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PROSPECTUS

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SPRAGUEVILLE

Mineral Property,

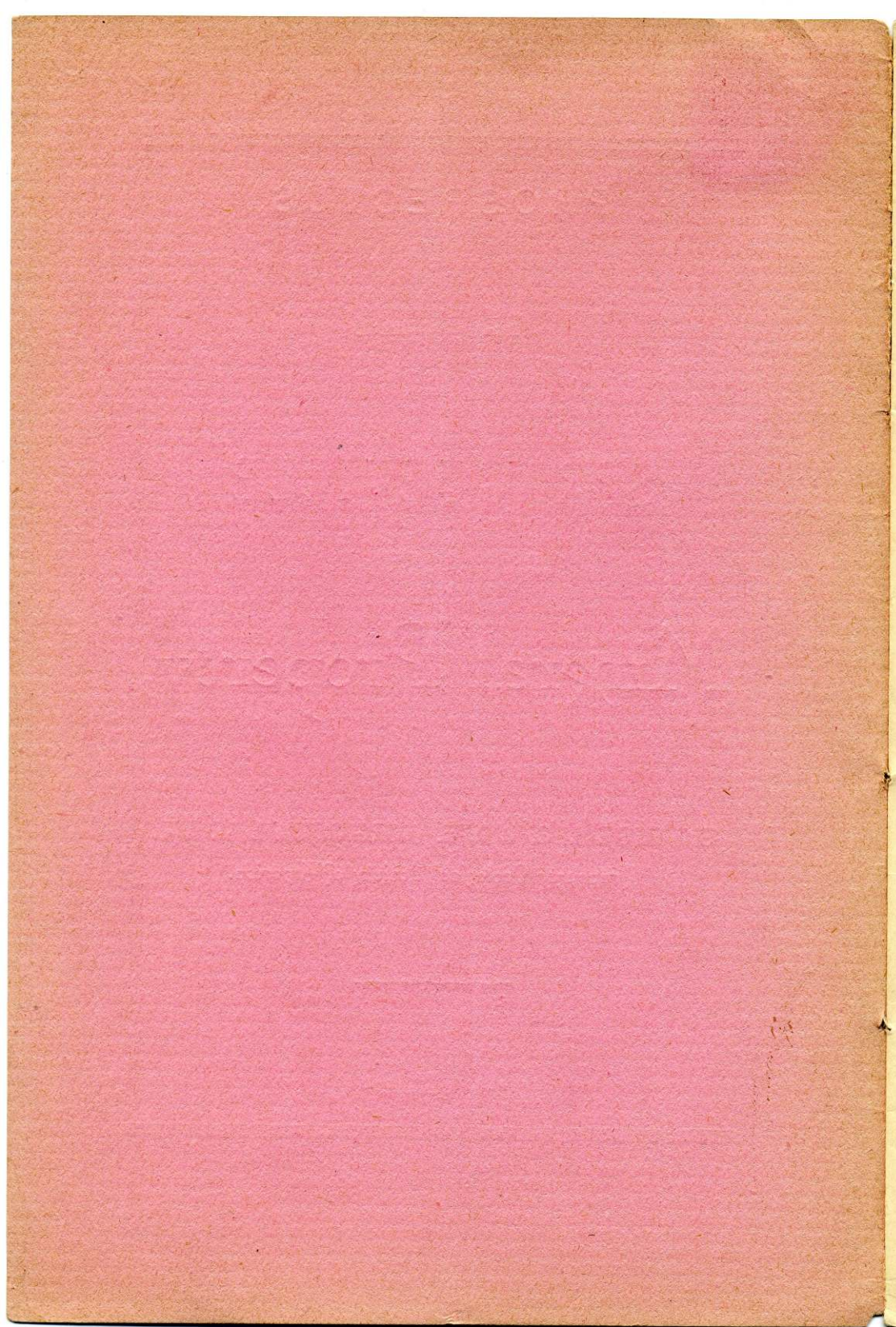
BY PROF. I. C. WHITE, MORGANTOWN, W. VA.,

Treasurer Geological Society of America.



1893.

GRAFTON LEADER PRINT



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PROSPECTUS

SPRAGUEVILLE

Missouri Property

BY FRED A. SMITH, ATTORNEY AT LAW

OF SPRAGUEVILLE, MISSOURI

THE  SPRAGUEVILLE  
Mineral Property.

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BY I. C. WHITE.

The "Spragueville" mineral lands, concerning which this report has reference, are situated near the line between Taylor and Marion counties, W. Va., on the Tygart's Valley River and on the main line of the B. & O. R. R., 10 miles west from Grafton. The property consists of about 500 acres of land in fee and 200 acres under lease, extending along the left bank of the river for nearly a mile. It is also cut by a tributary of considerable size, Lost Run, which puts into the river through the property, thus giving excellent access to the several beds of clay, coal, building stone, &c., found on the lands in question.

Geologically the lands lie along the crest of the Chest-

nut Ridge anticlinal, or rather just west from the crest, where the rise of the strata is to the S. E. and where that great arch brings up all of the members of the Lower or Allegheny River Coal Measures above water level. The members of this series exposed here are as follows, beginning at the top, according to Bulletin 65, U. S. G. Survey, pages 128 and 129:

1. Upper Freeport coal.....	3' 00"
2. Concealed, sandstone and shales.....	59' 00"
3. Coal, slaty, Lower Freeport.....	7' 04"
4. Fireclay, shales and sandstone.....	55' 00"
5. Coal, Upper Kittanning, good.....	3' 09"
6. Shales, dark.....	16' 00"
7. Coal, Middle Kittanning.....	1' 00"
8. Shales and sandstone.....	37' 00"
9. Coal, Lower Kittanning.....	5' 00"
10. Fireclay.....	5' 00"
11. Sandstones and shales.....	40' 00"
12. Coal, Clarion.....	1' 02"
13. Shales and concealed.....	25' 00"
14. Massive sandstone, top of No. XII.	

Immediately above No. 1 of this section come the massive sandstones of the Mahoning series, which cap out the hills, and are unexcelled for building purposes.

The coals, Nos. 1, 5, and 9, are of good quality and underlie the entire property from their outcrops back, with the exception of No. 9, which is absent from much of the land. Coal No. 3 is rather slaty on its outcrop but may improve with drifting further into the hills. When coal No. 9 is absent it is replaced by a splendid bed of excellent fire-clay, which is the most valuable mineral element on the property. This is the same stratum geologically as the famous clay beds at New Cumberland, East Liverpool, Rochester, New Brighton, and elsewhere in the upper Ohio Valley. It is usually 5 to 6 feet thick, the upper half of which is of the variety known as "soft" clay, and the lower half "hard,"

clay. A specimen of each of these varieties was recently analyzed by Mr. A. S. McCreath, of Harrisburg, Pa., the results of which are here compared with two other analyses of the same stratum from other localities:

	I	II	III	IV
Silica.....	47.880	68.315	55.960	60.300
Alumina.....	33.985	19.620	28.415	24.120
Oxide of Iron.....	1.368	1.575	1.641	1.460
Titanic Acid.....	3.185	1.370	1.010	1.200
Magnesia.....	0.346	0.692	0.396	0.680
Lime.....	0.360	0.100	0.070	0.590
Potash.....	0.079	2.345	0.615	2.420
Soda.....	0.402	0.359	.....	.....
Water.....	12.388	5.580	12.690	8.630
Totals.....	99.993	99.956	100.797	99.500

- I—"Hard" clay from Spragueville, W. Va., McCreath.  
 II—"Soft" clay " " " "  
 III—Kittanning fire-clay, Kittanning, Pa., McCreath.  
 IV—" " " East Liverpool, O., N. W. Lord.

These clays, III and IV, at Kittanning and East Liverpool, have long been mined and successfully manufactured into many forms of fire brick, paving brick, sewer pipe, and all kinds of terra cotta wares. The above analyses show the clays to be quite as similar in chemical constitution as they are identical in geological horizons, and hence the same kind of commercial articles could be made from the Spragueville clay as from that at Kittanning and East Liverpool. Besides this stratum of clay has long been manufactured into coke oven fire brick, paving brick and other forms, at Nuzum's, a station just across the Tygart's Valley river from the property in question, at the Glade Fire Brick plant.

The special advantages of this property are the following:

It is the only property of the kind open to investment

with this character of clay on it anywhere along the B. & O. R. R. between Baltimore and Wheeling.

It is within 10 miles of the great coking field along the Monongahela river, which has recently been opened up with Fairmont as its center. This district already has over 600 ovens in operation, and is destined to have thousands in the near future.

The property has its own coal beds for fuel in burning brick.

The difference in freight rates between this property, with a haul of 10 miles, and the nearest other fire brick plant, 150 miles distant, and east of the Alleghanies, will of itself constitute a good profit alone.

Several other varieties of clay and shales exist on the property, and by proper mixing almost any line of clay working could be profitably undertaken.

This clay was once examined by Edgar Richards, the microscopist of the U. S. Treasury Department, who submitted the following report thereon:

TREASURY DEPARTMENT, WASHINGTON, Sept. 30, 1887.  
*Hon. Jos. S. Miller, Commissioner of Internal Revenue,*

SIR—The two samples of fire-clay received from you September 16th and 22nd, and submitted to me for examination, gave the following results on analysis. For comparison the average analysis of the Mt. Savage fire clay is added:

	SPRAGUEVILLE.	PRESTON CO.	MT. SAVAGE.
Moisture.....	1 33	1 63	10 37
Silica, .....	59 25	64 04	55 75
Alumina.....	32 26	34 00	33 23
Undeterm'd, lime, &c	7 16	0 35	2 06

A mechanical test of both samples was made and the results obtained on firing the small bricks for five hours at a white heat in a muffle furnace are herewith transmitted. An inspection of these samples will show that no fusion of any kind took place when subjected to the high temperature, and that the Spragueville samples burnt perfectly white, showing that there is not any injurious iron compound present in the clay. These clays are fitted for use in all metallurgical op-



erations where high temperatures are employed and a highly refractory material demanded.

Respectfully,

EDGAR RICHARDS, Microscopist.

Any parties desiring further information concerning this property with a view to investment should correspond either with L. Mallonee, Cashier First National Bank, Grafton, W. Va.

I. C. WHITE, Ph. D.,

Late Professor Geology W. Va. University, and Treasurer Geological Society of America.

Morgantown, W. Va., May 10th, 1893.

