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DIV. OF OIL, GAS & MINING

Star Stone Quarries, Incorporated
Rosebud Mine
Notice of Intention to Commence Large Mining Operations

Submitted by

Star Stone Quarries, Incorporated
4040 South, 300 West
Salt Lake City, Utah 84107
Tel. (801) 262-4300
Fax (801) 262-4474

Contents of Rosebud Mine (Quarry) Notice of Intention

Notice of Intention to Commence Large Mining Operations dated June 14, 2000

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STAR STONE QUARRIES, INC.
ROSEBUD MINE
NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

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Department of Natural Resources
Division of Oil, Gas, and Mining
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0. Rule R647-4-102- Duration of the Notice of Intention

This Notice of Intention (NOI) is for the duration of this quarrying operation. For planning purposes, the content of this NOI is directed to the first 5-year development and reclamation plan with operations planned to continue beyond five years.

I. Rule R647-4-104- Operator, Surface and Mineral Owners

1. Mine Name: Rosebud
2. Name of Applicant or Company: Star Stone Quarries, Inc.
3. Permanent Address: 4040 South 300 West
   Salt Lake City, Utah 84107
4. Company Representative: Lon Thomas
   President
   4040 South 300 West
   Salt Lake City, Utah 84107
   Telephone (801) 262-4300
   Fax: (801) 262-4474
5. Location of Operation: SW ¼ Sec. 14, NW ¼ Sec. 14, Township:10 N, Range:16 W, SLB&M; Box Elder County, Utah
6. Ownership of the Land Surface: Bureau of Land Management
7. Owner of record of the minerals to be mined:
   Bureau of Land Management
8. Have the owners been notified in writing: Yes
9. Does the operator have legal right to enter and conduct mining operations on the land covered by this notice? Yes

II. Rule R647-4-105- Maps, Drawings & Photographs

105.1 - Base Maps

Map # 2.1 and Map # 3.1 are from a survey made June, 1999. Topographic maps are based on the Emigrant Pass topo map. The location of existing development on the topo maps is based on the survey map. Pre-existing roads have been modified on the topo maps to reflect their position with respect to the existing development. The scale should be considered to be approximate due to shrinkage or enlargement during copying.

1. Property boundaries of surface ownership of all lands that are to be affected by the mining operations: Map # 1.1.
2. Perennial, intermittent, or ephemeral streams, springs and other bodies of water, quarries, and roads within 500 feet of the proposed mining operations: Map # 1.1
   No landing strips, oil and gas pipelines, or other surface and subsurface facilities are located within 500 feet of the proposed mining operations.
   The quarries and access roads are located on ridges and slopes away from perennial and intermittent streams and springs. No ponds, lakes, or other bodies of water are present. Ephemeral streams and other drainages that may be crossed by roads and quarries do not support fish populations or other aquatic life.
3. The route of access from the nearest publicly maintained highway; 4 ½ miles southwest of turnoff from State Highway 30 near milepost 33: Map # 1.2.
4. Known areas, which have been previously impacted by mining or exploration activities within the proposed land affected: Maps # 2.1, # 2.2, # 2.3
5. Areas proposed to be developed over the 5-year mining plan in this notice: Maps # 3.1, # 3.2, # 3.3. See also, Rules R647-4-105.2, R647-4-105.3, R647-4-106.3.

105.2 - Surface Facilities Maps

1. Proposed surface facilities include buildings, roads, topsoil storage areas, and overburden/waste dumps: Maps # 3.2, # 3.3.
   There are no plans to construct the following facilities for this operation: stationary mining/processing equipment, utilities, drainage control structures, tailings or processed waste facilities, liquid wastes, and wastewater discharge treatment and containment facilities.
2. The extent of the surface area proposed to be affected by mining operations including the number of acres proposed to be affected are shown on Map # 3.1.
3. There are no known test borings or core holes on the property and none are planned. Drilling will be limited to blast holes, which will be destroyed during blasting and quarrying. Any test pits that may be developed are included on Maps # 3.2, # 3.3.

105.3 - Additional Maps

1. Quarrying is expected to be on-going at the end of the current 5-year NOI, therefore

reclamation is expected to be minimal. Concurrent reclamation performed for roads and quarry areas that are no longer needed, if any, is shown shaded on Maps # 5.1, 5.2. Reclamation treatments will include ripping, backfilling, recontouring to as close to original slope as practical, replacing soil, and broadcast seeding.

Individual quarry areas with existing and planned development are shown on Maps # 3.2, #3.3. Estimated acreage for each quarry area and access roads is discussed under rule R647-4-106.3.1 through R647-4-3.4.

Typical cross sections through each quarry are shown on Maps # 4.1, # 4.2.

Plan views of cross sections are shown on Maps # 3.2, # 3.3.

There are no permanent buildings on site and there are no building foundations. All buildings are portable and are expected to be in use at the end of the current 5-year NOI. No reclamation is planned for these facilities during the 5-year NOI.

There are no plans to construct the following facilities for this operation: stationary mining/processing equipment, utilities, power lines, drainage control structures, tailings or processed waste facilities, liquid wastes, and wastewater discharge treatment and containment facilities. Therefore, no reclamation will be required.

2. A border clearly outlining the extent of the area to be reclaimed after mining, the number of acres developed, and the number of acres proposed for reclamation: Maps # 5.1, # 5.2. To be reclaimed: White Quarry with road 3.54 acres, Green Quarry 5.26 acres: total 8.80 acres. To be developed: White Quarry with road 3.54 acres, Green Quarry 5.96 acres: total 9.50 acres. A preexisting road through the Green Quarry totaling 0.8 acres to remain following reclamation.
3. Areas developed by this operation, which are included in a request for a variance from the reclamation standards: None.
4. Highwalls which are proposed to remain steeper than 45 degrees and slopes which are proposed to remain steeper than 3 horizontal: 1 vertical: None.
   Dumps will be regraded to a maximum slope of 3h:1v.

III. Rule R647-4-106-Operation Plan

106.1 - Minerals to be mined: Quartzite to be used as building stone and decorative stone.

106.2 - Type of Operation Conducted: The quarries in this operation have stone that is at or near the surface with little or no overburden. Development involves making a cut on a ridge line or slope in a favorable bed, and creating an excavation that eventually has a highwall. The quarry is expanded as needed to stay in the favorable bed. The favorable bed can be considered to be the equivalent of a bedded mineral deposit such as coal. A cut normally is about 10 feet high except where daylighted out to the surface. If the quarry is deepened, successive cuts will be about 10 feet high except where daylighted out to the surface. This helps to provide a nearly level working surface.

A hydraulic excavator is used to extract the stone from the ground. It is then distributed to men on the quarry dump to process. The men use small hammers in conjunction with chisels to split the stone into uniform sizes. After splitting, the men grade the stone and stack it on pallets. The palletized stone is loaded on to trucks and shipped to our Oakley Yard off the quarry property. The unusable material is placed on the waste dump.

Equipment that is used includes: D-8 bulldozer, hydraulic excavator, two-yard front end loader with quick connect forks, two dump trucks. On some stone that is thicker, the excavator loads the stone directly into a dump truck to be hauled to the Oakley Yard or the yard in Salt Lake City for processing.

106.3 - Estimated Acreage
The estimated acreage for each area is shown below.

106.3.1 - Estimated Acreage Green Quarry Cross section Map # 4.1.
The following is an estimate of the average acreage planned to be developed annually:

Areas of actual mining:	0.236
Overburden/waste dumps:	0.164
Access for reclamation:	0.052
Other: Soil Stockpile:	0.012
Total:	0.464

The following is an estimate of the acreage planned to be developed over the 5-year period:

Areas of actual mining:	1.18
Overburden/waste dumps:	0.82
Access for reclamation:	0.26
Other: Soil Stockpile:	0.06
Total:	2.32

The following is an estimate of the acreage planned to be reclaimed over the 5-year period:

Areas of actual mining:	0
Overburden/waste dumps:	0
Other:	0
Total:	0

106.3.2 - Estimated Acreage White Quarry Cross section Map # 4.2
The following is an estimate of the average acreage planned to be developed annually:

Areas of actual mining:	0.052
Overburden/waste dumps:	0.072
Access for reclamation:	0.052
Other: Soil stockpile:	0.010

Total:	0.186

The following is an estimate of the acreage planned to be developed over the 5-year period:

Areas of actual mining:	0.26
Overburden/waste dumps:	0.36
Access for reclamation:	0.26
Other: Soil stockpile:	0.05
Total:	0.93

The following is an estimate of the acreage planned to be reclaimed over the 5-year period:

Areas of actual mining:	0
Overburden/waste dumps:	0
Other:	0
Total:	0

106.3.3 - Estimated Acreage Roads

The following is an estimate of the acreage planned to be developed annually:
Access/haul roads: None

The following is an estimate of the acreage planned to be developed over the 5-year period:
Access/haul roads: None

The following is an estimate of the acreage planned to be reclaimed over the 5-year period.
Access/haul roads: None

106.3.4 - Summary of Estimates, Development Total over 5 years; Ultimate Total

Development Total 5 years		Ultimate Total
Area	Acres	Acres
Green Quarry	2.32	5.96
White Quarry	0.93	3.54 (Includes access road)
Roads	0.00	0.00
Total	3.25	9.50

106.4 - Nature of material including waste rock/overburden and estimated tonnage

The mined material consists of quartzite that is used as decorative stone for exterior and interior walls of buildings; also for patios, floors, fireplaces, rock walls, and many types of lawn decorations. A description of the geologic setting is in rule R647-4-106.8. Every effort is made to maximize the amount of salable rock and minimize the amount of waste.

Thickness of overburden:	0.5 ft.
Thickness of mineral deposit:	100 ft.
Estimated annual volume of overburden/waste:	1,000 cubic yards

Estimated annual volume of ore mined: 1,000 cubic yards

Overburden/waste description: Overburden is a combination of soil, fine rock, and decomposed rock. Waste includes rock that is not considered to be salable as decorative stone because it breaks into pieces that are smaller than the minimum size that is salable. Some waste is a product of natural decomposition. Other waste is a product of handling during quarrying operations when rock breaks into small pieces. These types of undersized waste rock are identified as fine rock.

106.5 - Existing soil types, location of plant growth material
Soil resources of the area are thin and average 0.5 feet in thickness. The soil in some locations is too thin, too sparse, and too rocky to save. A visual inspection of undeveloped ground in the vicinity of the quarries clearly reveals areas of outcrop and loose rock either not covered by any soil or only by scattered patches of soil. When the rock is moved, any fines including soil is quickly lost in the rock and cannot be recovered.

Soils consist of a combination of topsoil, subsoil, decomposed rock, and rock chips. Very little of this material can be classified as topsoil. The quarries are located on slopes with areas of outcrop and thin soil cover. Slopes near the drainage have a thicker soil cover than do slopes higher on the ridge.
Access roads are located on slopes with similar conditions. Roads in the lower areas have a slightly thicker soil cover. These soils average 1 foot in thickness.

An order 3 Soil Survey of the area was completed by the U.S. Department of Agriculture; Natural Resources Conservation Service; (originally U.S. Soil Conservation Service). Appendix # 1 includes the portion of the USDA-NRCS map showing soil distribution for the property. The property is covered by soil classification type 63; Promo-Puett complex, 10 to 35 percent slopes. USDA-NRCS map unit descriptions are included as part of Appendix # 1.

Two soil samples were collected from the property for analyses. The sample locations are shown on Maps # 3.2, # 3.3. The analyses were completed by the Utah State University Analytical Labs and are included in Appendix # 1.

Two dump fines samples were collected; one from the Green Quarry dump and one from the White Quarry dump. They represent the fine dump material proposed for reclamation. The analyses were completed by the Utah State University Analytical Labs and are included in Appendix # 1.

106.6 - Plan for protecting and redepositing existing soils
Available soil will be salvaged to the extent it is practical. Average thickness of soil material to be salvaged and stockpiled: 6 inches (0.5 ft). This does not include the already

developed area from which soil materials were not salvaged.
Area from which soil material can be salvaged: Maps # 3.2, # 3.3.
Volume of soil to be stockpiled: Maps # 3.2, # 3.3, # 5.1, # 5.2.

Soil on existing roads has been bladed to the down hill berm. The berm is vegetated with native species. Soil on roads to be developed will be bladed to the down hill berm.

Salvageable soil over quarries and areas for waste dumps will be scraped from the surface with a D-8 dozer or excavator bucket and carefully piled up. If it cannot be pushed into a pile because of distance or terrain, it will be picked up with the loader bucket or excavator bucket; whichever is most suitable; loaded into trucks and transported to the topsoil stockpile. Soil includes topsoil, subsoil, decomposed rock, and fine rock.

Prior to development of quarry highwalls, the upper soil piles will be moved to a lower area close to the road. Inactive soil stockpiles will be planted with an approved interim seed mixture for stabilization.

106.7 - Existing vegetative communities to establish revegetation success
Jim Spencer, a graduate student in the Botany Range Department at BYU, completed a vegetation cover of the property. Mr. Spencer has related experience working summers for the US Forest Service doing vegetation studies. His report is included with this NOI as Appendix # 2. The measurements were made after discussing the required methodology with DOGM.

Two distinct types of vegetation are present at Rosebud, a sagebrush/grass community and a juniper community. The sagebrush/grass community was measured on the northwest side of the Green Quarry and the juniper community was measured on the east side of the White Quarry. Information as to transect locations, cover class, and a species list for each community is included as Appendix # 2.

At the sagebrush/grass community measurement site, vegetation cover was measured at 32.7%, litter at 9.0%, rock or fragments at 36.7%, and bare ground at 21.7% of the surface. Vegetation success for this type will be 70% of the 32.7% of vegetation cover, or 22.9% of the surface. At the juniper community measurement site, vegetation cover was measured at 30.0%, litter at 13.7%, rock or fragments at 35.3%, and bare ground at 21.0% of the surface. Vegetation success for this type will be 70% of the 30.0% vegetation cover, or 21.0% of the surface. On the average, vegetation success will be achieved at 22% vegetation cover.

106.8 - Depth to groundwater, overburden material & geologic setting
No wells are located on or within the vicinity of the operations. Therefore, the exact depth to groundwater is not known. There is an ephemeral drainage located to the southwest side

of the quarries and road.

The seasonal camp is located at the Green Quarry. This camp is supplied with drinking water from a well located at the Oakley Yard of Star Stone Quarries. Sanitation will be handled with use of a serviced portable toilet.

Overburden material is composed of a combination of non-salable rock, decomposed rock, subsoil, and very limited topsoil. By volume, the greatest portion is non-salable rock. The non-salable rock usually breaks into pieces that are too small to be a commercially salable product.

The operation is located in the Grouse Creek Mountains at altitudes from 5,400 to 5,600 feet. The climate is semi-arid with vegetation consisting mostly of grasses, sagebrush, forbs, and junipers.

The quarries are located in Cambrian (?) Quartzite of Clarks Basin. The metamorphosed sediments are characterized by layers or partings of micas developed between thicker beds of fine quartzite and lack significant folding. Bedding is well preserved and the formations typically dip at shallow angles. The lack of folding and significant faulting allows the rock to be quarried and separated into thin flat pieces for sale as decorative stone. Varying sizes and colors of the micas and the addition of very small quantities of iron oxides in some places makes for a variety of available stone types and colors.

106.9 - Location and size of ore and waste stockpiles, tailings and treatment ponds, and discharges

Location and size of existing waste/overburden dumps and stockpiles: Maps # 2.2 # 2.3.
Location and size of proposed waste/overburden dumps and stockpiles: Maps # 3.2, # 3.3.
Existing stockpiles are located on already developed areas within existing quarries.
Proposed stockpiles will be located on existing developed areas in quarries or in quarries to be developed. No separate areas will be needed for stockpiles. Palletized stone will be stored on the waste dump until ready for shipment.
No tailings facilities, water storage, or treatment ponds are to be developed as part of this NOI.

Overburden/waste material will be dozed with a D-8 dozer to the closest available waste dump, usually on the downhill side of the quarry from which the overburden is excavated. When practical, an excavator will be used to place overburden on the closest available waste dump. The total volume of overburden/waste is estimated at about 1000 cubic yards per year from both quarries. As a result, individual waste dumps will grow at a slow annual rate. When very fine overburden is encountered which is determined to be suitable as a growing medium for vegetation, it will be saved in the topsoil stockpile for later reclamation.

Waste dumps will be constructed in such a manner that they will not act as impoundments for water in the ephemeral drainage on the southwest side of the quarries.
No tailings ponds or water storage ponds are to be constructed; therefore hydraulic calculations are not required.
There are no proposed effluent discharge points since there will be no tailings ponds or water storage ponds.

IV. R647-4-107 - Operation Practices

During operations, the operator shall conform to the following practices unless the Division grants a variance in writing.

107.1 Public Safety & Welfare

107.1.12 Disposal of trash, scrap, debris

Trash, scrap metal and wood, and extraneous debris will be burned in a cleared area on site. Non-burnable trash will be hauled to a licensed disposal site off the property.

107.1.14 Posting of appropriate warning signs

Signs warning the public of the quarrying activity will be posted at the east and north road access to the property. These are the only places where public access to the operations is readily available. The following language is suggested: "Caution Mine Hazards," "Stay on Existing Road".

107.1.15 Berms, fences or barriers above highwalls

Highwalls will be constructed so that the average slope of the highwall and adjacent catch benches will be 45 degrees or less. Therefore, berms, fences, or other barriers are not required.
The highwalls are on lands to which access for the general public can be restricted. No communities or housing developments are located in the vicinity of the operations.
No housing developments are planned in the vicinity of the operations.

107.4 Deleterious material safely stored or removed

Potentially deleterious materials that are or may be stored on site include a 500 gallon fuel tank at the Green Quarry, one barrel of hydraulic oil, one barrel of motor oil, one case of tube grease, and one case of starting fluid. These materials shall be handled and stored in accorded with the manufacturers instructions. Care will be taken to minimize spills and to not use the materials in such a way as to create a fire hazard.

A containment structure has been constructed to hold at least 110% of the capacity of the 500 gallon fuel tank. The containment structure is constructed of overburden and lined with plastic sheeting. It will also be used to contain barrels of motor oil and

hydraulic oil.

107.5 Suitable soils removed & stored
Recoverable soils will be stripped and stockpiled on the topsoil stockpiles for later reclamation. Soils have already been discussed in rules R647-4-106.5 and R647-4-106.6. See Maps # 3.2, # 3.3.

107.6 Concurrent reclamation
The small size of the operation will make any concurrent reclamation difficult. No concurrent reclamation is planned during this 5-year NOI.

V. Rule R647-4-108 - Hole Plugging Requirements

There are no drill or test holes in connection with this operation. No drilling is being done in connection with the operation. Any future drilling will be limited to blast hole drilling. These holes will be entirely consumed during quarrying. No blast hole drilling is currently being done. There are no abandoned drill or test holes in existence on the property. Drill hole plugging will not be required.

VI. Rule R647-4-109 - Impact Statement

1. Potential surface impacts: The area in which this operation is located is a remote mountain slope in an area where there are no people living for 2 miles. The closest organized community is 26 miles away. The mining operations will affect approximately 9.5 acres on a thinly vegetated mountain slope. Surface impact on the area is minimal.
2. Subsurface impact: This is a shallow surface operation. There is no subsurface impact.
3. Groundwater systems: This is a shallow surface operation on the slope of a mountain with no ground water in the areas of operation. There are no plans to drill wells nor is water used in the operations. There will be no impact on the groundwater system.
4. Endangered species or their critical habitats: There are no endangered species in the area. There will be no impact on Endangered species or their critical habitat. See section for rule R647-4-109.2.
5. Existing soil resources for reclamation: The operation is located on a rocky slope with some salvageable topsoil. The upper slope of the area is covered by loose rock with minimal soil cover. The limited soil resources consist of topsoil, subsoil, decomposed rock, and rock chips with topsoil being the least of the resources. Some of the waste material that comes from the operation has a sufficient percentage of fine material to make it suitable to use as a soil cover during reclamation. It will be used along with recovered soil resources to sustain vegetation during reclamation.
6. Slope stability: The areas that have slope variation from the natural slope of the hill are the quarry dumps and quarry walls. The dumps are active and therefore exist at their

natural slide rate. At the time of final reclamation they will be regraded to a 3h:1v slope.

7. Erosion control: No water is used in this operation. The erosion potential is small. During reclamation, slopes will be regraded and revegetated to minimize erosion.
8. Air quality: No crushing or screening is entailed in this operation. Impact of digging stone on air quality is negligible.
9. Public health and safety: No one lives nearby this operation. Posting of warning signs is addressed in rule R647-4-107.1.14.

109.1 - Surface and groundwater systems

There is no ground water near this operation. This operation will not impact any groundwater or surface water. There are no wells at the operation or are there any plans to drill a well.

109.2 Impacts to threatened & endangered wildlife/habitat

1. This is a seasonal operation usually limited to approximately two to three months during the period from December to May. This quarry is worked during the colder months when access is not available to quarries at higher elevations. There are no full time residents. There will not be any impact to wildlife for about nine months of the year.
2. This is a daylight operation with operations sometimes continuing into the early nighttime hours. There are no late nighttime operations. There is no impact to wildlife during the later nighttime hours.
3. There are several deer that range near this operation. The operation seems to have a negligible effect on them. The deer hide in the day and graze wherever they please at night.

109.3 - Existing soil and plant resources

There is only a limited amount of soil where the operations are. There is some small vegetation that will be disturbed during mining operations. Vegetation will be restored during concurrent reclamation or after the end of mining, at final reclamation, according to regulations.

109.4 - Slope stability, erosion control, air quality, public health & safety

Described above.

109.5 - Actions proposed to mitigate any of the above impacts

Described above.

VII. Rule R647-4-110-Reclamation Plan

110.1 - Current land use and post mining land use
Current or premining land uses: Grazing and wildlife habitat.

List future post-mine land uses: Grazing and wildlife habitat.

110.2 - Reclamation of roads, highwalls, slopes, leach pads, dumps, etc.
Describe how the following features will be reclaimed:
Reclamation for impoundments, pits, ponds shall include:

1. The final elevations and final dispositions of and around the quarries will be sloped to approximate the natural slope of the hill. Fine material will be spread over the area. They will be seeded and vegetation established.
   Waste dumps will be sloped to 3h:1v.
   Slopes will be graded to maximize moisture retention and minimize erosion.
   There are no impoundments or ponds. No reclamation will be required for these features.
2. The final size of the quarries will be approximately 8.8 acres. The size of the development including the road to remain after reclamation is approximately 9.5 acres.
3. The quarries will be sloped so they will be free draining and the natural drainage patterns restored.

Reclamation plans for drainages shall include:

1. The establishment of a natural drainage pattern which fits in with the upstream and downstream cross-section of existing drainage in the vicinity of the disturbance.
   No drainages are affected. The quarries and waste dumps shall be constructed so that the ephemeral drainage is not blocked.
2. The reestablishment of a stable channel in the reclaimed reach of channel, using the necessary armoring to prevent excessive erosion and downstream sedimentation.
   No channels are affected.
3. Cross-sections and profiles of reestablished channels:
   No channels are affected.

Reclamation plans for drill holes and leach pads shall include:

1. There will be no drill holes or leach pads. No reclamation is required.
2. There will be no heap leach operations. No reclamation is required.

Backfilling and Grading
A 7-yard front end loader will be used to scoop up fine material from the dump. This material will be spread over the floor of the rock quarries to prepare them for the soil cover.

An excavator may be used to reclaim areas along and near highwalls, and steep dump slopes. The excavator will be used to bring material from down slope up to and above the excavator level. Slopes on the road will be regraded to approximate the natural slope.

A D-8 dozer will be used to re-contour the dumps to a grade modestly steeper than the existing slope of the hill. After contouring, the salvaged soil mixture will be placed on top and spread out. The maximum regraded dump slope will not be greater than 3h:1v.

The dumps will be contoured to help stabilize them and help them to retain moisture. See Maps # 5.1, # 5.2.

110.3 - Surface Facilities to be left
Identified roads that existed prior to the quarrying operation will remain. See Map # 5.1.

110.4 - Treatment, location and disposition of deleterious materials

1. Describe the nature and extent of any hazardous materials on-site:
   The materials include one 500 gallon fuel tank, one barrel of motor oil, one barrel of hydraulic oil, one case of grease, one case of starting fluid.
2. Describe how hazardous materials will be neutralized, removed from the site, or buried on site: The fuel, oil, grease, and starting fluid are used to operate the machinery. As a result, most of the hazardous materials will be consumed. Used motor oil is collected in barrels then taken to the yard in Idaho. It is added to the used oil collected from the company's other area operations before being taken to a recycling center for disposal.
3. Describe how buildings, foundations, trash, and other waste materials will be disposed of: No permanent buildings or foundations are located on site. Burnable trash is burned in already cleared areas on site. Other trash and waste materials will be hauled to a licensed disposal site. Also see rule R647-4-107-1.12.

110.5 - Revegetation planting program and topsoil redistribution

1. Soil Material Replacement: Fines from waste dumps will be spread over the solid rock on the quarries. Salvaged soil material from the topsoil stockpile will be placed on top of this layer. The mixture will be approximately 18" thick.
   The remaining material in the dump will be spread with a D-8 dozer. Salvaged soil material from the topsoil stockpile will be worked in and spread out. This should provide a surface with sufficient fines to support vegetation.
2. The topsoil will be amended with an application of composted manure at the rate of five tons per acre.
3. Seed Bed Preparation: The seed bed will be scarified with the loader teeth, if needed, or already be sufficiently loose from spreading with the dozer.
4. Seed Mixture: We propose to use a seed mixture recommended by the BLM and

DOGM as being suitable for this area.

5. The seed will be broadcast between October 15 and November 30, just after scarifying with the loader teeth. This should prove to be an effective method to begin germination of seeds.
6. Fertilization: fertilizer use will be minimized to discourage the growth of weeds, especially on the reclaimed road surface. Soil amendments will be added as required.
7. Other Revegetation Procedures: None.

We plan to seed the affected areas with the seed mixture recommended by DOGM. We will rely on DOGM to coordinate with the BLM and other agencies that may have control over seeding to insure the seed mixture to be used is acceptable to all agencies. The seed will be applied at the recommended rate.

Common Name	Species Name	*Rate lbs/ac (PLS)
'Hycrest' crested wheatgrass	Agropyron cristatum 'Hycrest'	0.75
Intermediate wheatgrass	Agropyron intermedium	1.0
Bluebunch wheatgrass	Agropyron spicatum	2.0
Orchard grass	Dactylis glomerata	0.5
Sandberg bluegrass	Poa sandbergii	0.5
Basin wildrye	Elymus cinereus	1.5
Ladak alfalfa	Medicago sativa	1.5
Yellow sweetclover	Melilotus officinalis	0.5
Palmer penstemon	Penstemon palmeri	0.5
Small burnet	Sanguisorba minor	2.0
Wyoming big sagebrush	Artemisia tridentata wyomingensis	0.1
4-Wing Saltbrush	Atriplex canescens	1.5
Rubber rabbitbrush	Chrysothamnus nauseosus	0.25
Forage kochia	Kochia prostrata	0.5
Bitterbrush	Purshia tridentata	1.0
		Total: 14.1 lbs/acre

* This is the recommended broadcast seeding rate (from DOGM).
If the species are to be drill seeded, decrease the rate of grass species by 1/3 (from DOGM).

The BLM Notice of Noncompliance dated May 25, 2000, did not include small burnet and Wyoming big sagebrush in their seed mixture.

VII. (Continued) R647-4-111 - Reclamation Practices

1.12 - Disposal of trash & debris

See comments under R647-4-107.1.12 and R647-4-110.4.3.

111.4 - Removal/storage of deleterious material

See comments under R647-4-107.4 and R647-4-110.4.2.

111.6 - All slopes regraded to stable configuration
See comments under R647-109.6, R647-110.2.1, and R647-110.5.

111.7 - Highwalls stabilized at 45 degrees or less
See comments under R647-107.1.15 and R647-110.2.1.

VIII. Rule R647-4-112 - Variance

No variances are requested under this rule.

IX. Rule R647-4-113 - Surety

Reclamation surety estimates are attached as Appendix # 3.

We propose to reduce the amount of up front surety reclamation bonding in the manner stated in a letter to DOGM dated February 29, 2000; copy in Appendix # 3. The amount we propose as a reclamation surety estimate is the subtotal of $24,785, which is the amount before adding in the escalation for 5 years at 3.27% per year.

X. Other - Information needed by Bureau of Land Management

The Mine Safety and Health Administration permit number is 42-01950.

Soils over the unauthorized trenches at the (Snow) White quarry not salvaged for reclamation have been replaced by at least 6 inches of imported topsoil.

The camp will be set up to comply with BLM's Use and Occupancy regulations in 43 CFR 3715.3-2.

XI. Signature Requirement

I hereby certify that the foregoing is true and correct.

Signature of Operator/Applicant:_____

Name:	Lon Thomas
Title/Position	President
Date:	June 14, 2000

File Name: Rosebud NOI2.doc
Modified: June 14, 2000

XI. Signature Requirement

I hereby certify that the foregoing is true and correct.

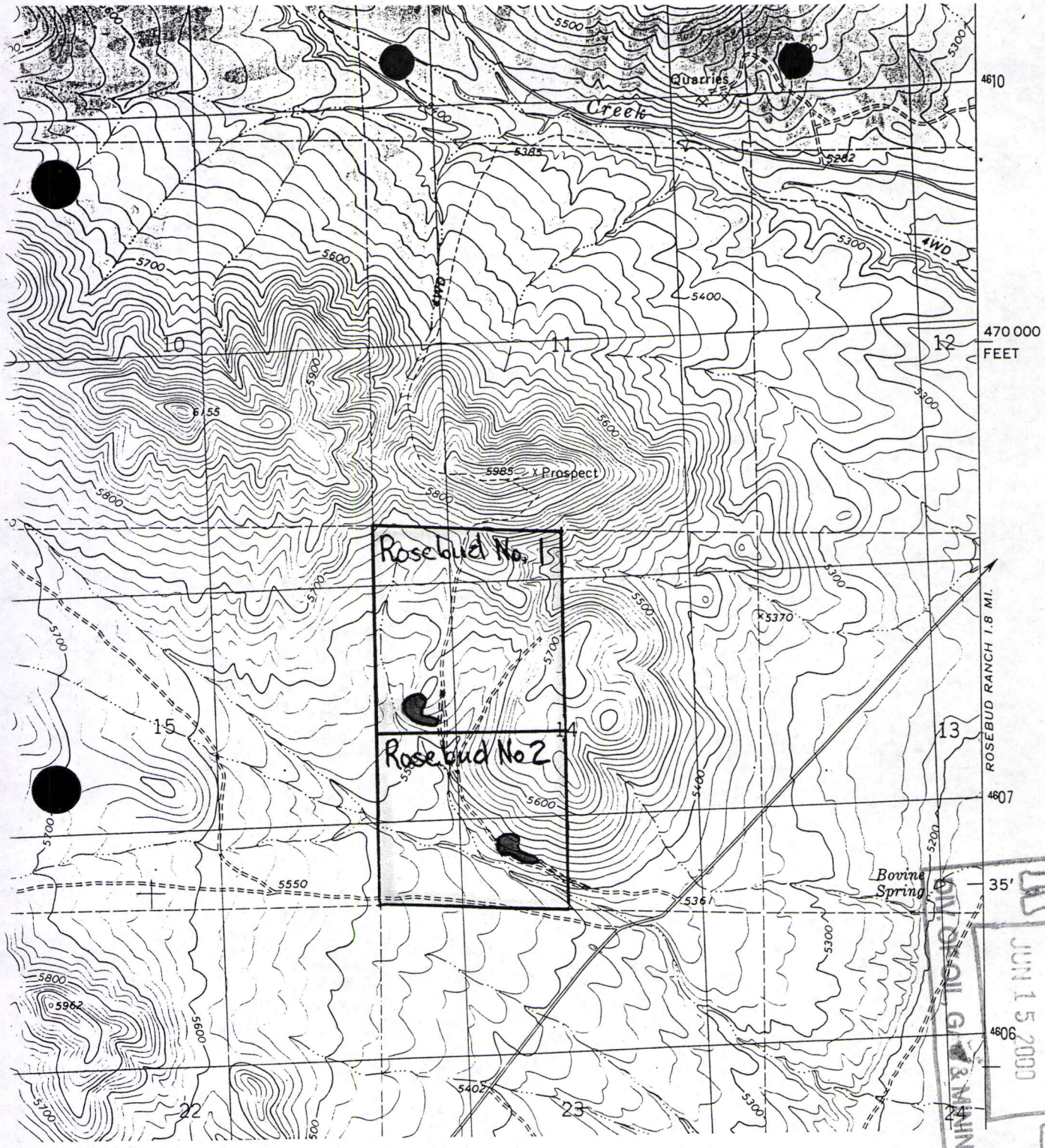
Signature of Operator/Applicant: _____

Name: Lon Thomas

Title/Position President

Date: June 14, 2000

File Name: Rosebud NOI2.doc
Modified: June 14, 2000



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DEPT OF INTERIOR
BUR. OF LAND MGMT

ROSEBUD QUARRY
STAR STONE QUARRIES, INC.

Map # 1.1

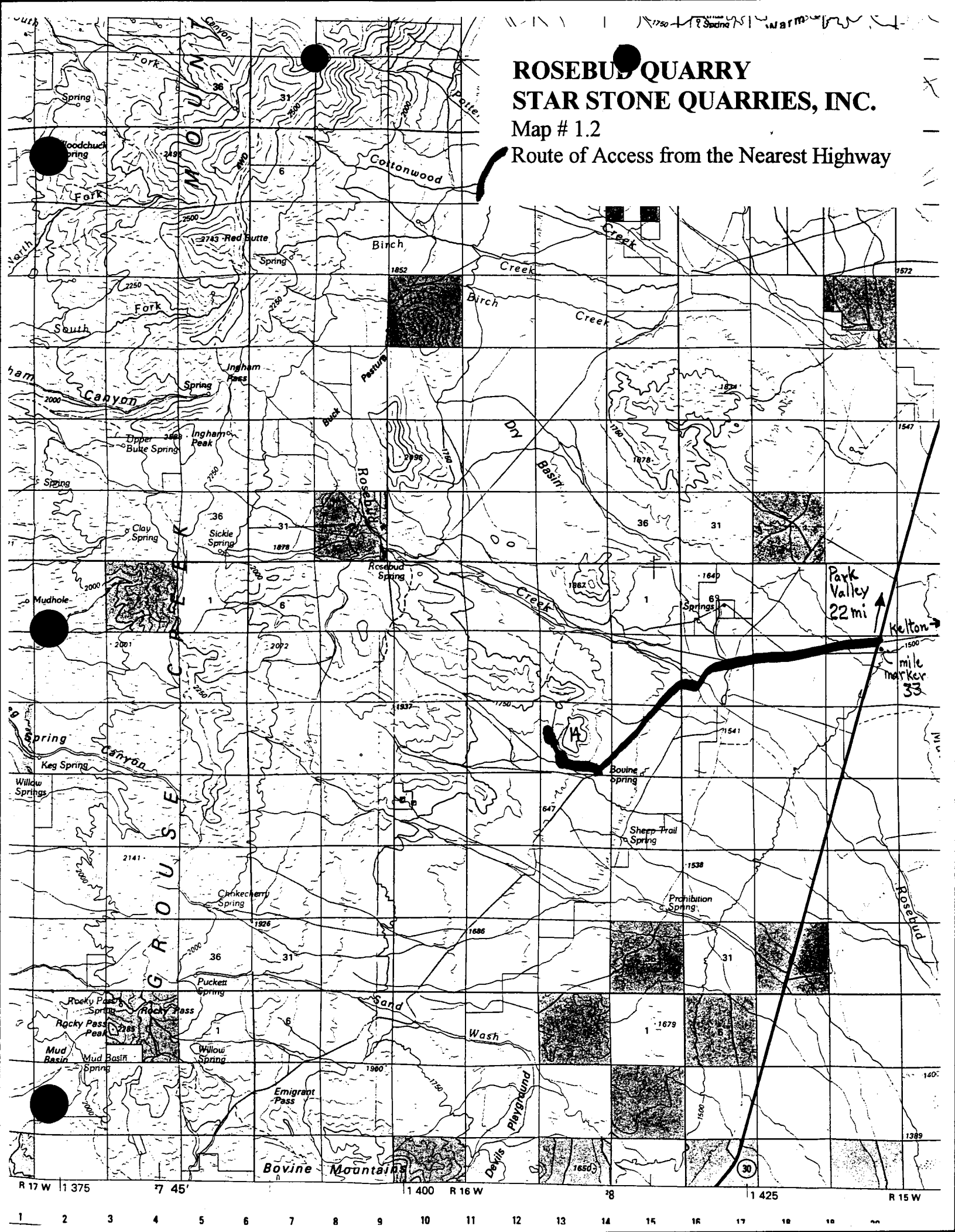
Property Boundaries of Surface Ownership

Streams Affected by Operation

ROSEBUD QUARRY
STAR STONE QUARRIES, INC.

Map # 1.2

Route of Access from the Nearest Highway

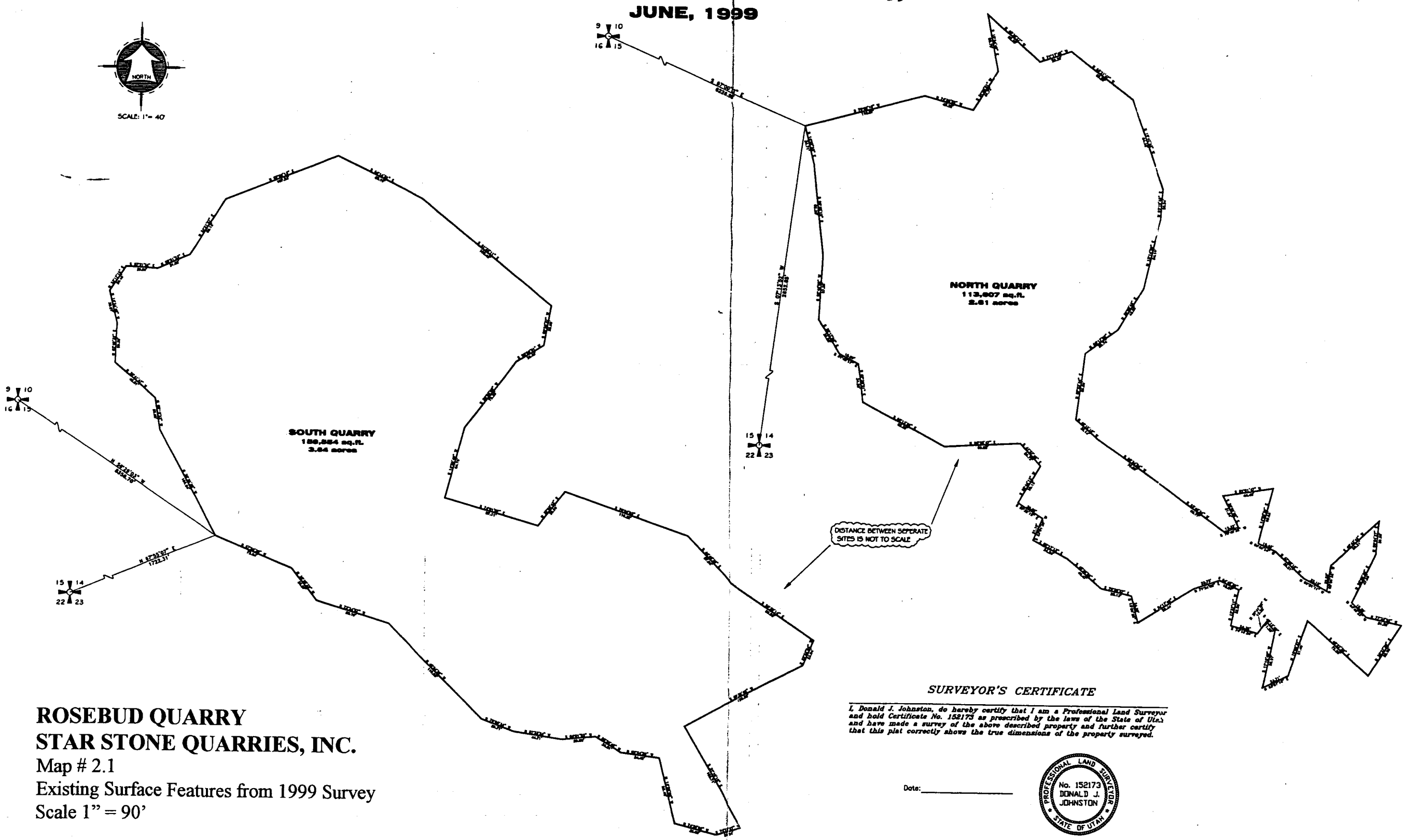


LON THOMAS - STONE QUARRY SITES

A PART OF THE WEST HALF OF SEC. 14, T 10 N, R 16 W, S.L.B.&M.

ROSEBUD, UTAH (Box Elder County)

JUNE, 1999



ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 2.1
Existing Surface Features from 1999 Survey
Scale 1" = 90'

SURVEYOR'S CERTIFICATE

I, Donald J. Johnston, do hereby certify that I am a Professional Land Surveyor and hold Certificate No. 152173 as prescribed by the laws of the State of Utah and have made a survey of the above described property and further certify that this plat correctly shows the true dimensions of the property surveyed.

Date: _____

PROFESSIONAL LAND SURVEYOR
No. 152173
DONALD J. JOHNSTON
STATE OF UTAH

DESIGN: ____ DATE: ____
DRAWN: D.W.J. DATE: 06-30-99
CHECKED: D.J.J. DATE: 06-30-99
REVISION: ____ DATE: ____

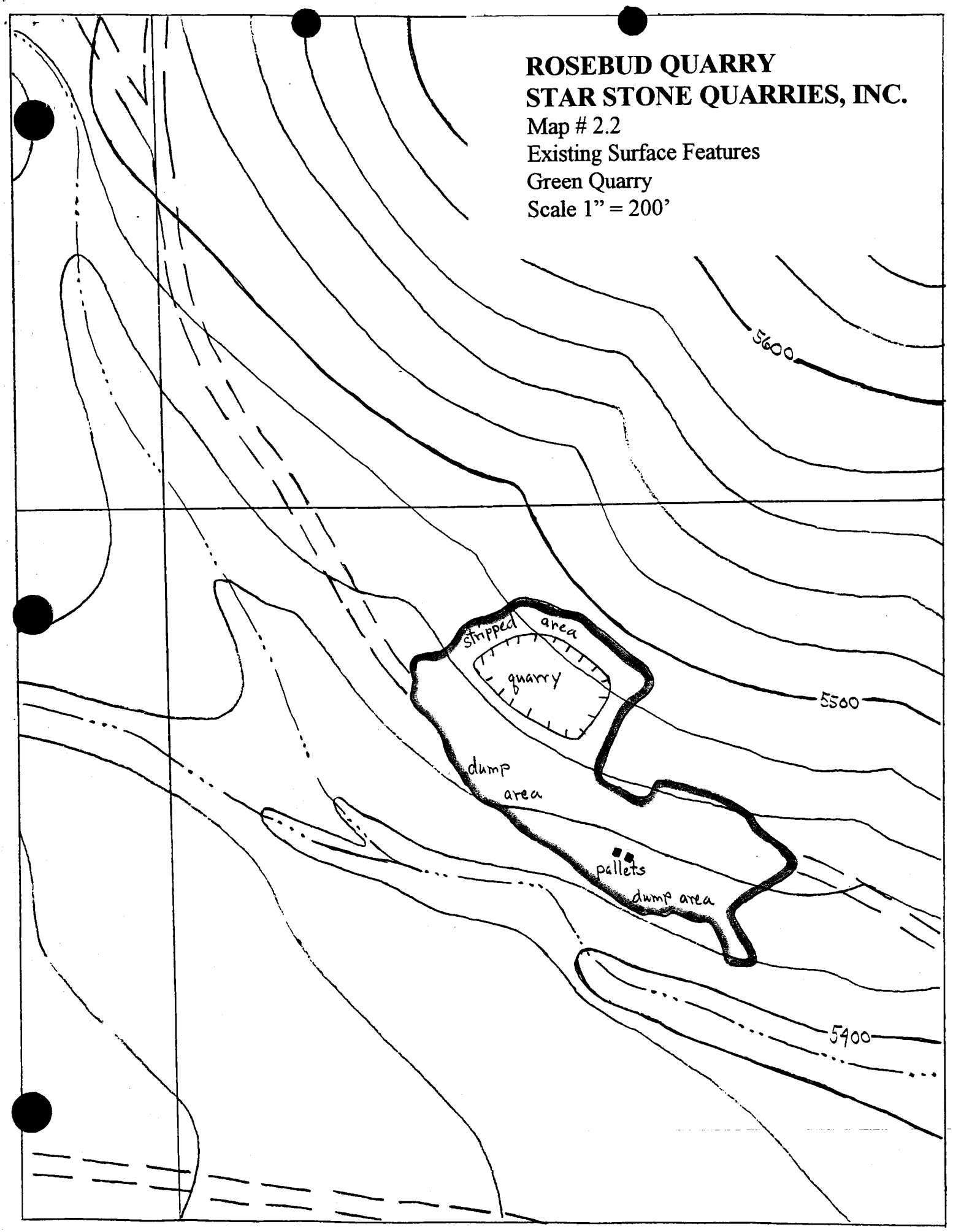
CLIENT
LON THOMAS
4040 South 300 West
Salt Lake City, UT 84107

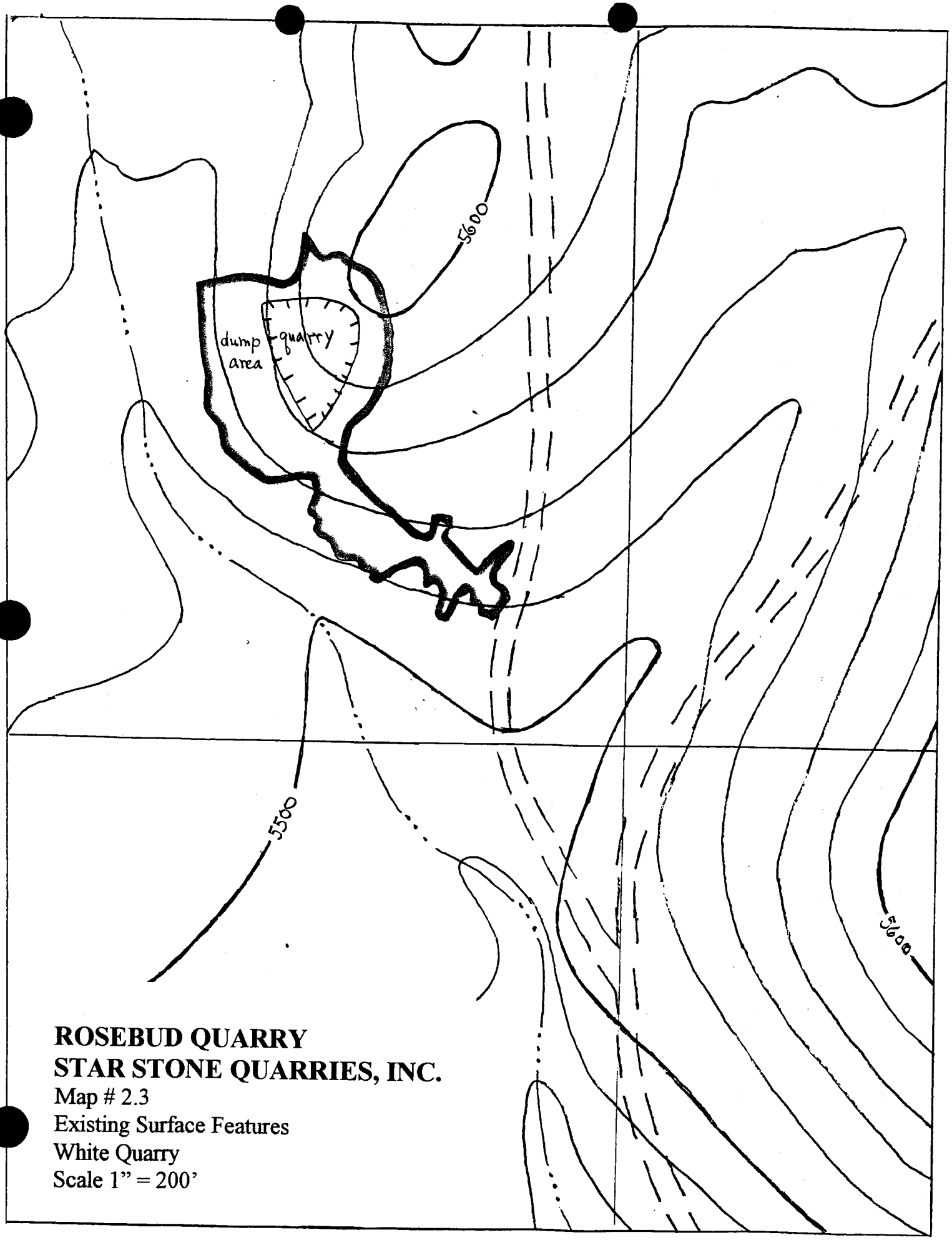
CERTIFICATE OF SURVEY
BOUNDARY SURVEY OF TWO STONE QUARRY SITES
SITUATE IN THE WEST HALF OF SECTION 14,
T 10 N, R 16 W, F.L.B.&M., ROSEBUD, UTAH (BOX ELDER COUNTY)

JOHNSTON ENGINEERING
PROFESSIONAL CORPORATION
Civil Engineering Land Surveying
101 EAST MAIN
TREMONTON, UT
84337
(435) 257-1168
FAX: 257-1168

SHEET 1 OF 1 SHEETS

JOB NUMBER
99S201


ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 2.2
Existing Surface Features
Green Quarry
Scale 1" = 200'
5600
5500
5400
stripped area
quarry
dump area
pallets
dump area



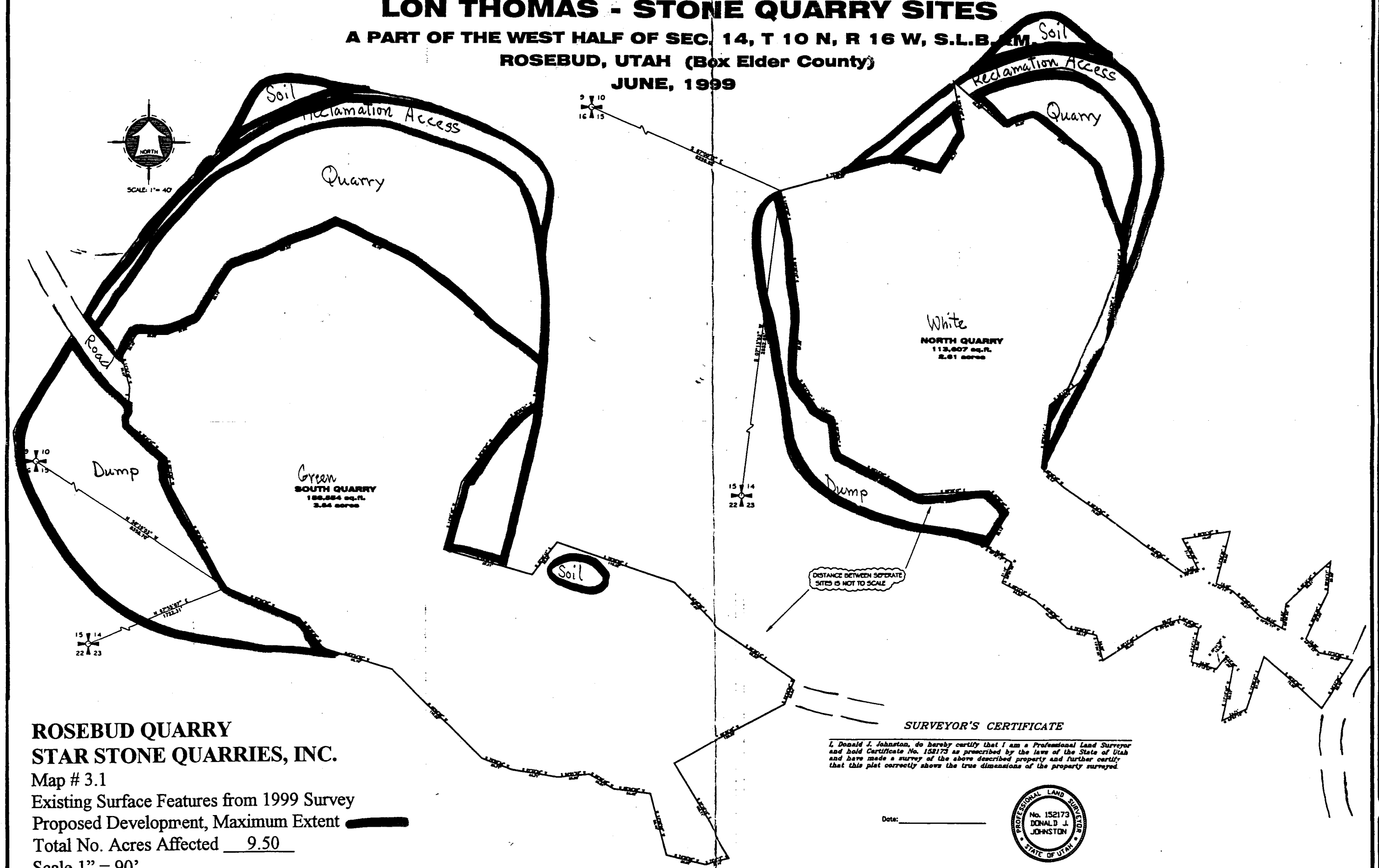
ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 2.3
Existing Surface Features
White Quarry
Scale 1" = 200'

LON THOMAS - STONE QUARRY SITES

A PART OF THE WEST HALF OF SEC. 14, T 10 N, R 16 W, S.L.B.&M.

ROSEBUD, UTAH (Box Elder County)

JUNE, 1999



ROSEBUD QUARRY
STAR STONE QUARRIES, INC.

Map # 3.1

Existing Surface Features from 1999 Survey

Proposed Development, Maximum Extent

Total No. Acres Affected 9.50

Scale 1" = 90'

SURVEYOR'S CERTIFICATE

I, Donald J. Johnston, do hereby certify that I am a Professional Land Surveyor and hold Certificate No. 152173 as prescribed by the laws of the State of Utah and have made a survey of the above described property and further certify that this plat correctly shows the true dimensions of the property surveyed.

Date: _____

PROFESSIONAL LAND SURVEYOR No. 152173 DONALD J. JOHNSTON STATE OF UTAH

DESIGN: ____ DATE: ____
DRAWN: B.W.J. DATE: 06-30-99
CHECKED: D.J.J. DATE: 06-30-99
REVISION: ____ DATE: ____

CLIENT

LON THOMAS
4040 South 300 West
Salt Lake City, UT 84107

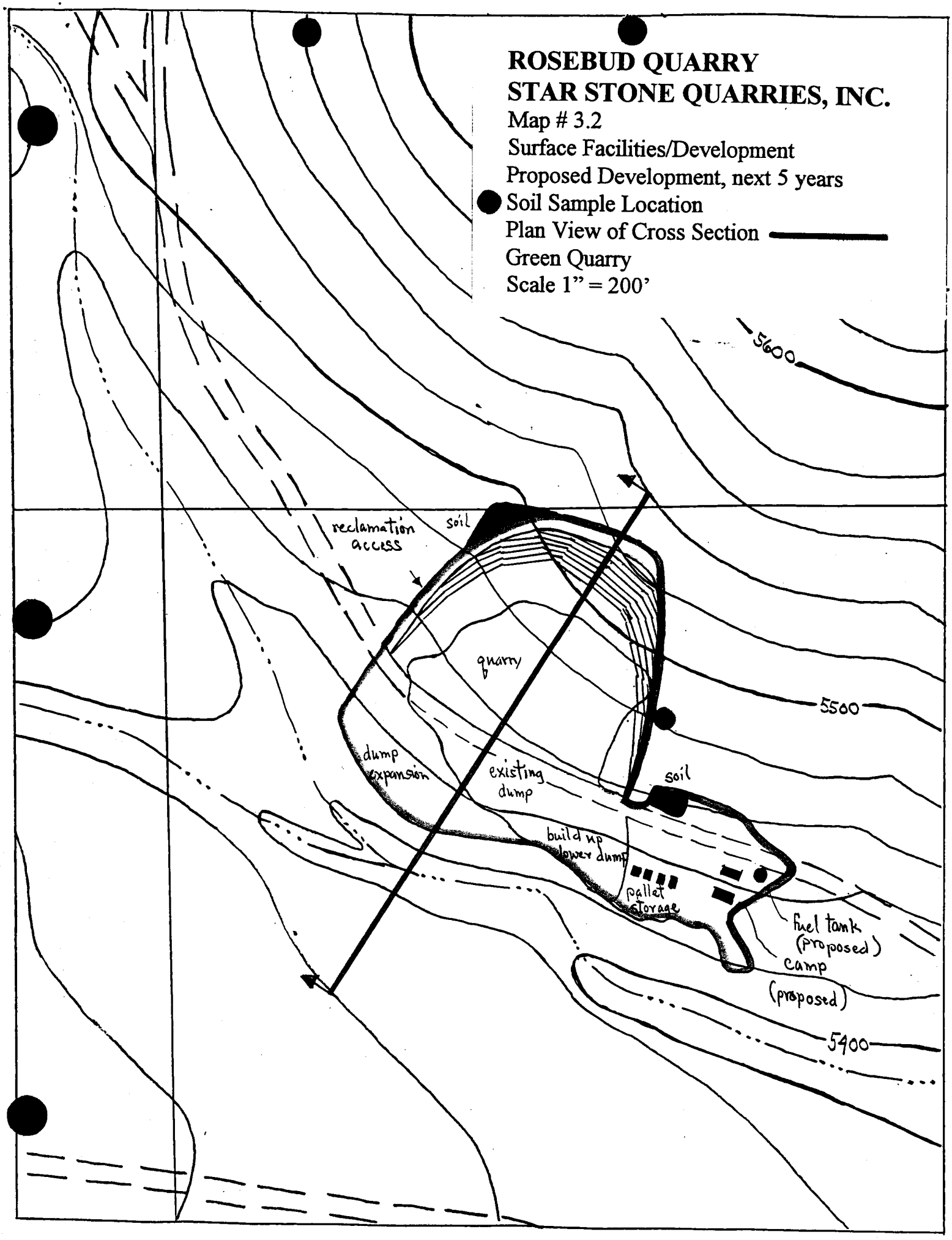
CERTIFICATE OF SURVEY

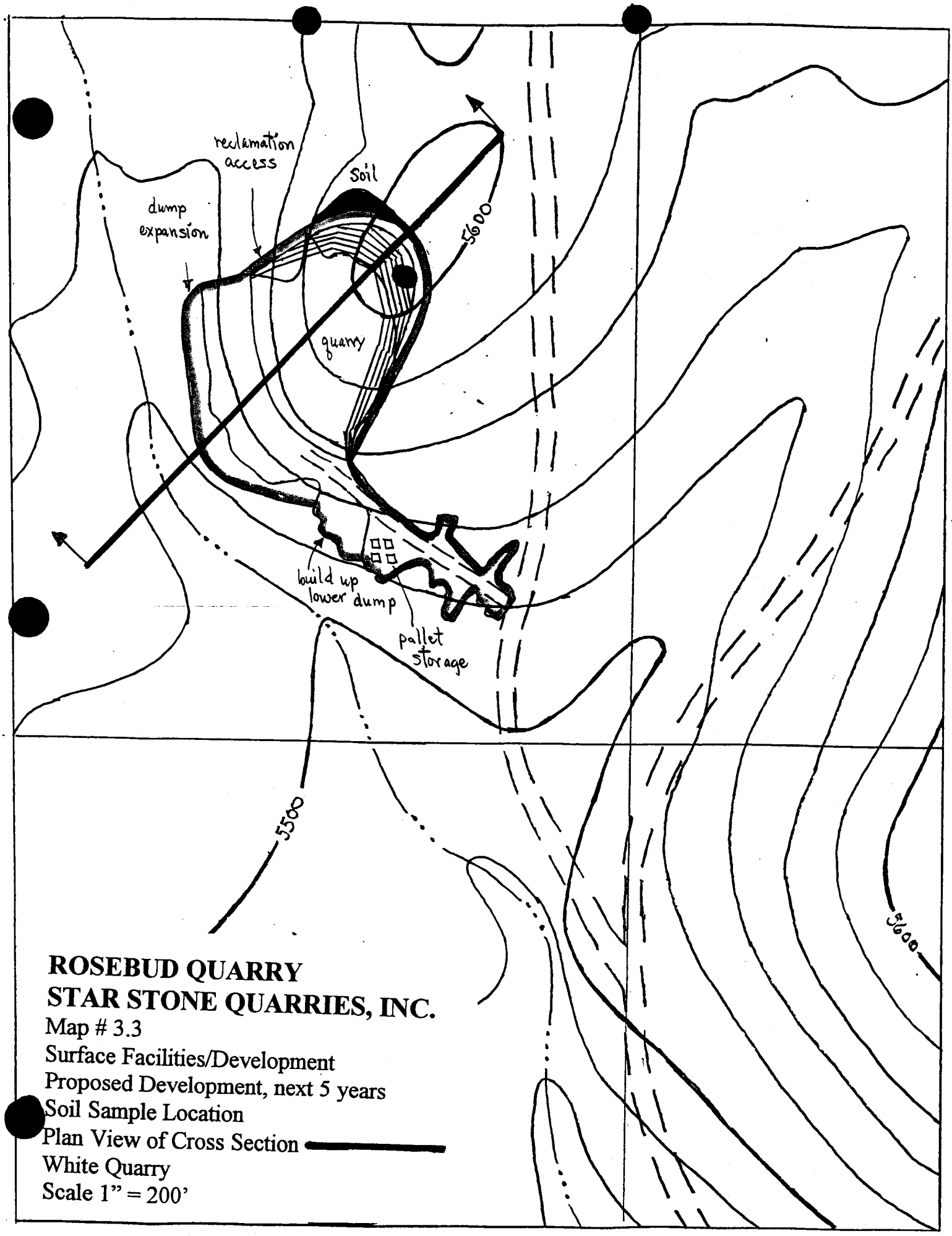
BOUNDARY SURVEY OF TWO STONE QUARRY SITES
SITUATE IN THE WEST HALF OF SECTION 14,
T 10 N, R 16 W, S.L.B.&M., ROSEBUD, UTAH (BOX ELDER COUNTY)

JOHNSTON ENGINEERING
PROFESSIONAL CORPORATION
101 EAST MAIN
TREMONTON, UT
84337
(435) 257-1186
FAX: 257-1188

SHEET 1 OF 1 SHEETS

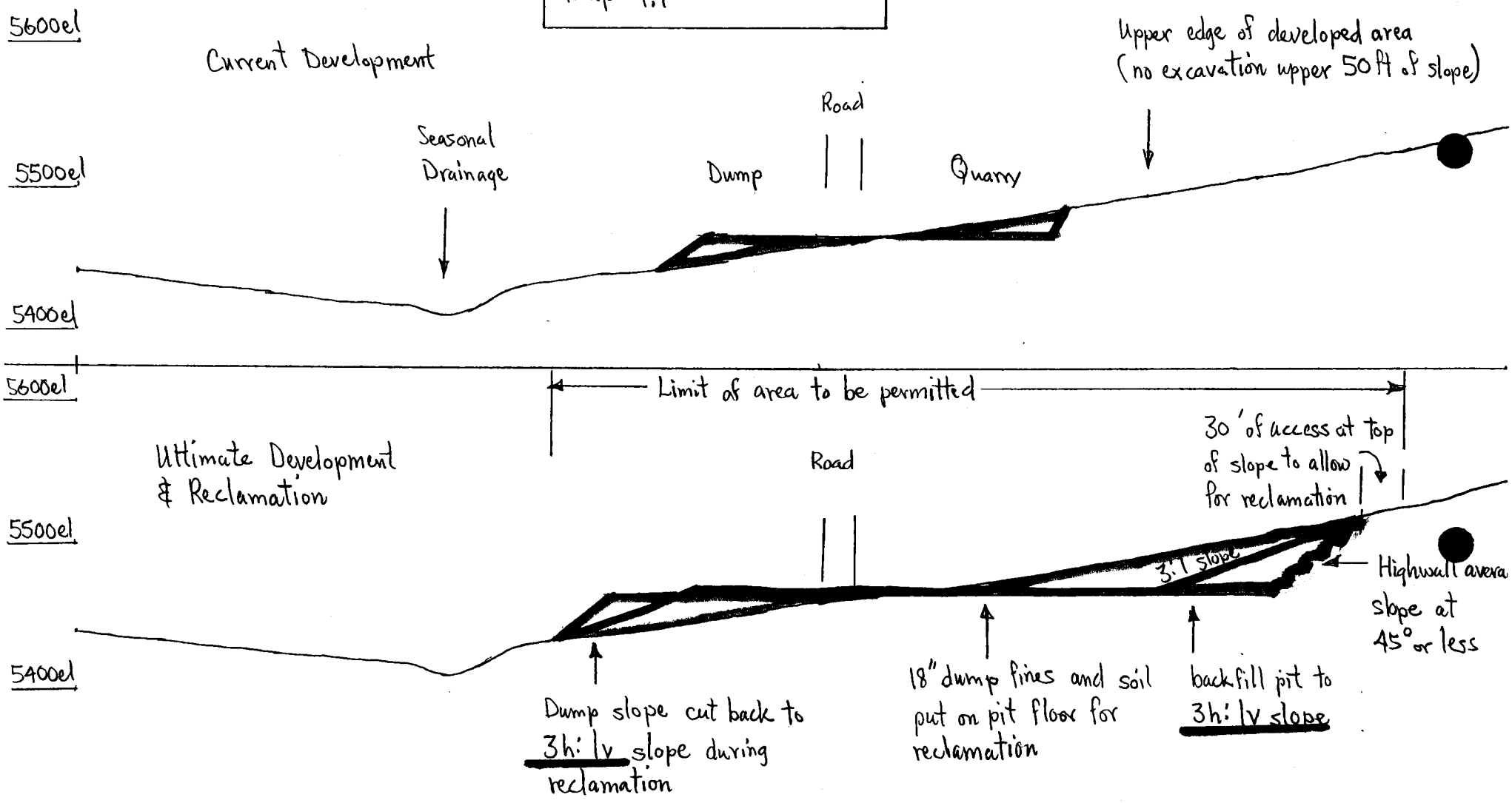
JOB NUMBER
995201


ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 3.2
Surface Facilities/Development
Proposed Development, next 5 years
Soil Sample Location
Plan View of Cross Section
Green Quarry
Scale 1" = 200'
5600
5500
5400
reclamation access
soil
quarry
dump expansion
existing dump
soil
build up lower dump
pallet storage
fuel tank (proposed)
camp (proposed)



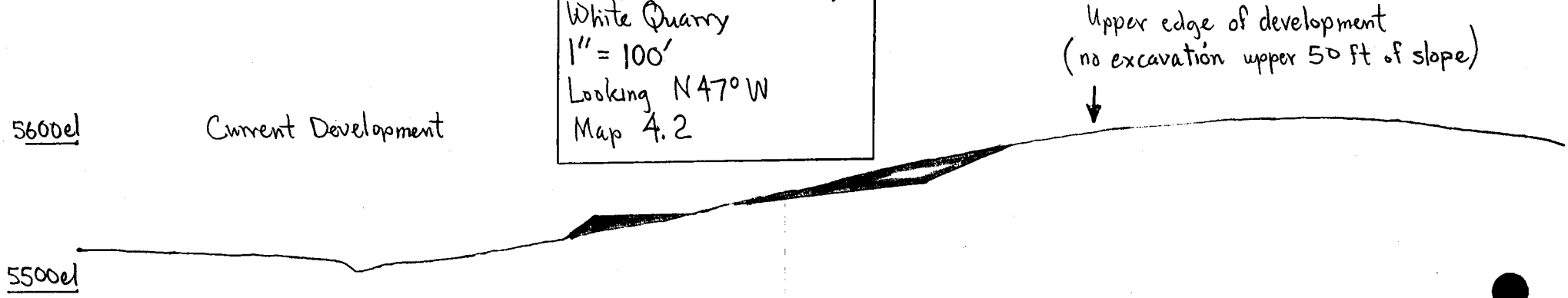
ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 3.3
Surface Facilities/Development
Proposed Development, next 5 years
Soil Sample Location
Plan View of Cross Section
White Quarry
Scale 1" = 200'

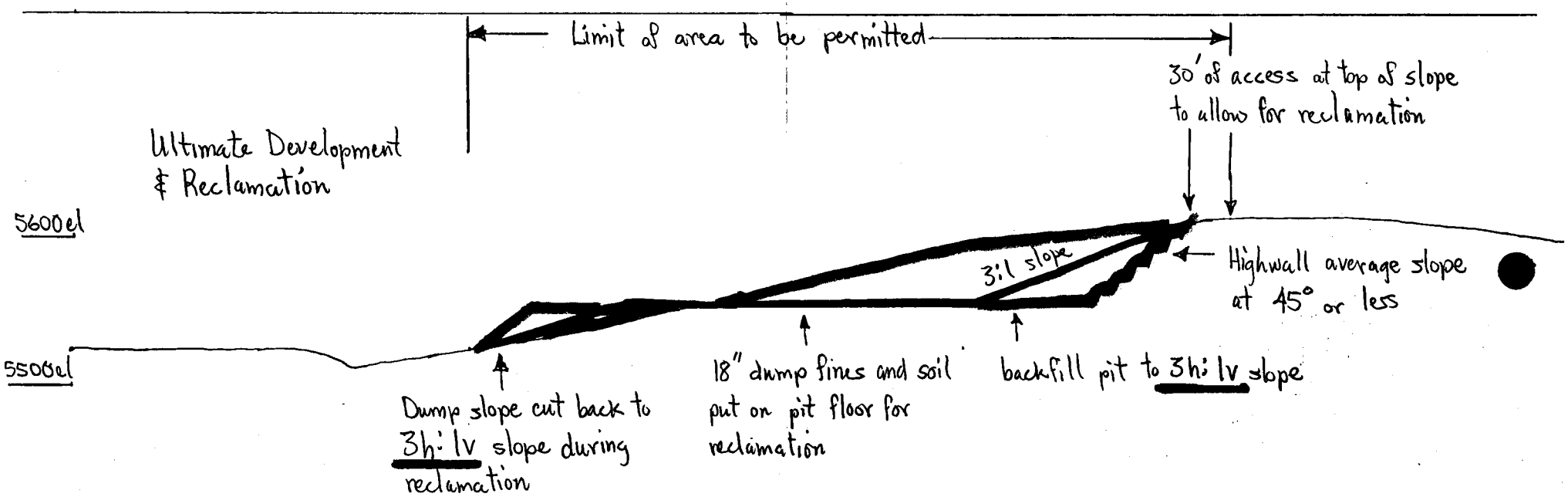
Star Stone Quarries, Inc.
Rosebud Mine (Quarry)
Green Quarry
1" = 100'
Looking N 57°W
Map 4.1



June, 2000 NOI

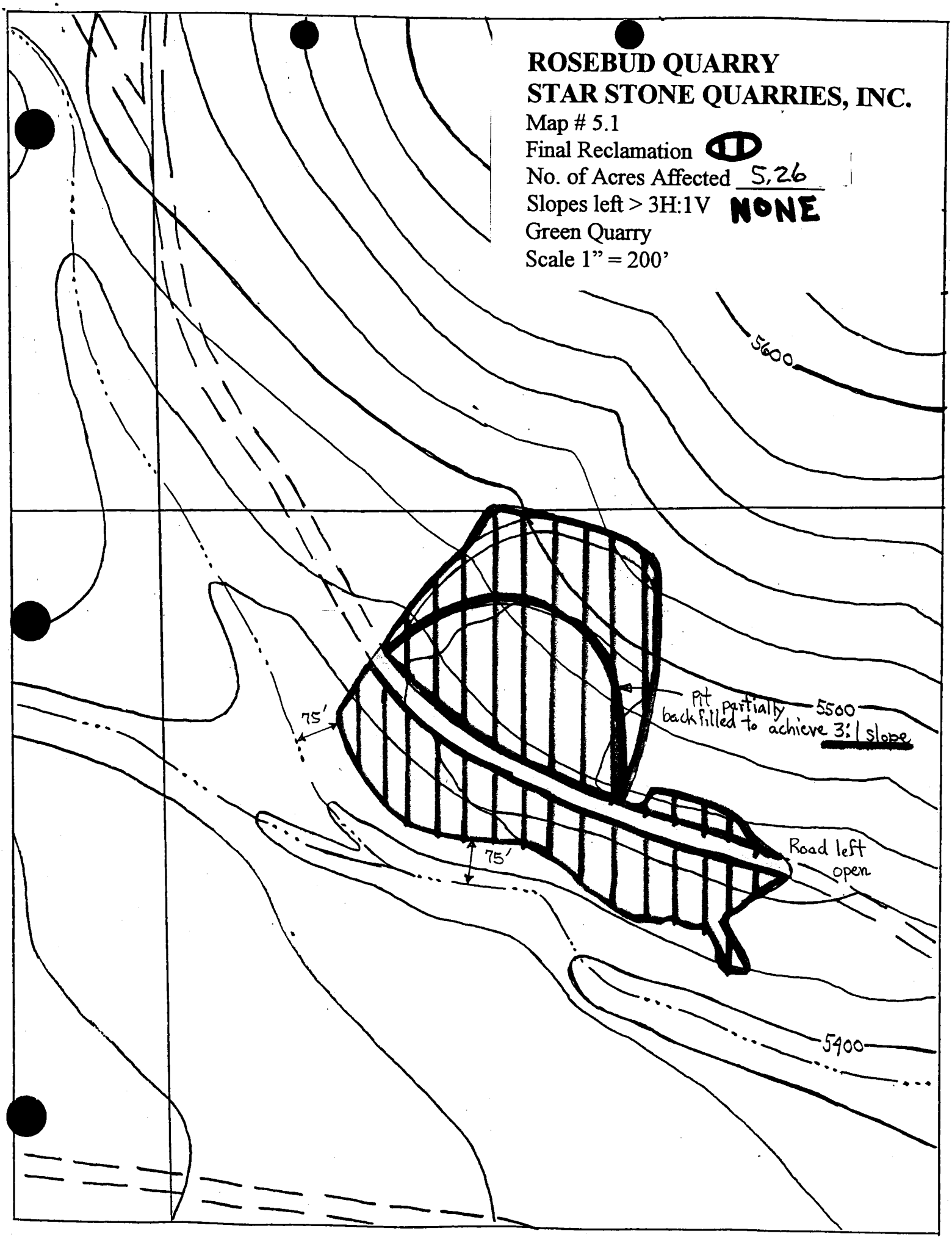
Star Stone Quarry, Inc.
Rosebud Mine (Quarry)
White Quarry
1" = 100'
Looking N 47° W
Map 4.2

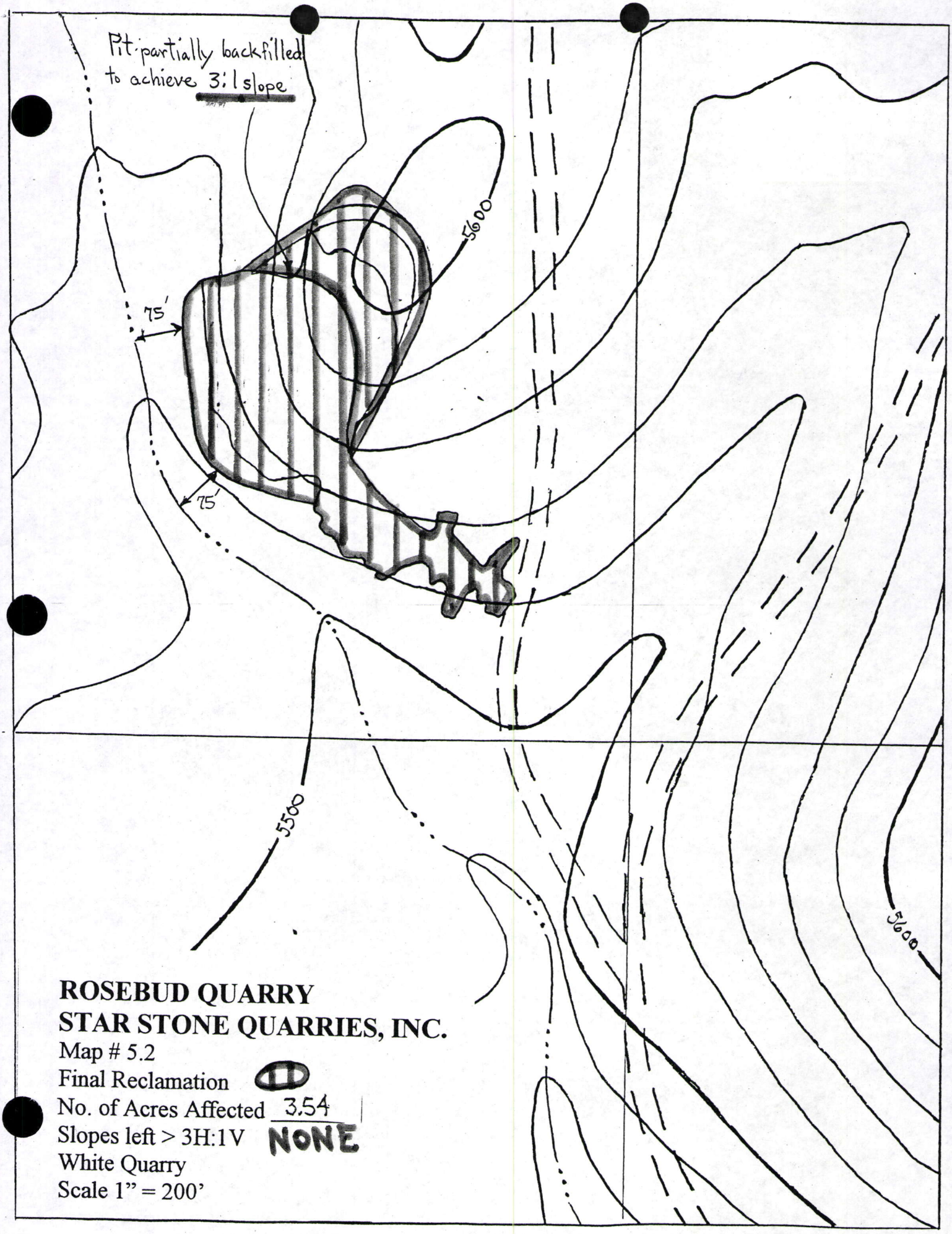




June, 2000 NOI

ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 5.1
Final Reclamation II
No. of Acres Affected 5.26
Slopes left > 3H:1V NONE
Green Quarry
Scale 1" = 200'





ROSEBUD QUARRY
STAR STONE QUARRIES, INC.
Map # 5.2
Final Reclamation
No. of Acres Affected 3.54
Slopes left > 3H:1V NONE
White Quarry
Scale 1" = 200'

Appendix 1

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SHEET 31

SOIL SURVEY OF BOX ELDER COUNTY, UTAH – WESTERN PART

113°37'30"

41°37'30"

Appendix 1

SHEET NO. 31

SOIL SURVEY OF BOX ELDER COUNTY, UTAH – WESTERN PART

Position of Quarries within Soil Profile based on June, 1999 Survey

113°37'30"

41°37'30"

and quartzite. Typically, 30 percent of the surface is covered with gravel. The surface layer is brown gravelly loam 2 inches thick. The subsurface layer is pale brown loam 3 inches thick. The subsoil is very pale brown gravelly sandy loam 8 inches thick. An indurated hardpan of silica and carbonates is at a depth of about 13 inches. In some areas depth to the hardpan is more than 20 inches.

Permeability is moderate in the Plegomir soil. Available water capacity is about 1 to 2 inches. The water-supplying capacity is 1 to 4 inches. The effective rooting depth is 10 to 20 inches. The organic matter content in the surface layer is about 0.5 to 1.0 percent. Runoff is medium, and the hazard of water erosion is moderate.

The Hiko Peak soil is very deep and well drained. It formed in alluvium derived dominantly from limestone and quartzite. Typically, 20 percent of the surface is covered with gravel. The surface layer is pale brown gravelly loam 4 inches thick. The upper 17 inches of the subsoil also is pale brown gravelly loam. The lower 9 inches is very pale brown very gravelly sandy loam. The underlying material to a depth of 60 inches also is very pale brown very gravelly sandy loam. In some areas the underlying material is extremely gravelly loamy sand or sand. Permeability is moderately rapid in the Hiko Peak soil. Available water capacity is about 4.0 to 7.5 inches. The water-supplying capacity is 5 to 8 inches. The effective rooting depth is 60 inches or more. The organic matter content in the surface layer is about 1 to 2 percent. Runoff is medium, and the hazard of water erosion is moderate.

The Bullump soil is very deep and well drained. It formed in alluvium and colluvium derived dominantly from quartzite and mica schist. Typically, 15 percent of the surface is covered with gravel. The surface layer is grayish brown loam 15 inches thick. The upper 9 inches of the subsoil is brown very gravelly clay loam. The lower part to a depth of 60 inches is light brown very gravelly clay loam.

Permeability is moderately slow in the Bullump soil. Available water capacity is about 8 to 11 inches. The water-supplying capacity is 9 to 11 inches. The effective rooting depth is 60 inches or more. The organic matter content in the surface layer is about 3 to 7 percent. Runoff is medium, and the hazard of water erosion is moderate.

This unit is used mainly for rangeland or wildlife habitat.

The potential plant community on the Plegomir soil is 45 percent grasses, 5 percent forbs, and 50 percent shrubs. Important plants are black sagebrush, Indian ricegrass, bluebunch wheatgrass, winterfat, and Douglas rabbitbrush. The suitability for livestock grazing is only fair because of reduced forage production. The suitability for range seeding is poor. The main limitations affecting range seeding are a low available water capacity and low annual precipitation.

The potential plant community on the Hiko Peak soil is 50 percent grasses, 10 percent forbs, and 40 percent shrubs. Important plants are Wyoming big sagebrush, bluebunch wheatgrass, Indian ricegrass, bottlebrush squirreltail, and shadscale. The suitability for livestock grazing is good. The suitability for range seeding is fair. The main limitation affecting range seeding is low annual precipitation.

The potential plant community on the Bullump soil is 50 percent grasses, 15 percent forbs, and 35 percent shrubs. Important plants are antelope bitterbrush, bluebunch wheatgrass, Idaho fescue, and mountain snowberry. The suitability for livestock grazing is good. If the desirable forage plants become almost depleted, brush management and reseeding may be used to improve the rangeland vegetation. The suitability for range seeding is good.

The Plegomir soil is in capability subclass VIIe in nonirrigated areas and is in the Semidesert Shallow Hardpan (Black Sagebrush) range site. The Hiko Peak soil is in capability subclass VIIs in nonirrigated areas and is in the Semidesert Gravelly Loam (Wyoming Big Sagebrush) North range site. The Bullump soil is in capability subclass VIe in nonirrigated areas and is in the Upland Loam (Browse) range site.

63—Promo-Puett complex, 10 to 35 percent slopes. This map unit is on hillsides east of the Grouse Creek Mountains. Slopes are linear and convex to concave and face all directions. They are 50 to 150 feet long in areas of the Promo soil and 25 to 50 feet long in areas of the Puett soil. The vegetation is dominantly black sagebrush on the Promo soil and Utah juniper on the Puett soil. Elevation is 5,200 to 6,000 feet. The average annual precipitation is about 8 to 13 inches, the mean annual air temperature is 45 to 50 degrees F, and the average freeze-free period is 120 to 160 days.

This unit is about 50 percent Promo very gravelly loam, 10 to 35 percent slopes, and 25 percent Puett gravelly loam, 20 to 35 percent slopes. The two soils occur as areas so intricately intermingled that mapping them separately was not practical at the selected scale.

Included in this unit are small areas of Acana, Declo, Jericho, and Lembos soils. Acana soils have a layer of clay accumulation and are on fan terraces. They support black sagebrush and Indian ricegrass. Declo soils have a layer of calcium carbonate accumulation and are on fans. They support shadscale and bottlebrush squirreltail. Jericho soils have a hardpan and are on fans. They support Utah juniper and black sagebrush. Lembos soils have a hardpan at a depth of 20 to 40 inches and are on valley bottoms. They support Wyoming big sagebrush and bluebunch wheatgrass. Also included are small areas of

rock outcrop on hilltops and ridges. Included areas make up about 25 percent of the total acreage.

The Promo soil is shallow and well drained. It formed in colluvium and alluvium derived dominantly from limestone and calcareous sandstone and siltstone. Typically, 45 percent of the surface is covered with gravel and channers. The surface layer is light gray and very pale brown very gravelly loam 8 inches thick. The underlying material, which extends to a depth of 13 inches, is very pale brown very gravelly loam. Slightly fractured, hard, calcareous siltstone bedrock is at a depth of about 13 inches. This soil is calcareous throughout.

Permeability is moderately rapid in the Promo soil. Available water capacity is about 1.0 to 1.5 inches. The water-supplying capacity is 1 to 3 inches. The effective rooting depth is 10 to 20 inches. The organic matter content in the surface layer is about 1 to 3 percent. Runoff is rapid, and the hazard of water erosion is severe.

The Puett soil is shallow and well drained. It formed in colluvium and alluvium derived dominantly from weakly consolidated limestone and calcareous sandstone. Typically, 30 percent of the surface is covered with gravel. The surface layer is light brownish gray gravelly loam 2 inches thick. The subsurface layer is pale brown sandy loam 3 inches thick. The underlying material, which extends to a depth of 12 inches, is light gray sandy loam. Soft, fractured, calcareous sandstone bedrock is at a depth of 12 inches. This soil is calcareous throughout. In places the depth to bedrock is more than 20 inches.

Permeability is moderately rapid in the Puett soil. Available water capacity is about 1 to 2 inches. The water-supplying capacity is 1 to 4 inches. The effective rooting depth is 10 to 20 inches. The organic matter content in the surface layer is about 0.5 to 1.0 percent. Runoff is rapid, and the hazard of water erosion is severe.

This unit is mainly used for woodland, rangeland, or wildlife habitat.

The potential plant community on the Promo soil is 45 percent grasses, 5 percent forbs, and 50 percent shrubs. Important plants are black sagebrush, bluebunch wheatgrass, Indian ricegrass, and horsebrush. The suitability for livestock grazing is poor because of reduced forage production. The suitability for range seeding also is poor. The main limitations affecting range seeding are a low available water capacity and rock fragments in the surface layer.

The potential vegetation on the Puett soil is an overstory of Utah juniper with a 50 percent canopy cover. The understory vegetation is 55 percent grasses, 10 percent forbs, and 35 percent shrubs. Important plants are black sagebrush, bluebunch wheatgrass, Indian ricegrass, and shadscale. Woodland productivity is low. Yields are 1 to 2 cords of wood per acre. The potential for post or Christmas tree production is poor. The suitability for livestock grazing is poor because of reduced forage production. The suitability for range seeding also is poor. The main limitation affecting range seeding is a low available water capacity.

The capability subclass is VIIe in nonirrigated areas. The Promo soil is in the Semidesert Shallow Loam (Black Sagebrush) range site. The Puett soil is in the Semidesert Shallow Loam (Utah Juniper-Bluebunch Wheatgrass) range site.

64—Puett-Plegomir gravelly loams, 3 to 15 percent slopes. This map unit is on dissected hills south of the town of Grouse Creek. The Puett soil is on eroded side slopes. The Plegomir soil is on ridges. Slopes face all directions, are concave to convex, and are less than 100 feet long in areas of the Puett soil and face all directions, are linear and convex, and are 100 to 300 feet long in areas of the Plegomir soil. The vegetation is dominantly Utah juniper, Indian ricegrass, bluebunch wheatgrass, Nevada bluegrass, and black sagebrush on the Puett soil and black sagebrush, Douglas rabbitbrush, bluebunch wheatgrass, and Nevada bluegrass on the Plegomir soil. Elevation is 5,500 to 6,000 feet. The average annual precipitation is about 8 to 12 inches, the mean annual air temperature is 45 to 48 degrees F, and the average freeze-free period is 120 to 160 days.

This unit is about 40 percent Puett gravelly loam, 5 to 15 percent slopes, and 40 percent Plegomir gravelly loam, 3 to 8 percent slopes. The two soils occur as areas so intricately intermingled that mapping them separately was not practical at the selected scale.

Included in this unit are small areas of Brobett, Codquin, Dahar, and Taylorsflat soils. The moderately deep Brobett soils and the shallow Codquin soils have more than 35 percent rock fragments and are on the steeper side slopes. The moderately deep Dahar soils have a layer of clay accumulation and are on the higher ridges. They support Utah juniper. The deep Taylorsflat soils are on alluvial fans in slightly concave areas. They support Wyoming big sagebrush and bluebunch wheatgrass. Included areas make up about 20 percent of the total acreage.

The Puett soil is shallow and well drained. It formed in colluvium and alluvium derived dominantly from weakly consolidated limestone and calcareous sandstone. Typically, 30 percent of the surface is covered with gravel. The surface layer is light brownish gray gravelly loam 2 inches thick. The subsurface layer is pale brown sandy loam 3 inches thick. The underlying material, which extends to a depth of 12 inches, is light gray sandy loam. Soft, fractured, calcareous sandstone bedrock is at a depth of 12 inches. This soil is calcareous throughout. In some areas the depth to bedrock is more than 20 inches.

Permeability is moderately rapid in the Puett soil.

plains. These soils formed in mixed lacustrine sediments and alluvium derived dominantly from limestone and quartzite. Slopes are 1 to 3 percent. Elevation is 4,400 to 4,600 feet. The average annual precipitation is 10 to 12 inches, and the mean annual air temperature is 46 to 47 degrees F.

These soils are coarse-silty, mixed (calcareous), mesic Xeric Torriorthents.

Typical pedon of Pomat silt loam, in an area of Mellor-Pomat association, 0 to 3 percent slopes, about 5 miles south of Curlew Junction, about 1,200 feet north and 800 feet west of the southeast corner of sec. 35, T. 14 N., R. 11 W.

A1—0 to 5 inches; pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; few very fine vesicular pores; slightly effervescent; disseminated carbonates; strongly alkaline (pH 8.6); abrupt smooth boundary.

A2—5 to 10 inches; pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common very fine tubular pores; slightly effervescent; disseminated carbonates; strongly alkaline (pH 8.8); gradual smooth boundary.

C1—10 to 22 inches; light gray (10YR 7/2) silt loam, pale brown (10YR 6/3) moist; moderate medium and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; strongly effervescent; disseminated carbonates; strongly alkaline (pH 9.0); abrupt smooth boundary.

C2—22 to 40 inches; light gray (10YR 7/2) silt loam, light brownish gray (10YR 6/2) moist; weak medium and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; strongly effervescent; disseminated carbonates; strongly alkaline (pH 8.9); gradual smooth boundary.

C3—40 to 52 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; strongly effervescent; disseminated carbonates; strongly alkaline (pH 8.6); abrupt smooth boundary.

C4—52 to 60 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; few faint mottles; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; few fine sodium filaments; strongly effervescent; disseminated carbonates; strongly alkaline (pH 8.5).

Range in Characteristics

The content of clay in the particle-size control section averages 12 to 17 percent.

C horizon: Hue is 10YR or 2.5Y. Chroma is 2 or 3.

Promo Series

The Promo series consists of shallow, well drained, moderately rapidly permeable soils on hillsides. These soils formed in colluvium, alluvium, and residuum derived dominantly from limestone, calcareous sandstone, and siltstone. Slopes are 10 to 35 percent. Elevation is 5,000 to 6,000 feet. The average annual precipitation is 10 to 13 inches, and the mean annual air temperature is 45 to 48 degrees F.

These soils are loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents.

Typical pedon of Promo very gravelly loam, in an area of Promo-Puett complex, 10 to 35 percent slopes, about 2.3 miles southeast of the junction of Highway 30 and the road to Muddy Ranch, about 1,200 feet north and 100 feet west of the southeast corner of sec. 24, T. 11 N., R. 15 W.

A1—0 to 2 inches; light gray (10YR 7/2) very gravelly loam, brown (10YR 5/3) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; about 45 percent gravel and 10 percent channers; slightly effervescent; disseminated carbonates; moderately alkaline (pH 8.1); clear smooth boundary.

A2—2 to 8 inches; very pale brown (10YR 7/3) very gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure parting to weak very fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; few very fine and fine tubular pores; about 40 percent gravel; slightly effervescent; disseminated carbonates; moderately alkaline (pH 8.2); clear wavy boundary.

C—8 to 13 inches; very pale brown (10YR 7/3) very gravelly loam, light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; about 45 percent gravel; strongly effervescent; disseminated carbonates; moderately alkaline (pH 8.4); clear wavy boundary.

R—13 inches; somewhat fractured, hard, calcareous siltstone bedrock.

Range in Characteristics

Bedrock is at a depth of 10 to 20 inches. The particle-size control section averages 18 to 25 percent clay and 35 to 60 percent rock fragments.

A horizon: Chroma is 2 to 4.

Puett Series

The Puett series consists of shallow, well drained, moderately rapidly permeable soils on hillsides. These soils formed in colluvium and alluvium derived dominantly from weakly consolidated limestone and calcareous sandstone. Slopes are 5 to 35 percent. Elevation is 5,200 to 6,000 feet. The average annual precipitation is 8 to 10 inches, and the mean annual air temperature is 46 to 50 degrees F.

These soils are loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents.

Typical pedon of Puett gravelly loam, in an area of Promo-Puett complex, 10 to 35 percent slopes, north of Dove Creek Hills, 400 feet east of the northwest corner of sec. 30, T. 11 N., R. 14 W.

A1—0 to 2 inches; light brownish gray (10YR 6/2) gravelly loam, dark brown (10YR 4/3) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine interstitial pores; about 15 percent gravel; slightly effervescent; disseminated carbonates; moderately alkaline (pH 8.4); clear smooth boundary.

A2—2 to 5 inches; pale brown (10YR 6/3) sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure parting to weak very fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, common fine and medium, and few coarse roots; common very fine interstitial pores; about 5 percent gravel; slightly effervescent; disseminated carbonates and coatings of carbonates on the undersides of rock fragments; strongly alkaline (pH 8.6); gradual smooth boundary.

C—5 to 12 inches; light gray (10YR 7/2) sandy loam, brown (10YR 5/3) moist; weak medium subangular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; about 12 percent gravel; strongly effervescent; disseminated carbonates and coatings of carbonates on the undersides of rock fragments; strongly alkaline (pH 8.7); gradual smooth boundary.

Cr—12 inches; soft fractured bedrock; few very fine and fine roots in fractures.

Range in Characteristics

Paralithic contact is at a depth of 10 to 20 inches. The content of rock fragments in the particle-size control section averages 5 to 15 percent.

A horizon: Chroma is 2 to 4. Reaction is moderately alkaline or strongly alkaline.

Bk horizon: Chroma is 2 or 3.

Raftriver Series

The Raftriver series consists of moderately deep, well drained, moderately permeable soils on fan terraces. These soils formed in alluvium and colluvium derived dominantly from quartzite, schist, and volcanic ash. Slopes are 2 to 20 percent. Elevation is 5,400 to 6,200 feet. The average annual precipitation is 12 to 16 inches, and the mean annual air temperature is 42 to 45 degrees F.

These soils are coarse-loamy, mixed, frigid Haploxerollic Durorthids.

Typical pedon of Raftriver loam, in an area of Raftriver-Duckree complex, 2 to 50 percent slopes, about 7 miles north of Lynn, about 1,600 feet north and 2,400 feet east of the southwest corner of sec. 36, T. 15 N., R. 17 W.

A—0 to 3 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and few fine vesicular pores; about 5 percent gravel; mildly alkaline (pH 7.6); clear smooth boundary.

Bw—3 to 12 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; few very fine interstitial and few very fine tubular pores; about 5 percent gravel; moderately alkaline (pH 8.0); gradual wavy boundary.

Bkq—12 to 24 inches; very pale brown (10YR 7/3) sandy loam, yellowish brown (10YR 5/4) moist; moderate thick platy structure parting to moderate fine angular blocky; very hard, very firm; few very fine and fine tubular pores; weakly cemented; slightly effervescent; disseminated carbonates and soft powdery masses of carbonates; moderately alkaline (pH 8.3); abrupt smooth boundary.

Bkqm—24 to 32 inches; very pale brown (10YR 7/3) weakly cemented duripan, yellowish brown (10YR 5/4) moist; massive; extremely hard, very firm; thin laminar cap; strongly effervescent; disseminated carbonates and visible masses of carbonates; strongly alkaline (pH 8.6); gradual smooth boundary.

B'kq—32 to 60 inches; very pale brown (10YR 7/3) sandy

Appendix 1

TABLE 5.--RANGELAND AND WOODLAND UNDERSTORY PRODUCTIVITY AND CHARACTERISTIC PLANT COMMUNITIES--Continued

Soil name and map symbol	Site	Total production		Characteristic vegetation	Com-sition
		Kind of year	Dry weight		
			Lb/acre		Pct
63*:					
Promo	Semidesert Shallow Loam (Black Sagebrush).	Favorable	350	Bluebunch wheatgrass	20
		Normal	250	Black sagebrush	20
		Unfavorable	175	Indian ricegrass	10
				Horsebrush	10
				Nevada bluegrass	5
				Bottlebrush squirreltail	5
				Sandberg bluegrass	5
				Hairy balsamroot	5
				Hood phlox	5
				Shadscale	5
				Douglas rabbitbrush	5
Puett	Semidesert Shallow Loam (Utah Juniper-Bluebunch Wheatgrass)	Favorable	350	Black sagebrush	30
		Normal	250	Bluebunch wheatgrass	25
		Unfavorable	175	Indian ricegrass	10
				Nevada bluegrass	5
				Globemallow	5
				Phlox	5
				Shadscale	5
64*:					
Puett	Semidesert Shallow Loam (Utah Juniper-Bluebunch Wheatgrass)	Favorable	350	Black sagebrush	30
		Normal	250	Bluebunch wheatgrass	25
		Unfavorable	175	Indian ricegrass	10
				Nevada bluegrass	5
				Globemallow	5
				Phlox	5
				Shadscale	5
Plegomir	Semidesert Shallow Hardpan (Black Sagebrush).	Favorable	650	Black sagebrush	25
		Normal	500	Indian ricegrass	15
		Unfavorable	250	Bluebunch wheatgrass	15
				Bottlebrush squirreltail	5
				Nevada bluegrass	5
				Needleandthread	5
				Thickstem wildcabbage	5
				Winterfat	5
				Mormon tea	5
				Douglas rabbitbrush	5
65*:					
Raftriver	Upland Loam (Wyoming Big Sagebrush).	Favorable	1,200	Bluebunch wheatgrass	15
		Normal	950	Wyoming big sagebrush	15
		Unfavorable	600	Nevada bluegrass	10
				Idaho fescue	10
				Bottlebrush squirreltail	5
				Thurber needlegrass	15
				Arrowleaf balsamroot	5
				Phlox	5
				Douglas rabbitbrush	5
Duckree	Upland Gravelly Loam (Wyoming Big Sagebrush).	Favorable	1,000	Wyoming big sagebrush	25
		Normal	800	Bluebunch wheatgrass	25
		Unfavorable	400	Bluegrass	15
				Antelope bitterbrush	10
				Needleandthread	5
				Phlox	5

See footnote at end of table.

TABLE 11.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors K	Erosion factors T	Wind erodi- bility group	Orga matt
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
56*:												
Sonlet----------	0-2	16-20	1.15-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low--------	0.15	1	6	1-5
	2-10	12-18	1.25-1.35	0.6-2.0	0.06-0.11	7.4-8.4	<2	Low--------	0.10			
	10-19	12-18	1.25-1.35	0.6-2.0	0.06-0.11	7.4-9.0	<2	Low--------	0.10			
	19	---	---	---	---	---	---	----------	----			
57*---------- Parkay family	0-6	15-20	1.25-1.30	0.6-2.0	0.12-0.14	6.1-6.5	<2	Low--------	0.15	5	6	5-10
	6-20	20-28	1.25-1.30	0.6-2.0	0.08-0.11	6.6-7.3	<2	Low--------	0.10			
	20-60	28-35	1.25-1.30	0.6-2.0	0.07-0.09	6.6-7.3	<2	Low--------	0.05			
58*:												
Parkay family---	0-4	15-20	1.25-1.30	0.6-2.0	0.12-0.14	6.1-6.5	<2	Low--------	0.15	5	6	5-10
	4-19	12-20	1.25-1.30	0.6-2.0	0.08-0.11	6.6-7.3	<2	Low--------	0.10			
	19-34	20-28	1.25-1.30	0.6-2.0	0.08-0.11	6.6-7.3	<2	Low--------	0.10			
	34-60	28-35	1.25-1.30	0.6-2.0	0.07-0.09	6.6-7.3	<2	Low--------	0.05			
Dateman family--	0-12	12-18	1.30-1.50	0.6-2.0	0.12-0.15	6.1-7.3	<2	Low--------	0.15	5	6	5-10
	12-43	18-27	1.30-1.50	0.6-2.0	0.09-0.12	6.1-7.8	<2	Low--------	0.15			
	43-60	8-18	1.30-1.50	0.6-2.0	0.05-0.08	6.1-7.3	<2	Low--------	0.10			
59*:												
Parkay family---	0-4	15-20	1.25-1.30	0.6-2.0	0.12-0.14	6.1-6.5	<2	Low--------	0.15	5	6	5-10
	4-19	12-20	1.25-1.30	0.6-2.0	0.08-0.11	6.6-7.3	<2	Low--------	0.10			
	19-34	20-28	1.25-1.30	0.6-2.0	0.08-0.11	6.6-7.3	<2	Low--------	0.10			
	34-60	28-35	1.25-1.30	0.6-2.0	0.07-0.09	6.6-7.3	<2	Low--------	0.05			
Broad Canyon family--------	0-15	16-23	1.15-1.40	0.6-6.0	0.08-0.11	6.6-7.3	<2	Low--------	0.10	3	6	5-10
	15-27	8-18	1.30-1.50	2.0-6.0	0.04-0.06	7.4-8.4	2-4	Low--------	0.05			
	27-50	4-12	1.40-1.60	6.0-20	0.03-0.05	7.9-8.4	4-16	Low--------	0.05			
	50	---	---	---	---	---	---	----------	----			
60*. Pits, gravel												
61*. Playas												
62*:												
Plegomir--------	0-2	16-27	1.00-1.30	0.6-2.0	0.12-0.14	7.9-8.4	<2	Low--------	0.24	1	5	.5-1
	2-5	18-27	1.10-1.40	0.6-2.0	0.15-0.16	7.9-9.0	<2	Low--------	0.32			
	5-13	12-25	1.10-1.40	0.6-2.0	0.07-0.14	8.5-9.0	<2	Low--------	0.17			
	13	---	---	---	---	---	---	----------	----			
Hiko Peak-------	0-4	10-18	1.40-1.50	0.6-2.0	0.11-0.14	7.9-9.0	<4	Low--------	0.24	5	5	1-2
	4-21	10-18	1.40-1.50	2.0-6.0	0.09-0.14	7.9-9.0	<4	Low--------	0.17			
	21-60	10-18	1.40-1.60	2.0-6.0	0.06-0.11	7.9-9.0	<4	Low--------	0.10			
Bullump---------	0-15	10-25	1.30-1.40	2.0-6.0	0.14-0.17	6.6-7.8	<2	Low--------	0.28	5	5	3-7
	15-60	27-35	1.35-1.50	0.2-0.6	0.14-0.18	6.6-7.8	<2	Moderate	0.15			
63*:												
Promo----------	0-8	10-20	1.30-1.50	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low--------	0.17	1	6	1-3
	8-13	18-25	1.30-1.50	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low--------	0.17			
	13	---	---	---	---	---	---	----------	----			
[illegible]ett----------	0-2	7-15	1.30-1.50	2.0-6.0	0.11-0.14	7.9-9.0	<2	Low--------	0.17	1	5	.5-1
	2-12	5-10	1.35-1.55	2.0-6.0	0.09-0.12	7.9-9.0	<2	Low--------	0.20			
	12	---	---	---	---	---	---	----------	----			

See footnote at end of table.

Appendix 1

Utah State UNIVERSITY

USU ANALYTICAL LABORATORIES
Ag Science Rm 166
4830 Old Main Hill
Logan UT 84322-4830
Telephone (435) 797-2217
Fax (435) 797-2117

RECEIVED OCT 26 1999

21 October 1999

David Ryzak
American Stone Inc
4040 S 300 W
Salt Lake City UT 84107

Soil samples from Rosebud Quarries

USU #	Ident	>2mm	pH	EC dS/m	SAR	P mg/kg	K mg/kg	Organic Matter —%—
7005	White	20.3	7.9	0.55	0.82	12	340	2.67
7006	Green	40.7	7.8	0.60	0.69	20	220	3.38

		Hydrometer					
		Sand	Silt	Clay	Texture	CEC meq/100 g	Kjeldahl Nitrogen —%—
		—%—					
7005	White	37	43	20	Loam	19.3	0.11
7006	Green	49	30	21	Loam	17.3	0.15

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Ag Science 166
4830 Old Main Hill
Logan UT 84322-4830
Telephone (435) 797-2217
Fax (435) 797-2117

April 11, 2000

Star Stone Quarries Inc.
David Ryzak
4040 S 300 W
Salt Lake City UT 84107

USU #	Ident.	pH	EC dS/m	>2mm %	SAR	Texture	OM %	CEC meq/100g	Total Kjeldahl Nitrogen %	-----NaHCO3----- P mg/kg	K mg/kg
2869	Rosebud-White	7.4	0.5	40	1.77	Sandy Clay Loam	2.1	15.2	0.09	6.3	>400
2870	Rosebud-Green	7.8	0.7	61.4	7.39	Sandy Clay Loam	0.9	9.1	0.05	5.2	230

Appendix 1

Appendix 2

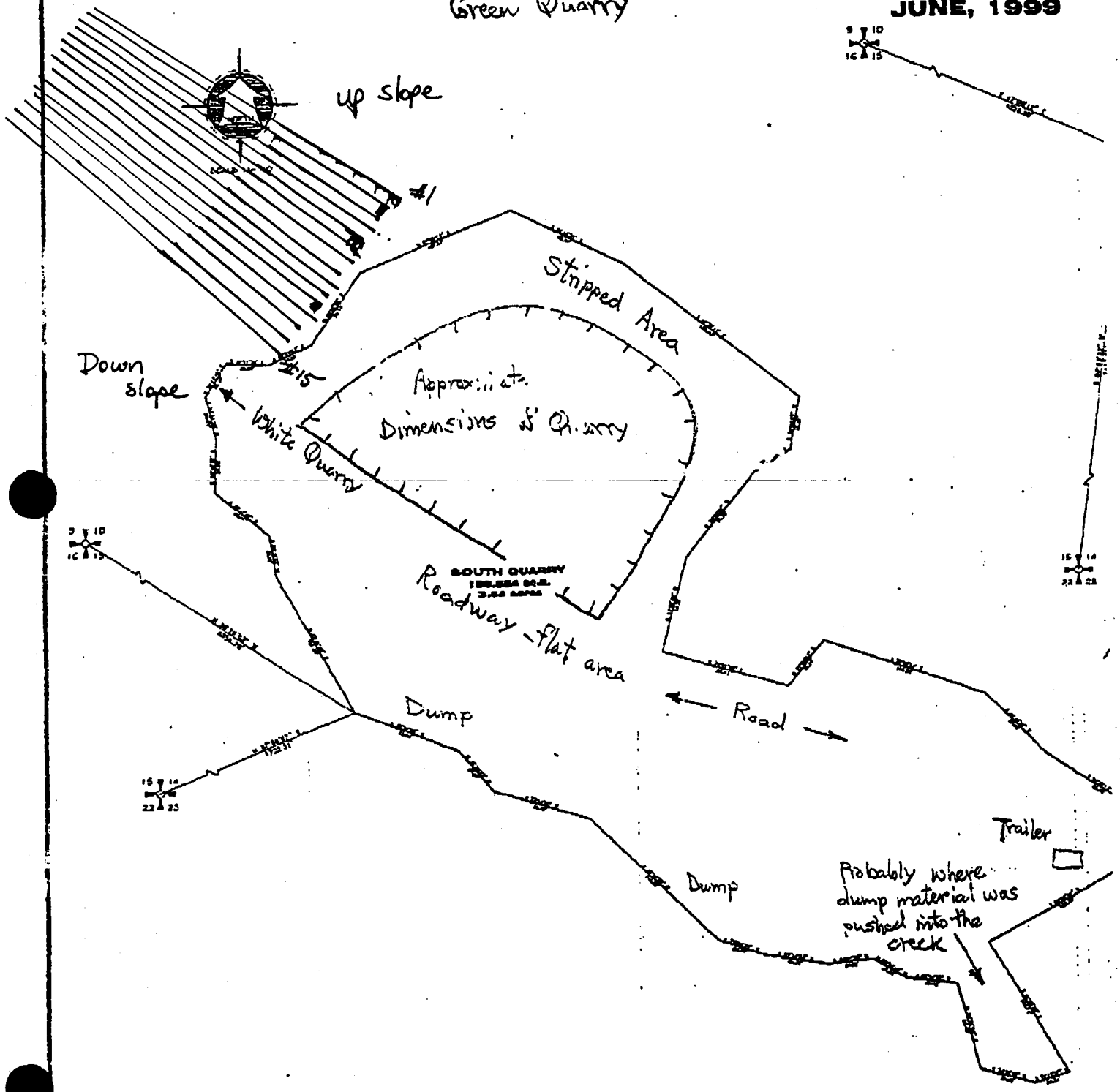
Map 3

LON THOMAS - STONE (

A PART OF THE WEST HALF OF SEC. 14,

ROSEBUD, UTAH (Box Eld

JUNE, 1999



Date: 9/14/99
Company: American Stone Co.
Location: Rose Bud, UT
Veg. Type: Sagebrush/Grass

Transect	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1	3	1	1	3	1	1	1	3	1	2	1	1	3	3	4	3	4	3	1	3
2	4	4	3	1	3	1	4	1	2	3	3	1	3	1	4	4	4	3	2	3
3	1	3	3	3	1	4	4	1	1	1	1	1	2	1	4	1	4	4	3	2
4	3	2	2	1	2	4	3	4	1	3	3	1	3	4	4	4	3	1	3	4
5	4	2	1	4	1	4	3	3	3	3	3	3	1	2	3	1	1	1	3	3
6	1	3	1	1	3	3	3	4	3	3	3	2	2	3	3	3	3	1	3	2
7	3	1	3	1	4	4	3	3	4	4	4	1	3	2	3	1	3	1	3	4
8	4	4	1	1	1	3	3	1	1	3	3	1	2	3	1	1	3	4	3	3
9	4	3	4	3	3	3	4	1	4	2	4	4	4	3	1	3	3	3	3	1
10	3	1	4	3	3	3	3	3	3	1	1	1	3	3	1	4	4	1	4	3
11	4	1	3	3	1	1	1	1	2	3	1	1	1	4	1	4	4	3	1	1
12	4	3	4	4	1	1	1	2	1	3	1	3	3	2	1	4	3	4	3	3
13	4	4	2	1	1	1	1	2	1	4	3	4	1	1	4	4	2	1	2	1
14	3	1	4	3	1	2	1	4	1	4	4	1	3	3	3	4	1	3	2	3
15	3	1	4	3	3	1	3	1	1	3	3	3	1	1	3	2	2	1	4	3

Cover Class	% Cover
1=vegetation	32.7
2=litter	9.0
3=rock or fragments	36.7
4=bare ground	21.7

Appendix 2

Spe[illegible] List

Date: 9/14/99
Company: American Stone Co.
Location: Rose Bud, UT
Veg. Type: Sagebrush/Grass

Artemisia	nova	
Artemisia	tridentata	var. wyomingensis
Atriplex	confertifolia	
Bouteloua	gracilis	
Bromus	tectorum	
Castilleja	chromosa	
Caulanthus	crassicaulis	
Elymus	spicatus	
Erigeron	pumilis	
Eriogonum	ovalifolium	
Grayia	spinosa	
Gutierrizia	sarothrae	
Halogeton	glomeratus	
Lepidium	perfoliatum	
Leptodactylon	pungens	
Opuntia	echinocarpa	
Phlox	hoodii	
Poa	pratensis	
Salsola	iberica	
Sarcobatus	vermiculatus	
Stipa	hymenoides	
Tetradymia	canescens	

Appendix 2

Appendix 2

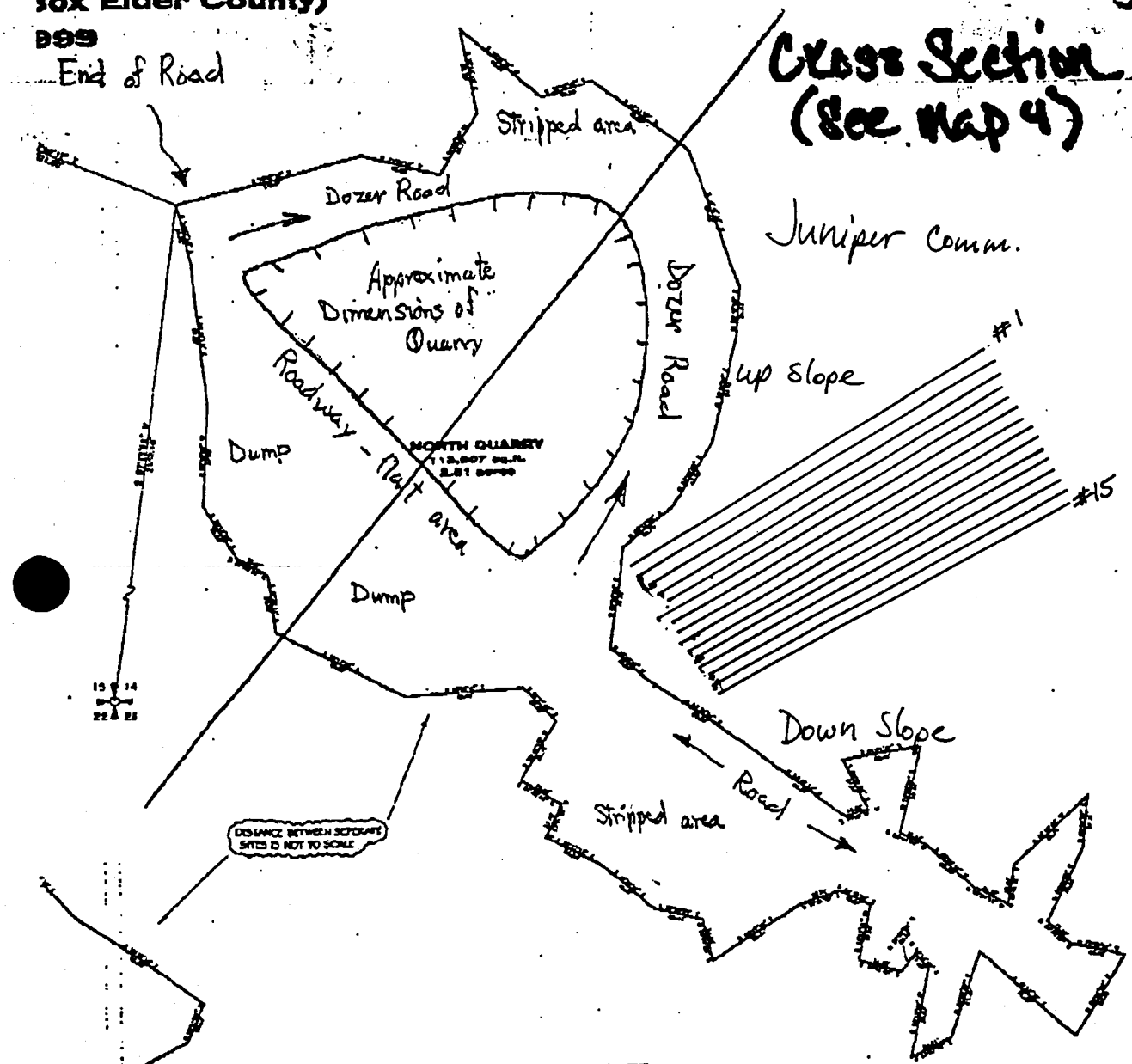
Rosebud
White Quarry

NE QUARRY SITE

C. 14, T 10 N, R 16 W, S.I

Box Elder County)

999



Cross Section (See Map 4)

RY

SURVEYOR'S CERTIFICATE

I, Donald J. Johnston, do hereby certify that I am a Professional Land Surveyor and hold Certificate No. 152173 as prescribed by the laws of the State of Utah and have made a survey of the above described property and further certify that this plot correctly shows the true dimensions of the property surveyed.

Date:

PROFESSIONAL LAND SURVEYOR No. 152173 DONALD J. JOHNSTON STATE OF UTAH

CLIENT

LON THOMAS
4040 South 300 West
Salt Lake City, UT 84107

CERTIFICATE OF SURVEY

BOUNDARY SURVEY OF TWO STONE QUARRY SITES
SITUATE IN THE WEST HALF OF SECTION 14,
T 10 N, R 16 W, S.L.B.&M., ROSEBUD, UTAH (BOX ELDER COUNTY)

JOHNSTON ENGINEERING PROFESSIONAL CORPORATION

SHEET 1 SHEETS 1

JOB NUMBER 993201

Date: 9/14/99
Company: American Stone Co.
Location: Rose Bud, UT
Veg. Type: Juniper

Transect	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1	3	3	3	2	3	3	3	3	1	2	1	4	1	4	3	3	4	2	1	1
2	3	3	1	1	3	3	1	1	2	1	1	4	3	1	1	2	2	1	3	2
3	3	2	1	1	1	3	3	1	3	2	1	1	1	2	1	4	4	1	4	3
4	2	3	1	1	4	2	4	3	3	3	2	1	3	1	1	2	3	4	1	2
5	3	1	1	2	2	4	3	3	3	1	1	1	1	4	2	1	3	4	3	4
6	1	1	4	3	3	3	3	1	3	2	2	2	4	3	1	2	1	4	3	1
7	1	2	2	1	3	3	4	1	3	3	1	4	3	3	4	3	1	1	2	3
8	3	3	3	3	3	3	3	2	1	2	3	2	1	2	1	1	1	1	1	3
9	1	1	3	1	1	3	3	3	4	4	3	3	1	2	3	4	1	4	3	3
10	4	4	3	1	3	1	4	3	3	3	4	4	4	4	4	3	3	1	2	3
11	3	3	3	3	1	1	1	3	4	4	4	4	4	1	2	3	3	4	4	4
12	1	1	4	4	4	3	4	4	3	3	4	4	3	3	1	4	4	3	1	1
13	2	2	4	3	3	3	3	3	4	1	2	3	1	2	3	3	3	1	4	1
14	3	2	1	4	4	4	3	3	3	4	4	4	1	2	1	2	1	3	3	1
15	1	2	1	4	4	4	3	3	1	3	3	1	1	2	1	4	4	3	1	1

Cover Class	% Cover
1=vegetation	30.0
2=litter	13.7
3=rock or fragments	35.3
4=bare ground	21.0

Appendix 2

Spe List

Date: 9/14/99
Company: American Stone Co.
Location: Rose Bud, UT
Veg. Type: Juniper

Artemisia	nova	
Artemisia	tridentata	var. wyomingensis
Bouteloua	gracilis	
Bromus	tectorum	
Caulanthus	crassicaulis	
Chaenactis	stevioides	
Chrysothamnus	viscidiflorus	
Cryptantha	spp.	
Descurainia	pinnata	
Elymus	smithii	
Elymus	spicatus	
Ephedra	nevadensis	
Gutierrizia	sarothrae	
Halogeton	glomeratus	
Juniperus	osteosperma	
Lepidium	perfoliatum	
Leptodactylon	pungens	
Opuntia	echinocarpa	
Stipa	hymenoides	

Appendix 2

Appendix 5

Rosebud

Reclamation Surety Estimate Revised Jun 14, 2000

Mine Name: Rosebud Quarry **Green Quarry, White Quarry, Road**

Components: Green Quarry = 5.26 ac, White Quarry = 3.54ac, Road = 0.70 ac. Total 9.50 ac.

Insert details of reclamation here

1. Scoop first 3-4 ft of dump with 7 yard loader then place it on the quarry floor to cover solid rock and recontour. This establishes a base for the soil mixture that will be spread.
2. Finish up the contouring with a dozer. 3. Spread soil mixture from soil stockpile and recontour areas with a loader. 4. Finish spreading soil with a dozer and excavator to final grade. 5. Broadcast seed and fertilize if needed.

Amount of developed area which will receive full reclamation treatments = 8.80

Estimated total developed area for this mine = 9.50

Activity	Qty	Unit	$/Unit	$
Safety Gates, signs, etc		sum	200	0
Demolition of buildings & facilities	0	CF	0	0
Debris & equipment removal - trucking	0	trips	48	0
Debris & equipment removal - dump fees	0	CY	6	0
Debris & equipment removal - loading trucks w/FE loader	0	hours	166	0
Demolition & debris removal - general labor	0	hours	15	0
Regrading facilities areas	0	acre	415	0
Regrading waste dump slopes (1/7 th of DOGM calc volume)	7000	CY	0.47	3,290
Ripping waste dump tops		acre	220	
[16 inch deep waste dump fines for quarry cover]				
Ripping stockpile & compacted areas	1.0	acre	220	220
Ripping pit floors	0	acre	363	0
Ripping pit access roads	0	acre	363	0
Creating safety berms or barriers around highwalls	0	LF	0	0
Ripping access roads - dozer	0.70	acre	220	154
Regrading access roads - dozer	0	acre	415	0
Sidecast mtl replacement on steep roads - trackhoe	0	LF	1	0
Surface drainage restoration of construction	0	LF	0	0
Topsoil replacement - dozer (2/3 of vol), 6" th.	6980	CY	0.47	3,281
Topsoil replacement - FE loader (1/3 of vol), 3" th.	3490	CY	1.15	4,014
Sub-soil Placement - Dozer (1/2 of sub-soil in regraded vol.)	2100	CY	0.47	987
Sub-soil Placement - FE loader (1/2 of vol; notes as above)	2100	CY	1.15	2,415
Mulching (composted manure @ 5 ton/acre)	8.80	acre	150	1,320
Broadcast seeding (14.1 lb/acre)	8.80	acre	170	1,496
General site cleanup & trash removal	4.4	acre	50	220
Equipment mobilization (loader, dozer, excavator)	3	equip	1000	3,000
Reclamation Supervision (est. 3 days at each quarry)	6	days	356	2,136
	Subtotal			22,532
10% Contingency				2,253
	Subtotal			24,785
Escalate for 5 years at 3.27% per yr				4,326
	Total			29,112

Appendix 3

Star Stone Quarries, Inc.
4040 South 300 West
Salt Lake City, Utah 84107
Tel. (801) 262-4300
Fax (801) 262-4474

February 29, 2000

Mr. D. Wayne Hedburg
Division of Oil, Gas, and Mining
P. O. Box 145801
Salt Lake City, Utah 84114-5801

Dear Wayne:

Enclosed is the revised Notice of Intention to Commence Large Mining Operations for our Cotton Thomas Mine (Quarry) in Box Elder County, Utah.

We made some adjustments to the NOI to reduce reclamation costs. The reduced reclamation costs are reflected in the Reclamation Surety Estimates. We would like to further reduce our up front costs by proposing a change in the method in which the surety is calculated. David Ryzak has been in contact with Tony Gallegos who believes the proposal is workable. Tony suggested we write down the proposed changes and present them to DOGM.

Star Stone Quarries proposes that the surety set up with DOGM is the amount after adding in the 10% contingency, but before adding in the 5 years' of 3.27% compounded escalation. We included DOGM's figures for comparison, however, we hope to reduce these costs considerably. For the Cotton Thomas Reclamation Surety Estimate as written by DOGM, the surety required will be $90,256 instead of $106,010. We propose that the funding document (presently a certificate of deposit with First Security Bank) when approved, be written so that 3.27% interest is added to the surety annually.

We will do the necessary paperwork with First Security Bank to set this up. Any excess interest over 3.27% will continue to go to Star Stone Quarries, Inc. If the escalation percentage changes during the course of the 5 years, the escalation added to the surety will be adjusted accordingly.

If this is a workable setup, we would like to set up all of our Reclamation Surety Estimates in like manner. Thank you for your consideration.

Sincerely,

Lon Thomas

Lon Thomas
President; Star Stone Quarries, Inc.