

WATER PERMIT NO. 1904-1

Name of Applicant: **Douglas Ottema**

Address: **1218 Easy Street, Whitewood SD 57793**

Phone: **605 717-2028**

Amount of Water Claimed: **0.167 cfs (6 AF storage)**

Total Acres: **NA**

Source of Water Supply: **runoff**

Water to be used for: **industrial use**

County: **Lawrence**

Type of Waste Disposal System: **NA**

Location: **approximately 12 miles west of Lead/Deadwood**

PRIORITY

Date Received: **3-30-09**

Application/License Fee: **\$200**

Corrected Application Received: **6-26-09**

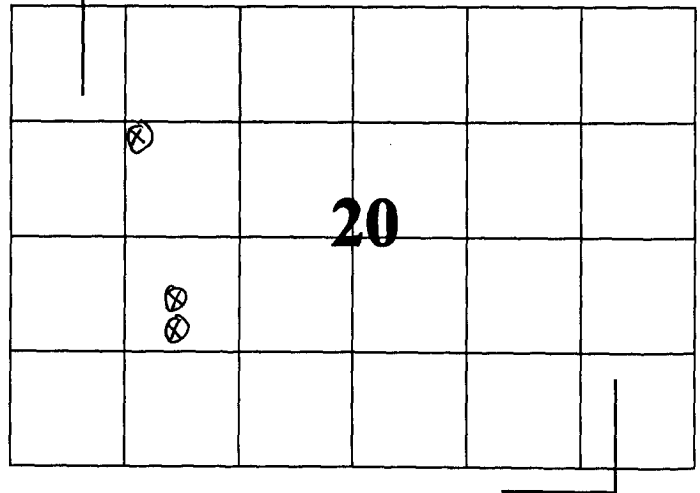
Period of Annual Use: **XX**

Remarks:

Diversion Point: **NW ¼ SW ¼ and SW ¼ NW ¼**

Sec 20-T5N-R1E

Land to be Irrigated: **NA**



Depth of Well: **NA**

Well Driller:

Remarks:

Type of Map: **topo**

Prepared by: **Thomas D VerHelst, NRCS**

Reviewed and the Number Assigned on: **7-8-09**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

FORM 2: Application for uses other than irrigation
(type or print)

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>1904-1</u> (office use only) Hydrologic Unit <u>10120203</u>
	Basin <u>Belle Fourche River</u>
	Newspaper <u>Laurence Co. Journal 376 Main St.</u> <u>605-578-3305</u> <u>Deadwood 57730</u>

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Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☒ Industrial	☐ Other	

Type of Application: (check one)
☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

- Name of Applicant Douglas Ottema Phone 605-717-2028
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 1218 Easy Street Whitewood State SD 57793
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 0.167 *CFS or ≤ 75 GPM **GPM 6.0 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Dams & diversions from dry gulches
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Lawrence
Three reservoirs with two gravity or pump stations. Located in NW1/4 of SW1/4;
and SW1/4 of NW1/4 Section 20, T5N, R1E, Black Hills Meridian.
- County or counties where water will be used Lawrence County
- Annual period during which water is to be used May through Nov. each year
January 1 - December 31 for storage
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

See attached description of project and description of initial reservoir as a dugout then constructed into a dam.

STATE OF SOUTH DAKOTA)

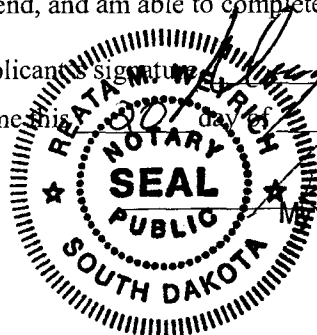
County of Lawrence SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

I, Douglas Ottema, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Douglas Ottema

Subscribed and sworn to before me this February day 20 2009



Commission Expires April 30, 2013
Notary Public
Reata M. Weyrich

**SOUTH DAKOTA
WATER PERMIT NO. 1904-1**

Date of first receipt of application March 30, 2009.

Date of return to applicant for corrections, amendments or changes April 3, 2009.

Date of receipt of corrected application June 26, 2009.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1904-1 to Douglas Ottema, 1218 Easy Street, Whitewood SD 57793 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 1904-1 appropriates up to 6 acre-feet of water in a series of three small dry draw dams/dugouts for a mining operation located in the W 1/2 SW 1/4 and SW 1/4 NW 1/4 Section 20-T5N-R1E. The mining claim is within the boundaries of the Black Hills National Forest in Lawrence County. Water to fill the dams/dugouts will be supplied primarily by snowmelt and runoff events. Water will be diverted from the dams/dugouts at a maximum rate of 0.167 cubic feet of water per second (less than 75 gallons per minute) for use in processing ore.
2. The water appropriated shall be used for the purpose of industrial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1- December 31.
4. The date of approval of Permit No. 1904-1 is December 7, 2009.
5. The date from which applicant may claim right is June 26, 2009.
6. One-fifth of the construction is to be completed on or before June 7, 2012.
7. All construction is to be completed on or before December 7, 2014.
8. Water is to be put to beneficial use on or before December 7, 2018.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 1904-1 authorizes three dry draw dams/dugout with a total combined storage capacity of 6 acre-feet of water and sufficient water annually to maintain the water level in the dam/dugouts.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JAN 14 2010

date



Supplemental Information

(Complete applicable portions only)

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well: _____
- On applicants property _____ On property owned by others _____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

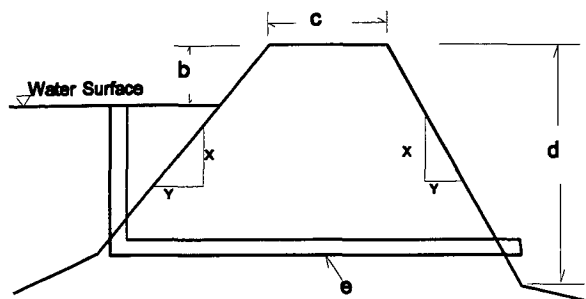
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams See attached supplement to Form 2A

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

Natural Resource Conservation Service
Bell Fourche, SD
Thomas D. Ver Helst



- b) Freeboard 2 ft
- c) Crest Width 12 ft
Crest Length 110 ft
- d) Height 12 ft
- e) Primary Outlet Capacity None
If pipe, diameter _____
- f) Secondary Spillway Capacity 12 cfs
Spillway Width 4 ft
- g) X & Y Slope _____
Upstream 2:1
Downstream 3:1
- h) Surface Area of Impoundment Max. 1 Acre
- i) Storage 2.5 Acre Feet
- j) Drainage Area Above Dam 10 Acres

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Supplement to Form 2
Description of project Form 2 #7

Area proposed for mining is located on top of a hill and the underlying formation consists of Precambrian metamorphic rocks with intrusions of porphyries forming a ridge line to the west of the alluvial deposit. This Precambrian metamorphic rock lies horizontally in the area proposed for mining. Ground water has never been encountered while digging exploration pits. Much of the area is capped with a three to four foot clay layer which has minimized the percolation of water into the alluvial formation. There are areas of the alluvial formation that contain a potpourri of clay, gravel and sand at the surface that will allow percolation. Since this is located on top of a ridge, gravity keeps any accumulation of groundwater resource from forming. Surface water is nonexistent except in the spring of the year some pre-existing prospect pits will retain water for a short period of time. The dry gulches will flow moderately from winter runoff and storm events during the spring and summer season. Observation of storm events even during heavy rainfall results in the slow migration of water to the dry gulches. These dry gulches drain into Potato Creek to the east and Bear Creek to the North.

It is proposed to develop a water supply in the form of dams. Three reservoirs are proposed having a capacity of 0.5 to 3.0 acre feet. Total water storage for the three reservoirs would be 6 acre ft. altogether.

Since runoff into the reservoirs may not be sufficient it may be necessary to divert water from the two adjacent dry gulches. These diversion points will be designed for gravity feeding or pumping water to the reservoirs. These diversion points may have a maximum dimension of 4 ft. X 4 ft. X 4 ft. deep to maintain a constant supply of water. Maximum rate of diversion will be less than 75 GPM. One dry gulch has a spring which supplies water to a wildlife and domestic livestock tank. Water taken from this dry gulch will not interfere with flow of water to the stock tank. Presently, this isn't functional because of mud and debris plugging the line that takes water from the stream bed of the dry gulch and diverts it to the stock tank. Also to accomplish additional water supply ditch lines may be installed to increase the flow of water into the reservoirs. See attached map for location of diversion point.

The water will be utilized for the processing of auriferous gravel to extract heavy minerals. Water will be circulated through settling ponds next to the processing facility. Water losses will occur through evaporation and absorbed by alluvial material. Volume of water at any one time will be a maximum of 15,000 gallons. Usage of this water will not be continuous since much of the formation is overburden and will be stripped to expose the ore body. Rate of charging and maintaining a water supply to the process facility from the dugout will be intermittent and not exceed 75 GPM.

Life of the alluvial mining project is anticipated to be a maximum of 20 years. Once project is terminated, water storage structures will be reclaimed.

Drainage from the area flows into Bear Creek and Potato-Beaver Creek. These creeks flow across the Madison formation further downstream. During the summer, these creeks cease to flow down stream with all water likely absorbed into the Madison formation.

Supplement to Form 2A
Subject # 4 Water Storage Dams

Water storage reservoirs will vary from a simple dugout reservoir to a dam breaching a ravine. Reservoirs will likely be kept within 6 ft. elevation above the ground surface yet in certain instances it may be necessary to exceed this height as indicated. Any Dam construction will be in accordance to the Natural Resource Conservation Service Specifications.

Dugout Reservoir Description

Initial construction will be a dugout reservoir with intentions of expanding into a dam at a later date. This dugout will displace up to 800 cu. yds @ a depth of 5 to 7 ft. below the surface. Area for dugout reservoir will involve removal of trees and brush followed by stockpiling of topsoil and subsoil. Following this, spoil will be removed to a depth of 7 ft. with displacement of permeable gravels if encountered. Clay will be reserved for backfilling as needed to develop an impermeable barrier for the reservoir. Clay membrane will be a minimum of 6 inches to 12 inches. Slopes will be at a maximum of 2:1 ratio. All excavated spoil will be stockpiled near the reservoir. At the natural drainage area living water bars/sediment filter will be installed if needed.

To accomplish 3.0 acre ft of water, the dugout reservoirs will be expanded into a dam. The dam structures will be composed of the excavated material taken from the dugout area of the reservoir. Dam construction will be in accordance to the Natural Resource Conservation Service specifications. See attached information provided by NRCS upon obtaining previous expired Water Permit No. 1657-1.

Excavated spoil that isn't utilized for construction of a dam will be stockpiled adjacent to the reservoir. Erosion hasn't been a problem with previous prospect pits yet seeding will be conducted to maintain stability.

Client : DOUG OTTEMAWA
 County : LAWRENCE
 Practice: DUGOUT

State: SD

By: TDV
Checked: _____Date: 07-22-97
Date: _____

Drainage Area : 6.12 * Acres
 Curve Number : 58 *
 Watershed Length : 200 Feet
 Watershed Slope : 5 Percent
 Time of Concentration: .119 Hours
 Rainfall Type : II

Storm Number	1	2	3	4	5	6	7
Frequency (yrs)	1	2	5	10	25	50	100
24-Hr Rainfall (in)	1.5	2.2	2.8	3.3	3.9	4.2	4.8
Ia/P Ratio	0.97	0.66	0.52	0.44	0.37	0.34	0.30
Used	0.50	0.50	0.50	0.44	0.37	0.34	0.30
Runoff (in)	0.00	0.07	0.21	0.38	0.62	0.76	1.06
Unit Peak Discharge (cfs/acre/in)	0.765	0.765	0.765	1.021	1.224	1.285	1.359
Peak Discharge (cfs)	0	0	1	2	5	6	9
Accumulated Runoff (Ac-Ft)		.04	.11	.19	.32	.39	.54
Value(s) provided by CN subroutine (F9)							

now fall:

Mean Annual Snowfall - 36"

Water Content Ratio - $\times .1\frac{1}{11}$

Water Content - 3.6"

Runoff Ratio - $\times .33$

Total Runoff - 1.19"

Total Runoff - 1.19"

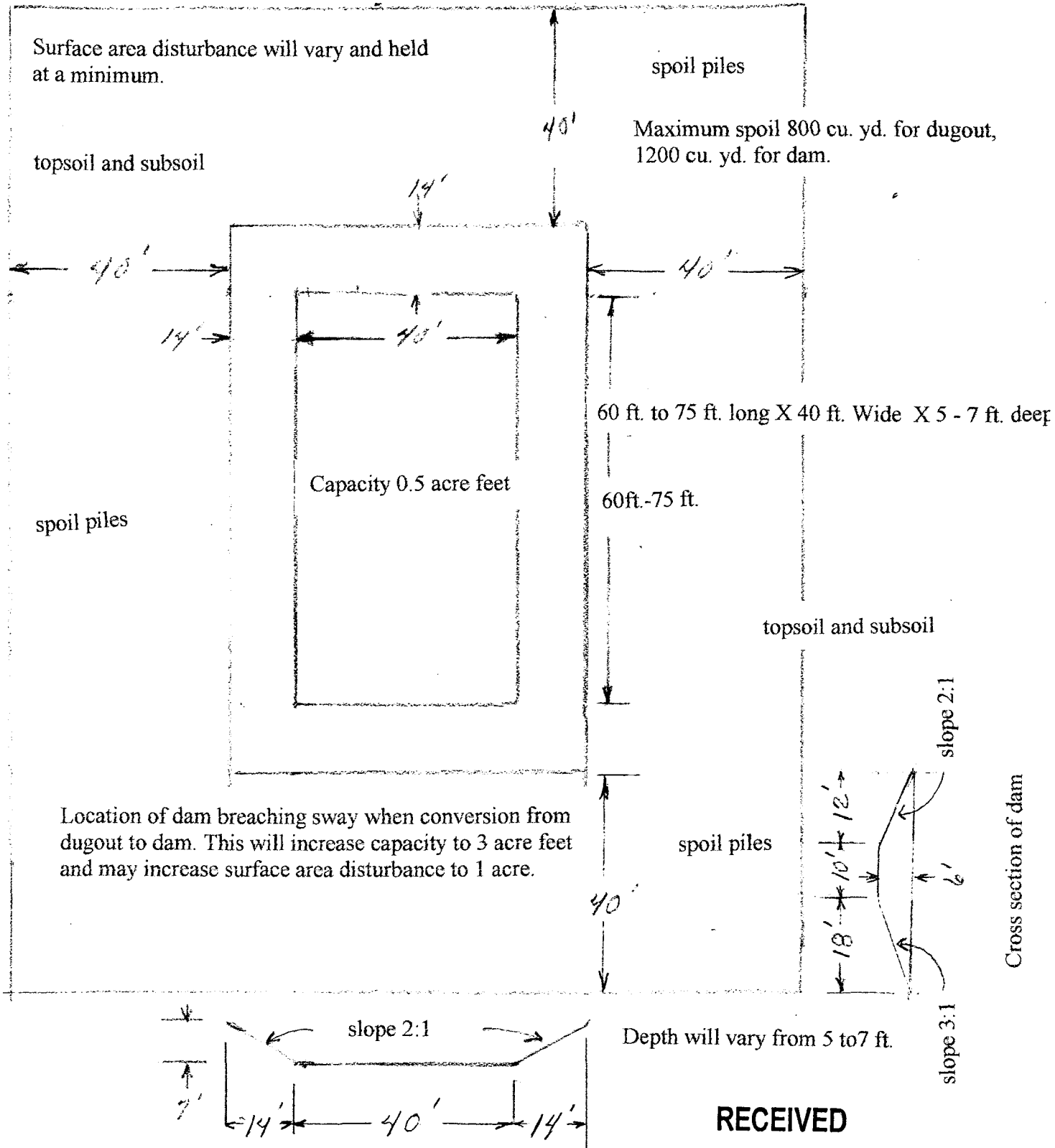
Area - 6.12 Ac

7.28 Ac-In = .61 Ac-Ft

Conclusion:

- 1) By using a 50% chance storm which is a 2yr-24hr storm event of 2.2" of rain this dugout will only receive only .04 ac-ft of runoff. And estimated snow runoff will only amount to .61 ac-ft. The accumulation of both will be far short of your anticipated 2.0 ac-ft need. You either need more drainage area or another water source.

Maximum surface area disturbance 0.75 acres
For dugout and 1.0 acres for dam



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DUGOUT RESERVOIR

Not to scale

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CROSS SECTION AT CREST OF EMERGENCY SPILLWAY AND PROFILE ALONG $\mathcal{Q}$ OF DAM
SECTION B-B

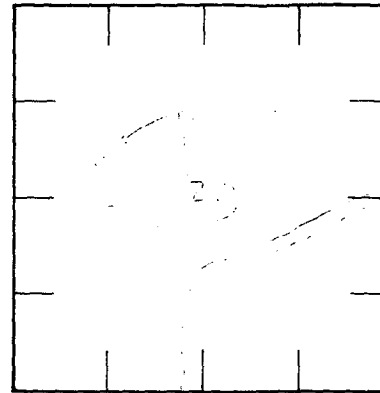
PROFILE ALONG $\mathcal{Q}$ OF EMERGENCY SPILLWAY
SEDIMENT YIELD

MAXIMUM CROSS SECTION OF DAM
SECTION A-A

ERODIBILITY AREA ACRES	GROSS RATE A.F./AC./YR.	DRAINAGE AREA ACRES	DELIVERY RATE %	DESIGN PERIOD YEARS	REQ'D. SEDIMENT VOLUME AC.-FT.

STRUCTURE DATA

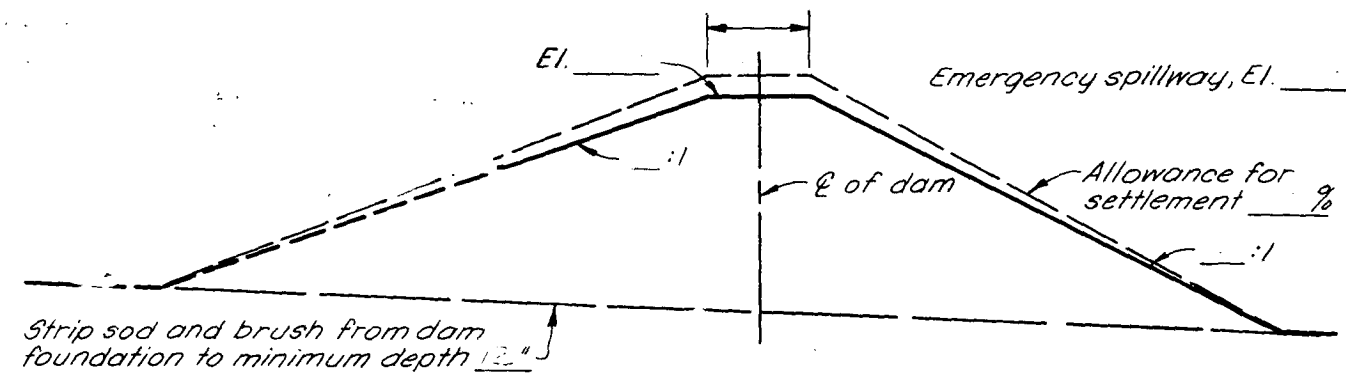
DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC.FT.	25-YR.	C.F.S.	FEET	ACRES	AC.FT.	AC.FT.
		1.32					



Sec. 12 T. 20 R. 13
County

LOCATION

TABLE OF QUANTITIES. PRELIMINARY

[illegible]

TYPICAL CROSS SECTION OF DAM

... CONSTRUCTION AND MATERIAL SPECIFICATIONS:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears slightly aged or off-white. There is no handwriting or other markings on the page.

EARTH DAM

OPERATOR: _____

... ..

Date	Approved by
------	-------------

Designed	Title
----------------	-------------

Drawn _____

	Title
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SKETCH PLAN OF DAM AND RESERVOIR AREA

REFERENCE: ..

Prepared by Natural Resource Conservation Service

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 3/30, 2009

RECEIVED OF Douglas Ottema 1218 Easy St Whitewood SD 57793

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>1904-1</u> to Appropriate Water, to construct and to put water to beneficial use	150	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>1904-1</u>	50	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	200 00

No.

04102

By

Salvador Echele
Chief Engineer

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MAR 30 2009

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Doug Ottema
1218 Easy Street
Whitewood, SD 57793-2126
March 27, 2009

Mr. Eric Gronlund
Department of Environment and Natural Resources
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Dear Mr. Gronlund:

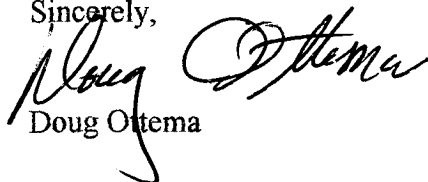
Enclosed is my application for water rights to construct reservoirs for placer mining. I'm submitting an application for a small mine permit and have delayed sending this until I get the application close to finalization so that each are synchronized.

I was in contact with Thomas D Ver Helst with Natural Resource Conservation Service last summer to do a site visit for the location of the dugout reservoir that will be expanded into a dam at a future date. We never did get together so therefore I'm enclosing data that he submitted to me back in 1997.

I'm also enclosing a check for \$200 to cover the cost of the application for water rights per our discussion.

Thank you for your time and if there are any questions please give me a call.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Ottema", is written over the word "Sincerely," and the printed name "Doug Ottema".

Doug Ottema

Enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

April 3, 2009

Douglas Ottema
1218 Easy Street
Whitewood SD 57793

Dear Mr. Ottema:

Thank you for submitting the application for a water permit to appropriate water for your mining operation near Beartown Hill in Lawrence County. Upon review of the application, the following items need to be addressed in order to complete the application.

1. The map submitted with the application must be signed by a registered professional engineer, registered land surveyor or government employee who prepares maps as a normal part of their job. Often we direct agricultural producers to their local NRCS or FSA office for assistance in meeting this requirement. I am uncertain whether they can provide this assistance to an industrial user.

Enclosed is the original map that will need to be signed and returned. Any other signed map that references the locations of the diversion works in reference to a section corner is also acceptable.

(Back in 1998, I signed the map after our on-site visit. Since I did not prepare this map, I am not comfortable signing the map for the purpose of meeting this requirement.)

2. The application states the three reservoirs and two pump stations are to be located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ and SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 20, T5N, R1E.

The map submitted with the application shows two reservoirs located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ and the third reservoir located across the road to the north in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 20, T5N, R1E.

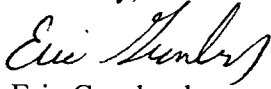
Do you concur? _____

3. The description of the project states the total storage capacity of the reservoirs is 6.0 acre feet of water. I intend to include this capacity under the amount of water claimed on the application.

4. The map shows the location of the wells in blue. I am assuming these were marked for reference purposes. If it is your intention to divert from any of these wells for the mining operation, a separate water right permit will need to be obtained for this groundwater use.

Please give me a call if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric Gronlund".

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

Schlaak, Karen

From: Gronlund, Eric
Sent: Wednesday, April 08, 2009 2:32 PM
To: Schlaak, Karen
Subject: Doug Ottema application

This is the small mining application in Lawrence County. We returned the application. He called to say with the snow in the are that it will likely be June before he gets NRCS out there to take a look at for the purpose of signing the map.

Eric Gronlund
Water Rights Program, DENR
Phone: (605) 773-3352
Fax: (605) 773-4068
Email: eric.gronlund@state.sd.us
Web: www.denr.sd.gov

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JUN 26 2009

WATER RIGHTS
PROGRAM

Douglas Ottema
1218 Easy Street
Whitewood, SD 57793-2126
Tele: 605-717-2028
June 25, 2009

Mr. Eric Gronlund
Department of Environment and Natural Resources
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Dear Mr. Gronlund

Enclosed is the map signed by Thomas D VerHelst with Natural Resource Conservation Service for the water rights permit submitted March 27, 2009.

A legal description is included with the map.

Total water storage will be the 6.0 acre ft. of water requested.

Water well location is only for information. There are no intentions of using water from these well.

Hopefully every thing is in place to proceed with the application. Any additional questions please feel free to contact me at the above phone number.

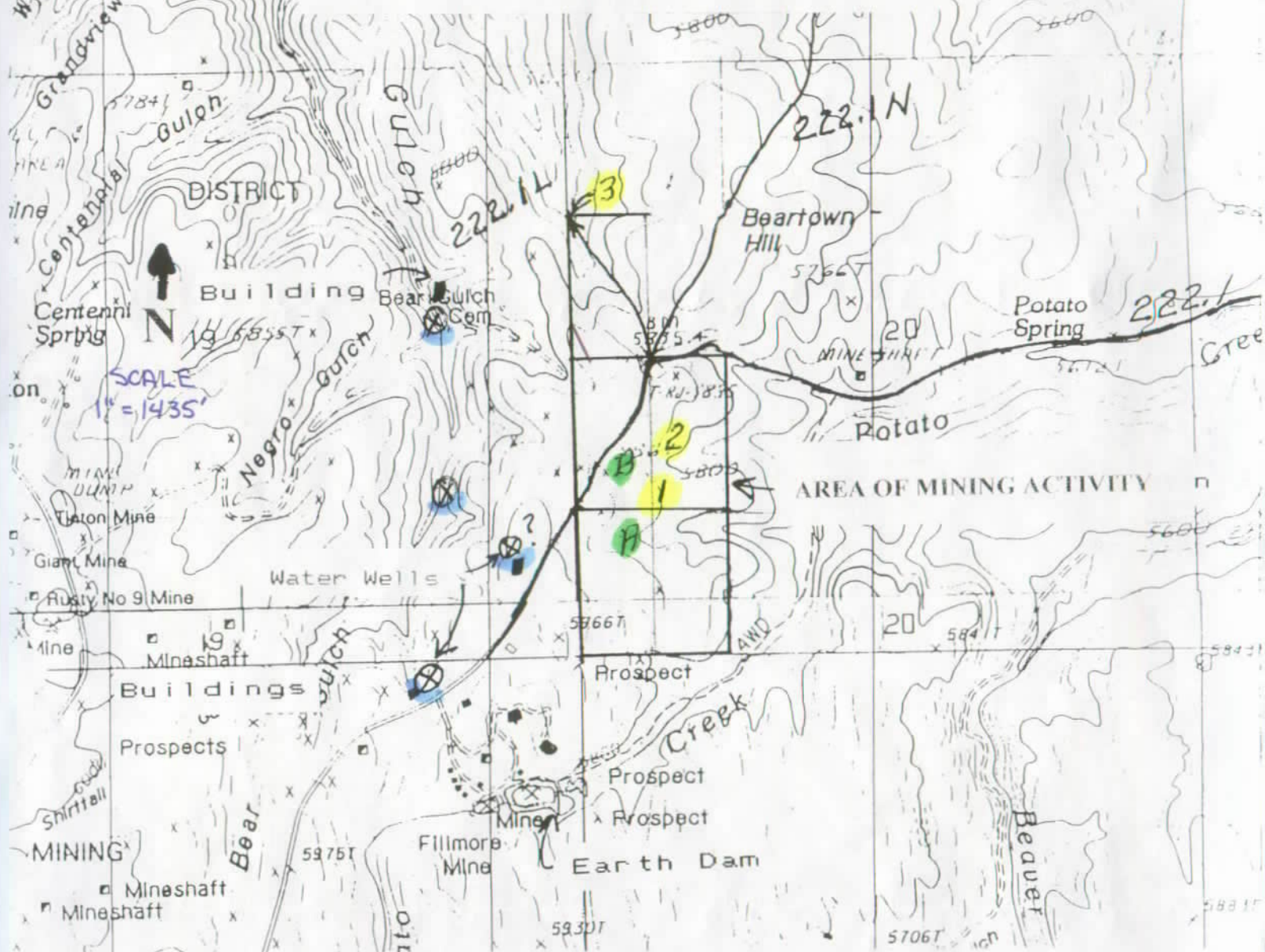
Sincerely,


Doug Ottema

enclosures

LOCATION OF PLACER MINING CLAIMS

SEC. 20, T5N, R1E, BHM
LAWRENCE COUNTY, SD



Location of Water Wells - No usage

Buildings

Description of dam and diversion locations:

Legal Description: W 1/2 of SW 1/4, W 1/2 of SW 1/4 of NW 1/4 Sec. 20, T5N, R1E

- Dam No. 1 Beginning SW corner of Section 20 thence 1453 ft. North, thence 790 ft. East.
- Dam No. 2 Beginning SW corner of Section 20 thence 2034 ft. North, thence 929 ft. East.
- Dam No. 3 beginning SW corner of Section 20, thence 3960 ft. North, thence 56 ft. East.
- Diversion A Beginning SW corner of Section 20, Thence 1056 ft. North thence 422 ft. East.
- Diversion B Beginning SW corner of Section 20, Thence 1690 ft. North thence 528 ft.

MAP APPROVED BY:

Thomas D. Ver Helst

Thomas D. Ver Helst

Ag Engineer, NRCS, Belle Fourche

June 24, 2009

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**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1904-1, Douglas Ottema**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 1904-1, Douglas Ottema, 1218 East Street, Whitewood SD 57793.

The Chief Engineer is recommending APPROVAL of Application No. 1904-1 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use during May, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. Water Permit No. 1904-1 authorizes three dry draw dams/dugout with a total combined storage capacity of 6 acre feet of water and sufficient water annually to maintain the water level in the dam/dugouts.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
November 3, 2009

NOTE: This recommendation for approval is based on the fact that Water Permit No. 1657-1 has been cancelled. Permit No. 1657-1 was for a slightly larger version of this same project but was cancelled for non-construction. Pursuant to SDCL 46-5-36 & 37, when a permit is abandoned and/or forfeited, the water shall revert to the public and shall be regarded as unappropriated public water. Therefore the cancellation of Permit No. 1657-1 provides for unappropriated public water to recommend approval of this application.

REPORT ON APPLICATION NO. 1904-1

For Douglas Ottema

July 27, 2009

Water Permit Application No. 1904-1 proposes to appropriate up to 6 acre-feet of water in a series of three small dry draw dams/dugouts for industrial use in a small-scale mining operation located in the W½ SW¼ and SW¼ NW¼ Section 20, all in T5N-R1E. The mining claim is within the Black Hills National Forest in Lawrence County, South Dakota. Water to fill the dams/dugouts will be supplied primarily by snowmelt and runoff events. Water will be diverted from the dams/dugouts at a maximum rate of 0.167 cubic feet of water per second (cfs), less than 75 gallons per minute, for use in processing ore. The application also proposes to appropriate up to 0.167 cfs (less than 75 gallons per minute) from pump stations along the dry draws to assist in maintaining water levels in the dams/dugouts.

WATER SOURCE – SURFACE WATER RUNOFF/SNOWMELT

The proposed mining operation is located near the headwaters of Bear Gulch and Beaver Creek. Bear Gulch is a tributary of Sand Creek, which is a tributary of the Redwater River. Beaver Creek is a tributary of Crow Creek, which is also a tributary of the Redwater River.

The water to be used in the mining operation is from surface runoff which will be stored in three reservoirs which will be converted into dams at a later date. Since runoff into the reservoirs may not be sufficient it may be necessary to divert water from the two adjacent dry gulches. These diversion points will be designed for gravity feeding or pumping water to the reservoirs.

Surface runoff water from the proposed mining area normally flows into Bear Gulch and Potato Creek (tributary of Beaver Creek). A short distance downstream from the proposed mining area, Bear Gulch and Beaver Creek pass over the outcrop of the Madison Limestone. As a result, the streams lose some or all of their flow up to the threshold rate.

The bedrock loss threshold for both Bear Gulch and Beaver Creek were measured in 1998 by Jon E. Hortness and Daniel G. Driscoll and found to be 4 cfs and 9 cfs respectively. Therefore due to the size of the drainage basin above the loss zone and the low loss threshold values, any precipitation or snowmelt would be able maintain the streamflow through the loss zone and contribute to the flow of the Redwater River.

WATER AVAILABILITY DISCUSSION

In October 1987, the Water Rights Program completed an investigation of water availability on Spearfish Creek and the Redwater River (both tributaries to the Belle Fourche River). In addition, Water Right No. 0377-1 held by the United States Bureau of Reclamation is for 1,440 cfs of the waters of the Belle Fourche River and Tributaries with a priority date of August 5, 1904. The water is stored in the Belle Fourche Reservoir.

The investigation results show that there is no unappropriated water for new appropriation because of prior rights for irrigation from Spearfish Creek and the Redwater River, and to fill the Belle Fourche Reservoir each year.

In May 2002, deferred Application No. 1348-1 (G. Eugene Johnson) was considered and denied by Water Management Board to divert water from Spearfish Creek for irrigation purposes. This application was deferred in May 1986 for further investigation. In the "Findings of Fact", the Board found that the three water courses in the area – Spearfish Creek, Redwater River and the Belle Fourche River, should be treated as a single complex and that the insufficiency of water is demonstrated by several factors to include that the United States Bureau of Reclamation's

inability to capture sufficient natural flows from the Belle Fourche River to provide an adequate water supply for the irrigation district and that the Belle Fourche Irrigation District has had to contract for water released from the Keyhole Reservoir in twenty-four of the previous twenty-seven years.

In denying this application, the Water Management Board concluded that there is not a reasonable probability that unappropriated water is available in the watershed (Conclusions of Law #5).

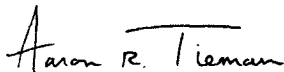
In May 2008, Water Permit No. 1657-1 which authorized the storage of 15 acre-ft of water with a diversion rate of 0.22 cfs was cancelled due to non-construction. The water from Water Permit No. 1657-1 reverted to the public and is regarded as unappropriated public water; therefore unappropriated water is available at this time for this application.

REVIEW OF EXISTING WATER PERMITS/RIGHTS

Two vested water rights (1404-1 and 958-1), with an authorized total diversion rate of 3.28 cfs to irrigate 138 acres, use Crow Creek as a water source. A number of water rights/permits use the Redwater River, and further downstream, the Belle Fourche River as water sources. Since surface water runoff from the proposed mining area for Water Permit Application No. 1904-1 would most likely reach the Redwater River; downstream water rights could be adversely affected if the Belle Fourche Reservoir does not reach storage capacity.

CONCLUSIONS

1. Water Permit Application No. 1904-1, Douglas Ottema, proposes to store up to 6-acre feet of water in small dry draw dams/dugouts for industrial use in a small-scale mining operation.
2. Water is to be diverted at a rate of 0.167 cfs from the dams/dugouts for the mining operation and at a rate of up to 0.167 from pump stations to maintain water levels in the dams/dugouts.
3. Surface runoff from the mining area flows to Bear Gulch and Beaver Creek, both tributaries to the Redwater River which is a tributary to the Belle Fourche River.
4. Not all the water is lost to the Madison Limestone outcrop in this area; therefore, the proposed water use may divert water otherwise used during drought periods for existing downstream Water Rights or domestic water use.
5. In 2002, the Water Management Board found that there is not a reasonable probability that unappropriated water is available in this watershed. The cancellation of Water Permit No. 1657-1 reverted water to the public as unappropriated water.



Aaron R. Tieman
Natural Resources Project Engineer

Approved by



Mark D. Rath
Natural Resources Engineering Specialist

BIBLIOGRAPHY

Driscoll, D.G., Bradford, W.L., and Neitzert, K.M., Selected Hydrologic Data, Through Water Year 1994, Black Hills Hydrology Study, South Dakota: United States Geological Survey Open File Report 96-399.

Driscoll, D.G. and Hortness, J.E., Streamflow Losses in the Black Hills of Western South Dakota, U.S. Geological Survey Water-Resources Investigations Report 98-4116.

Water Rights, 2009, Unpublished Water Rights Data, SD DENR, DES, Water Rights Program, Pierre, SD, 57501.

RECEIVED

NOV 30 2009

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

County of Lawrence) SS

I, Seri Adler

certify that the attached printed Notice was
taken

from the Lawrence County
Journal

printed and published in Deadwood

County of Lawrence and

state of South Dakota. The notice was
published

in the newspaper on the following two dates:

November 18, 2009

November 25, 2009

Cost of Printing \$46.19

NOTICE OF APPLICATION
NO. 1904-1 to Appropriate
Water

Notice is given that Douglas Ottema, 1218 East Street, Whitewood SD 57793 has filed an application for a water permit to appropriate up to 6 acre-feet of water in a series of three small dry draw dams/dugouts for a mining operation located in the W 1/2 SW 1/4 and SW 1/4 NW 1/4 Section 20-T5N-R1E. The mining claim is within the boundaries of the Black Hills National Forest in Lawrence County. Water to fill the dams/dugouts will be supplied primarily by snowmelt and runoff events. Water will be diverted from the dams/dugouts at a maximum rate of 0.167 cubic feet of water per second (less than 75 gallons per minute) for use in processing ore.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1904-1 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by December 7, 2009.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application.

/s/ Steven M. Pirner, Secretary
Department of Environment and Natural Resources.

Published twice at the total approximate cost of \$46.19.

Published Wed., Nov. 18
and Wed., Nov. 25, 2009
Lawrence County Journal

Seri Adler
(Signature)

Customer Service Rep
(Title)

11-25-09
(Date Signed)

Joyce Marie Pharr
Notary Public
my commission expires: 08/14/2012



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

November 10, 2009

Lawrence County Journal
376 Main St Suite A
Deadwood SD 57732

ATTENTION: Legal Public Notice

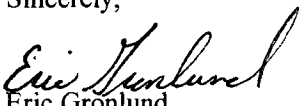
Enclosed is a Notice on Application No. 1904-1 to Appropriate Water to be published twice. Please publish the first notice on November 18, 2009 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Douglas Ottema, 1218 Easy St., Whitewood SD 57793 (Ph # 605-717-2028).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

No. 1904-1

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of November 10, 2009 enclosing Notice to Appropriate Water by Application No. 1904-1 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

November 10, 2009

Douglas Ottema
1218 Easy St
Whitewood SD 57793

Dear Mr. Ottema:

Water Permit Application No. 1904-1 for mining operation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Lawrence County Journal printed at Deadwood SD (Ph # 605-578-3305). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
eric.gronlund@state.sd.us

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

Instruction to Newspaper - Publish first Notice on November 18, 2009 with the second publication 7 days later. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 1904-1 to Appropriate Water

Notice is given that Douglas Ottema, 1218 East Street, Whitewood SD 57793 has filed an application for a water permit to appropriate up to 6 acre-feet of water in a series of three small dry draw dams/dugouts for a mining operation located in the W $\frac{1}{2}$ SW $\frac{1}{4}$ and SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 20-T5N-R1E. The mining claim is within the boundaries of the Black Hills National Forest in Lawrence County. Water to fill the dams/dugouts will be supplied primarily by snowmelt and runoff events. Water will be diverted from the dams/dugouts at a maximum rate of 0.167 cubic feet of water per second (less than 75 gallons per minute) for use in processing ore.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1904-1 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published twice at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

JAN 14 2013

Douglas Ottema
1218 Easy St
Whitewood SD 57793

Dear Mr. Ottema:

Enclosed is Water Permit No. 1904-1 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



1904-1

December 23, 2014

Douglas Ottema
1218 Easy Street
Whitewood SD 57793

Dear Mr. Ottema:

As we spoke on the phone, the time to have completed construction of works authorized by Water Permit No. 1904-1 has expired. You indicated that a small pond has been constructed but not to the 6.0 acre feet of water storage capacity intended when you obtained the permit. I stated that the permit is capable of being reinstated for the portion that has not yet been constructed. I agreed to provide a rough draft of an application to reinstate for you to review, make changes and sign for the purpose of filing for reinstatement.

Enclosed is the following:

1. Water Permit No. 1904-1
2. Draft application
3. Blank application form for use if extensive changes are made.

Please review and sign if in agreement. Note that under Item No. 7 there is a blank for stating the storage capacity of the one pond that has been constructed.

The application filing fee for reinstatement is \$100 and once reviewed and ready for public notice you'll be responsible for the cost of the publication notice.

Please let me know if you have any questions.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

enclosure

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	(office use only) No. _____ Hydrologic Unit _____
	Basin _____
	Newspaper _____

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☒ Industrial	☐ Other _____	

Type of Application: (check one)

☐ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☒ Amendment/Correction to Permit No. 1904-1		

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)
reinstatement of portion of project not completed by the December 7, 2014 date to complete construction.

1. Name to Appear on Water Permit Douglas Ottema

(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____

(name and complete address if different than above name)

Mailing Address 1218 Easy Street Whitewood SD 57793
(Address) (City) (State) (Zip Code)

Home Phone 605 7172028 Cell _____ Email _____

2. Amount of water claimed 0.167 *CFS or 75 gpm **GPM up to 6.0 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply dams and diversions from dry gulches

4. Location of point of diversion NW 1/4 SW 1/4, SW 1/4 NW 1/4 Sec. 20, T5N, R1E County Lawrence

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No

If "Yes," where will water be used? _____

(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Lawrence

6. Annual period during which water is to be used January 1 - December 31

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Construction of project was delayed due to magnitude of project and getting permitting through US Forest Service. Have completed one small pond capable of storing _____. Seek reinstatement of remaining storage up to 6.0 acre feet as the project moves forward.

I, _____, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.