

Department of Environment and Natural Resources
Minerals and Mining Program
Joe Foss Building
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Pierre, South Dakota 57501-3182
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JUL 11 2016
MINERALS & MINING PROGRAM

**APPLICATION FOR
SMALL SCALE MINING PERMIT**

Pursuant to SDCL 45-6B:
Relating to Mineral Extraction in
Operations Affecting Less Than
10 Acres Per Year & Removing
Less Than 25,000 Tons Per Year

Operator's Name: Dakota Granite Co.

Mailing address:

PO Box 1351
Milbank, SD 57252

Telephone:

(605) 432-5580

Physical address:

48391 150th St.
Milbank, SD 57252

Telephone:

(605) 432-5580

Fax:

(605) 432-6155

Name and address of surface owner: (Enter additional owners on last page)

Dakota Granite Co
48381 150th St.
Milbank, SD 57252

Name and address of mineral owner: (Enter additional owners on last page)

Dakota Granite Co
48381 150th St.
Milbank, SD 57252

Legal description of affected land:

Portions of SW 1/4 Section 7; T120N-R47W,
Portions of NE 1/4 Section 13; T120N-R48W

Name and address of operator's resident agent (if operator is an out-of-state corporation):

County: Grant

Minerals to be mined:

Granite

Proposed starting date:

as soon as permit is granted

Size of affected land (acres):

7.57

Proposed completion date:

1/1/2090

Estimated acres disturbed per year:

7.57

Estimated working days per year:

52

Estimated tonnage mined per year: 24000

Estimated duration of operation (years): 75

Estimated tons of ore per year: 20000

Reclamation type:

Overburden/waste tons per year: 4000

Wildlife Habitat

INSTRUCTIONS (Reference SDCL 45-6B)

This application must be accompanied by:

1. A narrative description of the type of mining operation proposed and how it will be conducted pursuant to Section 54 (7). This should include a description of the initial work to develop the operation and a description of the workings during the operation.
2. A narrative description of the measures to be taken to comply with the operating and reclamation requirements of SDCL 45-6B-37 through 45-6B-46 pursuant to Section 54 (9).
3. A map showing information sufficient to locate the affected land, including existing and proposed roads or access routes to be used in connection with the mining pursuant to Section 54 (5).
4. A wildlife survey pursuant to Section 54 (8).
5. A fee of \$100.00 pursuant to Section 55.
6. A list of the names and addresses of the land-owners of the affected land.

Before a hearing on the permit may be conducted by the SD Board of Minerals and Environment, the applicant must submit the following materials:

1. Certified mail receipts confirming mailing of notice to all surface owners and lessees pursuant to Section 17.
2. A copy of the affidavit of publication of notice pursuant to Section 16.
3. Proof of filing a copy of the application with the Register of Deeds pursuant to Section 15.
4. A surety in an amount to be determined by the department pursuant to Section 20 and 55.
5. A copy of instruments of consultation from all surface landowners, if different than the owner of the minerals, including written receipt of the operating and reclamation plans pursuant to Section 12 and 13.

STATE OF South Dakota

COUNTY OF Grant

On this _____ day of _____,

20 16, before me personally appeared

Rick Dilts who

acknowledged himself to be the CEO
(Title)

for Dakota Granite and that
(Operator)

he is authorized to execute the Application for Small Scale Mining Permit for the purposes contained therein.

Alesia Christensen
Notary Public

My Commission Expires Feb. 12, 2022
ALESIA CHRISTENSEN
NOTARY PUBLIC
STATE OF SOUTH DAKOTA



FOR DEPARTMENT USE ONLY

DATE APPROVED: _____ FUND AMOUNT: _____ PERMIT NUMBER: _____

Applicant hereby affirms that the mining will be conducted pursuant to SDCL 45-6B, or any regulations promulgated thereunder; that he will grant access to the Board of Minerals and Environment or its agents to the area under application from the date of the application and during the life of the permit as is necessary to assure compliance with SDCL 45-6B.

I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct.

Rick Dilts
Signature

CEO / Pres
Title

4-26-16
Date

Chairman, SD Board of Minerals & Environment

STATE OF SOUTH DAKOTA

BEFORE THE SECRETARY OF

THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF THE)
APPLICATION OF)

Small mine Permit - Dakota Granite)

STATE OF South Dakota)

COUNTY OF Grant)

CERTIFICATION OF

APPLICANT

I, Rich R. Dutton, the applicant in the above matter after being duly sworn upon oath hereby certify the following information in regard to this application:

I have read and understand South Dakota Codified Law Section 1-40-27 which provides:

"The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:

(1) The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner, or resident general manager of the facility for which application has been made:

- (a) Has intentionally misrepresented a material fact in applying for a permit;*
- (b) Has been convicted of a felony or other crime involving moral turpitude;*
- (c) Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;*
- (d) Has had any permit revoked under the environmental laws of any state or the United States; or*
- (e) Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or*

(2) The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a prima facie showing of the suitability and qualification of the applicant. If at any point in the application review, recommendation or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification,

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consideration of the application may be suspended and the application may be rejected as provided for under this section.

Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26."

I certify pursuant to 1-40-27, that as an applicant, officer, director, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; (d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this 24th day of May, 2016.

Rick R Diltz

Applicant (print)

Rick R Diltz

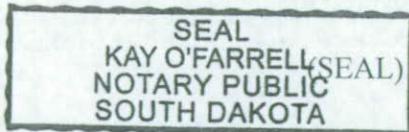
Applicant (signature)

Subscribed and sworn before me this 24th day of May, 2016.

Kay O'Farrell

Notary Public (signature)

My commission expires: May 16, 2022



PLEASE ATTACH ANY ADDITIONAL INFORMATION NECESSARY TO DISCLOSE ALL FACTS AND DOCUMENTS PERTAINING TO SDCL 1-40-27 (1) (a) THROUGH (e). ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION

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JUL 11 2016
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Small Permit Application

SDCL 45-6B-54(7) A narrative description of the type of mining operation and how it will be conducted.

This mining permit application is about a parcel of land exchanged on Maps 1 and 2, Plat Map. This property line has been in dispute for years and this exchange was a way to clear up the misconception of the property line. Dakota Granite is transferring 7.5 acres to Cold Springs Granite. Dakota Granite Company is adding 7.57 acres to the current mining operation. Dakota Granite Company will quarry a maximum of 20,000 tons of granite per year from this area. It is unlikely that we will produce the maximum amount each year because all other areas under the current mine Permit area 15 will also be active at the same time. All conditions for that permit will be used to cover this new 7.57 acres.

The equipment used in the quarry hole covered by Permit 15 is a loader, drill rig, and a couple of wire saws. The process for extraction of granite is basic and does not contain much blasting. The holes are drilled with the drill rig; wire is fed through the holes and hooked to the wire saw. The wire saw cuts the block of granite loose. The loader then comes in and removes the block. The drill rig is a support vehicle.

Due to the land exchange, the permit boundary is being expanded and modified per the requirements of **ARSD 74.29.03.02(2)** In the application, "land exchange area" is defined as the land exchange areas shown on Maps 1 and 2.

SDCL 45-6B-54(8) A preliminary wildlife survey will be conducted. Dakota Granite requested a survey by the local Game, Fish and Parks officer, Stan Michals. He reviewed the area and the initial wildlife survey. Mr. Michals stated that the original surveys are still pertinent for the new permitting effort. He did state that new endangered species might have critical habitat in the area. There is no species occurrence data available for the location of the expansion letter. The letter from Mr. Michals follows in the attachments.

ARSD 74.29.03.02 (2). New permit application required. A new permit application is required for major modifications. Major modifications include the following:

(1) The addition of proposed affected land not within the approved permits area. The new land in the exchange is outside of the permit boundary.

(2) The expansion of the boundaries of the permit area. The boundary of the permit will be expanded in areas and lessened in others do to the land exchange with Cold Springs Granite.

(3) A change in the overall post mining land use of the affected land. No change will happen in the post mining land use.

(4) A change in the permit which may adversely affect surface or groundwater. No change in the permit will adversely affect surface of ground water.

(5) The initiation of milling capabilities, excluding crushers. No milling capabilities will be initiated in this new area

ARSD 74:29:07:02. Minimizing of Adverse impacts

- 1) The mine operation facilities are already in place.
- 2) Most of the new area has been stripped down to the stone already under the previous mine permit.
- 3) The area of the new permit already has visual screening because it already is in an existing mine permit area.
- 4) This permit expansion area will have no more impact on surface and ground water. The expansion area is already near permit area 15 that has no effect on surface and ground water.
- 5) Dakota Granite has fences and gates for the existing quarry and Cold Springs Granite has the same set up for their side of the affected area.
- 6) No impacts on wildlife will be felt because this expansion area is in an active quarry where no wildlife is present. Stan Michals, from the Department of Game, Fish and Parks, in a 1-22-16 letter indicated the surveys for the initial permitting areas are still pertinent. Since the time of the first permit two species have been added to the Endangered Species Act of 1973. The Dakota Skipper and Poweshiek skipperling are endangered species that may be located in this area of Grant County. No species occurrence data is available for the expansion area
- 7) All locations of waste dumps, spoil piles, topsoil stockpiles will be included on Map 1 and 2, site map. All waste will be controlled the same as they are for the larger quarry area.
- 8) Some mine waste and spoil will be produced in this area when we begin the quarry process.
- 9) The integration of the mine operations planning with the reclamation plan will be easily done on the 7.57 acres. The expansion area will be covered for reclamation by large scale permit 15.

ARSD 74:29:07:17 and SDCL 45-6B-9 Underground mines

There are no underground mining areas connected to the granite quarry

SDCL 45-6B-8 previously mined lands

The locations of such mining activity existed prior to July 1, 1971.

SDCL 45-6B-32 Grant of permit if application in compliance with law—grounds for denial. The Board of Minerals and Environment shall grant a permit to an operator if the application complies with the requirements of this chapter and all applicable local, state and federal laws. The board may not deny a permit, except for one or more of the following:

1. The application is incomplete or the surety has not been posted

The surety is set up for Permit 15 for \$347,400.00. That should cover the new boundary area set up by this permit

2. The applicant has not paid the required fee;

The fee is included in with the mine permit application.

3. Any part of the proposed mining operation, the reclamation program, or the proposed future use is contrary to the laws or regulations of this state or the united States:

Dakota Granite has designed this quarry operation to comply with the laws and regulations of the state of South Dakota and the United States.

4. The mining operation will adversely affect the stability of any significant, valuable and permanent man-made structures located within 200 ft. of the affected land, except where there is an agreement between the operator and the persons having an interest in the structure that damage to the structure is to be compensated for by the operator:

The only significant, valuable, and permanent man-made structures located within 200 ft. of the affected area, belong to Dakota Granite. An understanding exists between Dakota Granite and Cold Spring Granite that should Dakota Granite cause any damage to Cold Spring Granite's equipment or structures; Dakota Granite will compensate Cold Spring Granite for such damage.

5. The mining operation would be in violation of any county zoning or subdivision regulations

Dakota Granite, at the time when they applied for a large mining permit 15, requested and received a letter from Grant County Commissioners stating that to the best of their knowledge, we are in compliance with all county ordinances' and requirements. On January 11, 2016 Grant County Planning and Zoning office sent a letter to Dakota Granite stating that Dakota Granite Company is in compliance with Grant County Zoning Regulations. It also stated that the Plat Recording was completed in the Register of Deeds Office on 12-15-2015 for the land exchange between Dakota Granite and Cold Spring Granite.

6. The proposed mining operation and reclamation cannot be carried out in conformance with the requirement of 45-6B-35

The proposed mining operation and reclamation can be carried out in the land exchange area with the conformance requirements because the existing permit covers the area and meet the requirements. The expansion area can be reclaimed in conformance with the requirements.

7. The Operator is currently found to be in violation of the provisions of this chapter with respect to any mining operation in this state.

Dakota Granite has no current violation of the provisions of this chapter with respect to any of its operation in South Dakota.

8. The land is unsuitable for a mining operation, as determined pursuant 45-6B-33:

SDCL 45-6B-33. As pursuant to ARSD 74:29:02:01, each section of this statute needs to be addressed.

SDCL 45-6B-33 Unsuitable land – No permit issued. No permit may be issued for the mining operation proposed on unsuitable land. Land is unsuitable if the following conditions cannot be satisfactory mitigated:

The land in the land exchange area are suitable for mining operation since they have already been used for mining operations in other permits.

- 1. Reclamation of the affected land pursuant to the requirements of this chapter is not physically or economically feasible:**

The land around this site can and will be reclaimed, along with the rest of the quarry covered under permit 15.

- 2. Substantial disposition of sediment in stream or lake beds, landslides, or water pollution cannot feasibly be prevented;**

If granite is removed from this area the spoils and sludge from the wire saws will be removed and placed on the Grout pile for the reclamation plan. All water used in sawing flows to a holding area and is pumped to holding ponds to let sediment settle out of the water.

- 3. The adverse effects of the proposed mining operation on the historic archeological aspects of affected or surrounding land outweigh the benefits of the proposed mining operation:**

Under **ARSD 74:29:10:01**: since the 7.57 acre expansion area is already within the permit boundaries of Cold Springs Granites mine permit 373, it is exempt from special, exceptional, critical, or unique lands determination requirements.

There are no known historic or archaeological aspects on the affected or surrounding land. On the Large Mine Permit 15 Mr. Robert J. Stahl of Aberdeen, SD had conducted a search of the property to identify any potential historic or archeological sites and he found none. A copy of the study was submitted with the permit 15. Since this site is in between two quarries that were in use at the time of the study. The area in question was researched and cleared.

- 4. The proposed mining operation will result in the loss or reduction of long-range productivity of aquifer, public and domestic water wells, watershed lands, aquifer recharge areas or significant agricultural areas.**

Operations have been ongoing in this area for some 90 years with no adverse affects to any water supplies. The little area added for this permit will not add anymore water use to the site. When the operation stops in 100 years, the quarry hole will fill with water from natural precipitation and will become a reservoir of water in the area. The post mining land use will have the potential to benefit the surrounding area during periods of drought.

- 5. The biological productivity of the land is such that the loss would threatened or endangered species of wildlife indigenous to the area:**

Mr. Arlo Haase, the conservation officer of the area, in a letter from 1/4/1983 stated he saw no endangered species in the area and saw no problems with future quarry operations for Dakota Granite permit 15. Being this area is next to two quarries, no forms of wildlife live there anymore. In the 1989 Cold Springs permit 373 Mr. Arlo Haase, makes a statement to this in his letter which is in Cold Springs Permit 373. He makes no comment of any endangered or threatened species in the area. The local wildlife that surrounds this area and could possibly travel through the expansion area includes whitetail deer, pheasant, partridge, cottontail rabbits, jack rabbits, red fox, raccoon, and mink.

In a 1-22-16 letter from Stan Michals of the South Dakota Department of Game, Fish, and Parks, Stan agrees with the initial permit survey. He does however state that two new endangered species could have critical habitat in Grant County. Species occurrence data is not available for the expansion area. With the expansion area being next to two quarries for many years there is no chance that these endangered species use this area as critical habitat.

6. **The Board finds that any probable adverse socioeconomic impacts of the proposed mining operation outweigh the probable beneficial impacts of the operation.**

Small scale operations are exempt from socioeconomic requirements as provided under **SDCL 45-6B-33.2**. The quarry operation has been around for 90 years and has greatly benefited the surrounding communities.

SDCL 45-6B-35, Mining operations –Applicable law. Every operator to whom a permit is issued pursuant to the provisions of this chapter may engage in the mining operation upon the affected lands described in the permit. Upon the performance of the subject to SS 45-6B-36 to 45-6B-46, inclusive with respect to such lands.

A Narrative description of the measures to be taken to comply with the operating and reclamation requirements of SDCL 45-6B-37 through 45-6B-46, ARSD 74:29:02, and ARSD 74:29:06 through ARSD 74:29:08.

Grading: SDCL 45-6B-37, ARSD 74:29:07:03, and ARSD 74:29:07:04

ARSD 74:29:07:03 grading and Backfilling—Necessity

- 1) **Public Safety and welfare;** the expansion area will be incorporated into the reclamation plan of permit area 15. The area will be reclaimed as a wildlife

area and allowed to naturally fill the rain water. The area around the quarry hole will be protected by the placement of a barricade of granite blocks. This is designed to alert everyone entering the area that a hazard exists. Fencing is already in place around the existing quarry area. Since most of the expansion area is inside the existing quarry it is already fenced in, all areas that are not fenced will be prior to operations. Barricades of granite will be placed by the edge of the expansion area.

- 2) **Technical and economic feasibility;** It would not be technically feasible to backfill an area when the areas around it are going to be filled with water.
- 3) **Surface and Mineral Ownership;** Dakota Granite Company will continue ownership throughout the reclamation process
- 4) **Land use requirements;** the expansion area does not have special land requirements.
- 5) **Pollution potential;** the expansion area will be reclaimed as a wildlife area and will add a source of clean water to the area. No pollution potential exists with this reclamation plan.
- 6) **Mineral resources value;** Dakota Granite will continue to mine until it is not economically feasible to mine. At that point the mineral value will be so low so the reclaimed wildlife area will be more valuable.

ARSD 74:29:07:04. Grading and backfilling, criteria.

- 1) **All reclaimed Slopes and slope combinations must meet the Following requirements:**
 - a. **Be visually and functionally compatible with the configuration of the surrounding area;** the edge of the quarry near the expansion area will be covered with topsoil and grasses planted. When the quarry fills with water the wildlife area will be a desirable contrast to the farmland in the area.
 - b. **Be suitable for the Post mining Use;** the intended post mining land use will be a wildlife habitat area. Since the edges will be planted and have a granite barrier for safety, the area will provide wonderful habitat for fish, waterfowl and other water animals.
 - c. **Be structurally stable;** Being that the quarry walls are solid granite and there is very little slope towards the quarry it is extremely structurally sound. The granite barrier will also prevent edges collapsing into the quarry hole.
 - d. **For fill slopes or other slopes composed of unconsolidated material, not exceed the angles of repose;** there will be no slopes in the expansion area. The grout mined out of this area has a natural angle

of repose of approximately 1:1 or 45 degrees. The grout pile has a natural slope on the sides.

- 2) **All grading, backfilling, and topographic reconstruction must control erosion and sedimentation, protect areas outside the affected land from slides or other damage, and minimize the need for long-term maintenance. Erosion control measures must be implemented during all phases of construction, operation, reclamation, and closure. Detailed plans indicating dimensions, location, spacing, and design of erosion control techniques are required;**
The expansion area will not cause any more erosion or sedimentation. The erosion control measures are already in place and the detailed plans are covered by permit area 15. The expansion area will have granite blocks along the edge to reduce erosion.
- 3) **All grading, backfilling, and topographic reconstruction must be completed as soon as feasible after mining ceases. The operator shall establish reasonable timetables consistent with good mining and reclamation practices;** the reclamation process is ongoing during the mining process and will begin in the expansion area at the same time as in Permit area 15. The reclamation timetable states that reclamation will begin as soon as the quarry has been exhausted of all usable granite. At this time it is not feasible to identify any date for this work to be done. When it starts it will be a 3 year process of reclamation. The first year will be building removal and grading of quarry edge then seeding of quarry edge. It will be closely monitored for the next 2 years then trees will be planted. It will be yearly checked after that for 30 years.
- 4) **Depressions for the accumulation of water are not allowed unless they are consistent with the approved post mining land use;** The post mining land use will be a wildlife habitat area and the water will be allowed to fill up the existing quarry and expansion area.
- 5) **Original drainage must be preserved as much as possible. Alternative drainage may be approved by the board if it is functionally compatible with and complements the prevailing hydrologic balance of the surrounding area;** the original drainage in the area has not been changed. The new expansion area or the original quarry area has not affected the original drainage.
- 6) **When high wall reduction or elimination is not proposed, the applicant must provide justification demonstrating that such reduction or elimination is impossible, impractical, or aesthetically undesirable. If they are not eliminated, all high walls must be stabilized;** the high wall cannot be reduced because it is part of the natural ground and trying to reduce it would only

destabilize a larger area than just the quarry. Being that the expansion area within the quarry is going to be a wildlife habitat area the high wall will not be a factor. The quarry will fill with water and will not be seen. Also the granite barrier along the edge will work as a natural guard from going over the high wall.

74:29:06:01. Presubmission conference -- Determination of post mining land use. In the area of the expansion the reclamation will be covered by permit 15. The expansion area edge will be graded and covered with topsoil then planted with native seeds in the spring. The larger part of the expansion area will be under water in the wildlife habitat area.

74:29:06:02. General requirements for determination of reclamation type. For all reclamation types the applicant must present a management plan for the purpose of determining the reclamation type that does the following:

(1) **Demonstrates that the affected land has the capability of meeting reclamation criteria in chapter 74:29:07.** The expansion area is small and will easily meet reclamation criteria

(2) **Demonstrates that the post mining land use is compatible with surrounding land uses.** Since the expansion area is surrounded by other quarries that are going to be made into Wildlife habitat area it only makes sense that it does too. Farmland is what surrounds the quarries at this time and a wildlife habitat area will be good for wildlife and also supplies an emergency source of water if needed by local farmers.

(3) **Details support and maintenance activities required for successful implementation.** Test reclamation plots were set up and have been growing for 20 years. They can be found below in **Revegetation ARSD 74:29:07:06 section 3.**

(4) **Includes assurance that the proposed post mining land use meets the following requirements:**

(a) **Is obtainable according to data on expected need and market.** The quarry will not shutdown as long as there is a market for the product and it is feasible to extract it.

(b) **Is supported by commitments from public agencies where appropriate.** Local wildlife conservation officer gave support for the reclamation plan. He committed on the wildlife that would benefit from the wildlife habitat area.

(c) **Is practicable on the basis of private financial capability for completion of the proposed operation.** Dakota Granite Company has put up bond that demonstrates its ability to take on the financial responsibility of the reclamation.

(d) **Is planned pursuant to a schedule attached to the reclamation plan that integrates the mining operation and reclamation with the post mining land use.** No reclamation plan can be scheduled for the expansion area. The area is located in a quarry that could run for 100 more years.

(e) **Is consistent with existing state and local land use plans and programs.** The state and county government agencies understand the reclamation plan for the expansion area.

(f) **Is of a beneficial use.** A wildlife area is more than just beneficial to wildlife. It is a place of recreation for locals and can be used as an emergency source of water for local farmers and residents.

74:29:06:03 Economic study required for determination of future mineral exploration and development as reclamation type. The economical impact of these 7.57 acres cannot determine the future reclamation plan. The amount of usable granite throughout the quarry site cannot be determined at this time because it is not feasible giving the size of the granite deposit.

74:29:06:04 Alternative post mining land use. The only post mining land use considered for this property is wildlife habitat area, so this does not apply to the expansion area.

Disposal of Refuse: SDCL 45-6B-38, ARSD 74:29:07:05, and ARSD 74:29:07:13.

The non-usable granite, called grout, will be hauled over to the Grout pile by Permit 15 or crushed by Fishers Sand and Gravel. The disposal of trash and other waste materials will be handled with the waste materials accumulated from the large scale permit area 15 that is adjacent to the expansion area. The trash disposal facilities for the expansion area will be located near the office on the north side of the Permit area 15 near 150th street. This area can be seen on Maps 1 and 2, site map.

Revegetation: SDCL 45-6B-39, ARSD 74:29:02:10, ARSD 74:29:07:06

ARSD 74:29:07:06. Revegetation. Revegetation must meet the following general requirements.

- 1) **Vegetative species and composition must be appropriate for the post mining land use. The species of vegetation to be used must be described in the**

reclamation plan, indicating the composition of seed mixtures and plant types and the seeding and planting rates per acre. Vegetative species and composition must be selected in consultation with the local conservation district, the landowner, and the department of game, fish, and parks if wildlife habitat is included as a post mining land use. Introduced, naturalized, or nonnative plant species may be used only if they are suitable for the post mining land use and are approved by the board; The expansion area is at the edge of the quarry and will have very little area to revegetate. The edge of the quarry near the expansion area will have native grasses planted. Most of the expansion area will be under water as the quarry fills with water to make a wildlife habitat area. This area will also be covered by permit area 15.

In permit 15 the area Soil Conservation Service Agent, Mr. Dale Johnson, had examined the plan and made recommendations for plant selection, seed mixtures and planting rates per acre.

Based on recommendations by Mr. Johnson in 1990, a native grass seeding mixture will be Alfalfa 15 lbs. psl/acre, Western Wheatgrass 4 lbs. pls/acre, Intermediate Wheatgrass 4 lbs. pls/acre, Green Needle grass 2lbs. pls acre, Sideoats Grama 2 lbs. pls/acre, Sand or Big Bluestem 3 lbs. pls/acre and Switch grass 2 lbs. pls/acre.

The area Conservation Officer, Mr. Arlo Haase, also examined the plan and provided a letter of recommendation available later in this small permit application.

Dakota Granite Company is the only owner of this land.

- 2) **The applicant must develop methods and procedures for revegetation which incorporate reference areas, baseline data comparisons, or other procedures to determine post reclamation revegetation success.** Very little revegetation will take place in the expansion area. The vegetation that will happen will be done like the reference areas described in the next section (3). Dakota Granite Company set up test reference area near Quarry 920 during the permit process for permit 15 that will cover the expansion area.
- 3) **A reference area may serve as a basis for comparatively measuring reclamation success. Reference areas must meet the following requirements:**
 - a. **Be large enough to make comparisons.** The area that was set up for the test plot was 100 feet by 100 feet and served as the test plot for all three quarries and the expansion area.
 - b. **Be located in areas where they will not be affected by future mining while serving their designated use.** The test plot is on top of a small grout pile to the South side of Quarry No. 920 that has been set aside for 20 years for this purpose.

- c. Be managed in a way that will not cause significant changes in the cover, productivity, species diversity, and composition of the vegetation. The test plot was not disturbed for 20 years other than in June to monitor the growth.
 - d. Be representative of the post mining land use. The test plot has been constructed and vegetated in accordance with the standard reclamation plan of the application for permit 15 and the expansion area.
- 4) Seeding and planting must be done in accordance with accepted agricultural practices. Affected lands shall be seeded during the first normal period of favorable planting conditions after final topsoil preparation, unless an alternative plan is approved. Any rills or gullies that would preclude successful establishment of vegetation or achievement of the post mining land use must be removed or stabilized. As areas become available for final reclamation, the seedbed will be prepared and planted in the spring of the year. The trees will be planted after the grasses have had two growing seasons to become established. Hills and gullies will be removed before revegetation begins.

Topsoil Salvage: SDCL 45-6B-40 and 74:29:07:07.

74:29:07:07. Topsoil management. In addition to the requirements of SDCL 45-6B-40, topsoil must be managed as follows:

- 1) All salvageable topsoil or other suitable material must be removed from the areas of affected land before the land is disturbed. The board may authorize topsoil to remain on areas where minor disturbances associated with construction and installation activities will occur, such as light-use roads, signs, utility lines, fences, and monitoring stations, provided that the minor disturbances will not adversely affect the soil resource. Most of the new area has already been stripped down to the granite. The topsoil from the expansion area will be stockpiled before the sand, gravel and clay is removed. The topsoil that can be salvaged from the 7.57 acre expansion area would be stored on the current piles on maps 1 and 2, Site Map.
- 2) Where long-term disturbances will occur, the board may authorize the temporary distribution of a portion of stockpiled topsoil or other suitable material to enhance stabilization of affected lands during periods of interim reclamation and temporary cessation of operations under the following conditions. The area of expansion is in a quarry that runs year round and does not have temporary cessation of operations.

- a. **The topsoil or subsoil capacity and productive capabilities are not diminished by the distribution or can be restored.** Topsoil piles are not distributed in this area because it is under operation.
 - b. **The topsoil is protected from erosion.** Topsoil used in the expansion area will be protected from erosion by the granite barrier.
 - c. **The topsoil will be available for final reclamation.** Topsoil from the expansion area will be stored at the same location near permit area 15. The location of topsoil stockpile will be at maps 1 and 2, Site map.
- 3) **The board may require topsoil or other suitable material to be analyzed by the operator prior to replacement to determine if fertilizer or other soil amendments are necessary to establish and sustain the required vegetation.** The initial removal of topsoil will go into a long term stockpile for final reclamation. Should the board determine a need to analyze this soil prior to final use, the process will be done.
 - 4) **Topsoil stockpiles must be marked with legible signs containing letters not less than six inches high in sufficient locations to clearly identify stockpiles. Such signs must be in place from the time stockpiling begins.** The stockpile from the expansion area would be minor if any. The topsoil would be added to the pile for permit 15. A metal sign and letters six inches high will be placed on all four sides of the topsoil pile. The piles are expected to be approximately; pile # 1= 300 feet long by 40 feet wide and 20 feet high, pile # 2 = 300 feet long by 50 feet wide by 20 feet high and pile # 3 will be 140 feet long by 40 feet wide by 20 feet high. The blocks and metal signs will be durable to withstand the 50 to 100 year duration of these operations. Stockpile location will be shown on maps 1 and 2, site map.
 - 5) **Topsoil or other suitable material shall be distributed as necessary to establish and sustain the required vegetation. The reclamation plan must contain an estimate of topsoil necessary to complete reclamation.** The topsoil needed for the expansion area is an estimate based on the current quarry ledge. This may change based on quarry expansion. The current edge is 500 feet long with a 10 foot buffer would be 5000 square feet. With 6 inches of topsoil it would be 2500 cubic feet of topsoil. All topsoil estimates are in the large scale permit 15.
 - 6) **If excess topsoil is present, the board may approve the use of the excess for reclamation purposes elsewhere.** Based on the numbers from Permit 15, there will be excess topsoil available. No excess topsoil will be available from the expansion area.

- 7) **Trees, large rocks, and other waste material which may hinder redistribution of topsoil must be separated from the topsoil before stockpiling;** All Trees, large rocks, and other waste material will be removed before the topsoil is stockpiled for future reclamation. Very little soil will come from the expansion area.
- 8) **If the amount of topsoil necessary for reclamation does not exist on the affected land, other suitable material such as subsoil may be used as a topsoil substitute if it can be demonstrated that the material is capable of establishing and sustaining the required vegetation. If other suitable materials are used in lieu of topsoil, they must be managed in accordance with all topsoil requirements in this section and with the following:**
 - a. **Topsoil substitute stockpiles must be segregated from topsoil stockpiles and signed as substitute topsoil stockpiles.** Based on the estimates of topsoil available and need, no substitute material will be needed.
 - b. **In addition to soil analyses, the board may require test plots to determine the suitability of topsoil substitutes as a plant-growing medium.** No substitute soils will be needed, abundant amount of topsoil available.

Hydrologic Balance: SDCL 45-6B-41, ARSD 74:29:02:11, ARSD 74:29:07:08 through ARSD 74:29:07:12, and ARSD 74:29:07:27.

Since this area was previously mined in would have no new affect on the water in the area. Mining in the expansion area will have no affect on the hydrological balance.

Sides, Subsidence or Damage Protection: SDCL 45-6B-42 and ARSD 74:29:07:16.

Since this expansion area is connected to our present quarry areas this is covered. Dakota Granite Company has chain link or barbed wire fence and a gate located in place along the township road with signs warning people to stay out, "Danger". Granite blocks were also placed around the perimeter of the quarry to form a barricade. Signs will be posted every 500 feet warning people to "Keep Out". As Far as the Cold Springs Granite side of the area, it should be covered by Cold Springs Granites permit.

Spoil Piles, Weeds: SDCL 45-6B-43, ARSD 74:29:07:14, and ARSD 74:29:07:15.

The expansion area will be within an existing Dakota Granite quarry that currently controls two noxious weeds. The same weed control method will be used for the expansion area as it is for the original quarry area. The two noxious weeds are identified

as Canadian Thistle and Leafy Spurge. Any infestation of either of these weeds will be controlled by spraying with an appropriate chemical during the spring emergence. Additional chemical control will be applied during the late summer as needed to control late growth.

Landowner Consultation, reclamation Type Development: SDCL 45-6B-44 and ARSD 74:29:06.

The proposed reclamation plan for this area is a natural wildlife area that will fill with water. The reclamation plan for Permit 15 will be used for this 7.57 acre area. All adjacent landowners were contacted and it was approved with permit 15. Cold Springs Granite will be sent a copy of the small permit application before it is submitted; a certified mail return receipt will be submitted.

Reclamation Choices, Operators Requirements: SDCL 45-6B-45, ARSD 74:29:07:18 through ARSD 74:29:07:26 and ARSD 74:29:07:01.

The choice of reclamation for the expansion area is wildlife habitat area. All operator requirements for this permit area will be covered by Dakota Granite Company. The expansion area will be reclaimed at the same time as the large mine permit 15 area.

Reclamation Timetable, Planting not required under certain conditions, Concurrent Reclamation: SDCL 45-6B-46 and ARSD 74:29:08.

This area is not scheduled for reclamation in the next year and a half. The area is many years away from being in a position for any reclamation to be completed. At this time it is not feasible to identify any date for this work to be done.

74:29:08:01. Requirements for concurrent reclamation. The expansion area is connected to our present quarry so no reclamation can be conducted before the larger quarry is shut down and ready for reclamation.

74:29:08:02. Requirements for interim reclamation. The expansion area is connected to our present quarry so no reclamation can be conducted before the larger quarry is shut down and ready for reclamation.

74:29:08:03. Requirements for final reclamation. The expansion area cannot have final reclamation done until the other quarry is ready to have final reclamation. Reclaiming the expansion area first would have an adverse affect on other mining operations.

74:29:08:04. Disturbance to avoid requirements -- Board order. Since the expansion area is within the existing quarry boundary, this does not apply.

Post closure Plan: SDCL 45-6B-91

The post closure plan for this area would be incorporated with the post closure plan for permit area 15. Since this area is smaller and connects to permit 15 all reclamation would be done whenever permit area 15 is done. The post closure plan for Area 15 is Wildlife Habitat area and will be planted and monitored like the test plots mentioned above in Section **ARSD74:29:07:06.**

- 1) **Treatment of Tailings.** This does not apply to this site
- 2) **Operation of monitoring systems.** Dakota Granite will fence or berm the area and allow vegetation to become established. Revegetation will be monitored and followed like the test plots for Permit 15 in Section O) above. Any erosion problems or lack of vegetation efforts will be to stabilize the erosion and reseed the area to help with vegetation growth.
- 3) **Inspection and Maintenance activities to ensure compliance with all applicable reclamation, design, and operating criteria.** Dakota Granite will monitor revegetation success and any erosion concerns while the reclamation is taking place.
- 4) **Procedures for maintaining the final cover and controlling erosion and fugitive dust.** Erosion and none vegetative areas will be monitored and corrected throughout the reclamation process.

Critical Resources: SDCL 45-6B-92

Since the area in question has been mined between two different mining companies for over 50 years, there are no new critical resources that would be affected.

1. **Wildlife:** No wildlife living in expansion area. It has been mentioned in other areas that two endangered species might have critical habitat in Grant County. No data shows they are in the expansion area and with current mining operations it is unlikely any wildlife live in the expansion area.
2. **Aquatic Resources:** No water flows naturally into the area.

3. Vegetation: Plant life living in the expansion area is very minimal and the endangered species are not known to be present in the expansion area.
4. Water: No drinking water is affected by this area.
5. Visual Resources: The area is in a quarry hole so it does not cause any visual constraint
6. Soils: Most of the soil from this area was removed many years before this permit.
7. Cultural Resources: Nothing is of any historical or cultural significance.
8. Air Quality: There are no homes or recreational areas near the quarry. There are only more quarries and farm fields.
9. Noise: There are no homes or recreational areas near the quarry. There are only more quarries and farm fields.
10. Land designated as special, exceptional, critical, or unique: This expansion area borders permit area 15 and that had no special land designations.

74:29:07:01. General requirements for all reclamation types. All mining operations must comply with the general requirements in §§ 74:29:07:02 to 74:29:07:17, inclusive, and with the following requirements:

(1) Reclamation must rehabilitate the affected land to a condition that meets the selected post mining land use. The post mining land use for the expansion area is wildlife habitat. The edge of the expansion area will be planted with native plants and monitored for years.

(2) All reclamation activities are subject to the concurrent, interim, and final reclamation requirements of chapter 74:29:08. The location of the expansion area makes so that there will be no interim reclamation.

(3) All reclamation required by the approved reclamation plan must be completed prior to final and full bond release. All reclamation will be completed soon after the quarry is closed.

74:29:07:08. Hydrologic balance -- Water quality. To minimize disturbances to the prevailing hydrologic balance of the affected land and adverse effects on the quality and quantity of surface water and groundwater, both during and after the mining operation and during reclamation, the following requirements must be met:

- (1) South Dakota water rights laws and regulations must be complied with.** The expansion area complies with all water rights laws as do the other permit areas
- (2) South Dakota water quality laws and regulations must be complied with.** The expansion area will comply with all water quality laws as do the other permit areas.
- (3) Dredge and fill laws in sections 401 and 404 of the Federal Clean Water Act as they existed on February 1, 1987, must be complied with.** No dredging or filling will take place in the expansion area.
- (4) Temporary or large sedimentation, erosion, or drainage control structures must be removed after affected lands have been vegetated and stabilized, if required by the reclamation plan.** All man-made erosion control measures will be removed from the expansion area as soon as it reaches full reclamation.
- (5) Permanent diversion structures must be designed not to erode during the passage of the approved design precipitation event.** The large granite barriers used in the expansion area to control erosion will not erode do to any precipitation event.
- (6) Unchannelized surface water must be diverted around the operation as necessary to minimize pollution and erosion and to protect the operation and downstream water users who have prior water rights.** No surface water is close enough to the expansion area to cause any pollution downstream.

74:29:07:09. Surface runoff diversions. Surface runoff diversions must meet the following general requirements:

- (1) In soils or other unconsolidated material, the sides of diversion ditches may be no steeper than two horizontal to one vertical.** The sides and, in ditches carrying intermittent discharges, the bottom must be stabilized by seeding with grasses or other methods specified in the reclamation plan as soon as practicable. There are no diversion ditches near the expansion area.
- (2) In rock, the sides of diversion ditches must be stable.** There are no diversion ditches near the expansion area.
- (3) Rock riprap, concrete, geosynthetic liners, geosynthetic filter media, soil cement, or other methods must be used where necessary to prevent erosion.** Erosion control in the expansion area is controlled by granite barriers.

(4) Culverts or bridges must be installed where necessary to allow access. No culverts or bridges are needed in the expansion area.

(5) Diversion ditches must be constructed to minimize hazards to humans, wildlife, or livestock. There are no diversion ditches near the expansion area.

(6) Surface runoff diversions around milling or processing facilities using potentially toxic chemicals or materials must be capable of carrying the flow from the six-hour probable maximum precipitation event without causing erosion. There are no diversion ditches near the expansion area and no milling or toxic chemicals.

(7) All other surface water diversions must be capable of carrying a minimum of the two-year six-hour precipitation event without causing erosion. There are no diversion ditches near the expansion area.

(8) Diversion ditches may not discharge on topsoil storage areas, spoil, or other unconsolidated material such as newly reclaimed affected lands. There are no diversion ditches or topsoil storage areas in the expansion area. There are no storage areas in the expansion area.

74:29:07:10. Diversions of intermittent and perennial streams. Permanent or temporary diversions of intermittent and perennial streams on affected lands must meet the following general requirements:

(1) Spoil, topsoil, or other unconsolidated materials may not be pushed into or placed within 10 feet of the banks of a perennial or intermittent stream or in a location which may subject them to bank full flooding except during the construction of the diversion as approved in the permit. There are no perennial or intermittent streams located in or near the expansion area.

(2) The banks of a diverted perennial or intermittent stream must be stabilized and vegetated with approved species as soon as practicable. There are no perennial or intermittent streams located in or near the expansion area.

(3) The banks and channel of a diverted perennial or intermittent stream must be protected where necessary by rock, geosynthetic liners, geosynthetic filter media, riprap, or similar measures to minimize erosion and degradation of water quality. Permanent diversions must be designed and constructed to prevent erosion and to carry flow consistent with the flow produced by stream's original

width, depth, shape, and gradient. There are no perennial or intermittent streams located in or near the expansion area.

(4) The board may not permit mining on the flood plain of a perennial or intermittent stream if it would cause the uncontrolled diversion of the stream during bank full periods. There are no perennial or intermittent streams located in or near the expansion area.

(5) Channel and flood plain diversions must be designed to prevent erosion during the passage of the approved design precipitation event. Cross-sections and other hydrologic data for the existing stream above, below, and within the diversion area must be used to determine the flow capacities, channel configuration, and shape of the diversion. Such design information must be included in the reclamation plan. The expansion area is not in a channel and flood plain. No diversions happen in or near the expansion area.

(6) The water quality of a diverted intermittent or perennial stream must meet surface water quality standards in chapter 74:51:01. There are no perennial or intermittent streams located in or near the expansion area.

74:29:07:12. Roads and railroad spurs. Constructed or upgraded roads and railroad spurs are affected land from the location where they provide exclusive service to the mining operation and must be covered by the reclamation bond. They must meet the following general requirements:

(1) When feasible, roads and railroad spurs must not be constructed within riparian zones. No roads or railroad spurs were built in a riparian zone. All other roads were constructed before the expansion area was purchased. It may be necessary to move the road in the future but the planned area will not be in a riparian zone.

(2) Roads within riparian zones must be constructed so that negative effects on streams are minimized; No roads or railroad spurs were built in a riparian zone. No streams are located near the access roads to the expansion area or any future roads.

(3) Roads or railroad spurs within the riparian zone of a coldwater permanent fishery designated pursuant to chapter 74:51:02 or 74:51:03 may be subject to the requirements of §§ 74:29:07:29 to 74:29:07:32, inclusive. No roads or railroad spurs were built in a riparian zone. No cold water permanent fishery are located near the access roads to the expansion area or any future roads.

- (4) Streams must be crossed at or near right angles unless contouring down to the stream bed will result in less potential stream bank erosion. Ford entrances and exits must be constructed to minimize erosion and prevent water from flowing down the roadway. No roads or railroad spurs will cross streams. There are no streams in the area.
 - (5) Drainage control structures must be used as necessary to control runoff and to minimize erosion, sedimentation and flooding. When used, drainage control structures must be installed as road construction progresses. Roads will be built on the granite surface and lined with granite blocks. Therefore no erosion will occur.
 - (6) Culverts must be installed at prominent drainage ways. Culverts must be protected from erosion by rock, concrete, riprap, or other approved means. Culverts and drainage pipes must be constructed and maintained to avoid plugging, collapsing, or erosion at inlets and outlets. No culverts will be necessary for future roads being it will be built on a flat granite surface.
 - (7) Trees and vegetation may be cleared only to the width necessary to maintain slope stability and to serve traffic needs. Expansion area has no tree.
 - (8) Access and haul road drainage structures must be routinely maintained. Access road will be maintained and no drainage structures will be required.
 - (9) Other transport facilities and utilities must be constructed and maintained to control degradation of water quality and quantity. No transport facilities and utilities were constructed for the expansion area.
 - (10) An applicant may request in writing to the board that a road or railroad spur be permitted to remain unclaimed if the surface landowner or a local, state, or federal agency has requested that the road or spur remain unreclaimed and agrees to be responsible for future maintenance. The operator must furnish proof of such a request. No surety is required for reclamation of such a road or spur and reclamation of the road or spur is not required if the request is approved by the board. . Any future roads may be unclaimed and we will request approval by the board at that time.
- 74:29:07:13. Buildings and structures. All buildings and structures constructed, used, or improved by the operator must be dismantled and removed unless it can be demonstrated to the board's satisfaction that they will be consistent with

the approved post mining land use. There are no buildings in the expansion area and none will be built. This does not apply to the expansion area.

74:29:07:14. Spoil. Spoil on all affected land must meet the following general requirements:

(1) Except where diversions are approved by the board, all spoil must be located to avoid blocking intermittent or perennial drainages. Ephemeral drainages may be blocked if the engineering and environmental methods used for dealing with runoff control and sedimentation is approved by the board. There are no drainages in the expansion area and all grout will be removed by dump truck and hauled to the grout pile or over to Fishers Sand and Gravel to be crushed.

(2) If permanent spoil dumps are approved by the board, the board may require the operator to demonstrate the long-term stability of the dumps through geotechnical stability analyses conducted by a registered professional engineer competent in the field of geotechnical analysis. No spoil dumps will be located in or near the expansion area.

(3) The board may require the operator to analyze spoil material to determine if it will be a source of water pollution. If the spoil material may be such a source the operator must describe proposed procedures for mitigating the condition. No spoil dumps will be located in or near the expansion area.

(4) All spoil material that is determined to be toxic or acid-forming or that will prevent reestablishment of vegetation on the reclaimed land surface must be properly disposed of during the mining operation unless such materials occur naturally on the land surface. No spoil dumps will be located in or near the expansion area.

74:29:07:18. Requirements for specific types of reclamation. The requirements in §§ 74:29:07:19 to 74:29:07:27, inclusive, apply to the specific type or types of reclamation selected pursuant to SDCL 45-6B-45. These requirements are to be used to develop, when practicable, a multiple-use reclamation plan.

The individual who develops the reclamation plan must be competent in the management and planning of the specific type or types of reclamation selected. The expansion area will be a wildlife habitat area. The 500 feet of quarry edge will be graded and planted with native grasses and trees. It will be monitored for 30 years along with the existing permit area 15. The individual

who developed the reclamation plan used the help of the South Dakota, Game, Fish and Parks officer and the local Soil Conservation Service Agent, Mr. Dale Johnson. With their help and the test plots study area, the Dakota Granite employee was able to develop the reclamation plan.

74:29:07:22. Wildlife habitat. The following requirements apply to wildlife habitat as an approved post mining land use:

(1) Reclamation shall be directed toward optimizing habitat diversity for game and nongame species. The surrounding unaffected land must be considered in determining habitat diversity goals. The local South Dakota Conservation Officer, Mr. Stan Michals was consulted on wildlife species. Mr. Michals agreed with the original survey that was done on the larger permit area. He added that two endangered species might have critical habitat in Grant County. These species were not considered for the reclamation plan. As for plant diversity in 1990 Mr. Dale Johnson was consulted from the Soil Conservation District. He provided the seed mixture for the reclamation found above in section **ARSD 74:29:07:06.**

(2) The applicant must identify the wildlife species to benefit from the proposed reclamation. The local wildlife that surrounds this area and could benefit from the reclamation of the expansion area includes whitetail deer, pheasant, partridge, cottontail rabbits, jack rabbits, red fox, raccoon, mink and a variety of birds including robins, blue jays, blackbirds, crows and swallows. Stan Michals also indicated that the Dakota skippers and Poweshiek skippering are two endangered species that might have habitat in Grant County. These species might benefit from the reclamation of the expansion area.

(3) The affected land must be revegetated with native trees, shrubs, forbs, grasses, or other approved alternative vegetation. Revegetation composition, spacing, and arrangement must be based on consultation with the department of game, fish and parks or on an approved reference area. Woody species and understory vegetation shall be planted at rates which can reasonably be expected to yield densities appropriate for the designated wildlife species. Mr. Dale Johnson was consulted from the Soil Conservation District. He provided the seed mixture for the reclamation found above in section **ARSD 74:29:07:06.** The native grasses will be planted first then after 3 years of growth trees and scrubs will be planted.

(4) Alternative wildlife habitat reclamation objectives shall be developed in consultation with the department of game, fish and parks and approved by the

board. The size of the expansion area is so small it makes it so alternative wildlife habitat reclamation objectives are not needed.

(5) Sites to be reclaimed for recreational fisheries must provide suitable habitat for the selected fish species. The site will not be designated as specifically a recreational fishery

(6) Surface impoundments to be reclaimed for recreational fisheries must have at least 25 percent of the bottom at a minimum depth of 20 feet to ensure sufficient water during drought, limit growth of undesirable weeds, and reduce the potential for winterkill. The site of the expansion area will not be designated as specifically a recreational fishery.

(7) Streams to be reclaimed for recreational fisheries must have a baseline study prepared by an individual who is competent in the field of fisheries management which addresses faunal, floral, and channel characteristics and is approved by the department of game, fish, and parks. Streams to be reclaimed for recreational fisheries must be reconstructed so that they provide suitable habitat for the selected fish species. Reclamation must achieve to the extent possible the premining pool to riffle ratio, width-to-depth ratio, and stream bed particle sizing and sorting ratio, unless modifications to enhance the stream habitat are approved by the department of game, fish and parks and the department. Reclamation techniques such as stream bank stabilization and revegetation, construction of wing deflectors, k-dams, or other management techniques may be incorporated into the reclamation plan and must have the approval of the department, the department of game, fish and parks, and the board. No streams in the expansion area so this does not apply.

(8) Sites to be reclaimed for recreational fisheries must have safe bank access. The site will not be designated as specifically a recreational fishery

(9) Reclamation is complete when the following conditions are met:

(a) The surviving vegetation species composition is capable of supporting the wildlife species identified as those to benefit from the proposed reclamation. The local wildlife authorities were consulted to make sure the reclamation plan benefits native species.

(b) The understory cover is adequate to control erosion. Grasses will be planted as described in section (3) above.

(c) Stream fisheries approximate or exceed the baseline condition of the stream or that of the approved reference area. The site will not be designated as specifically a recreational fishery

(6) Surface impoundment fisheries meet the post mining land use as described in the approved reclamation plan. The site will not be designated as specifically a recreational fishery

74:29:07:27. Permanent surface impoundment. The following requirements apply to a permanent surface impoundment as an approved post mining land use:

(1) Dams must be designed to contain and, if necessary, pass the design precipitation event. All dam designs must be reviewed and approved by the division of water rights. The expansion area is not considered a dam and neither does the permit area next to it. This does not apply.

(2) If necessary to prevent failure, dams must contain an overflow notch and spillway. Overflow notches and spillways must be riprapped with rock, concrete, or other suitable materials to prevent erosion. The expansion area is not considered a dam and neither does the permit area next to it. This does not apply.

(3) Slopes around surface impoundments, unless otherwise approved by the board, may not exceed two to one, except from five to ten feet below the expected water line where slopes may not exceed three to one. If a swimming area is proposed, the slope, unless otherwise approved by the board, may be no steeper than five to one throughout the area proposed for swimming. All slopes around surface impoundments must be graded and contoured to minimize hazards to humans, livestock, and wildlife. The slopes around the expansion area will be graded before final reclamation. The edges will have granite barriers to prevent accidental falls by people or wildlife.

(4) The board may require the operator to determine if sources of water contamination within the impoundment exist. Such sources must be treated to prevent contamination of the impounded water. The source of water for the expansion area will be ground water or rain water and should not contain any contamination.

(5) Surface impoundments intended for use as recreational fisheries or recreation areas must meet the applicable requirements of § 74:29:07:23. The site will not be designated as specifically a recreational fishery.

(6) Reclamation is complete when the intended use of the surface impoundment has been attained and all other requirements of the reclamation plan have been met. Reclamation will start immediately after shutdown and will be completed within 3 years of shutdown.

Dakota Granite Granite Company
Permit Conditions
Permits (Small expansion areas)

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74:29:03:16. Technical revisions

- (1) Adding contiguous, affected land within the permit boundary with the total of such additions not to exceed twenty (20) percent for the permitted affected land area;
- (2) Modifying seeding mixtures or rates;
- (3) Modifying water usage and sources as allowed by water rights permits;
- (4) Modifying dust control measures;
- (5) Modifying blasting methods and control measures by use of new procedures or products developed in the future provided they are operationally and economically feasible;
- (6) Modification or relocation of erosion, sedimentation, or drainage control;
- (7) Modifying operating time tables for proposed operations
- (8) Locating or modifying ancillary facilities within the permit boundary, including equipment and granite storage areas, parking lots, office buildings, septic systems, perimeter fencing, utilities (phone lines, natural gas lines, power lines, water lines) crushing areas, sludge ponds, stockpiles and rubble sites;
- (9) Modifying and relocating haulage routes and access roads within the permit boundary;
- (10) Relocating chemical or petroleum storage areas;
- (11) Implementing new surface mining techniques or equipment;
- (12) Implementing new and improved reclamation techniques as they are developed;
- (13) Modifying post closure plans and monitoring time frames;
- (14) Change the slope angle for final reclamation of specific sites where visually and functionally compatible.

South Dakota
Department of
Game, Fish and Parks

Division of Parks & Recreation

August 21, 1989

RECEIVED
JUL 11 2016
MINERALS & MINING PROGRAM

Mr. Don Sieger
Cold Spring Granite Company
202 South Third Avenue
Cold Spring, MN 56320

Dear Don:

The following information covers the requirements of wildlife habitat as the post-mining land use for your three granite quarry sites near Milbank, SD. These quarries are located more specifically as follows:

Carnelian No. 1 located on a portion of the North 1/2 of Section 17, T120N, R47W and the SW 1/4 of Section 8, T120N, R47W.

Carnelian No. 2 located on a portion of the South 1/2 of Section 7, T120N, R47W.

Carnelian No. 3 located on a portion of the North 1/2 of Section 13, T120N, R48W.

The wildlife species present on these lands and surrounding lands include whitetail deer, pheasant, partridge, cottontail rabbit, jack rabbit, red fox, raccoon, mink, and a variety of birds including robins, blue jays, blackbirds, crows, and swallows.

The Company plan to create a habitat suitable for the species noted above is realistic. Since the overall land area is relatively small, these species will naturally populate the affected areas without a stocking program.

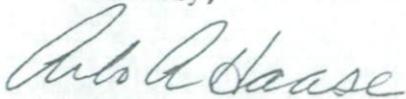
Cold Spring Granite Company's plan to vegetate the disturbed land area with a mixture of alfalfa, wheat grass and sweet clover is acceptable. Trees of red pine, black locust, and popple shall be planted on a 10' X 10' staggered spacing. Local shrubs and forbs will invade the lands from the surrounding area and establish a natural density.

The vegetation plan noted above shall be applied to all nearly horizontal land areas that have been disturbed excluding the sides of the grout piles. These sides may be left as broken granite rock without soil, sand, or gravel on them. The size fraction of the final surface should be made of blocks ranging in size from 1 to 3 feet.

✓

I see no endangerment of these species of wildlife by a quarry operation,
nor do I see any problem in the future with a quarry type of operation.

Sincerely,



Arlo A. Haase
Wildlife Conservation Officer
Department of Game, Fish & Parks
PO Box 404
Milbank, SD 57252



DEPARTMENT OF GAME, FISH, AND PARKS

Division of Wildlife – Regional Office
4130 Adventure Trail
Rapid City, South Dakota 57702-0303

January 22, 2016

RECEIVED
JUL 11 2016
MINERALS & MINING PROGRAM

Dakota Granite
Attn. Jason Redmond
48391 150th Street
PO Box 1351
Milbank, SD 57252

Coldspring
Attn. Steven R. Chouanard
17482 Granite West Road
Cold Spring, MN 56320-4578

Subject: Dakota Granit, Cold Spring Granite Mine Permit Applications

Gentlemen:

This letter is in response to your requests for information on fulfilling both large and small scale permit application requirements for wildlife surveys: SDCL 45-6B-54(8). Your permit application submittals result from Cold Spring Granite and Dakota Granite exchanges of previously permitted parcels in Grant County. Both parcels have GFP preliminary wildlife survey data from initial permits efforts. GFP review of that data indicates existing surveys are still pertinent for the new permitting effort. Mine permitting also requires description of critical resource as found in SDCL 45-6B-92(1). This section of your permit application may need updating. Since the initial permitting effort, the United States Fish and Wildlife Service has listed the Dakota skippers (*Hesperia dacotae*) and Poweshiek skipperling (*Oarisma poweshiek*) as threatened under the Endangered Species Act of 1973. Additionally, the Fish and Wildlife Service has designated about 19,900 acres of critical habitat in Minnesota, North Dakota and South Dakota. Species occurrence data is not available for your specific project area but potential habitat exists in native prairie in Grant County. Please make this addition to your company's permit applications. Please be free to contact me with any wildlife related questions regarding your mining operations. Thank you and good luck.

Sincerely,

Stan Michals
Energy and Minerals Coordinator

Cc: E. Holm (SD/DENR)

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Sunset Small Mine Expansion Map



- Yellow – Top Soil
- Purple – Active Grout Pile
- Red – Test seeding plot
- Green – Burn Pit

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Whetstone Small Mine Expansion Map



- Yellow – Top Soil
- Purple – Active Grout Pile
- Red – Test Seeding Plot
- Green – Burn Pit
- White – Potential Road

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22105-00

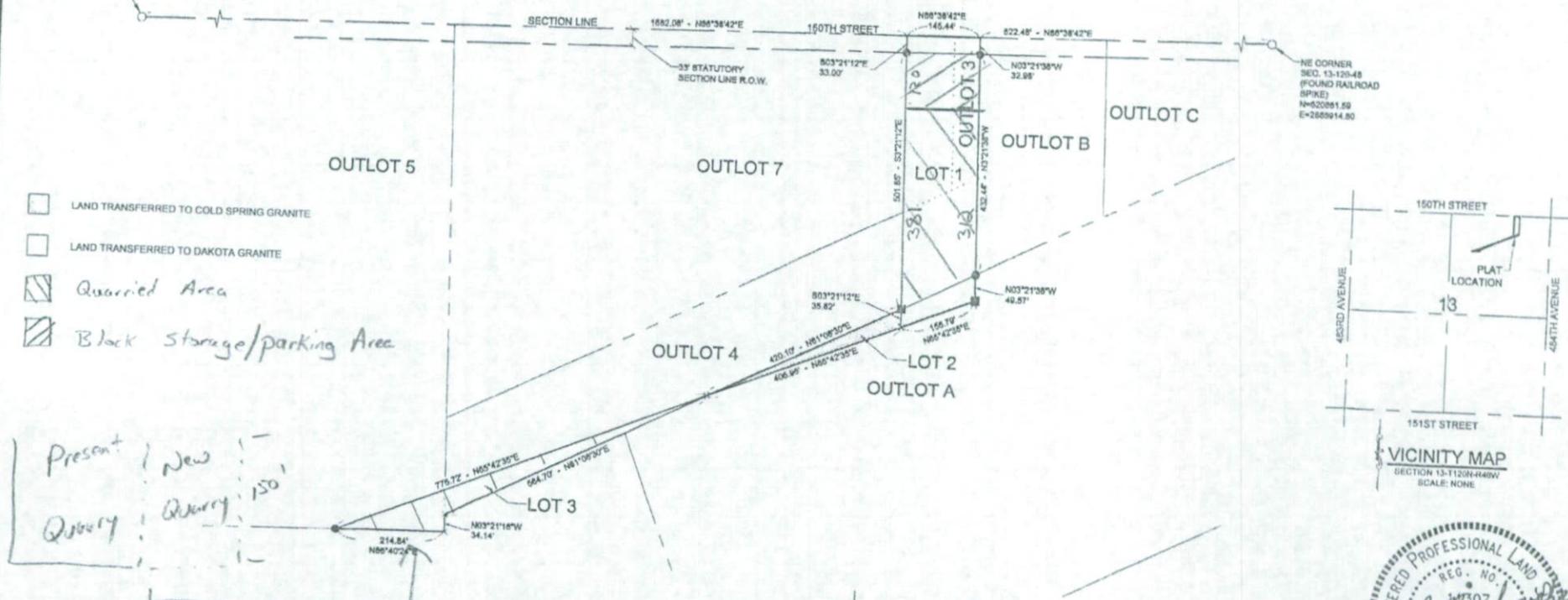
PLAT OF
 LOTS 1, 2 AND 3 OF COLD SPRING-DAKOTA GRANITE SECOND ADDITION.
 LOCATED IN OUTLOTS A, 3, 4, 5 AND 7 OF SECTION 13, TOWNSHIP 120 NORTH,
 RANGE 48 WEST OF THE 5TH P.M., GRANT COUNTY, SOUTH DAKOTA

VACATION NOTICE
 THIS PLAT SHALL VACATE A PART OF LOTS 3, 4, 5 AND 7 OF THE
 PLAT OF OUTLOTS 3, 4, 5, 7 IN THE NE1/4 OF SECTION 13,
 TOWNSHIP 120 NORTH, RANGE 48 WEST OF THE 5TH P.M., GRANT
 COUNTY, SOUTH DAKOTA, FILED IN PLAT BOOK B, PLAT NUMBER 51
 AND
 SHALL VACATE A PART OF OUTLOT A OF THE PLAT OF PROPERTY
 OF DAKOTA GRANITE COMPANY IN NE1/4, SECTION 13, TOWNSHIP
 120 NORTH, RANGE 48 WEST OF THE 5TH P.M., GRANT COUNTY,
 SOUTH DAKOTA, FILED IN PLAT ENVELOPES, PLAT NUMBER 281.

Present
 Quarry
 New
 Quarry
 150'

N1/4 CORNER
 SEC. 13-120-48
 (FOUND REBAR)
 N=420706.36
 E=2663269.81

NE CORNER
 SEC. 13-120-48
 (FOUND RAILROAD
 SPIKE)
 N=620851.59
 E=2669914.80



- LAND TRANSFERRED TO COLD SPRING GRANITE
- LAND TRANSFERRED TO DAKOTA GRANITE
- Quarried Area
- Black Storage/parking Area

Present
 Quarry
 New
 Quarry
 150'

LOT 1 CONTAINS 1.8± ACRES OF WHICH
 0.1± ACRES BEING STATUTORY
 SECTION LINE R.O.W.
 SECTION LINE R.O.W.
 LOT 2 CONTAINS 0.2± ACRES
 LOT 3 CONTAINS 0.5± ACRES

Document # _____
 STATE OF SOUTH DAKOTA COUNTY OF GRANT-ss
 Recorded this _____ day of _____, A.D., 20____
 at _____ M., Plat Case _____ Plat No. _____
 Register of Deeds

SHEET 1 OF 2

- LEGEND**
- MONUMENT FOUND
 - MONUMENT SET THIS SURVEY (50' REBAR WITH STAMPED PLASTIC CAP #11307)
 - MONUMENT SET THIS SURVEY (PAINT MARK ON GRANITE)
 - × CORNER FALLS IN QUARRY PIT AND INACCESSIBLE AT THE TIME OF THIS SURVEY.

HORIZONTAL DATUM: NAD 83 (2007)
 PROJECTION: SOUTH DAKOTA STATE PLANE COORDINATES NORTH ZONE (4001)
 BASIS OF BEARING: GEODETIC NORTH
 ALL DIMENSIONS SHOWN ARE IN TERMS OF U.S. SURVEY FEET



PREPARED BY:
 BANNER ASSOCIATES, INC.
 MILBANK, SOUTH DAKOTA
 (605) 323-6342
 SEPTEMBER 2016

Map 1

Rev. 1

Small Permit Application Added Item

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Certification of Application Form: A copy is found later in the application.

SDCL 45-6B-15: We will get the letter once this is approved

SDCL 45-6B-37, ARSD 74:29:07:49 (1) (d), (2), and (7), and ARSD &4:29:07:27(3):

The final slope along the quarry edge in the expansion area will be 25% grade or 4 to 1. There are no plans to allow swimming in the quarry after reclamation. It is to be a wildlife habitat area. The area outside the expansion area will be protected from slides like all other ledges along the permit area 15. The ledges will have a slight grade and will have large granite blocks placed along the edge to prevent erosion. These blocks will also act as a natural safety barrier. The landforms created by grading are a nice flat area with a slight slope. This will be compatible with the flat farmland surrounding the quarry.

The block storage areas are large flat areas and will be reclaimed with little to no grading to be compatible with the surrounding farmland. After reclamation they will act as feeding and bedding areas for wildlife. With large blocks of granite around the perimeter and a very flat area the area will be stable. The block storage areas will be reclaimed and monitored after the quarry is closed at the same time as the rest of the quarry is reclaimed.

The diversion pipeline that exists east of the Whetstone quarry will remain in place. This drainage pipeline will not be disrupted during the development of the quarry or the block storage area.

SDCL 45-6B-38, SDCL 45-6B-40, ARSD 74:29:07:P05, and ARSD 74:29:07:07 (1) (4) and (5):

I estimate that we will salvage 1500 cubic yards of top soil from the land exchange area. We will require about 1200 cubic yards of topsoil for reclamation of the quarry edge and the block storage area with the remaining 300 cubic yards of the top soil being used to reclaim the grout pile. The top soil stored on the north side of the Whetstone land exchange area is not part of the land exchange. The topsoil pile will remain the property of Dakota Granite.

SDCL 45-6B-39, ARSD 74:29:07:22(3): Copy included in application

SDCL 45-6B-41, ARSD 74:29:02:11(1)(2)(9) and (10) and ARSD 74:29:07:04(2):

A copy of Water sampling done in 1991 is included in this report. The testing of water shows there was good water quality at the time. There will be a slight grade on the ledges and large granite barriers will be placed to control erosion. Also native seed will be planted to prevent erosion. No chemicals will be used in the expansion area. No milling will be taken place in the expansion area. Copy of Spill Contingency Plan is later in this application. Geological Cross Section and the surface water inventory map are attached to the mine permit application.

SDCL 45-6B-42 and ARSD 74:29:07:16:

There will be no subsidence in the expansion area. No mining will be done below the surface so there will be no chance for cave-ins. The expansion area is on solid granite down to an unknown depth. There is no chance the area will sink into the ground.

SDCL 45-6B-43 and ARSD 74:29:07:15:

A copy of a letter from Nathan Mueller of Grant County Weed Department is included later in this application. It states that the weed control plan for the expansion area is in compliance with Grant County Weed Department mandated practices.

SDCL 45-6B-44: A copy of a written statement from Steve Chouanard saying he received the application is included.

SDCL 45-6B-46:

Most of the expansion area will not be vegetated because the quarry will fill with water and be considered a lake. A large piece of the expansion area will be under water. The edge of the quarry and the Block Storage area will be vegetated with the approved seed mix. Most of the grout from the expansion area will be hauled to Fisher Sand and Gravel with some of the grout being placed on our existing grout pile.

SDCL 45-6B-54(8):

It is reworded at the beginning of the application. When mentioned in this application "land exchange area" is defined as the land exchange areas shown on Maps 1 and 2.

SDCL 45-6B-92(1), (2), (3), and (6):

The expansion area will be at the edge of our current quarry. Most of the expansion area will be under water at the time of reclamation. It is not critical winter range now because it is in a fenced area and will not be critical at the time of reclamation. No cold water fisheries will be in the expansion area. Any fish found in the quarry after reclamation will be a natural occurrence. There are no Riparian zones or wetlands located in the expansion area. The soil in the expansion area is not highly erosive. Most of the expansion has already been stripped to the stone and will have little vegetation until reclamation takes place. It may be necessary to move our current road at the Whetstone approximately 250 feet to the east; the new road would be built in the same manner as the old road. The road would be directly on the stone surface with no additional stripping needed. Reclamation of the road would be carried out in the same manner as the rest of the quarry.

ARSD 74:29:06:02(4) (a) and (e):

The reclamation type is obtainable according to the expected need in the area because it has been approved in the past under permit 15. Permit 15 has been approved by the Department of the Game, Fish and Parks and the SD DENR. The wildlife already uses the land in its current state and we are planning on improving on the sight with our reclamation plan. The reclamation plan is consistent with existing state and local land use plans because it was approved under our large mine permit area 15.

ARSD 74:29:07:01(2) and ARSD 74:29:08:02:

The topsoil salvage from the expansion area will be limited because it has already been quarried or stripped off. The topsoil in this area has interim reclamation. The topsoil from the expansion area will be stored with our existing topsoil piles on permit 15. The soil is seeded with the approved seed mix and left undisturbed until reclamation begins.

ARSD 74:29:07:02(7):

Most of our grout from the expansion area will be hauled to the Fishers crushing sight with the possibility of some of the material going on our existing grout piles on permit 15 as seen on the maps. The reclamation of these grout piles will be on going throughout the life of the quarry and finished when the quarry closes during reclamation under our current plan. No grout piles will be in the expansion area. We are surrounded by farmland and open to wildlife. After reclamation the area will be a large lake surrounded by flat ground much like the farmland around it. The wildlife thrives in this area now and we will reclaim the sight to be beneficial to the wildlife.

SDCL 45-6B-20:

Reclamation bond will be included in with Permit 15

ARSD 74:29:03:16:

Technical Revisions are included later in this application.



DEPARTMENT OF GAME, FISH, AND PARKS

Division of Wildlife – Regional Office
4130 Adventure Trail
Rapid City, South Dakota 57702-0303

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MINERALS & MINING PROGRAM

June 9, 2016

Dakota Granite
Attn. Jason Redmond
48391 150th Street
PO BOX 1351
Milbank, SD 57252

RE: ARSD 74:29:07:06. Revegetation

Dear Steve,

This is in response to your request for agency approval of the reclamation seed mixture for the quarry expansion permit. South Dakota Department of Game Fish, and Parks finds the previously approved native grass seeding mixture appropriate to achieve the post mine land use at the mine expansion area.

Please contact me if you have questions or concerns with the information provided.
Good luck.

Sincerely

Stan Michals

Energy and Minerals Coordinator
SD/Game, Fish and Parks
Office (605)394-2589
Fax (605)394-1793
Stan.Michals@state.sd.us

CC: E. Holm SD/DENR

"Serving People, Managing Wildlife"

The Division of Wildlife will manage South Dakota's wildlife and fisheries resources and their associated habitats for their sustained and equitable use, and for the benefit, welfare, and enjoyment of the citizens of this state and its visitors.



COLDSPRING

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To Whom It May Concern

I received the small permit application from Dakota Granite on April 27, 2016. All information and maps were included in the application. If you have any questions about the application please contact me at 320-685-4808.

Steve Chouanard
17482 Granite West Road
Cold Spring, MN 56320
schouanard@coldspringusa.com
320-685-4808

To whom it may concern:

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Dakota Granite has been and continues to be in compliance with Grant County Weed Department mandated weed control practices.

Dakota Granite makes use of Chemical, Mechanical and Bio-Control methods as the need dictates.

In ongoing cooperation Dakota Granite consults with Grant County Weed Department when questions or concerns arise.

If you are in need of additional information contact:

Grant County Weed Department

210 E. 5th Ave.

Milbank, SD 57252

Ph.# 605-432-1489

Nathan Mueller Grant County Weed Supervisor

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MINERALS & MINING PROGRAM

Name of Business: **Dakota Granite Co.**

Facility Phone 650-432-5580

Types of Work or Hazardous Substances Used: Fuel, Diesel Fuel, Oil, Hydraulic Fluid and Anti-Freeze Fluid

Spill Prevention

General Requirements

- Ensure all hazardous substances are properly labeled.
- Store, dispense, and/or use hazardous substances in a way that prevents releases.
- Provide secondary containment when storing hazardous substances in bulk quantities.
- Maintain good housekeeping practices for all chemical materials at the facility.
- Routine/Daily checks in the hazardous substance storage area to be performed by Operator.

Facility Specific Requirements

Dakota Granite has implemented proper planning and preventative measures to minimize the likelihood of spills, and to quickly and successfully clean up a spill should one occur.

Dakota Granite has developed this Spill Plan to set forth minimum standards for handling and storing regulated substances and cleaning up spills. Potential sources of spills include machinery and equipment failure, fuel handling, transfer accidents and storage tank leaks

Spill Containment

The general spill response procedure at this facility is to stop the source of the spill, contain any spilled material and clean up the spill in a timely manner to prevent accidental injury or other damage. Small spills will be contained by site personnel if they are able to do so without risking injury.

- **In the event of a large spill:**

If a spill should occur TJ Waste Removal will be called and they will be responsible for clean-up and removal of the spill.

Emergency Procedures:

- Immediately call **911** in the event of injury, fire or potential fire, or spill of a hazardous substance that gives rise to an emergency situation.
- If a spill has occurred, contact the following persons immediately:

Wayne VanHout_____	605-880-5704
Jason Redmond_____	605-924-1134
Rick Dilts _____	605-949-1712
Pat Raffety_____	605-467-0264
Scott Tietjen_____	605-880-3321

- **In the event of a large spill:**

If a spill should occur TJ Waste Removal will be called and they will be responsible for clean-up and removal of the spill.

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Office of Drinking Water
CHEMICAL ANALYTICAL DATA
RECEIVED

OCT 22 1990

Water Supply: Dakota Granite
City, County: _____
Source Sampled: Well# _____
Date drilled _____ Other _____
Type of Sample: Raw _____ Treated _____ Composite _____
Treatment Process(es): _____

Date Collected: Sept 15 1990
Collected By: Michael Linney
Report Mailed To: Chuck Alunson
Dakota Granite
301 S. Adams
M. I. Bank, S.D., 57052
Lat: _____ Long: _____

Received By Lab: 7-21-90
Report Sent By Lab: _____

Comments: _____

Parameter	Maximum Limit	Results	Parameter	Suggested Limit	Results
<input checked="" type="checkbox"/> Arsenic (As)	50 ug/l		<input checked="" type="checkbox"/> Chloride (Cl)	250 mg/l	
<input type="checkbox"/> Barium (Ba)	1000 ug/l		<input checked="" type="checkbox"/> Iron (Fe)	0.3 mg/l	
<input checked="" type="checkbox"/> Cadmium (Cd)	10 ug/l		<input type="checkbox"/> Manganese (Mn)	0.05 mg/l	
<input type="checkbox"/> Chromium (Cr)	50 ug/l		<input checked="" type="checkbox"/> Sulfate (SO ₄)	250 mg/l	
<input type="checkbox"/> Lead (Pb)	50 ug/l		<input checked="" type="checkbox"/> Tot. Diss. Solids (TDS)	500 mg/l	
<input type="checkbox"/> Mercury (Hg)	2 ug/l		<input checked="" type="checkbox"/> pH	6.5-8.5	
<input checked="" type="checkbox"/> Nitrate (NO ₃) (as N)	10 mg/l		<input type="checkbox"/> Alkalinity-M (CaCO ₃)	mg/l	
<input type="checkbox"/> Selenium (Se)	10 ug/l		<input type="checkbox"/> Alkalinity-P (CaCO ₃)	mg/l	
<input type="checkbox"/> Silver (Ag)	50 ug/l		<input type="checkbox"/> Bicarbonate (HCO ₃)	mg/l	
<input type="checkbox"/> Fluoride (F)	2.4 mg/l		<input type="checkbox"/> Carbonate (CO ₃)	mg/l	
<input checked="" type="checkbox"/> Gross alpha <u>Screen</u>	15 pCi/l		<input checked="" type="checkbox"/> Spec. Cond. @ _____ °C	umhos/cm	
<input type="checkbox"/> Gross radium	pCi/l		<input type="checkbox"/> Calcium (Ca)	mg/l	
<input type="checkbox"/> Radium 226	5 pCi/l		<input type="checkbox"/> Magnesium (Mg)	mg/l	
OTHER PARAMETERS			<input type="checkbox"/> Hardness (CaCO ₃) gpg:	mg/l	
<input checked="" type="checkbox"/> <u>Copper</u>			<input type="checkbox"/> Langelier Index		
<input checked="" type="checkbox"/> <u>Total Petroleum Hydrocarbons</u>			<input type="checkbox"/> Sodium (Na)	mg/l	
			<input type="checkbox"/> Potassium (K)	mg/l	
			<input type="checkbox"/> Field temperature	°F	°C
			<input type="checkbox"/> Nitrite (NO ₂) (as N)	mg/l	

LAB COMMENTS: _____
Percentage of Error: _____
WSP - 6060 - 2/82

mg/l = milligrams/liter = parts/million (ppm)
ug/l = micrograms/liter = parts/billion (ppb)
gpg = grains per gallon
pCi/l = picocuries per liter
LAB NUMBER: _____

SITE SAMPLED:

REPORT TO:

BILL TO:

Dakota Granite
 201 So. Main
 Milbank, S.D.
 57252

COST

\$ 215.00

ID NUMBER LOCATION	TIME/DATE COLLECTED	LAB NUMBER	RESULTS OF ANALYSIS
<i>Water</i>	<i>7-15-90</i>	<i>91X-204</i>	<i>no petroleum found</i>

DATE SAMPLE RECEIVED *7-21-90*

COMPLETION DATE *9-15-90*
 SIGNATURE *Donald J. Franch*

RECORD OF TELEPHONE CONVERSATION

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DATE: 10/29/90 TELEPHONE NUMBER: 432-5580

TELEPHONE CALL TO: Tim Stengel, Dakota Granite

TELEPHONE CALL FROM: EH

RE: Parameters for WQ Sampling

STAFF SIGNATURE Eric Holm

NOTES:

states I told Jim that the health ~~lab~~ lab has the wrong parameters marked for analysis. Jim said they would take another sample and send it in. I told Jim to photocopy the section in the conditions that gives the parameters to be sampled and send it along with the sample. Jim said he would do that also, he will ask the lab to contact our office to verify that the correct parameters are being ~~analyzed~~ analyzed.

Quarriers and Manufacturers of Monumental Granite

Dakota Granite

BOX 1351
MILBANK, SOUTH DAKOTA 57252

Telephone: 800-843-3333—S Dak 605-432-5580

FAX: Outside South Dakota, or from Outside the USA, U
1-605-432-5589; Ask for Extension 119

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MINERALS & MINING PROGRAM



December 31, 1990

Mr. Eric Holm
Department of Water and Natural Resources
523 East Capitol
Pierre, SD 57501-3181

Dear Eric:

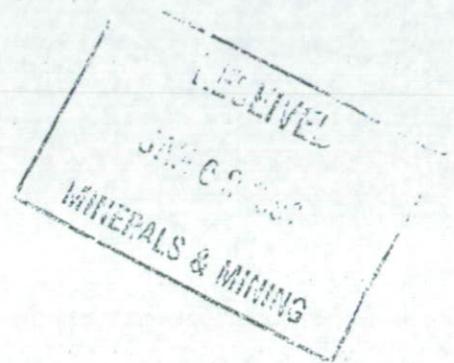
Enclosed is a copy of the results of the latest water sample done for our Brown Velvet Quarry. If you need anything else, please let me know.

Best wishes for the New Year.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chuck Monson".

Chuck Monson
Exec. Vice President



SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES

Office of Drinking Water
CHEMICAL ANALYTICAL DATA

RECEIVED
JUL 11 2016
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Water Supply: Public Water Date Collected: Sept 8 1990
 City, County: _____ Collected By: Michael Bludge
 Source Sampled: Well# _____ Report Mailed To: Chuck Morrison
 Date drilled _____ Other _____
 Type of Sample: Raw _____ Treated _____ Composite _____
 Treatment Process(es): _____
 Depth: MINERALS & MINING
 Location: 301 S. Main
Wellbank S.D. 57052
 Lat: _____ Long: _____
 Comments: _____
 Received By Lab: 7-31-90 AF
 Report Sent By Lab: 10-27-90 MS

Parameter	Maximum Limit	Results	Parameter	Suggested Limit	Results
✓ Arsenic (As)	50 ug/l	1.2	✓ Chloride (Cl)	250 mg/l	
Barium (Ba)	1000 ug/l		✓ Iron (Fe)	0.3 mg/l	1.12
✓ Cadmium (Cd)	10 ug/l	< 1.0	Manganese (Mn)	0.05 mg/l	
Chromium (Cr)	50 ug/l		✓ Sulfate (SO ₄)	250 mg/l	3.54
Lead (Pb)	50 ug/l		✓ Tot. Diss. Solids (TDS)	500 mg/l	920
Mercury (Hg)	2 ug/l		✓ pH	6.5-8.5	7.47
✓ Nitrate (NO ₃) (as N)	10 mg/l	0.2	Alkalinity-M (CaCO ₃)	mg/l	
Selenium (Se)	10 ug/l		Alkalinity-P (CaCO ₃)	mg/l	
Silver (Ag)	50 ug/l		Bicarbonate (HCO ₃)	mg/l	
Fluoride (F)	2.4 mg/l		Carbonate (CO ₃)	mg/l	
✓ Gross alpha Screened	15 pCi/l	0.4	✓ Spec. Cond. @ 25 °C	umhos/cm	1370
Gross radium	pCi/l		Calcium (Ca)	mg/l	
Radium 226	5 pCi/l		Magnesium (Mg)	mg/l	
OTHER PARAMETERS			Hardness (CaCO ₃) gpg:	mg/l	
✓ Copper	< 0.1	< 0.1 ppb	Langelier Index		
✓ Total Petroleum Hydrocarbons			Sodium (Na)	mg/l	
			Potassium (K)	mg/l	
			Field temperature	of	°C
			Nitrite (NO ₂) (as N)	mg/l	

LAB COMMENTS: well to be sampled when
available
STATE HEALTH LABORATORY
 500 E Capital
 PIERRE, SD 57501-5093
 Percentage of Error:
 WNR - 606R - 6/82

mg/l = milligrams/liter = parts/million (ppm)
 ug/l = micrograms/liter = parts/billion (ppb)
 gpg = grains per gallon
 pCi/l = picocuries per liter
 LAB NUMBER:

Dakota Granite

P. O. BOX 1351
MILBANK, SOUTH DAKOTA 57252

Telephone: 800-843-3333 — S Dak 605-432-5580
FAX: 1 (605) 432-5589 — S Dak or International - Ask for Ext. 119
OR

USA 1 (800) 338-5346 - Ask for Ext. 119



October 1, 1991

Mr. Thomas G. Hack
Office of Minerals and Mining
Dept. of Environment and Natural Resources
523 East Capitol
Pierre, SD 57501-3181

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JUL 11 2016
MINERALS & MINING PROGRAM

Dear Tom:

I am enclosing the results of water tests for our two large scale mining permits, Brown Velvet Quarry and Whetstone Quarry. The most recent analyses were completed by Twin City Testing in Sioux Falls.

Please contact me if you need more information. Our next samples will be taken mid-month (October).

Sincerely yours,

Tim Tyler

Enclosures

Whetstone Granite

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SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER QUALITY DATA

Sampler Werner Werner Project Whetstone Granite Agency Code _____

Received in Lab by DL Date & Time 6-13-91 6:30

Station Identification _____ T R Sec. Q

Site Location Whetstone Quarry

STORET Number _____

Name of Water _____

Nearest Town _____

Date 6-11-91

Time 6:30 AM

Type of Sample _____

Sample Depth _____ Duplicate _____

FIELD ANALYSES

Water Temperature	11°F	10°C	•F	•C	Precip -- n i m h
Air Temperature	21°F	20°C	•F	•C	Wind -- c m s
Conductivity/°C	94	Microhm			Odor -- y n
Flow	61				Sentic -- y n
Secchi Disk	78	meters			Dead Fish -- y n
Alkalinity to pH 4.5	431	mgCaCO ₃ /L			Film -- y n
Dissolved Oxygen	300	mg/L			Turbidity -- y n
pH	400	su			Width --
					Water Depth --
					Ice Cover --
					Color --

VISUAL OBSERVATIONS

BILL CODE	PRESERVATIVE		BOTTLE		BOTTLE		BOTTLE		UNIT
	LAB METHOD	A	B	A	B	C	X		
Fecal Coliform	31616	31615		X				100 ml	
Conductivity/°C	95			X				mg/L	
PO ₄	310			X				su	
Lab pH	403			X				mg/L	
Alkalinity (P)	415			X				mg/L	
Alkalinity (T)	410			X				mg/L	
HCO ₃	440			X				mg/L	
T. Solids	500			X				mg/L	
T. Diss. Solids	70300			X				mg/L	
T. Susp. Solids	530			X				mg/L	
Hardness CaCO ₃	800			X				mg/L	
Ca	915	915		X				mg/L	
Mg	927	925		X				mg/L	
Na	929	930		X				mg/L	
K	937	935		X				mg/L	
Cl	940			X				mg/L	
SO ₄	945	945		X				mg/L	
Ammonia-N	610	608		X		0.18	X	mg/L	
NO ₂ -N	630	631		X		<0.1	X	mg/L	
NO ₃ -N	625	623		X				mg/L	
Total Ph-P	685			X				mg/L	
Ortho PO ₄ -P	70507	671		X				mg/L	

FIELD COMMENTS:

PRESERVATIVE		
As	1002	mg/L
Cd	1027	mg/L
Cr	1034	mg/L
Cu	1042	mg/L
Pb	1051	mg/L
Ni	1067	mg/L
Ag	1077	mg/L
Zn	1092	mg/L
Hg	71903	mg/L
Fe Total	1045	mg/L
Mn Total	1055	mg/L
Cn	720	mg/L

LAB COMMENTS: Billed
Log in estov
Please collect and mail on a
Monday or Tuesday.

Reported out by Lab _____
Sampler's estimated date and time of arrival in Lab 7/5/cond=0.77

Brown Velvet

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SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER QUALITY DATA

Sampler Brown Velvet Project _____ Agency Code _____

Received in Lab by HR Date & Time 11-15-90 0200

Station Identification _____

Site Location Varata Granite on T E Sec. 9

STATE Number _____

Name of Water _____

Nearest Town _____

Date _____

Time _____

Type of Sample _____

Sample Depth _____

FIELD ANALYSES Duplicate

Water Temperature 11°F 10°C °F °C

Air Temperature 21°F 20°C °F °C

Conductivity/°C 94 Micromho

Flow 61

Secchi Disk 78 meters

Alkalinity to pH 4.5 431 mgCaCO₃/L

Dissolved Oxygen 300 mg/L

pH 400

VISUAL OBSERVATIONS

Precip -- n l m h

Wind -- c m s

Odor -- y n

Septic -- y n

Dead Fish -- y n

Film -- y n

Turbidity -- r n

Width --

Water Depth --

Ice Cover --

Color --

PRESERVATIVE

BILL CODE	LAB ANALYSES	LAB METHOD "A"	LAB METHOD "B"	BOTTLE A	BOTTLE B	BOTTLE C	UNIT
	Fecal Coliform	31616	31615			S	/100 ml.
	Conductivity/°C	95		1633/95			µmhos
	BCD ₅	310		121	5.1-10-158		mg/L
	Lab pH	403		7.78			µV
	Alkalinity (F)	415					mg/L
	Alkalinity (T)	410					mg/L
	HCO ₃	440					mg/L
	T. Solids	600					mg/L
	T. Diss. Solids	70300		1126			mg/L
	T. Susp. Solids	530		229			mg/L
	Hardness CaCO ₃	900					mg/L
	Ca	916	915				mg/L
	Mg	927	925				mg/L
	Na	929	930				mg/L
	K	937	935				mg/L
	Cl	940					mg/L
	SO ₄	945	949	422			mg/L
	Ammonia-N	610	608	0.93			mg/L
	NO ₂ -NO ₃ -N	630	631	0.10			mg/L
	TKN-N	625	623				mg/L
	Total PO ₄ -P	665					mg/L
	Ortho PO ₄ -P	10507	871				mg/L

FIELD COMMENTS:

PRESERVATIVE

As	1002	µg/L
Cd	1027	µg/L
Cr	1034	µg/L
Cu	1042	µg/L
Pb	1051	µg/L
Ni	1067	µg/L
Ag	1077	µg/L
Zn	1092	µg/L
Hg	71900	µg/L
Fe Total	11045	1.07 mg/L
Mn Total	11055	mg/L
Cn	720	µg/L

LAB COMMENTS:

Bill 75.50

Reported out by Lab 11-20-91 HR TDS/cond. 0.23
Sampler's estimated date and time of arrival in Lab _____

(066)

906580

Brown Velvet

SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES
Office of Drinking Water
CHEMICAL ANALYTICAL DATA

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Water Supply: Drinking Ground
City, County: _____
Source Sampled: Well# _____ Depth _____
Date drilled _____ Other _____
Type of Sample: Raw _____ Treated _____ Composite _____
Treatment Process(s): _____
Received By Lab: 1-21-91 rl
Report Sent By Lab: 1-27-91 rl

Date Collected: Sept 18 1990
Collected By: Michael Alvey
Report Mailed To: Chuck Alvey
Dakota Ground
203 S. Main
Al. Hwy. S.D. 57552
Lat: _____ Long: _____
Comments: _____

Parameter	Maximum Limit	Results
Arsenic (As)	50 ug/l	1.2
Barium (Ba)	1000 ug/l	
Cadmium (Cd)	10 ug/l	<1.0
Chromium (Cr)	50 ug/l	
Lead (Pb)	50 ug/l	
Mercury (Hg)	2 ug/l	
Nitrate (NO ₃) (as N)	10 mg/l	0.2
Selenium (Se)	10 ug/l	
Silver (Ag)	50 ug/l	
Fluoride (F)	2.4 mg/l	
Gross alpha ^{gross}	15 pCi/l	0.4 ± 0.4
Gross radium	pCi/l	
Radium 226	5 pCi/l	

Parameter	Suggested Limit	Results
Chloride (Cl)	250 mg/l	
Iron (Fe)	0.3 mg/l	1.12
Manganese (Mn)	0.05 mg/l	0.22
Sulfate (SO ₄)	250 mg/l	354
Tot. Diss. Solids (TDS)	500 mg/l	920
pH	6.5-8.5	7.47
Alkalinity-M (CaCO ₃)	mg/l	
Alkalinity-P (CaCO ₃)	mg/l	
Bicarbonate (HCO ₃)	mg/l	
Carbonate (CO ₃)	mg/l	
Spec. Cond. @ 25 °C	umhos/cm	1270
Calcium (Ca)	mg/l	
Magnesium (Mg)	mg/l	
Hardness (CaCO ₃) gpg:	mg/l	
Langelier Index		
Sodium (Na)	mg/l	
Potassium (K)	mg/l	
Field temperature	of	°C
Nitrite (NO ₂) (as N)	mg/l	

OTHER PARAMETERS

<i>total iron</i>	<10 ppb
<i>total iron from Hydrocarbon</i>	sec.

LAB COMMENTS: _____

mg/l = milligrams/liter = parts/million (ppm)
ug/l = micrograms/liter = parts/billion (ppb)
gpg = grains per gallon
pCi/l = picocuries per liter

Percentage of Error:
WNR - 606R - 6/82

LAB NUMBER: 905718

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MINERALS & MINING PROGRAM

10/01/91

11:04

DAKOTA GRANITE CO

27 01 191 12:03 TMM CITY TESTING S. DAKOTA

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OCT 03 1991

MINERALS & MINING

REPORT OF: WATER ANALYSIS

SUBJECT: DAKOTA GRANITE

DATE: QUILT 1, 1001

REPORTED TO: DAKOTA GRANITE
ATTN: TMM TYLER
301 S. MAIN
MILBANK, SD 57252

LABORATORY NO: 6600 91-630

INTRODUCTION

On August 18 and 20, 1991, our office received a sample of waste water submitted by Dakota Granite, in Milbank, South Dakota. We were requested to analyze the samples for the parameters listed in the attached Table #1.

SAMPLE IDENTIFICATION

<u>TCT #</u>	<u>Sample Identification</u>
91-5108	Whetstone, 09-18-91
91-5135	Brown Velvet, 09-20-91

METHODOLOGY

The samples for dissolved iron were analyzed using a Perkin Elmer Model 306 Atomic Absorption Spectrophotometer.

The samples for the remaining parameters were analyzed according to methods referenced in EPA 600/4-79-020, March 1979, "Methods for the Chemical Analysis of Water and Waste".

RESULTS

The results are listed in the attached Table #1.

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TABLE #1
WATER ANALYSIS
6600 91-630
October 1, 1991

<u>Parameter</u>	<u>91-5108</u>	<u>91-5135</u>	<u>LDL</u>
pH	7.19	7.41	
Total Suspended Solids	0.4	9.2	1.0
BOD	ND	ND	5.0
Nitrates	0.78	0.53	0.01
Ammonia, NH ₃ -N	0.09	0.08	0.05
Sulfates	180	390	2.0
Fecal Coliform	< 2/100 ml	> 240/100 ml	...
Total Dissolved Solids	720	1,110	1.0
Conductivity	1,130	1,570	1.0
Dissolved iron	ND	ND	0.03

LDL - Lower Detectable Limit

* All results are in milligrams per liter

ND - Not detected or below the lower detectable limit.

Dakota Granite

P. O. BOX 1351
MILBANK, SOUTH DAKOTA 57252

Telephone: 800-843-3333 — S Dak 605-432-5580

FAX: 1 (605) 432-5589 — S Dak or International - Ask for Ext. 119

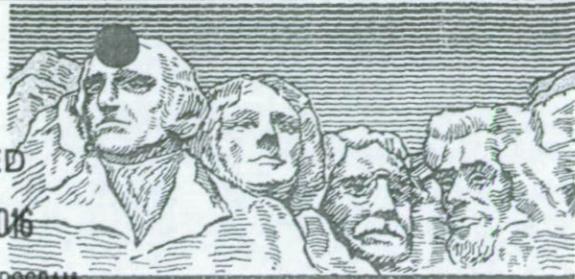
OR

USA 1 (800) 338-5346 - Ask for Ext. 119

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JUL 11 2016

MINERALS & MINING PROGRAM



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DEC 10 1991

MINERALS & MINING PROGRAM

December 10, 1991

Mr. Thomas G. Hack
Dept. of Environment & Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Dear Mr. Hack:

Enclosed is a copy of the results of water sample analysis for our large scale mining permits.

The cover sheet indicates which quarry each analysis is from.

Sincerely,

Tim Tyler

A handwritten signature in cursive script that reads "Tim Tyler".

RECEIVED

RECEIVED

JUL 11 2016

DEC 2 1991



TWIN CITY TESTING CORPORATION

corporation

MINERALS & MINING

601 EAST 48th STREET NORTH
SIOUX FALLS, SD 57104
PHONE 605/332-5371

REPORT OF: WATER ANALYSIS

PROJECT: DAKOTA GRANITE

DATE: November 15, 1991

REPORTED TO: DAKOTA GRANITE
ATTN: TIM TYLER
301 S. MAIN
MILBANK, SD 57252

LABORATORY NO: 6600 91-630

INTRODUCTION

On October 15, 1991, our office received a sample of waste water submitted by Dakota Granite, in Milbank, South Dakota. We were requested to analyze the samples for the parameters listed in the attached Table #1.

SAMPLE IDENTIFICATION

<u>TCT #</u>	<u>Sample Identification</u>
92-360	Whetstone, 10-15-91
92-361	Brown Velvet, 10-15-91

METHODOLOGY

The samples for dissolved iron were analyzed using a Perkin Elmer Model 306 Atomic Absorption Spectrophotometer.

The samples for the remaining parameters were analyzed according to methods referenced in EPA 600/4-79-020, March 1979, "Methods for the Chemical Analysis of Water and Waste".

RESULTS

The results are listed in the attached Table #1.

REPORT OF: WATER ANALYSIS

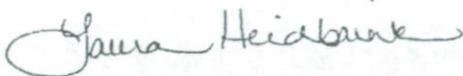
LABORATORY NO. 6600 91-630

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JUL 11 2016
MINERALS & MINING PROGRAM
DATE: November 15, 1991
PAGE: 2

REMARKS

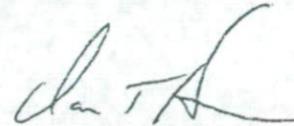
The samples were consumed in the analyses. If you have any questions or comments concerning this report, please feel free to contact us.

Sincerely,



Laura Heidbrink
Inorganic

LH/DTH/lf
rep630.6wa



Dan T. Hanson
Chemistry Manager

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MINERALS & MINING PROGRAM

TABLE #1
WATER ANALYSIS
6600 91-630
November 15, 1991

<u>Parameter*</u>	<u>92-360</u>	<u>92-361</u>	<u>LDL</u>
pH	7.35	7.43	---
Total Suspended Solids	1.2	180	1.0
BOD	ND	ND	5.0
Nitrates	0.51	0.42	0.01
Ammonia, NH ₃ -N	0.23	0.14	0.05
Sulfates	144	362	2.0
Fecal Coliform	2/100 ml	70/100 ml	---
Total Dissolved Solids	704	1,016	1.0
Conductivity	1,100	1,453	1.0
Dissolved iron	ND	0.79	0.03

LDL - Lower Detectable Limit

* All results are in milligrams per liter

ND - Not detected or below the lower detectable limit.

FROM: Tom Hack

TO: Eric Holm

CC: Tom Hack

SUBJECT: GRANITE QUARRY WQ MONITORING

PRIORITY:

ATTACHMENTS:

DATE: 03-18-92

TIME: 13:22

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MINERALS & MINING PROGRAM

Eric:

Recently I talked with a Kim Lapakko of the Minnesota DNR regarding water quality monitoring at Minnesota granite quarries. He was uncertain. He therefore referred me to a Dick Clark from the Minnesota Pollution Control Agency. From the conversation with Dick Clark, I gathered the following information:

- 1) According to Mr. Clark, his agency is only interested in the quality of the water exiting the discharge pipe. His agency implements the NPDES program in Minnesota. His view is the same as Doug Miller's. As all water collected in the pit must eventually meet the discharge limitations, he finds no reason to periodically monitor the water in the pit.
- 2) The operators realize the importance of keeping the pit water clean. Contaminants in the pit could adversely affect the quality of the granite (e.g. sulfate).
- 3) The state of Minnesota issues State Disposal System (SDS) permits to operators who wash their rocks on-site.

As no water quality monitoring parameter has appeared to be a concern to us, with the exception of a high sulfate level at one area as the result of an accidental spill, I feel that we should no longer require additional water quality monitoring from that which is required in their NPDES permit.

=====

Dakota Granite

P. O. BOX 1351
MILBANK, SOUTH DAKOTA 57252

Telephone: 800-843-3333 — S Dak 605-432-5580
FAX: 1 (605) 432-5589 — S Dak or International - Ask for Ext. 119
OR
USA 1 (800) 338-5346 - Ask for Ext. 119



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MINERALS & MINING PROGRAM

May 18, 1992

Mr. Thomas G. Mack
Office of Minerals and Mining
Dept. of Environment and Natural Resources
523 East Capitol
Pierre, SD 57501-3181

Dear Tom:

Enclosed are the results of our April water tests from each of our four quarries in South Dakota.

May samples were taken on May 13. We expect the results in about a month. At that time we ask that you consider deleting the parameters which have remained within the guidelines consistently.

Sincerely yours,

Tim Tyler

enclosures



twin city testing
corporation

601 EAST 48TH STREET NORTH
SIOUX FALLS, SD 57104-0698
PHONE 605/332-5371

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11 1 2016

MINERALS & MINING PROGRAM

REPORT OF: WATER ANALYSIS

PROJECT: DAKOTA GRANITE
SIOUX FALLS, SOUTH DAKOTA

DATE: May 13, 1992

REPORTED TO: Tim Tyler
Dakota Granite
301 S. Main
Milbank, SD 57252

LABORATORY NO: 6600 91-630

INTRODUCTION

On April 15, 1992, our office received samples from the above referenced site. We were requested to analyze the samples for the parameters listed in the attached table.

SAMPLE IDENTIFICATION

<u>TCT #</u>	<u>Sample Identification</u>
92-2949	Brown Velvet, 4-15-92, 9:45 am
92-2950	Whetstone, 4-15-92, 9:45 am
92-2951	American Rose, 4-15-92, 9:45 am
92-2952	Dakota Mahogany, 4-15-92, 9:45 am

METHODOLOGY

Inorganic

The samples were analyzed according to methods referenced in EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Waste".

Metals

The solutions were analyzed using a Perkin Elmer Model 306 Atomic Absorption Spectrophotometer.

RESULTS

The results are listed in the attached Table 1.

RECEIVED
JUL 11 2016

REPORT OF: WATER ANALYSIS

MINERALS & MINING PROGRAM

LABORATORY NO. 6600 91-630

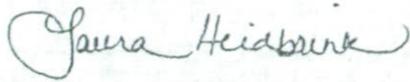
DATE: May 13, 1992

PAGE: 2

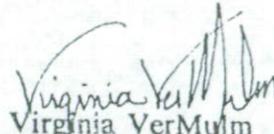
REMARKS

The samples will be held for a period of thirty days from the date of this report and then discarded unless we are notified otherwise. If you have any questions or comments concerning this report, please feel free to contact us.

Sincerely,



Laura Heidbrink
Inorganic



Virginia VerMulin
Atomic Absorption



Dan T. Hanson
Chemistry Manager

LH/VV/DTH/kk
rep630.wa

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JUL 11 2016
MINERALS & MINING PROGRAM

TABLE 1
WATER ANALYSIS
6600 91-630
May 13, 1992

<u>Parameter</u>	<u>92-2949</u>	<u>92-2950</u>	<u>92-2951</u>	<u>92-2952</u>	<u>LDL</u>
Ammonia	0.33	0.09	0.08	0.51	0.05
Dissolved Iron	ND	ND	ND	ND	0.03
Nitrate	0.32	0.44	0.67	1.1	0.01
Sulfate	300	150	280	260	2.0
Total Dissolved Solids	930	760	700	850	1.0
Total Suspended Solids	14	ND	1.6	2.0	1.0
Fecal Coliform	Absent	Absent	Absent	Absent	--
Conductivity	1230	1110	960	1250	1.0
pH	7.50	7.27	7.67	7.53	--
Biological Oxygen Demand	ND	ND	ND	ND	5.0

All results are in mg/L

LDL - Lower Detectable Limit

ND - Not detected or below the lower detectable limit.

Dakota Granite

P. O. BOX 1351
MILBANK, SOUTH DAKOTA 57252

Telephone: 800-843-3333 — S Dak 605-432-5580
FAX: 1 (605) 432-5589 — S Dak or International - Ask for Ext. 119
OR

USA 1 (800) 338-5346 - Ask for Ext. 119

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JUN 09 1992

MINERALS & MINING

June 6, 1992

Mr. Thomas G. Hack
Office of Minerals and Mining
Dept. of Environment and Natural Resources
523 East Capitol
Pierre, SD 57501-3181

Dear Tom:

Enclosed are the results of our May water tests from each of our four quarries in South Dakota.

Is consideration being given to deleting any of the parameters which have consistently remained within guidelines?

Sincerely yours,

Tim Tyler

enclosures



TWIN CITY TESTING CORPORATION

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MINERALS & MINING PROGRAM

601 EAST 48TH STREET NORTH
SIOUX FALLS, SD 57104-0698
PHONE 605/332-5371

REPORT OF: WATER ANALYSIS

PROJECT: DAKOTA GRANITE
SIOUX FALLS, SOUTH DAKOTA

DATE: May 27, 1992

REPORTED TO: Tim Tyler
Dakota Granite
301 S. Main
Milbank, SD 57252

LABORATORY NO: 6600 91-630

INTRODUCTION

On May 13, 1992, our office received samples from the above referenced site. We were requested to analyze the samples for the parameters listed in the attached table.

SAMPLE IDENTIFICATION

<u>TCT #</u>	<u>Sample Identification</u>
92-3284	Brown Velvet, 0513920700
92-3285	Whetstone, 0513920700
92-3286	Dakota Mahogany, 0513920700
92-3287	American Rose, 0513920700

METHODOLOGY

Inorganic

The samples were analyzed according to methods referenced in EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Waste".

Metals

The solutions were analyzed using a Perkin Elmer Model 306 Atomic Absorption Spectrophotometer.

RESULTS

The results are listed in the attached Table 1.

REPORT OF: WATER ANALYSIS

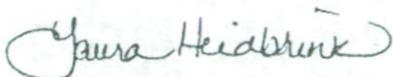
LABORATORY NO. 6600 91-630

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MINERALS & MINING PROGRAM
DATE: May 27, 1992
PAGE: 2

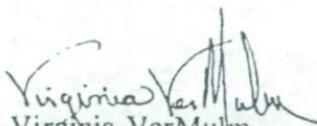
REMARKS

The samples will be held for a period of thirty days from the date of this report and then discarded unless we are notified otherwise. If you have any questions or comments concerning this report, please feel free to contact us.

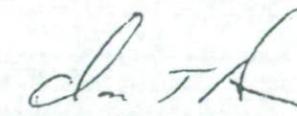
Sincerely,



Laura Heidbrink
Inorganic



Virginia VerMullm
Atomic Absorption



Dan T. Hanson
Chemistry Manager

LH/VV/DTH/kk
rep630.2wa

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TABLE 1
WATER ANALYSIS
6600 91-630
May 27, 1992

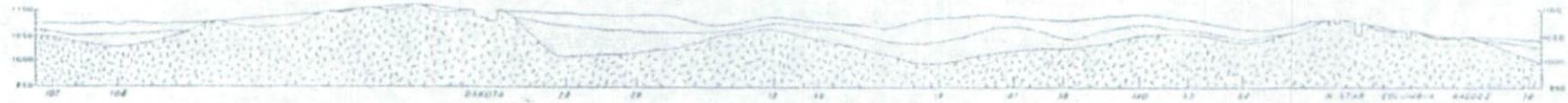
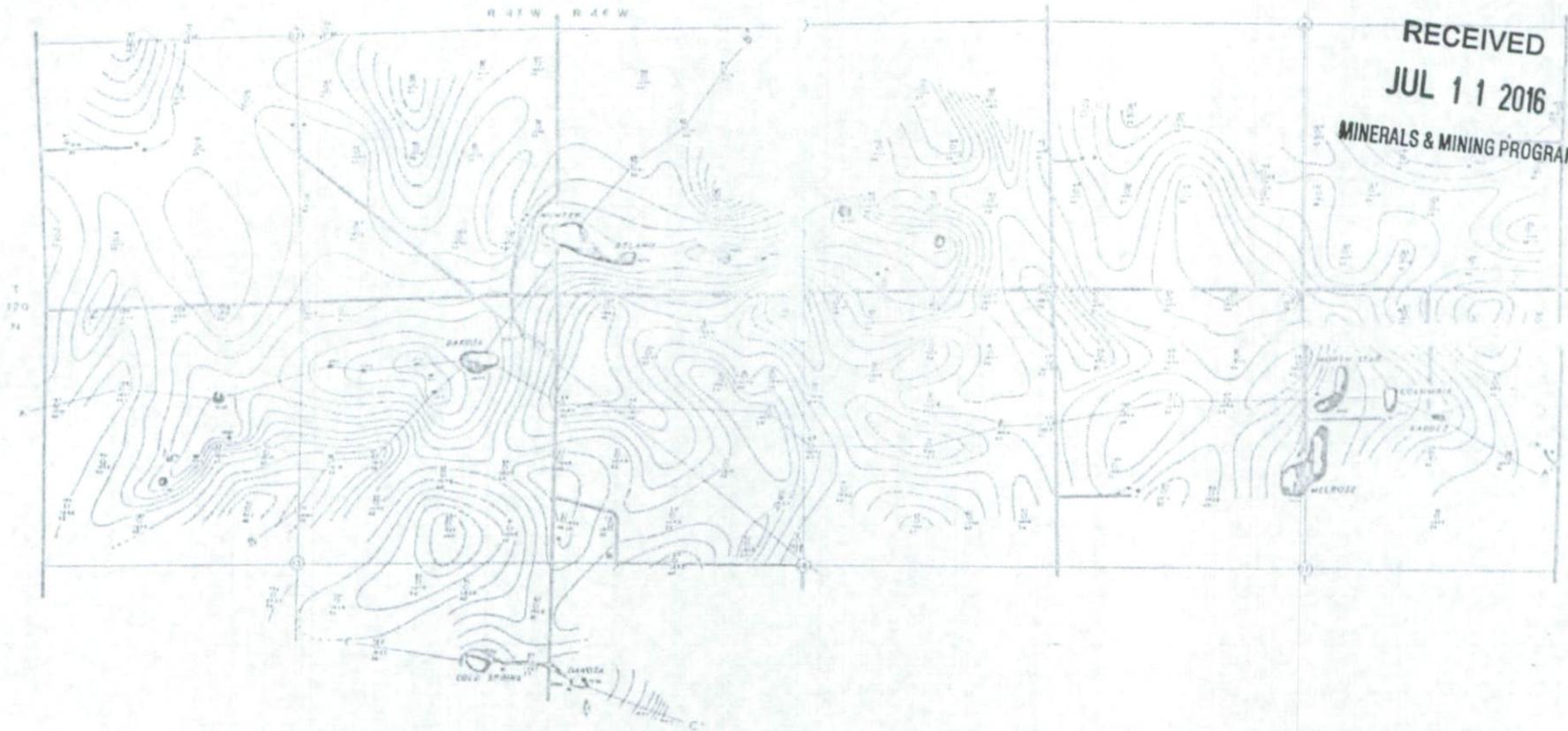
<u>Parameter</u>	<u>92-3284</u>	<u>92-3285</u>	<u>92-3286</u>	<u>92-3287</u>	<u>LDL</u>
Ammonia	0.15	0.16	0.13	0.04	0.05
Dissolved Iron	ND	ND	ND	ND	0.03
Nitrate	0.22	0.43	0.83	0.37	0.01
Sulfate	340	150	270	300	2.0
Total Dissolved Solids	990	780	860	500	1.0
Total Suspended Solids	13.2	ND	4.0	1.6	1.0
Fecal Coliform	Present	Present	Absent	Present	--
Conductivity	1250	1020	1250	970	1.0
pH	7.71	7.82	8.19	8.14	--
Biological Oxygen Demand	ND	ND	ND	ND	5.0

All results are in mg/L

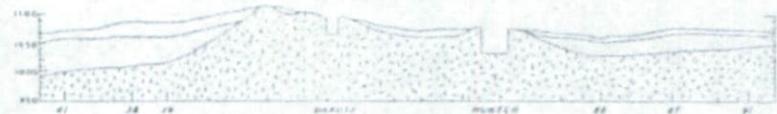
LDL - Lower Detectable Limit

ND - Not detected or below the lower detectable limit.

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CROSS SECTION A-A'



CROSS SECTION B-B'

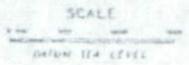


CROSS SECTION C-C'

CONTOUR LINES ON SURFACE OF GRANITE, INTERNAL EFFECT
 BASED ON INTERPRETATION OF GEOPHYSICAL SOUNDINGS
 TAKEN WITH AN ELECTRIC EARTH RESISTIVITY INSTRUMENT

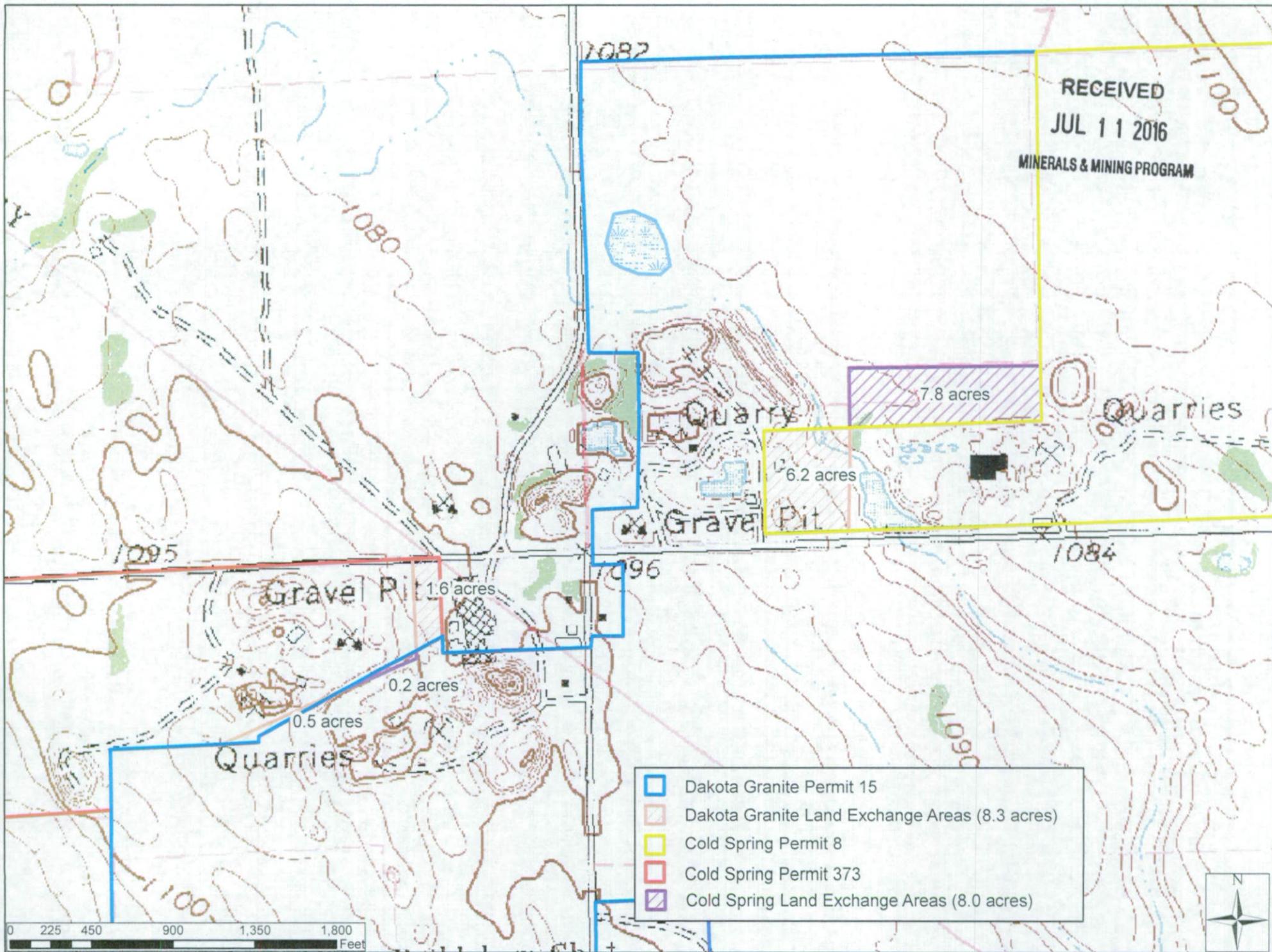
MILBANK GRANITE AREA
 MAP SHOWING THE RELIEF OF THE GRANITE SURFACE

STATE GEOLOGICAL SURVEY
 VERMILION, S. DAK.
 JULY, AUGUST, 1937



- RECEIVED
 APR 24 1992
 MINERALS & MINING
- LEGEND
- RESISTIVITY STATION AND NUMBER
 - ALTITUDE TOP OF GRANITE
 - DEPTH TO GRANITE
 - RESISTIVITY STATION DRILLED
 - BOULDER CLAY
 - SAND AND GRAVEL
 - GRANITE
 - QUARRY
 - GRANITE OUTCROP
 - HOUSE

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MINERALS & MINING PROGRAM



0 225 450 900 1,350 1,800 Feet

PLAT OF
LOTS 1, 2 AND 3 OF COLD SPRING-DAKOTA GRANITE SECOND ADDITION.
LOCATED IN OUTLOTS A, 3, 4, 5 AND 7 OF SECTION 13, TOWNSHIP 120 NORTH,
RANGE 48 WEST OF THE 5TH P.M., GRANT COUNTY, SOUTH DAKOTA

VACATION NOTICE
THIS PLAT SHALL VACATE A PART OF LOTS 3, 4, 5 AND 7 OF THE
PLAT OF OUTLOTS 3, 4, 5, 6, 7 IN THE NE 1/4 OF SECTION 13,
TOWNSHIP 120 NORTH, RANGE 48 WEST OF THE 5TH P.M., GRANT
COUNTY, SOUTH DAKOTA, FILED IN PLAT BOOK 8, PLAT NUMBER 51
AND
SHALL VACATE A PART OF OUTLOT A OF THE PLAT OF PROPERTY
OF DAKOTA GRANITE COMPANY IN NE 1/4, SECTION 13, TOWNSHIP
120 NORTH, RANGE 48 WEST OF THE 5TH P.M., GRANT COUNTY,
SOUTH DAKOTA, FILED IN PLAT ENVELOPES, PLAT NUMBER 280.

Present
Quarry

New
Quarry

150'

N 1/4 CORNER
SEC. 13-120-48
(FOUND REBAR)
N=520706.36
E=2883289.81

NE CORNER
SEC. 13-120-48
(FOUND RAILROAD
SPIKE)
N=520881.59
E=2885914.80

- LAND TRANSFERRED TO COLD SPRING GRANITE
- LAND TRANSFERRED TO DAKOTA GRANITE
- Quarried Area
- Block Storage

Present
Quarry

New
Quarry

150'

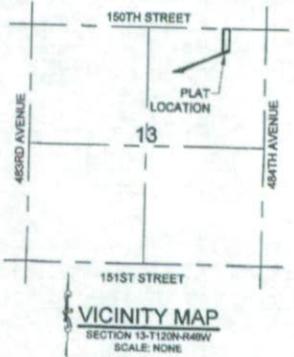
LOT 1 CONTAINS 1.8± ACRES OF WHICH
0.1± ACRES BEING STATUTORY
SECTION LINE R.O.W.
LOT 2 CONTAINS 0.2± ACRES
LOT 3 CONTAINS 0.5± ACRES

Document # _____
STATE OF SOUTH DAKOTA COUNTY OF GRANT ss _____
Recorded this _____ day of _____, A.D., 20 _____
at _____ o'clock _____ M., Plat Case _____ Plat No. _____
Register of Deeds

SHEET 1 OF 2

- LEGEND**
- MONUMENT FOUND
 - MONUMENT SET THIS SURVEY
(5/8" REBAR WITH STAMPED
PLASTIC CAP #11307)
 - MONUMENT SET THIS SURVEY
(PAINT MARK ON GRANITE)
 - × CORNER FALLS IN QUARRY PIT AND
INACCESSIBLE AT THE TIME OF THIS
SURVEY.

HORIZONTAL DATUM: NAD 83 (2007)
PROJECTION: SOUTH DAKOTA STATE PLANE
COORDINATES NORTH ZONE (4001)
BASIS OF BEARING: GEODETIC NORTH
ALL DIMENSIONS SHOWN ARE IN
TERMS OF U.S. SURVEY FEET



PREPARED BY:
BANNER ASSOCIATES, INC.
MILBANK, SOUTH DAKOTA
(855) 323-6342
SEPTEMBER 2015

GEODETIC BEARING
SCALE: 1" = 200'

Map 7

Rev. 1

RECEIVED
APR 29 2016

PLAT OF
LOTS 1, 2 AND 3 OF COLD SPRING-DAKOTA GRANITE ADDITION,
LOCATED IN GOVERNMENT LOT 4 AND THE E1/2-SW1/4 OF SECTION 7, TOWNSHIP 120 NORTH,
RANGE 47 WEST OF THE 5TH P.M., GRANT COUNTY, SOUTH DAKOTA

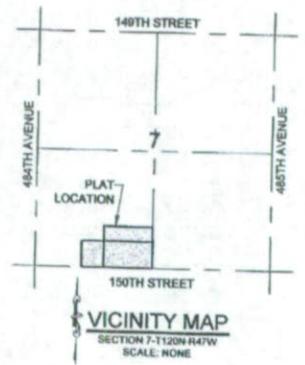
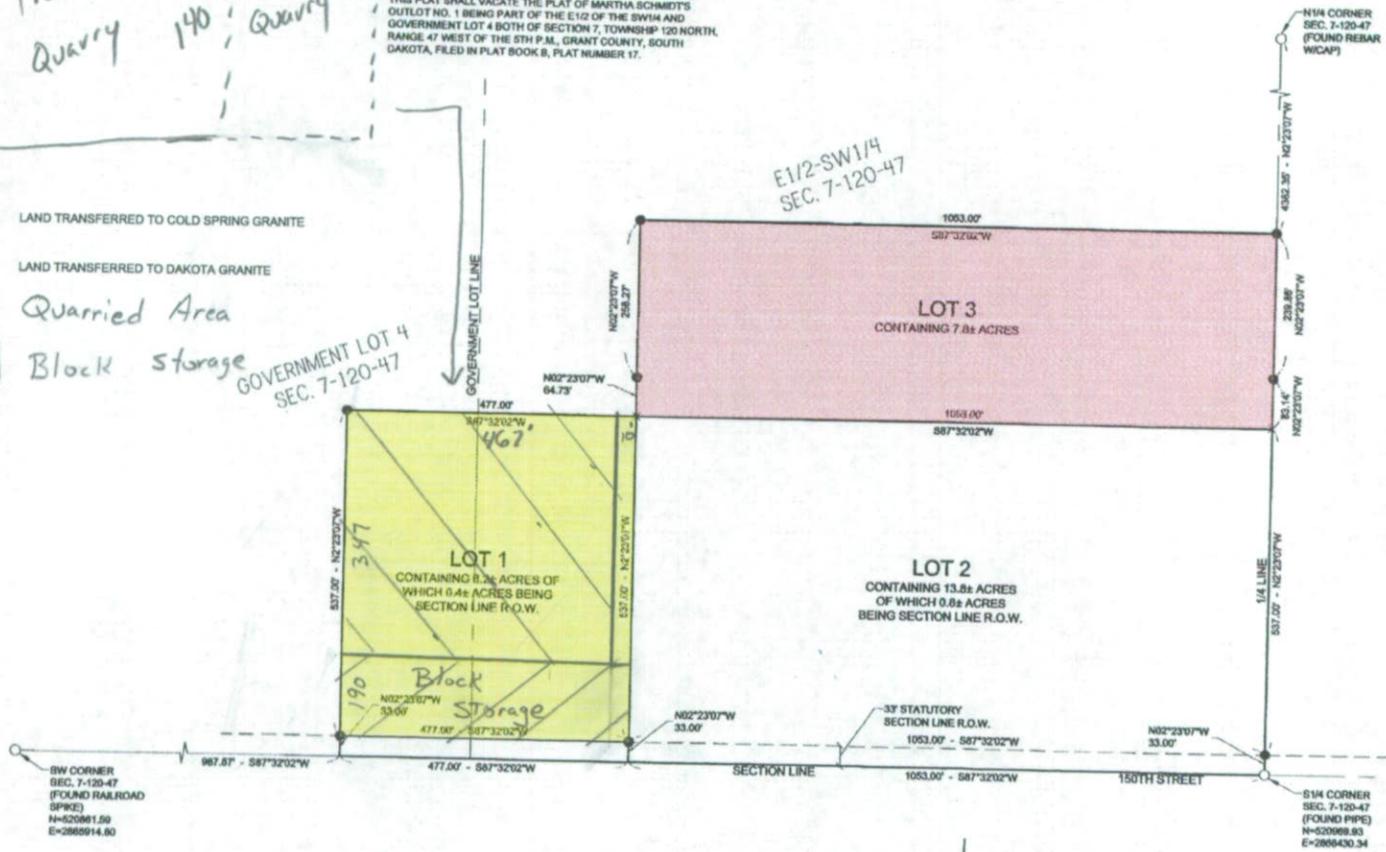
Present Quarry
140'
New Quarry

VACATION NOTICE
THIS PLAT SHALL VACATE THE PLAT OF MARTHA SCHMIDT'S OUTLOT NO. 1 BEING PART OF THE E1/2 OF THE SW1/4 AND GOVERNMENT LOT 4 BOTH OF SECTION 7, TOWNSHIP 120 NORTH, RANGE 47 WEST OF THE 5TH P.M., GRANT COUNTY, SOUTH DAKOTA, FILED IN PLAT BOOK 8, PLAT NUMBER 17.

- LAND TRANSFERRED TO COLD SPRING GRANITE
- LAND TRANSFERRED TO DAKOTA GRANITE
- Quarried Area
- Block Storage

GOVERNMENT LOT 4
SEC. 7-120-47

E1/2-SW1/4
SEC. 7-120-47



PREPARED BY:
BANNER ASSOCIATES, INC.
MILBANK, SOUTH DAKOTA
(855) 323-6342
NOVEMBER 2015

LEGEND

- MONUMENT FOUND
- MONUMENT SET THIS SURVEY (5/8" REBAR WITH STAMPED PLASTIC CAP #11307)
- x CORNER FALLS IN QUARRY PIT AND WAS INACCESSIBLE AT THE TIME OF THE SURVEY

HORIZONTAL DATUM: NAD 83 (2007)
PROJECTION: SOUTH DAKOTA STATE PLANE
COORDINATES NORTH ZONE (4001)
BASIS OF BEARING: GEODETIC NORTH
ALL DIMENSIONS SHOWN ARE IN TERMS OF U.S. SURVEY FEET



Document # _____
STATE OF SOUTH DAKOTA COUNTY OF GRANT-ss
Recorded this _____ day of _____, A.D. 20 _____
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SHEET 1 OF 2

Map 2

RECEIVED
APR 29 2016
MINERALS & MINING PROGRAM