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GRANTHAM PROPOSITION.

Prepared by

Celite Division

Johns-Manville Products Corporation

January 1972

The Celite Division proposes that Johns-Manville enter the talc business. We propose to do this by:

1) Buying (for stock or cash) from the Louise Grantham Trust and the minority holders, the assets of the Louise Grantham Corporation (and subsidiaries) and the Trust's and others' interests in mining claims. The principal assets are mines at Warm Springs Canyon, California, and a talc grinding mill in Los Angeles.

2) Buying grinding and loading facilities at Dunn Siding, California from the Pfizer Corporation.

3) Expanding production facilities at Dunn and Los Angeles.

4) Installing environmental control facilities at Los Angeles, Dunn and the mines.

Our investment would be:

Allocation of Actual Assets on Purchase of Grantham

1)	Assets - Trust and minority holders	$3,900,000
2)	Pfizer facilities	500,000
3)	Expansion	1,400,000
4)	Environmental control	500,000
	Total	$6,300,000

Warm Springs Mine

CRMC-HT-TALC-000224

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Talc Industry

Talc is a natural mineral, generally magnesium silicate, mined and processed throughout the world. Principal operations in the United States are in New York, California, Montana and Vermont. So-called "eastern" talc tends to be fibrous, while "western" talcs are softer, whiter, and have a platey structure. For low grade applications, either can be used and business is divided geographically. For applications requiring high brightness and low abrasiveness, western talc is preferred, and high quality grades are marketed on the east coast.

In 1971, total market was 875,000 tons, and nearly $25,000,000. During the 1960 decade, ton sales increased at a rate of about 4%; dollar sales at a rate of 5½%.

Major uses are in ceramics, paint, paper, plastics, insecticides and roofing. Paint and paper applications have shown the greatest recent growth -- up 54% and 112% respectively in the last decade.

Growth has been most rapid in highly processed, highest priced specialty markets, particularly in the past few years.

Talc Quality

Processed (ground) talc in general has commercial utility as an inert filler/extender pigment because of

... color (whiteness)

... low abrasion (relative)

... chemical purity

... fibrous or not

Desertalc is recognized world-wide as one of the brightest. Desertalc is recognized world-wide as having low abrasion index and this relates to good chemical purity. Desertalc is non-fibrous, and as such has application where fibrous talcs are deficient.

Grantham in the Industry

Grantham sales are 45,000 tons and $2,300,000 of ground talc; 6% of tons and 9% of the dollar market.

Grantham also sells 25,000 tons ($700,000) of crude talc to the United Sierra Division of Cyprus Mines.

Reserves

The "opened" talc mines at Warm Springs number three. Two are being worked at this time. Based upon geological data furnished by Grantham, together with Johns-Manville mining surveys, there are

Estimated recoverable - first layer	- 1.2 million tons
Estimated recoverable - second layer	- 1.5 million tons
Total	- 2.7 million tons

On a gross basis there are

Estimated - first layer	- 2.1 million tons
Estimated - second layer	- 2.5 million tons
Total	- 4.6 million tons

Some portion of tonnage between gross and recoverable may be mineable. A drill program would dictate action to be taken. At current and forecasted withdrawal rate, reserves are assured for in excess of 25 years.

Clay reserves at Mohave, California, are estimated in excess of one million mineable tons. At current and forecasted annual withdrawal rate, the reserves are ample for in excess of 50 years.

People

Grantham's current employment is approximately 65 hourly and 15 salaried employees. Key people in the latter are, and each of whom very probably would join J-M:

Rolf F. Bassett	-	Finance-Management	-	Age 60
*Richard Lamar	-	R&D	-	Age 50
Earl Smith	-	Sales	-	Age 48
Richard Franklin	-	Mining	-	Age 42
*Norman B. Scheffel	-	Sales	-	Age 43
Daniel B. Tash	-	LA Plant Supt.	-	Age 53

* Now on contract with Grantham

Included in this group are considerable talents and capabilities related to the talc business, resulting from years of exposure in Grantham and formerly with other western talc businesses.

We plan also to have a five-year Consultant Contract with W. B. Grantham for $60,000 per year.

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Mines

The Warm Springs Canyon talc mining operation includes 80 lode claims. Not all are being worked. Those that are not are adjacent to or contiguous with those that are worked. By virtue of the "Apex Law" as related by Grantham mining engineers, additional claims are included. The Apex basis is that any ore body continuous beyond an established claim is considered to have common ownership.

The Warm Springs operation is in Inyo County, California (Lower Death Valley) and is

130 miles to Union Pacific rail head (Field or Dunn Siding, California)

140 miles to Las Vegas, Nevada

300 miles to Los Angeles

The Warm Springs operation includes

Diesel-operated electrical generation (no outside power);

Well equipped base-camp living and recreation facilities, including outside swimming pool;

An ample source of spring-fed fresh water supply;

E & R facilities.

Ore is hauled by contract carrier from Warm Springs to rail head Mining is all underground, using room and pillar method.

The clay operation is at Jaw Bone Canyon, Kern County, Californ From mine to rail head (Southern Pacific - Cantel, California)

11 miles.

Ore is contract mined and hauled. Contract included in the "Grantham package" calls for availability until "mine is exhausted." Mining is all open pit.

Dunn Option

Johns-Manville has option to purchase plant, auxiliary buildings and land (approximately 280 acres) from Pfizer. The latter acquired the total facility in 1967 from Kennedy Minerals, including talc mines. Pfizer had at the time milling facilities at Victorville, California, and a second plant was soon considered excess. The Dunn plant has been operated off and on during the past few years. Lompoc plant engineers have surveyed and examined the Dunn facilities and concur with the option list of equipment and facilities in general.

Option expires in late February 1972.

Financial Projection - 5 Years

Sales

Grantham's sales, limited by capacity, are $3.0 million -- 9% of the market.

Using Grantham's high quality talc and our sales force in our markets, we plan a vigorous expansion to $5.2 million sales in 1976, attaining 14% of the market.

Earnings

We plan 200 $280,000 of earnings the first year (current level), growing to ~~over $500,000~~ 400,000 by 1976.

Tax depletion is very important to earnings. Grantham now has an effective tax rate of 25% of pretax earnings; we have used this for 3 years. On the advice of the Tax Department, we have used 35% after that.

Investment and Cash Flow

Of the $6.3 million requested, about $5.0 million will be spent now. In the next few years, we schedule 1.3 million ~~$900,000~~ more -- with present forecasts, most of this in 1975 and 1976.

At the end of the first year we will be out 4.6 ~~$5.0~~ million in cash flow. In the next few years we expect to pay for the future expansion and generate a positive flow of ~~$2.2~~ 1.9 million.

We do not pretend to know the long-run future of talc or our participation, but we believe we can eventually attain sales of $10,000,000 and earnings of $1,000,000. However, if we can hold our sales and earnings after 1976, we will attain a DCF yield of ~~11%~~ 13.2 on this venture.

Geology - Chemical - Health Aspects

Talc

Geologically, Grantham talc is in the Crystal Spring Formation (part of the Pahrump Group in Death Valley) of the Panamint Range. There are three principal layers of ore bodies. There are outcroppings of the ore bodies, and portals are located at these points. Ore strata are separated by dolomitic, diabase and volcanic rock formation. There are faults in the deposit which have been established in terms of quarrying procedures. The mineable ore beds are 10-15 feet in thickness and lie with dip of 9° to 20° generally.

Chemically, the talc is essentially magnesium silicate. Minor composition is calcium carbonate, sodium carbonate and potassium oxide. Trace composition is oxide of aluminum, iron, titanium, manganese and copper.

Petrographically, talc is major; tremolite small or minor; calcite trace to small.

The following points are significant:

1) Grantham talc vs. eastern talc is softer, platey-like, and current and projected uses other than in cosmetics and food products.

2) No health cases are on record with working people -- mine or other -- related to dust or other exposure.

3) Reportedly other (particularly United Sierra Division, Cyprus Mines and Vanderbilt) have had no cases related to environmental exposure.

Clay

Grantham clay (on contract not ownership) is geologically/chemical a claystone highly siliceous in composition. Minor composition is aluminum and potassium oxide; trace is oxide of iron, calcium, magnesium and sodium. The composition may be considered an aluminum silicate but not kaolinic in type.

In terms of health hazards, it is conjectured that environmentall "treat as a nuisance dust."

FINANCIAL DATA

(M's)

	1972	1973	1974	1975	1976	
Sales	3600	3900	4300	4700	5200	
Net Earnings	200 ~~280~~	300 ~~370~~	380 ~~450~~	340 ~~400~~	460 ~~530~~	
Cash Flow	-4630 ~~-5900~~	+580 ~~+660~~	+760 ~~+830~~	+310 ~~+380~~	+270 ~~+340~~	
Investment	5000 ~~5410~~	700 ~~100~~	140 ~~40~~	390 ~~290~~	570 ~~470~~	Total 6300

Rate of yield - ~~11%~~ 13.2

CRMC-HT-TALC-000233

TALC MARKETS

(000 Tons)

	Ceramics	Paint	Paper	Insecticides	Roofing	Rubber	Cosmetics	Plastics	Other
Talc Ind.	246	166	55	54	30	24	12	?	288
Grantham	18	12	5	0	0	0	1.5	2.5	?
%	7.5	7.5	9.5	0	0	0	11	?	?
Colite		X	X	X		X		X	X

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Paint Industry Customers Include:

- Celanese Coatings
- Desoto
- Glidden
- National Lead
- Sherwin-Williams

Paper Industry Customers Include:

- American Can
- Georgia Pacific
- Kimberly-Clark
- Oxford Paper
- Westvaco
- Weyerhaeuser

Exterior Latex Tint Base

Reference:

Formula No. S-66009-6
E.I. DuPont de Nemours & Company, Inc.
Pigments Department
Wilmington, Delaware 19898

FORMULATION

INGREDIENTS	POUNDS	GALLONS
DISPERSION		
Water	150.0	18.03
Carbitol	30.0	3.51
Daxad 30	5.0	0.52
Igepal CA360	5.0	0.57
Ti-Pure® titanium dioxide R-960	175.0	5.32
Talc	116.0	4.88
Mica 325 mesh waterground	30.0	1.27
CELITE 281	50.0	2.60
Colloid 581-B	1.0	0.15
REDUCTION		
Cellosize WP-4400 (2% solution)	118.0	14.10
Colloid 581-B	1.0	0.15
Witco 912	4.0	0.48
Elvacet® 1454	432.0	48.00
2amino-2methyl-1propanol	4.0	0.51
Super-Ad-It	10.0	1.23
	1,131.0	101.32

Pigment Volume Concentration = 36.4%
Viscosity (overnight) = 70-75 KU

Disperse in high speed disperser

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