

REGION 1
MINERALS AND GEOLOGY

ORNAMENTAL AND BUILDING STONE

MINE/MARKET SURVEY

USERS' GUIDE



Revised---DECEMBER 1984

Greg Jaspersen

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FOREWORD

In June 1982, an effort was instigated to collect, analyze and computerize mining and marketing data related to ornamental stone in the western States (see Appendix A). The initial data obtained was transposed to individual records and computerized. Copies of the data were distributed to all contributors through Forest Service Regional Offices and BLM State Offices. Since that time, more data has been received and some changes have been made in the record format. Descriptors have been added relating to "Mining Method", "Use", and "Surface Type"--these three items make up the components of "Rock Class". This breakout will facilitate quick mine/market comparisons among similar types (classes) of rock which are used for the same purpose. The "vehicles" used for this retrieval are the Reports described in Appendix D.

The purpose of this revised edition of the Users' Guide is to:

1. Make available all the newly formatted information currently in the system.
2. Provide the original contributors (users) the chance to add new data and/or correct or amend data previously submitted.
3. Allow the first time users the opportunity to become familiar with and utilize the system, as well as, submit data for entry into the ornamental stone data base.

The current data base consists of 180 records containing information gathered from masons, stone dealers and quarry owners. Some of the records are outdated and may not accurately reflect today's mining costs, marketing figures and freight charges.

Most of the data comes from dealers rather than quarrymen since dealers are more numerous than quarries. Also, dealers are more concentrated, especially in larger cities. The data base will be much stronger as more records are input containing information on quarry-related operations. The key to the whole issue is the mining costs and profit margins to the miner. The few records relating to stone masons are less valuable than others because, in most cases, quarry costs and dealer prices are not shown.

FOREWORD (con't)

Using this Guide, please go through the printouts and review those entries you submitted and update, amend and/or correct them as need be. A copy of the data entry sheet, suitable for duplicating, is enclosed for recording additional entries and for use by new contributors. As you go through the Guide, please note anything that is not clear and feel free to offer suggestions that will improve it. We need to concentrate on quarries as noted in the Foreword. Also, freight costs need to be brought into line with today's price structure. As was originally explained, during the formative stages of this program, the RO Minerals & Geology Staff in Region 1 will assume responsibility for maintaining the data base and disseminating information and reports on an "as needed" basis. As the system evolves and is perfected, it will be centralized to better facilitate individual access.

Any questions regarding data may be addressed to Billy L. Hicks, Resource Geologist, Minerals and Geology Unit, USFS Northern Region, P.O. Box 7669, Missoula, MT 59807. Billy may also be contacted by phone using FTS 585-3591 or Commerical (406) 329-3591. For information regarding the program or the system, contact Greg Jasperson, Computer Systems Analyst in the same Staff Unit. Greg's telephone extension is 3574. Also, in order to keep the data base current (updated), notify Billy or Greg of any changes to existing records or additions of new records.

SYSTEMS INFORMATION

Hardware: DG MV8000
Software: PROXI, PRESENT, COBOL
Data Base Name: STONE
Systems Contact: Greg Jasperson (FTS: 585-3574)

NAMES, DEFINITIONS and CODES

(Data General)
 (Ornamental & Building Stone)
 (Data Program)

(Screen 1)
No./Data Name

Definition/Codes

(1) **Record ID**

A 4-digit number consisting of a 1-digit Region number plus a 3-digit assigned sequential number. The record ID number is used to identify or retrieve a record from the data base.

(2) **Region Number**

The seven standard FS Region numbers (0-6) for the western states, including Alaska, as depicted on the map in Exhibit A.

(3) **Type**

This refers to "type of stone":

A = ashler (rock that comes naturally fractured into regular, usable shapes for masonry purposes)

AC = rock that is essentially ashler but is sawn on one or two faces

CD = rock cut to dimension, either as brick or large slabs

R = rubble (in a general sense--rounded to angular shape and can be easily picked from talus slopes, river banks, etc.)

V = veneer (any rock that can be placed on a wall--includes flagstone and patio stone)

VH = rock suitable for hearthstone

(4) **Trade Name**

This refers to the label put on the rock by the quarryman or dealer. The labels may not be consistent; i.e., a quarryman may call his rock "Black Beauty" and a dealer may market the same rock as "Moonstone".

NAMES, DEFINITIONS and CODES (con't)

(Data General Program - con't)

(Screen 1)
No./Data NameDefinition/Codes

(5) Rock Code

Refers to "category of rock type":

Field St = river rock, talus slope deposits**Granite** = granite rock**Lava** = all volcanic rock types, including
rhyolites, tuffs, etc.**Qtzt** = quartzite**Schist** = schist**Slate** = fine-grained rock that naturally
cleaves**SS** = sandstone**Trav** = travertine, marbles and limestones

(6) Rock Description

A brief geologic description of rock type; i.e.,
micaceous quartzite.

(7) Contact Person

Refers to the person that dealt personally with
the quarry owner, dealer or mason. If information
comes from written reports, the author and/or
publication is listed as the contact person.**Contact Phone**

- (8) (area code or FTS)
- (9) (prefix)
- (10) (4-digit number)

Area code and commercial number or FTS number of
contact person. A complete address will be
maintained in a separate file.

NAMES, DEFINITIONS and CODES (con't)

(Data General Program - con't)

(Screen 1)
No./Data NameDefinition/Codes

- (11) **Source of Information** Party from whom information was obtained:
- D = dealer
- M = mason
- Q = quarryman
- Use one or a combination; i.e., DQ means that the person is both dealer and quarryman.
- (12) **Meridian** The 2-digit numerical code assigned to each meridian; i.e., 20 = Montana Principal Meridian, 07 = Black Hills Meridian. (See Appendix C for a complete list of meridians and their codes.)
- (NOTE: Usually, the meridian will only be applicable where a quarry is considered.)
- (13) **Township** Self-explanatory
- (14) **Range** Self-explanatory
- (15) **Section** Self-explanatory; only one section per records.
- (16) **State Code** Two-character standard state codes; i.e., MT = Montana, ID = Idaho, etc.
- (17) **City Location** Refers to the city nearest the quarry location.
- (18) **Vendor** Refers to the company name of the dealer, mason or quarryman.
- (19) **State Sold** Two-character standard state codes; i.e., ID = Idaho, MT = Montana
- (20) **City Sold** City or town where the vendor or mason is located.

NAMES, DEFINITIONS and CODES (con't)**(Data General Program - con't)****(Screen 2)**
No./Data Name**Definition/Codes****(1) Query Date**

Date of the interview or report from which the information is taken; i.e., 1984.

Rock Class:

Relationship of use, mining method and surface type (see below):

(2)—Mining Methods**I = Handpicked**--loose rock picked from outcrop, or other surfaces and mechanically or manually loaded on pallet, truck or trailer.**II = Handpicked-Limited Mechanical Assistance**--the breaking or splitting of rock along natural joints and/or fractures using picks, bars, levers, or limited blasting. Rock is manually or mechanically loaded on pallet, truck or trailer.**III = Extensive Mechanical Mining and Processing**--rock is cut in place or removed from outcrop for sawing or guillotining to produce cut dimension or ashlar stone. Also may include rock requiring special handling; i.e., thin "flags" with large surface dimensions that must be palletized vertically and otherwise handled carefully to prevent breakage. Rock is manually or mechanically loaded on a pallet, truck or trailer.**(3)—Use****A =** Rock can be used only on vertical surfaces such as walls (interior/exterior), fireplaces or other surfaces where a smooth flat surface is not necessary. Most rounded to angular rubble that can be picked up from talus slopes, river bottoms and banks, outcrop, etc., would fall in this category.**B =** Rock which can be used anywhere "Rock A" described above can be used. In addition, it can be used on horizontal surfaces which must be relatively smooth, nonabrasive, flat and durable, such as hearths, floors, patios, sidewalks and stepping stones.**(4)—Surface Type****1 =** Surface of the stone is natural occurring; i.e., bedding planes.**2 =** Surface of the stone is manmade; i.e., sawn or guillotined.

NAMES, DEFINITIONS and CODES (con't)

(Data General Program - con't)

(Screen 2)
No./Data NameDefinitions/Codes(5) **Grouping**

Certain types of stone appear very frequently in the data base; i.e., "Montana Travertine", "Coconino Sandstone", "Oakley Slate", "Black Butte Lava". In many cases, the "trade name" given by one dealer may bear no resemblance to the name given the same rock by another dealer. For instance, material from the surface of the recent lava flow in southern Idaho is marketed under the trade names "Moon Rock", "Black Butte Lava", and "Shoshone Lava" even though it is the same rock. The micaceous quartzite mined around Oakley, Idaho, is sold under a variety of names including "Rocky Mountain Quartzite", "Oakley Slate", and "Adventureen". Grouping may be advantageous as a "first cut" in comparison of use, current market, and mining method.

The initial list of groups is as follows, and can be added to as needed:

- 1 = Coconino Sandstone
- 2 = Pritchard Slate (Mont)
- 3 = Oakley Quartzite
- 4 = Montana Travertine
- 5 = Shoshone Lava
- 6 = River Rock (from any place)

(6) **Mining Cost**

Costs for mining and processing includes that which is incurred by the miner in getting the rock from the outcrop to its first point of sale--the quarry, mine site, yarding or processing area--prior to shipment to dealer yards. Costs include, but are not limited to, labor (direct cost plus workman compensation, etc.); equipment used in mining or processing--tractors, hand tools, saws, guillotines; material--wire pallets, explosives, etc.; fuel--electricity, diesel, gas; transportation costs, if used to get rock from the quarry to a staging area or to the closest point of sale to dealers or other purchasers.

NAMES, DEFINITIONS and CODES (con't)

(Data General Program - con't)

(Screen 2)
No./Data NameDefinition/Codes(7) **Confidence Level**

Based on:

- 1 = information given by the quarry owner.
- 2 = estimate made from given information.
- 3 = estimate based on similar operations.

(8) **F.O.B. Quarry Price**

Refers to cost per ton of rock at quarry or yarding area (reflects quarry profit).

(9) **Dealer Price**

Refers to the price the dealer paid for the rock (includes freight, if delivered).

(10) **Retail Price**

Market price for stone in small lots. This is the highest price in dollars per ton (\$/ton).

(11) **Distance from Source**

Miles (to the nearest tenth) from the quarry or yarding area to the point where it is being retailed by the dealer.

(12) **Amount per Mile**

Cost to transport in cents per ton/mile.

(13) **Freight**

Cost to transport from quarry or yarding area to retailer (amount per mile times miles).

(14) **Confidence Level**
(Adjusted Dealer Price)

Based on:

- 1 = freight costs as given
- 2 = freight costs calculated
- 3 = origin of the stone is inferred
- 4 = origin of the stone is only known because of the state it is located in

(15) **Adjusted Dealer Price**

Retail price less freight costs.

NAMES, DEFINITIONS and CODES (con't)

(Data General Program - con't)

(Screen 2)
No./Data Name

Definition/Codes(16) **Ownership**

Refers to land status:

PDB = public domain BLM

PDF = public domain USFS

PVT = private (includes State-owned lands)

SU = under special use; i.e., community pit

(17) **Royalty**

A compensation or portion of the proceeds paid to the owner of a right, as a patent or oil or mineral right.

(18) **Adjudicated**

YL = yes, locatable

YN = yes, non-locatable

BLANK = no, to be determined later

(19) **Coverage per FT²**

Amount of area (in square feet) that a ton of a given rock will cover.

(20) **Dealer Price Per FT²**

This is the price per square foot as opposed to ton units (i.e., Oakley Slate).

UPDATING PROCEDURES

All changes, updates and deletions to the data base will be processed by the R0 Minerals and Geology Information Management Group with the assistance of the M&G Resource Geologist, Billy L. Hicks. Refer to page 2 under "FOREWORD".

A PROPOSAL

Whether a mineral material is a common variety and, as such, not locatable under the mining laws since the Act of July 23, 1955, or is still locatable as an uncommon variety depends on two things; 1) having a unique property, that, 2) gives the stone a special and distinct value. This language has been a problem for nearly on 27 years.

Many cases involving the issue of building stone locations have run the gamut from Administrative Law Judge (formerly called Hearings Examiners) to the United States Supreme Court. This is not only a costly process, but it involves a lot of time. In some cases, as much as 15 years have elapsed between the time of initial investigation and final determination by the courts. This creates quite a burden on the agency involved, not to mention the claimant(s).

A careful review of the many cases involving building stone will reveal some inconsistencies and ambiguities as to "unique property" and "special or distinct value." Many of the decisions on record are not unanimous. There is still confusion among Forest Service and BLM mineral examiners regarding criteria applicable in resolving the issue of locatability. Perhaps it is time for the professional geologists and mining engineers most closely associated with the problem at the grassroots level, to jointly establish some physical criteria that: 1) recognizes the laws and established precedents; 2) is universally understood and applicable; 3) is fair and equal to all and; 4) is defensible.

Probably the two most important and meaningful decisions on "common vs uncommon" are U.S. vs Coleman and U.S. vs U.S. Minerals Development Corporation. They are not new--both were issued in 1968 and have been cited extensively in nearly every case since that time. In U.S. vs Coleman, No. 630, April 22, 1968, the Supreme Court established that the marketability test is a logical refinement of the prudent man rule. The Court further held that this test and rule are not distinct standards, but are complimentary.

In U.S. vs U.S. Minerals Development Corporation, 75 I.D. _____; A-30407 (April 30, 1968), the Secretary, impelled by the Coleman decision to breathe some life into the building stone statute, defined some important criteria for distinguishing between common and uncommon varieties of building stone. In remanding the McClarty case, the Ninth Circuit Court of Appeals translated this criteria into guidelines as follows:

1. There must be a comparison of the deposit in question with other deposits of such minerals; generally,
2. the mineral deposit in question must have a unique property;

1/ Kenneth McClarty vs Sec. of Interior et al, No. 21227 U.S. Court of Appeals, Ninth Circuit 520, 1969.

A PROPOSAL (con't)

3. the unique property must give the deposit a distinct and special value;
4. if the special value is for uses to which ordinary varieties of minerals are put, the deposit must have some distinct and special value for such use; and
5. the distinct and special value must be reflected by the higher price which the material commands in the market place.

As near as can be determined, one of the first geologists to recognize the significance of these guidelines was Tom H. W. Loomis, a Minerals Specialist on the Energy and Minerals Staff, Division of Standards and Technology, located in the Denver Service Center. Tom was with BLM; and his paper, Report on Building Stone, was probably written in 1969 or 1970, although it is not dated.

Much of what appears in the following sections entitled "Comparison", "Unique Properties", "Distinct and Special Values" and "Competition in the Market Place" was taken from Loomis' report.

Comparison

Comparison of the deposit or occurrence in question must include comparison with other deposits of similar stone and with other competitive stone used for the same purpose (emphasis added): Use of the material is not the sole criteria in determining whether or not it is locatable, but it is an important factor in comparing one deposit with another to ascertain whether the given deposit has proportions giving it a special and distinct value.

Unique Properties

Webster defines unique as: "Single; sole. Being without a like or equal; single in kind or excellence; unequaled; matchless." If one were to hold to this definition of unique with respect to building stone, very few deposits could be considered uncommon. Characteristics that have been claimed as "unique" include cleavability, coloration, fracture pattern, etc. However, each of these is, in part, a common rock characteristic. Unique characteristics as defined by the courts include picturesque coloration confined to very limited occurrences in the Coconino Sandstone (U.S. vs. Lee Chartrand, et al, Arizona A 1186, April 22, 1970) and naturally fractured andesite occurring in regular shapes that make it easy to lay up (U.S. vs Kenneth McClarty, A-29821, August 13, 1969).

Distinct and Special Values

Possession of a unique property alone is not enough. It only becomes important when it gives the deposit a distinct and special value. This may be reflected in one of two ways:

A PROPOSAL (con't)

1. If the material has some unique property that makes it useful for some purpose for which other commonly available material cannot be used, it may be said that it has distinct and special value; or
2. If the material is used for the same purpose as material of common occurrence, then it must be demonstrated that some "property" of the material gives it special value.

An example of Statement No. 1 above might be a stone which, because of some chemical or physical property, was able to absorb much more heat than any another known building stone. Due to this unique property, it was extensively used in the construction of solar heated buildings.

As was mentioned earlier, the courts have held that "distinct and unique coloration, over and above anything else noted in the same type rock would probably meet the criteria". Rock, which lays up easy because of its fracture and/or joint pattern, might be said to have a unique property, even though it is used for the same purpose as any other building stone.

Competition in the Market Place

Differences in chemical or physical properties are immaterial if they do not result in a distinct economic advantage of one material over another. Likewise, "uniqueness", however profound, is of no consequence unless it results in an economic advantage over competitive materials. What might be regarded as a partial exception to this was set forth in U.S. vs Callaghan, 8.IBLA 324, 70 ID 689, 1972, where the Court held that a deposit of common variety could not be considered uncommon because of an economic advantage due to its proximity to market. This is only an extrinsic factor and does not make the material any less common.

As defined under the four criteria listed on the next page, economic advantage relates to the market place. This was questioned by the Ninth Circuit Court in the McClarty case. In the decision remanding the case, the Court indicated that the retail market price alone cannot be the exclusive test. It was held that "special economic value of the stone may be reflected by reduced costs or overhead so that the profits to the producer would be substantially more, while the retail market price would remain competitive with other building stone." Thus, economic edge translates into profit margin for the product rather than market price in the dealer's stone yard.

In summary then, it seems reasonable to assume that if a claimant can produce a mineral material having distinct chemical and/or physical properties that consistantly result in a substantial economic advantage over material used for the same purpose, he will have met the requirements of discovery and the material

A PROPOSAL (con't)

in question is an uncommon variety. This is assuming of course that elements of discovery are present. If the preceding statements are true, it follows then, that the key factor is price structure with the components being:

1. The mining and/or processing costs per unit (sq. yd., ton, pallet) of production.
2. The unit price at quarry or pickup point.
3. The unit price at the dealer's yard.
4. The extent of market area and consistency of sales.

Another critical factor would be comparison of the deposit in question with other deposits of similar stone and with other competitive stone that could be used for the same purpose.

Most minerals examinations involving mineral materials have been conducted since 1955 primarily because P.L. 167 was passed that year. Prior to that time, neither the Forest Service nor the BLM had more than a handful of geologists or mining engineers. Without a detailed record search, there is no way of knowing the total combined number of examinations which have been conducted by the Forest Service and the BLM. It is almost a certainty that nearly every examination involved a separate price structure analysis and market study. There has never been a joint effort by the two agencies to conduct a comprehensive market survey for building stone and other construction materials, nor an effort to devise a system for processing and managing the information. It is time that serious consideration be given such as effort.

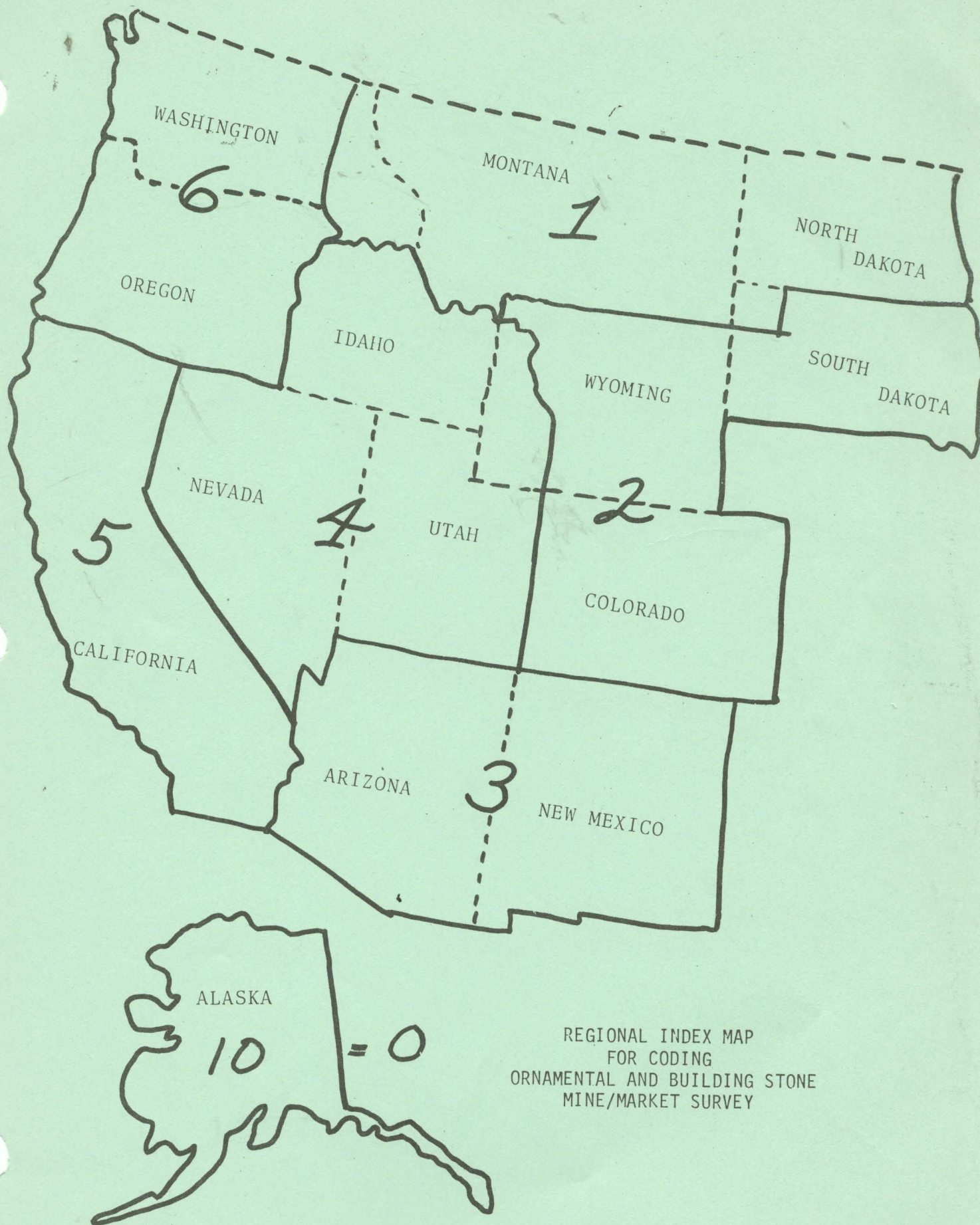
Proposal

The public lands open to mineral entry in the 13 Western States are managed as part of six Forest Service Regions with 88 National Forests and eleven BLM State Offices with 54 Districts. If each National Forest and BLM District were to "survey" three quarry operations, three stone dealers and three contractors, more than 1,250 records would result--this does not include quarries or pits on private lands. In addition to mining and market data, the survey would provide basic information on royalties which could be very helpful in standardizing or comparing fees for mineral material disposed of by permit.

According to our Information Management personnel, it would not be difficult to develop a program that will handle the information and allow for continued update and additions. Storage at a centralized location, such as the Fort Collins Computer Center, would assure access to all BLM and Forest Service users. The

A PROPOSAL (con't)

Region 1 Minerals and Geology Staff Group is willing to take on the responsibility of being the "clearing-house" for the initial survey records. After that, depending upon responses received, it may be advisable to put together a task force or working group made up of 4 - 6 mining engineers and/or geologists from the BLM and the Forest Service. Working with Greg Jasperson and his assistant (Karen Reed) and, perhaps some appraisers, it should be possible to design a program to meet our joint needs.



REGIONAL INDEX MAP
FOR CODING
ORNAMENTAL AND BUILDING STONE
MINE/MARKET SURVEY

MERIDIAN CODES

<u>Meridian Name</u>	<u>Code</u>	<u>State(s) Included</u>
1st Principal	01	Indiana and Ohio
2nd Principal	02	Illinois and Indiana
3rd Principal	03	Illinois
4th Principal	04	Illinois and Minnesota
5th Principal	05	Arkansas, Iowa, Minnesota, Missouri, North Dakota and South Dakota
6th Principal	06	Colorado, Kansas, Nebraska, South Dakota and Wyoming
Black Hills	07	South Dakota
Boise	08	Idaho
Chickasaw	09	Mississippi
Choctaw	10	Mississippi
Cimarron	11	Oklahoma
Copper River	12	Alaska
Fairbanks	13	Alaska
Gila & Salt River	14	Arizona
Humboldt	15	California
Huntsville	16	Alabama and Mississippi
Indian	17	Oklahoma
Louisiana	18	Louisiana
Michigan	19	Michigan and Ohio
Montana Principal	20	Montana
Mount Diablo	21	California and Nevada
Navajo	22	Arizona
New Mexico	23	Colorado and New Mexico
St. Helena	24	Louisiana
St. Stephens	25	Alabama and Mississippi
Salt Lake	26	Utah
San Bernardino	27	California
Seward	28	Alaska
Tallahassee	29	Alabama and Florida
Uinta	30	Utah
Ute	31	Colorado
Washington	32	Mississippi
Willamette	33	Oregon and Washington
Wind River	34	Wyoming
Ohio	35	Ohio
Great Miami River	36	Ohio
Muskingum River	37	Ohio
Ohio River	38	Ohio
1st Scioto River	39	Ohio
2nd Scioto River	40	Ohio
3rd Scioto River	41	Ohio
Ellicott's Line	42	Ohio
12 Mile Square	43	Ohio
Kateel River	44	Alaska
Umiat	45	Alaska

1/14/85

1

ORNAMENTAL AND BUILDING STONE
MINE/MARKET SURVEY

REPORT 1

--ADJUSTED DEALER PRICE BY CLASS--

```

=====
          **** CLASS ****
RECORD   MINING   SURF   ADJUSTED
  ID     METHOD USE TYPE DEALER PRICE DEALER PRICE
=====
1027      II      B      1           0.00      90.00
1029      II      B      1           0.00      95.00
1033      II      B      1           0.00     279.00
1037      II      B      1           0.00     125.00
1045      II      B      1           0.00     199.00
1046      II      B      1           0.00     144.00
1052      II      B      1           0.00     174.00
1053      II      B      1           0.00     154.00
1060      II      B      1           0.00     139.00
1063      II      B      1         180.00     236.00
1064      II      B      1          90.00     121.00
1076      II      B      1           0.00     297.00
1084      II      B      1           0.00     180.00
1102      II      B      1         172.00     218.00
3008      II      B      1           0.00     239.00
3009      II      B      1           0.00     154.00
3019      II      B      1           0.00     154.00
3020      II      B      1           0.00     154.00
3026      II      B      1           0.00     109.00
3036      II      B      1           0.00     128.00
3063      II      B      1           0.00     261.00
3064      II      B      1           0.00     176.00
4001      II      B      1          87.00     148.00
4023      II      B      1          82.00     150.00
4025      II      B      1          50.00     105.00
4028      II      B      1          65.00     120.00
4029      II      B      1          65.00     115.00
4030      II      B      1          52.00      85.00
4037      II      B      1          65.00     120.00
6050      II      B      1           0.00     160.00
6051      II      B      1          75.00      95.00

```

NUMBER OF ENTRIES = 31

STANDARD DEVIATION = \$56.43


```

INPUT INDEX STONE
SELECT ROCK_CLASS = "II B1" AND ADJ_DEALER_PRICE > 0.0
PAGESIZE 55 LINES 80 COLUMNS
NOHEADERS
SORT STONE_KEY
BREAK AFTER ROCK_CLASS
TITLE 1 DATE PAGE COL 50
TITLE 2 "ORNAMENTAL AND BUILDING STONE" COL 13
TITLE 3 "MINE/MARKET SURVEY" COL 18
TITLE 4
TITLE 5 "REPORT 1" COL 24
TITLE 6 "-----" COL 24
TITLE 7
TITLE 8 "--ADJUSTED DEALER PRICE BY CLASS--" COL 11
TITLE 9
TITLE 10 "===== " COL 2
TITLE 11 "**** CLASS ****" COL 10
TITLE 12 "RECORD MINING SURF ADJUSTED" COL 2
TITLE 13 " ID METHOD USE STAT DEALER PRICE DEALER PRICE" COL 2
TITLE 14 "===== " COL 2
TITLE 15
REPORT 1 STONE_KEY COL 3 MINE_METHOD COL 12 RC_USE COL 18 SURF_TYPE COL 22
        DEALER_PRICE COL 29 ADJ_DEALER_PRICE COL 43
TOTAL 1
TOTAL 2
TOTAL 3 "NUMBER OF ENTRIES = " COUNT
TOTAL 4
TOTAL 5 "STANDARD DEVIATION = " STD(ADJ_DEALER_PRICE)
        PICTURE $$,$$9.99
PRINT ON @LPT3

```


1/14/85

1

ORNAMENTAL AND BUILDING STONE
MINE/MARKET SURVEY

REPORT 1A

--AVERAGE MINING COST BY CLASS--

```
=====
          **** CLASS ****
RECORD   MINING      SURF
  ID      METHOD USE TYPE  MINING COST
=====
```

1037	II	B	1	20.00
1053	II	B	1	120.00
1063	II	B	1	32.00
1064	II	B	1	60.00
1076	II	B	1	32.00
1080	II	B	1	45.00
1084	II	B	1	60.00
1091	II	B	1	32.00
1093	II	B	1	70.00
1094	II	B	1	60.00
1095	II	B	1	45.00
1096	II	B	1	40.00
1101	II	B	1	28.00
3008	II	B	1	40.00
3009	II	B	1	38.00
3019	II	B	1	40.00
3020	II	B	1	38.00
3025	II	B	1	39.00
3026	II	B	1	39.00
3028	II	B	1	40.00
3031	II	B	1	40.00
3036	II	B	1	38.00
3039	II	B	1	15.00
3040	II	B	1	6.00
3041	II	B	1	40.00
3042	II	B	1	25.00
4001	II	B	1	35.00
4009	II	B	1	35.00
4016	II	B	1	35.00
4025	II	B	1	26.00
4037	II	B	1	35.00
6050	II	B	1	30.00
6051	II	B	1	30.00
6063	II	B	1	66.00
6065	II	B	1	106.00
6067	II	B	1	66.00

NO. OF RECORDS = 36

AVG. MINING COST = \$42.94


```

INPUT INDEX STONE
SELECT ROCK_CLASS = "I1 B1" AND MINE_COST > 0.0
PAGESIZE 57 LINES 80 COLUMNS
NOHEADERS
SORT STONE_KEY
BREAK AFTER ROCK_CLASS
TITLE 1 DATE PAGE COL 37
TITLE 2
TITLE 3 "ORNAMENTAL AND BUILDING STONE" COL 5
TITLE 4 "MINE/MARKET SURVEY" COL 10
TITLE 5
TITLE 6 "REPORT 1A" COL 15
TITLE 7 "-----" COL 15
TITLE 8
TITLE 9 "--AVERAGE MINING COST BY CLASS--" COL 3
TITLE 10
TITLE 11 "===== " COL 2
TITLE 12 "**** CLASS ****" COL 10
TITLE 13 "RECORD MINING SURF" COL 2
TITLE 14 " ID METHOD USE TYPE MINING COST" COL 2
TITLE 15 "===== " COL 2
TITLE 16
REPORT 1 STONE_KEY COL 3 MINE_METHOD COL 12 RC_USE COL 18
SURF_TYPE COL 22 MINE_COST COL 29
TOTAL 1
TOTAL 2
TOTAL 3 "NO. OF RECORDS = " COUNT
TOTAL 4
TOTAL 5 "AVG. MINING COST = " AVG(MINE_COST)
PICTURE $$,$$9.99
PRINT ON @LPT3

```


1/14/85

--ORNAMENTAL AND BUILDING STONE--
--MINE/MARKET SURVEY--

REPORT 2 /

--AVERAGE DEALER PRICE PER SQUARE FOOT BY CLASS--

```

=====
          **** CLASS ****
RECORD  MINING    SURF    TOTAL
  ID    METHOD USE TYPE  TRADE NAME  DEALER PRICE
          PER SQ FT
=====
1027      II      B      1    ARTSTONE          1.67
1033      II      B      1    WHISKY TRAIL        1.80
1037      II      B      1    ARIZONA SANDSTONE    1.50
1045      II      B      1    KALISPELL ARGILLITE  0.90
1046      II      B      1    KALISPELL ARGILLITE  0.72
1052      II      B      1    QUARTZITE FLAGSTONE  0.87
1060      II      B      1    MOTHER NATURES ART STONE 2.39
1063      II      B      1    MONTANA FLAGSTONE    0.79
1064      II      B      1    MONTANA FLAGSTONE    0.81
1076      II      B      1    MONTANA FLAGSTONE    0.99
3008      II      B      1    ARIZONA FLAGSTONE    1.33
3009      II      B      1    ARIZONA FLAGSTONE    1.28
3019      II      B      1    SELECT COCONINO SANDSTONE 1.28
3020      II      B      1    PATIO STONE          1.28
3025      II      B      1    SELECT              1.16
3026      II      B      1    PATIO 1' X 1"        1.09
3036      II      B      1    COLORADO FLAGSTONE    1.07
3063      II      B      1    TEXAS BRONZE         1.52
4001      II      B      1    THREE RIVERS FLAGSTONE 0.74
4023      II      B      1    WINDRIDGE QUARTZITE  1.50
4029      II      B      1    HIDDEN LAKE SANDSTONE 1.15
4030      II      B      1    HIDDEN LAKE SANDSTONE 1.31
4037      II      B      1    THREE RIVER FLAGSTONE 0.60
6050      II      B      1    RAMSEY SLATE         0.54
6051      II      B      1    RAMSEY SLATE         1.60

```

NUMBER OF ENTRIES = 25

AVG. DEALER PRICE PER SQ. FT = \$1.20


```

INPUT INDEX STONE
SELECT ROCK_CLASS = "II B1" AND DEALER_PR_FT > 0.0
PAGESIZE 57 LINES 80 COLUMNS
NOHEADERS
SORT STONE_KEY
BREAK AFTER ROCK_CLASS
TITLE 1 DATE PAGE COL 66
TITLE 2 "---ORNAMENTAL AND BUILDING STONE---" COL 19
TITLE 3 "---MINE/MARKET SURVEY---" COL 24
TITLE 4
TITLE 5 "REPORT 2" COL 30
TITLE 6 "-----" COL 30
TITLE 7
TITLE 8 "---AVERAGE DEALER PRICE PER SQUARE FOOT BY CLASS---" COL 9
TITLE 9
TITLE 10 "===== " COL 2
      "===== " COL 51
TITLE 11 "**** CLASS ****" COL 10 "TOTAL" COL 58
TITLE 12 "RECORD MINING SURF" COL 2 "DEALER PRICE" COL 54
TITLE 13 " ID METHOD USE TYPE TRADE NAME "COL 2
      "PER SQ FT" COL 56
TITLE 14 "===== " COL 2
      "===== " COL 51
TITLE 15
REPORT 1 STONE_KEY COL 3 MINE_METHOD COL 12 RC_USE COL 18
      SURF_TYPE COL 22 TRADE_NAME COL 27 DEALER_PR_FT COL 56
TOTAL 1
TOTAL 2
TOTAL 3 "NUMBER OF ENTRIES = " COUNT
TOTAL 4
TOTAL 5 "AVG. DEALER PRICE PER SQ. FT = " AVG(DEALER_PR_FT)
      PICTURE $$,$$9.99
PRINT ON @LPT3

```


1/14/85

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ORNAMENTAL AND BUILDING STONE
MINE/MARKET SURVEY

REPORT 3

--REPORT BASED ON TRADE NAME--
--COMPUTED ON--
--ADJUSTED DEALER PRICE--

=====

TRADE NAME =	QUARTZ SLATE
--------------	--------------

=====

STANDARD DEVIATION = \$91.92

VARIANCE = \$845,000


```

INPUT INDEX STONE
SELECT TRADE_NAME = "QUARTZ SLATE" " AND ADJ_DEALER_PRICE > 0.0
PAGESIZE 55 LINES 80 COLUMNS
NOHEADERS
SORT STONE_KEY
BREAK AFTER TRADE_NAME
TITLE 1 DATE PAGE COL 40
TITLE 2
TITLE 3 "ORNAMENTAL AND BUILDING STONE" COL 7
TITLE 4 "MINE/MARKET SURVEY" COL 12
TITLE 5
TITLE 6 "REPORT 3" COL 18
TITLE 7 "-----" COL 18
TITLE 8
TITLE 9 "--REPORT BASED ON TRADE NAME--" COL 7
TITLE 10 "---COMPUTED ON---" COL 15
TITLE 11 "---ADJUSTED DEALER PRICE---" COL 11
TITLE 12
TITLE 13
TITLE 14
TITLE 15 "===== " COL 2
TITLE 16 "TRADE NAME = QUARTZ SLATE " COL 2
TITLE 17 "===== " COL 2
TITLE 18
TITLE 19
TITLE 20
TOTAL 1 " STANDARD DEVIATION = " STD(ADJ_DEALER_PRICE)
      PICTURE $$$,$$9.99
TOTAL 2
TOTAL 3 " VARIANCE = " VAR(ADJ_DEALER_PRICE)
      PICTURE $$$,$$$,$$9
PRINT ON @LPT3

```


1/14/85

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ORNAMENTAL AND BUILDING STONE
MINE/MARKET SURVEY

REPORT 4

--REPORT BASED ON STONE TYPE--
--COMPUTED ON--
--ADJUSTED DEALER PRICE--

=====
STONE TYPE = R
=====

STANDARD DEVIATION = \$47.21
VARIANCE = \$222,856


```

INPUT INDEX STONE
SELECT TYP = "R " AND ADJ_DEALER_PRICE > 0.0
PAGESIZE 55 LINES 80 COLUMNS
NOHEADERS
SORT STONE_KEY
BREAK AFTER TYP
TITLE 1 DATE PAGE COL 36
TITLE 2
TITLE 3 "ORNAMENTAL AND BUILDING STONE" COL 3
TITLE 4 "      MINE/MARKET SURVEY" COL 3
TITLE 5
TITLE 6 "REPORT 4" COL 14
TITLE 7 "-----" COL 14
TITLE 8
TITLE 9
TITLE 10
TITLE 11 "--REPORT BASED ON STONE TYPE--" COL 3
TITLE 12 "--COMPUTED ON--" COL 10
TITLE 13 "--ADJUSTED DEALER PRICE--" COL 6
TITLE 14
TITLE 15
TITLE 16
TITLE 17 "======" COL 10
TITLE 18 "STONE TYPE = R" COL 10
TITLE 19 "======" COL 10
TITLE 20
TITLE 21
TITLE 22
TOTAL 1 "STANDARD DEVIATION = " STD(ADJ_DEALER_PRICE)
      PICTURE $$$,$$9.99
TOTAL 2
TOTAL 3 "VARIANCE = " VAR(ADJ_DEALER_PRICE)
      PICTURE $$$,$$$,$$9
PRINT ON @LPT3

```


SAMPLE OF PRINTOUT STRUCTURE GENERATED BY REPORTS 5 - 7

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ORNAMENTAL BUILDING STONE MINE/MARKET SURVEY MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	3005	QUERY DATE.....	1982
REGION.....	3	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	II
TRADE NAME.....	APACHE GOLD	USE.....	A
ROCK CODE.....	SCHIST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	GREY & GREEN SCHIST 3-4"	GROUPING.....	
CONTACT PERSON.....	HILTON CASS	MINING COST.....	0.00
CONTACT PHONE.....	602-261-4372	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	95.00
RANGE.....		DISTANCE FROM SOURCE.....	90.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	AZ	FREIGHT PER TON.....	4.00
CITY LOCATION.....	PRESCOTT	CONFIDENCE LEVEL (DP).....	2
VENDOR.....	APACHE STONE & SUPPLY	ADJUSTED DEALER PRICE.....	91.00
STATE SOLD.....	AZ	OWNERSHIP.....	POB
CITY SOLD.....	PHOENIX	ADJUDICATED.....	
		COVERAGE.....	50.00
		DEALER PRICE/FT2.....	1.32
		ROYALTY.....	0.00


```

INPUT INDEX STONE
SELECT REGION = 3
PAGESIZE 55 LINES 131 COLUMNS
NOHEADERS
SORT STONE_KEY
BREAK AFTER STONE_KEY
EJECT
TITLE 1 DATE PAGE RIGHT
TITLE 2 'ORNAMENTAL BUILDING STONE' COL 41
TITLE 3 'MINE/MARKET SURVEY' COL 44
TITLE 4 'MASTER LIST' COL 48
TITLE 5
TITLE 6 'FIELD NAME' COL 2 'VALUE' COL 26 'FIELD NAME' COL 60
      'VALUE' COL 84
TITLE 7 '*****' COL 2 '*****' COL 26 '*****' COL 60
      '*****' COL 84
TITLE 8
REPORT 1 'RECORD ID.....' COL 2 STONE_KEY COL 26
      'QUERY DATE.....' COL 60 QUERY_DATE COL 84 PICTURE ZZZZ
REPORT 2 '-----' COL 26 '-----' COL 84
REPORT 3 'REGION.....' COL 2 REGION COL 26
      'ROCK CLASS' COL 60
REPORT 4 '-' COL 26
REPORT 5 'TYPE.....' COL 2 TYP COL 26
      'MINING METHOD.....' COL 63 MINE_METHOD COL 84
REPORT 6 '---' COL 26 '---' COL 84
REPORT 7 'TRADE NAME.....' COL 2 TRADE_NAME COL 26
      'USE.....' COL 63 RC_USE COL 84
REPORT 8 '-----' COL 26 '-' COL 84
REPORT 9 'ROCK CODE.....' COL 2 ROCK_CODE COL 26
      'SURFACE TYPE.....' COL 63 SURF_TYPE COL 84 PICTURE Z
REPORT 10 '-----' COL 26 '-' COL 84
REPORT 11 'ROCK DESCRIPTION.....' COL 2 ROCK_DESCR COL 26
      'GROUPING.....' COL 60 GROUPING COL 84
REPORT 12 '-----' COL 26
      '-----' COL 84
REPORT 13 'CONTACT PERSON.....' COL 2 CONTACT_PERSON COL 26
      'MINING COST.....' COL 60 MINE_COST COL 84
REPORT 14 '-----' COL 26 '-----' COL 85
REPORT 15 'CONTACT PHONE.....' COL 2 AREA_CODE COL 26
      '-' COL 29 PRE_FIX COL 30 PICTURE ZZZ '-' COL 33
      PH_NUMBER COL 34 PICTURE ZZZZ
      'CONFIDENCE LEVEL (MC):' COL 60 MC_CONF_LVL COL 84
      PICTURE Z
REPORT 16 '---' COL 26 '-' COL 84
REPORT 17 'SOURCE OF INFORMATION:' COL 2 SOURCE_OF_INFO COL 26
      'FOB QUARRY.....' COL 60 FOB_QUARRY COL 84
REPORT 18 '---' COL 26 '-----' COL 85
REPORT 19 'MERIDIAN.....' COL 2 MERIDIAN COL 26 PICTURE ZZ
      'DEALER PRICE.....' COL 60 DEALER_PRICE COL 84
REPORT 20 '---' COL 26 '-----' COL 85
REPORT 21 'TOWNSHIP.....' COL 2 TWSHP COL 26
      'RETAIL PRICE.....' COL 60 RETAIL_PRICE COL 84
REPORT 22 '---' COL 26 '-----' COL 85
REPORT 23 'RANGE.....' COL 2 RANGE COL 26
      'DISTANCE FROM SOURCE..' COL 60 DIST_FROM_SOURCE COL 85
REPORT 24 '---' COL 26 '-----' COL 85
REPORT 25 'SECTION.....' COL 2 SECTN COL 26 PICTURE ZZ
      'AMOUNT PER MILE.....' COL 60 AMT_PER_MILE COL 84
REPORT 26 '---' COL 26 '-----' COL 85
REPORT 27 'STATE CODE.....' COL 2 STATE_CODE COL 26
      'FREIGHT PER TON.....' COL 60 FRT_PER_TON COL 84
REPORT 28 '---' COL 26 '-----' COL 85
REPORT 29 'CITY LOCATION.....' COL 2 CITY_LOC COL 26
      'CONFIDENCE LEVEL (DP):' COL 60 DP_CONF_LVL COL 84
      PICTURE Z
REPORT 30 '-----' COL 26 '-' COL 84
REPORT 31 'VENDOR.....' COL 2 VENDOR COL 26
      'ADJUSTED DEALER PRICE:' COL 60 ADJ_DEALER_PRICE COL 84
REPORT 32 '-----' COL 26 '-----' COL 85
REPORT 33 'STATE SOLD.....' COL 2 STATE_SOLD COL 26
      'OWNERSHIP.....' COL 60 OWNERSHIP COL 84
REPORT 34 '---' COL 26 '---' COL 84
REPORT 35 'CITY SOLD.....' COL 2 CITY_SOLD COL 26
      'ADJUDICATED.....' COL 60 ADJUDICATED COL 84
REPORT 36 '-----' COL 26 '---' COL 84
REPORT 37 'COVERAGE.....' COL 60 COVERAGE COL 84
REPORT 38 '-----' COL 85
REPORT 39 'DEALER PRICE/FT2.....' COL 60 DEALER_PR_FT COL 84
REPORT 40 '-----' COL 85
REPORT 41 'ROYALTY.....' COL 60 ROYALTY COL 84
REPORT 42 '-----' COL 85
PRINT ON @LPT

```


ISAM FILE.
STONE_RECORD KEY STONE_KEY.

01	STONE_RECORD,	
05	STONE_KEY	UNPACKED UNSIGNED (4),
05	REGION	UNPACKED UNSIGNED (1),
05	TYP	CHARACTER (2),
05	TRADE_NAME	CHARACTER (25),
05	ROCK_CODE	CHARACTER (8),
05	ROCK_DESCR	CHARACTER (25),
05	CONTACT_PERSON	CHARACTER (20),
05	CONTACT_PHONE,	
10	AREA_CODE	CHARACTER (3),
10	PRE_FIX	UNPACKED UNSIGNED (3),
10	PH_NUMBER	UNPACKED UNSIGNED (4),
05	SOURCE_OF_INFO	CHARACTER (3),
05	MERIDIAN	UNPACKED UNSIGNED (2),
05	TWNSHP	CHARACTER (5),
05	RANGE	CHARACTER (5),
05	SECTN	UNPACKED UNSIGNED (2),
05	STATE_CODE	CHARACTER (2),
05	CITY_LOC	CHARACTER (20),
05	VENDOR	CHARACTER (25),
05	STATE_SOLD	CHARACTER (2),
05	CITY_SOLD	CHARACTER (20),
05	QUERY_DATE	UNPACKED UNSIGNED (4),
05	ROCK_CLASS,	
10	MINE_METHOD	CHARACTER (3),
10	RC_USE	CHARACTER (1),
10	SURF_TYPE	UNPACKED UNSIGNED (1),
05	MINE_COST	UNPACKED (5,2),
05	GROUPING	CHARACTER (35),
05	MC_CONF_LVL	UNPACKED UNSIGNED (1),
05	FOB_QUARRY	UNPACKED (6,2),
05	DEALER_PRICE	UNPACKED (6,2),
05	RETAIL_PRICE	UNPACKED (6,2),
05	DIST_FROM_SOURCE	UNPACKED UNSIGNED (4,1),
05	AMT_PER_MILE	UNPACKED (5,2),
05	FRT_PER_TON	UNPACKED (5,2),
05	DP_CONF_LVL	UNPACKED UNSIGNED (1),
05	ADJ_DEALER_PRICE	UNPACKED (5,2),
05	OWNERSHIP	CHARACTER (3),
05	ROYALTY	UNPACKED (5,2),
05	ADJUDICATED,	
10	ADJ_YN	CHARACTER (1),
10	LOC_LN	CHARACTER (1),
05	COVERAGE	UNPACKED (5,2),
05	DEALER_PR_FT	UNPACKED (5,2).

ORNAMENTAL AND BUILDING STONE
MINE/MARKET SURVEY
DATA ENTRY SHEET

(see next page)

ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME #####	VALUE ####	FIELD NAME #####	VALUE ####
RECORD ID.....	----	QUERY DATE.....	----
REGION.....	----	ROCK CLASS.....	----
TYPE.....	----	MINING METHOD.....	----
TRADE NAME.....	----	USE.....	----
ROCK CODE.....	----	SURFACE TYPE.....	----
ROCK DESCRIPTION.....	----	GROUPING.....	----
CONTACT PERSON.....	----	MINING COST.....	----
CONTACT PHONE.....	----	CONFIDENCE LEVEL (MC).....	----
SOURCE OF INFORMATION.....	----	FOB QUARRY.....	----
MERIDIAN.....	----	DEALER PRICE.....	----
TOWNSHIP.....	----	RETAIL PRICE.....	----
RANGE.....	----	DISTANCE FROM SOURCE.....	----
SECTION.....	----	AMOUNT PER MILE.....	----
STATE CODE.....	----	FREIGHT PER TON.....	----
CITY LOCATION.....	----	CONFIDENCE LEVEL (DP).....	----
VENDOR.....	----	ADJUSTED DEALER PRICE.....	----
STATE SOLD.....	----	OWNERSHIP.....	----
CITY SOLD.....	----	ADJUDICATED.....	----
		COVERATE.....	----
		DEALER PRICE/FT2.....	----
		ROYALTY.....	----

Region I

12/11/84

ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1001	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	AC	MINING METHOD.....	III
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	TRAVERTINE	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-535-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	100.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP)...	
VENDOR.....	MCLAUGHLIN MASONRY	ADJUSTED DEALER PRICE...	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	45.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1002	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	OAKLEY STONE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS QUARTZITE	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	150.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	ID	FREIGHT PER TON.....	0.00
CITY LOCATION.....	OAKLEY	CONFIDENCE LEVEL (DP)...	
VENDOR.....	MCLAUGHLIN MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	120.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

12/11/64

ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1003	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	1
TRADE NAME.....	VOLCANIC MOSS ROCK	USE.....	A
ROCK CODE.....	LAVA	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	BASALT 3"-8" ACROSS	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-505-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	130.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	10	FREIGHT PER TON.....	0.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	
VENDOR.....	MCLAUGHLIN MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	85.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME	VALUE	FIELD NAME	VALUE
*****	*****	*****	*****
RECORD ID.....	1004	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	A	MINING METHOD.....	II
TRADE NAME.....	SIERRA SUNSET REGULAR	USE.....	A
ROCK CODE.....	LAVA	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	RHYOLITE (FROTHY PUMICE)	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-535-2451	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	200.00
RANGE.....		DISTANCE FROM SOURCE.....	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	CA	FREIGHT PER TON.....	0.00
CITY LOCATION.....		CONFIDENCE LEVEL (OP).....	
VENDOR.....	MCLAUGHLIN MASONRY	ADJUSTED DEALER PRICE.....	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	200.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE ****
RECORD ID.....	1005	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	I
TRADE NAME.....	HELENA PICTURE STONE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	GREY PHYLLITE 2"-3" THICK	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	100.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	HELENA	CONFIDENCE LEVEL (DP)...	
VENDOR.....	QUALITY CRAFT MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	100.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

12/11/74

 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1003	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	MOSS ROCK	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	QUARTZ LATITE	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FEB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	135.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	PHILIPSBURG	CONFIDENCE LEVEL (DP)...	
VENDOR.....	QUALITY CRAFT MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	60.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1007	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	AC	MINING METHOD.....	III
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	8
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	TRAVERTINE	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FIS-585-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	135.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP)...	
VENDOR.....	QUALITY CRAFT MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	80.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1008	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	VOLCANIC MOSS ROCK	USE.....	A
ROCK CODE.....	LAVA	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	BASALT 6"-8" ACROSS	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-595-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FQB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	90.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	ID	FREIGHT PER TON.....	0.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	
VENDOR.....	QUALITY CRAFT MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	100.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1009	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	CAKLEY STONE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS	GROUPING.....	
CONTACT PERSON.....	RAY TESORO	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-2451	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FJB QUARRY.....	0.00
M-RIJIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	30.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	IO	FREIGHT PER TON.....	0.00
CITY LOCATION.....	CAKLEY	CONFIDENCE LEVEL (DP)...	
VENDOR.....	QUALITY CRAFT MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BUTTE	ADJUDICATED.....	
		COVERAGE.....	80.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1010	QUERY DATE.....	1984
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	BASIN MOSS STONE	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	RYHOLITE	GROUPING.....	
CONTACT PERSON.....	BILL STRALEY	MINING COST.....	30.00
CONTACT PHONE.....	FTS-585-5073	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	110.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	20.00
CITY LOCATION.....	HELENA	CONFIDENCE LEVEL (DP)...	1
VENDOR.....	SMITTY'S FIREPLACE	ADJUSTED DEALER PRICE..	90.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	HELENA	ADJUDICATED.....	
		COVERAGE.....	50.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1012	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	ITI
TRADE NAME.....	ROCKY MOUNTAIN QUARTZITE	USE.....	B
ROCK CODE.....	QTZT	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS QUARTZITE	GROUPING.....	
CONTACT PERSON.....	BILL STRALEY	MINING COST.....	137.00
CONTACT PHONE.....	FTS-565-5073	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION:	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	230.00
RANGE.....		DISTANCE FROM SOURCE...	258.0
SECTION.....		AMOUNT PER MILE.....	0.15
STATE CODE.....	IO	FREIGHT PER TON.....	33.70
CITY LOCATION.....	IDAHO FALLS	CONFIDENCE LEVEL (DP)...	2
VENDOR.....	SMITTY'S FIREPLACE	ADJUSTED DEALER PRICE...	219.30
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	HELENA	ADJUDICATED.....	
		COVERAGE.....	220.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1013	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	TRAVERTINE	GROUPING.....	
CONTACT PERSON.....	BILL STRALEY	MINING COST.....	60.00
CONTACT PHONE.....	FTS-585-5073	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FUB QUARRY.....	73.60
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	130.00
RANGE.....		DISTANCE FROM SOURCE..	136.0
SECTION.....		AMOUNT PER MILE.....	0.11
STATE CODE.....	MT	FREIGHT PER TON.....	20.00
CITY LOCATION.....	GARDINER	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	SMITH'S FIREPLACE	ADJUSTED DEALER PRICE..	109.50
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	HELENA	ADJUDICATED.....	
		COVERAGE.....	40.00
		DEALER PRICE/FT2.....	0.30
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1014	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	LAVA MOSS	USE.....	A
ROCK CODE.....	LAVA	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	BASALT SLABS	GROUPING.....	
CONTACT PERSON.....	BILL STRALEY	MINING COST.....	25.00
CONTACT PHONE.....	FTS-535-5075	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	L	FOS QUARRY.....	75.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	140.00
RANGE.....		DISTANCE FROM SOURCE..	256.0
SECTION.....		AMOUNT PER MILE.....	0.10
STATE CODE.....	ID	FREIGHT PER TON.....	25.30
CITY LOCATION.....	IDAHO FALLS	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	SMITH'S FIREPLACE	ADJUSTED DEALER PRICE..	114.20
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	HELENA	ADJUDICATED.....	
		COVERAGE.....	60.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

12/11/84	FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
	RECORD ID.....	1015	QUERY DATE.....	1982
	REGION.....	1	ROCK CLASS	
	TYPE.....	R	MINING METHOD.....	I
	TRADE NAME.....	MOSS ROCK	USE.....	A
	ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
	ROCK DESCRIPTION.....	LAVA	GROUPING.....	
	CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	0.00
	CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
	SOURCE OF INFORMATION..	M	FUB QUARRY.....	0.00
	MERIDIAN.....		DEALER PRICE.....	0.00
	TOWNSHIP.....		RETAIL PRICE.....	30.00
	RANGE.....		DISTANCE FROM SOURCE..	0.0
	SECTION.....		AMOUNT PER MILE.....	0.00
	STATE CODE.....	MT	FREIGHT PER TON.....	0.00
	CITY LOCATION.....	ENNIS	CONFIDENCE LEVEL (DP)...	
	VENDOR.....	HOUGARD MASONRY	ADJUSTED DEALER PRICE..	0.00
	STATE SOLD.....	MT	OWNERSHIP.....	
	CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
			COVERAGE.....	0.00
			DEALER PRICE/FT2.....	0.00
			ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1016	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	GRANITE	USE.....	A
ROCK CODE.....	GRANITE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	GRANITIC RUBBLE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FEB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	110.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	EMMIS	CONFIDENCE LEVEL (DP)...	
VENDOR.....	HOUGARD MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1017	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	RIVER ROCK	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	ROUNDED RIVER ROCK	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	20.00
CONTACT PHONE.....	FTS-535-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FEB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	ENNIS	CONFIDENCE LEVEL (DP)...	
VENDOR.....	HOUGARD MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
		COVERAGE.....	30.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1519	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	FIELD ST RIVER ROCK	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	GRANITE RIVER ROCK	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	20.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FUB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BOZEMAN	CONFIDENCE LEVEL (OP)...	
VENDOR.....	PIHL MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	PRAY	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE *****
RECORD ID.....	1019	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	SANDSTONE	USE.....	A
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	20.00
CONTACT PHONE.....	FTS-535-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BOZEMAN	CONFIDENCE LEVEL (DP)...	
VENDOR.....	PIHL MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	PRAY	ADJUDICATED.....	
		COVERAGE.....	30.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1020	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	AC	MINING METHOD.....	1
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	TRAVERTINE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	20.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	M	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	90.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BOZEMAN	CONFIDENCE LEVEL (DP)...	
VENDOR.....	PIHL MASONRY	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	PRAY	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1021	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	WHITE, ORANGE, RED TRAV	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	62.00
CONTACT PHONE.....	FTS-505-4261	CONFIDENCE LEVEL (MC).....	1
SOURCE OF INFORMATION.....	2	FOB QUARRY.....	73.00
MERIDIAN.....	20	DEALER PRICE.....	0.00
TOWNSHIP.....	T9S	RETAIL PRICE.....	0.00
RANGE.....	R2E	DISTANCE FROM SOURCE.....	0.0
SECTION.....	14	AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP).....	
VENDOR.....	LIVINGSTON MARBLE GRANITE	ADJUSTED DEALER PRICE.....	0.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	LIVINGSTON	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	5.55

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1022	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	A	MINING METHOD.....	III
TRADE NAME.....	TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	TRAVERTINE, WHITE, ORANGE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	135.00
CONTACT PHONE.....	FTS-535-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	Q	FOB QUARRY.....	147.00
MERIDIAN.....	20	DEALER PRICE.....	0.00
TOWNSHIP.....	T9S	RETAIL PRICE.....	0.00
RANGE.....	R6E	DISTANCE FROM SOURCE...	0.0
SECTION.....	14	AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (OP)...	
VENDOR.....	LIVINGSTON MARBLE GRANITE	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	LIVINGSTON	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	5.35

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1223	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	CD	MINING METHOD.....	III
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TPAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	WHITE, ORANGE, RED TPAV	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	135.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	Q	FOB QUARRY.....	0.00
MERIDIAN.....	20	DEALER PRICE.....	0.00
TOWNSHIP.....	T9S	RETAIL PRICE.....	0.00
RANGE.....	R3E	DISTANCE FROM SOURCE..	0.0
SECTION.....	14	AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP)...	
VENDOR.....	LIVINGSTON MARBLE GRANITE	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	LIVINGSTON	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	14.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1024	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	II
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	WHITE, ORANGE, RED TRAV	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	30.00
CONTACT PHONE.....	FIS-585-4261	CONFIDENCE LEVEL (MC).....	1
SOURCE OF INFORMATION.....	1	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	70.00
TOWNSHIP.....		RETAIL PRICE.....	135.00
RANGE.....		DISTANCE FROM SOURCE.....	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	10.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP).....	1
VENDOR.....	HALLETT MINERALS CO.	ADJUSTED DEALER PRICE.....	125.00
STATE SOLD.....	MT	OWNERSHIP.....	PVT
CITY SOLD.....	LIVINGSTON	ADJUDICATED.....	
		COVERAGE.....	65.00
		DEALER PRICE/FT2.....	1.92
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1026	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	QUARTZITE	USE.....	A
ROCK CODE.....	QTZT	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	LIGHT COLORED QTZT RUBBLE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	0.00
CONTACT PHONE.....	FTS-565-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	D	FEB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	
VENDOR.....	BOZEMAN BRICK BLOCK&TILE	ADJUSTED DEALER PRICE...	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	1.25
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1027	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	ARTSTONE	USE.....	8
ROCK CODE.....	QTZT	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	YELLOW ORANGE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	0	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	100.00
RANGE.....		DISTANCE FROM SOURCE..	192.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	10.00
CITY LOCATION.....	TOWNSEND	CONFIDENCE LEVEL (DP)..	3
VENDOR.....	BOZEMAN BRICK BLOCK&TILE	ADJUSTED DEALER PRICE..	90.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	1.67
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE ****
RECORD ID.....	1025	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	SANDSTONE	USE.....	A
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	141.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	7.00
CITY LOCATION.....	BILLINGS	CONFIDENCE LEVEL (DP)...	3
VENDOR.....	BOZEMAN BRICK BLOCK&TILE	ADJUSTED DEALER PRICE..	134.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1029	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	HELENA SLATE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	BLACK & BROWN SLATE	GROUPING.....	
CONTACT PERSON.....	NAN CHRISTIANSON	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-4261	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	U	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	100.00
RANGE.....		DISTANCE FROM SOURCE..	95.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	5.00
CITY LOCATION.....	HELENA	CONFIDENCE LEVEL (DP)..	3
VENDOR.....	GOZEMAN BRICK BLOCK/TILE	ADJUSTED DEALER PRICE..	95.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BOZEMAN	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE *****
RECORD ID.....	1030	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	HORN MT STONE	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	QTZT JOLOMITE	GROUPING.....	
CONTACT PERSON.....	BILLY HICKS	MINING COST.....	23.00
CONTACT PHONE.....	FTS-585-3591	CONFIDENCE LEVEL (MC).....	1
SOURCE OF INFORMATION.....	WM	FOB QUARRY.....	26.00
MERIDIAN.....	20	DEALER PRICE.....	26.00
TOWNSHIP.....	T13S	RETAIL PRICE.....	125.00
RANGE.....	R2E	DISTANCE FROM SOURCE.....	75.0
SECTION.....	5	AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	3.75
CITY LOCATION.....	ALDER	CONFIDENCE LEVEL (DP).....	1
VENDOR.....	COX MASONRY	ADJUSTED DEALER PRICE.....	121.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	ALDER	ADJUDICATED.....	
		COVERAGE.....	45.00
		DEALER PRICE/FT2.....	2.67
		ROYALTY.....	7.50

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 ORNAMENTAL BUILDING STONE
 MINE/MARKEJ SURVEY
 MASTER LIST

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FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1031	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	F	MINING METHOD.....	I
TRADE NAME.....	MCCARTNEY MT QUARTZITE	USE.....	A
ROCK CODE.....	QTZT	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	QUARTZITE	GROUPING.....	
CONTACT PERSON.....	BILLY HICKS	MINING COST.....	0.00
CONTACT PHONE.....	FTS-565-3591	CONFIDENCE LEVEL (MC).....	1
SOURCE OF INFORMATION.....	QM	FOB QUARRY.....	22.00
MERIDIAN.....	20	DEALER PRICE.....	0.00
TOWNSHIP.....	T3S	RETAIL PRICE.....	125.00
RANGE.....	R7W	DISTANCE FROM SOURCE.....	36.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	1.80
CITY LOCATION.....	ALDER	CONFIDENCE LEVEL (DP).....	1
VENDOR.....	COX MASONRY	ADJUSTED DEALER PRICE.....	123.00
STATE SOLD.....	MT	OWNERSHIP.....	PVT
CITY SOLD.....	ALDER	ADJUDICATED.....	
		COVERAGE.....	40.00
		DEALER PRICE/FT2.....	3.05
		ROYALTY.....	5.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1032	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	I
TRADE NAME.....	SHORT CREEK STONE	USE.....	B
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE	GROUPING.....	
CONTACT PERSON.....	BILLY HICKS	MINING COST.....	21.00
CONTACT PHONE.....	FTS-585-5073	CONFIDENCE LEVEL (MC).....	1
SOURCE OF INFORMATION.....	QM	FUB QUARRY.....	23.00
MERIDIAN.....	20	DEALER PRICE.....	24.00
TOWNSHIP.....	T16S	RETAIL PRICE.....	200.00
RANGE.....	R2W	DISTANCE FROM SOURCE.....	40.0
SECTION.....	13	AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	2.00
CITY LOCATION.....	ALDER	CONFIDENCE LEVEL (DP).....	
VENDOR.....	COX MASONRY	ADJUSTED DEALER PRICE.....	196.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	ALDER	ADJUDICATED.....	
		COVERAGE.....	200.00
		DEALER PRICE/FT2.....	0.99
		ROYALTY.....	5.50

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME	VALUE	FIELD NAME	VALUE
*****	*****	*****	*****
RECORD ID.....	1035	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	WHISKY TRAIL	USE.....	5
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	FE STAINED SLATE 1/4-3/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-565-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FUB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	300.00
RANGE.....		DISTANCE FROM SOURCE..	420.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	21.00
CITY LOCATION.....	KALISPELL	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	279.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	1.80
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1034	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	SANDSTONE	USE.....	A
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	RED KNUBBY SS 2"-3"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6341	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	U	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	125.00
RANGE.....		DISTANCE FROM SOURCE..	214.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	WY	FREIGHT PER TON.....	11.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	4
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	114.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1035	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	ROCKY MOUNTAIN QUARTZITE	USE.....	8
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS QZTT 1/4"-3/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	137.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	0	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	205.00
RANGE.....		DISTANCE FROM SOURCE..	531.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	IO	FREIGHT PER TON.....	27.00
CITY LOCATION.....	OAKLEY	CONFIDENCE LEVEL (DP)..	3
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	173.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
REC'D ID.....	1036	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	ROCKY MOUNTAIN QUARTZITE	USE.....	5
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS QTZT 1"-1 1/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	125.00
CONTACT PHONE.....	FTS-535-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	F&B QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	150.00
RANGE.....		DISTANCE FROM SOURCE..	531.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	ID	FREIGHT PER TON.....	27.00
CITY LOCATION.....	OAKLEY	CONFIDENCE LEVEL (DP)..	3
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	133.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1037	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRAJE NAME.....	ARIZONA SANDSTONE	USE.....	B
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SMOOTH SS 1"-1 1/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	20.00
CONTACT PHONE.....	FTS-535-6341	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	130.00
RANGE.....		DISTANCE FROM SOURCE...	1094.0
SECTION.....		AMOUNT PER MILE.....	0.35
STATE CODE.....	AZ	FREIGHT PER TON.....	55.00
CITY LOCATION.....	ASHFORK	CONFIDENCE LEVEL (DP)...	3
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	125.00
STATE SOLD.....	MT	OWNERSHIP.....	POF
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	250.00
		DEALER PRICE/FT2.....	1.50
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE *****
RECORD ID.....	1033	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	VERMONT N.Y. SLATE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	SLATE 1/4"-5/8"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FIS-535-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	288.00
RANGE.....		DISTANCE FROM SOURCE...	2416.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	VT	FREIGHT PER TON.....	121.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	4
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE...	167.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	1.30
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1039	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	A	MINING METHOD.....	I
TRADE NAME.....	DRY WALL	USE.....	A
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE BLOCKY	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-535-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	U	FOE QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	80.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BILLINGS	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	80.00
STATE SOLD.....	MT	OWNERSHIP.....	PVT
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	25.00
		DEALER PRICE/FT2.....	3.20
		ROYALTY.....	10.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE ****
RECORD ID.....	1040	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	B
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	TRAVERTINE, SPLIT FACE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	120.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	F08 QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	160.00
RANGE.....		DISTANCE FROM SOURCE..	121.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	6.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	154.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	25.00
		DEALER PRICE/FT2.....	6.16
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

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FIELD NAME	VALUE	FIELD NAME	VALUE
*****	*****	*****	*****
RECORD ID.....	1041	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	THERMOPOLIS LIMESTONE	USE.....	B
ROCK CODE.....	TRAV	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	LIMESTONE RIPPLE FACE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
M-RIIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	115.00
RANGE.....		DISTANCE FROM SOURCE..	214.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	WY	FREIGHT PER TON.....	11.00
CITY LOCATION.....	THERMOPOLIS	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	104.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	40.00
		DEALER PRICE/FT2.....	2.60
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1042	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	EAGLE SANDSTONE	USE.....	B
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE 3"-6"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6341	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	35.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BILLINGS	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	85.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	50.00
		DEALER PRICE/FT2.....	1.70
		ROYALTY.....	7.50

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

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FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1043	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	VM	MINING METHOD.....	III
TRADE NAME.....	COLORADO ROSE FLAGSTONE	USE.....	B
ROCK CODE.....	SS	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	CUT SANDSTONE 1/2"-3/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-525-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	0	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE..	594.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	CO	FREIGHT PER TON.....	30.00
CITY LOCATION.....	LYONS	CONFIDENCE LEVEL (DP)..	3
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	1.25
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

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FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE *****
RECORD ID.....	1044	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	I
TRADE NAME.....	MONTANA SUNLIGHT	USE.....	B
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE 1/2"-3/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	U	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE..	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BILLINGS	CONFIDENCE LEVEL (DP)...	
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE..	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	220.00
		DEALER PRICE/FT2.....	0.80
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1645	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	KALISPELL ARGILLITE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	ARGILLITE 1/2"-1"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	220.00
RANGE.....		DISTANCE FROM SOURCE...	420.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	21.00
CITY LOCATION.....	KALISPELL	CONFIDENCE LEVEL (DP)...	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE...	199.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	220.00
		DEALER PRICE/FT2.....	0.90
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1046	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	11
TRADE NAME.....	KALISPELL ARGILLITE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	ARGILLITE 1 1/2"-2"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....		FJB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	105.00
RANGE.....		DISTANCE FROM SOURCE.....	420.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	21.00
CITY LOCATION.....	KALISPELL	CONFIDENCE LEVEL (DP).....	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE.....	144.00
STATE SOLD.....	MT	OWNERSHIP.....	POF
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	200.00
		DEALER PRICE/FT2.....	0.72
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1047	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRAJE NAME.....	DRIFTWOOD (IDA GLACIAL)	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	NOBBY QTZT LIMESTONE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	25.00
CONTACT PHONE.....	FIS-535-6341	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	160.00
RANGE.....		DISTANCE FROM SOURCE..	246.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	IO	FREIGHT PER TON.....	12.00
CITY LOCATION.....	HENRY'S LAKE	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	HALON'S STONE CENTER	ADJUSTED DEALER PRICE..	143.00
STATE SOLD.....	MT	OWNERSHIP.....	PDF
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME	VALUE	FIELD NAME	VALUE
*****	*****	*****	*****
RECORD ID.....	1043	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	COPPER MTN CAMBRIAN STONE	USE.....	A
ROCK CODE.....	QZT	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	QUARTZITE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	140.00
RANGE.....		DISTANCE FROM SOURCE.....	152.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	WY	FREIGHT PER TON.....	3.00
CITY LOCATION.....	CODY	CONFIDENCE LEVEL (DP).....	2
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE.....	132.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE ****
RECORD ID.....	1049	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	CLOVERLY	USE.....	A
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-0841	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	140.00
RANGE.....		DISTANCE FROM SOURCE.....	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	MT	FREIGHT PER TON.....	0.00
CITY LOCATION.....	BILLINGS	CONFIDENCE LEVEL (DP).....	1
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE.....	140.00
STATE SOLD.....	MT	OWNERSHIP.....	PDB
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1050	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	III
TRADE NAME.....	WHITE TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	TRAVERTINE 4"-6"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	60.00
CONTACT PHONE.....	FTS-535-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...		FDB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	0.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....		FREIGHT PER TON.....	0.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	
VENDOR.....		ADJUSTED DEALER PRICE...	0.00
STATE SOLD.....		OWNERSHIP.....	
CITY SOLD.....		ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1051	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	MOSS ROCK	USE.....	A
ROCK CODE.....	FIELD ST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	FIELD ST	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-565-6941	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	35.00
TOWNSHIP.....		RETAIL PRICE.....	95.00
RANGE.....		DISTANCE FROM SOURCE..	98.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	5.00
CITY LOCATION.....	GRASS RANGE	CONFIDENCE LEVEL (DP)..	1
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE..	90.00
STATE SOLD.....	MT	OWNERSHIP.....	PVT
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	10.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1052	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	QUARTZITE FLAGSTONE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS QTZT 1/4"-3/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-565-6341	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	B	FJB QUARRY.....	120.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	199.00
RANGE.....		DISTANCE FROM SOURCE...	490.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	ID	FREIGHT PER TON.....	25.00
CITY LOCATION.....	OAKLEY	CONFIDENCE LEVEL (DP)...	3
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE...	174.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	200.00
		DEALER PRICE/FT2.....	0.37
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1053	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	QUARTZITE FLAGSTONE	USE.....	8
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS QUIT 3/4"-1"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	120.00
CONTACT PHONE.....	FTS-555-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	U	FOB QUARRY.....	170.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	179.00
RANGE.....		DISTANCE FROM SOURCE...	490.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	ID	FREIGHT PER TON.....	25.00
CITY LOCATION.....	OAKLEY	CONFIDENCE LEVEL (DP)...	3
VENDOR.....	HALONE'S STONE CENTER	ADJUSTED DEALER PRICE...	154.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1054	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	FERRY BASIN (ANSON SLATE)	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	ARGILLITE 1/4"-3/4"	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	55.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FUB QUARRY.....	150.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	279.00
RANGE.....		DISTANCE FROM SOURCE..	224.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	11.00
CITY LOCATION.....	HELENA	CONFIDENCE LEVEL (DP)..	1
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE..	263.00
STATE SOLD.....	MT	OWNERSHIP.....	PDB
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

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FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE ****
RECORD ID.....	1055	QUERY DATE.....	1963
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	FERRY BASIN (ANSON SLATE)	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	ARGILLITE 1"-4"	GROUPING.....	
CONTACT PERSON.....	CON WIRTH	MINING COST.....	55.00
CONTACT PHONE.....	FTS-585-6541	CONFIDENCE LEVEL (MC).....	2
SOURCE OF INFORMATION.....	D	FOR QUARRY.....	100.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	225.00
RANGE.....		DISTANCE FROM SOURCE.....	224.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	11.00
CITY LOCATION.....	HELENA	CONFIDENCE LEVEL (DP).....	
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE.....	200.00
STATE SOLD.....	MT	OWNERSHIP.....	PDB
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	150.00
		DEALER PRICE/FT2.....	1.33
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1056	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	RED, ORANGE, WHITE TRAV	GROUPOING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	60.00
CONTACT PHONE.....	FTS-585-6341	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....	D	FUB QUARRY.....	106.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	139.00
RANGE.....		DISTANCE FROM SOURCE.....	115.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	6.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP).....	2
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE.....	133.00
STATE SOLD.....	MT	OWNERSHIP.....	PVT
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	50.00
		DEALER PRICE/FT2.....	2.66
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1057	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	A	MINING METHOD.....	III
TRADE NAME.....	MONTANA TRAVERTINE	USE.....	A
ROCK CODE.....	TRAV	SURFACE TYPE.....	2
ROCK DESCRIPTION.....	WHITE, ORANGE, RED TRAV	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	135.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC).....	
SOURCE OF INFORMATION.....	0	FOB QUARRY.....	136.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	259.00
RANGE.....		DISTANCE FROM SOURCE.....	115.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	6.00
CITY LOCATION.....	LIVINGSTON	CONFIDENCE LEVEL (DP).....	2
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE.....	53.00
STATE SOLD.....	MT	OWNERSHIP.....	PVT
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	100.00
		DEALER PRICE/FT2.....	0.53
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1053	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	I
TRADE NAME.....	COLORADO RUBBLE	USE.....	A
ROCK CODE.....	SS	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	COLORADO SANDSTONE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-555-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	65.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	119.00
RANGE.....		DISTANCE FROM SOURCE..	594.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	CO	FREIGHT PER TON.....	30.00
CITY LOCATION.....	LYONS	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE..	89.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	75.00
		DEALER PRICE/FT2.....	1.19
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1059	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	HONEY LEDGE	USE.....	B
ROCK CODE.....	SCHIST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	MICACEOUS SCHIST	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	70.00
CONTACT PHONE.....	FTS-585-6341	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	129.00
RANGE.....		DISTANCE FROM SOURCE..	490.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	IO	FREIGHT PER TON.....	25.00
CITY LOCATION.....	GAKLEY	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE..	104.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	50.00
		DEALER PRICE/FT2.....	2.08
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1060	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	VH	MINING METHOD.....	II
TRADE NAME.....	MOTHER NATURES ART STONE	USE.....	8
ROCK CODE.....	RYOLITE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	VOLCANICE	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	139.00
RANGE.....		DISTANCE FROM SOURCE..	192.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	10.00
CITY LOCATION.....	TOWNSEND	CONFIDENCE LEVEL (DP)...	
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE..	139.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	2.39
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1061	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	R	MINING METHOD.....	II
TRADE NAME.....	PINE MOUNTAIN SCHIST	USE.....	A
ROCK CODE.....	SCHIST	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SCHIST	GROUPING.....	
CONTACT PERSON.....	GON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-535-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	0	FOS QUARRY.....	68.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	199.00
RANGE.....		DISTANCE FROM SOURCE...	1094.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	AZ	FREIGHT PER TON.....	55.00
CITY LOCATION.....	ASHFORK	CONFIDENCE LEVEL (DP)...	2
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE..	144.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	0.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE ****	FIELD NAME *****	VALUE *****
RECORD ID.....	1062	QUERY DATE.....	1983
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	III
TRADE NAME.....	FLAGSTONE SANDSTONE	USE.....	B
ROCK CODE.....	53	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	SANDSTONE 1" THICK	GROUPING.....	
CONTACT PERSON.....	DON WIRTH	MINING COST.....	0.00
CONTACT PHONE.....	FTS-585-6841	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	0	FOB QUARRY.....	75.00
MERIDIAN.....		DEALER PRICE.....	0.00
TOWNSHIP.....		RETAIL PRICE.....	109.00
RANGE.....		DISTANCE FROM SOURCE...	0.0
SECTION.....		AMOUNT PER MILE.....	0.00
STATE CODE.....	CO	FREIGHT PER TON.....	0.00
CITY LOCATION.....		CONFIDENCE LEVEL (DP)...	
VENDOR.....	RUSTIQUE BRICK	ADJUSTED DEALER PRICE...	0.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	BILLINGS	ADJUDICATED.....	
		COVERAGE.....	203.00
		DEALER PRICE/FT2.....	0.00
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1003	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	MONTANA FLAISTONE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	DRK GRV ARGILLITE QTYZ, THIN	GROUPING.....	
CONTACT PERSON.....	LYNNE DICKMAN	MINING COST.....	32.00
CONTACT PHONE.....	FTS-585-3595	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION..	D	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	130.00
TOWNSHIP.....		RETAIL PRICE.....	240.00
RANGE.....		DISTANCE FROM SOURCE..	71.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	4.00
CITY LOCATION.....	MISSOULA	CONFIDENCE LEVEL (DP)..	2
VENDOR.....	MISSOULA FIREPLACE SUPPLY	ADJUSTED DEALER PRICE..	230.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	ST. REGIS	ADJUDICATED.....	
		COVERAGE.....	300.00
		DEALER PRICE/FT2.....	0.79
		ROYALTY.....	0.00

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ORNAMENTAL BUILDING STONE
MINE/MARKET SURVEY
MASTER LIST

FIELD NAME *****	VALUE *****	FIELD NAME *****	VALUE *****
RECORD ID.....	1064	QUERY DATE.....	1982
REGION.....	1	ROCK CLASS	
TYPE.....	V	MINING METHOD.....	II
TRADE NAME.....	MONTANA FLAGSTONE	USE.....	B
ROCK CODE.....	SLATE	SURFACE TYPE.....	1
ROCK DESCRIPTION.....	DARK GRAY ARGILLITE QZT	GROUPING.....	
CONTACT PERSON.....	LYNNE DICKMAN	MINING COST.....	60.00
CONTACT PHONE.....	FTS-535-3595	CONFIDENCE LEVEL (MC)...	
SOURCE OF INFORMATION...	U	FOB QUARRY.....	0.00
MERIDIAN.....		DEALER PRICE.....	90.00
TOWNSHIP.....		RETAIL PRICE.....	125.00
RANGE.....		DISTANCE FROM SOURCE...	71.0
SECTION.....		AMOUNT PER MILE.....	0.05
STATE CODE.....	MT	FREIGHT PER TON.....	4.00
CITY LOCATION.....	ST. REGIS	CONFIDENCE LEVEL (DP)...	2
VENDOR.....	MISSOULA FIREPLACE SUPPLY	ADJUSTED DEALER PRICE...	121.00
STATE SOLD.....	MT	OWNERSHIP.....	
CITY SOLD.....	MISSOULA	ADJUDICATED.....	
		COVERAGE.....	150.00
		DEALER PRICE/FT2.....	0.81
		ROYALTY.....	0.00

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 ORNAMENTAL BUILDING STONE
 MINE/MARKET SURVEY
 MASTER LIST

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FIELD NAME	*****	VALUE	*****
RECORD ID	1065	QUERY DATE	1982
REGION	1	ROCK CLASS	
TYPE	V	MINING METHOD	I
TRADE NAME	MOSS ROCK	USE	A
ROCK CODE	QTZT	SURFACE TYPE	1
ROCK DESCRIPTION	WEATHERED QTZT W/LICHENS	GROUPING	
CONTACT PERSON	LYNNE DICKMAN	MINING COST	37.00
CONTACT PHONE	FTS-535-3595	CONFIDENCE LEVEL (MC)	
SOURCE OF INFORMATION	D	FOB QUARRY	0.00
MERIDIAN		DEALER PRICE	60.00
TOWNSHIP		RETAIL PRICE	125.00
RANGE		DISTANCE FROM SOURCE	0.0
SECTION		AMOUNT PER MILE	0.00
STATE CODE	MT	FREIGHT PER TON	0.00
CITY LOCATION	MISSOULA	CONFIDENCE LEVEL (DP)	1
VENDOR	MISSOULA FIREPLACE SUPPLY	ADJUSTED DEALER PRICE	125.00
STATE SOLD	MT	OWNERSHIP	
CITY SOLD	MISSOULA	ADJUDICATED	
		COVERAGE	60.00
		DEALER PRICE/FT2	2.08
		ROYALTY	0.00