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March 14, 2012

Chairman Darrel Fehr
1844 County Hwy DD
Bloomer, WI 54724

RE: EOG Resources, Inc.

Dear Chairman Fehr:

Pursuant to correspondence received from Town of Cooks Valley legal counsel, Mr. Glenn Stoddard, dated March 9, 2012, the purpose of this letter is to respond to the issues outlined in that document regarding EOG Resources, Inc's ("EOG") ongoing mining operations in the Town of Cooks Valley.

In reviewing the correspondence and the attached Non-Metallic Mining Ordinance, we wanted to set forth in writing some issues which are important for the preservation of the record and for EOG as a company. First and foremost, the Town of Cooks Valley asked EOG to submit a developer's agreement immediately following the acceptance by the Town Board of the Right of Way Permit and Roadway Agreement on December 20, 2011.

Per the Town's request stemming from the December 20th meeting, our office, in conjunction with Mine Superintendent Tom Maul, spent time with you in January negotiating the parameters of a development agreement. Also per your request and your time line, we provided a written development agreement for the Town's review prior to the regularly scheduled February monthly meeting.

Since the decision from the Supreme Court in the *Zweifelhofer* case, the Town is now taking a new approach. Nonetheless, we felt it important to point out EOG has lived up to its commitments and provided a well-thought out and appropriate Mining Agreement. Because the Mining Agreement takes into consideration issues which cannot be approached through a Non-Metallic Mining Ordinance, for example a property guaranty, we still think it is in the Town's best interest to pursue a Mining Agreement versus an application of the Chapter 19 Non-Metallic Mining Ordinance.

In reviewing Attorney Stoddard's letter, there are also legal conclusions which are reached by the Town Board. We do not agree with the legal analysis that the Town of Cooks Valley Chapter 19 Non-Metallic Mining Ordinance applies given our pre-existing status of an operational mine prior to the issuance of the Supreme Court's decision. Further, as I have addressed with Attorney Stoddard, there are parts of the application which preempt Federal law set forth by the Mining Safety and Health

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Administration ("MSHA"). Although our office fully believes the Town's law does not preempt MSHA, we will leave it to your counsel to further analyze those issues as it relates to the Town's demand for immediate property inspections.

Setting the legal issues aside, EOG has always worked pro-actively with government officials at all levels and has never deviated from that course. With this in mind, you will find attached to this correspondence, a Non-Metallic Mining Application, along with the appropriate filing fee. Nonetheless, we fully reserve our rights to challenge all or parts of the written application, in addition to the Chapter 19 Non-Metallic Mining Ordinance. Thus, do not construe the attached application or filing fee as an acceptance of the Town's jurisdiction.

We have also provided 25 copies of the application and provided extensive documentation to be reviewed consistent with your application process. We are filing these documents with you prior to the deadline set forth in the March 7th correspondence. We believe the application is complete and everything set forth in your aforementioned correspondence has been satisfied.

In terms of moving forward, we are hopeful the Town agrees to move the permitting process forward in an expedited manner. Of course, we will pro-actively answer any follow-up questions you have and, again, we think the Town may be better positioned if you turn towards a Mining Agreement versus the application of your Chapter 19 Non-Metallic Mining Ordinance language.

Respectfully submitted, but with full reservation of rights, on behalf of EOG Resources, Inc.

Very truly yours,

WELD, RILEY, PRENN & RICCI, S.C.

John Robert Behling

JRB/kan

Enclosures

cc: Attorney Glenn Stoddard (w/enc)
Mr. Curt Parsons (via e-mail) (w/o att)
Mr. Jeff Spencer (via e-mail) (w/o att)
Mr. Tim Stauffer (via e-mail) (w/o att)

Town of Cooks Valley Non-Metallic Mining Applications

This is a portion of Appendix A

15784 40th Street

Clerk Residence

3717 County Highway A

Bloomer, WI. 54724

Filing Fee \$500

Date of Application February 16th, 2012

Company Name EOG Resources Inc.

Contact Person Tim Stauffer

Address 619 Bridge St., Suite 101, Chippewa Falls, WI. 54729

Phone 715-720-5917 Fax 715-720-5984 Cell 715-495-0103

Email tim_stauffer@eogresources.com

Proof of Insurance (Please attach a copy of this at the back of the application) _____

Legal Description of land for proposed mine development Attached

Tax parcel number Attached

Name and address of surface land owner Dennis Schindler
13806 20th St., Colfax, WI 54730

Name and address of mineral owner Same

1) Type of Mine:

 Construction Fill (Sand, gravel, aggregate, or clay used in the _____
construction trades).

 X Industrial Sand Mine (used to produce glass, moldings for castings,
manufacture of abrasives, or processed into proppant or other industrial
uses).

2) Final destination of mined material: Processing plant, Chippewa Falls, WI.

3) Describe current land uses within and adjacent to the project area. Photos would be
helpful in providing a view in all directions. Coordinate the photos with the description
below.

 Agriculture, Residential Pictures Attached

4) Permits:

- A) Does this mine have a current reclamation permit from Chippewa County to operate?
Yes
- B) List other permits (county, state federal, DNR etc.) necessary for this project, indicate status and provide a copy (if available).
DNR air permit, DNR storm water discharge permit are attached as Exhibits 1 and 2
-

5) Size:

- A) Expected maximum depth of mine? 1100 feet. Depth is relative to what benchmark?
Mean Sea Level (Natural ground cover, mean sea level, road elevation, etc.)
- B) Groundwater level in the project area? 1102 to 1092 Mean Sea Level.
Confirmed or estimated?(circle one). Confirmed
Depth is relative to what benchmark? 3 on-site monitoring wells. Please see attached Figure 4 groundwater elevation map.
- C) Will any part of the mine extend below the water table: Yes _____ No X
If yes – do you intend to dewater: Yes _____ No _____
If yes – Estimated dewatering rates in gallons per day? _____. What impact, if any, will mine dewatering have on neighboring wells? Provide data to support any conclusions or statements made, including any monitoring well data, well construction data, and current water withdrawal rates.

- D) Specify total area 234 (in acres) to be affected by this project. Include areas for future expansion, stockpiling, processing, haul roads, settling basins, buildings, parking facilities. Show all phases for the removal of material. Give a complete description of the entire site. Use a separate sheet if necessary. Any area of extraction must be at least 50 feet from any line fence or property boundary.
Please refer to copy of Chippewa County Reclamation Permit. 234 acres mining, stockpiling, loading, scaling, reclamation, erosion control facilities, office trailer, haul roads. Please see attached figures 1, 2, 3 (SEH)

6) Mining Operations:

- A) Describe the method that will be used to dispose of brush and other vegetative debris. Describe the process completely: Clearing and grubbing to remove brush. Brush will be mulched. Mulch will be blended with topsoil as conditioner.
- B) Describe the methods that will be used to retain topsoil and all other overburden. Describe how the topsoil, subsoil and other materials will be stored until the reclamation process takes place. Topsoil – A horizon and B horizon will be stripped and stockpiled for use in reclamation. Topsoil stock piles will be seeded and mulched, signs will be placed to identify topsoil stockpiles.

- C) Describe the processing methods that will be used at the site. (Processing methods may include stockpiling & storage, blending, grading, crushing, screening & cleaning, scalping, dewatering, and dust control). If there are none, please explain why they are not necessary.

Drilling and blasting will be utilized to loosen sandstone for extraction – material will be fed to a vibrating screen to remove oversized particles before being stockpiled and loaded into trucks.

- D) Describe the method of extraction (shovel and truck, front-end loader and truck, hydraulic dredge, dragline and truck, self-loading scraper, other): Primarily excavator and articulated haul trucks. Other methods as conditions dictate.

- E) Will explosives be used: Yes X No _____.

If yes – specify the types & methods of explosives used and describe what precautions will be used to prevent physical hazards to persons and neighboring property from flying debris, excessive air blasts, or ground vibrations. Depending on the mine's location to nearby structures, more detailed information may be required on the blasting program (such as third party blasting study).

ANFO will be used in the blasting process. Sequential timing will be used to minimize blast vibrations. Multiple seismographs will be used to measure vibrations at neighboring structures.

- F) Will water be used at the site? Yes X No _____. (Water may be necessary for processing and also to keep dust under control at the pit site and the haul road, if present). If yes – describe the volume of water needed, the source of the water, and any run off control measures (if needed).

Water will be used intermittently to control dust. Water will be pumped from sediment basins to control dust. If additional water is needed it will be purchased from local well sources.

- G) Describe the methods used to control dust at the site. This includes mining processes, on haul roads, and while transporting to final destination. Be as complete as possible.

Water trucks will spray dirt haul roads, vacuum sweeper truck will clean paved areas. Trucks hauling to plant will be tarped.

- H) Will fuel tanks, solvents, explosives, or other chemicals be stored on site?

Yes X No _____. If yes – describe these materials and how they will be secured, stored, and method of containment. Indicate locations of storage facilities on mine map(s). Fuel tank will be located on concrete containment device.

Fertilizer tanks may be stored on site. Tanks will be located as shown on Figure 2 attached.

- I) Will any structures need to be established on site? Yes X No _____. This includes any storage shed, portable toilet, employee facility, etc. If yes – specify the number, type and location: Office trailer will be located at the site. Truck scale will be constructed. A drive-over waste unloading facility will be constructed. All located in the operations area (Figure 2).

- J) Identify the number of employees expected to work at the site and the facilities that will be provided: 12-15 employees.
- K) Hours / days of operation (including maintenance): Operation 5 days per week, 24 hours per day, Monday-Friday with maintenance operations possibly occurring on Saturdays
- L) Length of time the mine is to remain operational? From 2012 to 2032.

7) Trucking operations:

- A) How many loads per day: 400. Hours trucks will operate: 24 hours/day, 5 days per week.
- B) Weight per load: 80,000 lbs maximum load weight for sand trucks. Waste trucks 151 loads/day, maximum load weight 73,000 lbs.
- C) Type of truck: Bottom dump trailers and end dumps will be utilized at the mine
- D) Which township and county roads will be used to transport material? Please provide a complete description of all roads to be used to transport and to return to the site. Performance bonds may be necessary for the repair and/or restoration of any township road affected in adverse way. What specific contributions will be taken to insure that the township roads will be maintained to a safe and secure condition? 20th Street to 135th Avenue to State Hwy 40 to County Road B to Hwy 53 to Chippewa Falls. Road maintenance Agreement has been executed with the Town (Attached)

8) Environmental:

- A) List resources that may be impacted by this project such as timber, agriculture, surface water, ground water, air quality, noise pollution, and plant wildlife or fish habitat. Describe measures that will be taken to mitigate those impacts. Landowner has removed existing timber on the property. Crops within the mining areas have been harvested. Areas not within mining area will continue to be cropped. Stormwater plan is in place. Air permit is in place which describes dust control measures. White noise backup alarms are installed to minimize noise pollution.
- B) Are there any known endangered species on or near the mine site?
Yes ____ No X . If yes – Describe the species and whether an environmental impact statement will need to be prepared? _____
- C) Are there any known acid producing minerals or soils present? Yes ____ No X .
If yes – how will acid water pollution from the excavation, stockpiling, and waste areas be controlled? _____
- D) What is the schedule and method for well monitoring within a ¼ mile of the mine's boundaries before, during and after the mine is opened, worked, and reclaimed? (Monitoring distance may need to be increased if the mine depth is near the water table, dewatering is used, or explosives are used):
All wells within ¼ mile have been sampled and analyzed prior to mine operations. All wells within ¼ mile will continue to be monitored per the conditions of the Reclamation Plan

E) Describe erosion control practices that will be used during mining. If no measures will be used, explain why none are needed. Silt fence, diversion ditches and stormwater diversion berms, erosion mat, sediment basins.

F) Describe measures that will be taken to screen the operation from view of surrounding land uses or an explanation of why such measures are not needed. If they are not needed, please include photos of the area (aerial or ground level) Please show the areas affected on a plat. Natural topography and tree cover will provide primary screening for the majority of the site. Additional screening devices may be utilized as the mine develops.

9) Reclamation: (this section is preliminary – the actual Chippewa County Reclamation plan for the proposed mining site will need to be submitted to the township before the plan commission can officially review the application)

A) Describe progressive reclamation activities that will occur over the life of the operation. Be complete in the description. If necessary show the reclamation in the various phases. (Attach at the back if necessary).
Please see attached map – reclamation will follow mining through the proposed phases.

B) Is an excavated / impounded body of water to be left as part of the reclamation?
Yes ___ No X
If yes – 1) will it be secured to prevent unauthorized access by the public?
Yes ___ No ___
If yes – 2) will it be stocked with fish? Yes ___ No ___
If yes – what species? _____

C) Describe the methods that will be used at the cessation of seasonal operations to stabilize slopes from erosion. This includes both wind and water erosion. Be complete in your description.
All slopes will be seeded and matted or mulched to establish sufficient vegetation to prevent erosion. Water spreader vehicles and tackifiers may be utilized to prevent wind erosion.

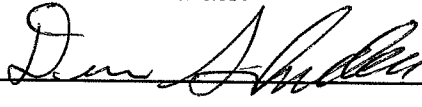
D) Will the site become inactive during current operations for an unspecified period of time? Yes ___ No X If yes – Describe the interim reclamation methods that will be used:
Not Planned

E) Describe proposed reclamation including final slopes, high wall reduction, benching, terracing, and other structural slope stabilization measures. Will the reclamation practices being followed be in agreement with all items in Chapter 30 of the General Code of Ordinances of Chippewa County? Specifically, this is Chapter 30 (NON-METALLIC MINING RECLAMATION)

Site will be reclaimed for passive recreation with all high walls backfilled to 3:1 Horizontal to vertical or flatter. All reclamations will conform to Chippewa County Chapter 30 requirements.

- F) Describe anticipated topography, water impoundments, artificial lakes, and future land use of the site. This should be based upon the entire proposed site. It should include a detailed description of the process and how it will relate to the Chippewa County Non-Metallic Mining Reclamation Ordinance.
Land use will be passive recreation. Topography will consist of level areas and slopes, meadows and tree areas. Please see attached Figure 3.
- G) Describe plans for the disposition of surface structures, haul roads, and related facilities after completion of mining.
All surface structures shall be removed upon completion of mining and reclamation.
- H) Describe the methods proposed for the disposal or reclamation of the oversize and undersized materials. If returned to the site, how will they be incorporated into the reclamation process?
Materials returned to the site will be blended with overburden and used for fill in the reclamation process.
- I) Describe or attach a copy of seeding plan that includes methods of seed bed preparation, seed mixtures, seeding rates, mulching, and other techniques needed to accomplish site stabilization.
Please see attachment.
- J) Describe long term maintenance needed to support reclamation. (as per the amended ordinance):
Once vegetation and tree stock is established, no long term maintenance should be required.
- K) Provide an estimate of the reclamation cost of each phase of the project or the entire site if phasing is not planned.
Please see attachment.

To the best of my knowledge, I certify that the information provided on this application and accompanying documents is true and accurate.

Property Owners signature:  Date 3/15/2012

Please print or type the signature: Dennis Schindler

Mining Company signature:  Date 3/15/12

Please type or print the signature: Tim Stauffer

Company: EOG Resources Inc.

Address: 619 Bridge Street, Chippewa Falls, WI 54729

Signature of this application authorizes the Town of Cooks Valley staff and its designees to enter upon the property to perform needed inspections. Entry will not require a prior notice.

This applicant agrees to provide twenty-five(25) copies of this application. These copies are necessary for the plan commission, town board, adjoining landowners, and general public at the public hearings.

Legal description for the Dennis Schindler Property:

SW ¼ of Section 29; the NE ¼ of the SE ¼ and the SE ¼ of the SE ¼ of Section 30; and the NE ¼ of the NE ¼ of Section 31, T30N, R10W, in the Town of Cook's Valley, Chippewa County, Wisconsin.

Tax Parcel ID Numbers for the Dennis Schindler Property:

23010-2931-00000000

23010-2932-00000000

23010-2933-00020000

23010-2934-00000000

23010-3041-00210000

23010-3044-00210000

23010-3111-00000000

SECTION 625 TOPSOIL AND SALVAGED TOPSOIL

625.1 Description

- (1) This section describes furnishing, placing, spreading, and finishing humus-bearing soil, adapted to sustain plant life, commonly known as topsoil, from locations the contractor furnishes beyond the limits of the right-of-way.
- (2) This section also describes removing topsoil from the sites of proposed roadway excavations and embankments in amounts and depths available and necessary to cover the work slopes. This work also includes reclamation, placing, spreading, and finishing of this topsoil.

625.2 Materials

- (1) Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure this topsoil is in a Ph range of 6.0 to 7.0.
- (2) Salvaged topsoil consists of the loam, sandy loam, silt loam, silty clay loam or clay loam humus-bearing soils available from overlying portions of areas to be occupied by the completed roadway.

625.3 Construction

625.3.1 Preparing the Roadway for Topsoil

- (1) Undercut or underfill all areas designated to receive topsoil to a degree that if covered to the required depth with topsoil the finished work conforms to the required lines, grades, slopes and cross sections the plans and drawings show.

625.3.2 Processing Topsoil or Salvaged Topsoil

- (1) Mow topsoil procurement areas to a height of approximately 6 inches. Remove litter such as brush, rock, and other materials that will interfere with subsequent vegetation establishment.
- (2) Strip off the humus-bearing soil. Take care to minimize removing the underlying sterile soil. Then stockpile the topsoil on the right-of-way or place it directly on the designated areas.
- (3) Under the Salvaged Topsoil bid item, remove topsoil from excavation areas and the roadway foundation up to the quantity necessary to cover the slopes for the bid items of Salvaged Topsoil and Topsoil. Salvage topsoil from embankment areas outside the roadway foundation only if that additional material is required to cover the slopes.
- (4) Use Salvaged Topsoil in excess of the contract quantity to replace contract quantities of Topsoil. Utilize excess topsoil on the project or dispose of as specified in 205.3.12.

625.3.3 Placing

- (1) After preparing and finishing the areas designated for topsoil to the required lines, grades, slopes and cross section, place and spread the topsoil to a uniform depth as the plans show or the contract requires. If no depth is shown, place and spread the topsoil to a minimum depth of 4 inches in rural areas and a minimum depth of 6 inches in urban areas, or as the engineer designates.
- (2) Break down all clods and lumps using the appropriate equipment to provide a uniformly textured soil.
- (3) Where using either sod or seed mixture 40 ensure that, for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.
- (4) Remove rocks, twigs, foreign material, and clods that cannot be broken down. Dress the entire surface to present a uniform appearance. The engineer will not require rolling.
- (5) If light sandy soils are covered with heavier clay bearing loam topsoil, then mix or blend the 2 types of soils to a more or less homogeneous mixture by using the appropriate equipment.

625.4 Measurement

625.4.1 Topsoil

- (1) The department will measure Topsoil acceptably completed by the square yard or by the cubic yard, whichever the contract specifies.
- (2) If the department measures by the square yard, the measured quantity shall equal the actual number of square yards of topsoiled area to the depth specified within the limits of construction designated on the plans, or in the contract, or as the engineer directs.
- (3) If measured by the cubic yard, the department will measure material in the vehicle. If the contractor transports the material in vehicles not adapted for measurement, then the department will measure the

SECTION 627 MULCHING

627.1 Description

- (1) This section describes furnishing, placing, and anchoring a mulch cover, usually in connection with seeding the surfaces of the roadway.

627.2 Materials

- (1) Mulching material consists of straw or hay in an air-dry condition, wood excelsior fiber, wood chips, or other suitable material of a similar nature that the engineer approves, and is substantially free of noxious weed seeds and objectionable foreign matter.
- (2) If using tackifier, the department will prequalify it before use. Select tackifiers from the department's erosion control product acceptability list (PAL). The contractor may obtain a copy of the PAL and the prequalification procedure for products not on the PAL from the department.

627.3 Construction

627.3.1 General

- (1) Unless directed otherwise, place the mulch on the specified area within 2 days after completing the seeding.
- (2) The contractor shall not perform mulching during periods of excessively high winds that might preclude proper mulch placement.
- (3) Place the mulch loosely or open enough to allow some sunlight to penetrate and air to slowly circulate, but thick enough to shade the ground, conserve soil moisture, and prevent or reduce erosion.
- (4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes before final or partial acceptance of the work.

627.3.2 Placing

- (1) The contractor may perform the work as specified in one of the following ways: Method A, Method B, or Method C, or a combination of the 3, unless a specific method is specified in the contract.

627.3.2.1 Method A, Netting

- (1) Uniformly spread the mulching material over the designated areas to a loose depth of 1/2 to 1 1/2 inches. Use a specific rate of application; dependent on the character of the material, that results in a cover conforming to the requirements specified above in 627.3.1. Loosen or make fluffy the mulch material from compacted bales before spreading in place. Unless directed otherwise, begin mulching at the top of the slopes and proceed downward.
- (2) Securely anchor straw or hay mulch by using engineer-approved netting anchored to the ground with pegs or staples to prevent it from floating as the vegetation grows. Instead of this anchorage, the contractor may secure mulch by heavy biodegradable twine fastened by pegs or staples to form a grid with 6 to 10 feet spacing.
- (3) The contractor may use department-approved erosion control mats, listed in the PAL, instead of separately applying mulch and netting.

627.3.2.2 Method B, Tackifier

- (1) Treat straw or hay with a tackifier, blow from a machine, and uniformly deposit over designated areas in one operation. Place straw or hay uniformly over the area 1/2 to 1 inch deep, using 1/2 to 3 tons of mulch per acre. Mix and place tackifier according to the PAL. Within the above limits, the engineer will determine, on the job, the application rate of the mulch and the tackifier, and the engineer may vary the rates during mulching to produce the desired results. Use an engineer-approved machine to place the mulch that blows or ejects by constant air stream a controlled amount of mulch and applies a spray of tackifier to partially coat the straw or hay, sufficient to hold together and keep in place the deposited straw or hay. The contractor may apply the tackifier as an overspray in a separate operation after placing the straw or hay.
- (2) Apply wood fiber, wood chips, or similar material with engineer-approved blowing machines, or other engineer-approved methods, that place a controlled amount of mulch uniformly over the area 1/2 to 1 1/2 inches deep. Treat areas receiving wood chip mulch, with one pound of available nitrogen per 1000 square feet before or after applying the chips.

- (3) Throughout the process, feed the mulch material into the blowing machine to produce a constant and uniform ejection from the discharge spout, and operate in a position to produce mulch of uniform depth and coverage.

627.3.2.3 Method C, Crimping

- (1) Spread the straw or hay mulch uniformly over the designated areas to a loose depth of 1/2 to 1 1/2 inches, using 1/2 to 3 tons of mulch per acre, by blowing from a machine, as specified in Method B, or by other engineer-approved methods.
- (2) Immediately after spreading, anchor the mulch in the soil by using a mulch crimper consisting of a series of dull, flat discs with notched edges. Space the 20 inch diameter discs at about 8 inch centers. Equip the crimper with a ballast compartment to allow adjusting the weight for depth control.
- (3) Impress the mulch into the soil 1 1/2 to 2 1/2 inches deep in one pass of the crimper. The department will not allow mulch crimpers to operate on slopes so steep that damage to the mulch, seedbed, or soil occurs. Anchor the mulch on these areas by one of the following methods: Method A or Method B. Equip and operate tractors to minimize disturbing or displacing the soil. This process may require more than one pass of the crimper to ensure adequate anchoring of the mulch.
- (4) The contractor shall not use Method C if it cannot impress the mulch to a minimum of 1 1/2 inch.

627.4 Measurement

- (1) The department will measure Mulching acceptably completed by the square yard or by the ton, whichever the contract specifies.
- (2) If measured by the square yard, the measured quantity equals the number of square yards of surface area that the contractor applied the mulch.
- (3) If measured by the ton, the measured quantity equals the number of tons of mulch provided, placed, and acceptably completed.
- (4) Tackifiers or nitrogen used for treating mulch are incidental to the cost of the work.

627.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
627.0200	Mulching	SY
627.0205	Mulching	TON

- (2) Payment for Mulching is full compensation for providing all materials, including tackifiers or nitrogen; for all hauling, treating, placing, spreading, and anchoring of the mulch material; and for maintaining the work and repairing all damaged areas.
- (3) If the contractor opts to use department-approved erosion control mats instead of separately applying mulch and netting, the department will pay for it at the contract unit price for Mulching only.

Annual Ryegrass	97	90
Winter Wheat	95	90

- (2) For the borrow pit mixture use, by weight, 60 percent temporary species seeds and 40 percent permanent species seeds.
- (3) For the temporary component, use any combination of temporary seeds listed in the table above.
- (4) For the permanent component, use seeds from not more than 4 of the permanent species listed in the table above in any combination.
- (5) When nurse crop is required for spring seeding before June 15, use annual oats. For fall seeding after October 15, use winter wheat, or annual ryegrass.

630.3 Construction

630.3.1 General

- (1) If not protecting with a mulch cover, perform seeding, except Nos. 60, 70 and 70A mixtures at times of the year when temperature and moisture conditions are suitable for seeding, except during midsummer.
- (2) Perform seeding, except Nos. 60, 70 and 70A mixtures, in conjunction with mulching as specified in section 627 at any time the engineer allows.
- (3) The contractor may perform seeding of Nos. 60, 70 and 70A mixtures at any time soil conditions are suitable, except between June 15 and October 15, unless the engineer allows otherwise.
- (4) Perform seeding with the selected seed mixture, sown at the specified rate.

630.3.2 Preparation of Seed Bed

- (1) Complete grading, shouldering, topsoiling, and fertilizing, if part of the work under contract, before permanent seeding, except the contractor may place the fertilizer and seed mixture in one operation if using equipment designed for the purpose.
- (2) Just before seeding, work the area being seeded with discs, harrows, or other appropriate equipment to obtain a reasonably even and loose seedbed. Place topsoil as specified in 625.3.3.

630.3.3 Sowing

- (1) Select the method of sowing from either method A, method B, method C, or an appropriate combination of methods A, B, and C. Obtain the engineer's approval for the sowing method and specific procedures used for each seed mixture used before sowing that mixture.

630.3.3.1 Method A

- (1) Sow the selected seed mixture using equipment adapted to the purpose, or by scattering it uniformly over the areas to be seeded. Lightly rake or drag to cover the seed with approximately 1/4 inch of soil. After seeding, lightly roll or compact the areas using suitable equipment, preferably the cultipacker type, when the engineer judges the seedbed too loose, or if the seedbed contains clods that might reduce seed germination. The contractor shall not roll slopes steeper than 1:3.
- (2) If scattering seed by hand, perform this work with satisfactory hand seeders and only when the air is calm enough to prevent seeds from blowing away.

630.3.3.2 Method B

- (1) Sow or spread the seed upon the prepared bed using a stream or spray of water under pressure and operated from an engineer-approved machine designed for that purpose. Place the selected seed mixture and water into a tank, provided within the machine, in sufficient quantities that when spraying the seed on a given area it is uniformly spread at the required application rate. During this process, keep the tank contents stirred or agitated to provide uniform distribution. Spread the tank contents within one hour after adding the seed to the tank. The engineer will reject seed that remains mixed with the water for longer than one hour. The engineer will not require dragging or rolling.

630.3.3.3 Method C

- (1) For spring seeding of seed mixtures 70 and 70A into existing ground cover, mow existing vegetation to 4 inches or less in height 2 to 4 weeks before seeding. Ten to 14 days after mowing, spray with vegetation control herbicide conforming to 632.2.12.
- (2) For fall seeding of seed mixtures 70 and 70A into existing ground cover, mow existing vegetation to 4 inches or less in height 4 to 6 weeks before seeding. Ten to 14 days after mowing, spray with vegetation

control herbicide conforming to 632.2.12. Retreat with vegetation control herbicide 10 to 14 days after initial application if live vegetation persists.

- (3) Seed with a rangeland type drill with one or more seed boxes that can be calibrated independently to deliver different sized seeds uniformly at the required rate and equipped with a rear-mounted press wheel for each seed drop tube. If seeding into existing vegetation or thatch, use a rangeland type drill equipped with a no-till attachment that can cut through the vegetation or thatch in front of the V disc and seed drop tube. If the configuration of the area to be seeded allows, apply seed at 1/2 the specified seed rate and apply the second 1/2 in a perpendicular direction.

630.3.3.4 Borrow Pits and Material Disposal Sites

- (1) Seed borrow pits, and material disposal sites off the right-of-way, with the selected seed mixture specified in 630.2.1.5.1.4. Consult with the landowner or the landowner's agent when selecting the seed mixture.

630.3.3.5 Seeding Rates

630.3.3.5.1 Right-of-Way

- (1) Use the following sowing rate for seeds in pounds per 1000 square feet:

- Seed mixture No. 10 at 1.5 pounds
- Seed mixture No. 20 at 3 pounds
- Seed mixture No. 30 at 2 pounds
- Seed mixture No. 40 at 2 pounds
- Seed mixture No. 60 at an equivalent seeding rate of 1.5 pounds^[1]
- Seed mixture No. 70 or 70A at 0.4 pounds
- Seed mixture No. 75 at an equivalent seeding rate of 0.7 pounds^[1]
- Seed mixture No. 80 at an equivalent seeding rate of 0.8 pounds^[1]
- Temporary seeding at 3 pounds
- Nurse crop seeding at 0.8 pounds

^[1] Determine the actual seeding rate by multiplying the equivalent seeding rate by the sum of the unadjusted and adjusted percentages of the various species in the seed mixtures as sown.

- (2) The unadjusted percentage equals the minimum percent of purity and germination specified in the table of seed mixtures contained in 630.2.1.5.1.1.1 for the applicable species.
- (3) Obtain the adjusted percentage for each of the PLS species by dividing the specified percentage of the species by the product of the percent of purity and the percent of germination for each of the PLS species as delivered.

630.3.3.5.2 Borrow Pits and Material Disposal Areas

- (1) For seeding borrow pits and material disposal off the right-of-way, sow the seed mixtures specified in 630.2.1.5.1.4 at the following rates per pound per 1000 square feet:

- Seed mixture No. 10 at 0.75 pound
- Seed mixture No. 20 at 1 pound
- Seed mixture No. 70 or 70A at 0.4 pounds
- Seed mixture No 75 at 0.7 pounds
- Borrow pit mixture at 1.5 pounds

630.3.3.6 Establishment Period for Native Seeding

- (1) During the growing season after planting seed mixture 70 or 70A, mow all seeded areas twice as the engineer directs. Mow vegetation back to 6 inches when it has reached a height of at least 12 inches.

DS Mine Reclamation Cost Calculations

A-0

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	43,700	\$ 1.50	\$ 65,550
2	Prep, Seed & Mulch	AC	13	\$ 1,500.00	\$ 18,750
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	1	\$ 5,000.00	\$ 5,000
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 7,144.00	\$ 7,144
				Grand Total	\$ 96,444

S1 Available	450,000 CY
Topsoil	11,800 CY
Subsoil	31,900 CY
Overburden	0 CY
Reject	0 CY
S1 Used	0 CY

A-1

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	50,200	\$ 1.50	\$ 75,300
2	Prep, Seed & Mulch	AC	14	\$ 1,500.00	\$ 21,600
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	48,000	\$ 0.25	\$ 12,000
6	Storm Water Ponds	EA	2	\$ 5,000.00	\$ 10,000
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 9,512.00	\$ 9,512
				Grand Total	\$ 128,412

S1 Available	450,000 CY
Topsoil	13,500 CY
Subsoil	36,700 CY
Overburden	99,000 CY
Reject	179,286 CY
S1 Used	278,286 CY

A-2

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	464,986	\$ 1.50	\$ 697,479
2	Prep, Seed & Mulch	AC	10	\$ 1,500.00	\$ 15,300
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	0	\$ 5,000.00	\$ -
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 57,022.32	\$ 57,022
				Grand Total	\$ 769,801

S1 Available	171,714 CY
Topsoil	9,600 CY
Subsoil	26,100 CY
Overburden	431,000 CY
Reject	170,000 CY
S1 Used	171,714 CY
S2 Available	2,500,000 CY
S2 Used	429,286 CY

A-3

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	1,723,400	\$ 1.50	\$ 2,585,100
2	Prep, Seed & Mulch	AC	24	\$ 1,500.00	\$ 35,850
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	2	\$ 5,000.00	\$ 10,000
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 210,476.00	\$ 210,476
				Grand Total	\$ 2,841,426

S2 Available	2,070,714 CY
Topsoil	22,500 CY
Subsoil	60,900 CY
Overburden	1,340,000 CY
Reject	300,000 CY
S2 Used	1,640,000 CY

A-4

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	490,014	\$ 1.50	\$ 735,021
2	Prep, Seed & Mulch	AC	17	\$ 1,500.00	\$ 25,500
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	0	\$ 5,000.00	\$ -
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 60,841.68	\$ 60,842
				Grand Total	\$ 821,363

S2 Available	430,714 CY
Topsoil	16,000 CY
Subsoil	43,300 CY
Overburden	1,806,000 CY
Reject	437,143 CY
S2 Used	430,714 CY
S3 Available	10,000,000 CY
S3 Used	1,812,429 CY

A-5

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	119,300	\$ 1.50	\$ 178,950
2	Prep, Seed & Mulch	AC	34	\$ 1,500.00	\$ 51,150
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	0	\$ 5,000.00	\$ -
7	Length of Slope Factor	AC	0	\$ 18,408.00	\$ -

S3 Available	8,187,571 CY
Topsoil	32,100 CY
Subsoil	87,200 CY
Overburden	6,121,000 CY
Reject	977,143 CY
S3 Used	7,098,143 CY

8	County Costs to Administer (8%)	LS	1	\$	18,408.00	\$	18,408
					Grand Total	\$	248,508

A-6

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	1,751,215	\$ 1.50	\$ 2,626,822
2	Prep, Seed & Mulch	AC	27	\$ 1,500.00	\$ 40,050
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	2	\$ 5,000.00	\$ 10,000
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 214,149.78	\$ 214,150
				Grand Total	\$ 2,891,022

S3 Available	1,089,428	CY
Topsoil	25,200	CY
Subsoil	68,300	CY
Overburden	2,225,000	CY
Reject	522,143	CY
S3 Used	1,089,428	CY
EXTRA	1,657,715	CY

A-7

#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	4,340,700	\$ 1.50	\$ 6,511,050
2	Prep, Seed & Mulch	AC	30	\$ 1,500.00	\$ 45,300
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	1	\$ 5,000.00	\$ 5,000
7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 524,908.00	\$ 524,908
				Grand Total	\$ 7,086,258

S3 Available	0	CY
Topsoil	28,500	CY
Subsoil	77,200	CY
Overburden	3,670,000	CY
Reject	565,000	CY
EXTRA	4,235,000	CY

A-8








#	Item	Unit	#	Cost	Item Total
1	Earthwork	CY	3,283,029	\$ 1.50	\$ 4,924,543
2	Prep, Seed & Mulch	AC	27	\$ 1,500.00	\$ 40,950
3	Abandon High Cap Well	EA	0	\$ 4,000.00	\$ -
4	Remove Processing Plant	EA	0	\$ 80,000.00	\$ -
5	Access Road Demolition	SF	0	\$ 0.25	\$ -
6	Storm Water Ponds	EA	1	\$ 5,000.00	\$ 5,000

S3 Available	0	CY
Topsoil	25,700	CY
Subsoil	69,900	CY
Overburden	2,811,000	CY
Reject	376,429	CY
EXTRA	3,187,429	CY



7	Length of Slope Factor	AC	0	\$ 5,000.00	\$ -
8	County Costs to Administer (8%)	LS	1	\$ 397,639.43	\$ 397,639
				Grand Total	\$ 5,368,132

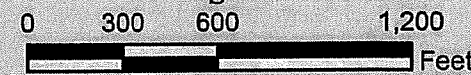
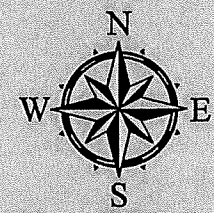


Legend

-  Intermittent Streams
-  Roads
-  DS Mine Property
-  Parcels
-  Private Water Supply Wells
-  Private On-site Wastewater Treatment System
-  Concentrated Flow Direction

Utilities

-  OH Electric
-  OH Phone



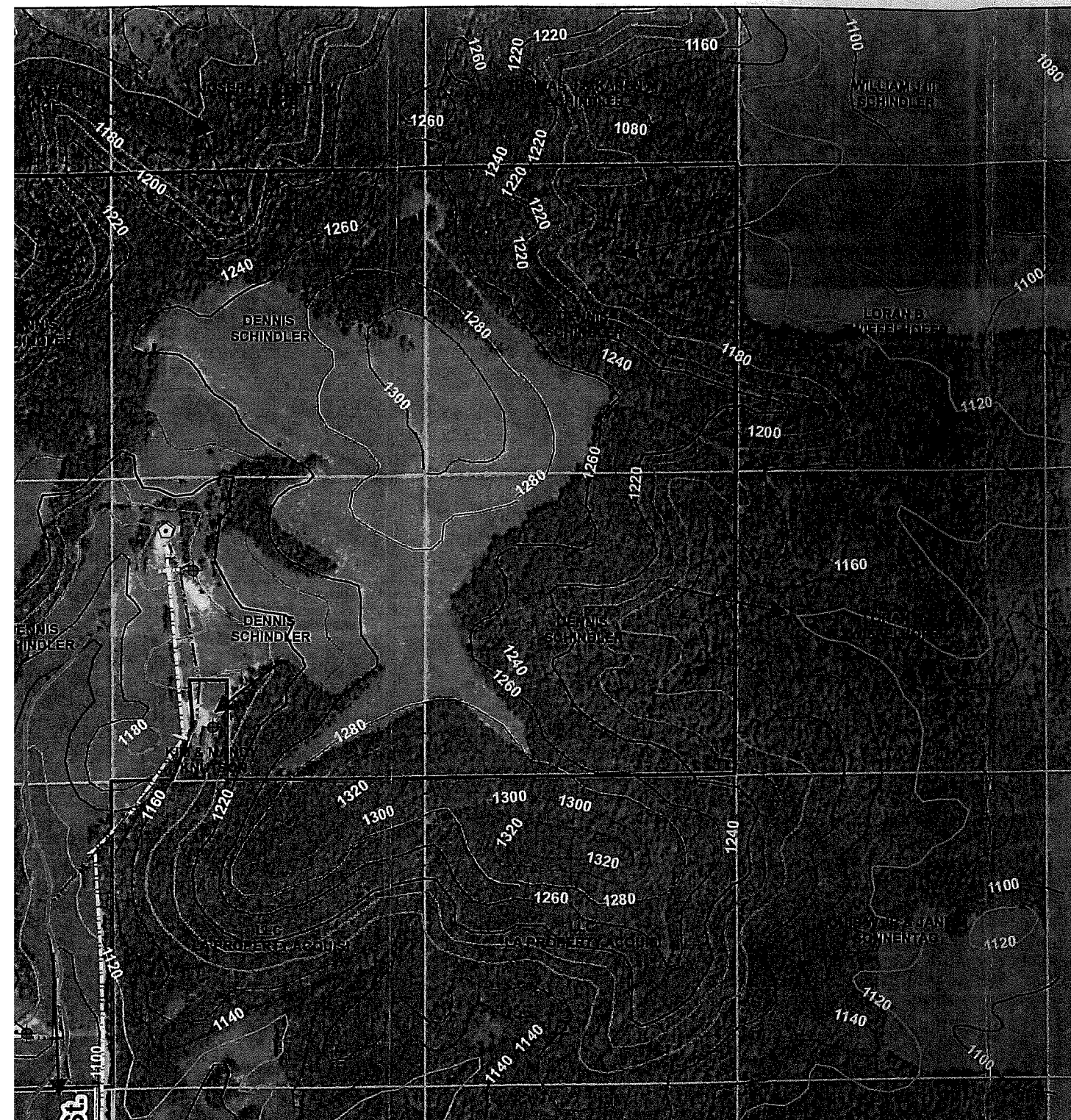
Source:

Parcels = Chippewa and Dunn County Land Records
 Topography = USGS Topographic Maps
 Roads = WIDNR
 Streams = WIDNR *Adjusted for 5/18/11 Stream Determination
 Private On-site Wastewater Treatment System = SEH Survey
 Utilities = SEH Survey
 Wells = SEH Survey for on-site wells, offsite well locations are estimated based on well log data.
 Imagery = ESRI (2007)

Projection:

Chippewa County Coordinates, Feet

Map by:





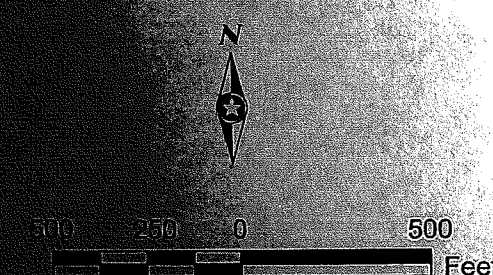
- ### Legend
- = DIRECTION OF FLOW
 - = SLOPE
 - = EXISTING CONTOURS
 - = PROPOSED FINAL CONTOURS

NOTES: EROSION CONTROL

1. PROVIDE LONG TERM TEMPORARY SEDIMENT BASINS, DIVERSIONS, ETC. TO THE GREATEST EXTENT POSSIBLE THROUGH RECLAMATION.

2. PHASE INSTALLATION OF TOPSOIL, SEED, MULCH AND EROSION CONTROL MATS AS SLOPES ARE BUILT UP TO FOLLOW EROSION CONTROL PLAN.

3. RECLAMATION SLOPES MAY INCLUDE BENCHING AT VARYING INTERVALS AS FIELD CONDITIONS WARRANT.



1. CONTOUR INTERVAL 20 FEET
2. CONTOUR INTERVAL 10 FEET

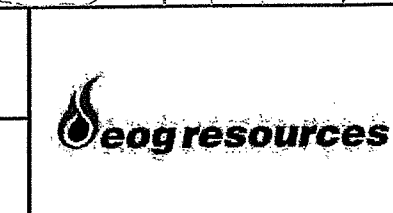
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113677

DATE:
06/29/11



DS MINE
TOWN OF COOKS VALLEY, WI

FINAL SITE PLAN

FIGURE
3



LEGEND

- ◆ WELL Monitoring Well
1092.78 Ground Water Elevation
- ▬ MINE OPERATIONS BOUNDARY
- ▬ 1/4 MILE BUFFER
- ▬ 1/2 MILE BUFFER
- 1100 GROUNDWATER CONTOUR (OCTOBER 2011)