc. 1996 Stock Option Plan for Key Employees of our report dated January 23, 1998 with respect to the consolidated financial statements of CARBO Ceramics Inc. included in the Annual Report on Form 10-K for the year ended December 31, 1997.

ERNST & YOUNG LLP

New Orleans, Louisiana

March 12, 1998

ARTICLE 5

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM CONSOLIDATED FINANCIAL STATEMENTS AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

MULTIPLIER: 1,000

PERIOD TYPE	12 MOS
FISCAL YEAR END	DEC 31 1997
PERIOD END	DEC 31 1997
CASH	8,899
SECURITIES	13,905
RECEIVABLES	14,243
ALLOWANCES	0
INVENTORY	8,381
CURRENT ASSETS	46,861
PP&E	43,905
DEPRECIATION	(9,812)
TOTAL ASSETS	80,954
CURRENT LIABILITIES	7,616
BONDS	0
PREFERRED MANDATORY	0
PREFERRED	0
COMMON	146
OTHER SE	70,796
TOTAL LIABILITY AND EQUITY	80,954
SALES	85,122
TOTAL REVENUES	85,122
CGS	42,186
TOTAL COSTS	42,186
OTHER EXPENSES	0
LOSS PROVISION	0
INTEREST EXPENSE	0
INCOME PRETAX	35,025
INCOME TAX	12,936
INCOME CONTINUING	22,089
DISCONTINUED	0
EXTRAORDINARY	0
CHANGES	0
NET INCOME	22,089
EPS PRIMARY	1.51
EPS DILUTED	1.50

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