PLAINTIFF'S EXHIBIT WRG-1198

Brief History of Zonolite's Operations

The Zonolite Company was organized in 1922 under Montana laws to exploit the vermiculite ore reserves discovered in northwestern Montana during World War I as the result of government explorations for new sources of potash.

Commercial mining in that location which is nine miles northeast of Libby, Montana began in 1923. Operations continued at a very slow pace and only reached the $200,000 annual sales level in 1940.

The following table summarizes its sales and profits for the period 1939 - 1962.

(See Table I on following page)

In 1946 Zonolite started mining and milling operations in and around Kearney, South Carolina where a group of small (generally less than 100,000 tons) vermiculite deposits had been acquired by Zonolite. This development improved Zonolite's ability to service eastern markets and was timely in providing additional capacity to supply the growing demand which followed the end of World War II. In 1946, Zonolite's sales passed the one million dollar mark and profit after taxes reached the $100,000 mark for the first time.

From 1946 through 1951 Zonolite's sales and profits soared to $6,270,000 and $776,000 respectively reflecting the building boom of the post-war and Korean eras. There literally was a sellers market in vermiculite. However, this gave rise to the commercial development of perlite by undersupplied customers of Zonolite who had been using vermiculite for making proprietary plaster mixes.

Perlite is a silicate mineral found throughout many parts of the western U.S.A. It can be "popped" much like popcorn by heating in red-hot furnaces and in the exploded form is a lightweight, snow-white, friable, bead-sized material. In this form it now is vermiculite's chief concrete aggregate competition. Perlite made its major inroads in the plaster mix markets in the post-Korea years and

vermiculite has apparently permanently lost position because most producers of plaster mixes now produce their own perlite requirements. Over the decade 1951 to 1961, Zonolite's sales of expanded vermiculite for plaster aggregate dropped from about 35,300 tons to 8,300 tons. As a matter of interest, Zonolite's sales projections anticipate a continuing decrease to 2,800 tons by 1966. In part, this loss of vermiculite sales for plaster mix reflects the downtrend in plaster wall construction.

Zonolite's business encountered major difficulties in 1957-58 when profits dropped to the lowest level ($141,000 and $55,000 respectively) in over ten years. This was despite an average sales increase of 17% per year over the twelve year period 1946 - 58 and 7.8% a year over the four year period 1954 - 58. Zonolite's Directors recognized the need for a change in direction of the company and, at this point (Feb. 1958), Joseph A Kelley was elected President and Chief Executive Officer. He immediately embarked on a three-pronged program of cost reduction, shifting the sales mix around to more evenly balance run-of-the-mine material and increasing sales volume. Steps also were taken to reduce Zonolite's dependence on the building industry by developing new uses for vermiculite. It was through these efforts that vermiculite usage developed into large tonnage (over 30,000 tons/year in 1961) as a carrier for lightweight lawn and garden fertilizers,

Description of Zonolite's Existing Business

Zonolite's existing business may be grouped as follows:

1. Vermiculite mines and milling operations at Libby, Montana and Kearney, S. C. which ship concentrated unexpanded vermiculite to the groups listed below and to miscellaneous industrial and agricultural customers.

2. Building Products Division which operates 18 vermiculite expanding plants and warehouses throughout the U.S.A. It sells bagged expanded vermiculite and certain resale items to the building industry.

3. Agricultural Products Sales Division which sells expanded vermiculite obtained from above for soil conditioning and lawn/garden fertilizers, insecticides, herbicides, etc.

4. Licensee - Customer Group with plants throughout the U.S.A. and Canada. They conduct businesses generally similar to (2) and (3) above. Included in this group are five minority owned U.S.A. affiliates. Products of this entire group are sold under Zonolite brand names.

The chart on the following page shows a breakdown of Zonolite ore shipments, expanded vermiculite products sales and resale product volumes for the current fiscal year ending 3/31/63.

APPROXIMATE COMPOSITION OF ZONOLITE'S SALES IN FISCAL YEAR ENDING 3/31/63

MINE AND MILL
LIBBY, MONTANA
140,800 TONS ORE
$ 2,090,000 SALES VALUE

MINE AND MILL
KEARNEY, S. C.
73,400 TONS ORE
$ 1,320,000 SALES VALUE

81,000 Tons Ore, Value $ 1,390,000

Operated By Building Products Division

18 ZONOLITE OWNED VERMICULITE EXPANSION & BAGGING PLANTS

	Tons	Dollars (000)
Ore Sales to Licensees	97,900	$ 1,400
Ore Sales to Agric. Expanders	26,300	460
Misc. Industrial Ore Sales	9,000	160
Sub Total	133,200	$ 2,020
Sold By Building Products Division		
Concrete Aggregate	23,800	$ 1,900
Attic Insulation	21,200	1,720
Masonry Fill Insulation	8,200	740
Plaster Aggregate	4,800	390
Mixed Construction Products	3,400	540
Misc.	2,700	390
Sub Total	64,100	$ 5,680
Sold By Agric. Products Division		
Carrier for Agric. Chemicals	13,300	$ 900
Terralite (Soil Conditioner)	3,600	320
Sub Total	16,900	$ 1,220
TOTAL VERMICULITE PRODUCTS	214,200	$ 8,920

RESALE PRODUCTS

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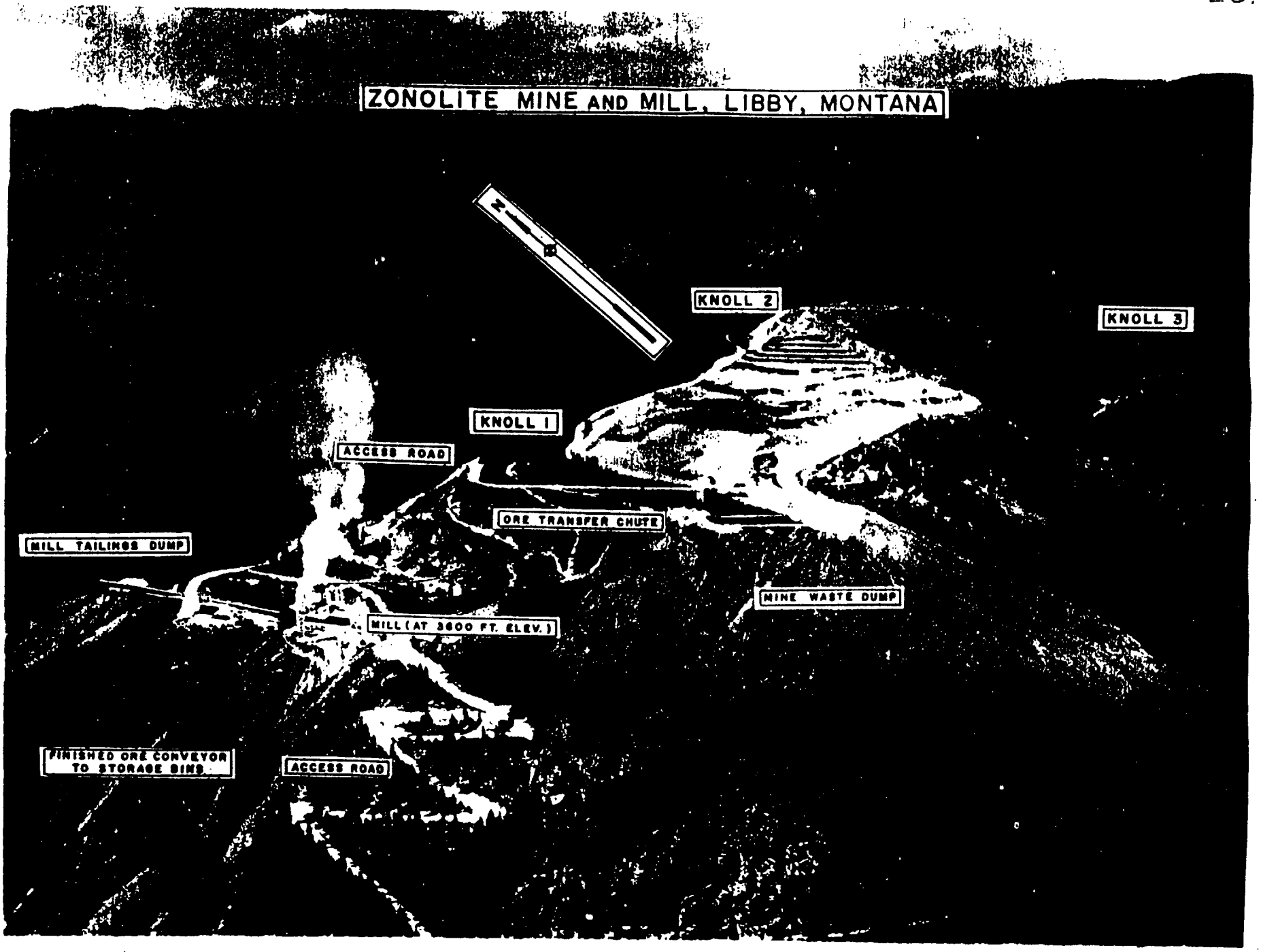
Sold By Building Products Division	
Glass Fiber Home Insulation	[illegible],800
Dyfoam Polystyrene Home Insulation	200
Perlite	200
Aluminum Siding	140
Total Resale Products	$ 2,340
Less: Sales Deductions	(660)
TOTAL ZONOLITE COMPANY SALES	$10,600


ZONOLITE MINE AND MILL, LIBBY, MONTANA
KNOLL 2
KNOLL 3
KNOLL 1
ACCESS ROAD
ORE TRANSFER CHUTE
MILL TAILINGS DUMP
MINE WASTE DUMP
MILL (AT 3600 FT. ELEV.)
FINISHED ORE CONVEYOR TO STORAGE BINS
ACCESS ROAD

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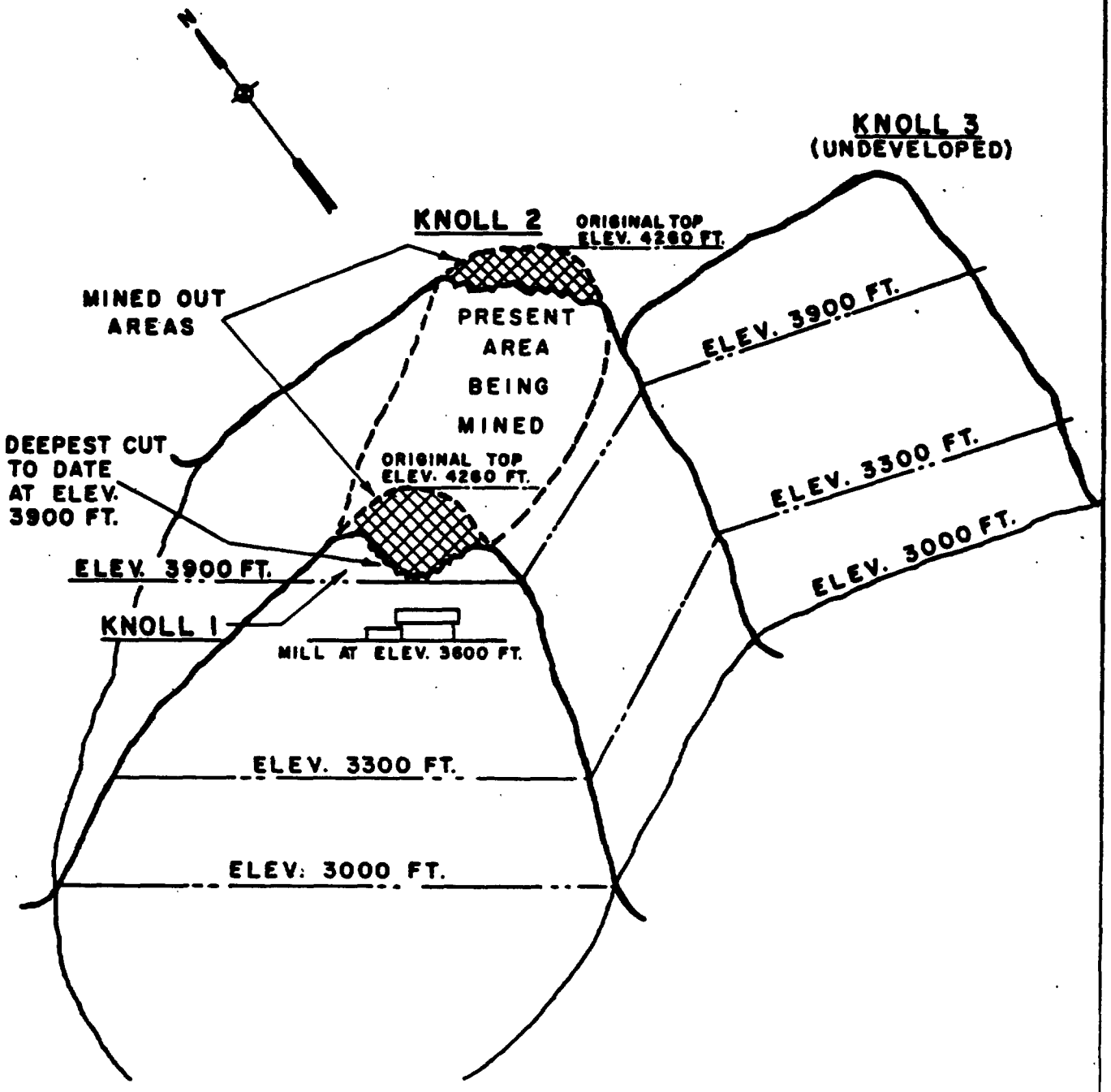
SKETCH OF LIBBY ZONOLITE-OWNED VERMICULITE DEPOSITS



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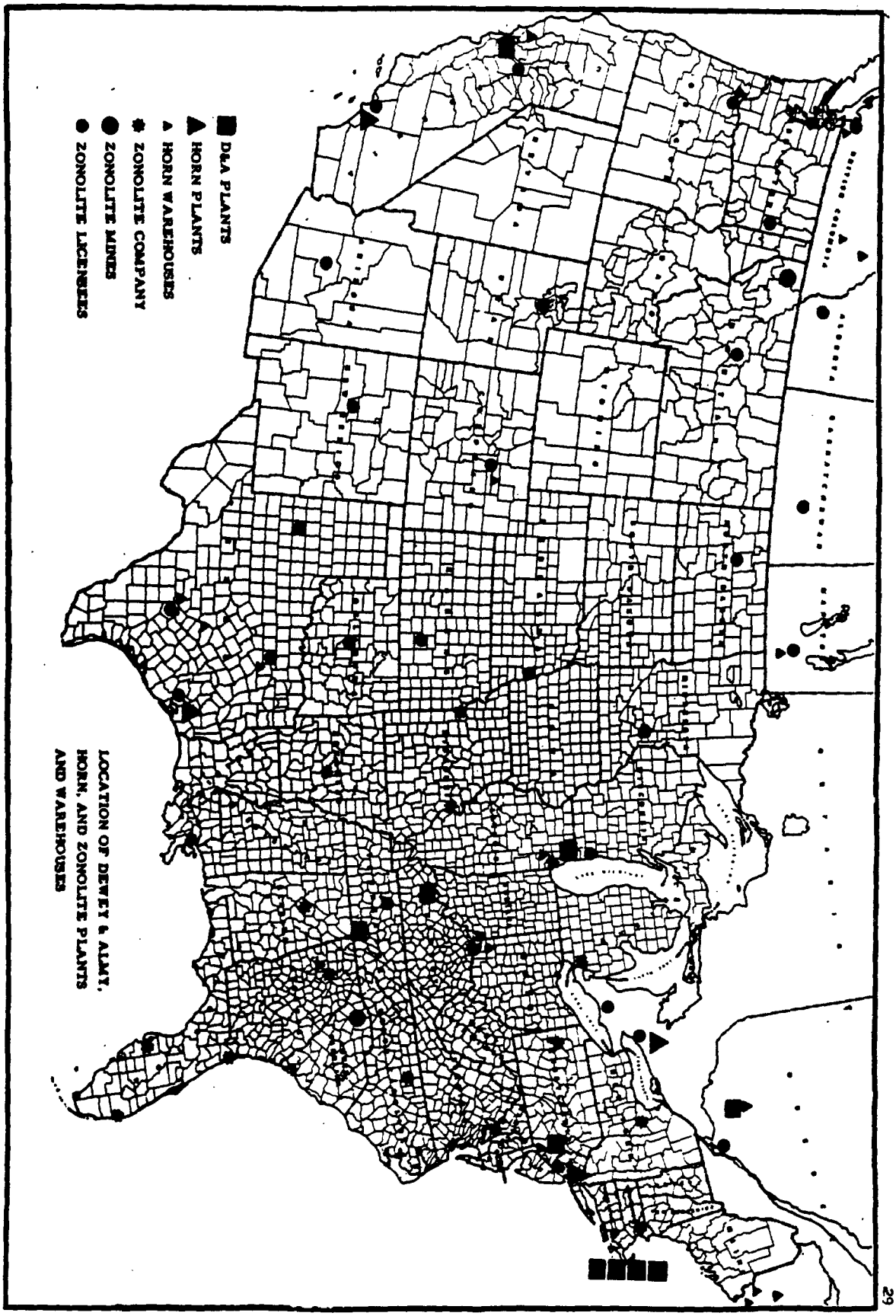

LOCATION OF DEWEY & ALMY, HORN, AND ZONOLITE PLANTS AND WAREHOUSES

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Zonolite Product Definitions

The following brief definitions of Zonolite's major products may prove helpful:

1. Ore Concentrates

   Industrial Ore is unexpanded vermiculite which is sold for such industrial applications as slow cooling of molten metal, dispersing of chemicals and use as galvanizing vat blankets.

   Verxite, a more highly purified form of vermiculite ore, is now being produced as animal feed base material for carrying vitamins, nutrients, antioxidants, etc.

2. Expanded Vermiculite
   (Generally sold in 4 cubic foot bags).

   Housefill is Number 1 (peanut size) expanded vermiculite sold by Zonolite as a loose fill, fireproof insulation for the attics of older houses, and as a re-insulation in attics where mineral wool type insulation has settled or where an insufficient thickness of glass fiber insulation was originally installed.

   Econofil is Number 2 (large pea-size) expanded vermiculite. Its uses are the same as for Housefill.

   Zonolite Insulating Concrete Aggregate is Number 3 (small pea-size) expanded vermiculite used in concrete under carefully controlled conditions by approximately 100 licensed applicators. Combined with portland cement and water, the aggregate serves to construct lightweight fireproof insulation for roof decks.

   Zonolite Plaster Aggregate, Number 3 size expanded, is used by plasterers in combination with gypsum to provide a lightweight, insulating, more fire resistant plaster for either hand or machine application.

   Masonry Fill is a specially treated expanded vermiculite for insulating cavity walls and the cores of concrete blocks which is water resistant.

Mixed Products are mill mixed plasters and plastics. Included are:

Mono-Kote, a fireproofing material designed for direct application to structural steel floors and beams and to concrete surfaces.

Zono-Coustic, an acoustical plaster affording fast machine application, high sound absorption and freedom from fissuring or shrinkage.

Zonolite Acoustical Plastic, an acoustical material with good sound absorption characteristics and rated fire resistance for hand or machine application. This material follows any contour and bonds to plaster, concrete, galvanized metal or other clean, firm surfaces.

Zonolite Spra-Insulation, an insulating and acoustical material for application to metal building interiors. Applied by machine, it gives a hard, durable coating that controls condensation.

Agricultural Sales include expanded Number 4 size (granules) and Number 5 size ore sold as a chemical carrier and a bulking material to manufacturers of fertilizers, pesticides, herbicides, etc.

Terralite is an expanded vermiculite sold in bags for soil conditioning.

Miscellaneous uses for bagged vermiculite include barbecue grill base, and sales to chain outlets for minor specialty uses.

3. "Other-Than-Vermiculite" Products

In addition to ore concentrate and expanded vermiculite products the Zonolite Company markets fiber glass home insulation and styrofoam board (Dyfoam) and expanded perlite. The reselling of aluminum siding is being discontinued.

Perlite, sold as a plaster aggregate, is purchased in crude form and expanded in furnaces in three Zonolite plants.

Glass Fiber is a conventional blanket-type insulation batt with a reflective aluminum vapor barrier adhered to one side.

Dyfoam, an expanded bead polystyrene foam, paper laminated, flexible insulating board developed by Zonolite, is used as a backer for aluminum siding, plaster base insulation, industrial insulation, curtain wall insulation, and as perimeter insulation.

Short Fiber Tremolite Asbestos Outlook

In Zonolite's Montana ore deposits, tremolite asbestos occurs in varying concentrations. There are rich veins containing up to 80% asbestos which are discarded as mine waste. Asbestos that is more intimately intermingled with vermiculite is fed to the mill and discarded in the mill tailings. The asbestos volume available is believed adequate to support a commercial recovery rate of 50,000 tons per year and pilot work is under way on a process for so doing.

It is of interest to note that Zonolite purchases between 5,000 and 10,000 tons/year of short fiber (chrysotile type) asbestos for use in its mixed products. The Libby tremolite asbestos can be substituted for all of Zonolite's asbestos purchases. This would provide a valuable base load for Zonolite's proposed asbestos plant. It is believed that the tremolite type asbestos can be substituted for enough of the 1961 estimated U.S.A. consumption of 490,000 tons of short fiber chrysotile asbestos to provide an attractive market (at $40 a ton) for the proposed Libby asbestos mill. This point, however, must (and will be) checked out as soon as semi-commercial quantities of the material become available and before an RCA is prepared for the project.

Current plans for the commercial asbestos plant include start of construction in time to support sales of $600,000 (15,000 tons at $40) in 1964 reaching the $1,400,000 level

(35,000 tons) in 1966. Zonolite's internal capital budgets, based on preliminary engineering studies, provide for a fixed asset investment in the project of $1,500,000 and incremental working capital of $50,000 in support of the project, for a total capital employed of $1,550,000. It should be pointed out that this RCA does not request authority for this project.

After-tax earnings from the asbestos operations are projected at $300,000 in 1966, a return of 19.4% on total capital employed. This would increase the RCA 1966 earnings per Grace acquisition share of $3.84 by $1.20 a share for a total of $5.04 a share. However, it is entirely premature to count on this materializing although, as previously indicated, it looks promising on the basis of available information.