STATE OF OREGON
Department of Geology and Mineral Industries
1005 State Office Building, Portland, Oregon 97201

OPEN FILE REPORT O-81-7

ROCK MATERIAL RESOURCES OF MARION, POLK, YAMHILL, AND LINN COUNTIES, OREGON

By

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October 1981

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ILLUSTRATIONS

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Oregon Department of Geology and Mineral Industries

SUMMARY

This study provides a mineral resource data base for use of the various county planning and public works departments, county and State road and highway departments, private contractors, and private citizens.

The text contains general information on geography and population, followed by specific information on the major rock types, geologic formations, and types of rock materials that occur in the four-county area.

Site-specific data are presented in maps and tables.

The four-county study area contains 1,168 sites that have been mined in the past. From the sites, 99 million yards of rock material have been excavated and 4,000 acres (0.14 percent of land area) were affected. Surveying shows that 176 million yards remain to be mined. Only sites with past production were surveyed.

This study recommends that the land status of all active and potential mining sites, particularly those near urban areas, should be determined in terms of present use and zoning classification. All future changes in status should consider the mineral potential of each parcel. Zoning of land which excludes mineral resource development would have the effect of preventing any future production and would reduce the available natural resource. The counties may wish to relate land status to mineral resource potential.

INTRODUCTION

General

The population of Marion, Polk, Yamhill, and Linn Counties, Oregon, is expected to continue to expand. While creating an increasing need for construction aggregate, this growth can simultaneously restrict the use of existing sources because of zoning, encroachment of incompatible development, and elimination of other rock material deposits by simply building over them. With proper planning, a continued supply of these important rock material resources will be available in a manner most compatible with the environment and long-range land use plans.

Purpose

The purpose of this study is to develop concise data on the rock material resources of the four-county area in a form which can be used as a data base for short-range planning for rock material supplies and Land Conservation and Development Commission's (LCDC) Goal 5, Program 3b, in compliance with ORS 215.055. This is a cooperative study of the Oregon Department of Geology and Mineral Industries, the Pacific Northwest Regional Commission, and the Land Conservation and Development Commission. Data from this report can be used by planners, politicians, and private citizens for planning and public decisions concerning land usage and also by contractors looking for rock materials for construction projects.

Study Parameters

ORS 215.055 states lands "that are, can, or should be utilized for sources or processing of mineral aggregate" must be taken into consideration in the adoption of land use ordinances. LCDC Goal 5, Program 3b, calls for inventories describing the location, quality, and quantity of mineral and

aggregate resources. To study and identify the aggregate resources that can be mined (as required under LCDC Goal 5, Guideline A6), in-depth study of geologic units must be undertaken and a geological map prepared. To study the aggregate resources that should be mined (as required under LCDC Goal 5, Guideline B1), a cultural restraints map should be prepared to overlay the site map. This study, however, inventories only those aggregate resources that have been mined in the past or are currently being mined, and these sites may not contain future reserves.

This study includes material resources location maps and survey data tables for each of the four counties. Each site was given a number which is used throughout the report. A survey of all possible rock resources was beyond the scope of this report. This study is not concerned with environmental or geological hazards, engineering geology, or metallic mineral resources.

LCDC Goal 5, Program 3a, calls for an inventory of land needed or desirable for open space. Guideline A2 states, "The maintenance and development of open spaces in urban areas should be encouraged." LCDC Goal 5, Guideline B9, states, "Areas identified as having non-renewable minerals and aggregate resources should be planned for interim, transitional and 'second use' utilization as well as for the primary use."

If reclamation is built into the aggregate mining system, some of the largest areas in the urban center that have not been built upon because they are being mined for rock material could be viewed as future open spaces. Possible reclamation for each site is listed in the survey data table.

Methods of Study

Files of the Department's Mined Land Reclamation Division and other State and county agencies were searched for rock material extraction site locations. Additional sites were identified by communication with local aggregate producers and personnel from individual counties, State Highway Division, U.S. Forest Service, Bureau of Land Management, and timber companies, and by inspection of aerial photographs. Other sites were located during travel while field surveying.

Before physical inventorying of sites began, all known sites were plotted on U.S. Geological Survey topographic maps or on appropriate maps from the Bureau of Land Management, U.S. Forest Service, the State Department of Forestry, or timber company maps.

On-site surveys were accomplished by use of a rangefinder and a clinometer or a planimeter and aerial photographs or maps. The surveys provided data on dimension and shape of each site, volume of material removed, and reserves remaining. Estimates of reserves were determined by considering depth and lateral extent of deposits, the thickness of overburden, limiting effect of ground water, property ownership, and conflicting land uses. The assumption was made that point bars in river channels normally can be cropped every three years, and that they had been for the last 30 years and would for another 30 years. Reserves were limited to 10 times past production.

The quality of the rock was estimated by field inspection; by identifying geologic formation, rock type, and characteristics; and by obtaining Oregon State Highway Division laboratory data.

Computer programs which printed the survey data which summarized various survey data factors such as area mined, past production, and site ownership, were developed.

Acknowledgments

The authors are grateful for help received from many individuals. Throughout the study, quarry and pit operators, including the timber companies, have been very cooperative in supplying site-location information and allowing access; they are too numerous to mention individually. Allen King of the Willamette National Forest was especially helpful. Bill Fretwell supplied the laboratory data from the Oregon State Highway Division.

GEOGRAPHY

Location, Physical Geography, Extent of Area, and Access

The study area is located in northwestern Oregon immediately south of the Portland area (Figure 1). The study straddles the Willamette River and is centered around Salem, the state capital.

The study area covers 4,926 sq mi: Yamhill County with 714, Polk County with 740, Marion County with 1,175, and Linn County with 2,297 sq mi. The area is divided into three geological and topographical provinces. They are from west to east: the Coast Range, the Willamette Trough, and the Western-High Cascade Range. Elevations range from 55 ft along the Willamette River to 10,497 ft at the top of Mt. Jefferson.

The Willamette Valley has a temperate maritime climate with moderately warm summers and wet, mild winters. The weather is cooler in the foothills and mountain range and can be extremely severe in the High Cascades. Rainfall ranges from about 70 in. per year along the Willamette River to well over 100 in. per year in the mountains. About 60 percent of the annual precipitation occurs during January through February, while only 10 percent occurs during June through September (Resource Atlases, OSU).

Land cover of the area is characterized by timber of the Douglas fir association in the uplands and farming in the lowlands and the Willamette Valley. The Douglas fir association consists of Douglas fir, with subordinate western hemlock, western red cedar, and grand fir. Also present are bigleaf and vine maple.

Willamette Valley crops include rye grass, various grains, fruits, grapes, strawberries, and vegetables. Much of the low-lying easily flooded areas are used for grazing.

The four mid-Willamette counties have excellent road and railway systems. The major north-south highways are Interstate 5 and U.S. 99W and 99E. The major east-west highways are U.S. 20 and Oregon routes 18, 22, and 34. The secondary system of state, county and forest access roads (Federal, state and private) allows good access to all parts of the study area. Rail service through the Willamette Valley is by Southern Pacific and Burlington Northern.

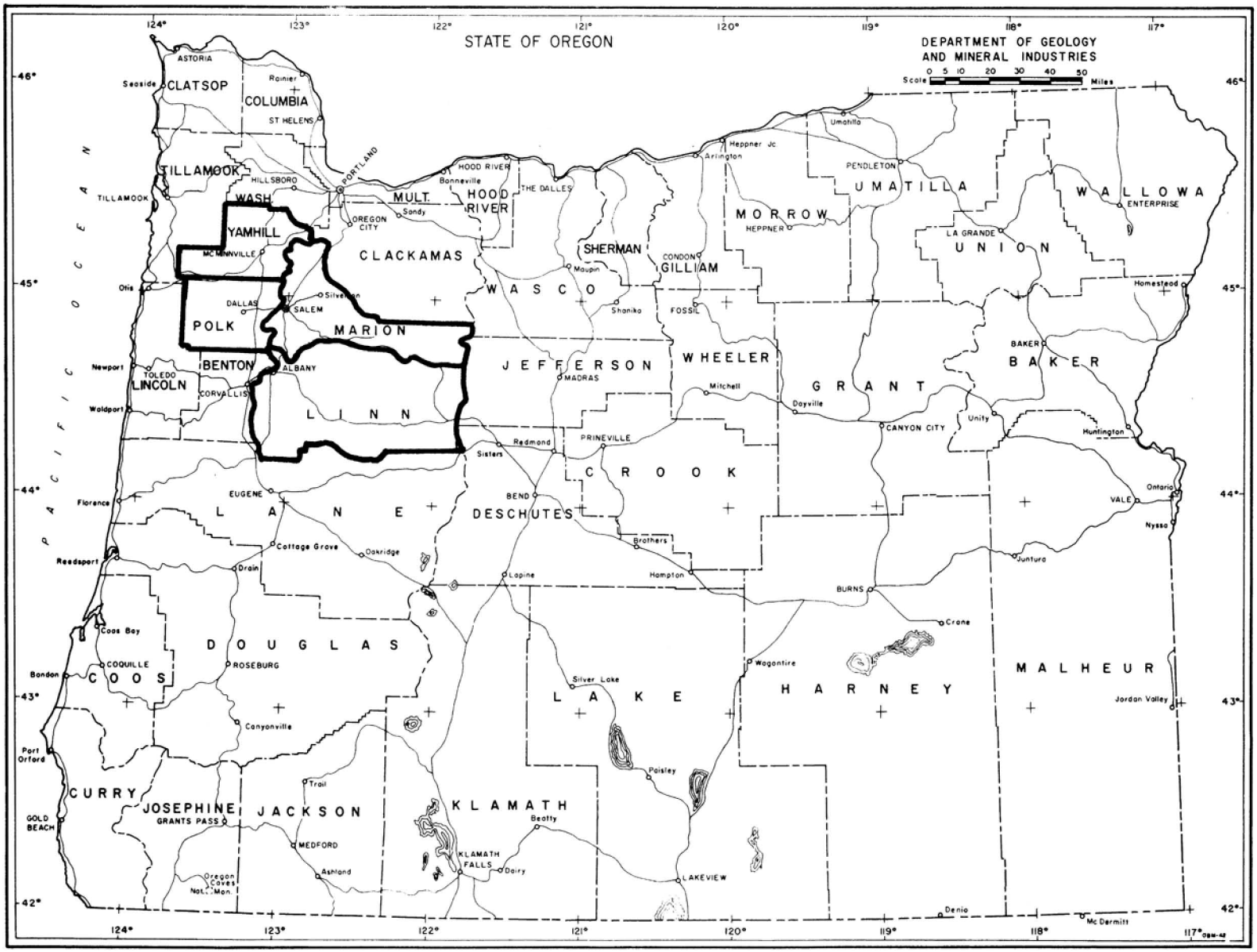

Figure 1. Index map with the counties included in this study outlined with heavy black lines.

Socioeconomic Factors

The four-county area had a population of 394,950 in 1980 (see Table 1). Population has grown an average of 2.53 percent annually since 1960. The largest city is the state capital of Salem, followed by Albany, McMinnville, Lebanon, and Woodburn. Employment is diversified, with large numbers of people engaged in government, timber and wood products, agriculture, metal refining, education, and services.

Table 1. Population statistics for the four study counties*

County	Population		
	1960	1970	1980
Linn	58,867	71,914	88,100
Marion	120,880	151,309	205,800
Polk	26,573	35,349	45,450
Yamhill	32,478	40,213	55,600
Total	238,798	298,785	394,950

* Oregon Blue Book (1981-82)

ROCK MATERIAL RESOURCES

General

Rock material is any naturally formed mass of consolidated or unconsolidated mineral matter or mined products obtained from such a mass. Deposits include clay and shale, sand and gravel, and stone. Mined products may include any or all of the types of material discussed below that are used as pit or quarry run, and/or processed by crushing, and/or screening, and/or drying. Processing does not include calcining or other treatments by which physical or chemical or both characteristics of the rock material are changed.

Lands showing no evidence of past mining were not surveyed for this study even though they might be potential sources of rock material. Furthermore, because potential in this study is based, in part, on cultural restraints, the future potential estimate given for a site may be increased through proper zoning and acquisition by the rock material producers. The only rock materials that have been mined in the four counties are clay and shale, sand and gravel, quarry stone (both crushed and dimension), and volcanic cinders.

Clay and Shale

Clay is a natural, earthy, fine-grained material composed of rock or mineral fragments less than 0.002 mm in size and containing a group of crystalline minerals known as clay minerals. Most clays exhibit plasticity when wet. Clay minerals may originate from simple weathering under generally humid conditions or from hydrothermal action which can transform surface or subsurface rocks of many types into more or less pure *in situ* deposits of one or more clay minerals. Transportation and deposition of exposed clay minerals will form deposits which may usually contain silt, sand, and other impurities. Shale deposits are formed by the transport of clay particles to a body of water where they settle out, forming clay beds. These beds then form compacted rock.

Clays from the mid-Willamette counties have in the past been used for common brick and tile. Most of Oregon's clay deposits produce a red- to dark-buff-colored brick because of the high iron content of the clay. However, the clay from Sites 99, Yamhill County, and 209, Polk County, produce a white to a light-tan brick. Site 99, originally Willamina Brick and Tile, has been reclaimed and is being used as an industrial site.

Sand and Gravel

Sand and gravel are mineral commodities that were produced by the natural disintegration of bed rock. The term "sand and gravel" refers to size of the bedrock fragments, not to the mineral content or rock type. The deposits of sand and gravel in the four counties are alluvial (river or glacial). Alluvial deposits are formed by stream action picking up, transporting, and depositing sand and gravel. Such deposits are usually imperfectly stratified and frequently show size gradations. Coarse sands and gravels may be interspersed with lenses of fine sands or clays. The beds vary greatly in thickness and are usually complex in composition. Particles are usually poorly sorted; they may be angular but are generally rounded because of the hardness of the material and the distance it has been transported. These deposits occur as bars within the stream channels and as point bars on the inside banks of meanders. The deposits also occur as old buried meander channels in the Willamette River flood plain.

The glacial deposits occur mainly in the Cascades. They are completely unstratified and contain a wide range of sizes of rock.

Stone (Dimension)

Dimension stone is quarried stone which is specially cut or shaped for use as gravestones or in buildings, bridges, curbing, or other construction. In the four counties, only two sites, Linn County Site 278 (sandstone) and Marion County Site 78 (tuff) are listed as dimension stone quarries. Small amounts of basalt, andesite, and limestone have been used for dimension purposes.

Stone (Crushed and Pit Run)

Crushed and pit-run quarry stone, almost all stone produced in the four-county area, is sold as pit-run or crushed stone. Pit-run stone is mined and sold without further processing. Crushed stone is reduced in size and screened to meet various consumer requirements. Most of the crushed and pit-run stone is quarried from igneous rock, mainly basalt and andesite, and is used for construction purposes. In the past, four limestone quarries in Polk County (Sites 212, 329, 330, and 331) were used as a source of lime for cement and agricultural purposes. For today's market, the grade is too low to be used.

Volcanic Cinder

Volcanic cinder has been produced from four sites: Linn County Sites 219, 220, and 496 and Marion County Site 169. Volcanic cinders are uncemented volcanic fragments formed from a basic igneous magma. The cinder can be used as a lightweight aggregate for concrete products; however, all the cinders produced from the four quarries were used for road topping or to improve traction on icy or snow-covered roads.

SURVEY DATA TABLES AND INVENTORY MAPS

General

The Oregon Department of Geology and Mineral Industries surveyed 1,168 rock material sites in the four counties. Rock material sites in Marion County are shown on Plate 1, Polk and Yamhill on Plate 2, and Linn on Plate 3. The survey data for Marion County are printed in Table 2, Polk County in Table 3, Yamhill in Table 4, and Linn in Table 5.

Table data for each site include site identification, location, status, size, source description, mining system, processing plant, and usage. Because a maximum of data is presented in the tables, the major column headings are discussed briefly in the following paragraphs.

Computer-generated summary tables for each county and for the entire study area appear as Table 11 in the appendix.

Site Identification

The site numbering system for rock material starts in the northwest corner of each county. The numbers follow the township to the east, move back to the west end of the next township to the south, and continue again to the east. Site operators located in the field are listed in the "Operator or Owner" column; title searches were not made. The four commodities included in this survey are clay identified by the letter "C" on the survey data tables, sand and gravel by "G", pumice and volcanic cinders by "P", and stone by "S". Land ownership of the sites in the study area is as follows: Federal, 377; State, 52; county, 16; local, 11; private (other than timber), 250; timber, 478; and unknown, 16. The ownership totals within each of the counties are listed in Table 6.

Table 2

MARION

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOLOGIC UNIT	COVER	WEATHER	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLAIM	FOOTNOTE
1	DAYTON	G	P	4S	3W	27NW	A	10	0.1	0.0	350	S	V	QAL	0	S	F	1	1	R		F-T	W	
2	OSHD	S	S	4S	1W	6NW	N	35	1.0	0.0	0	B	B	TYB	2	S	CM	2	33	R		FS	H	
3	WILMES	S	P	4S	1W	6SE	A	200	6.0	0.0	1000	B	B	TYB	3	M	FC	2	18	R		F-T	AF	
4	D BRICK	C	P	4S	1W	17SW	R	40	6.0	2.0	0	S	O	QTM	0	S	F	1	2	R	O	O	A	B
5	OSHD	G	S	4S	1W	31SE	R	300	10.0	0.0	0	S	G	QTM	0	S	F	1	2	R		F	WH	
6	G BAKER	G	P	5S	3W	2SW	I	2	0.1	0.0	200	S	V	QAL	0	S	F	1	3	R		F-T	W	
7	OSHD	G	S	5S	3W	11SW	A	160	17.0	0.0	200	S	V	QAL	1	S	F	1	3	R		F-T	H	
8	VIESKO	G	P	5S	3W	35NW	A	1000	36.0	10.0	3000	S	V	QTL	2	S	F	1	3	R	CSO	F-T	WH	AB
9	OSHD	G	S	5S	2W	28NE	R	1000	70.0	0.0	200	S	V	QTM	0	S	F	1	2	R		F	WH	
10	OSHD	G	S	5S	2W	28SE	N	200	14.0	0.0	200	S	V	QTM	0	S	F	1	1	R		F	WH	
11	OSHD	G	S	5S	2W	27NW	N	50	5.0	0.0	50	S	V	QMT	0	S	F	1	1	R		F	WH	
12	G BALL	G	P	6S	3W	11NE	R	1000	30.0	15.0	0	S	V	QMT	1	S	F	1	0	R		F-T	AW	A
13	R BEND	G	P	6S	3W	12SW	A	700	26.0	9.0	4000	S	V	QTL	2	S	F	1	4	R	CSO	F-T	WH	AB
14	UNKNOWN	G	P	6S	3W	16NE	I	5	0.5	0.0	50	S	V	QTL	0	S	F	1	1	R		F-T	WH	
15	STADELI	G	P	6S	3W	21SE	A	664	21.0	2.0	1000	S	V	QTM	1	S	F	2	7	R		F-T	WH	
16	WALLING	G	P	6S	3W	27NW	I	180	10.0	8.0	1800	S	V	QTM	1	S	F	1	8	R	O	F-T	WH	B
17	OSHD	G	S	6S	3W	25NE	R	450	12.0	0.0	0	S	V	QTM	0	S	F	1	10	R		F	W	
18	BLAKE	G	P	6S	3W	33SE	I	120	5.0	0.0	250	S	V	QAL	0	S	F	1	3	R		F-T	W	
19	KEIZER	G	P	6S	3W	33SE	A	750	32.0	8.0	1000	S	V	QTL	0	S	F	1	5	R		F-T	WH	
20	R BEND	G	P	6S	3W	35SW	A	2500	88.0	13.0	0	S	V	QTM	3	S	F	1	4	R		F-T	RW	A
21	OSHD	G	S	6S	3W	36SW	R	225	16.0	0.0	100	S	V	QTM	0	S	F	1	2	R		F	O	B
22	ABIQUA	G	P	6S	1W	22SE	I	660	29.0	18.0	600	S	V	QTL	1	S	F	1	3	R		F-T	WH	
23	SILVERT	G	P	6S	1W	23SW	A	450	18.0	6.0	300	S	V	QTL	2	S	F	1	12	R	CS	F-T	WH	
24	STADELI	G	P	6S	1E	19SE	A	100	4.0	0.0	100	B	B	TYB	1	S	FC	2	8	R		F-T	AR	
25	MARTUSH	S	P	6S	1E	29NE	R	80	3.0	0.0	0	B	B	TYB	0	S	FC	1	13	R		F-T	R	
26	UNKNOWN	S	P	6S	1E	28SW	R	4	0.1	0.0	4	B	B	TYB	0	S	F	1	7	R		F-T	A	
27	MCNATT	S	P	6S	1E	32NW	A	3	1.0	0.0	50	B	B	TYB	0	S	F	1	5	R		F-T	A	
28	OSHD	G	S	7S	3W	4SW	N	200	22.0	4.0	1000	S	V	QAL	0	S	F	1	3	R		F-T	WH	
29	UNKNOWN	G	P	7S	3W	11SW	I	850	20.0	6.0	0	S	V	QTM	3	S	F	1	3	R	O	F-T	IL	B
30	R BEND	G	P	7S	3W	12NW	N	680	20.0	4.0	0	S	V	QTM	1	S	F	1	1	R		F-T	WH	
31	COMERCL	G	P	7S	3W	30SW	A	525	18.0	6.0	1500	S	V	QTL	0	S	F	1	5	R	CS	F-T	WH	
32	HEYDEN	G	P	7S	3W	30SW	A	3	0.4	0.0	30	S	V	QTL	0	S	F	1	4	R		F-T	AWH	
33	OS PEN	G	S	7S	3W	25SE	N	250	4.0	0.0	0	S	V	QTM	1	S	F	1	0	R		F-T	WH	
34	IHCCA	G	P	7S	3W	31SW	I	2	0.1	0.0	2	S	V	QTL	0	S	F	1	4	R		F	A	
35	SALEM	G	L	7S	3W	32SW	R	700	34.0	0.0	0	S	V	QTL	2	S	F	1	4	R		F-T	WHO	B
36	WALLING	G	P	7S	3W	35SW	I	1300	18.0	31.0	0	S	V	QTM	2	S	F	1	2	R	O	F-T	IW	B
37	WALLING	G	P	7S	3W	35SE	I	3000	44.0	4.0	0	S	V	QTM	1	S	F	1	4	R		F-T	W	A
38	R BEND	G	P	7S	3W	36SE	A	3000	27.0	20.0	1300	S	V	QTM	1	S	F	2	15	R		F-T	IW	A
39	SALEM	G	L	7S	3W	36SE	R	2000	30.0	38.0	0	S	V	QTM	1	S	F	1	1	R		F-T	WO	B
40	V SPAUR	S	P	7S	1W	12NE	A	21	1.0	0.0	50	B	B	TYB	0	S	F	1	20	R		F-T	RF	
41	V SPAUR	S	P	7S	1W	12NE	A	30	2.0	0.0	500	B	B	TYB	0	S	F	2	22	R		F-T	RF	
42	QUALEY	S	P	7S	1W	25SW	A	17	1.0	0.0	20	B	B	TYB	1	M	FB	1	12	B	CS	F-T	A	
43	UNKNOWN	S	P	7S	1W	36NW	N	10	0.7	0.0	10	B	B	TYB	1	M	FB	1	8	R		F-T	A	
44	SILVERT	S	L	7S	1E	7NW	N	6	0.4	0.0	24	B	B	TYB	0	S	FC	2	4	B		F-B	F	
45	QUALEY	S	P	7S	1E	7SW	A	6	0.4	0.0	100	B	B	TYB	0	S	F	2	10	R		F-T	F	
46	V SPAUR	S	P	7S	1E	11SE	A	70	2.0	0.0	100	T	B	TYB	0	M	FM	1	14	R		F-T	F	
47	MAULDNG	S	P	7S	1E	24NW	I	5	0.4	0.0	15	B	B	TYB	0	S	F	1	12	R		F-T	F	
48	MAULDNG	S	P	7S	1E	26NE	A	11	2.0	0.0	100	B	B	TYB	0	S	F	1	3	R		F-T	A	
49	OSHD	S	S	7S	1E	35SW	N	12	0.6	0.0	12	B	B	TYB	0	S	FM	1	11	B		F-B	F	
50	TIMBER	S	T	7S	1E	36NW	N	2	0.1	0.0	20	B	B	TYB	0	SM	FB	2	8	RB		F-T	F	
51	UNKNOWN	S	P	7S	2E	7NW	N	13	1.0	0.0	20	B	B	TYB	0	M	FC	1	10	R		F-T	A	
52	OSF	S	T	7S	2E	27SE	A	1	0.1	0.0	5	B	A	TS	0	S	F	1	5	R		F-T	F	
53	TIMBER	S	T	7S	2E	33SW	I	24	1.0	0.0	2	B	A	TS	0	S	FB	2	9	R		F-T	F	
54	UNKNOWN	S	P	8S	4W	21SE	N	10	2.0	0.0	100	S	V	QAL	0	S	F	1	0	R		F-T	WH	
55	UNKNOWN	S	P	8S	4W	23NW	N	10	0.7	0.0	25	B	B	TYB	0	SM	F	1	13	R		F-B	AIR	
56	VALLEYC	G	P	8S	4W	28SE	A	216	15.0	0.0	750	S	V	QTL	0	S	F	2	3	R		F-T	WH	
57	SALEM	G	L	8S	3W	1SE	A	750	9.0	2.0	0	S	V	QTM	1	S	F	1	1	R		F-T	L	
58	HILL TR	S	P	8S	3W	8SW	A	200	8.0	0.0	600	B	B	TYB	0	S	FC	4	10	B	C	F-T	R	A
59	UNKNOWN	S	P	8S	3W	8SW	I	1	0.1	0.0	5	B	B	TYB	0	S	F	1	4	B		F-T	R	
60	OSHD	S	S	8S	3W	11SE	I	35	1.0	0.0	0	B	B	TYB	1	S	F	1	11	RB		F-T	R	
61	UNKNOWN	S	P	8S	3W	22NE	I	6	1.0	0.0	1	B	B	TYB	18	M	F	2	16	R		F-T	AR	
62	OSHD	S	S	8S	3W	25NE	I	15	1.0	0.0	2	B	B	TYB	0	S	F	1	7	R		F-T	AR	
63	OSHD	S	S	8S	3W	25NE	I	48	2.0	0.0	100	B	B	TYB	0	S	FC	1	12	RB		F-T	RF	A
64	WALLING	G	P	8S	2W	6NW	A	2000	69.0	21.0	3600	S	V	QTM	1	S	F	3	8	R	CS	F-T	W	
65	OS PEN	S	S	8S	2W	4SW	R	80	4.0	0.0	0	B	B	TYB	0	C	F	1	11	R		F	AO	B
66	COMO CS	G	P	8S	2W	7NE	A	4100	99.0	41.0	6500	S	V	QTM	2	S	F	1	9	R	CSO	F-T	WH	AB
67	UNKNOWN	S	P	8S	2W	8SE	N	1	0.1	0.0	0	B	B	TYB	0	M	FC	1	4	R		F-T	A	
68	UNKNOWN	S	P	8S	2W	18SW	N	6	0.4	0.0	0	B	B	TYB	0	S	CM	1	10	B		FS	R	
69	TURNER	S	P	8S	2W	29NW	A	270	15.0	1.0	3000	B	B	TYB	2	SM	FM	5	17	RB	CS	F-T	AR	
70	UNKNOWN	S	P	8S	1W	4SE	A	36	2.0	0.0	100	B	B	TYB	0	S	CM	1	5	B		FS	F	
71	UNKNOWN	S	P	8S	1W	27NW	N	5	0.4	0.0	10	B	B	TYB	0	S	FM	1	4	B		F-B	A	
72	FISH&WI	G	S	8S	1W	31NW	N	285	7.0	1.0	500	S	V	QTM	0	S	F	1	2	R		F-T	W	
73	UNKNOWN	G	P	8S	1W	31SW	N	230	4.0	0.0	100	S	V	QTM	0	S	F	1	2	R		F-T	R	
74	FISH&WI	G	S	8S	1W	31SW	N	250	7.0	0.0	500	S	V	QTM	0	S	F	1	1	R		F-T	H	
75	UNKNOWN	S	P	8S	1E	1SW	N	31	2.0	0.0	10	B	B	TYB	0	S	FB	1	12	B		F-B	F	
76	QUALEY	S	P	8S	1E	17NW	A	21	2.0	0.0	30	B	B	TYB	0	S	FC	2	7	B		F-T	A	
77	OSHD	S	S	8S	1E	17NW	A	26	2.0	0.0	4	B	B	TYB	0	S	F	1	5	B		F-T	A	
78	UNKNOWN	S	P	8S	1E	29NW	N	6	1.0	0.0	10	B	B	T	TS	2	S	M	8	1	O	O	A	B
79	TIMBER	S	T	8S	2E	3NW	A	34	0.6	0.0	100	B	A	TS	1	S	FC	1	15	RB		F-T	F	
80	TIMBER	S	T	8S	2E	12NE	A	8	0.6	0.0	50	B	A	TS	0	S	FC	1	8	R		F-T	F	

Table 2 (continued)

MARION

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
81	TIMBER	S	T	8S	2E	21SE	A	76	2.0	0.0	200	B	A	TS	1	S	FB	2	22	RB		F-T	F		
82	TIMBER	S	T	8S	2E	22NE	N	8	0.3	0.0	0	B	B	TS	3	S	CM	1	15	RB		F-B	F		
83	TIMBER	S	T	8S	2E	24NE	N	28	0.8	0.0	50	B	A	TS	1	S	FM	2	36	R		F-B	F		
84	TIMBER	S	T	8S	2E	24SW	I	16	0.5	0.0	50	B	A	TS	0	S	FB	1	12	RB		F-B	F		
85	TIMBER	S	T	8S	3E	6SW	A	10	0.6	0.0	50	B	A	TS	0	S	FB	1	11	R		F-T	F		
86	TIMBER	S	T	8S	3E	7NE	A	7	0.4	0.0	70	B	A	TS	0	S	FB	1	12	R		F-T	F		
87	TIMBER	S	T	8S	3E	7SE	I	1	0.1	0.0	3	B	A	TS	0	S	FB	2	14	R		F-T	F		
88	TIMBER	S	T	8S	3E	8NE	A	4	0.2	0.0	40	B	A	TS	0	S	FB	1	9	R		F-BO	F		B
89	TIMBER	S	T	8S	3E	8SW	I	1	0.1	0.0	4	B	A	TS	0	S	FB	1	4	R		F-B	F		
90	TIMBER	S	T	8S	3E	10SE	A	1	0.1	0.0	4	B	A	TS	0	S	FC	1	3	R		F-T	F		
91	TIMBER	S	T	8S	3E	17NW	I	3	0.2	0.0	2	B	A	TS	0	S	FB	1	23	R		F-T	F		
92	TIMBER	S	T	8S	3E	16NE	I	6	0.5	0.0	1	B	B	TS	0	SC	FM	1	11	R		F-T	F		
93	TIMBER	S	T	8S	3E	15NW	A	12	0.4	0.0	30	B	A	TS	0	S	FM	1	17	R		F-T	F		
94	TIMBER	S	T	8S	3E	14SE	A	1	0.1	0.0	1	B	A	TS	0	S	FB	1	5	R		F-T	F		
95	TIMBER	S	T	8S	3E	22SE	N	1	0.2	0.0	0	B	A	TS	0	M	F	1	2	R		F-T	F		
96	TIMBER	S	T	8S	3E	29NE	I	2	0.1	0.0	2	B	B	TLB	0	SM	FB	1	9	R		F-T	F		
97	TIMBER	S	T	8S	3E	28NW	I	30	1.0	0.0	100	B	A	TS	0	S	FB	2	22	R		F-T	F		
98	TIMBER	S	T	8S	3E	28SE	A	13	1.0	0.0	2	B	A	TS	0	S	FC	2	17	R		F-T	F		
99	TIMBER	S	T	8S	3E	26NW	I	3	0.4	0.0	10	B	A	TS	0	S	FB	1	30	R		F-T	F		
100	TIMBER	S	T	8S	3E	25NE	I	6	0.3	0.0	0	B	A	TS	0	SC	FM	1	19	R		F-T	F		
101	TIMBER	S	T	8S	3E	31SW	I	15	0.5	0.0	0	B	A	TS	0	SC	FM	2	15	R		F-B	F		
102	TIMBER	S	T	8S	4E	18SE	I	2	0.1	0.0	0	B	A	TS	0	SC	FM	1	11	R		F-B	F		
103	USFS	S	F	8S	4E	28SE	N	2	0.2	0.0	5	S	V	QTM	0	S	F	1	6	R		F-T	F		
104	USFS	S	F	8S	4E	26SE	I	2	0.2	0.0	10	T	B	TLB	0	S	FB	2	8	R		F-T	F		
105	USFS	S	F	8S	4E	33SW	I	14	0.5	0.0	3	B	B	TLB	0	S	FM	2	10	B		F-B	F		
106	USFS	S	F	8S	4E	34NW	I	4	0.3	0.0	10	T	T	TLB	0	M	F	1	55	R		F-T	F		
107	USFS	S	F	8S	4E	34NE	N	5	0.3	0.0	1	B	T	TLB	0	M	FC	1	36	R		F-T	F		
108	USFS	S	F	8S	5E	31NW	I	9	0.5	0.0	5	B	O	TI	0	S	FC	1	21	R		F-T	F		B
109	USFS	S	F	8S	6E	25SW	I	2	0.1	0.0	0	B	T	TLB	0	S	F	1	11	R		F	F		
110	USFS	S	F	8S	6E	34SE	A	4	0.2	0.1	20	B	T	TLB	0	S	FM	1	7	RB		F-B	F		
111	USFS	S	F	8S	7E	15NW	A	18	2.0	0.1	100	B	B	QTV	0	S	FB	2	21	R		F-B	F		
112	USFS	S	F	8S	7E	23SW	I	6	0.3	0.0	30	B	B	QTV	0	S	CM	1	12	B		F-BRJ	F		
113	USFS	S	F	8S	7E	24SW	I	3	0.4	0.1	10	B	B	QTV	0	S	FM	1	4	R		F-BRJ	F		
114	USFS	S	F	8S	7E	29SE	I	31	1.0	0.2	100	B	B	TLB	0	S	FC	1	15	R		F-T	F		
115	USFS	S	F	8S	7E	28SW	A	6	0.5	0.0	25	B	B	QTV	0	S	FM	2	13	R		F-T	F		
116	USFS	S	F	8S	7E	26NE	A	39	10.0	0.5	250	B	B	QTV	2	S	FM	2	10	B	CS	F-BRJ	F		
117	USFS	S	F	8S	7E	25NE	I	24	1.5	0.5	100	B	B	QTV	0	S	FM	2	17	RB		F-BR	F		
118	USFS	S	F	8S	7E	31SW	A	1	1.6	0.1	10	B	B	TI	2	S	F	1	2	R		F-T	F		
119	USFS	S	F	8S	8E	14SE	I	6	1.0	0.1	60	B	B	QTV	0	S	CM	1	8	R		FS	F		
120	USFS	S	F	8S	8E	20NE	I	3	0.1	0.0	30	T	B	QTV	0	S	FM	1	22	R		F-T	F		
121	USFS	S	F	8S	8E	27SW	I	15	1.0	0.0	150	T	B	QTV	0	S	FM	1	24	R		F-T	F		
122	MARION	S	C	9S	3W	2NW	I	20	0.4	0.0	400	B	B	TYB	0	S	FC	1	6	R		F-T	W		
123	MARION	S	C	9S	3W	2SW	A	110	3.0	0.0	200	B	B	TYB	0	S	FC	2	11	R		F-T	AR		A
124	OSHD	S	S	9S	3W	2SW	I	25	1.0	1.0	200	B	B	TYB	0	S	FC	1	9	R		F-T	RF		
125	DAVIDSN	S	P	9S	2W	29SE	A	21	1.0	0.0	200	B	B	TYB	0	S	FC	1	13	R		F-T	A		
126	UNKNOWN	S	P	9S	2W	28NW	N	9	0.8	0.0	30	B	B	TYB	0	S	F	1	9	R		F-T	AR		
127	UNKNOWN	S	P	9S	2W	32SE	I	100	3.0	0.0	500	B	B	TYB	0	S	FM	2	21	B		F-B	A		
128	UNKNOWN	S	P	9S	1W	11NW	N	10	0.6	0.0	0	B	A	TS	0	S	FB	1	6	R		F-T	F		
129	OSHD	S	S	9S	1W	11NE	I	7	0.5	0.0	70	B	A	TS	0	S	FC	1	12	R		F-T	A		
130	UNKNOWN	S	P	9S	1E	9SE	A	6	0.7	0.0	25	B	B	TYB	0	S	F	1	4	R		F-T	F		
131	SMITH	S	P	9S	1E	15NW	I	90	4.0	1.0	300	B	B	TYB	0	S	FC	4	28	R		F-T	A		
132	UNKNOWN	S	P	9S	1E	14SW	I	9	0.4	0.0	300	B	B	TYB	0	S	F	1	28	R		F-T	F		
133	TIMBER	S	T	9S	2E	5SE	A	14	0.3	0.0	70	B	A	TS	0	S	FB	3	9	R		F-T	F		
134	TIMBER	S	T	9S	2E	15SW	A	3	0.5	0.0	15	B	A	TLB	1	S	FB	1	4	R		F-T	F		
135	FRANK L	S	P	9S	2E	25SE	A	158	16.0	0.0	200	S	V	QTL	0	S	F	1	3	R		F-T	I		
136	UNKNOWN	S	P	9S	3E	8SW	I	6	0.3	0.0	50	B	B	TYB	0	S	FC	1	29	B		F-T	F		
137	UNKNOWN	S	P	9S	3E	18NW	I	38	1.0	0.0	25	B	B	TYB	0	S	FB	2	30	R		F-T	F		
138	TIMBER	S	T	9S	3E	19NW	A	44	2.0	0.0	50	B	A	TS	0	SC	FM	2	8	R		F-T	F		
139	TIMBER	S	T	9S	3E	23NE	I	1	0.1	0.0	3	B	A	TS	0	S	FC	1	4	R		F-T	F		
140	UNKNOWN	G	P	9S	3E	30SW	R	27	3.0	0.0	0	B	V	QTL	0	S	FM	1	2	R		F-B	IR		
141	OSF	S	S	9S	3E	25NE	A	4	0.6	0.0	8	B	A	TS	0	S	FM	1	3	R		F-T	F		
142	TIMBER	S	T	9S	4E	20SW	I	5	0.5	0.0	15	B	B	TS	0	M	FC	1	6	R		F-T	F		
143	OSF	S	S	9S	4E	21SE	N	2	0.1	0.0	4	B	B	TLB	0	SM	FB	2	13	R		F-T	F		
144	OSF	S	S	9S	4E	22SW	N	1	0.1	0.0	0	B	B	TLB	0	S	FC	1	14	R		F-T	F		
145	OSF	S	S	9S	4E	23NW	N	8	0.3	0.0	8	T	V	TLB	0	S	F	1	13	R		F-T	F		
146	USFS	S	F	9S	5E	8SW	I	3	0.1	0.0	1	T	T	TLB	0	S	FM	1	50	R		F-T	F		
147	USFS	S	F	9S	5E	23SW	N	2	0.1	0.0	15	B	A	TS	0	S	FC	1	24	R		F-B	F		
148	USFS	S	F	9S	5E	24NE	A	10	0.5	0.2	75	B	B	QTV	0	S	FB	2	16	R		F-BO	F		B
149	USFS	S	F	9S	5E	30SE	A	26	1.0	0.0	100	B	A	TS	0	S	FM	2	20	B		F-B	F		
150	USFS	S	F	9S	5E	29SE	I	13	0.7	0.0	100	T	A	TLB	0	S	FM	1	69	R		F-T	F		
151	USFS	S	F	9S	5E	28SW	I	2	0.1	0.0	4	T	A	TLB	0	S	F	1	10	R		F-T	F		
152	USFS	S	F	9S	5E	26NE	I	12	0.2	0.0	10	B	E	TLB	0	M	F	1	35	R		F-T	F		
153	USFS	S	F	9S	5E	26SE	N	2	0.1	0.0	10	B	B	TLB	0	SM	FM	1	21	R		F-B	F		
154	USFS	S	F	9S	5E	36NE	I	16	0.3	0.0	0	T	T	TLB	0	S	FM	1	61	R		F-T	F		
155	USFS	S	F	9S	6E	2SE	I	1	0.1	0.0	5	B	A	TI	0	S	FC	1	19	R		F-T	F		
156	USFS	S	F	9S	6E	11SW	I	15	2.0	0.1	10	B	B	TS	0	M	FC	2	13	R		F-T	F		
157	USFS	S	F	9S	6E	17NE	I	36	2.0	0.0	20	T	T	TLB	0	SM	FC	1	30	R		F-T	F		
158	USFS	S	F	9S	6E	20NE	A	42	2.0	1.0	200	B	B	QTV	0	S	FM	1	2	R		F-BO	F		B
159	USFS	S	F	9S	6E	24NW	N	30	0.8	0.0	0	B	T	TLB	0	S	FM	1	20	R		F-B	F		
160	USFS	S	F	9S	6E	26NE	I	47	1.0	0.1	200	B	E	TLB	0	SM	FM	2	20	R		F-B	F		

Table 2 (continued)

MARION

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT	NOTE
161	USFS	S	F	9S	6E	34SE	I	13	0.5	0.0	20	B	E	TLB	0	MC	F	1	10	R		F-T	F			
162	USFS	S	F	9S	6E	36NE	I	3	0.2	0.0	0	B	A	TS	0	MC	FM	1	18	R		F-B	F			
163	USFS	S	F	9S	7E	4SE	I	1	0.2	0.0	10	B	B	QTV	0	S	FB	2	5	R		F-B	F			
164	USFS	S	F	9S	7E	21SE	I	110	25.0	0.5	250	B	B	TS	0	S	FC	3	58	R		F-T	F			
165	USFS	S	F	9S	7E	31SW	N	3	0.2	0.0	0	B	A	TS	0	MC	FM	1	14	R		F-T	F			
166	USFS	S	F	9S	7E	32SE	I	7	0.3	0.0	15	B	B	TS	0	S	FC	1	23	R		F-B	F			
167	USFS	S	F	9S	7E	33SW	I	10	0.3	0.0	2	B	A	TS	0	S	FC	1	26	R		F-B	F			
168	USFS	S	F	9S	7E	33SW	I	2	0.1	0.0	10	B	A	TS	0	S	FM	1	17	R		F-B	F			
169	USFS	P	F	9S	8E	23SW	I	1	0.1	0.0	0	B	O	QTV	0	M	FM	1	12	R		FT	F		B	
170	UNKNOWN	S	P	10S	2W	5NE	N	111	3.0	0.0	10	B	B	TYB	0	S	FM	1	14	B		F-T	A			
171	BAILEY	G	P	10S	2W	8NE	N	100	3.0	1.0	200	S	V	QTL	0	S	F	1	2	R		F-T	H			
172	OSHD	S	S	10S	4E	1SE	A	45	1.0	0.0	3	B	T	TLB	0	S	FB	1	68	R		F-T	F			
173	ALEXAND	S	P	10S	5E	1SW	A	10	2.0	1.0	30	B	B	TLB	0	S	C	2	8	B		F-B	R			
174	USFS	S	F	10S	5E	17SW	I	30	0.5	0.0	4	B	O	TI	0	S	FB	1	61	RB		F-B	F		B	
175	USFS	S	F	10S	6E	5NW	I	3	0.4	0.0	3	B	E	TLB	0	S	FM	1	7	R		F-B	F			
176	TIMBER	S	T	10S	6E	9SE	I	30	0.8	0.0	0	T	T	TLB	0	M	FM	1	20	R		F-T	F			
177	USFS	S	F	10S	6E	11NE	I	50	2.0	0.0	50	B	A	TS	0	S	FM	2	10	R		F-B	F			
178	TIMBER	G	T	10S	6E	16NW	I	3	0.2	0.0	2	T	T	TLB	0	M	F	1	19	R		F-T	F			
179	TIMBER	S	T	10S	6E	16SW	I	30	3.0	0.0	15	B	B	QTV	0	S	FM	2	20	R		F-B	F			
180	USFS	S	F	10S	6E	23NE	A	90	3.0	0.0	500	B	B	QTV	0	S	FB	4	22	R		F-B	F			
181	USFS	S	F	10S	7E	6NW	I	8	0.5	0.0	1	B	A	TS	0	S	FC	1	14	R		F-T	F			
182	TIMBER	S	T	10S	7E	7NE	I	12	0.4	0.0	50	B	B	TLB	0	S	FC	1	18	R		F-T	F			
183	TIMBER	S	T	10S	7E	8SE	I	3	0.1	0.0	10	B	B	QTV	0	S	FB	1	11	R		F-B	F			
184	USFS	S	F	10S	7E	10NW	A	1	0.1	0.1	10	B	B	TLB	0	S	FM	1	13	B		F-B	F			
185	USFS	S	F	10S	7E	20NE	N	100	2.0	0.0	10	T	B	QTV	0	S	FB	1	21	R		F-B	F			

FOOTNOTES: MARION COUNTY

A. Oregon State Highway Laboratory data given in Table 9.

B. See site number below for other footnotes.

4. Site is a source of clay for a brick and tile plant. The plant has a kiln.

8. The site has a ready mix plant.

13. The site has both a ready mix and a hot mix plant.

16. The site has a ready mix plant.

21. Reclaimed to a park.

29. The site has a hot mix plant.

35. Reclaimed to a city park.

36. The active part of the site is being used for a hot mix plant.

39. Reclaimed to a city park.

65. Reclaimed to a gun range.

66. Site has both a ready mix and a hot mix plant.

78. Gray tuff was sawn out of the outcrop and sold as building stone.

88. Some of the stone would split into flagstone.

108. The rock type is diorite.

148. Some of the stone would split into flagstone.

158. Some of the stone would split into flagstone.

169. The rock type is cinders.

174. The rock type is diorite.

Table Heading Definitions:

COMMOD (Commodity): C: clay; G: gravel; P: pumice (cinder); S: stone; DOMAIN: F: Federal; S: State; C: county; L: local; P: private; T: private timber lands; U: unknown; TOWN (Township, north or south); RANG (Range, east or west); SEC (section, quarter); STATUS: A: active; I: inactive; N: natural reclaimed; R: reclaimed; DEPOST (Deposit type): B: bedrock; S: surficial; T: talus; ROCK (rock type): A: andesite; B: basalt; E: breccia; G: gabbro; L: limestone; R: rholite; S: siltstone - sandstone - conglomerate; T: tuff; V: various; O: other; GEOL UNIT (Geological unit); COVER (depth of overburden in yards); WEATHR (Degree of Weathering); S: slight; M: moderate; C: complete; JOINT (Jointing): F: fine, 0-6 inches; C: coarse, 7-12 inches; B: blocky, 13-18 inches; M: massive, 19 plus inches; BENCHS (Number of benchs); FACE (Height of highest highwall in yards); BREAK (Breaking ground): R: rippable; B: drill and blast; PLANT TYPE: C: crusher; S: screen; O: other; USAGE: F: fill or embankment; S: subbase; B: base; T: topping; R: riprap; J: jetty stone; O: other; RECLAMATION: A: agricultural; I: industrial; L: landfill; R: residential; W: water recreation; H: wildlife habitat.

Table 3

POLK

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLAMATION	FOOT NOTE
201	TIMBER	S	T	6S	8W	23SE	R	6	0.2	0.0	0	B	B	TES	6	S	CB	1	13	B		F-BR	I	
202	TIMBER	S	T	6S	8W	24NW	I	6	0.3	0.0	1	B	B	TES	2	S	CM	1	11	RB		F-BR	F	
203	TIMBER	S	T	6S	8W	28SW	I	17	0.2	0.0	150	B	B	TES	0	S	CM	1	46	B		F-B	F	
204	TIMBER	S	T	6S	8W	30NE	I	10	0.6	0.0	0	B	G	TI	0	SM	FC	1	10	R		F-B	F	
205	TIMBER	S	T	6S	8W	31NE	N	10	0.1	0.0	0	B	B	TES	4	S	FM	1	44	B		F-B	F	
206	TIMBER	S	T	6S	8W	31SE	I	1	0.1	0.0	0	B	S	TES	0	M	FC	1	3	R		F-B	F	
207	TIMBER	S	T	6S	8W	34SE	A	110	2.0	0.0	500	B	B	TI	0	S	CM	2	43	B		F-BRJ	F	A
208	TIMBER	S	T	6S	8W	35SE	A	15	0.2	0.0	100	B	G	TI	0	S	FB	1	35	R		F-B	F	
209	UNKNOWN	C	P	6S	7W	5SE	N	6	1.0	0.0	0	B	S	TES	3	C	F	1	5	R		O	F	B
210	BURCH G	S	P	6S	7W	28NE	A	307	5.0	0.0	1500	B	B	TSR	2	S	FB	2	22	B		F-T	AF	A
211	UNKNOWN	G	P	6S	6W	8NE	A	30	0.3	0.0	30	S	V	QAL	0	S	F	1	1	R		F-T	BW	
212	WRIGHT	G	P	6S	6W	19SE	R	4	0.5	3.0	0	S	L	TES	1	SM	F	1	5	R		O	A	B
213	UNKNOWN	G	P	6S	6W	21SE	I	140	8.0	0.0	50	S	V	QTM	0	S	FC	2	6	R		F-T	ARF	
214	BURCH G	G	P	6S	6W	28NE	I	340	35.0	5.0	1000	S	V	QTM	0	S	F	1	4	R		F-T	WF	
215	POLK CO	G	C	6S	6W	34NW	A	10	1.0	2.0	15	S	V	QAL	0	S	F	0	0	R		F-T	BW	
216	TIMBER	S	T	6S	4W	13NW	I	39	6.0	0.5	300	B	V	TYB	0	S	FC	2	18	B		F-I	ARF	
217	POLK CO	S	C	6S	4W	13NW	A	105	3.0	1.0	1000	B	B	TYB	0	S	FC	1	18	B		F-I	ARF	
218	STADELI	C	P	6S	3W	21NW	A	2075	42.0	46.0	6000	S	B	QTL	5	S	F	1	10	R	CSO	F-IO	BW	AB
219	TIMBER	S	T	7S	8W	6NW	I	8	0.2	0.0	15	B	V	TES	0	M	F	1	2	R		F-T	F	
220	TIMBER	S	T	7S	8W	6NE	I	2	0.1	0.0	6	B	S	TI	0	M	CM	1	10	B		F-B	F	
221	TIMBER	S	T	7S	8W	8NE	I	6	0.2	0.0	10	B	G	TES	0	M	F	1	23	R		F-T	F	
222	TIMBER	S	T	7S	8W	8SW	I	6	0.1	0.0	6	B	S	TES	0	S	F	1	16	R		F-T	F	
223	TIMBER	S	T	7S	8W	9SE	N	3	0.1	0.0	20	B	S	TI	0	M	FB	1	8	R		F-B	F	
224	TIMBER	S	T	7S	8W	10SE	I	50	1.0	0.0	100	B	G	TI	0	M	CM	1	42	B		F-B	F	
225	BLM	S	F	7S	8W	12SE	I	1	0.1	0.0	0	B	G	TES	0	S	F	1	3	R		RJ	F	
226	BLM	S	F	7S	8W	14SW	R	1	0.1	0.0	5	B	B	TI	0	M	FB	1	18	R		F-T	F	
227	BLM	S	F	7S	8W	15SW	A	1	0.1	0.0	3	B	G	TES	0	S	F	1	4	R		F-T	F	
228	TIMBER	S	T	7S	8W	15NW	I	9	0.7	0.0	30	B	S	TES	0	S	F	1	4	R		F-T	F	
229	TIMBER	S	T	7S	8W	16SW	I	13	0.5	0.0	40	B	S	TES	0	S	F	1	6	R		F-T	F	
230	BLM	S	F	7S	8W	17SW	I	1	0.2	0.0	0	B	S	TES	0	S	F	1	2	R		F-T	F	
231	BLM	S	F	7S	8W	17NW	I	2	0.2	0.0	4	B	S	TES	0	S	F	2	3	R		F-I	F	
232	BLM	S	F	7S	8W	18NE	I	13	0.3	0.0	20	B	S	TES	0	S	F	1	19	R		F-B	F	
233	TIMBER	S	T	7S	8W	21NE	I	1	0.1	0.0	3	B	S	TES	0	S	F	1	3	R		F-T	F	
234	TIMBER	S	T	7S	8W	21SE	I	2	0.1	0.0	6	B	G	TI	0	S	F	1	6	R		F-I	F	
235	TIMBER	S	T	7S	8W	22SE	I	6	0.2	0.0	20	B	S	TES	0	S	F	1	3	R		F-T	F	
236	TIMBER	S	T	7S	8W	24SW	I	17	0.3	0.0	100	B	G	TI	0	S	F	1	24	R		F-I	F	
237	TIMBER	S	T	7S	8W	24SW	N	21	0.2	0.0	50	B	G	TI	0	M	FC	2	18	R		F-B	F	
238	TIMBER	S	T	7S	8W	30NW	I	1	0.1	0.0	1	B	G	TI	0	M	FC	1	4	R		F-B	F	
239	BLM	S	F	7S	8W	31NE	N	5	0.2	0.0	5	B	B	TSR	0	M	FC	1	5	R		F-B	F	
240	TIMBER	S	T	7S	8W	36NE	I	3	0.1	0.0	20	B	G	TI	0	S	FB	1	13	R		F-B	F	
241	BLM	S	F	7S	7W	2NE	I	1	0.1	0.0	1	B	B	TSR	1	M	F	1	3	R		F-T	F	
242	TIMBER	S	T	7S	7W	2SE	A	3	0.1	0.0	30	B	B	TSR	0	M	F	1	4	R		F-I	F	
243	TIMBER	S	T	7S	7W	2SE	I	1	0.1	0.0	1	B	B	TSR	0	M	F	1	1	R		F-T	F	
244	BLM	S	F	7S	7W	3SE	A	6	0.1	0.0	18	B	B	TSR	0	S	F	1	25	B		F-T	F	
245	BLM	S	F	7S	7W	5NE	N	4	0.3	0.0	20	B	B	TSR	0	S	FB	1	3	R		F-B	F	
246	BLM	S	F	7S	7W	5NW	I	3	0.1	0.0	30	B	B	TSR	0	S	FM	1	7	R		F-B	F	
247	TIMBER	S	T	7S	7W	6NW	I	10	0.2	0.0	40	B	B	TSR	0	M	FC	1	19	R		F-B	F	
248	TIMBER	S	T	7S	7W	6NW	I	1	0.1	0.0	5	B	B	TSR	0	M	FB	1	3	R		F-B	F	
249	BLM	S	F	7S	7W	8NW	N	1	0.1	0.0	5	B	B	TSR	0	S	FB	1	6	B		F-B	F	
250	TIMBER	S	T	7S	7W	11SE	A	3	0.2	0.0	30	B	B	TSR	0	S	FC	1	13	R		F-B	F	
251	TIMBER	S	T	7S	7W	11SW	I	1	0.1	0.0	10	B	B	TSR	0	M	C	1	13	B		F-B	F	
252	TIMBER	S	T	7S	7W	12NE	N	1	0.1	0.0	1	B	B	TSR	0	M	FC	1	2	R		F-B	F	
253	BLM	S	F	7S	7W	13SW	N	1	0.1	0.0	5	B	B	TSR	0	M	FB	2	4	B		F-T	F	
254	TIMBER	S	T	7S	7W	14NE	I	1	0.1	0.0	10	B	B	TSR	0	M	CB	1	15	B		F-T	F	
255	TIMBER	S	T	7S	7W	11SE	A	4	0.1	0.0	40	B	B	TSR	0	S	CB	1	15	B		F-B	F	
256	TIMBER	S	T	7S	7W	22NW	I	1	0.1	0.0	5	B	B	TSR	0	S	F	1	4	R		F-I	F	
257	TIMBER	S	T	7S	7W	22SW	I	2	0.1	0.0	10	B	B	TSR	0	S	FB	1	17	R		F-B	F	
258	BLM	S	F	7S	7W	27SW	I	2	0.1	0.0	5	B	B	TSR	0	S	F	1	5	R		F-T	F	
259	TIMBER	S	T	7S	7W	28NE	A	4	0.1	0.0	40	B	B	TSR	0	M	F	2	3	R		F-I	F	
260	BLM	S	F	7S	7W	29SW	I	2	0.1	0.0	6	B	G	TI	0	S	FB	1	4	R		F-B	F	
261	TIMBER	S	T	7S	7W	34SE	A	8	0.1	0.0	70	B	B	TSR	0	S	F	1	28	R		F-B	F	
262	TIMBER	S	T	7S	7W	35NE	I	7	0.2	0.0	35	B	B	TSR	1	S	CM	1	19	B		F-B	F	
263	BLM	S	F	7S	6W	7NW	N	2	0.1	0.0	1	B	B	TSR	1	MC	F	1	4	R		F-T	F	
264	CHEISEL	S	P	7S	6W	8NE	A	65	2.0	2.0	650	B	B	TSR	0	S	CM	3	50	B	CS	F-B	F	A
265	BLM	S	F	7S	6W	9SW	I	6	0.5	0.0	18	B	B	TSR	0	M	FC	1	7	R		F-T	F	
266	TIMBER	S	T	7S	6W	9NE	A	11	0.4	0.0	10	B	B	TSR	0	S	FM	1	11	B		F-B	F	
267	TIMBER	S	T	7S	6W	15NE	I	3	0.1	0.0	15	B	B	TSR	0	S	M	1	14	B		F-J	F	
268	TIMBER	S	T	7S	6W	19NE	I	1	0.1	0.0	5	B	B	TSR	0	M	F	1	2	R		F-B	F	
269	TIMBER	S	T	7S	6W	22NW	N	1	0.1	0.0	2	B	B	TSR	0	S	F	1	2	R		F-T	F	
270	TIMBER	S	T	7S	6W	22NW	I	4	0.6	0.0	12	B	B	TSR	0	S	FC	1	7	R		F-T	F	
271	UNKNOWN	S	U	7S	6W	25SE	I	2	0.4	0.0	4	B	B	TSR	0	S	C	1	3	R		F-B	AF	
272	JONES R	S	P	7S	6W	25NW	A	50	2.0	0.0	250	B	B	TSR	2	S	CM	1	16	B		F-J	A	B
273	JONES R	S	P	7S	6W	25SW	A	500	10.0	6.0	2000	B	B	TSR	3	S	CM	1	23	B	CSO	F-BRJ	A	
274	UNKNOWN	S	U	7S	6W	25SW	I	22	0.5	0.0	0	B	E	TSR	0	S	CM	1	23	B		F-BRJ	R	B
275	UNKNOWN	S	P	7S	6W	36NW	I	55	3.0	0.0	50	B	B	TSR	2	S	CM	1	24	B		F-BRJ	AF	

Table 3 (continued)

POLK

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
276	VALLEYC	S	P	7S	6W	25SW	I	45	1.0	0.0	50	B	B	TSR	1	S	CM	1	22	B		F-BRJ	F		
277	KMARTIN	S	P	7S	6W	36NW	A	417	5.0	0.0	800	B	B	TSR	2	S	CM	1	38	B		F-BRJ	F		
278	KMARTIN	S	P	7S	6W	25SW	I	70	2.0	3.0	200	B	B	TSR	0	S	FB	2	14	B		F-J	FA		
279	BLM	S	F	7S	6W	28SW	I	1	0.1	0.0	10	B	B	TSR	0	S	FC	1	3	R		F-J	F		
280	KMARTIN	S	P	7S	6W	35NE	I	1	0.1	0.0	10	B	E	TSR	0	S	FC	1	4	B		F-B	FA		
281	UNKNOWN	G	P	7S	6W	6NW	R	11	0.9	0.0	0	S	V	QTM	1	S	F	1	3	R		F-T	AH		B
282	UNKNOWN	G	P	7S	5W	22NE	R	35	5.0	0.0	0	S	V	QTM	0	S	F	1	0	R		F-T	A		B
283	FREEM&S	G	P	7S	4W	2SW	A	14	0.5	0.0	140	B	B	TYB	0	S	F	1	4	RB	CS	F-T	AF		
284	UNKNOWN	G	P	7S	4W	26SW	R	240	5.0	0.0	1000	S	V	QTM	1	S	F	1	10	R		F-T	AH		B
285	MPMATER	G	P	7S	4W	36SE	I	17	0.8	0.0	100	S	V	QTL	1	S	F	1	6	R		F-T	AWH		
286	PACIFIC	G	P	7S	3W	3SW	R	134	3.0	1.0	1000	S	V	QTL	0	S	F	1	10	R		F-T	AH		B
287	UNKNOWN	S	P	7S	3W	6NW	I	26	1.0	0.0	1	B	B	TYB	1	SC	FB	3	10	B		F-T	A		B
288	JFOWLER	G	P	7S	3W	10NW	A	400	25.0	0.0	2000	S	V	QTL	3	S	FC	1	8	R	CS	F-TO	ALW		AB
289	UNKNOWN	G	U	7S	3W	10NW	N	69	3.0	0.0	0	S	V	QTL	0	S	F	1	6	R		F-T	AH		
290	UNKNOWN	G	P	7S	3W	15SW	N	260	8.0	0.0	2000	S	V	QTL	0	S	F	1	10	R		F-T	W		B
291	KD S&G	G	P	7S	3W	15NW	A	2400	35.0	6.0	10000	S	V	QTL	4	S	FC	2	10	R		F-TO	AW		B
292	UNKNOWN	S	P	7S	3W	18NW	I	13	1.0	0.0	0	B	B	TYB	2	S	FB	1	10	B		F-B	AR		
293	UNKNOWN	S	U	7S	3W	21NW	N	5	0.5	0.0	0	B	B	TYB	0	S	FB	1	5	B		F-B	R		
294	VOIGT P	G	P	7S	3W	29SE	A	820	12.0	5.0	820	S	V	QAL	0	S	F	1	1	R		F-TO	WH		B
295	UNKNOWN	S	U	7S	3W	30NW	N	46	1.0	0.0	0	B	B	TYB	2	S	FM	1	32	B		F-B	RF		
296	TIMBER	S	T	8S	8W	1SE	A	27	0.4	0.0	100	B	G	TI	0	SM	FM	1	25	RB		F-B	F		
297	TIMBER	S	T	8S	8W	2SE	A	48	1.0	0.0	250	B	G	TES	0	S	FC	2	34	R		F-B	F		
298	TIMBER	S	T	8S	8W	4NE	I	1	0.1	0.0	5	B	G	TI	0	M	FC	1	5	R		F-B	F		
299	TIMBER	S	T	8S	8W	6SE	N	10	0.2	0.0	20	B	B	TSR	0	S	FC	1	25	R		F-T	F		
300	TIMBER	G	T	8S	8W	6NW	N	5	0.1	0.0	15	S	V	QTH	0	MC	FC	1	20	R		F-B	F		
301	TIMBER	S	T	8S	8W	7NW	I	10	0.2	0.0	0	B	B	TSR	4	S	CM	1	30	B		F-B	F		
302	TIMBER	S	T	8S	8W	11NW	A	4	0.3	0.0	12	B	S	TES	0	S	F	1	4	R		F-T	F		
303	TIMBER	S	T	8S	8W	20NW	A	75	1.0	0.0	150	B	S	TSR	0	S	FC	1	52	RB		F-T	F		
304	TIMBER	S	T	8S	8W	28SE	A	69	3.0	0.0	300	B	S	TES	0	C	F	4	22	R		F	F		
305	TIMBER	S	T	8S	8W	28NE	N	10	0.3	0.0	20	B	G	TI	0	S	CM	1	17	B		F-BRJ	F		
306	TIMBER	S	T	8S	8W	28NE	A	65	3.0	0.0	650	B	V	TSR	2	S	FB	6	37	B		F-B	F		
307	TIMBER	S	T	8S	8W	29NE	N	3	0.1	0.0	10	B	S	TES	0	M	FC	1	11	R		F-B	F		
308	TIMBER	S	T	8S	8W	29SW	N	2	0.1	0.0	6	B	G	TI	0	M	FC	1	11	R		F-T	F		
309	TIMBER	S	T	8S	8W	30SE	N	4	0.1	0.0	40	B	V	TI	0	M	CB	1	18	RB		F-B	F		
310	TIMBER	S	T	8S	8W	31SE	I	20	0.3	0.0	70	B	G	TI	2	S	CB	1	33	R		F-B	F		
311	TIMBER	S	T	8S	8W	34NW	I	2	0.1	0.0	0	B	S	TES	0	C	F	1	3	B		F	F		
312	TIMBER	S	T	8S	8W	34NW	I	2	0.2	0.0	10	B	S	TES	0	M	F	2	4	R		F	F		
313	FAA	S	F	8S	7W	6SW	R	9	0.4	0.0	0	B	G	TI	0	M	FC	1	4	R		F-B	F		B
314	TIMBER	S	T	8S	7W	8NW	I	5	1.0	0.0	20	B	B	TSR	0	M	F	1	2	B		F-T	F		
315	BLM	S	F	8S	7W	15SE	I	11	0.4	0.0	60	B	G	TI	0	M	CM	1	15	B		F-BR	F		
316	TIMBER	S	T	8S	7W	16SE	I	3	0.2	0.0	15	B	B	TSR	0	M	FC	2	7	R		F-T	F		
317	TIMBER	S	T	8S	7W	17NW	A	4	0.1	0.0	10	B	G	TI	0	S	FB	1	12	R		F-B	F		
318	TIMBER	S	T	8S	7W	21NE	I	18	0.2	0.0	35	B	G	TI	2	S	FB	1	32	RB		F-B	F		
319	TIMBER	S	T	8S	7W	28SE	A	6	0.2	0.0	15	B	G	TI	0	M	FC	1	16	R		F-T	F		
320	TIMBER	S	T	8S	7W	29SE	A	5	0.1	0.0	20	B	G	TI	0	M	FC	1	16	R		F-T	F		
321	TIMBER	S	T	8S	7W	29SE	A	6	0.1	0.0	20	B	G	TI	0	M	FC	1	35	R		F-T	F		
322	TIMBER	S	T	8S	7W	36NE	N	3	0.1	0.0	4	B	G	TI	0	MC	FC	1	3	R		F-B	F		
323	VALLEYC	S	P	8S	6W	2SW	A	200	7.0	14.0	2000	B	G	TSR	2	S	FM	4	20	RB	CS	F-R	AR		
324	TIMBER	S	T	8S	6W	3SW	A	3	0.1	0.0	6	B	G	TSR	2	S	FC	1	17	B		F-T	F		
325	TIMBER	S	T	8S	6W	3NW	A	5	0.5	0.0	50	B	B	TSR	0	S	FC	1	11	B		F-T	F		
326	TIMBER	S	T	8S	6W	4NW	I	2	0.1	0.0	20	B	B	TSR	0	S	FC	1	18	B		F-T	F		
327	TIMBER	S	T	8S	6W	5NE	I	3	0.2	0.0	30	B	B	TSR	0	S	F	1	12	R		F-T	A		
328	DALLAS	G	L	8S	6W	6SE	N	45	2.0	0.0	0	S	V	QTM	0	SC	F	1	3	R		FS	F		B
329	LEONARD	S	P	8S	6W	11SE	I	90	2.0	3.0	300	B	L	TES	0	M	M	1	15	B	CS	O	F		B
330	GP	S	P	8S	6W	12NW	A	780	7.0	1.0	1000	B	L	TES	3	S	BM	1	25	B		O	F		B
331	UNKNOWN	S	P	8S	6W	12NE	N	22	0.1	0.0	0	B	L	TES	2	M	M	1	12	B		O	HR		B
332	TIMBER	S	T	8S	6W	28NW	A	2	0.2	0.0	10	B	S	TES	0	M	F	1	4	R		F-T	F		A
333	UNKNOWN	G	P	8S	5W	24NW	R	31	2.0	0.0	0	S	V	QTM	1	S	F	1	3	R		O	L		B
334	SETNIKR	G	P	8S	4W	23NW	A	100	7.0	0.0	1000	S	V	QTL	0	S	F	3	6	R		F-T	AWH		
335	VALLEYC	G	P	8S	4W	23NW	I	180	8.0	10.0	1000	S	V	QTL	0	S	F	1	7	R		F-T	AWH		A
336	VALLEYC	G	P	8S	4W	28SE	A	500	5.0	21.0	500	S	V	QAL	0	S	F	1	2	R	CSO	F-T	WH		B
337	VALLEYC	G	P	8S	4W	34SE	A	530	15.0	0.0	1300	S	V	QTL	2	S	F	1	12	R		F-T	AH		
338	POLK CO	G	C	8S	4W	34SE	A	180	22.0	0.0	180	S	V	QAL	0	S	F	1	2	R		F-T	WH		
339	TIMBER	S	T	9S	8W	17SW	A	186	2.0	0.0	300	B	G	TI	0	S	FM	3	36	B	CS	F-J	F		
340	TIMBER	S	T	9S	8W	21SE	I	5	0.2	0.0	15	B	G	TI	0	SM	CB	1	10	RB		F-B	F		
341	TIMBER	S	T	9S	8W	26SE	N	8	0.1	0.0	16	B	G	TI	0	SM	FM	1	28	RB		F-B	F		
342	TIMBER	S	T	9S	8W	26SW	A	6	0.2	0.0	16	B	G	TI	0	M	FC	2	14	R		F-B	F		
343	TIMBER	S	T	9S	8W	28SE	I	15	0.5	0.1	75	B	G	TI	0	SM	CM	1	24	RB		F-B	F		
344	OSF	S	S	9S	8W	36NW	I	6	0.3	0.0	30	B	G	TI	0	MC	FC	1	31	R		F-T	F		
345	OSF	S	S	9S	8W	36SE	N	9	0.3	0.0	0	B	G	TES	0	SM	FC	1	21	R		F-B	F		
346	TIMBER	S	T	9S	8W	3NE	I	10	0.5	0.0	50	B	G	TI	0	M	FC	2	7	R		F-T	F		
347	BLM	S	F	9S	7W	3NW	I	2	0.1	0.0	20	B	G	TI	0	M	FC	1	4	R		F-B	F		
348	TIMBER	S	T	9S	7W	4NE	I	5	0.3	0.0	15	B	N	TES	0	SM	F	1	4	R		F-T	F		
349	TIMBER	S	T	9S	7W	4NW	A	210	2.0	1.0	1000	B	G	TI	0	M	FM	2	66	R	C	F-T	F		
350	BLM	S	F	9S	7W	9NE	A	3	0.1	0.0	10	B	G	TI	0	MC	FM	2	5	R		FS	F		

Table 3 (continued)

POLK

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT	TYPE	USAGE	RECLA-MATION	FOOT NOTE
351	TIMBER	S	T	9S	7W	10SW	A	6	0.1	0.0	60	B	G	TI	0	M	FC	1	22	R			F-T	F	
352	BLM	S	F	9S	7W	11NW	A	40	0.5	0.0	100	B	G	TI	0	S	FC	3	22	B			F-T	F	
353	TIMBER	S	T	9S	7W	11SE	I	9	0.1	0.0	20	B	G	TI	0	S	BM	1	19	R			F-T	F	
354	BLM	S	F	9S	7W	13SE	N	65	1.0	0.0	100	B	G	TI	0	S	CM	1	55	B			F-BRJ	F	
355	TIMBER	S	T	9S	7W	14NW	I	1	0.1	0.0	3	B	S	TES	0	S	FC	1	8	R			F-B	F	
356	TIMBER	S	T	9S	7W	14NW	I	1	0.3	0.0	5	B	G	TI	0	M	FC	1	4	R			F-BR	F	
357	TIMBER	S	T	9S	7W	16NE	I	4	0.3	0.0	8	B	G	TI	1	M	FC	1	11	R			F-B	F	
358	TIMBER	S	T	9S	7W	16SE	I	17	1.0	0.0	50	B	G	TI	0	S	FM	1	35	R			F-B	F	
359	TIMBER	S	T	9S	7W	19NE	I	46	0.5	0.0	125	B	S	TES	0	S	CM	1	34	B			F-B	F	
360	TIMBER	S	T	9S	7W	19SE	I	25	1.0	0.0	250	B	G	TI	0	S	FB	2	24	B			F-B	F	
361	TIMBER	S	T	9S	7W	20NW	A	320	2.0	0.0	1000	B	G	TES	0	S	FB	4	75	B			F-T	F	
362	BLM	S	F	9S	7W	21NW	A	2	0.1	0.0	20	B	G	TI	0	S	BM	2	13	B			F-J	F	
363	TIMBER	S	T	9S	7W	21NE	A	51	1.0	0.5	500	B	G	TI	0	M	CM	1	36	R			F-J	F	
364	TIMBER	S	T	9S	7W	34SW	A	30	1.0	0.0	300	B	G	TI	0	S	CM	1	32	B			F-J	F	
365	TIMBER	S	T	9S	6W	10NW	I	1	0.1	0.0	5	B	S	TES	0	M	F	1	4	R			F	F	
366	UNKNOWN	S	U	9S	6W	17NW	I	1	0.3	0.0	5	B	G	TI	0	M	FM	1	2	R			F-BRJ	AF	
367	UNKNOWN	S	U	9S	6W	17NW	N	1	0.1	0.0	5	B	G	TI	0	M	F	1	3	R			F-B	F	
368	TIMBER	S	T	9S	6W	17SW	N	3	0.1	0.0	10	B	G	TI	0	S	CM	1	19	B			F-BRJ	F	
369	POLK CO	S	C	9S	6W	27NW	R	13	0.5	1.0	25	B	G	TI	3	S	CB	1	7	B			F-B	A	AB
370	UNKNOWN	G	U	9S	4W	3NW	A	330	7.0	0.0	3000	S	V	QTM	2	S	F	2	9	R			F-T	F	
371	POLK CO	G	C	9S	4W	14SE	N	125	3.0	0.0	50	S	V	QTL	0	S	F	2	10	R			F-T	WHF	
372	UNKNOWN	S	P	9S	4W	30SW	N	12	0.3	0.0	30	B	S	TES	0	M	F	1	18	R			FO	RF	B

FOOTNOTES: POLK COUNTY

A. Oregon State Highway Laboratory data given in Table 9.

B. See site number below for other footnotes.

209. The site is a clay deposit and could be used as a source of clay for brick or tile.

212. In the early 1900's the site was a source of agricultural lime. In today's market the limestone is too impure to have any value; therefore, zero reserves.

218. Overburden being sold as topsoil. Site has a ready mix plant.

273. Site has a hot mix plant.

274. Zero reserves because house was built on top of highwall.

281. Reclaimed as an irrigation pond.

282. Reclaimed as a pasture.

284. Reclaimed as an irrigation pond.

286. Reclaimed as an irrigation pond.

287. Reclaimed as an irrigation pond.

288. Partly reclaimed as land fill/farmland.

290. Being used as a dirt bike track.

291. Overburden being sold as topsoil.

294. Overburden being sold as topsoil.

313. Site being used for storage building and stockpile.

328. Source of clay for the core of a rock filled dam.

329. Was a source of agricultural lime, now a minor source of building stone.

330. Was a source of limestone for cement and agricultural lime, now a minor source of building stone.

331. Was a source of agricultural lime, now a residential area.

333. Was a source of clay for brick and tile, now being used as a landfill.

336. The site has a ready mix plant.

369. Reclaimed as an irrigation pond.

372. The site was used as a source of foundry casting sand.

Table Heading Definitions:

COMMOD (Commodity): C: clay; G: gravel; P: pumice (cinder); S: stone; DOMAIN: F: Federal; S: State; C: county; L: local; P: private; T: private timber lands; U: unknown; TOWN (Township, north or south); RANG (Range, east or west); SEC (section, quarter); STATUS: A: active; I: inactive; N: natural reclaimed; R: reclaimed; DEPOST (Deposit type): B: bedrock; S: surficial; T: talus; ROCK (rock type): A: andesite; B: basalt; E: breccia; G: gabbro; L: limestone; R: rholite; S: siltstone - sandstone - conglomerate; T: tuff; V: various; O: other; GEOL UNIT (Geological unit); COVER (depth of overburden in yards); WEATHR (Degree of Weathering); S: slight; M: moderate; C: complete; JOINT (Jointing): F: fine, 0-6 inches; C: coarse, 7-12 inches; B: blocky, 13-18 inches; M: massive, 19 plus inches; BENCHS (Number of benchs); FACE (Height of highest highwall in yards); BREAK (Breaking ground): R: rippable; B: drill and blast; PLANT TYPE: C: crusher; S: screen; O: other; USAGE: F: fill or embankment; S: subbase; B: base; T: topping; R: riprap; J: jetty stone; O: other; RECLAMATION: A: agricultural; I: industrial; L: landfill; R: residential; W: water recreation; H: wildlife habitat.

Table 4

YAMHILL

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLAMATION	FOOT NOTE
1	BLM	SS	F	2S	6W	3SW	A	2	0.1	0.0	20	B	G	TI	1	S	C	1	6	R		F-B	F	
2	BLM	SS	F	2S	6W	KNE	I	2	0.1	0.0	20	B	B	TSR	1	S	C	1	12	R		F-T	F	
3	BLM	SS	F	2S	6W	8SW	N	10	0.3	0.0	20	B	B	TI	0	SM	FM	1	16	R		F-B	F	
4	TIMBER	SS	P	2S	6W	9NW	A	2	0.1	0.0	6	B	B	TI	0	SM	FB	1	10	R		F-B	F	
5	TIMBER	S	P	2S	6W	9SE	N	1	0.1	0.0	3	B	G	TI	0	M	F	1	8	R		F-T	F	
6	BLM	S	F	2S	6W	9NE	I	1	0.1	0.0	1	B	G	TI	1	M	M	1	3	R		FS	F	
7	TIMBER	S	T	2S	6W	9NE	N	1	0.1	0.0	5	B	B	TI	0	SM	F	1	8	R		F-T	F	
8	TIMBER	SS	T	2S	6W	10SW	N	85	2.0	0.0	250	B	B	TI	0	SM	FB	1	10	R		F-B	F	
9	TIMBER	S	T	2S	6W	15SW	A	1	0.1	0.0	5	B	G	TI	0	M	FC	1	4	R		F-T	F	
10	TIMBER	S	T	2S	6W	20NE	A	1	0.1	0.0	5	B	G	TI	0	S	F	2	5	R		F-T	F	
11	TIMBER	S	T	2S	6W	24NW	N	1	0.1	0.0	1	B	G	TI	0	S	FC	1	4	R		F-T	F	
12	BLM	SS	F	2S	6W	35NW	I	1	0.1	0.0	5	B	G	TI	0	S	F	1	7	R		F-T	F	
13	UNKNOWN	SS	P	2S	5W	6SE	I	30	0.5	0.0	100	B	G	TI	0	SM	CB	1	22	B		F-B	F	
14	ESPEDAL	SS	P	2S	5W	11SE	A	2	0.5	0.0	5	B	G	TI	1	S	BM	1	6	B		F-BR	AF	
15	BLM	S	F	2S	5W	19NE	I	1	0.1	0.0	3	B	G	TI	1	M	B	2	11	R		F-B	F	
16	UNKNOWN	SS	P	2S	5W	22SE	I	4	1.0	0.0	12	B	B	TES	0	S	FC	1	4	R		F-B	RF	
17	UNKNOWN	SS	P	2S	5W	26NW	R	64	9.0	0.0	0	B	B	TES	0	S	CB	1	5	B		F-BRJ	ARF	B
18	UNKNOWN	SS	U	2S	5W	27NE	I	32	1.0	5.0	3	B	B	TES	2	M	FB	1	12	B		F-BR	IRF	B
19	YMHLLCO	SS	C	2S	5W	28SW	A	50	1.0	2.0	100	B	B	TES	1	S	CM	1	13	B		F-BR	F	
20	UNKNOWN	S	P	2S	5W	29SW	N	2	0.7	0.0	2	B	G	TI	1	S	CM	1	2	R		F-BR	F	
21	TIMBER	S	T	2S	5W	32NW	A	60	3.0	0.0	10	B	B	TES	0	S	FC	2	7	R		F-B	AF	
22	PKIEWIT	SS	P	2S	4W	6SW	I	1000	20.0	0.0	0	B	G	TI	3	S	CM	4	59	R		FSR	AF	
23	CMEISEL	SS	P	2S	3W	17NE	A	192	4.0	0.5	1500	B	B	TYB	2	S	FB	2	55	B		F-T	RF	
24	WILLS&G	SS	P	2S	3W	20NE	I	4	0.3	0.0	40	B	B	TYB	1	S	F	1	6	RB		F-B	AF	
25	FOGARTY	S	P	2S	3W	26SE	I	50	1.0	0.5	500	B	B	TYB	1	SM	F	2	20	B		F-T	RF	
26	UNKNOWN	S	U	2S	3W	26NW	I	13	0.8	0.0	0	B	B	TYB	0	SM	F	1	7	B		F-T	RF	B
27	UNKNOWN	SS	P	2S	3W	34NE	N	3	0.1	0.0	0	B	B	TYB	1	S	FB	1	3	B		F-B	ARF	B
28	UNKNOWN	SS	P	2S	3W	34NE	I	31	0.8	0.0	0	B	B	TYB	1	MC	F	1	11	R		F-T	RF	B
29	UNKNOWN	SS	U	2S	2W	31SE	I	4	0.2	0.0	0	B	B	TYB	0	SM	F	2	12	R		F-T	RF	
30	TIMBER	S	T	3S	6W	4NW	I	1	0.1	0.0	2	B	G	TI	0	M	F	1	3	R		F-T	F	
31	BLM	SS	F	3S	6W	5SE	I	1	0.1	0.0	3	B	G	TI	0	M	FC	1	8	R		F-B	F	
32	TIMBER	SS	T	3S	6W	8NE	I	10	0.3	0.0	20	B	G	TI	0	M	FC	3	10	B		F-B	F	
33	MCMINWL	SS	L	3S	6W	9NE	A	6	0.1	0.0	25	B	G	TI	0	S	F	1	5	R		F-B	F	
34	MCMINWL	SS	L	3S	6W	15SE	N	92	1.0	0.0	0	B	G	TI	0	M	FB	1	10	R		F	F	
35	TIMBER	S	T	3S	6W	16SW	I	13	0.4	0.0	40	B	B	TES	1	S	FB	1	13	R		F-B	F	
36	TIMBER	S	T	3S	6W	16SW	I	4	0.6	0.0	10	B	G	TI	0	M	FM	1	4	B		F-B	F	
37	BLM	SS	F	3S	6W	17SW	A	50	2.0	0.3	150	B	B	TES	0	S	CM	1	21	B		F-BR	F	
38	TIMBER	SS	T	3S	6W	23NW	I	9	0.4	0.0	10	B	G	TI	0	M	FB	1	18	R		F-B	F	
39	BLM	S	F	3S	6W	28SW	I	115	3.0	0.0	100	B	G	TI	0	S	CB	1	27	B		F-B	F	
40	BLM	S	F	3S	6W	29SW	A	11	0.8	0.0	10	B	G	TI	0	M	CM	1	16	R		F-B	F	
41	TIMBER	S	T	3S	6W	34SW	A	30	2.0	0.0	60	B	B	TES	0	S	CB	1	13	B		F-B	F	
42	TIMBER	SS	T	3S	5W	6NW	N	10	0.3	0.1	30	B	B	TES	0	S	FM	1	7	R		F-BR	F	
43	TIMBER	SS	T	3S	5W	18SE	I	1	0.1	0.0	0	B	B	TI	0	MC	FB	1	9	R		F	F	
44	YMHLLCO	SS	C	3S	5W	18NW	I	33	0.4	0.0	30	B	B	TES	0	S	FC	1	16	R		F-B	F	
45	DAYTNSG	S	P	3S	4W	19NE	I	68	2.0	0.5	7	B	G	TI	1	SM	CM	1	12	B		F-BR	A	
46	FISH&WL	SS	S	3S	4W	21NW	I	5	0.3	0.0	0	B	S	TES	0	MC	F	2	10	R		F	H	
47	CRABTRE	SS	P	3S	3W	27SW	A	310	8.0	2.0	1500	B	B	TYB	0	S	FM	3	35	B	CS	F-T	ALF	B
48	CHEL VA	SS	P	3S	3W	28SE	R	97	2.0	0.0	0	B	B	TYB	0	S	F	1	20	R		F-T	O	B
49	OSHD	SS	S	3S	3W	31NE	A	47	2.0	0.0	200	B	B	TYB	0	S	FC	1	21	R		F-T	RF	
50	UNKNOWN	S	P	3S	3W	32NW	I	1	0.1	0.0	10	B	B	TYB	0	S	F	1	2	R		F-T	ARF	
51	CMEISEL	SS	P	3S	3W	33SW	A	97	5.0	2.0	500	B	B	TYB	2	S	FM	2	14	RB		F-T	F	
52	UNKNOWN	SS	U	3S	3W	34NW	N	1	0.1	0.0	0	B	B	TYB	1	S	FB	1	4	B		F-B	AF	
53	OSHD	SS	S	3S	2W	6SE	A	4	1.0	0.0	20	B	B	TYB	0	SM	F	2	3	R		F-T	RF	
54	CMEISEL	S	P	3S	2W	15NE	A	320	4.0	1.0	40	B	B	TYB	1	S	FC	1	38	B		F-T	IL	
55	UNKNOWN	S	P	3S	2W	19SW	I	13	0.3	0.0	0	B	B	TYB	0	S	FM	2	16	B		F-B	RH	
56	OSBORNE	S	P	3S	2W	22SE	I	25	1.0	0.0	5	B	B	TYB	1	M	FB	1	9	R		F-T	ARF	
57	BICITY	SS	P	3S	2W	22SE	A	326	3.0	10.0	1000	B	B	TYB	1	SM	FC	3	25	R		F-T	ARF	
58	AYERS	SS	P	3S	2W	27NE	I	16	2.0	0.0	100	B	B	TYB	1	M	F	1	4	R		F-T	ARF	
59	USFS	SS	F	4S	9W	23NW	I	10	1.0	0.0	3	B	B	TES	0	S	F	1	4	R		F-B	F	
60	USFS	S	F	4S	8W	24SE	A	36	20.0	0.0	200	B	G	TI	2	SM	FB	3	20	R		F-T	F	A
61	USFS	S	F	4S	8W	28SE	I	52	1.0	0.0	100	B	B	TES	0	S	BM	3	13	B		F-J	F	
62	USFS	SS	F	4S	8W	28SW	R	20	3.0	0.0	0	B	B	TES	3	SC	CB	3	4	RB		F-BR	HF	
63	BLM	SS	F	4S	7W	23SW	A	21	1.0	0.2	100	B	B	TI	2	SM	FM	2	13	RB		F-B	F	
64	BLM	SS	F	4S	7W	29SW	I	5	0.4	0.0	30	B	B	TSR	1	SM	FC	2	10	R		F-T	F	
65	TIMBER	S	T	4S	6W	11NW	N	4	0.2	0.0	40	B	B	TSR	0	S	FC	2	8	B		F-B	F	
66	UNKNOWN	S	P	4S	5W	10SW	N	2	0.1	0.0	4	B	G	TI	0	M	FB	1	5	R		F-B	AH	
67	UNKNOWN	SS	P	4S	5W	24NE	N	30	0.1	0.0	20	B	G	TI	1	M	CM	1	13	B		FS	ALR	
68	UNKNOWN	SS	U	4S	5W	25SW	R	15	0.6	0.0	0	B	G	TI	0	M	FB	1	5	R		F-B	L	
69	M COYLE	SS	P	4S	5W	26SE	R	11	2.0	0.0	0	B	G	TI	0	M	FC	1	9	R		F-T	A	
70	WILLNBR	S	P	4S	5W	34NE	R	34	5.0	0.0	70	B	G	TI	0	M	FB	1	12	RB		F-B	A	B
71	CMEISEL	S	P	4S	4W	18SW	I	470	10.0	0.0	0	B	B	TI	3	SM	FM	2	26	B		F-B	L	
72	MCMINVL	SS	L	4S	4W	19NE	N	48	2.0	0.0	0	B	B	TI	1	MC	FB	1	10	R		F-B	O	B
73	CMEISEL	SS	P	4S	3W	26NW	A	1120	12.0	2.0	1120	B	S	QAL	0	S	F	1	0	R	CS	F-T	HW	B
74	DALLAS	G	P	4S	3W	26SE	A	170	22.0	0.0	1700	S	V	QTL	2	S	F	2	11	R		F-TO	HW	B
75	USFS	S	F	5S	9W	11SW	A	91	3.0	5.0	500	B	B	TI	0	SM	CM	1	10	RB		F-BRJ	F	
76	TIMBER	S	T	5S	8W	6SW	I	8	0.2	0.0	20	B	B	TI	0	S	FC	1	15	R		F-B	F	
77	BLM	SS	F	5S	8W	16SE	A	45	4.0	1.0	250	B	B	TSR	2	SM	CM	2	13	BB		F-BRF	F	
78	TIMBER	SS	T	5S	8W	26NW	A	27	0.7	2.0	100	B	B	TES	3	S	FB	2	31	B		F-BR	F	
79	BLM	SS	F	5S	7W	8SE	I	21	0.5	0.0	10	B	B	TES	0	S	FC	2	14	R		F-T	F	
80	TIMBER	S	T	5S	7W	9SE	I	3	0.1	0.0	12	B	B	TES	0	S	FC	1	12	R		F-B	F	

Table 4 (continued)

YAMHILL

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT	TYPE	USAGE	RECLA MATION	FOOT	NOTE
81	POLKLOG	S	P	5S	7W	12SE	A	158	9.0	1.0	600	B	E	TSR	10	S	FB	3	44	B	S		F-R	AF		
82	PKSHIMR	S	P	5S	6W	8NW	I	62	1.0	1.0	65	B	B	TES	0	S	FM	1	13	RB			F-B	AF		
83	YMHLLCO	S	C	5S	6W	11SE	I	11	0.8	0.0	5	B	B	TI	0	SM	FB	1	24	RB			F-B	AF		
84	UNKNOWN	S	U	5S	6W	14NW	I	1	0.1	0.0	1	B	G	TI	1	MC	FB	1	3	R			F-B	F		
85	A REID	S	P	5S	6W	24NW	A	266	7.0	0.0	500	B	E	TES	4	S	BM	3	32	B	CS		F-R	AF		
86	BOISE C	S	P	5S	6W	32SW	R	19	1.0	0.0	40	B	E	TES	1	M	BM	1	3	B			F-B	IL		
87	UNKNOWN	S	P	5S	6W	32SE	I	6	0.2	0.0	6	B	E	TES	2	S	BM	1	9	B			F-B	AO	B	
88	UNKNOWN	S	P	5S	5W	15NW	N	1	0.1	0.0	0	B	G	TI	0	MC	F	1	3	R			F-B	AH		
89	MCKIBBN	G	P	5S	5W	31SE	A	45	8.0	0.2	200	S	V	QAL	0	S	F	1	1	R			F-T	WH		
90	UNKNOWN	G	P	5S	5W	32SE	A	1	0.3	0.1	10	S	V	QTM	0	S	F	1	1	R			F-T	WH		
91	O YOKUM	S	P	5S	4W	12NW	A	950	18.0	5.0	2000	B	B	TYB	1	S	FC	2	43	B	CS		F-B	ALF		
92	F KAMPH	S	P	5S	4W	12NE	A	80	3.0	0.5	800	B	B	TYB	1	SM	FM	2	19	B	CS		F-B	ARF		
93	CMEISEL	S	P	5S	4W	15SW	A	570	10.0	0.0	5000	B	B	TYB	1	SM	FB	3	30	B			FB	AF		
94	UNKNOWN	S	P	5S	4W	17SW	I	3	0.1	0.0	1	B	F	TYB	1	SM	F	1	11	R			F-T	ARF		
95	CMEISEL	S	P	5S	4W	23NE	A	181	4.0	6.0	1800	B	B	TYB	1	S	FB	2	20	B	CS		F-T	ALF		
96	MCMINRP	S	P	5S	4W	23SE	A	490	12.0	1.0	2000	B	B	TYB	0	SM	FB	3	28	RB	CS		F-T	ARF		
97	ANDERSN	S	P	5S	4W	26NE	A	38	2.0	0.0	100	B	B	TYB	0	MC	FC	1	10	R			F-T	RF		
98	MAR WRT	G	P	5S	3W	1SW	I	100	3.0	2.0	0	S	V	QAL	0	S	F	1	0	R			F-T	WH		
99	WLLMN L	C	P	6S	7W	1NW	R	100	13.0	5.0	0	B	S	TES	2	MC	F	1	17	R			FO	I	B	
100	UNKNOWN	G	P	6S	5W	4NE	N	50	2.0	0.1	50	S	V	QAL	0	S	F	1	0	R			F-T	WH		

FOOTNOTES: YAMHILL COUNTY

A. Oregon State Highway Laboratory data given in Table 9.

B. See site number below for other footnotes.

17. Part of site reclaimed as home sites, part of site is naturally reclaimed.

18. Being used for a stockpile area.

26. Zero reserves because site is in a rural - residential area.

27. Zero reserves because site is in a rural - residential area.

28. Zero reserves because site is in a rural - residential area.

47. Processing plant is 1.5 miles to the east of the quarry.

48. Reclaimed to a rifle range.

70. Reclaimed to a farm storage area.

72. Reclaimed to a city park.

73. Processing plant is 1.5 miles from quarry.

74. Overburden is being sold for topsoil.

87. Being used as a rifle range.

99. Was a clay source for a brick and tile plant. Now reclaimed to an industrial site.

Table Heading Definitions:

COMMOD (Commodity): C: clay; G: gravel; P: pumice (cinder); S: stone; DOMAIN: F: Federal; S: State; C: county; L: local; P: private; T: private timber lands; U: unknown; TOWN (Township, north or south); RANG (Range, east or west); SEC (section, quarter); STATUS: A: active; I: inactive; N: natural reclaimed; R: reclaimed; DEPOST (Deposit type): B: bedrock; S: surficial; T: talus; ROCK (rock type): A: andesite; B: basalt; E: breccia; G: gabbro; L: limestone; R: rholite; S: siltstone - sandstone - conglomerate; T: tuff; V: various; O: other; GEOL UNIT (Geological unit); COVER (depth of overburden in yards); WEATHR (Degree of Weathering); S: slight; M: moderate; C: complete; JOINT (Jointing): F: fine, 0-6 inches; C: coarse, 7-12 inches; B: blocky, 13-18 inches; M: massive, 19 plus inches; BENCHS (Number of benchs); FACE (Height of highest highwall in yards); BREAK (Breaking ground): R: rippable; B: drill and blast; PLANT TYPE: C: crusher; S: screen; O: other; USAGE: F: fill or embankment; S: subbase; B: base; T: topping; R: riprap; J: jetty stone; O: other; RECLAMATION: A: agricultural; I: industrial; L: landfill; R: residential; W: water recreation; H: wildlife habitat.

Table 5

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOLUNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
1	N SAM	G	P	9S	1W	15NW	A	800	94.0	24.0	300	S	V	QTL	1	S	F	1	3	R	CSO	F-T	H		B
2	N SAM	G	P	9S	1W	15NE	A	225	6.0	0.0	1000	S	V	QTL	0	S	F	1	5	R		F-T	H		A
3	N SAM	G	P	9S	1W	14NW	A	140	15.0	0.0	4	S	V	QTL	0	S	F	1	5	R		F-T	WH		
4	N SAM	S	P	9S	1W	14SE	A	12	1.0	0.0	200	B	B	TYB	0	S	FB	1	6	RB		F-T	A		
5	HORN	S	P	9S	1E	19SE	N	2	0.1	0.0	10	B	B	TYB	0	S	F	1	4	R		F-T	A		
6	LINN CO	G	C	9S	2E	19NE	N	50	4.0	0.0	0	S	V	QTL	0	S	F	1	1	R		F-T	W		
7	N SAM	G	P	9S	2E	19NE	N	154	16.0	0.0	200	S	V	QTL	0	S	F	1	1	R		F-T	W		
8	C CRUSH	G	P	9S	2E	20NW	A	115	7.0	0.0	20	S	V	QTL	0	S	F	1	4	R		F-T	A		
9	TIMBER	G	T	9S	2E	27SE	A	95	2.0	0.0	100	S	V	QTM	0	S	F	1	2	R		S-T	I		
10	TIMBER	S	T	9S	2E	36NW	A	30	2.0	0.0	100	B	A	TI	0	S	FM	1	25	R		F-B	I		A
11	N SAM	G	P	9S	3E	34NE	A	545	20.0	2.0	100	S	V	QTM	0	S	FM	2	10	R		F-B	IR		A
12	UNKNOWN	S	P	9S	4E	31SE	I	14	0.3	0.0	30	B	A	TS	0	SM	FC	2	35	R		F-T	F		
13	UNKNOWN	G	P	10S	3W	6SW	N	20	2.0	0.0	100	S	V	QTL	1	S	F	1	3	R		F-T	H		
14	NISSEN	G	P	10S	3W	4SW	A	200	20.0	0.0	300	S	V	QTL	1	S	F	1	4	R		F-T	AW		
15	STADELI	G	P	10S	3W	4SE	A	160	11.0	0.0	300	S	V	QTL	1	S	F	1	4	R	C	F-T	AW		
16	UNKNOWN	G	U	10S	3W	3SW	R	86	2.0	0.0	30	S	V	QTL	0	S	F	1	10	R		F-T	H		
17	JB ROCK	G	P	10S	3W	2SE	A	560	48.0	15.0	500	S	V	QTL	2	S	F	1	15	R	CSO	F-T	WH		AB
18	UNKNOWN	G	P	10S	3W	9SW	A	30	0.6	0.0	10	S	V	QTL	1	S	F	1	10	R		F-T	WA		
19	FORSLND	G	P	10S	3W	9SE	A	720	26.0	0.0	1000	B	B	TYB	2	S	FM	3	14	R	S	F-R	I		
20	MARI-LN	S	P	10S	3W	10SW	I	285	3.0	0.0	0	B	B	TYB	2	S	FB	3	10	R		F-T	RF		
21	UNKNOWN	S	P	10S	3W	17NE	I	34	1.0	0.0	10	B	B	TYB	10	M	FB	2	14	B		FB	RHF		
22	JB ROCK	S	P	10S	3W	16NW	A	108	5.0	0.0	500	B	B	TYB	1	M	FC	2	20	R		FB	RHF		
23	OSHD	G	S	10S	3W	16NE	R	300	11.0	0.0	0	S	V	QTM	0	S	F	1	3	R		FT	H		
24	MORSE B	G	P	10S	3W	14NW	N	16	1.0	3.0	200	S	V	QTL	0	S	F	1	4	R		FT	H		
25	S YIH	S	P	10S	3W	14SE	R	156	2.0	2.0	0	B	B	TYB	2	S	FM	4	28	B		FB	R		
26	UNKNOWN	G	P	10S	3W	16SW	N	36	2.0	0.0	0	S	V	QTL	0	S	F	1	5	R		F-T	WH		
27	MORSE B	S	P	10S	3W	22SE	A	500	33.0	0.0	400	B	B	TS	2	S	FM	2	15	B		F-T	AR		
28	OSHD	G	S	10S	3W	33SW	R	26	2.0	0.0	0	S	V	QTM	0	S	F	1	1	R		F-T	H		
29	RIVERSD	G	P	10S	2W	30NW	A	100	3.0	2.0	300	S	V	QAL	0	S	F	0	0	R	CS	F-T	H		
30	UNKNOWN	G	P	10S	2W	23NE	A	20	0.4	0.0	20	S	V	QAL	0	S	F	1	1	R		F-T	WH		
31	UNKNOWN	S	P	10S	2W	25NW	N	7	0.8	0.0	10	B	B	TYB	0	S	BM	1	5	B		FRJ	A		
32	UNKNOWN	S	P	10S	2W	25SW	N	6	1.0	0.0	30	B	B	TYB	0	S	CM	1	6	B		FR	F		
33	LINN CO	S	C	10S	1W	7NW	I	15	1.0	0.0	30	B	B	TYB	1	S	FM	1	7	B		F-B	A		
34	LINN CO	S	C	10S	1W	8NW	A	190	6.0	1.0	400	B	B	TYB	1	S	FM	3	10	B		F-B	A		
35	UNKNOWN	S	P	10S	1W	24SW	I	7	0.2	0.0	7	B	B	TYB	0	SM	FB	1	16	R		F-B	RHF		
36	BLM	S	F	10S	1W	25SW	I	12	0.3	0.0	20	B	B	TYB	0	S	FB	1	23	B		F-T	F		
37	UNKNOWN	S	P	10S	1E	10NE	I	54	1.0	0.5	500	B	B	TLB	0	S	CB	1	63	B		F-B	AF		
38	BLM	S	F	10S	1E	1NE	I	10	0.4	0.0	3	B	B	TLB	2	S	FB	1	14	RB		F-B	F		
39	BLM	S	F	10S	1E	23SE	I	14	1.0	1.0	100	B	B	TI	0	S	C	1	27	R		F-B	F		
40	UNKNOWN	S	T	10S	1E	24SE	N	2	0.3	0.0	10	B	A	TLB	1	S	FM	1	20	B		F-B	F		
41	TIMBER	S	T	10S	1E	28NE	A	32	1.0	0.0	50	B	B	TLB	3	S	FM	3	18	RB		F-T	F		
42	BLM	S	F	10S	1E	27NE	N	7	0.2	0.0	10	B	B	TI	0	S	CM	2	32	B		F-B	F		
43	TIMBER	S	T	10S	1E	26NE	I	29	0.5	0.0	100	B	A	TS	0	S	F	2	21	R		F-T	F		
44	BLM	S	F	10S	1E	25NW	I	23	0.5	0.0	0	B	A	TS	0	M	F	1	60	R		F-T	F		
45	UNKNOWN	S	T	10S	2E	10SW	N	30	0.6	0.0	30	B	A	TS	0	S	FB	2	15	R		F-T	F		
46	UNKNOWN	S	T	10S	2E	10SE	N	22	0.8	0.0	20	B	A	TS	0	SM	F	1	23	R		F-T	F		
47	OSF	S	S	10S	2E	12SE	N	1	0.1	0.0	0	B	A	TS	0	SM	FM	1	11	R		F-B	F		
48	TIMBER	S	T	10S	2E	17SW	I	2	0.1	0.0	5	B	A	TS	0	M	FB	1	12	R		F-T	F		
49	TIMBER	S	T	10S	2E	16SE	N	13	2.0	0.1	13	B	B	TLB	1	SM	FM	1	27	B	C	F-B	F		
50	TIMBER	S	T	10S	2E	13SW	I	1	0.1	0.0	0	B	A	TS	0	C	F	1	10	R		F	F		
51	TIMBER	S	T	10S	2E	20NW	I	2	0.1	0.0	0	B	A	TS	0	MC	F	1	7	R		F-T	F		
52	TIMBER	S	T	10S	2E	20SW	N	2	0.3	0.0	2	B	A	TLB	0	S	F	1	3	R		F-T	F		
53	TIMBER	S	T	10S	2E	20SE	I	2	0.3	0.0	10	B	A	TS	0	SM	F	1	10	R		F-T	F		
54	TIMBER	S	T	10S	2E	21SW	N	2	0.1	0.0	0	B	B	TLB	0	MC	F	1	7	R		F-T	F		
55	TIMBER	S	T	10S	2E	20SE	I	35	0.5	0.0	50	B	A	TS	0	S	FM	1	11	RB		F-T	F		
56	BLM	S	F	10S	2E	23NW	I	9	0.3	0.0	2	B	B	TLB	0	MC	FC	1	16	R		F-T	F		
57	UNKNOWN	S	T	10S	2E	30NE	N	10	1.0	0.0	2	B	B	TLB	0	MC	F	2	9	R		F-T	F		
58	TIMBER	S	T	10S	2E	29NE	A	20	0.5	0.0	20	B	A	TS	8	S	FM	1	37	RB		F-B	F		
59	TIMBER	S	T	10S	2E	28NW	A	6	0.3	0.0	3	B	A	TLB	1	S	FS	1	12	R		F-T	F		
60	TIMBER	S	T	10S	2E	29SE	N	6	0.3	0.0	10	B	A	TS	2	SM	FM	1	15	R		F-T	F		
61	TIMBER	S	T	10S	2E	28NW	R	50	0.8	0.0	0	B	A	TLB	0	S	FB	1	2	R		F-B	WF		
62	TIMBER	S	T	10S	2E	27SW	I	29	2.0	0.0	100	B	A	TI	2	S	FM	4	31	B		F-B	F		
63	TIMBER	S	T	10S	2E	26SE	R	4	0.1	0.0	2	B	A	TS	0	MC	F	1	4	R		F-T	F		
64	BLM	S	F	10S	2E	31SW	I	5	0.2	0.0	20	B	B	QTV	0	S	CM	1	11	B		F-S	F		
65	TIMBER	S	T	10S	2E	32NE	I	7	0.3	0.0	2	B	B	QTV	0	SM	FB	2	17	B		F-T	F		
66	TIMBER	S	T	10S	2E	33SE	N	3	0.3	0.0	0	B	A	TS	0	S	FM	1	4	R		F-T	F		
67	TIMBER	S	T	10S	2E	34SW	I	10	0.5	0.0	50	B	A	TS	0	S	FM	2	18	RB		F-B	F		
68	TIMBER	S	T	10S	2E	36NW	N	2	0.1	0.0	20	B	B	TI	0	SM	FM	1	10	R		F-B	F		
69	TIMBER	S	T	10S	2E	36NE	I	2	0.1	0.0	2	B	A	TLB	2	SC	FB	1	20	R		F-B	F		
70	TIMBER	S	T	10S	2E	36NW	A	31	2.0	0.0	100	B	B	TI	0	SM	FM	1	16	RB		F-B	F		
71	TIMBER	S	T	10S	2E	36SE	I	4	0.4	0.0	1	B	A	TS	0	S	FM	2	7	R		F-B	F		
72	TIMBER	S	T	10S	2E	35SE	I	3	0.2	0.0	1	B	A	TS	1	SM	FB	1	10	R		F-B	F		
73	OSF	S	S	10S	3E	10NE	A	48	1.0	0.0	150	B	A	TS	0	S	FB	1	5	B		F-T	F		
74	OSF	S	S	10S	3E	18SE	A	35	3.0	0.0	150	B	A	TS	0	S	FB	2	23	B		F-T	F		
75	TIMBER	S	T	10S	3E	20SE	I	13	0.4	0.0	25	B	B	TLB	0	S	FM	2	38	RB		F-B	F		
76	OSF	S	S	10S	3E	21NW	I	3	0.1	0.0	10	B	B	TLB	0	SM	FB	2	10	R		F-T	F		
77	OSF	S	S	10S	3E	21NE	I	1	0.1	0.0	1	B	A	TS	0	S	FB	1	12	R		F-T	F		
78	OSF	S	S	10S	3E	22NW	I	1	0.1	0.0	0	B	A	TS	0	M	FM	1	10	R		F-B	F		
79	TIMBER	S	T	10S	3E	30NE	I	15	0.3	0.0	30	B	A	TS	0	SM	FM	2	16	R		F-T	F		
80	TIMBER	S	T	10S	3E	30NE	I	1	0.2	0.0	3	B	A	TS	0	SM	FB	1	6	R		F-T	F		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
81	TIMBER	S	T	10S	3E	28SE	I	15	0.4	0.0	30	B	A	TS	0	M	FB	2	19	R		F-I	F		
82	UNKNOWN	S	T	10S	3E	27NE	I	3	0.1	0.0	15	B	A	TS	0	S	FM	1	16	R		F-I	F		
83	UNKNOWN	S	T	10S	3E	26SW	I	2	0.2	0.0	5	B	B	TLB	0	S	FM	1	20	RB		F-B	F		
84	TIMBER	S	T	10S	3E	31NW	N	1	0.1	0.0	0	B	B	TLB	0	SM	FM	1	4	R		F-B	F		
85	TIMBER	S	T	10S	3E	32NE	I	1	0.1	0.0	2	B	A	TS	0	M	FC	2	5	R		F-T	F		
86	TIMBER	S	T	10S	3E	34NW	I	5	0.1	0.0	10	B	B	TLB	0	M	FM	1	22	R		F-B	F		
87	TIMBER	S	T	10S	3E	34NW	N	115	2.0	0.0	5	B	B	TLB	0	S	FB	1	85	RB		F-T	F		
88	TIMBER	S	T	10S	3E	34SW	A	8	0.4	0.0	3	B	B	TLB	0	SM	F	1	36	R		F-T	F		
89	UNKNOWN	S	T	10S	3E	36NW	I	15	0.5	0.0	50	B	T	TLB	0	M	F	1	28	R		F-T	F		
90	OSF	S	S	10S	4E	5NW	I	5	0.3	0.0	5	B	A	TS	0	SM	FM	2	10	RB		F-T	F		
91	OSF	S	S	10S	4E	18SW	I	8	0.4	0.0	7	B	A	TS	0	M	FB	2	13	R		F-I	F		
92	OSF	S	S	10S	4E	19SW	A	29	1.0	0.1	90	B	A	TS	0	S	FM	2	15	R		F-B	F		
93	USFS	S	F	10S	4E	21NW	I	1	0.1	0.0	0	B	A	TS	0	S	FM	1	14	R		F-B	F		
94	OSF	S	S	10S	4E	19SW	A	19	0.6	0.0	20	B	A	TS	0	S	FB	2	25	R		F-B	F		
95	USFS	S	F	10S	4E	28NE	I	4	0.3	0.0	10	B	R	TLB	0	S	F	0	31	R		F-T	F		
96	USFS	S	F	10S	4E	34NE	I	2	0.1	0.0	5	B	B	TLB	0	S	FC	1	15	R		F-B	F		
97	USFS	S	F	10S	5E	7SW	I	2200	25.0	2.0	200	B	O	TI	0	S	CM	3	72	B		F-BRJ	F		B
98	TIMBER	S	T	10S	5E	13SE	A	2	0.2	0.0	20	B	A	TS	0	S	FB	2	10	R		F-T	F		
99	TIMBER	S	T	10S	5E	24NW	I	1	0.1	0.0	5	B	B	TS	0	S	FM	1	11	R		F-T	F		
100	USFS	S	F	10S	5E	24NE	I	2	0.1	0.0	0	B	A	TLB	0	M	FB	1	12	R		F-T	F		
101	TIMBER	S	T	10S	5E	22SW	I	21	0.9	0.0	5	B	A	TS	0	S	FM	3	15	RB		F-I	F		
102	USFS	S	F	10S	5E	28SW	N	1	0.1	0.0	2	B	A	TS	0	SM	FB	1	6	R		F-T	F		
103	USFS	S	F	10S	5E	32SE	A	1	0.1	0.0	5	B	R	TLB	0	S	FM	1	13	R		F-B	F		
104	USFS	S	F	10S	6E	17SW	I	2	0.2	0.0	0	B	T	TLB	0	M	FC	1	30	R		F-T	F		
105	USFS	S	F	10S	6E	20NW	I	3	0.1	0.0	0	B	T	TLB	0	SM	FM	1	24	RB		F-B	F		
106	USFS	S	F	10S	6E	33NE	I	3	0.2	0.0	1	B	A	TS	0	SM	FC	1	7	R		F-T	F		
107	USFS	S	F	10S	6E	35SE	A	37	0.8	0.0	100	B	B	QTV	0	S	FB	3	50	R		F-B	F		
108	USFS	S	F	10S	7E	28SW	A	133	3.0	0.0	75	S	V	QTM	0	S	FM	1	20	R		F-B	F		
109	HUB CTY	G	P	11S	4W	10SW	A	475	15.0	0.0	1500	S	V	QTL	3	S	F	1	5	R		F-T	WH		
110	HUB CTY	G	P	11S	4W	11NW	A	500	13.0	6.0	500	S	V	QTL	3	S	F	1	2	R	CSQ	F-T	WH		B
111	WILDISH	G	P	11S	4W	17NE	A	3000	58.0	20.0	8000	S	V	QTL	2	S	FC	1	10	R	CSQ	F-I	AWH		
112	KARSTEN	G	P	11S	4W	16NE	I	22	3.0	0.0	200	S	V	QAL	0	S	F	1	0	R		F-T	W		
113	SP RAIL	G	P	11S	4W	14NE	N	80	5.0	0.0	0	S	V	QTM	2	S	F	1	0	R		F	H		
114	OSP	G	S	11S	4W	20NE	I	425	18.0	0.0	100	S	V	QTL	1	S	F	1	4	R		F-I	WH		
115	UNKNOWN	G	P	11S	4W	23SE	A	1	0.1	0.0	10	S	V	QAL	0	S	F	1	1	R		F-T	WH		
116	DERRY	G	P	11S	4W	28SW	I	40	3.0	0.0	40	S	V	QTL	1	S	F	1	5	R		F-I	AH		
117	WILDISH	G	P	11S	4W	31SE	N	445	13.0	0.0	50	S	V	QTM	2	S	F	1	3	R		F-I	W		
118	SULLIVN	G	P	11S	3W	4NW	R	300	7.0	0.0	0	S	V	QTM	1	S	F	1	2	R		F-T	I		
119	ALBANY	G	L	11S	3W	5SE	R	400	12.0	0.0	0	S	V	QTM	2	S	F	1	4	R		F-T	W		
120	UNKNOWN	C	P	11S	3W	5SE	R	17	4.0	1.0	0	S	O	QTM	0	S	F	1	5	R		FO	R		B
121	ALBANY	G	L	11S	3W	4SW	R	350	11.0	0.0	0	S	V	QTM	2	S	F	1	3	R		F-T	RW		
122	ALBANY	G	L	11S	3W	4SE	R	300	6.0	0.0	0	S	V	QTM	2	S	F	1	3	R		F-T	W		A
123	UNKNOWN	G	P	11S	3W	9SE	A	35	3.0	0.0	70	S	V	QTM	1	S	F	1	4	R		F-T	WH		
124	MORSE B	G	P	11S	3W	10NE	I	1000	23.0	11.0	0	S	V	QTM	1	S	F	1	1	R		F-T	IWH		
125	MORSE B	G	P	11S	3W	11SW	A	3500	100.0	25.0	3000	S	V	QTM	2	S	FC	1	11	R	CSQ	F-T	AWH		B
126	LINN CO	G	C	11S	3W	28NW	R	1500	30.0	0.0	0	S	V	QTM	2	S	F	1	3	R		F-I	W		
127	HUB CTY	G	P	11S	2W	4NW	I	132	10.0	5.0	50	S	V	QTL	0	S	F	1	3	R		F-T	AWH		
128	FISH&WL	G	S	11S	2W	3SE	I	130	2.0	0.0	0	S	V	QAL	0	S	F	1	1	R		F-I	WH		
129	UNKNOWN	G	P	11S	2W	10NW	R	40	2.0	0.0	200	S	V	QTL	0	S	F	1	2	R		F-I	WHF		
130	UNKNOWN	G	P	11S	2W	10NW	N	100	5.0	0.0	200	S	V	QAL	0	S	F	0	0	R		F-T	H		
131	WILDISH	G	P	11S	2W	10SE	A	230	18.0	0.0	1000	S	V	QTL	1	S	F	1	3	R	CS	F-I	A		
132	LINN CO	G	P	11S	2W	32SE	I	200	12.0	0.0	100	S	V	QTM	1	S	FC	1	2	R		F-I	AW		A
133	TIMBER	S	T	11S	1E	4SE	N	9	0.2	0.0	0	B	B	QTY	0	S	FM	1	30	B		F-B	F		
134	TIMBER	S	T	11S	1E	10NW	I	50	0.7	0.0	0	B	B	TLB	0	S	F	1	33	RB		F-T	F		
135	TIMBER	S	T	11S	1E	24NE	I	16	0.2	0.0	80	B	B	TLB	0	S	FM	2	36	B		F-B	F		
136	TIMBER	S	T	11S	1E	26SE	N	25	0.2	0.0	0	B	B	QTV	10	S	FC	1	29	R		F-B	F		
137	BLM	S	F	11S	1E	35SE	A	3	0.3	0.0	15	B	B	TLB	0	S	FC	2	15	R		F-T	F		
138	TIMBER	S	T	11S	1E	35SW	I	6	0.5	0.0	10	B	A	TS	0	S	F	1	4	R		F-T	F		
139	TIMBER	S	T	11S	1E	35SE	A	30	0.3	0.0	5	B	A	TS	0	S	FC	2	41	R		F-B	F		
140	BLM	S	F	11S	2E	5NW	I	2	0.1	0.0	0	B	A	TS	0	S	M	1	10	B		J	F		
141	BLM	S	F	11S	2E	5SW	A	6	0.4	0.0	70	B	B	QTV	0	S	CM	1	4	R		F-B	F		
142	TIMBER	S	T	11S	2E	3NW	I	6	0.3	0.0	30	B	B	QTV	0	S	FM	1	11	B		F-B	F		
143	TIMBER	S	T	11S	2E	2NE	A	7	1.0	0.0	30	B	B	TLB	0	SM	FB	2	22	R		F-T	F		
144	TIMBER	S	T	11S	2E	1NW	I	12	0.4	0.0	100	B	B	TLB	0	S	FC	1	17	RB		F-I	F		
145	BLM	S	F	11S	2E	2SW	I	7	0.2	0.0	7	B	B	TLB	1	S	FM	1	14	RB		F-B	F		
146	BLM	S	F	11S	2E	2SW	I	2	0.1	0.0	5	B	B	TLB	0	SC	FM	1	10	RB		F-T	F		
147	TIMBER	S	T	11S	2E	8SE	A	6	0.3	0.0	20	B	B	QTV	0	S	FC	2	3	R		F-I	F		
148	BLM	S	F	11S	2E	10SE	A	24	0.5	0.0	75	B	B	TLB	0	SC	FB	2	29	B		F-T	F		
149	TIMBER	S	T	11S	2E	11SE	N	2	0.2	0.0	1	B	A	TLB	0	M	FC	1	11	R		F-B	F		
150	TIMBER	S	T	11S	2E	11SE	N	24	0.6	0.0	50	B	A	TLB	0	M	FM	1	25	R		F-B	F		
151	TIMBER	S	T	11S	2E	17NE	I	3	0.2	0.0	3	B	B	QTV	0	S	FM	1	4	R		F-B	F		
152	TIMBER	S	T	11S	2E	17NE	I	1	0.1	0.0	3	B	A	QTV	0	M	FM	1	5	R		F-B	F		
153	TIMBER	S	T	11S	2E	17SE	I	4	0.2	0.0	12	B	B	QTV	0	SM	FM	1	15	R		F-B	F		
154	TIMBER	S	T	11S	2E	16SE	N	1	0.1	0.0	0	B	B	QTV	0	SM	FM	1	3	R		FS	F		
155	TIMBER	S	T	11S	2E	16SE	A	51	1.0	0.0	0	B	A	TS	0	S	FC	2	20	R		F-FR	F		
156	TIMBER	S	T	11S	2E	16SE	I	2	0.2	0.0	0	B	A	TS	0	MC	F	1	6	R		F	F		
157	TIMBER	S	T	11S	2E	15NE	I	12	0.4	0.0	20	B	B	TLB	0	S	F	1	19	R		F-I	F		
158	TIMBER	S	T	11S	2E	15NE	I	17	0.6	0.0	20	B	B	TLB	0	S	F	1	39	R		F-I	F		
159	TIMBER	S	T	11S	2E	15SE	A	19	0.4	0.0	20	B	A	TLB	0	S	FB	2	13	R		F-T	F		
160	BLM	S	F	11S	2E	13SE	N	24	0.4	0.0	5	B	B	TLB	0	MC	F	1	32	R		F	F		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLAMATION	FOOT NOTE
161	TIMBER	S	T	11S	2E	20NW	N	2	0.1	0.0	10	B	B	TLB	0	S	F	1	10	R		F-I	F	
162	TIMBER	S	T	11S	2E	22SE	I	18	0.4	0.0	40	B	B	TI	0	S	FM	2	27	R		F-BR	F	
163	TIMBER	S	T	11S	2E	22SE	A	10	0.5	0.0	80	B	A	TS	0	S	FB	2	13	R		FT	F	
164	TIMBER	S	T	11S	2E	23SW	N	5	0.5	0.0	0	B	B	TLB	0	SM	FC	1	4	R		FT	F	
165	TIMBER	S	T	11S	2E	26NW	I	10	0.6	0.0	4	B	A	TS	1	S	FB	1	5	R		FT	IF	
166	TIMBER	S	T	11S	2E	26NE	I	15	0.5	0.0	0	B	A	TLB	0	SM	FB	2	18	R		FT	F	
167	TIMBER	S	T	11S	2E	26SW	I	24	0.4	0.0	0	B	A	TS	0	MC	F	1	12	R		FT	IF	
168	TIMBER	S	T	11S	2E	35SW	A	4	0.1	0.0	10	B	A	TS	1	S	FM	1	13	R		FT	F	
169	TIMBER	S	T	11S	2E	35SE	A	13	0.6	0.0	3	B	B	TLB	0	S	FB	3	29	R		FT	F	
170	BLM	S	F	11	3E	6SW	I	16	0.4	0.0	16	B	T	TLB	0	M	FM	1	6	R		FT	F	
171	TIMBER	S	T	11S	3E	5NE	R	6	0.3	0.0	0	B	A	TSB	0	SC	FB	1	6	R		FT	F	
172	TIMBER	S	T	11S	3E	5NE	A	2	0.1	0.0	10	B	A	TSB	0	S	FM	1	7	R		FT	F	
173	TIMBER	S	T	11S	3E	5SE	I	3	0.1	0.0	30	B	B	QTV	0	S	FM	1	13	B		FB	F	
174	BLM	S	F	11S	3E	4SW	A	20	0.5	0.4	20	B	A	TSV	0	S	FM	1	8	RB		FB	F	
175	BLM	S	F	11S	3E	4SW	I	5	0.3	0.0	0	B	A	TSV	0	S	CM	1	5	B		FB	F	
176	TIMBER	S	T	11S	3E	3NE	I	5	0.1	0.0	20	B	A	TS	0	M	FB	1	13	R		F-I	F	
177	TIMBER	S	T	11S	3E	1NW	A	4	0.1	0.0	1	B	A	TLB	3	SM	FM	1	9	R		F-B	F	
178	TIMBER	S	T	11S	3E	1SW	A	7	0.4	0.0	20	B	A	TS	0	S	FC	1	7	R		F-B	F	
179	BLM	S	F	11S	3E	9SW	I	4	0.3	0.1	40	B	B	TLB	0	S	FB	1	19	B		F-B	F	
180	BLM	S	F	11S	3E	12SW	I	1	0.1	0.0	3	B	A	TS	0	S	FB	1	20	R		F-B	F	
181	BLM	S	F	11S	3E	17NW	I	1	0.1	0.0	2	B	B	TLB	0	S	FM	1	7	R		F-B	F	
182	TIMBER	S	T	11S	3E	16SE	I	4	0.2	0.0	40	B	B	TLB	0	SM	FC	2	10	RB		F-I	F	
183	BLM	S	F	11S	3E	15NW	A	2	0.2	0.1	1	B	B	QTV	0	S	CM	1	7	R		FS	F	
184	BLM	S	F	11S	3E	15NE	I	17	0.5	0.0	35	B	B	TLB	0	SM	FM	1	21	R		F-B	F	
185	BLM	S	F	11S	3E	15SE	I	2	0.1	0.0	0	B	A	TS	0	SM	FB	1	11	R		F-B	F	
186	BLM	S	F	11S	3E	14NE	I	1	0.1	0.0	4	B	A	TS	0	S	FC	1	3	B		F-B	F	
187	BLM	S	F	11S	3E	14NE	I	6	0.2	0.0	3	B	A	TS	0	M	FB	1	20	R		F-B	F	
188	BLM	S	F	11S	3E	14SE	I	5	0.5	0.0	10	B	A	TS	0	M	FB	1	0	R		F-B	F	
189	TIMBER	S	T	11S	3E	13NE	I	2	0.1	0.0	2	B	E	TLB	0	S	FM	1	15	B		F-B	F	
190	BLM	S	F	11S	3E	20NE	I	11	1.0	0.0	50	B	B	TLB	0	S	FB	2	48	R		F-I	F	
191	BLM	S	F	11S	3E	23SW	I	10	1.0	0.0	4	B	A	TS	0	SC	FB	4	10	R		F-B	F	
192	TIMBER	S	T	11S	3E	24SE	N	1	0.1	0.0	2	B	B	TLB	0	M	FC	1	8	R		F-B	F	
193	BLM	S	F	11S	3E	32NE	I	2	0.2	0.0	3	B	B	TLB	0	S	FM	3	2	R		F-B	F	
194	BLM	S	F	11S	3E	26SE	I	2	0.1	0.0	0	B	B	TLB	0	S	FB	1	26	B		F-B	F	
195	BLM	S	F	11S	3E	32NW	I	9	0.2	0.1	5	B	B	TLB	0	S	FM	1	18	R		F-I	F	
196	BLM	S	F	11S	3E	33NW	I	3	0.2	0.0	2	B	A	TLB	0	M	FB	1	8	R		F-B	F	
197	BLM	S	F	11S	3E	33SE	A	2	0.2	0.0	4	B	A	TS	0	S	FB	2	4	R		F-B	F	
198	BLM	S	F	11S	3E	33SE	I	3	0.1	0.0	5	B	A	TS	0	S	FC	1	12	R		F-I	F	
199	BLM	S	F	11S	3E	34NE	N	2	0.1	0.0	5	B	B	TLB	0	S	FB	1	26	R		F-B	F	
200	BLM	S	F	11S	3E	35SW	I	185	2.0	0.0	20	B	T	TLB	0	M	FB	2	99	R		F-B	F	
201	BLM	S	F	11S	4E	6SW	A	5	0.3	0.2	20	B	A	TS	0	S	FC	1	5	R		F-B	F	
202	BLM	S	F	11S	4E	4NW	I	26	0.4	1.0	100	B	B	TI	0	S	FM	3	6	B		F-B	F	
203	USFS	S	F	11S	4E	3NW	A	3	0.1	0.1	7	B	E	TLB	0	M	FB	2	11	R		F-B	F	
204	TIMBER	S	T	11S	4E	7NE	I	1	0.2	0.0	2	B	R	TLB	0	M	F	1	2	R		F-I	F	
205	BLM	S	F	11S	4E	8SW	I	1	0.1	0.0	1	B	A	TLB	0	S	FB	1	9	R		F-B	F	
206	UNKNOWN	S	T	11S	4E	7SW	I	13	0.3	0.0	10	B	A	TLB	0	S	FM	1	40	R		F-B	F	
207	BLM	S	F	11S	4E	8NE	I	2	0.1	0.1	10	B	B	TI	0	S	F	1	20	B		F-B	F	
208	BLM	S	F	11S	4E	9SW	I	2	0.2	0.0	5	B	B	TLB	0	M	FB	1	7	R		F-B	F	
209	USFS	S	F	11S	4E	10NW	I	9	0.5	0.0	9	B	R	TLB	0	S	FB	1	19	B		F-BR	F	
210	USFS	S	F	11S	4E	10SE	I	7	0.5	0.0	30	B	A	TS	0	S	F	3	3	R		F-I	F	
211	USFS	S	F	11S	4E	11NE	I	8	0.1	0.0	7	B	B	TLB	0	S	FM	1	20	R		F-BRJ	F	
212	BLM	S	F	11S	4E	18NW	I	1	0.1	0.0	0	B	A	TLB	0	M	FM	1	17	B		F-B	F	
213	TIMBER	S	T	11S	4E	16NE	I	1	0.1	0.0	5	B	A	TLB	0	S	FC	1	12	R		F-B	F	
214	TIMBER	S	T	11S	4E	16SE	I	10	1.0	0.0	25	B	E	TLB	0	S	FM	2	24	RB		F-B	F	
215	TIMBER	S	T	11S	4E	16SW	I	10	0.1	0.0	10	B	B	TLB	0	S	FB	1	58	B		F-B	F	
216	TIMBER	S	T	11S	4E	16SW	I	4	0.2	0.0	12	B	A	TLB	0	S	FC	1	11	R		F-B	F	
217	USFS	S	F	11S	4E	13NW	I	5	0.1	0.0	5	B	A	TLB	0	S	CB	1	34	R		F-B	F	
218	BLM	S	F	11S	4E	21NW	I	3	0.1	0.0	20	B	B	TLB	0	S	FC	1	19	B		F-B	F	
219	USFS	P	F	11S	4E	21SE	I	1	0.1	0.0	20	B	O	QTV	0	S	FM	1	10	R		F-I	F	B
220	USFS	P	F	11S	4E	22NE	I	8	1.0	0.0	50	B	O	QTV	0	S	FC	2	4	R		F-I	F	B
221	USFS	S	F	11S	4E	25SW	I	2	0.2	0.0	6	B	T	TLB	1	S	FB	1	8	R		F-B	F	
222	BLM	S	F	11S	4E	32NW	A	2	0.1	0.0	2	B	E	TLB	0	S	F	1	13	R		F-I	F	
223	USFS	S	F	11S	5E	6SW	A	12	0.7	0.0	5	B	R	TLB	0	S	FC	1	31	R		F-I	F	B
224	USFS	S	F	11S	5E	2NE	A	1	0.1	0.0	2	B	A	TLB	0	S	FM	1	5	R		F-B	F	
225	USFS	S	F	11S	5E	1SE	N	2	0.1	0.0	0	B	A	TS	0	SM	FC	1	15	R		F-I	F	
226	USFS	S	F	11S	5E	17SW	I	40	3.0	0.0	20	B	E	TLB	0	SM	F	1	7	R		F-I	F	
227	USFS	S	F	11S	5E	15SE	I	7	0.4	0.0	50	B	A	TS	0	S	FC	2	8	R		F-B	F	
228	USFS	S	F	11S	5E	19NW	I	8	0.2	0.0	35	B	A	TS	0	S	FB	1	21	R		F-B	F	
229	USFS	S	F	11S	5E	19NE	A	8	0.6	0.0	60	B	A	TS	0	S	FC	2	11	R		F-I	F	
230	USFS	S	F	11S	5E	23NW	I	8	0.6	0.0	30	B	A	TLB	1	M	FB	1	10	R		F-I	F	
231	USFS	S	F	11S	5E	13SE	I	10	0.5	0.0	0	B	A	TS	2	S	FC	2	10	R		F-I	F	
232	USFS	S	F	11S	5E	21SW	I	2	0.1	0.0	20	B	A	TS	0	SM	FM	2	7	RB		F-B	F	
233	USFS	S	F	11S	5E	28SW	I	4	0.1	0.0	4	B	A	TLB	0	SM	F	1	26	R		F-I	F	
234	USFS	S	F	11S	5E	28NE	I	4	0.1	0.0	1	B	R	TLB	0	S	F	1	25	B		F-I	F	
235	USFS	S	F	11S	5E	28SE	A	6	0.3	0.0	20	B	R	TLB	0	S	FM	3	6	RB		F-B	F	
236	USFS	S	F	11S	5E	25SW	A	25	0.6	0.0	10	B	B	TI	0	S	FC	1	18	R		F-I	F	
237	USFS	S	F	11S	5E	25SE	A	192	4.0	0.5	800	B	B	TLB	0	SM	FM	2	80	B		F-B	F	
238	USFS	S	F	11S	5E	34SW	R	16	1.0	0.1	1	B	A	TLB	2	M	FC	1	10	R		F-I	F	
239	USFS	S	F	11S	5E	36SE	I	3	0.1	0.0	0	B	A	TLB	0	S	FB	1	20	B		F-B	F	
240	USFS	S	F	11S	6E	6NE	I	12	2.0	0.0	5	B	A	TS	0	S	FM	1	5	R		F-BR	F	

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
241	USFS	S	F	11S	6E	4NW	I	3	0.2	0.0	10	B	A	TS	0	SM	FB	2	10	R		F-T	F		
242	USFS	S	F	11S	6E	4NE	I	5	0.3	0.0	50	B	A	TS	0	S	F	3	8	R		F-T	F		
243	USFS	S	F	11S	6E	4NE	I	6	0.2	0.0	5	B	A	TS	0	SM	FM	1	33	RB		F-B	F		
244	USFS	S	F	11S	6E	3NE	I	7	0.4	0.0	30	B	B	QTV	0	S	FB	1	4	R		F-B	F		
245	USFS	S	F	11S	6E	3NE	I	1	0.1	0.0	2	B	B	QTV	0	S	FC	1	5	R		F-T	F		
246	USFS	S	F	11S	6E	8NW	A	46	2.0	0.1	150	B	B	TLB	0	SM	FC	1	28	R		F-T	F		
247	USFS	S	F	11S	6E	8SE	I	1	0.1	0.0	0	B	B	TLB	6	S	F	1	14	R		F-T	F		
248	USFS	S	F	11S	6E	12NE	I	28	0.8	0.0	0	B	A	TLB	0	SM	FM	3	20	R		F-B	F		
249	USFS	S	F	11S	6E	18NE	I	20	0.8	0.0	75	B	B	TLB	0	S	FC	1	44	RB		F-T	F		
250	USFS	S	F	11S	6E	17NE	I	1	0.1	0.0	5	B	B	TLB	0	S	FC	3	2	R		F-T	F		
251	USFS	S	F	11S	6E	20NE	I	5	0.2	0.0	0	B	T	TLB	0	SM	FC	1	12	R		F-T	F		
252	USFS	S	F	11S	6E	20SE	I	7	0.3	0.0	25	B	B	TLB	0	S	FC	1	38	R		F-T	F		
253	USFS	S	F	11S	6E	22SE	I	3	0.1	0.0	15	B	A	TS	0	S	FB	1	10	R		F-B	F		
254	USFS	S	F	11S	6E	29NE	I	11	0.2	0.0	1	B	E	TLB	0	S	FM	1	75	R		F-B	F		
255	USFS	S	F	11S	6E	25SE	I	20	1.0	0.0	100	B	B	TS	0	S	FC	2	50	R		F-B	F		
256	USFS	S	F	11S	6E	31NE	I	4	0.2	0.0	1	B	B	TLB	0	S	FC	1	4	R		F-B	F		
257	USFS	S	F	11S	7E	10SE	A	270	5.0	1.0	500	B	B	QTV	0	S	FM	2	73	R	CSO	F-B	F		B
258	USFS	S	F	11S	7E	30NW	I	19	1.0	0.0	100	B	A	TS	0	S	FC	2	9	R		F-T	F		
259	USFS	S	F	11S	7E	29SE	I	5	0.3	0.0	5	B	B	QTV	0	S	FM	1	23	R		F-B	F		
260	USFS	S	F	11S	7E	32SW	N	107	3.0	0.0	150	B	B	TS	0	SM	FM	2	32	R		F-B	F		
261	USFS	S	F	11S	7E	32SW	I	4	0.3	0.0	20	B	B	TS	0	S	FC	1	7	R		F-B	F		
262	VALLEY	G	P	12S	5W	2NE	A	400	8.0	0.0	0	S	V	QTL	2	S	F	1	3	R		F-T	L		
263	MORSE B	G	P	12S	5W	1NW	I	540	12.0	0.0	0	S	V	QTL	2	S	F	1	4	R		F-T	WH		A
264	UNKNOWN	G	P	12S	5W	1NE	N	80	4.0	0.0	20	S	V	QTM	2	S	F	1	4	R		F-T	WHF		
265	GATES	G	P	12S	4W	8NW	R	85	6.0	0.0	100	S	V	QTL	1	S	F	1	2	R		F-T	RWH		
266	MORSE B	G	P	12S	4W	31NE	N	100	3.0	0.6	500	S	V	QTL	0	S	F	1	2	R		F-T	HF		
267	MORSE B	G	P	12S	2W	2SE	R	25	1.0	3.0	0	S	V	QAL	0	S	FC	0	0	R		F-T	A		
268	MORSE B	G	P	12S	2W	1SW	A	1000	58.0	19.0	400	S	V	QTL	1	S	FC	1	2	R	CSO	F-T	WH		AB
269	MORSE B	S	P	12S	2W	12SW	N	50	1.0	0.0	50	B	A	TS	1	S	FM	2	14	RB		F-B	AR		
270	MORSE B	S	P	12S	2W	13NW	I	30	2.0	0.0	200	B	A	TS	0	S	FM	2	16	RB		F-B	AR		
271	MORSE B	G	P	12S	2W	13NW	I	1200	40.0	40.0	500	S	V	QTL	1	S	FC	1	3	R		F-T	WH		
272	GINDHRT	S	P	12S	2W	13NE	N	1	0.1	0.0	10	B	A	TS	1	S	FC	0	1	R		F-T	AF		
273	MORSE B	S	P	12S	2W	13NE	I	120	2.0	0.0	400	B	A	TS	0	S	CM	2	14	B		F-B	HF		A
274	MCCALIE	S	P	12S	2W	36SE	A	31	2.0	0.0	100	B	A	TS	2	S	FC	1	3	R	CS	F-T	R		
275	BROWN B	S	P	12S	1W	6NW	A	50	2.0	0.5	150	B	A	TS	0	S	FM	2	19	B	CS	F-T	A		A
276	BROWN B	S	P	12S	1W	6SE	A	20	0.7	0.0	10	B	A	TS	1	M	FB	1	12	RB		F-T	A		
277	MORSE B	S	P	12S	1W	6SW	A	165	7.0	8.0	500	B	A	TS	2	S	FC	2	13	RB	CS	F-T	A		A
278	GINDHRT	S	P	12S	1W	7SW	A	1	1.0	0.0	10	B	S	TMS	1	S	M	1	2	B	0	O	A		B
279	GINDHRT	S	P	12S	1W	7SW	A	10	5.0	0.0	200	B	A	TS	1	S	FC	1	5	R		F-T	AW		
280	LLOYD	S	P	12S	1W	18NE	A	35	1.0	0.0	100	B	A	TS	1	S	FC	2	11	R		F-T	AR		
281	GRAHM	S	P	12S	1W	16SW	A	30	1.0	0.0	100	B	B	TYB	0	S	CM	1	18	B		FS	R		A
282	UNKNOWN	S	P	12S	1W	20NW	N	13	2.0	0.0	100	B	B	TLB	0	S	CM	1	5	B		FS	ARF		
283	BLM	S	F	12S	1E	3SW	I	14	0.5	0.0	30	B	B	TLB	0	S	FM	1	11	R		F-B	F		
284	TIMBER	S	T	12S	1E	2NW	N	5	0.3	0.0	2	B	B	TLB	0	S	F	1	1	R		F-T	F		
285	TIMBER	S	T	12S	1E	35NW	A	19	0.5	0.0	20	B	A	TS	0	SM	FB	1	10	R		F-T	F		
286	UNKNOWN	S	T	12S	2E	2NE	A	3	0.5	0.0	25	B	B	TS	0	S	F	1	4	R	CS	F-T	F		
287	TIMBER	S	T	12S	2E	8SE	N	4	0.3	0.0	10	B	B	TLB	0	M	F	1	4	R		F-T	F		
288	UNKNOWN	S	T	12S	2E	10SE	I	2	0.3	0.0	0	B	B	TLB	0	S	F	1	5	R		F-T	F		
289	UNKNOWN	S	T	12S	2E	10NE	I	2	0.2	0.0	0	B	B	TLB	0	S	FM	1	1	B		F-TR	F		
290	BLM	S	F	12S	2E	11NW	I	10	0.4	0.0	6	B	B	TLB	0	S	FC	1	3	R		F-T	F		
291	UNKNOWN	S	T	12S	2E	12NW	I	6	0.2	0.0	2	B	A	TS	0	SC	F	2	20	R		F-T	F		
292	TIMBER	S	T	12S	2E	18SW	N	10	1.0	0.0	0	B	B	TLB	0	M	FC	2	10	R		F-T	F		
293	TIMBER	S	T	12S	2E	19NE	N	9	0.5	0.0	0	B	B	TLB	0	M	F	1	6	R		F-T	F		
294	BLM	S	F	12S	2E	29SW	I	13	0.4	0.0	50	B	A	TS	0	S	FM	1	15	R		F-BO	F		B
295	TIMBER	S	T	12S	2E	31SW	A	50	2.0	0.0	100	B	A	TS	0	M	FB	2	20	R		F-T	F		
296	TIMBER	S	T	12S	2E	33SE	A	11	0.5	0.0	35	B	A	TS	0	SM	FC	3	12	R		F-T	F		
297	TIMBER	S	T	12S	2E	35SW	I	6	0.2	0.0	2	B	E	TLB	4	MC	FM	2	7	R		F-T	F		
298	BLM	S	F	12S	3E	4SE	I	1	0.1	0.0	3	B	A	TS	0	S	FB	1	30	RB		F-B	F		
299	BLM	S	F	12S	3E	3NW	A	3	0.1	0.0	20	B	A	TS	0	S	FB	1	20	B		F-B	F		
300	BLM	S	F	12S	3E	3NE	A	9	0.3	0.0	5	T	T	TLB	0	M	FM	1	24	R		F-B	F		
301	BLM	S	F	12S	3E	1SW	A	17	0.7	0.0	30	B	B	TI	0	S	FC	3	30	RB		F-B	F		
302	BLM	S	F	12S	3E	1NE	I	5	0.1	0.0	5	B	A	TS	0	S	FC	1	34	R		F-B	F		
303	TIMBER	S	T	12S	3E	7NW	I	20	0.8	0.0	40	B	A	TS	0	SM	FC	1	44	R		F-T	F		
304	TIMBER	S	T	12S	3E	7NW	I	29	2.0	0.0	50	B	A	TS	3	S	FB	3	10	RB		F-T	F		
305	TIMBER	S	T	12S	3E	8SE	I	2	0.1	0.0	20	B	B	TI	0	S	FB	1	23	B		F-B	F		
306	BLM	S	F	12S	3E	9NW	N	2	0.2	0.0	2	B	A	TS	0	S	FB	2	6	R		F-B	F		
307	BLM	S	F	12S	3E	9NW	I	1	0.2	0.0	1	B	E	TLB	0	SM	FM	2	12	R		F-B	F		
308	BLM	S	F	12S	3E	15NW	I	12	0.7	0.0	50	B	A	TS	10	S	FB	3	20	RB		F-T	F		
309	TIMBER	S	T	12S	3E	14SE	I	11	0.3	0.0	5	B	E	TLB	0	M	FC	1	15	R		F-T	F		
310	TIMBER	S	T	12S	3E	13NW	I	8	0.5	0.0	2	B	B	TI	0	SM	F	1	4	R		F-T	F		
311	TIMBER	S	T	12S	3E	13NW	I	1	0.1	0.0	2	B	E	TLB	0	M	FC	1	4	R		F-T	F		
312	TIMBER	S	T	12S	3E	13SW	I	3	0.2	0.0	2	B	T	TLB	0	M	FC	1	4	R		F-B	F		
313	TIMBER	S	T	12S	3E	24NW	A	4	0.4	0.0	6	B	E	TLB	0	M	FC	1	4	R		F-B	F		
314	TIMBER	S	T	12S	3E	24NW	A	4	0.1	0.0	20	B	E	TLB	0	S	FC	2	10	R		F-T	F		
315	TIMBER	S	T	12S	3E	24NE	A	143	1.0	0.5	1000	B	E	TLB	0	S	FM	3	39	R		F-TRJ	F		
316	TIMBER	S	T	12S	3E	35SW	A	15	0.5	0.0	50	B	O	TI	0	SM	F	2	14	R		F-T	F		B
317	TIMBER	S	T	12S	4E	6NE	A	3	0.1	0.0	15	B	B	TLB	0	M	FC	1	13	R		F-B	F		
318	TIMBER	S	T	12S	4E	6SE	A	8	1.0	0.1	10	B	B	QTV	0	M	CM	1	4	R		FS	F		
319	TIMBER	S	T	12S	4E	3SW	A	1	0.1	0.0	10	T	E	TLB	0	S	FC	1	3	R		F-T	F		
320	USFS	S	F	12S	4E	1NE	I	1	0.1	0.0	1	B	R	TLB	0	S	FC	1	3	RB		F-B	F		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
321	TIMBER	S	T	12S	4E	8SE	A	17	0.5	0.0	20	B	A	TLB	0	S	FC	2	13	R		F-T	F		
322	TIMBER	S	T	12S	4E	10SE	A	4	0.1	0.0	10	B	B	TLB	0	S	FC	1	2	R		F-T	F		
323	TIMBER	S	T	12S	4E	12NE	I	1	0.1	0.0	3	B	B	TLB	0	S	FC	1	10	R		F-B	F		
324	TIMBER	S	T	12S	4E	12SE	I	7	0.2	0.0	20	B	B	TLB	0	S	FB	1	13	R		F-B	F		
325	TIMBER	S	T	12S	4E	12SE	I	2	0.1	0.0	10	B	B	TLB	0	S	FC	1	14	R		F-B	F		
326	TIMBER	S	T	12S	4E	18NW	A	3	0.2	0.0	6	B	R	TLB	0	M	FC	1	4	R		F-T	F		
327	TIMBER	S	T	12S	4E	18NE	A	1	0.1	0.0	5	B	R	TLB	0	S	FC	1	4	R		F-B	F		
328	TIMBER	S	T	12S	4E	18NW	A	4	0.1	0.0	1	B	R	TLB	0	S	FC	1	20	R		F-T	F		
329	TIMBER	S	T	12S	4E	18SW	I	1	0.1	0.0	1	B	E	TLB	0	S	F	1	4	R		F-T	F		
330	TIMBER	S	T	12S	4E	17NW	A	6	0.3	0.0	20	B	R	TLB	0	S	FB	1	17	R		F-T	F		
331	TIMBER	S	T	12S	4E	17SW	I	2	0.2	0.0	1	B	E	TLB	0	S	FC	1	1	R		F-B	F		
332	TIMBER	S	T	12S	4E	16NW	A	2	0.1	0.0	4	B	T	TLB	0	S	FB	1	10	R		F-B	F		
333	TIMBER	S	T	12S	4E	16NE	A	30	0.3	0.0	100	B	E	TLB	0	S	F	1	48	R		F-T	F		
334	TIMBER	S	T	12S	4E	16SW	I	1	0.1	0.0	2	B	E	TLB	0	M	F	1	3	R		F-T	F		
335	TIMBER	S	T	12S	4E	15NW	A	3	0.1	0.0	10	B	B	TLB	0	S	F	2	12	R		F-T	F		
336	TIMBER	S	T	12S	4E	15NE	I	1	0.1	0.0	1	B	E	TLB	0	S	FC	1	2	R		F-B	F		
337	TIMBER	S	T	12S	4E	15NE	I	1	0.1	0.0	1	B	E	TLB	0	S	F	1	4	R		F-TR	F		
338	TIMBER	S	T	12S	4E	14NW	A	3	0.7	0.0	6	B	B	TLB	0	S	FC	1	6	R		F-B	F		
339	TIMBER	S	T	12S	4E	13NW	A	1	0.1	0.0	5	B	A	TLB	0	S	FC	1	3	R		F-T	F		
340	TIMBER	S	T	12S	4E	13NW	A	3	0.2	0.0	3	B	A	TLB	0	S	FC	1	13	R		F-T	F		
341	TIMBER	S	T	12S	4E	13NE	I	4	0.1	0.0	10	B	B	TLB	0	S	FM	1	25	R		F-BR	F		
342	TIMBER	S	T	12S	4E	13SW	A	6	0.2	0.0	30	B	T	TLB	0	S	FC	1	12	R		F-T	F		
343	TIMBER	S	T	12S	4E	13SE	A	7	0.1	0.0	40	B	B	TI	0	S	F	2	16	R		F-T	F		
344	TIMBER	S	T	12S	4E	19SE	A	11	0.2	0.0	40	B	B	TLB	0	S	FM	2	14	R		F-T	F		
345	TIMBER	S	T	12S	4E	20NE	A	2	0.1	0.0	10	T	A	TS	0	S	FC	1	10	R		F-T	F		
346	TIMBER	S	T	12S	4E	21NW	A	5	0.3	0.0	25	B	A	TS	0	S	FC	2	6	R		F-B	F		
347	TIMBER	S	T	12S	4E	23SE	A	1	0.1	0.0	2	B	B	TI	0	S	FC	1	4	R		F-B	F		
348	TIMBER	S	T	12S	4E	24NW	A	1	0.1	0.0	5	B	T	TLB	0	S	FB	1	7	R		F-B	F		
349	TIMBER	S	T	12S	4E	24NW	A	3	0.2	0.0	30	B	A	TLB	0	S	FC	1	7	R		F-T	F		
350	TIMBER	S	T	12S	4E	24NW	I	1	0.1	0.0	5	B	T	TLB	0	S	FC	1	10	R		F-B	F		
351	TIMBER	S	T	12S	4E	30NW	I	3	0.2	0.0	10	B	B	TLB	0	S	FM	1	3	R		F-B	F		
352	TIMBER	S	T	12S	4E	30SW	I	1	0.1	0.0	5	B	B	TLB	0	S	F	1	10	R		F-B	F		
352	TIMBER	S	T	12S	4E	29NW	A	14	0.3	0.0	14	B	B	TLB	0	S	FC	1	22	R		F-T	F		
354	TIMBER	S	T	12S	4E	27SE	I	1	0.1	0.0	3	B	B	TLB	0	S	FC	1	4	R		F-B	F		
355	TIMBER	S	T	12S	4E	25NW	A	2	0.1	0.0	10	B	A	TLB	0	S	F	1	10	R		F-B	F		
356	TIMBER	S	T	12S	4E	25NW	R	1	0.1	0.0	3	B	O	TI	0	S	FB	1	4	R		F-T	F		B
357	TIMBER	S	T	12S	4E	32NE	I	2	0.1	0.0	3	B	E	TLB	0	S	FC	1	9	R		F-B	F		
358	TIMBER	S	T	12S	4E	33SE	A	5	0.1	0.0	25	B	A	TS	0	S	FC	1	12	R		F-T	F		
359	TIMBER	S	T	12S	4E	36NE	A	5	0.1	0.0	10	B	B	TI	0	S	FB	1	19	R		F-B	F		
360	USFS	S	F	12S	5E	28SW	I	6	0.1	0.0	6	B	A	TLB	0	S	FC	1	28	R		F-B	F		
361	USFS	S	F	12S	5E	27SE	A	105	1.0	0.1	10	B	B	TI	0	S	FC	3	38	R		F-B	F		
362	USFS	S	F	12S	5E	26NE	I	2	0.1	0.0	8	B	A	TLB	0	M	FM	1	12	R		F-B	F		
363	USFS	S	F	12S	5E	25NW	I	5	0.2	0.0	20	B	A	TLB	0	SM	FC	2	10	R		F-B	F		
364	USFS	S	T	12S	5E	32NE	I	2	0.2	0.0	3	B	A	TS	0	SM	FC	2	4	R		F-B	F		
365	TIMBER	S	T	12S	5E	33SE	A	5	0.5	0.0	20	B	B	QTV	0	S	FC	1	3	R		F-T	F		
366	USFS	S	F	12S	5E	34SW	I	4	0.2	0.0	12	B	A	TS	0	S	F	1	5	R		F-T	F		
367	USFS	S	F	12S	5E	36SW	I	10	0.2	0.0	50	B	B	TI	0	M	FM	1	22	RB		F-TRJ	F		B
368	USFS	S	F	12S	6E	3NE	A	22	2.0	0.0	20	B	B	TLB	0	S	FM	2	19	RB		F-T	F		
369	USFS	S	F	12S	6E	1NW	I	2	0.1	0.0	10	B	E	TLB	0	S	FB	1	12	R		F-B	F		
370	USFS	S	F	12S	6E	1NW	I	4	0.2	0.0	10	B	E	TLB	0	M	FC	1	12	R		F-T	F		
371	USFS	S	F	12S	6E	5NW	I	8	0.4	0.0	20	B	B	TLB	0	S	FM	1	8	R		F-B	F		
372	USFS	S	F	12S	6E	3SW	I	4	0.4	0.0	4	B	A	TS	0	SM	FB	2	7	R		F-B	F		
373	USFS	S	F	12S	6E	14NE	I	9	0.5	0.0	50	B	B	QTV	0	S	FM	1	16	RB		F-B	F		
374	USFS	S	F	12S	6E	15SW	I	2	0.1	0.0	0	B	B	QTV	0	M	FC	1	15	R		F-T	F		
375	USFS	S	F	12S	6E	15SE	I	1	0.1	0.0	10	B	B	QTV	0	S	FC	2	10	R		F-B	F		
376	USFS	S	F	12S	6E	20NE	I	1	0.1	0.0	3	B	A	TLB	0	S	FC	1	8	R		F-B	F		
377	USFS	S	F	12S	6E	20SE	I	20	0.2	0.0	40	B	A	TLB	0	M	FC	2	37	R		F-T	F		
378	USFS	S	F	12S	6E	26SE	I	2	0.1	0.0	0	B	B	QTV	0	M	FM	1	15	R		F-B	F		
379	USFS	S	F	12S	6E	26SW	A	8	0.4	0.0	50	B	B	QTV	0	S	F	1	5	R		F-B	F		
380	TIMBER	S	T	12S	6E	31SW	I	11	0.1	0.0	25	B	B	TI	0	S	FM	1	38	B		F-B	F		
381	USFS	S	F	12S	7E	5NE	I	8	0.2	0.0	0	B	B	QTV	0	S	FB	1	26	R		F-B	F		
382	USFS	S	F	12S	7E	7SE	A	5	0.8	0.0	25	B	B	TS	0	S	FM	1	0	R	CS	F-BR	F		
383	UNKNOWN	S	T	12S	7E	31NW	A	2	0.2	0.0	10	B	V	QTV	0	S	FC	1	6	R		F-B	F		
384	OSP	G	S	13S	4W	30SW	N	220	7.0	0.0	0	S	V	QTV	0	S	F	1	4	R		F-T	WH		
385	UNKNOWN	S	U	13S	3W	9NE	I	17	0.5	0.3	100	B	B	TLB	0	MC	FM	1	19	R		F-B	RHF		
386	OSHD	S	S	13S	3W	9NE	R	500	25.0	4.0	1000	B	B	TLB	0	S	FM	1	99	RB		F-BRJ	RHF		AB
387	UNKNOWN	G	P	13S	3W	28SW	R	270	18.0	0.0	0	S	V	QTM	0	S	F	1	2	R		F	AW		
388	M SLATE	S	P	13S	3W	27NW	A	1000	30.0	5.0	1000	B	B	TLB	0	SM	FM	3	16	B		F-B	RH		
389	OSHD	G	S	13S	3W	33NW	R	120	12.0	0.0	50	S	V	QTM	0	S	F	0	1	R		F	WH		
390	F SMITH	G	P	13S	3W	36NE	A	20	2.0	1.0	500	S	V	QTL	0	S	F	1	2	R	CS	F-T	A		
391	F SMITH	G	P	13S	3W	36SE	A	30	2.0	0.0	100	S	V	QAL	0	S	F	0	0	R		F-T	WH		
392	HARRING	S	P	13S	2W	1SE	A	110	7.0	0.0	600	B	A	TS	2	S	FC	2	19	RB	CS	F-T	AF		
393	TIMBER	S	T	13S	2W	9SW	A	3	0.2	0.0	30	B	B	TLS	0	S	FB	2	26	R		F-T	F		
394	TIMBER	S	T	13S	2W	16NE	A	10	0.5	0.0	5	B	A	TSS	0	S	FC	1	8	R		F-T	F		
395	TIMBER	S	T	13S	2W	16SE	A	5	0.4	0.0	25	B	B	TLB	0	S	F	1	13	R		F-T	F		
396	TIMBER	S	T	13S	2W	22NW	A	12	0.8	0.0	40	B	B	TLB	0	SM	FC	2	11	R		F-T	F		
397	MANNING	S	P	13S	2W	30SW	N	30	1.0	0.0	150	B	B	TLB	2	S	CB	1	21	B		FRJ	A		
398	TIMBER	S	T	13S	2W	28SE	A	2	0.1	0.0	10	B	B	TLB	0	S	FC	1	4	R		F-T	F		
399	F SMITH	S	P	13S	2W	31NW	A	18	1.0	0.0	70	B	A	TSB	0	S	FB	5	4	R		F-T	R		
400	PIONEER	G	P	13S	2W	31SE	A	70	2.0	3.0	140	S	V	QAL	0	S	F	1	2	R	CS	F-T	WH		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESER-VES X1000 CU YD	DEPOST	ROCK	GEOLOGIC UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLAMATION	FOOT NOTE
401	TIMBER	S	T	13S	1W	1SE	A	4	0.4	0.0	25	B	B	TYB	0	S	FB	1	3	R	CS	F-T	F	
402	JOHNSON	S	P	13S	1W	13SE	A	110	8.0	0.0	600	B	B	TYB	2	M	FC	3	22	RB	CS	F-T	R	
403	LINN CO	S	C	13S	1W	13SE	A	75	2.0	0.0	200	B	B	TYB	0	M	F	2	17	B	S	F-I	R	
404	LINN CO	S	C	13S	1W	26SE	I	150	3.0	3.0	500	B	B	TYB	1	S	FM	1	16	B		F-T	A	
405	CASCADE	S	P	13S	1W	26SE	A	90	3.0	0.0	1000	B	B	TYB	0	S	CM	2	21	B		FSR	AF	A
406	TIMBER	S	T	13S	1E	5SW	A	1	0.1	0.0	5	B	B	TYB	0	S	FM	1	4	RB		F-I	F	
407	WILDISH	S	T	13S	1E	18SW	A	90	2.0	0.0	400	B	B	TYB	0	SM	FC	3	70	RB		F-I	AR	
408	TIMBER	S	T	13S	1E	16SW	I	35	2.0	0.0	40	B	B	TYB	0	SM	FC	2	12	RB		F-I	F	
409	UNKNOWN	S	P	13S	1E	22SW	N	400	8.0	0.0	200	R	B	TYB	0	S	BM	3	28	B		FRJ	WF	
410	MORSE B	G	P	13S	1E	29NW	A	1000	40.0	20.0	2000	S	V	QTL	2	S	FC	2	15	R	CSO	F-T	WH	AB
411	TACK L	G	P	13S	1E	29NE	R	150	8.0	0.0	0	S	V	QTL	1	S	FC	1	4	R		F-I	I	
412	CLEAR L	G	P	13S	1E	28NW	N	230	10.0	10.0	200	S	V	QTL	0	S	FC	1	4	R		F-T	IWH	
413	TIMBER	S	T	13S	2E	4NE	N	7	0.3	0.0	20	B	A	TS	0	S	FM	2	15	R		F-I	F	
414	TIMBER	S	T	13S	2E	7NW	N	9	0.4	0.0	45	B	A	TS	0	M	F	1	11	R		F-T	F	
415	TIMBER	S	T	13S	2E	9NW	I	9	0.4	0.0	9	B	A	TS	0	S	FC	1	9	R		F-T	F	
416	TIMBER	S	T	13S	2E	11NW	I	10	0.1	0.0	30	B	A	TLB	4	S	FM	1	34	B		F-B	F	
417	TIMBER	S	T	13S	2E	11NE	A	30	0.9	0.1	5	B	A	TLB	3	S	FM	1	23	R		F-B	F	
418	TIMBER	S	T	13S	2E	13SE	I	11	0.7	0.0	30	B	A	TS	0	S	FB	1	8	R		F-T	F	
419	US ACE	S	F	13S	2E	19NE	I	400	8.0	0.0	0	S	V	QTM	0	S	F	1	0	R		F-T	W	
420	TIMBER	S	T	13S	2E	29NW	A	20	1.0	0.0	50	B	R	TLB	0	S	FM	2	39	R		F-T	F	
421	US ACE	S	F	13S	2E	26SW	I	1000	5.0	15.0	1000	B	B	TLB	0	S	CM	6	20	B		F-BRJ	F	
422	OSHD	S	S	13S	2E	35SW	N	26	0.7	0.0	30	B	B	TLB	0	S	FM	2	18	B		F-B	F	
423	TIMBER	G	T	13S	3E	4SE	N	50	0.7	0.0	150	S	V	QTM	0	S	F	1	15	R		F-T	F	
424	TIMBER	S	T	13S	3E	7SW	I	3	0.1	0.0	3	B	A	TLB	0	S	FB	1	10	R		F-I	F	
425	TIMBER	S	T	13S	3E	16SW	A	60	0.3	0.0	100	B	B	TLB	0	S	FB	1	78	R		F-T	F	
426	TIMBER	S	T	13S	3E	20NE	I	3	0.2	0.0	3	B	A	TS	0	S	FC	1	4	R		F-T	F	
427	USFS	S	F	13S	3E	23SW	I	16	0.3	0.0	30	B	E	TLB	0	S	FM	1	22	R		F-B	F	
428	TIMBER	S	T	13S	3E	28SE	A	13	0.3	0.0	50	B	B	TLB	0	S	FB	3	20	R		F-B	F	
429	USFS	S	F	13S	3E	26SE	I	4	0.1	0.0	2	B	T	TLB	0	S	F	1	24	R		FS	F	
430	TIMBER	S	T	13S	3E	33NE	I	50	2.0	0.0	10	B	B	TLB	0	S	FB	1	37	RB		F-B	F	
431	TIMBER	S	T	13S	4E	3SW	I	3	0.1	0.0	6	B	B	TLB	0	S	FB	1	9	R		F-S	F	
432	USFS	S	F	13S	4E	2SW	I	5	0.1	0.0	25	B	B	TS	0	S	FM	1	9	R		F-I	F	
433	TIMBER	S	T	13S	4E	9NE	I	2	0.1	0.0	3	B	B	TLB	0	S	FB	1	10	R		F-B	F	
434	TIMBER	S	T	13S	4E	9SE	I	2	0.1	0.0	2	B	B	TLB	1	S	FC	1	7	R		F-B	F	
435	TIMBER	S	T	13S	4E	9NE	I	1	0.1	0.0	5	B	B	TLB	0	M	FM	1	17	R		F-B	F	
436	TIMBER	S	T	13S	4E	9SW	I	1	0.1	0.0	1	B	B	TLB	0	S	FC	1	7	R		F-B	F	
437	USFS	S	F	13S	4E	10SE	I	6	0.1	0.0	20	B	A	TS	0	S	FC	1	15	R		F-T	F	
438	USFS	S	F	13S	4E	11NW	I	1	0.1	0.0	3	B	A	TS	0	S	F	2	10	R		F-T	F	
439	USFS	S	F	13S	4E	11SW	I	30	0.2	0.0	30	B	A	TS	0	S	FM	1	61	R		F-B	F	
440	TIMBER	S	T	13S	4E	12NW	I	1	0.1	0.0	3	B	A	TS	0	S	F	1	4	R		F-T	F	
441	TIMBER	S	T	13S	4E	17NE	I	1	0.1	0.0	2	B	R	TLB	0	M	FC	1	4	R		F-T	F	
442	TIMBER	S	T	13S	4E	17NE	I	8	0.1	0.0	1	B	B	TLB	0	SM	FC	1	9	R		F-B	F	
443	USFS	S	F	13S	4E	17SW	I	4	0.1	0.0	0	B	B	TLB	0	SM	F	2	15	R		F-T	F	
444	TIMBER	S	T	13S	4E	17SE	I	1	0.1	0.0	1	B	A	TS	0	S	FC	1	6	R		F-B	F	
445	TIMBER	S	T	13S	4E	16NW	R	3	0.1	0.0	2	B	A	TS	0	S	F	1	3	R		F-B	F	
446	TIMBER	S	T	13S	4E	14SW	A	7	0.2	0.0	70	B	A	TS	0	S	F	3	17	R		F-T	F	
447	USFS	S	F	13S	4E	20NW	I	12	0.2	0.0	0	B	A	TS	0	S	FB	2	46	R		F-T	F	
448	USFS	S	F	13S	4E	20SE	I	35	2.0	0.0	100	B	A	TS	0	S	FB	2	22	R		F-T	F	
449	USFS	S	F	13S	4E	30SE	N	1	0.1	0.0	0	T	B	TLB	0	S	FM	1	18	R		F-BR	F	
450	USFS	S	F	13S	4E	30SW	N	5	0.2	0.0	50	B	B	TLB	0	S	FM	1	24	R		F-B	F	
451	USFS	S	F	13S	4E	30SW	I	45	2.0	0.5	10	B	B	TLB	0	S	FM	2	16	RB		F-B	F	
452	USFS	S	F	13S	4E	32NE	I	1	0.1	0.0	0	B	B	TLB	0	S	FC	1	8	B		F-B	F	
453	TIMBER	S	T	13S	5E	5NE	I	32	1.0	0.0	0	B	B	TI	0	SC	FC	1	13	R		F-B	F	
454	TIMBER	S	T	13S	5E	5SW	N	2	0.2	0.0	2	B	A	TS	0	S	FB	1	10	R		F-T	F	
455	TIMBER	S	T	13S	5E	5SW	I	1	0.1	0.0	0	B	E	TLB	0	C	F	1	5	R		F	F	
456	TIMBER	S	T	13S	5E	5SE	N	2	0.1	0.0	2	B	B	TLB	0	SM	FC	1	13	R		F-B	F	
457	USFS	S	F	13S	5E	4SE	I	1	0.1	0.0	0	B	B	QTV	0	S	FB	1	7	R		F-B	F	
458	USFS	S	F	13S	5E	2NW	A	7	0.8	0.0	15	B	A	TS	0	S	FC	1	2	R		F-T	F	
459	USFS	S	F	13S	5E	2SE	N	2	0.1	0.0	2	B	A	TS	0	S	F	1	16	R		F-T	F	
460	TIMBER	S	T	13S	5E	1NW	I	3	0.3	0.1	30	B	O	TI	0	M	FC	1	10	R		F-B	F	B
461	TIMBER	S	T	13S	5E	7NW	A	3	0.1	0.0	3	B	A	TLB	0	S	FB	1	19	B		F-B	F	
462	TIMBER	S	T	13S	5E	7SW	A	40	2.0	0.0	40	B	B	TLB	0	S	FM	2	80	R		FSR	F	
463	USFS	S	F	13S	5E	8NW	I	3	0.1	0.0	1	B	A	TLB	3	S	FC	1	10	R		F-B	F	
464	USFS	S	F	13S	5E	8SE	I	40	0.6	0.0	20	B	B	TLB	0	SM	FM	1	31	RB		F-BRJ	F	
465	TIMBER	S	T	13S	5E	9NW	A	28	0.5	0.0	30	B	B	QTV	0	S	FM	2	18	R		F-T	F	
466	USFS	S	F	13S	5E	12NW	I	12	0.2	0.0	10	B	A	TS	0	S	FB	1	48	R		F-B	F	
467	TIMBER	S	T	13S	5E	14SE	I	9	0.1	0.0	10	B	B	QTV	0	S	FC	1	25	R		F-B	F	
468	TIMBER	S	T	13S	5E	13SW	I	3	0.1	0.0	5	B	B	TLB	0	S	FB	1	10	B		F-B	F	
469	USFS	S	F	13S	5E	20SE	I	9	0.3	0.0	20	B	R	TLB	0	S	FM	3	16	B		F-B	F	
470	USFS	S	F	13S	5E	20SE	I	50	1.0	0.0	100	B	B	TI	0	S	FC	3	20	R		F-B	F	
471	TIMBER	S	T	13S	5E	21NE	I	2	0.1	0.0	6	B	R	TLB	0	S	FM	1	8	R		F-B	F	
472	TIMBER	S	T	13S	5E	23SW	A	12	0.5	0.0	5	B	O	TI	0	S	FM	1	7	R		F-B	F	B
473	USFS	S	F	13S	5E	24NE	I	1	0.1	0.0	3	B	B	TLB	0	S	FC	1	10	R		F-B	F	
474	USFS	S	F	13S	5E	24SW	A	22	0.7	0.0	25	B	A	TS	0	S	FB	2	17	R		F-B	F	
475	TIMBER	S	T	13S	5E	27SW	A	26	1.0	0.0	100	T	A	TS	0	S	FM	2	36	R		F-B	F	
476	TIMBER	S	T	13S	5E	27NE	A	5	0.3	0.0	10	T	A	TS	0	S	FC	1	30	RB		F-B	F	
477	USFS	S	F	13S	5E	26NW	A	55	1.0	0.0	25	B	A	TS	0	S	FM	1	29	R		F-B	F	
478	TIMBER	S	T	13S	5E	25SW	I	1	0.1	0.0	1	B	T	TLB	0	M	F	1	5	R		F-T	F	
479	USFS	S	F	13S	5E	32NW	N	10	0.4	0.0	30	B	R	TI	2	S	FM	1	27	B		F-B	F	
480	USFS	S	F	13S	5E	32SW	N	21	0.2	0.0	0	B	E	TLB	0	S	FB	1	46	R		F-B	F	

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT	TYPE	USAGE	RECLA	MATION	FOOT NOTE
481	USFS	S	F	13S	5E	34SE	I	1	0.1	0.0	0	B	I	TLB	0	M	FM	1	4	R			F-B	F		
482	USFS	S	F	13S	5E	36NE	A	4	0.2	0.0	12	B	A	TS	0	S	F	1	11	R			F-T	F		
483	USFS	S	F	13S	5E	36NW	I	30	1.2	1.0	30	T	A	QTV	0	S	FC	1	37	R			F-T	F		
484	USFS	S	F	13S	5E	36SW	I	3	0.2	0.0	30	B	A	TLB	0	S	FM	1	10	R			F-B	F		
485	TIMBER	S	T	13S	6E	5NE	I	5	0.2	0.0	0	T	B	TLB	0	S	FC	1	0	R			F-B	F		
486	TIMBER	S	T	13S	6E	7NW	I	3	0.1	0.0	3	B	E	TLB	0	SM	FM	1	12	RB			F-B	F		
487	TIMBER	S	T	13S	6E	7NW	A	150	2.0	0.1	500	B	B	TLB	0	S	FB	5	36	R			F-B	F		
488	USFS	S	F	13S	6E	8SW	I	7	0.1	0.0	1	B	T	TLB	0	M	FB	1	51	R			F-B	F		
489	USFS	S	F	13S	6E	18NW	N	4	0.3	0.0	1	B	A	TS	0	S	F	1	4	R			F-B	F		
490	TIMBER	S	F	13S	6E	18SE	A	9	0.4	0.0	5	B	A	TS	0	S	FB	3	9	R			F-B	F		
491	USFS	S	F	13S	6E	17NW	I	1	0.3	0.0	0	B	O	TI	0	S	FB	1	2	R			F-B	F		B
492	TIMBER	S	F	13S	6E	19NE	A	2	0.1	0.0	10	B	A	TS	0	M	FC	1	10	R			F-T	F		
493	USFS	S	F	13S	6E	20NW	I	13	0.4	0.0	6	T	O	TI	0	S	FB	1	32	R			F-B	F		B
494	USFS	S	F	13S	6E	27SE	I	22	1.0	0.1	20	B	B	TLB	0	S	FB	1	8	R			F-B	F		
495	USFS	S	F	13S	6E	34SW	I	11	0.5	0.0	11	B	B	QTV	0	S	FM	1	19	RB			F-B	F		
496	USFS	P	F	13S	7E	15SE	A	400	45.0	0.0	4000	B	O	QTV	0	S	F	5	44	R		S	F-T	F		B
497	USFS	S	F	13S	E	23SW	A	150	2.0	0.0	1000	B	A	QTV	0	S	FB	4	47	RB			F-T	F		AB
498	USFS	S	F	13S	E	35SE	I	23	1.0	0.0	200	B	A	QTV	0	S	FC	1	54	R			F-T	F		B
499	UNKNOWN	G	P	14S	4W	36NW	N	45	1.0	0.0	0	S	V	QTM	1	S	F	0	1	R			F	AWH		
500	WIDMER	S	P	14S	3W	13NW	A	45	3.0	0.0	200	B	B	TLB	0	S	FM	1	6	RB			F-T	A		A
501	LABLANG	S	P	14S	3W	13SW	I	70	2.0	0.6	200	B	B	TLB	0	S	FM	1	10	B			F-T	A		
502	BIGELOW	S	P	14S	3W	13SW	R	12	1.0	0.0	0	B	B	TLB	0	S	FM	1	2	B			F-T	R		
503	UNKNOWN	S	P	14S	3W	22SW	N	4	0.4	0.0	20	B	B	TLB	0	S	FB	2	4	R			FSR	A		
504	OSHD	S	S	14S	3W	28SE	I	38	0.5	0.0	380	B	B	TLB	0	S	CM	4	30	B			F-B	ARH		
505	WILL Q	S	P	14S	3W	28SE	I	132	4.0	0.3	1000	B	B	TLB	0	S	CM	2	23	B			F-BR	ARH		
506	NORRIS	S	P	14S	3W	24SE	A	30	2.0	0.0	150	B	B	TI	0	S	FC	3	4	R		CS	F-TO	AR		B
507	UNKNOWN	G	P	14S	2W	4NW	A	6	1.0	0.0	90	S	V	QAL	0	S	F	0	0	R			F-T	WH		
508	CALAPO	G	P	14S	2W	4NW	A	20	2.0	1.0	100	S	V	QAL	0	S	F	0	0	R			F-T	WHF		
509	NORTHRN	S	P	14S	2W	3NW	A	27	1.0	0.0	60	B	B	TLB	0	SM	FM	1	8	R			F-T	A		
510	UNKNOWN	S	P	14S	2W	2NW	N	3	0.0	0.0	30	B	B	TLB	0	S	CM	1	8	B			F-B	AF		
511	TIMBER	S	T	14S	2W	12NW	A	7	0.3	0.0	30	B	B	TLB	0	S	FB	1	7	RB			F-T	F		
512	UNKNOWN	S	P	14S	2W	14NW	N	2	0.2	0.0	20	B	B	TI	0	S	FC	1	2	RB			F-T	F		
513	UNKNOWN	S	P	14S	2W	14SW	N	1	0.1	0.0	10	B	A	TS	0	S	F	1	5	R			F-T	AF		
514	TIMBER	S	T	14S	2W	13SW	A	3	0.3	0.1	20	B	A	TS	0	S	FC	1	8	R			F-T	F		
515	TIMBER	S	T	14S	2W	21NE	I	1	0.1	0.0	2	B	R	TLB	0	SM	F	1	3	R			F-T	F		
516	TIMBER	S	T	14S	2W	23SE	A	1	0.2	0.0	10	B	B	TI	0	S	FC	1	1	RB			F-T	F		
517	UNKNOWN	S	P	14S	2W	24SW	I	22	2.0	0.0	50	B	A	TS	0	SC	FM	3	12	RB			F-T	F		
518	BLM	S	F	14S	2W	28NW	N	1	0.1	0.0	3	B	A	TS	0	S	FC	1	5	R			F-T	F		
519	BLM	S	F	14S	2W	28NE	I	2	0.4	0.0	1	B	A	TLB	0	S	F	1	2	R			F-T	F		
520	UNKNOWN	G	P	14S	1W	16NW	A	40	1.0	2.0	80	S	V	QAL	0	S	F	1	0	R			F-T	WH		
521	BLM	S	F	14S	1W	31SW	I	3	0.2	0.0	20	B	B	TLB	0	S	FB	1	3	B			F-B	F		
522	UNKNOWN	S	P	14S	1W	33NE	I	9	2.0	0.0	50	B	A	TS	0	S	FM	2	10	B			F-B	F		
523	BLM	S	F	14S	1W	35NW	I	6	1.0	0.0	20	B	O	TLB	0	M	FM	1	4	R			F-T	F		B
524	UNKNOWN	S	P	14S	1E	1SE	N	2	0.1	0.0	0	B	B	TLB	0	S	F	1	12	R			F-B	F		
525	TIMBER	S	T	14S	1E	21NE	I	4	0.7	0.0	4	B	B	TLB	0	M	FC	2	8	R			F-T	F		
526	TIMBER	S	T	14S	1E	23NE	I	41	1.0	0.0	50	B	B	TLB	0	SM	FM	1	25	RB			F-BR	F		
527	TIMBER	S	T	14S	1E	26SE	I	6	0.2	0.0	2	B	B	TLB	0	S	FB	1	4	R			F-T	F		
529	TIMBER	S	T	14S	2E	7SE	A	18	1.0	0.0	100	B	B	TLB	0	S	FB	5	20	R			F-B	F		
528	TIMBER	S	T	14S	1E	26SE	A	6	1.0	0.0	25	B	B	TLB	0	M	F	1	6	R			F-T	F		
530	TIMBER	S	T	14S	2E	9NE	I	3	0.2	0.0	1	B	T	TLB	0	S	FM	2	17	RB			F-B	F		
531	TIMBER	S	T	14S	2E	12NE	N	7	0.2	0.0	70	B	A	TS	0	SM	FB	3	12	R			F-T	F		
532	TIMBER	S	T	14S	2E	17SE	I	5	0.3	0.0	15	B	B	TLB	0	S	FB	2	14	R			F-T	F		
533	TIMBER	S	T	14S	2E	16NE	I	2	0.1	0.0	6	B	A	TS	0	S	FM	2	4	B			F-B	F		
534	TIMBER	S	T	14S	2E	15SW	I	19	2.0	0.0	20	B	A	TS	0	M	FC	1	5	R			F-T	F		
535	USFS	S	F	14S	2E	14SW	A	33	2.0	0.0	75	B	A	TS	0	M	FC	2	10	R			F-T	F		
536	TIMBER	S	T	14S	2E	24NW	N	1	0.2	0.0	3	B	B	TS	0	S	FB	1	4	R			F-T	F		
537	TIMBER	S	T	14S	2E	27SE	I	3	0.3	0.0	10	B	A	TS	0	SM	FC	1	4	R			F-T	F		
538	TIMBER	S	T	14S	2E	29SE	I	2	0.1	0.0	0	B	A	TS	0	S	FM	1	12	R			F-BR	F		
539	TIMBER	S	T	14S	2E	25SW	I	1	0.1	0.0	0	B	E	TLB	3	S	FB	1	20	RB			F-B	F		
540	TIMBER	S	T	14S	2E	31NW	A	7	0.3	0.0	14	B	A	TS	0	S	FM	1	10	RB			F-B	F		
541	TIMBER	S	T	14S	2E	31NW	I	1	0.1	0.0	2	B	A	TS	0	S	FC	1	10	R			F-T	F		
542	TIMBER	S	T	14S	2E	31SW	A	13	0.3	0.0	60	B	A	TS	0	S	FB	2	24	R			F-T	F		
543	TIMBER	S	T	14S	2E	33NW	N	2	0.2	0.0	2	B	A	TS	0	M	FM	1	6	R			F-B	F		
544	TIMBER	S	T	14S	2E	33SE	I	6	0.3	0.0	0	B	A	TS	0	S	FM	1	7	R			F-B	F		
545	TIMBER	S	T	14S	2E	36NE	I	5	0.2	0.0	5	B	A	TS	0	S	FB	1	20	R			F-T	F		
546	TIMBER	S	T	14S	3E	9NE	I	7	0.5	0.0	3	B	B	TLB	0	S	FB	1	11	R			F-T	F		
547	TIMBER	S	T	14S	3E	11SW	I	7	0.3	0.0	30	B	A	TS	0	S	FM	2	38	R			F-TR	F		
548	TIMBER	S	T	14S	3E	17NW	N	10	0.9	0.0	10	B	B	TLB	0	S	FB	2	8	B			F-B	F		
549	TIMBER	S	T	14S	3E	16NE	I	20	0.6	0.0	0	B	A	TS	0	SM	FB	1	26	RB			F-B	F		
550	TIMBER	S	T	14S	3E	15NW	N	18	0.3	0.0	10	B	E	TLB	0	M	FB	1	27	R			F-T	F		
551	TIMBER	S	T	14S	3E	13NW	N	1	0.1	0.0	0	B	A	TLB	0	S	FM	1	4	R			F-B	F		
552	TIMBER	S	T	14S	3E	13NE	I	1	0.1	0.0	5	B	A	TLB	0	S	FM	1	8	R			F-B	F		
553	TIMBER	S	T	14S	3E	23SW	N	1	0.2	0.0	1	B	B	TLB	0	S	FB	1	4	R			F-T	F		
554	TIMBER	S	T	14S	3E	24NE	I	25	0.7	0.0	50	B	A	TLB	0	S	FM	1	40	R			F-T	F		
555	TIMBER	S	T	14S	3E	30SW	I	8	0.1	0.0	25	B	B	TI	0	S	F	2	16	R			F-T	F		
556	TIMBER	S	T	14S	3E	29SW	A	8	0.5	0.0	16	B	A	TS	0	S	FC	1	3	R			F-T	F		
557	TIMBER	S	T	14S	3E	29SW	A	4	0.2	0.0	4	B	A	TS	0	S	FB	1	16	RB			F-TO	F		B
558	TIMBER	S	T	14S	3E	28SW	A	2	0.2	0.0	1	B	A	TS	0	M	F	1	5	R			F-T	F		
559	TIMBER	S	T	14S	3E	27NW	N	1	0.1	0.0	5	B	B	TLB	0	S	F	1	10	R			F-T	F		
560	TIMBER	S	T	14S	3E	27SE	I	4	0.2	0.0	7	B	A	TS	0	S	FM	1	12	B			F-B	F		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MATION	FOOT NOTE
561	TIMBER	S	T	14S	3E	27SE	I	6	0.2	0.0	12	B	B	TLB	0	S	F	1	13	R		F-T	F		
562	TIMBER	S	T	14S	3E	25NE	I	5	2.0	0.0	5	B	A	TS	0	M	FC	1	6	R		F-T	F		
563	TIMBER	S	T	14S	3E	31NW	I	2	0.1	0.0	10	B	A	TS	0	S	FB	1	24	R		F-B	F		
564	TIMBER	S	T	14S	3E	33NE	I	1	0.1	0.0	2	B	B	TS	0	S	F	1	7	R		F-T	F		
565	TIMBER	S	T	14S	3E	33NW	I	2	0.1	0.0	0	B	A	TS	0	S	FC	2	4	R		F-T	F		
566	TIMBER	S	T	14S	3E	36NW	A	78	1.0	0.0	400	B	A	TS	0	S	FM	2	25	R		F-T	F		
567	USFS	S	F	14S	4E	5NW	N	20	6.0	0.0	0	B	A	TS	1	SM	F	1	25	R		F-B	F		
568	USFS	S	F	14S	4E	5NW	I	27	0.5	0.0	30	B	A	TS	1	SM	FC	1	21	R		F-T	F		
569	USFS	S	F	14S	4E	8NE	I	5	0.1	0.0	0	B	R	TLB	0	SM	FC	1	23	R		F-T	F		
570	USFS	S	F	14S	4E	8SE	I	24	0.3	0.0	10	B	R	TLB	0	S	FC	1	30	R		F-T	F		
571	UNKNOWN	S	T	14S	4E	18NE	I	3	0.1	0.0	3	T	R	TLB	0	S	FB	1	15	R		F-B	F		
572	TIMBER	S	T	14S	4E	18SE	I	44	2.0	1.0	10	B	A	TS	0	S	FM	4	11	R		F-B	F		
573	TIMBER	S	T	14S	4E	16NW	A	12	0.3	0.0	30	B	B	QTV	0	S	FC	2	16	R		F-T	F		
574	TIMBER	S	T	14S	4E	16NE	A	8	0.2	0.0	30	B	B	QTV	0	S	F	1	14	R		F-T	F		
575	TIMBER	S	T	14S	4E	20NW	I	75	0.3	0.0	100	B	A	TLB	0	S	FB	4	23	R		F-T	F		
576	TIMBER	S	T	14S	4E	20SW	A	40	0.4	0.0	100	B	B	TLB	0	S	FM	2	40	B		F-B	F		
577	TIMBER	S	T	14S	4E	24SE	A	30	2.0	0.0	100	B	R	TLB	0	S	FM	2	25	R		F-T	F		
578	TIMBER	S	T	14S	4E	24SE	I	1	0.1	0.0	0	B	R	TLB	0	S	FC	1	12	R		F-B	F		
579	TIMBER	S	T	14S	4E	30NW	I	3	0.2	0.0	10	B	A	TS	0	M	FM	1	18	R		F-B	F		
580	TIMBER	S	T	14S	4E	29NW	I	6	0.1	0.0	0	B	A	TLB	0	S	FC	2	6	R		F-T	F		
581	TIMBER	S	T	14S	4E	29SE	I	4	0.2	0.0	2	B	A	TLB	0	S	FM	1	10	R		F-B	F		
582	TIMBER	S	T	14S	4E	33NW	I	15	0.6	0.0	15	B	A	TLB	0	S	FB	1	13	R		F-T	F		
583	TIMBER	S	T	14S	4E	33SE	I	15	0.2	0.0	15	B	A	TLB	0	S	FB	1	23	R		F-T	F		
584	TIMBER	S	T	14S	4E	36NE	A	3	0.1	0.0	5	B	B	TLB	0	S	FC	1	3	R		F-B	F		
585	TIMBER	S	T	14S	5E	5SE	A	1	0.1	0.0	1	B	R	TLB	0	S	FC	1	5	B		F-B	F		
586	USFS	S	F	14S	5E	8SE	I	44	1.0	0.0	2	B	A	TS	8	M	FM	1	32	R		F-BRJ	F		
587	USFS	S	F	14S	5E	17SE	A	17	0.2	0.0	30	B	B	TLB	0	S	FB	1	20	B		F-B	F		
588	TIMBER	S	T	14S	5E	19SW	I	4	0.1	0.0	4	B	R	TLB	0	S	FC	1	7	R		F-B	F		
589	TIMBER	S	T	14S	5E	21NE	A	3	0.3	0.0	1	B	E	TLB	0	M	FC	1	4	R		F-T	F		
590	USFS	S	F	14S	5E	24NW	I	63	1.0	0.0	100	T	B	QTV	0	S	FM	2	24	R		F-B	F		
591	TIMBER	S	T	14S	5E	29NE	A	18	0.5	0.0	20	B	E	TLB	0	SM	FM	1	14	RB		F-BRJ	F		
592	USFS	S	F	14S	5E	28SE	I	22	0.5	0.0	5	T	A	TS	0	S	F	1	3	R		F-T	F		
593	USFS	S	F	14S	5E	34NE	I	5	0.3	0.0	2	B	T	TLB	0	MC	FM	1	11	R		F	F		
594	USFS	S	F	14S	6E	6SE	I	10	0.1	0.0	40	T	B	QTV	0	S	FC	2	25	R		F-B	F		
595	USFS	S	F	14S	6E	9NW	R	1	0.1	0.0	1	B	B	QTV	0	S	FM	1	4	B		F-B	F		
596	USFS	S	F	14S	6E	9SE	I	2	0.1	0.0	20	B	B	QTV	0	S	FM	1	12	R		F-B	F		
597	USFS	S	F	14S	6E	9SE	I	1	0.1	0.0	10	B	B	QTV	0	S	FB	1	6	R		F-B	F		
598	USFS	S	F	14S	6E	18SE	I	52	2.0	0.8	50	B	B	QTV	1	S	F	2	25	RB		F-T	F		
599	USFS	S	F	14S	6E	17NE	A	18	0.7	0.0	50	B	A	TS	0	S	FB	1	20	R		F-T	F		
600	USFS	S	F	14S	6E	15NW	N	3	0.1	0.0	2	T	B	QTV	0	SC	FC	1	4	R		F-B	F		
601	USFS	S	F	14S	6E	15NE	I	3	0.1	0.0	10	B	B	QTV	0	S	FC	1	21	R		F-B	F		
602	USFS	S	F	14S	6E	15NE	I	10	0.3	0.0	5	B	B	QTV	0	S	FB	2	25	B		F-B	F		
603	USFS	S	F	14S	6E	31NE	A	154	2.0	0.5	600	B	A	TS	0	S	FC	4	80	R		F-B	F		
604	USFS	S	F	14S	6E	35SW	I	5	0.1	0.0	0	B	B	QTV	4	S	FC	1	15	R		F-B	F		
605	USFS	S	F	14S	7E	29NE	A	50	10.0	0.0	200	B	B	QTV	0	S	FM	1	6	R		F-TO	F		B
606	MORSE B	G	P	15S	4W	5SE	N	200	23.0	0.0	600	S	V	QAL	0	S	F	1	2	R		F-I	WH		
607	MORSE B	G	P	15S	4W	9SE	A	365	11.0	28.0	0	S	V	QTL	1	S	F	1	3	R		F-I	I		
608	MORSE B	G	P	15S	4W	16SE	A	354	24.0	21.0	1000	S	V	QTL	1	S	F	1	3	R	CSO	F-T	WH		AB
609	UNKNOWN	G	P	15S	3W	4NW	R	200	7.0	0.0	0	S	V	QTM	0	S	F	1	2	R		F	AW		
610	KAMPFER	S	P	15S	3W	12NW	I	25	0.8	0.0	100	B	B	TLB	0	S	BM	1	32	B		RJ	A		
611	DANELS	G	P	15S	3W	16NW	R	300	16.0	0.0	0	S	V	QTM	0	S	F	1	0	R		F	IW		
612	OSHD	G	S	15S	3W	33SW	R	600	17.0	0.0	0	S	V	QTM	1	S	F	1	0	R		F	AW		
613	BLM	S	F	15S	2W	3NE	A	24	0.8	0.2	50	B	A	TS	0	S	FB	1	13	B		F-B	F		
614	BLM	S	F	15S	2W	3SE	N	4	0.2	0.0	5	B	T	TLB	0	M	F	1	14	R		F-T	F		
615	BLM	S	F	15S	2W	1SE	I	14	0.8	2.0	50	B	B	TLB	0	S	FB	1	11	B		F-B	F		A
616	BLM	S	F	15S	2W	31SE	I	2	0.2	0.0	6	B	E	TLB	0	SM	FM	1	7	R		F-B	F		
617	TIMBER	S	T	15S	2W	32NE	I	5	0.3	0.0	4	B	B	TLB	1	MC	FM	2	15	R		F-B	F		
618	TIMBER	S	T	15S	1E	2SW	I	26	0.5	0.2	75	B	B	TLB	0	S	FM	1	30	B		F-B	F		
619	BLM	S	F	15S	1E	1SW	I	5	0.2	0.0	15	B	T	TLB	0	SM	CM	1	22	R		F-B	F		
620	TIMBER	S	T	15S	1E	11NE	I	8	0.2	0.0	40	B	A	TS	0	SM	FC	1	11	R		F-T	F		
621	TIMBER	S	T	15S	1E	13SW	I	12	0.1	0.0	100	B	B	TLB	0	S	FC	1	25	R		F-I	F		
622	TIMBER	S	T	15S	1E	13SW	I	5	0.3	0.0	20	B	A	TS	0	S	FC	1	9	R		F-T	F		
623	TIMBER	S	T	15S	1E	24SW	I	2	0.2	0.0	20	B	A	TS	0	S	FC	1	7	R		F-T	F		
624	TIMBER	S	T	15S	1E	24NE	I	28	2.0	0.1	100	B	A	TS	0	S	FM	1	7	R		F-BR	F		
625	TIMBER	S	T	15S	1E	24SE	A	50	2.0	0.0	150	B	A	TS	0	S	FC	2	9	R		F-T	F		
626	TIMBER	S	T	15S	2E	5NW	I	2	0.1	0.0	5	B	A	TS	0	S	F	1	18	R		F-I	F		
627	TIMBER	S	T	15S	2E	5SW	I	4	0.2	0.0	12	B	A	TS	0	S	FM	1	12	RB		F-B	F		
628	TIMBER	S	T	15S	2E	5SE	I	10	0.4	0.0	10	B	A	TS	0	S	FM	1	6	R		F-T	F		
629	TIMBER	S	T	15S	2E	4SW	I	6	0.5	0.0	12	B	A	TS	0	S	FC	1	5	R		F-T	F		
630	TIMBER	S	T	15S	2E	7NE	I	10	0.2	0.0	5	B	B	TLB	0	S	FB	2	38	RB		F-T	F		
631	TIMBER	S	T	15S	2E	7SE	A	64	1.0	0.0	500	B	B	TLB	0	S	FM	3	40	RB		F-B	F		
632	TIMBER	S	T	15S	2E	7SW	I	8	0.7	0.0	40	B	A	TS	0	M	F	2	10	R		F-I	F		
633	TIMBER	S	T	15S	2E	8SE	N	4	0.2	0.0	12	B	B	TLB	0	S	FM	1	19	B		F-B	F		
634	TIMBER	S	T	15S	2E	9SE	N	9	0.5	0.0	10	B	A	TS	0	S	FM	2	12	R		F-B	F		
635	TIMBER	S	T	15S	2E	11NW	I	10	0.3	0.0	30	B	A	TS	0	S	FB	1	20	R		F-T	F		
636	TIMBER	S	T	15S	2E	11NE	A	4	1.0	0.0	15	B	A	TLB	0	S	FM	1	4	R		F-T	F		
637	TIMBER	S	T	15S	2E	11NE	I	4	0.3	0.0	4	B	E	TLB	0	M	F	1	6	R		F-T	F		
638	TIMBER	S	T	15S	2E	11SW	I	3	0.2	0.0	1	B	A	TLB	0	SM	FM	1	8	R		F-B	F		
639	TIMBER	S	T	15S	2E	18SW	N	1	0.1	0.0	3	B	B	TLB	0	S	FC	1	6	R		F-I	F		
640	TIMBER	S	T	15S	2E	17NW	A	19	0.6	0.0	40	B	B	TS	0	S	FM	2	14	R		F-T	F		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

SITE NO	OWNER OR OPERATOR	COMMOD	DOMAIN	LOCATION TOWN	RANG	SEC	STATUS	PAST PRODUCTION X1000 CU YD	MINE AREA IN ACRES	PLANT AREA IN ACRES	RESERVES X1000 CU YD	DEPOST	ROCK	GEOL UNIT	COVER	WEATHR	JOINT	BENCHS	FACE	BREAK	PLANT TYPE	USAGE	RECLA	MINATION	FOOT NOTE
641	TIMBER	S	T	15S	2E	17NE	N	2	0.1	0.0	2	B	A	TS	0	S	FM	2	5	R		F-B	F		
642	TIMBER	S	T	15S	2E	15NW	I	6	0.2	0.0	18	B	A	TS	0	S	FC	2	17	R		F-T	F		
643	TIMBER	S	T	15S	2E	14SE	I	12	0.7	0.0	20	B	A	TS	0	S	FM	3	18	R		F-B	F		
644	TIMBER	S	T	15S	2E	13NW	A	2	0.2	0.0	1	B	A	TS	0	S	F	2	4	R		F-T	F		
645	TIMBER	S	T	15S	2E	19NW	I	8	0.4	0.0	16	B	A	TS	0	SM	F	1	14	R		F-T	F		
646	TIMBER	S	T	15S	2E	19SW	I	5	0.3	0.0	5	B	A	TS	0	S	FB	1	6	R		F-T	F		
647	TIMBER	S	T	15S	2E	22NE	A	13	0.5	0.0	13	B	A	TLB	0	S	FM	3	16	R		F-B	F		
648	TIMBER	S	T	15S	2E	28SE	A	80	3.0	0.0	500	B	A	TS	0	S	FB	2	14	R		F-T	F		
649	TIMBER	S	T	15S	2E	27NE	A	13	0.6	0.0	50	B	A	TS	1	S	FB	1	13	R		F-T	F		
650	TIMBER	S	T	15S	2E	26NW	I	1	0.1	0.0	3	B	A	TS	0	M	F	1	4	R		F-T	F		
651	TIMBER	S	T	15S	2E	25SW	A	12	0.2	0.0	20	B	A	TS	0	S	FC	1	13	R		F-T	F		
652	TIMBER	S	T	15S	2E	25SW	I	5	0.3	0.0	10	B	A	TS	0	S	FC	1	13	R		F-T	F		
653	TIMBER	S	T	15S	2E	36NE	I	4	0.4	0.0	8	B	A	TS	0	S	F	1	4	R		F-T	F		
654	TIMBER	S	T	15S	3E	3SE	I	10	0.3	0.0	0	B	B	TLB	0	S	FB	2	21	R		F-B	F		
655	TIMBER	S	T	15S	3E	3SE	I	6	0.2	0.0	60	B	A	TS	0	S	FB	2	18	R		F-B	F		
656	TIMBER	S	T	15S	3E	7SE	A	7	0.3	0.0	7	B	A	TS	0	S	F	2	13	R		F-T	F		
657	TIMBER	S	T	15S	3E	11NW	I	3	0.1	0.0	15	B	B	TLB	0	S	FB	2	10	R		F-B	F		
658	TIMBER	S	T	15S	3E	11NW	A	2	0.2	0.0	2	B	A	TS	0	SM	FB	1	13	R		F-T	F		
659	TIMBER	S	T	15S	3E	18SW	I	3	0.3	0.0	3	B	A	TS	0	S	F	1	3	R		F-T	F		
660	TIMBER	S	T	15S	3E	17NE	I	3	0.2	0.0	15	B	A	TS	0	S	FB	1	12	R		F-T	F		
661	TIMBER	S	T	15S	3E	14NE	I	3	0.1	0.0	6	B	A	TLB	0	S	FM	2	17	RB		F-B	F		
662	TIMBER	S	T	15S	3E	19SW	I	5	0.2	0.0	0	B	A	TLB	0	S	FM	1	28	B		F-B	F		
663	TIMBER	S	T	15S	3E	21SW	I	5	0.1	0.0	5	B	A	TS	0	S	FB	1	15	R		F-B	F		
664	TIMBER	S	T	15S	3E	22SW	I	1	0.1	0.0	1	B	B	TLB	0	SM	FC	1	20	R		F-B	F		
665	TIMBER	S	T	15S	3E	22SW	A	8	0.3	0.0	8	B	B	TLB	0	M	F	2	10	R		T-T	F		
666	TIMBER	S	T	15S	3E	24NW	A	30	1.0	0.0	50	B	B	TLB	0	S	FB	1	6	R		F-T	F		
667	TIMBER	S	T	15S	3E	24SE	A	8	0.4	0.0	20	B	B	TLB	0	S	FC	1	7	R		F-T	F		
668	TIMBER	S	T	15S	3E	24SE	I	2	0.3	0.0	1	B	B	TLB	0	S	FM	1	25	R		F-B	F		
669	TIMBER	S	T	15S	3E	28SW	A	2	0.1	0.0	2	B	A	TS	0	S	FC	1	4	R		F-T	F		
670	TIMBER	S	T	15S	3E	28SE	A	2	0.1	0.0	2	B	A	TS	0	S	FC	1	6	R		F-T	F		
671	TIMBER	S	T	15S	3E	27NW	I	9	0.2	0.0	30	B	B	TLB	0	S	FB	1	35	B		F-B	F		
672	TIMBER	S	T	15S	3E	26SW	I	25	0.2	0.0	40	B	B	TLB	0	S	FB	1	21	R		F-T	F		
673	TIMBER	S	T	15S	3E	31NW	A	4	0.3	0.0	0	B	A	TS	0	SM	FB	1	14	R		F-T	F		
674	TIMBER	S	T	15S	3E	32NW	I	2	0.1	0.0	5	B	A	TS	0	S	FC	1	12	R		F-T	F		
675	TIMBER	S	T	15S	3E	34NE	I	4	0.1	0.0	2	B	A	TS	0	SM	FC	1	8	R		F-T	F		
676	USFS	S	F	15S	4E	6NE	I	3	0.1	0.0	10	B	B	TLB	0	SM	FC	1	18	R		F-B	F		
677	USFS	S	F	15S	4E	5NW	I	3	0.1	0.0	0	B	A	TS	0	S	FB	1	16	B		F-B	F		
678	USFS	S	F	15S	4E	5NW	I	3	0.1	0.0	0	B	A	TLB	0	S	FM	1	17	B		F-B	F		
679	USFS	S	F	15S	4E	4SW	I	1	0.1	0.0	1	B	A	TLB	0	S	F	1	2	R		F-T	F		
680	USFS	S	F	15S	4E	3NW	I	22	1.0	0.0	100	B	A	TLB	0	S	FB	2	28	R		F-B	F		
681	USFS	S	F	15S	4E	7NE	I	9	0.2	0.0	30	B	B	TLB	0	S	F	1	24	R		F-T	F		
682	USFS	S	F	15S	4E	9SW	N	2	0.1	0.0	3	B	A	TLB	0	SM	F	1	5	R		F-B	F		
683	USFS	S	F	15S	4E	18NW	I	3	0.2	0.0	2	B	B	TLB	0	SM	F	1	3	R		F-T	F		
684	USFS	S	F	15S	4E	18NW	I	14	1.0	0.1	10	B	B	TLB	0	S	FB	2	20	R		F-B	F		
685	USFS	S	F	15S	4E	17NW	I	2	0.1	0.0	2	B	E	TLB	0	S	FC	1	28	B		F-B	F		
686	USFS	S	F	15S	4E	16NE	I	2	0.1	0.0	3	B	A	TS	0	S	FB	1	7	B		F-B	F		
687	USFS	S	F	15S	4E	16NE	I	1	0.1	0.0	0	B	A	TLB	0	S	FB	1	5	B		F-B	F		
688	USFS	S	F	15S	4E	15SE	I	43	0.4	0.0	50	B	B	TLB	0	S	FM	1	50	B		F-B	F		
689	TIMBER	S	F	15S	4E	19SE	I	2	0.1	0.0	1	B	A	TLB	0	M	FC	1	15	R		F-B	F		
690	USFS	S	F	15S	4E	20NW	I	1	0.1	0.0	1	B	A	TLB	0	MC	FB	1	3	R		F-B	F		
691	USFS	S	F	15S	4E	20NW	I	1	0.1	0.0	1	B	A	TLB	0	MC	FC	1	21	R		F-B	F		
692	USFS	S	F	15S	4E	21SW	I	1	0.1	0.0	0	B	A	TLB	0	SM	FC	1	4	R		F-B	F		
693	USFS	S	F	15S	4E	30NE	I	1	0.1	0.0	0	B	A	TLB	0	S	FM	1	11	R		F-BR	F		
694	USFS	S	F	15S	4E	29NE	I	9	0.2	0.0	9	B	A	TLB	0	S	FM	1	16	R		F-BR	F		
695	USFS	S	F	15S	4E	29NE	I	3	0.1	0.0	3	B	B	TLB	0	SM	FB	1	14	R		F-B	F		
696	USFS	S	F	15S	5E	5SW	A	11	1.0	0.1	20	B	A	TS	0	S	FM	2	33	R		F-B	F		
697	USFS	S	F	15S	5E	5SE	I	5	0.1	0.0	10	B	A	TS	0	S	FB	2	9	R		F-B	F		
698	USFS	S	F	15S	5E	1NW	I	4	0.2	0.0	10	B	B	TLB	0	S	F	1	14	R		F-T	F		B
699	USFS	S	F	15S	5E	9SW	I	2	0.1	0.0	1	B	A	TS	0	S	FM	1	20	R		F-B	F		
700	USFS	S	F	15S	5E	10NE	A	87	2.0	0.2	100	B	A	TLB	0	S	FB	5	13	RB		F-T	F		
701	USFS	S	F	15S	5E	11NE	A	17	0.5	0.1	2	T	B	QTV	0	S	FB	1	24	R		F-B	F		
702	USFS	S	F	15S	5E	12SW	I	7	0.2	0.0	0	B	A	QTV	0	S	FB	1	14	R		F-B	F		
703	USFS	S	F	15S	5E	17NE	I	24	0.5	0.0	15	T	A	TS	0	S	FM	1	39	R		F-BR	F		
704	USFS	S	F	15S	5E	16SW	N	30	0.5	0.0	4	B	A	TS	0	S	FM	1	38	R		F-BR	F		
705	USFS	S	F	15S	6E	3SW	I	2	0.2	0.1	10	B	B	TLB	0	S	FB	1	6	R		F-B	F		
706	USFS	S	F	15S	6E	7SE	I	4	0.3	0.0	0	B	A	TS	2	S	FB	1	9	R		F-B	F		
707	USFS	S	F	15S	6E	10SE	I	15	0.6	0.0	4	B	B	TLB	0	SM	FM	1	16	B		F-B	F		
708	USFS	S	F	15S	6E	11SE	I	1	0.1	0.0	0	B	B	TLB	0	SM	FM	1	15	R		F-B	F		
709	USFS	S	F	15S	6E	11SW	I	1	0.1	0.0	0	B	B	TS	4	S	FC	1	12	R		F-B	F		
710	OSHD	G	S	16S	3W	4NE	R	160	8.0	0.0	0	S	V	QTM	0	S	F	1	0	R		F	AW		
711	WILL Q	S	P	16S	3W	3SW	I	120	0.2	10.0	1000	B	B	TLB	1	S	FM	2	29	B		F-BRJ	RF		

Table 5 (continued)

LINN

ROCK MATERIALS RESOURCE DATA

FOOTNOTES: LINN COUNTY

A. Oregon State Highway Laboratory data given in Table 9.

B. See site numbers below for other footnotes.

1. The site has a ready mix plant.
17. The site has a ready mix plant.
97. The rock type is diorite.
110. The site has a ready mix plant.
120. The site was a source of clay; for a brick and tile plant.
125. The site has a ready mix and a hot mix plant.
219. The rock type is cinders.
220. The rock type is cinders.
223. Some of the stone could be used for building.
257. The site has a hot mix plant.
268. The site has a ready mix plant.
278. The sandstone is being sawed out of the outcrop and processed into building stone or into skin abrasive stones.
294. Some of the stone will split into flagstone.
313. Rock type is diorite.
356. Rock type is diorite.
367. Rock type is granite.
386. Highwall is 141 yards high.
410. The site has a ready mix and a hot mix plant.
460. The rock type is granitic.
472. The rock type is diorite.
491. The rock type is dacite.
493. The rock type is dacite.
496. The rock type is cinder.
497. The range is 7½ E.
498. The range is 7½ E.
506. Small amounts of the underlying sandstone have been used for building stone.
523. The rock type is diorite.
557. Some of the stone will split into flagstone.
605. Some of the stone could be used for building stone.
608. The site has a ready mix plant.
698. The rock type is diorite.

Table Heading Definitions:

COMMOD (Commodity): C: clay; G: gravel; P: pumice (cinder); S: stone; DOMAIN: F: Federal; S: State; C: county; L: local; P: private; T: private timber lands; U: unknown; TOWN (Township, north or south); RANG (Range, east or west); SEC (section, quarter); STATUS: A: active; I: inactive; N: natural reclaimed; R: reclaimed; DEPOST (Deposit type): B: bedrock; S: surficial; T: talus; ROCK (rock type): A: andesite; B: basalt; E: breccia; G: gabbro; L: limestone; R: rholite; S: siltstone - sandstone - conglomerate; T: tuff; V: various; O: other; GEOL UNIT (Geological unit); COVER (depth of overburden in yards); WEATHR (Degree of Weathering); S: slight; M: moderate; C: complete; JOINT (Jointing): F: fine, 0-6 inches; C: coarse, 7-12 inches; B: blocky, 13-18 inches; M: massive, 19 plus inches; BENCHS (Number of benchs); FACE (Height of highest highwall in yards); BREAK (Breaking ground): R: rippable; B: drill and blast; PLANT TYPE: C: crusher; S: screen; O: other; USAGE: F: fill or embankment; S: subbase; B: base; T: topping; R: riprap; J: jetty stone; O: other; RECLAMATION: A: agricultural; I: industrial; L: landfill; R: residential; W: water recreation; H: wildlife habitat.

Table 6. Site ownership by type and by county

	Marion	Polk	Yamhill	Linn	Total
Federal	50	25	19	243	337
State	26	2	3	21	52
County	2	5	3	6	16
Local	4	1	3	3	11
Private (other than timber)	36	37	48	106	227
Timber	67	94	18	330	509
Unknown	0	8	6	2	16
Total	185	172	100	711	1,168

Location

Site locations are described down to the quarter section; however, sites are plotted on the localities map to the quarter/quarter section (40 acres).

Status

The status of each site was determined. Between March 1980 and May 1981, of the 1,168 sites, 356 were active and covered 2,360 acres, 577 sites were inactive and covered 854 acres, 176 sites were naturally reclaimed (the site was revegetated) and covered 306 acres, and 59 sites were reclaimed and covered 557 acres. Any site which had some material removed within the last 12 months was considered active.

Size

Table 7 summarizes the numbers of sites that fall within various size categories along with both past production and potential production figures. The table also shows a total volume figure for material which has been mined and for potential in yards. The term "cubic yard," as used in this report, refers to "bank yards" or "in-place yards," not "crushed yards." When a cubic yard of in-place rock material is mined, it swells from 25 to 40 percent by the addition of voids to become a truck yard. When a truck yard is crushed and separated into different size fractions, it swells again, up to as much as 100 percent, to become a crushed yard.

The cubic yard figures given as reserves are "indicated" reserves or resources (defined as reserves or resources for which tonnage and grade are completed partly from specific measurements, samples, or production data, and partly from projection for a reasonable distance on geologic evidence) reduced by conflicting cultural constraints, such as adjoining land usage, property lines, zoning, public safety, and other environmental control considerations.

At each site, acreage used for stockpiles and plant sites was measured in addition to the acreage excavated. A total of 4,077 acres have been affected by mining in the four counties. This total is 0.14 percent of the land area. An average of 30,200 cubic yards were taken from each excavated acre.

Source Description

Of 158 pits dug in alluvium and listed under deposit type as surficial, five sites were for clay and the rest were for sand and gravel. Of the 1,010 quarries developed in bed rock, four were for volcanic cinders, two for dimension stone, and the remainder were for crushed or pit-run stone (of which four were limestone). Of the latter, 34 were developed in talus slopes.

The major rock types mined were basalt (1,431 sites) and andesites (312 sites). Other rock types were gabbro, rhyolite, tuff, and granite. A few hard sandstones and shales were mined, mainly for use in embankments or fill. The survey data tables give the geologic unit or formation for each site. Names or types of rock units are derived from the literature, as listed in the bibliography. The number of sites in each geologic unit or formation is given in Table 8.

Table 7. Number of sites by size and by county

Site size (1,000 cu yd)	Marion		Polk		Yamhill		Linn		Total	
	Past production	Future potential	Past production	Future potential	Past production	Future potential	Past production	Future potential	Past production	Future potential
0 - 10	82	85	100	69	41	49	426	389	649	592
11 - 25	26	18	21	29	13	10	115	100	175	157
26 - 50	27	20	15	23	18	9	72	92	132	144
51 -100	10	21	11	12	13	11	24	58	58	102
100+	40	41	25	39	15	21	74	72	154	173
Total No. of sites	185	185	172	172	100	100	711	711	1168	1168
Total yd (1,000)	34,497	41,527	13,884	49,146	8,741	23,945	41,950	61,082	99,072	175,700
Acres excavated	1,098		362		273		1,550		3,283	
Plant and stockpile	278		132		56		328		794	
Total	1,376		494		329		1,878		4,077	

Table 8. Number of sites in each geologic unit

Surficial		Sedimentary		Igneous	
Symbol	No. of sites	Symbol	No. of sites	Symbol	No. of sites
Qal	38	Tfs	0	Qtv	69
Qtl	60	Tms	1	Ts	260
Qtm	58	Tes	58	Tyb	102
Qth	2			Tlb	331
				Tsr	57
				Ti	132
Total	158	Total	59	Total	951
				GRAND TOTAL	1,168

The geological units or formations and their symbols, from the youngest to the oldest are as follows:

Surficial geologic units

- Qal - Recent river alluvium
- Qtl - Quaternary lower terrace deposits
- Qtm - Quaternary middle terrace deposits
- Qth - Quaternary higher terrace deposits

Bedrock geologic units

Sedimentary rocks

- Tfs - Pliocene fluvial sedimentary rocks
- Tms - Oligocene to Miocene marine sedimentary rocks
- Tes - Eocene sedimentary rocks

Bedrock geologic units (continued)

Igneous rocks

Qtv - Cascades Formation
Ts - Sardine Formation
Tyb - Yakima Basalt Subgroup of Columbia River Basalt Group
Tlb - Little Butte Volcanic Series
Tsr - Siletz River Volcanic Series
Ti - Intrusives

Mining System

In Oregon, rock material is mined by surface methods. The survey data tables give the number of benches and the height of the highest highwall for each site. The tables indicate if the material can be ripped or if drilling and blasting are required. The data on jointing show what size fragment will be produced from the site. The amount and type of processing needed after mining can vary from none for pit-run pits and quarries to very extensive and complex to produce specification material; the tables indicate the type of equipment that was present when the site was surveyed.

A more complete discussion of mining systems and reclamation in Oregon is found in Schlicker and others (1978) and Gray and others (1978).

Uses

Pit-run material uses are herein described, starting with the use that requires the least size and strength specifications.

The terms "embankment" and "fill" are used interchangeably, consistent with the treatment in our various data sources. Materials for embankment or fill to bring roads and construction sites to grade can range in size from sand to jettystone. The only requirement is that the material remain stable after being placed in a low area. In construction of forest access roads or other projects in remote areas, often local material of lower quality is

chosen in order to lower the transportation costs. The State or a county occasionally uses lower quality local rock for subbase and high-quality aggregate, often from another locality, for the top course and paving.

Normally, bed rock weathered into fragments, sand, or clay is suitable for embankments or, treated, it may be usable with cement for base rock in road construction.

Rock material used for subbase and base to support roads is usually smaller than 6 inches in the widest dimension. The subbase, above the embankment and below the base course, can be up to 6 inches in the widest dimension but must contain a certain percentage of fines as binder. The base course is made of specified or select graded material ranging in size from 3-1/2 inches to dust. Fines, material smaller than 1/8 inch, are needed to hold coarser material in place. Fines should constitute no more than 25 percent of the material, be free draining, and remain stable when saturated. The term "fines" in soil mechanics refers to material smaller than 200 mesh size, usually detrimental to road base material.

The last layer placed on a roadbed is variously called "top course," "surfacing," "topping," or "road metal." Either sand and gravel or stone is used. It is graded to less than 1 inch, with very little material smaller than 1/4 inch, and mixed with a binder of fine soil to keep it from "raveling" off the surface. The surfacing must be durable to withstand wear from vehicle tires. Stone for surfacing roads is usually crushed; some gravel deposits, however, can be screened to produce the correct size.

Jettystone and riprap are used to build jetties and to line stream banks, beach fronts, and highway embankments. The rock material used for riprap and jettystone should be hard, durable, angular in shape, resistant to weathering, and denser than 160 pounds per cubic foot. The difference between riprap and jettystone is size. Riprap weighs from 50 to 2,000 pounds per stone; jettystone weighs 0.25 tons to 28 tons per stone. Material of jettystone size is needed only where the extreme force of ocean storms must be counteracted.

Reclamation

The symbols listed under the reclamation column are possible second uses for the land after the mining is completed. This list is not completely comprehensive. Other second uses not listed may be more appropriate and would fit better with the landowner's needs. The reclamation column data are a reflection of surrounding land use and should be used as a rough guide, not as a final word.

State Highway Division Laboratory Data

General

Data from all of the laboratory tests performed by the Oregon State Highway Division on materials from the four counties were made available for this study. Sites from which materials were tested are marked with "A" in the survey data tables. The test data are summarized in Table 9.

Sometimes several types of tests were performed on material from one site; in other instances only one test was done. Samples for testing were selected by various people over a long period of time, and the testing was done by various people. Data given in the tables should, therefore, be regarded only as guidelines.

Different size fractions from the same site will give different test results. Therefore, to present the best statistics for an entire deposit rather than for a particular size fraction, data ranges (the highest and lowest values) are given in the laboratory data tables. No attempt was made to determine weighted data averages for sites. If no range is recorded for material from a particular site, either all test results were the same or only one test was conducted. Table 10 gives test standards for each type of use.

Table 9. Oregon State Highway Division laboratory data

Site Number	Specific Gravity			Los Angeles Rattler (% Loss)	Sodium Sulfate (% Loss)	Natural Fines		Manufactured Fines		Oregon Degradation	
	Bulk	Saturated Surface Dry	Apparent			Plasticity Index (%)	Liquid Limit (%)	Plasticity Index (%)	Liquid Limit (%)	Pass No. 20 (%)	Height (Inches)
Yamhill County											
60	2.33	2.55	2.97	13.0 - 29.0	-	NP	--	--	--	--	--
Polk County											
207	2.76	--	--	16.4	10.5	--	--	NP	22	--	--
210	2.60	--	2.93	16.0	2.7	--	--	NP	25	18.6	4.1
218	2.53	2.59	--	14.8 - 19.8	--	--	--	--	--	13.3 - 14.0	0.8 - 0.9
264	2.38	2.60	--	21.8	17.0	NP	21	--	--	19.0	2.6
288	--	--	--	17.8	--	NP	28	--	--	19.5	1.7
332	2.64	--	2.84	22.8	--	NP	--	--	--	18.0	1.2
335	2.53	2.59	--	17.2	--	NP	--	--	--	18.5	1.6
369	2.65	--	2.91	20.5	0.9	--	--	NP	23	29.6	3.7
Marion County											
8	2.54	2.60	--	--	--	--	--	--	--	--	--
12	2.52	--	2.69	16.0 - 17.2	4.7 - 5.4	NP	--	--	--	16.0 - 19.5	0.6 - 1.2
13	2.50	2.57	2.67	14.5 - 14.6	1.9 - 2.9	NP	--	--	--	16.0 - 19.5	1.0 - 1.2
20	2.59	--	2.74	--	2.2 - 3.5	NP	--	--	--	13.3 - 14.4	0.8 - 1.1
37	2.62	2.66	--	--	--	--	--	--	--	13.3	0.8
38	--	--	--	17.1	1.2	--	--	--	--	20.3	--
58	2.45 - 2.76	2.78	2.75	16.5 - 28.5	0.55	--	--	--	--	--	--
63	--	--	--	28.0	--	--	--	--	--	26.2	4.1
66	2.39	--	2.69	14.1 - 15.3	2.3 - 5.1	NP	27	--	--	7.3 - 12.5	0.7 - 1.8
123	2.74	--	2.83	14.4	--	--	--	--	--	16.0	0.3
Linn County											
2	2.50 - 2.65	2.68	2.76	15.0 - 18.7	--	--	--	--	--	12.9 - 17.5	0.6 - 0.7
11	2.36	2.50	2.75	--	4.5	NP	--	--	--	17.5	0.6
17	2.30	2.45	2.71	16.1 - 17.4	5.5	NP	23 - 26	--	--	6.6 - 18.3	0.9 - 1.2
122	2.90	--	2.91	--	0.81	NP	--	--	--	13.5	0.7
132	2.32 - 2.46	--	2.69	19.4 - 24.7	9.1 - 14.8	11 - 21	32 - 42	--	--	16.1 - 20.5	1.2 - 1.8
263	2.29 - 2.59	--	2.72	16.7 - 18.1	4.5 - 7.7	NP	--	--	--	13.5 - 15.8	0.7 - 1.4
268	2.59	2.65	2.75	16.1	4.7	NP	--	--	--	15.2	1.3
273	--	--	--	15.24	1.9	--	--	--	--	--	--
275	--	--	--	12.2 - 14.6	--	--	--	NP - 4	23 - 28	15.6 - 24.0	2.4 - 4.2
277	--	--	--	16.5	0.6	--	--	--	--	10.9	0.5
281	284	--	--	17.4	0.3	--	--	--	--	--	--
386	2.78	--	2.81	14.6	0.6	11	--	--	--	12.5	0.5
405	2.73	--	2.62	20.0	3.1	NP	--	--	--	15.8	0.3
410	2.30 - 2.51	--	2.74	16.1 - 19.0	2.9 - 6.9	NP	--	--	--	13.6 - 18.6	1.0 - 1.4
497	2.52 - 2.66	2.62 - 2.68	2.70 - 2.88	22.0 - 27.7	0.3 - 2.3	NP	--	--	--	17.0 - 17.8	0.3 - 0.4
500	2.74	2.75	--	19.5	0.1	--	--	--	--	8.9	0.1
608	2.24 - 2.54	2.42 - 2.61	2.73	16.0 - 16.9	2.7 - 3.2	--	--	--	--	11.8 - 20.8	0.6 - 0.9
615	--	--	2.83 - 2.91	16.0 - 21.0	9.0 - 42.0	2 7	--	NP	NP	--	--

Table 10. Test standards by usage

Usage	Test standards						
	Specific gravity (minimum)	Los Angeles rattler (maximum percent)	Sodium sulfate (maximum percent)	Plasticity index (nonplastic or maximum percent)	Liquid limits (nonplastic or maximum percent)	Oregon degradation	
						Maximum (percent)	Maximum height (in.)
Asphalt concrete aggregate							
Fine - $\frac{1}{4}$ in.		35	18	6	33	30	4
Coarse - 1 in. + $\frac{1}{4}$ in.		30	18			30	3
Cement concrete aggregate							
Fine - 3/8 in. + 100 mesh		30	10			30	3
Coarse - $2\frac{1}{4}$ in. + $\frac{1}{4}$ in.		30	12			30	3
Surface - topping		35					
Base		35		6	33	30	3
Subbase		45					
Riprap	2.5		16			35	8

For those not familiar with the tests, a brief description of each is in order.

Specific gravity

Specific gravity is an index number that is the ratio between the weight of a unit volume of a substance and the weight of an equal volume of water at the same temperature and pressure. The higher the number, the denser and, in most cases, the stronger the rock material.

Los Angeles rattler

This test indicates how material will withstand the grinding action of heavy traffic. The material to be tested is weighed, subjected to tumbling for a set time, screened, and reweighed. The statistic listed is the percentage lost during the testing.

Sodium sulfate test

The sodium sulfate test is used to determine how weather will affect rock material. The material is weighed, tested, then reweighed. Testing consists of soaking the sample in a strong brine solution at an elevated temperature for 16 to 18 hours and then drying it at an elevated temperature for 2 hours. This is repeated several times. The statistic reported is the percentage of loss.

Plasticity index and liquid limits

To test the clay content of a rock material sample, the plastic and liquid limits must be determined, from which the plasticity index is derived. The plastic limit, the lowest water content by weight percent at which the material becomes plastic, is the water-content boundary between the plastic and semisolid states. The liquid limit is the moisture content, by weight percent, at the water-content boundary between the semiliquid and the plastic states. The plasticity index is the water-content range within which a rock material is plastic. Numerically it is the liquid limit minus the plastic limit.

Oregon degradation test

The Oregon degradation test is designed to measure the quantity and quality of the material produced by attrition similar to that caused in a roadway by repeated traffic loading and unloading. The quantity is indicated by a weight percentage of fine material produced; the quality is measured by a modified sand equivalent test. The fine material is made by using air jets to rub one particle against another in water.

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APPENDIX

Table 11. Computer-generated summary data tables

MARION

DOMAIN	PROD	AREAM	AREAP	RESERV	NUMB'S
FEDERAL	883.	68.1	3.7	2554.	50.
STATE	3714.	199.3	6.0	3166.	26.
COUNTY	130.	3.4	0.0	600.	2.
LOCAL	3456.	73.4	40.0	24.	4.
TIMBER	459.	20.1	0.0	1021.	36.
PRIVATE	25855.	734.3	228.0	34162.	67.
UNKNOWN	0.	0.0	0.0	0.	0.
TOTAL	34497.	1098.6	277.7	41527.	185.

GEOLOGIC UNITS

SURFICIAL		BEDROCK		IGNEOUS ROCKS	
LABEL	NUMBER	LABEL	NUMBER	LABEL	NUMBER
QAL	8	TFS	0	QTV	17
QTL	14	TMS	0	TS	44
QTM	23	TES	0	TYB	46
QTH	0			TLB	29
				TSR	0
				TI	4
TOTAL	45	TOTAL	0	TOTAL	140

GRAND TOTAL 185

STATUS	NUMBER	ACRES
ACTIVE	59.	709.1
INACTIVE	76.	277.8
RECLAIM	12.	273.1
NATURAL RECLAIM	38.	116.3
TOTAL	185.	1376.3

SIZE DISTRIBUTION

CU YD X1000	PROD	RESERV
0 - 10	82	85
11 - 25	26	18
26 - 50	27	20
51 - 100	10	21
101+	40	41
TOTAL	185	185

Table 11 (continued)

POLK

DOMAIN	PROD	AREAM	AREAP	RESERV	NUMB'S
FEDERAL	185.	5.5	0.0	466.	25.
STATE	15.	0.6	0.0	30.	2.
COUNTY	433.	29.5	4.0	1270.	5.
LOCAL	45.	2.0	0.0	0.	1.
TIMBER	1810.	43.7	2.1	7585.	94.
PRIVATE	10920.	267.5	126.0	36781.	37.
UNKNOWN	476.	12.8	0.0	3014.	8.
TOTAL	13884.	361.6	132.1	49146.	172.

GEOLOGIC UNITS

SURFICIAL		BEDROCK		IGNEOUS ROCKS	
LABEL	NUMBER	LABEL	NUMBER	LABEL	NUMBER
QAL	5	TFS	0	QTV	0
QTL	11	TMS	0	TS	0
QTM	8	TES	36	TYB	7
QTH	1			TLB	0
				TSR	52
				TI	52
TOTAL	25	TOTAL	36	TOTAL	111
				GRAND TOTAL	172

STATUS	NUMBER	ACRES
ACTIVE	53.	340.7
INACTIVE	78.	107.5
RECLAIM	10.	22.6
NATURAL RECLAIM	31.	22.9
TOTAL	172.	493.7

SIZE DISTRIBUTION

CU YD X1000	PROD	RESERV
0 - 10	100	69
11 - 25	21	29
26 - 50	15	23
51 - 100	11	12
101+	25	39
TOTAL	172	172

Table 11 (continued)

YAMHILL

DOMAIN	PROD	AREAM	AREAP	RESERV	NUMB'S
FEDERAL	495.	40.6	6.5	1525.	19.
STATE	56.	3.3	0.0	220.	3.
COUNTY	94.	2.2	2.0	135.	3.
LOCAL	146.	3.1	0.0	25.	3.
TIMBER	269.	10.8	2.1	620.	18.
PRIVATE	7615.	210.4	40.4	21416.	48.
UNKNOWN	66.	2.8	5.0	4.	6.
TOTAL	8741.	273.2	56.0	23945.	100.

GEOLOGIC UNITS

SURFICIAL

LABEL	NUMBER
QAL	4
QTL	1
QTM	1
QTH	0
TOTAL	6

BEDROCK

LABEL	NUMBER
TFS	0
TMS	0
TES	22
TOTAL	22

IGNEOUS ROCKS

LABEL	NUMBER
QTV	0
TS	0
TYB	26
TLB	0
TSR	5
TI	41
TOTAL	72

GRAND TOTAL 100

STATUS	NUMBER	ACRES
ACTIVE	35.	214.6
INACTIVE	41.	64.5
RECLAIM	8.	40.6
NATURAL RECLAIM	16.	9.5
TOTAL	100.	329.2

SIZE DISTRIBUTION

CU YD X1000	PROD	RESERV
0 - 10	41	49
11 - 25	13	10
26 - 50	18	9
51 - 100	13	11
101+	15	21
TOTAL	100	100

Table 11 (continued)

LINN

DOMAIN	PROD	AREAM	AREAP	RESERV	NUMB'S
FEDERAL	7624.	208.5	27.6	12773.	243.
STATE	2695.	109.9	4.1	1993.	21.
COUNTY	1980.	46.0	4.0	1130.	6.
LOCAL	1050.	29.0	0.0	0.	3.
TIMBER	3717.	133.9	2.4	8915.	330.
PRIVATE	24781.	1020.1	289.5	36141.	106.
UNKNOWN	103.	2.5	0.3	130.	2.
TOTAL	41950.	1549.9	327.9	61082.	711.

GEOLOGIC UNITS

SURFICIAL

LABEL	NUMBER
QAL	21
QTL	34
QTM	26
QTH	1
TOTAL	82

BEDROCK

LABEL	NUMBER
TFS	0
TMS	1
TES	0
TOTAL	1

IGNEOUS ROCKS

LABEL	NUMBER
QTV	52
TS	216
TYB	23
TLB	302
TSR	0
TI	35
TOTAL	628

GRAND TOTAL 711

STATUS	NUMBER	ACRES
ACTIVE	209.	1095.2
INACTIVE	382.	404.4
RECLAIM	29.	220.6
NATURAL RECLAIM	91.	157.6
TOTAL	711.	1877.8

SIZE DISTRIBUTION

CU YD X1000	PROD	RESERV
0 - 10	426	389
11 - 25	115	100
26 - 50	72	92
51 - 100	24	58
101+	74	72
TOTAL	711	711

Table 11 (continued)

TOTAL

DOMAIN	PROD	AREAM	AREAP	RESERV	NUMB'S
FEDERAL	9187.	322.7	37.8	17318.	337.
STATE	6480.	313.1	10.1	5409.	52.
COUNTY	2637.	81.1	10.0	3135.	16.
LOCAL	4697.	107.5	40.0	49.	11.
TIMBER	6255.	208.5	6.6	18141.	478.
PRIVATE	69171.	2232.3	683.9	128500.	258.
UNKNOWN	645.	18.1	5.3	3148.	16.
TOTAL	99072.	3283.3	793.7	175700.	1168.

GEOLOGIC UNITS

SURFICIAL

LABEL	NUMBER
QAL	38
QTL	60
QTM	58
QTH	2
TOTAL	158

BEDROCK

LABEL	NUMBER
TFS	0
TMS	1
TES	58
TOTAL	59

IGNEOUS ROCKS

LABEL	NUMBER
QTV	69
TS	260
TYB	102
TLB	331
TSR	57
TI	132
TOTAL	951

GRAND TOTAL 1168

STATUS	NUMBER	ACRES
ACTIVE	356.	2359.6
INACTIVE	577.	854.2
RECLAIM	59.	556.9
NATURAL RECLAIM	176.	306.3
TOTAL	1168.	4076.9

SIZE DISTRIBUTION

CU YD X1000	PROD	RESERV
0 - 10	649	592
11 - 25	175	157
26 - 50	132	144
51 - 100	58	102
101+	154	173
TOTAL	1168	1168

PLATE I

OPEN FILE REPORT O-81-7

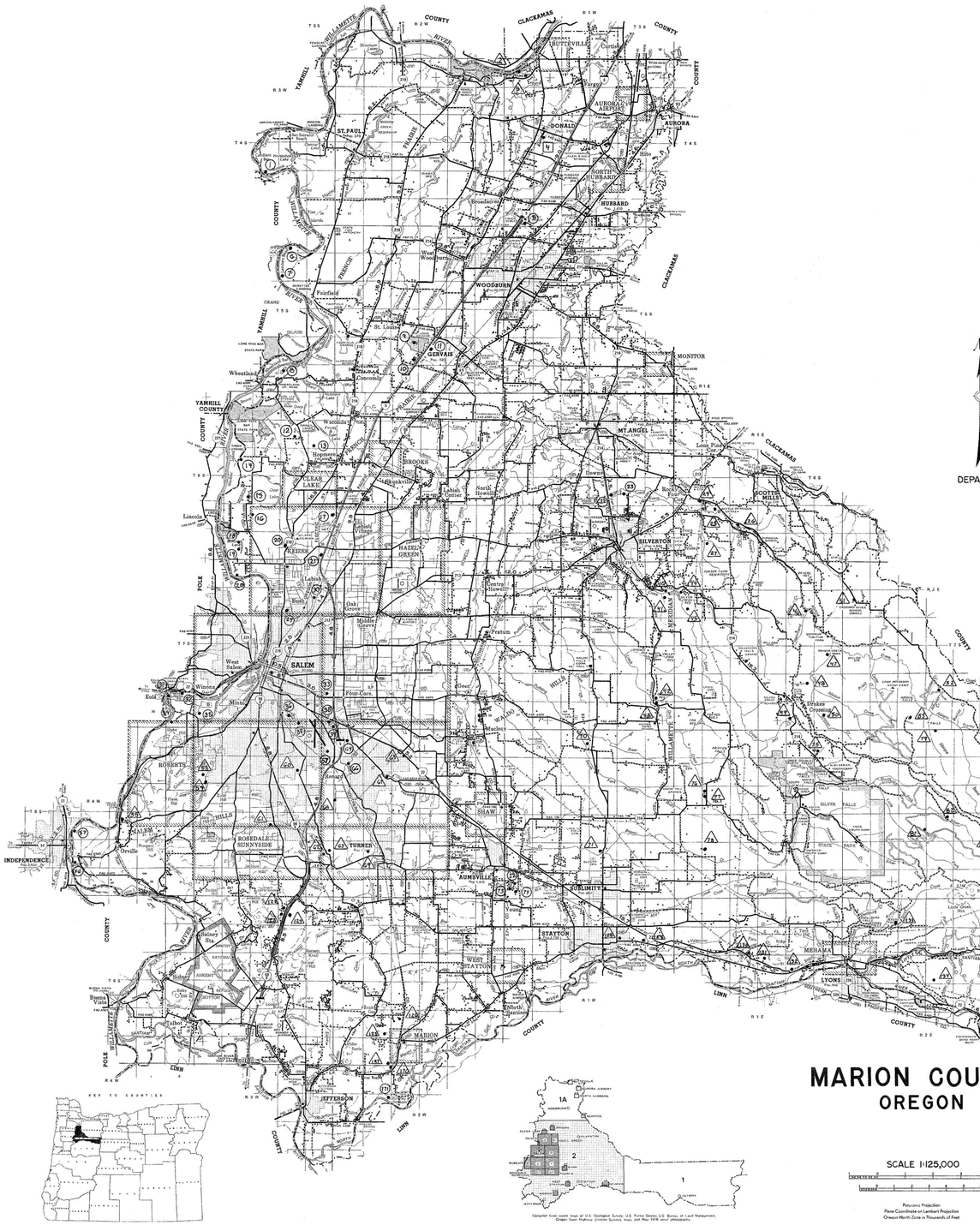
ROCK MATERIAL LOCATION MAP OF MARION COUNTY, OREGON

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
DONALD A. HULL, STATE GEOLOGIST

SAND AND GRAVEL PIT

STONE QUARRY

OTHER (CLAY, CINDER)



By J. J. Gray and A. H. Throop, 1981
Field work done in 1980-81

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
DONALD A. HULL, STATE GEOLOGIST

PLATE II

OPEN FILE REPORT O-81-7

ROCK MATERIAL LOCATION MAP OF YAMHILL AND POLK COUNTIES, OREGON

- SAND AND GRAVEL PIT
- STONE QUARRY
- OTHER (CLAY, CINDER)

By J.J. Gray and A.H. Throop, 1981
Field work done in 1980-81

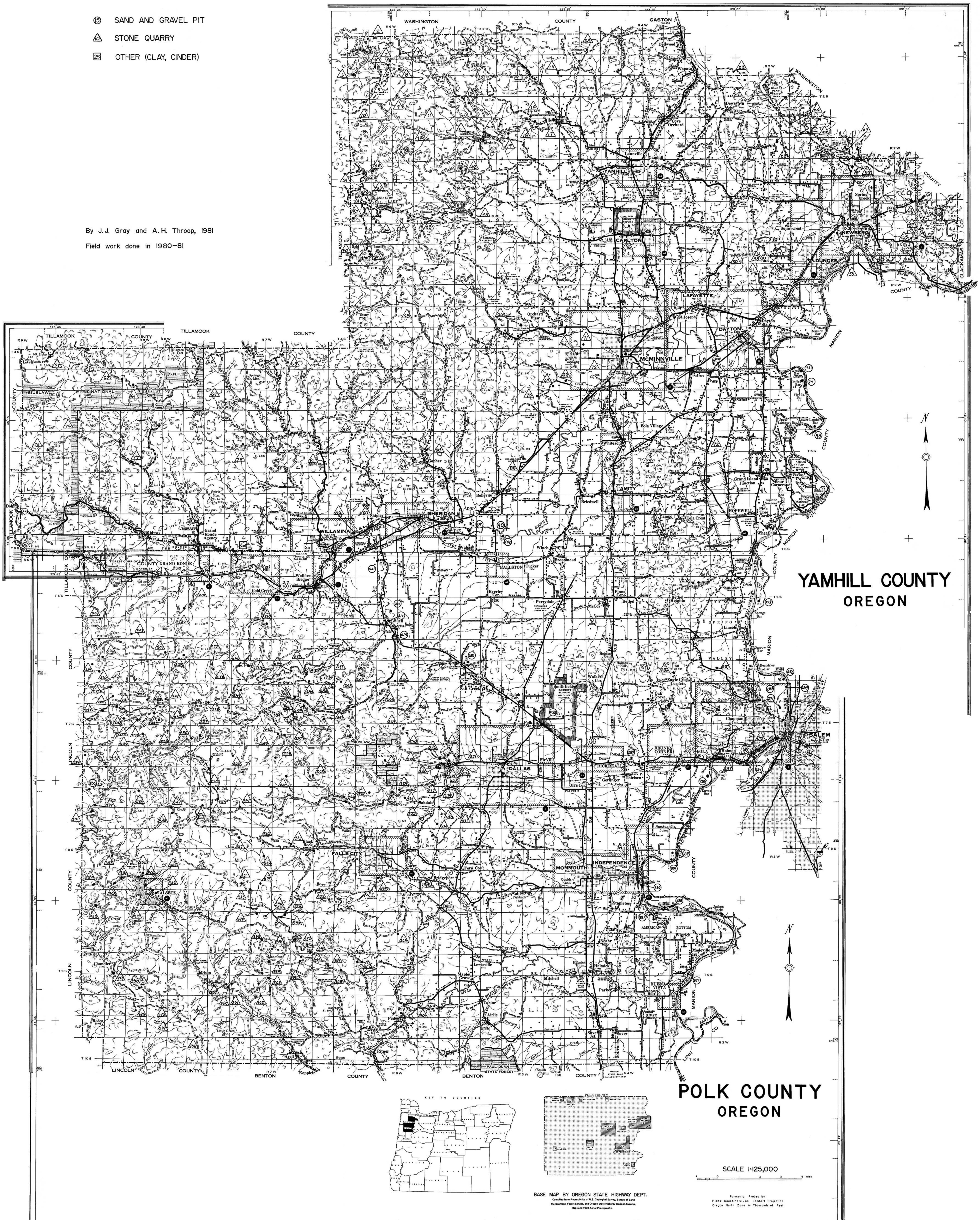


PLATE III

OPEN FILE REPORT O-81-7

ROCK MATERIAL LOCATION MAP OF LINN COUNTY, OREGON

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
DONALD A. HULL, STATE GEOLOGIST

LINN COUNTY
OREGON

(15) SAND AND GRAVEL PIT

(10) STONE QUARRY

(25) OTHER (CLAY, CINDER)

N

SCALE 1:125,000

By J.J. Gray and A.H. Throop, 1981
Field work done in 1980-81

BASE MAP BY OREGON STATE HIGHWAY DEPT.