

WATER PERMIT NO. 1809-1

Name of Applicant: **Fairview Ranch, Inc.**

Address: **15935 Bixby Rd, Faith SD 57626**

Phone: **605 748-2420**

Amount of Water Claimed: **107 AF**

Total Acres: **NA**

Source of Water Supply: **runoff**

Water to be used for: **fish & wildlife propagation and livestock water**

County: **Perkins**

Type of Waste Disposal System:

Location: **24 miles south of Bison**

PRIORITY Date Received: **10-27-03**

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

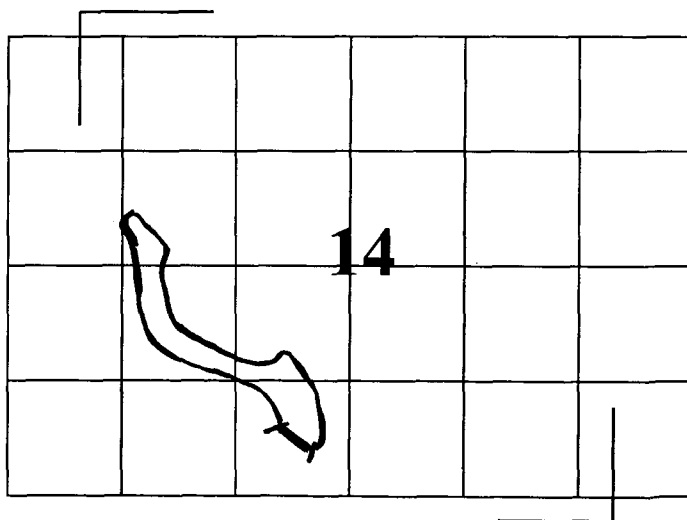
Corrected Application Received: **10-30-03**

Period of Annual Use: **January 1 – December 31**

Remarks:

Diversion Point: **SE ¼ SW ¼ Sec 14-T14N-R13E**

Water Impounded: **SW ¼, SW ¼ NW ¼ Sec 14-T14N-R13E**



Depth of Well: **NA**

Well Driller :

Remarks:

Type of Map: **topo**

Prepared by: **Thomas VerHelst, NRCS**

Reviewed and the Number Assigned on: **10-30-03**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 1809-1**

Date of first receipt of application October 27, 2003.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1809-1 to Fairview Ranch, Inc., c/o Mike Haines, Pres., 15935 Bixby Rd, Faith SD 57626 authorizing the construction of the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 1809-1 authorizes impoundment of 107 acre-feet of water from runoff by constructing a dam located in the SE ¼ SW ¼ Section 14 with water impounded in the SW ¼, SW ¼ NW ¼ Section 14; all in T14N-R13E.
2. The water appropriated shall be used for the purpose of fish and wildlife propagation and livestock water purposes 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. 1809-1 is December 22, 2003.
5. The date from which applicant may claim right is October 27, 2003.
6. One-fifth of the construction is to be completed on or before June 22, 2006.
7. All construction is to be completed on or before December 22, 2008.
8. Water is to be put to beneficial use on or before December 22, 2012.
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. 1809-1 authorizes a dam with a storage capacity of 107 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

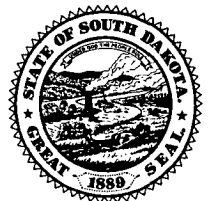
WATER MANAGEMENT BOARD

By: Garland Erbele

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

DEC 29 2003

date



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>1809-1</u>	(office use only) Hydrologic Unit <u>10130305</u>
	Basin <u>Moreau River</u>	
	Newspaper <u>The Bison Courier, Bison</u>	

RECEIVED
OCT 27 2003
WATER RIGHTS
PROGRAM

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 <u>Livestock</u>	

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.)

1. Name of Applicant Fairview Ranch Inc. Phone 748-2420 or 748-2412
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 15935 Bixby Rd. Faith SD 57626
(Street, RR, or Box and City) (Zip Code)
2. Amount of water claimed _____ *CFS or _____ **GPM 107 ***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 Runoff
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Perkins
SE1/4 SW1/4 SEC 14, T14N-R13E Water Impounded: SW1/4 SW1/4 NW1/4
Sec 14-T14N-R13E
5. County or counties where water will be used Perkins
6. Annual period during which water is to be used Jan 1 - Dec 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)
Project involves construction of a multi-purpose earth filled dam. Dam specifications include a 15" dia. plastic principal spillway and a 40' wide vegetated auxiliary spillway.

STATE OF SOUTH DAKOTA)

County of Perkins 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, Fairview Ranch Inc. 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.

Mike C. Harris Pres.

Applicant's signature

Fairview Ranch Inc.
Mike C. Harris Pres.

Subscribed and sworn to before me this 24 day of OCTOBER 2003

Channon Laines

Notary Public signature

my comm. - EXPIRES: Feb. 9, 2008

(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

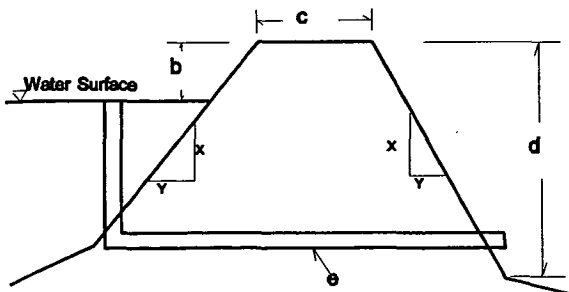
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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:

NRCS
P.O. Box 189
Bison, SD 57620



- b) Freeboard 3.0'
- c) Crest Width 16'
Crest Length 249'
- d) Height 27.5'
- e) Primary Outlet Capacity 26.6 cfs
If pipe, diameter 15"
- f) Secondary Spillway Capacity 316.1 cfs
Spillway Width 40'
- g) X & Y Slope
Upstream 4:1
Downstream 3:1
- h) Surface Area of Impoundment 17.3 Ac
- i) Storage 107 Acre Feet
- j) Drainage Area Above Dam 1148 Acres

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date October 27, 20 03

RECEIVED OF Fairview Ranch Inc., Mike or Holly Haines, 17481 Deep Creek Rd., Faith SD

57626

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

Fee for Application for Permit No. <u>1809-1</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>1809-1</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.

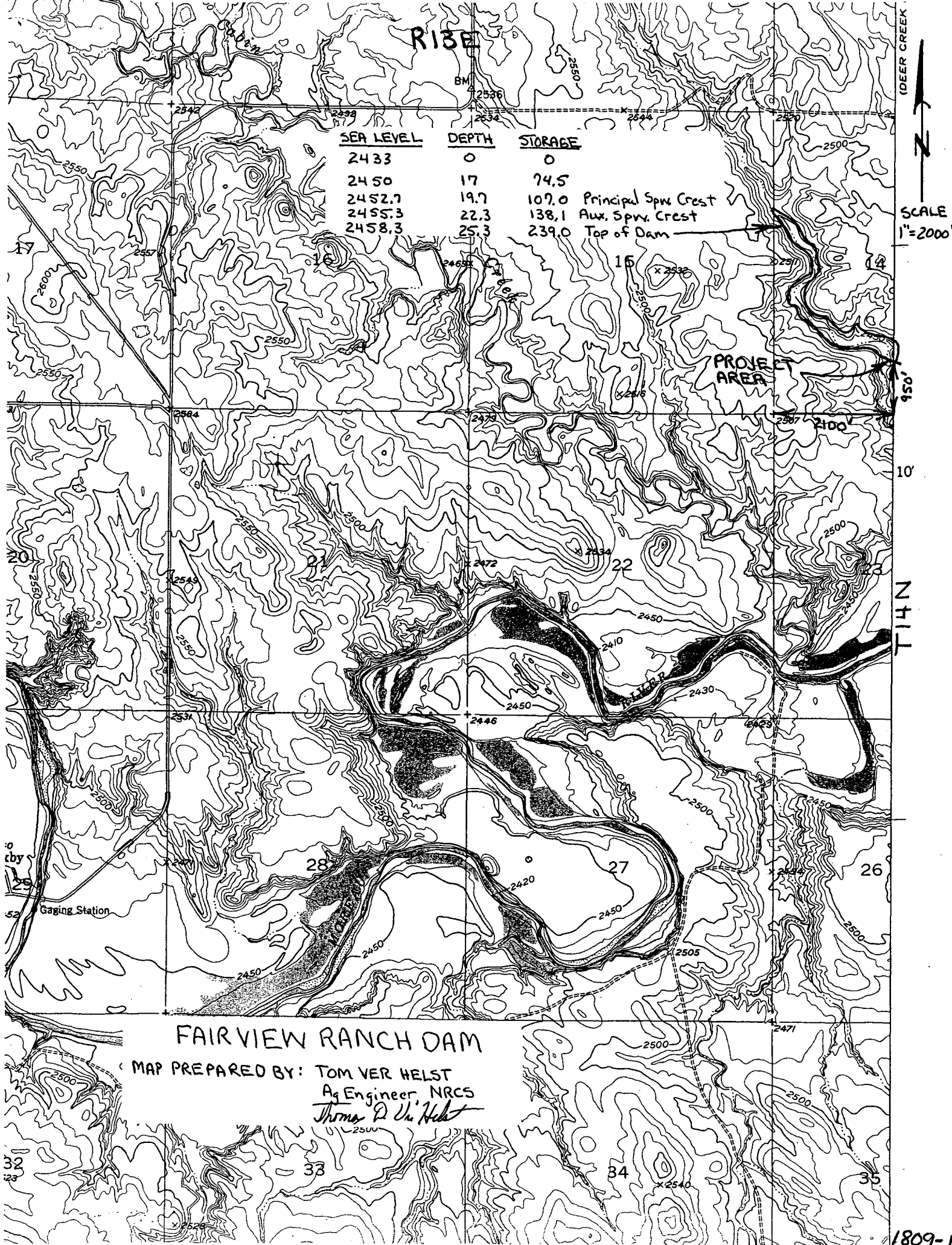
901

By

Darland Ebele

Chief Engineer

gm



R13E

BM 2536

SEA LEVEL	DEPTH	STORAGE
2433	0	0
2450	17	74.5
2452.7	19.7	107.0
2455.3	22.3	138.1
2458.3	25.3	239.0

Principal Spw. Crest

Aux. Spw. Crest

Top of Dam

PROJECT AREA

SCALE 1"=2000'

FAIRVIEW RANCH DAM

MAP PREPARED BY: TOM VER HELST

Ag Engineer, NRCS

Thomas D. Ver Helst

Water Permit Application No 1809-1

Fairview Ranch

Top of Dam Elev. - 93.9
 2nd Spillway Elev. - 90.9
 P. Spillway Elev. - 88.3
 D/S Emb. Toe Elev. - 66.4

Cat. 3 - Low Hazard Dam

Ht = 27.5 ft

Normal Storage Capacity - 107 Ac-Ft
 Int Storage Capacity - 139 Ac-Ft
 Max Storage Capacity - 240 Ac-Ft

Int Capacity x Eff. Ht. = $139 \times 20 = 2780 < 3000 \therefore 25 \text{ yr}$
Minimum Spillway Design

From USGS WRI 98-4055 "Tech for Est Peak Flow ... in 50"

$$DA = 1.79 \text{ mi}^2 = 1148 \text{ Ac}$$

$$\text{Slope} = 60 \text{ ft/mi}$$

$$SI = 2.50$$

$$Q_{25} = 207 CA^{.573}$$

$$= 207 (1.79)^{.573}$$

$$= \underline{289 \text{ cfs}}$$

$$Q_{100} = 379 CA^{.566}$$

$$= 379 (1.79)^{.566}$$

$$= \underline{526 \text{ cfs}}$$

Secondary Spillway Flow

$$Q = C L H^{3/2} \quad H = 3$$

$$= (2.6)(52)(3)^{1.5} \quad C = 2.6$$

$$= \underline{703 \text{ cfs}} \quad L = 52$$

Section 74:02:08:09

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Dam Max X-Sec - OK
4. Area Capacity - OK
5. Outlet Details - OK
6. Spillway Rating - OK
7. Spillway Details - OK
8. Specs - 3rd NRCS - OK
9. EPP - N/A Cat 3 - OK

NRCS Annual Yield

$$CN = 70 \quad DA = 1148 \quad Iso = 1 1/2$$

$$80\% \text{ chance} = 0.066^{43} \quad 0.066 \times 1148^{1/2} = \underline{6.3 \text{ Ac-Ft}}$$

$$50\% \text{ chance} = 0.15 \quad 0.15 \times 1148^{1/2} = \underline{14.35 \text{ Ac-Ft}}$$

$$10\% \text{ chance} = 0.98 \quad 0.98 \times 1148^{1/2} = \underline{94 \text{ Ac-Ft}}$$

CONSTRUCTION SPECIFICATIONS

for

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WATER RIGHTS
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DAM

FAIRVIEW RANCH INC

PERKINS CO.

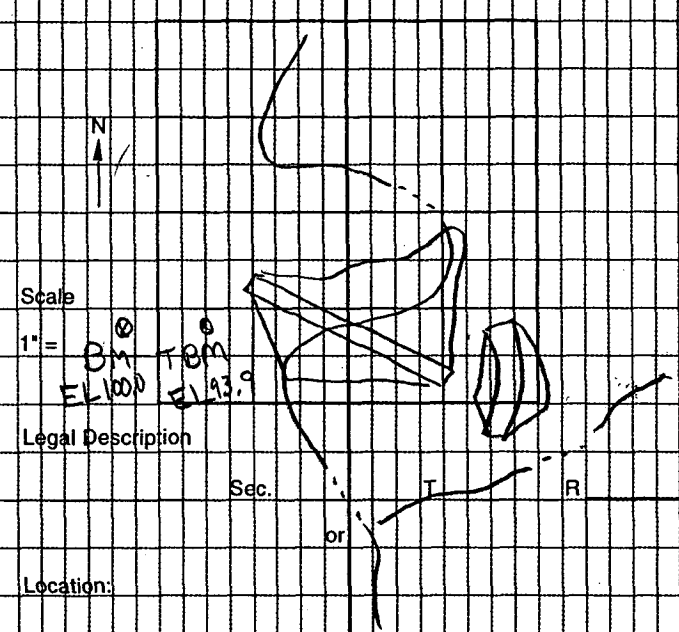
Prepared by:

USDA-NATURAL RESOURCES CONSERVATION SERVICE

Assisting:

PERKINS Conservation District

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCD	Date	10/7/03
Field Office	BISON	
Name	SQUEAK & MIKE HAINES	
Individual, <u>Group</u> Unit of Govt. (circle one)		
Job	DAM	
Design Sur.	☒	Const. Layout ☒
Const. Check		Other
Ident No.		Field No.
		
Location:		

Sta.	B.S.	H.I.	F.S. or Grade Rod	Elev. or Planned Elev.
TBM	10.05	95.93		85.88
0+00			2.0	93.9
45				
0+45				
24				
0+69				
23				
0+92				
17				
1+09				
0+89				
22				
1+31				
1+11				
15				

WARM, CLR, CALM

10/7/03

T. VERHELST
G. HENDRICKS
Haidi Ahlers
Ryan Beer

OS
3:1

16' TOP
2.0
0

US
4:1

F88 85.1
10.8 85.1
34.4

F93 86.6 83.1
9.3 86.6 12.8
0 45'

F14.7
14.7 81.2
66.8'

F13.0 89.9
15.0 89.9
49.0

F12.6 88.3 80.8
14.6 88.3 15.1
0 42'

F22.3
24.3 81.6
97.2

F16.7 119.2 118.3
18.7 119.2 10.6
58.1 38'

F24.7
26.7 89.2
0

F25.3
27.3 88.6
109.2

F18.2 116.0
20.2 116.0 15.9
42.6 55'

F26.8 89.1 81.7
28.8 89.1 24.2
0 96.0

F22.2
24.2 81.7
96.8

F24.5
24.5 89.4
81.5

F24.6
26.6 89.3
0

F12.5 90.4
19.5 90.4
78.0

Station	B.S.	H.I.	F.S. or grad rod	Elev. or planned elev.	DS	TOP	115
1+46		95.93			31	18	115
1+26			2.0	93.9	F27.5 29.5 90.5	F18.4 29.4 0	F16.1 18.1 22.4
35							
1+81					F13.3 15.3 47.9	F14.3 16.3 0	F14.2 16.2 64.8
1+61							
37							
2+13					F1.4 8.4 27.2	F5.0 7.2 0	F5.9 7.9 31.6
1+98							
31							
2+46						F0.0 20 0	
2+29	20.32						
TBM	6.25	106.25	100	100.0			
PROFILE E					40' WIDE		
0+00			15.4	90.9	15.4 20	15.4 0	15.4 20
80							
0+80			15.4		15.4 20	15.4 0	15.4 20
48'							
1+28					15.4 20	15.4 0	15.4 20
TBM			12.35	93.9			

CLEARING AND GRUBBING (SD-2) CONSTRUCTION SPECIFICATION

1. Scope

The work shall consist of clearing, grubbing and disposal of trees, snags, logs, brush, shrubs, stumps, and rubbish from the designated areas.

2. Protection of Existing Vegetation

Trees and other woody vegetation designated to remain undisturbed shall be protected from damage throughout the entire construction period. Vehicles, stockpiled materials, and/or ground disturbance shall not be allowed within the dripline of the vegetation designated to remain in place. The contractor shall repair any damage resulting from the contractor's operations or neglect.

3. Marking

Limits of the areas to be cleared and grubbed will be marked by stakes, flags, tree markings, or other suitable methods. Trees to be left standing and uninjured will be designated by special markings placed on the trunks at a height of about six feet above the ground surface.

4. Clearing and Grubbing

Unless otherwise specified, all stumps, roots, and root clusters that have a diameter one inch or larger shall be grubbed out to a depth of at least two feet below subgrade for concrete structures and one foot below ground surface for embankment and other designated sites. All trees not marked for preservation, and all snags, logs, brush, shrubs, stumps, rubbish, and similar materials shall be cleared from within the limits of the marked areas.

5. Disposal

Where brush piles for wildlife are not specified on the drawings, cleared, and grubbed materials shall be disposed of by burning and/or burying at locations shown on the drawings or shall be disposed of by methods and at sites selected by the contractor and approved by the NRCS inspector. Materials to be buried shall be placed at least two feet below the surrounding ground line and shall be covered by at least two feet of soil with the soil surface graded to drain.

The contractor is responsible for complying with all applicable laws and regulations and the payment of any and all fees that may result from disposal at locations away from the construction site.

EARTH FILL - CLASS A (SD-7A) CONSTRUCTION SPECIFICATION

1. Scope

The work will consist of the construction of earth fills where the degree of compaction is to be measured by standard compaction tests.

2. Materials

All fill materials shall be obtained from required excavations and designated borrow areas. Selection, blending, placement, and compaction of fill will be subject to approval of the NRCS inspector.

Fill materials shall contain no frozen material, sod, roots or other perishable material, or rocks larger than six inches in diameter. Fill shall not be placed on a frozen surface.

3. Foundation Preparation

All foundation (including abutment) surfaces shall be shaped one horizontal to one vertical or flatter except as otherwise specified.

After stripping (see stripping specification), the foundation shall be loosened thoroughly by scarifying or plowing to a minimum depth of six inches. The foundation shall then be compacted to the density and moisture requirements specified for the fill.

4. Placement

All foundation excavation and preparation shall be completed before placing fill. After placement, fill materials must be spread and blended by motor grader or other approved equipment. Except as required by the drawings, fill material shall be mixed and uniformly placed throughout the entire fill without lenses, streaks, pockets, or layers of material that differ significantly from surrounding material.

Placement and compaction methods must prevent damage to structures and allow the structure to assume backfill loads gradually and uniformly. Within 2 feet of any structure, fill layer thickness must not exceed 4 inches and equipment loads must not exceed 400 pounds.

Fill shall be placed in approximately horizontal layers. Except as described above, fill layer thickness shall not exceed six inches for compaction by large machines or four inches for small hand directed power tampers.

If the surface of any layer becomes too hard and smooth for proper bond with the succeeding layer, it shall be scarified parallel to the axis of the fill, to a depth of not less than two inches, before the next layer is placed.

Except as otherwise specified, openings temporarily left in dam fills (for pipe installation, streamflow, etc..) shall have side slopes three horizontal to one vertical or flatter. When filling the opening, the bonding surface of the fill in place shall be stripped of all material not meeting the requirements of this specification and shall be scarified, moistened, and recompacted as new earthfill is placed.

5. Control of Moisture Content

During placement and compaction of earthfill, the moisture content of the material being placed shall be maintained within the specified range. Application of water to earthfill material shall be accomplished at the borrow areas insofar as practicable, but may also be applied by sprinkling the material after placement on earthfill. Uniform moisture distribution shall be obtained by diskings or blading.

Material that is too wet shall either be removed from the fill or dried to the specified moisture prior to compaction. If the top surface of the preceding layer becomes too dry to permit suitable bond, it shall be removed or scarified, moistened by sprinkling to an acceptable moisture content, and recompacted.

6. Compaction (Class A)

Unless otherwise specified, the fill shall be compacted using sheepfoot type tamping rollers to 90 percent of Standard Proctor (ASTM D698) optimum density at a moisture content within 2 percent of optimum moisture.

Compaction of fill adjacent to concrete structures shall not be started for at least the following number of days after placement of the concrete.

Concrete Structure	Days After Concrete Placement
Vertical or near-vertical walls with earth load on one side only	14
Walls backfilled on both sides simultaneously	7
Conduits and spillway risers, cast-in-place (with inside forms in place)	7
Conduits and spillway risers, cast-in-place (forms removed)	14
Conduits, pre-cast, cradled	2
Conduits, pre-cast, bedded	1
Anti-seep Collars and Cantilever Pipe Supports (backfill both sides simultaneously)	3

7. **Testing**

Density and moisture content of the fill may be tested during construction by the NRCS inspector following the methods described in ASTM D698 and D1556 or equivalent. Tests performed by the NRCS inspector will be used to verify that the earthfills conform to the plans and specifications and not as a replacement for the contractor's quality control program.

The contractor will be responsible for supplying adequate documentation to NRCS to certify moisture and compaction requirements have been met. Optimum Moisture, Maximum Density, and associated test data will be furnished as described by ASTM D698, D1556, D2167, or equivalent.

8. **Amount of Testing to be Furnished by the Contractor**

Proctor Curves - A minimum of one Moisture-Density (ASTM D698) Standard Proctor Curve and associated test data must be prepared and furnished to NRCS for each type of material to be incorporated into the earth fill.

In-place Compaction Tests - A minimum of one in-place moisture and density test must be taken for each 2,500 cubic yards of fill placed. At least one of these tests must be taken each day Class A earth fill is placed. A copy of these tests must be furnished to the NRCS inspector.

EARTH FILL-CLASS S (SD-7S) CONSTRUCTION SPECIFICATION

1. Scope

The work shall consist of the construction of compacted earth fills where the amount of compaction is to be controlled by specifying a construction method.

2. Materials

All fill materials shall be obtained from required excavations and designated borrow areas. Selection, blending, placement, and compaction of fill will be subject to approval of the NRCS inspector.

Fill materials shall contain no frozen material, sod, roots or other perishable material, or rocks larger than eight inches in diameter. Fill shall not be placed on a frozen surface.

3. Foundation Preparation

All foundation (including abutment) surfaces shall be shaped one horizontal to one vertical or flatter except as otherwise specified.

After stripping (see stripping specification), the foundation shall be loosened thoroughly by scarifying or plowing to a minimum depth of four inches. The foundation shall then be compacted by the process specified for the fill.

4. Placement

All foundation excavation and preparation shall be completed before placing fill. Except as required by the drawings, fill material shall be mixed and uniformly placed throughout the entire fill without lenses, streaks, pockets, or layers of material that differ significantly from surrounding material.

Placement and compaction methods must prevent damage to structures and allow the structure to assume backfill loads gradually and uniformly. Within 2 feet of any structure, fill layer thickness must not exceed 4 inches and equipment loads must not exceed 400 pounds.

Fill shall be placed in approximately horizontal layers. Except as described above, fill layer thickness shall not exceed nine inches for compaction by large machines or four inches for small hand directed power tampers.

If the surface of any layer becomes too hard and smooth for proper bond with the succeeding layer, it shall be scarified parallel to the axis of the fill, to a depth of not less than two inches, before the next layer is placed.

Except as otherwise specified, openings temporarily left in dam fills (for pipe installation, streamflow, etc.,) shall have side slopes three horizontal to one vertical or flatter. When filling the opening, the bonding surface of the fill in place shall be stripped of all material not meeting the requirements of this specification and shall be scarified, moistened, and recompactd as new earthfill is placed.

5. Control of Moisture Content

At the time of compaction, earth fill shall have a moisture content that when kneaded in the hand will form a ball that does not easily crumble when pressed between the hands. If the soil is too wet, it will yield free water when kneaded in the hand.

Fill materials must be wetted or dried as needed to achieve proper moisture prior to compaction.

6. Compaction (Class S)

Fill layers shall be compacted by one of the following methods.

- a. By routing the hauling and spreading equipment such that all points of the fill are traversed by at least one tread track of the loaded equipment traveling parallel to the centerline of the fill.
- b. By at least 2 passes of a tamping (sheepsfoot) roller weighing at least 100 pounds per square inch of bearing area.

Fill adjacent to structures shall be compacted to a density equivalent to that of the surrounding fill by means of hand tamping or manually directed power tampers or plate vibrators. Within 2 feet of any structure, equipment loads must not exceed 400 pounds.

Compaction of fill adjacent to concrete structures shall not be started for at least the following number of days after placement of the concrete.

Concrete Structure	Days After Concrete Placement
Vertical or near-vertical walls with earth load on one side only	14
Walls backfilled on both sides simultaneously	7
Conduits and spillway risers, cast-in-place (with inside forms in place)	7
Conduits and spillway risers, cast-in-place (forms removed)	14
Conduits, pre-cast,	2
Conduits, pre-cast,	1
Anti-seep Collars and Cantilever Pipe Supports (backfill both sides simultaneously)	3

SEEDING (SD-28) CONSTRUCTION SPECIFICATION

1. Scope

The work shall consist of furnishing all labor, equipment, and materials needed for seeding the areas shown on the drawings.

2. General

Seeding and related operations shall be performed in the following time period.

Dates: _____

3. Fertilizer

Fertilizer shall be uniformly applied commercial liquid or dry fertilizer conforming to South Dakota laws and regulations. Fertilizer shall be supplied and applied as follows.

Types and rates: _____

4. Seed

Seed requirements and seeding rates are listed below. Documentation must be provided showing the seed meets current South Dakota laws and regulations. The seed must be planted within one year of its latest germination test.

5. Seedbed Preparation

The area to be seeded shall be made reasonably smooth and firm. Ditches shall be filled to conform to design lines and grades before seedbed preparation is begun. Prior to seeding, required fertilizer shall be applied and mixed with the soil surface to a depth of three inches. The contractor shall suspend operations when the soil is too wet.

6. Cover and/or Nurse Crops

When specified, cover and/or nurse crops shall be seeded as follows:

7. Sowing Seed

Except as otherwise specified, seeding shall be performed immediately after seedbed preparation. Seeding shall be drilled or broadcast and incorporated in a manner that will achieve uniform distribution of seed placed at appropriate soil depth.

When seeding waterways or similar water flow areas, machinery operations must be performed in a direction that is not parallel to water flow (use figure 8, serpentine, etc.).

8. Mulching

Except as otherwise specified, required mulching must be performed as soon as possible after seeding. Mulch shall be applied uniformly as follows.

STRIPPING (SD-4) CONSTRUCTION SPECIFICATION

1. Scope

The work shall consist of removing topsoil and other undesirable materials from borrow areas and foundations of structures and earth fills.

2. General

Required stripping excavation depth will be the depth needed to expose subsoil reasonably free of roots and other perishable material. Excavated earth material suitable for fill shall be placed in earth fills as appropriate. Stripped material suitable for topsoil shall be stockpiled and placed over disturbed areas as shown on the drawings or as approved by the NRCS inspector. All waste material shall be disposed of as shown on the drawings or as approved by the NRCS inspector.

3. Foundation Stripping

Remove loose soil and extend stripping to a reasonably smooth surface in consolidated subsoil. Except as shown on the drawings, foundation slopes shall be excavated to one horizontal to one vertical or flatter.

4. Borrow Area Stripping

Borrow areas shall be stripped to expose material suitable for earth fill.

SALVAGING AND SPREADING TOPSOIL (SD-10) CONSTRUCTION SPECIFICATION

1. Scope

The work shall consist of salvaging topsoil from borrow pits or other excavations and spreading it in the designated areas to the specified depths.

2. Quality of Topsoil

Topsoil shall consist of friable soil reasonably free of grass, roots, weeds, sticks, stones, or other foreign materials.

3. Excavation

Topsoil shall be removed after clearing, grubbing and removing vegetation and shall be stockpiled. Objectionable materials shall be removed and buried, or disposed of, at locations approved by the NRCS inspector.

4. Spreading

Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Surfaces to be covered shall be lightly scarified just prior to the spreading operation.

All earth fills not to be submerged shall be covered with topsoil to a depth of 6 to 18 inches measured perpendicular to the surface of the fill and placed to the neat lines shown on the drawings.

After placement is completed, the topsoil surface shall be left in a condition that will permit seeding equipment to be operated without excessive smoothing.

WOOD FABRICATION AND INSTALLATION (SD-16) CONSTRUCTION SPECIFICATION

1. Scope

The work shall consist of furnishing and constructing wood structures and wood parts of composite structures.

2. Plywood Material

Plywood and Oriented Strand Board (OSB) for use in above ground sheltered construction (buildings, etc.) shall meet Product Standard PS-1 and shall conform to the requirements shown on the drawings.

Plywood for use in exposed above ground construction shall be exterior grade, meet Product Standard PS-1 and shall conform to the requirements shown on the drawings.

Treated plywood for use above ground shall meet Product Standard PS-1 and be pressure treated with waterborne preservatives (Arsenicals) to a retention level of at least 0.4 pounds per cubic foot except as shown on the drawings.

Treated plywood that is to be in permanent contact with water or the earth must meet Product Standard PS-1 and be pressure treated with waterborne preservatives (Arsenicals) to a retention level of 0.6 pounds per cubic foot, except as shown on the drawings.

3. Structural Timber and Lumber Material

All wood material shall be sound wood free from decay and disease damage, shall be straight, not cracked, and shall meet the requirements shown on the drawings. Structural timber and lumber shall be structural grade or better.

Unless otherwise specified, all timber and all nominal lumber sizes 2X10 or larger shall be pressure treated by one of the following preservatives:

Cresote

Pentachlorophenol

Waterborne Preservatives (Arsenicals) treated to 0.4 pounds per cubic foot retention

Unless otherwise specified, all nominal lumber sizes 2X8 or smaller shall be pressure treated using waterborne preservatives (Arsenicals). Wood for use above ground shall be treated to a retention level of at least 0.4 pounds per cubic foot. Wood for use in permanent contact with water or earth shall be treated to a retention level of at least 0.6 pounds per cubic foot.

4. Metal Hardware

Bolts, nuts, washers, rods, angle iron, and other metal hardware shall be an appropriate grade of steel, and if installed underground, shall be galvanized, or have equal corrosion protection.

5. Installation

All framing shall be true and exact. Timber and lumber shall be accurately cut and assembled to close fit. Nails and spikes shall be driven with just sufficient force to set the heads flush with the surface of the wood.

Bolt holes shall be drilled for snug fit. Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread.

Washers shall be used in contact with all bolt heads and nuts that would otherwise be in contact with wood.

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	(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 <u>Livestock</u> | |

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.)

1. Name of Applicant Fairview Ranch Inc. Phone 748-2420 or 748-2412
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 15935 Bixby Rd. Faith State SD 57626
(Street, RR, or Box and City) (Zip Code)

2. Amount of water claimed _____ *CFS or _____ **GPM 107 ***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 Runoff

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Perkins
SE1/4, SW1/4 SEC 14, T14N-R13E

5. County or counties where water will be used Perkins

6. Annual period during which water is to be used Jan 1 - Dec 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)

Project involves construction of a multi-purpose earth filled dam. Dam specifications include a 15" dia. plastic principal spillway and a 40' wide vegetated auxiliary spillway.

STATE OF SOUTH DAKOTA)
County of _____ 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, _____, 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 _____

Subscribed and sworn to before me this _____ day of _____ 20 _____

(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

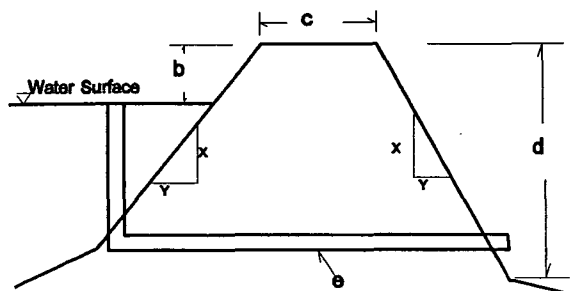
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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:

NRCS
P.O. Box 189
Bison, SD 57620



- b) Freeboard 3.0'
- c) Crest Width 16'
Crest Length 249'
- d) Height 27.5'
- e) Primary Outlet Capacity 26.6 cfs
If pipe, diameter 15"
- f) Secondary Spillway Capacity 316.1 cfs
Spillway Width 40'
- g) X & Y Slope
Upstream 4:1
Downstream 3:1
- h) Surface Area of Impoundment 17.3 Ac
- i) Storage 107 Acre Feet
- j) Drainage Area Above Dam 1148 Acres

R13E

SEA LEVEL	DEPTH	STORAGE
2433	0	0
2450	17	74.5
2452.7	19.7	107.0
2455.3	22.3	138.1
2458.3	25.3	239.0

Principal Spw. Crest
Aux. Spw. Crest
Top of Dam

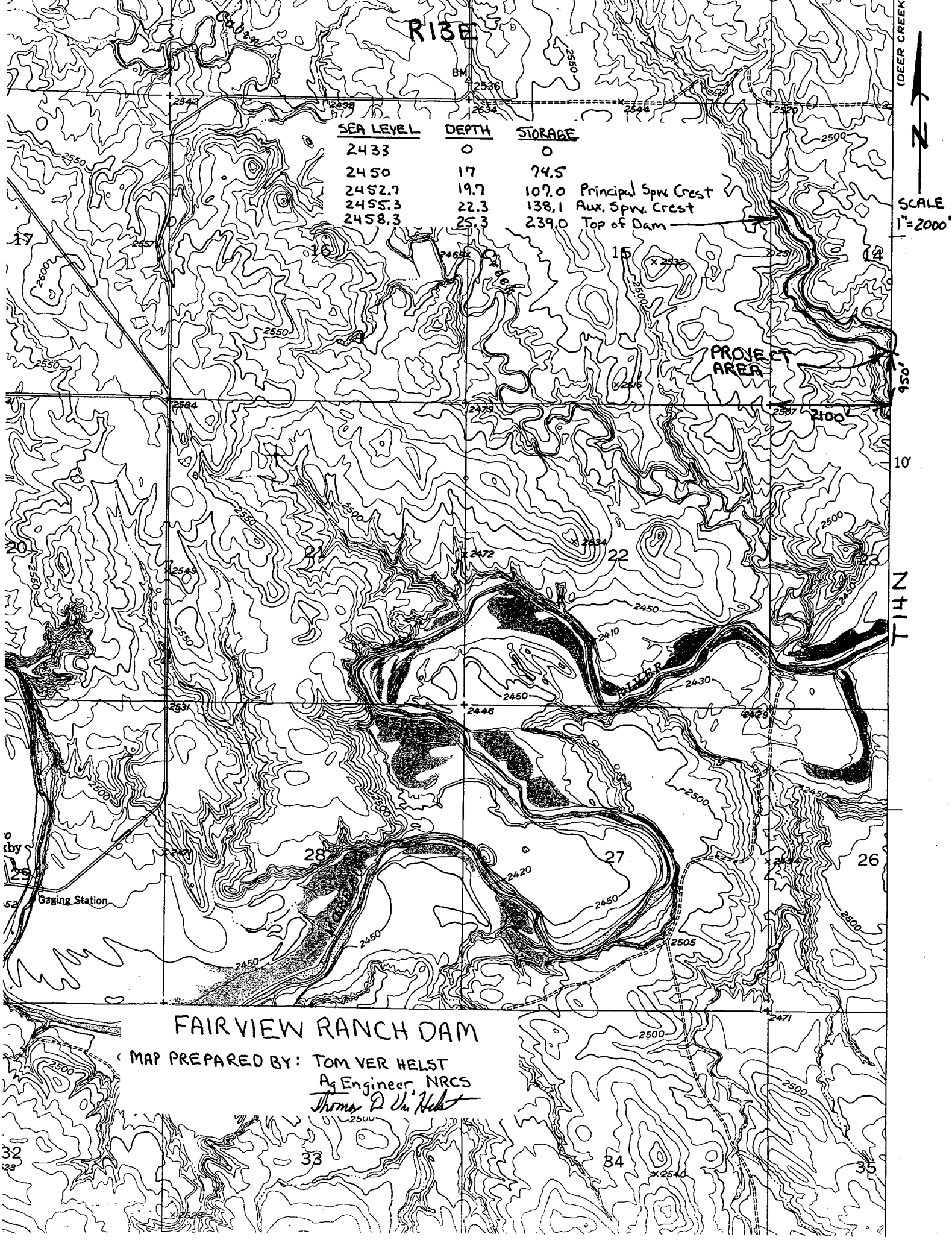
PROJECT
AREA

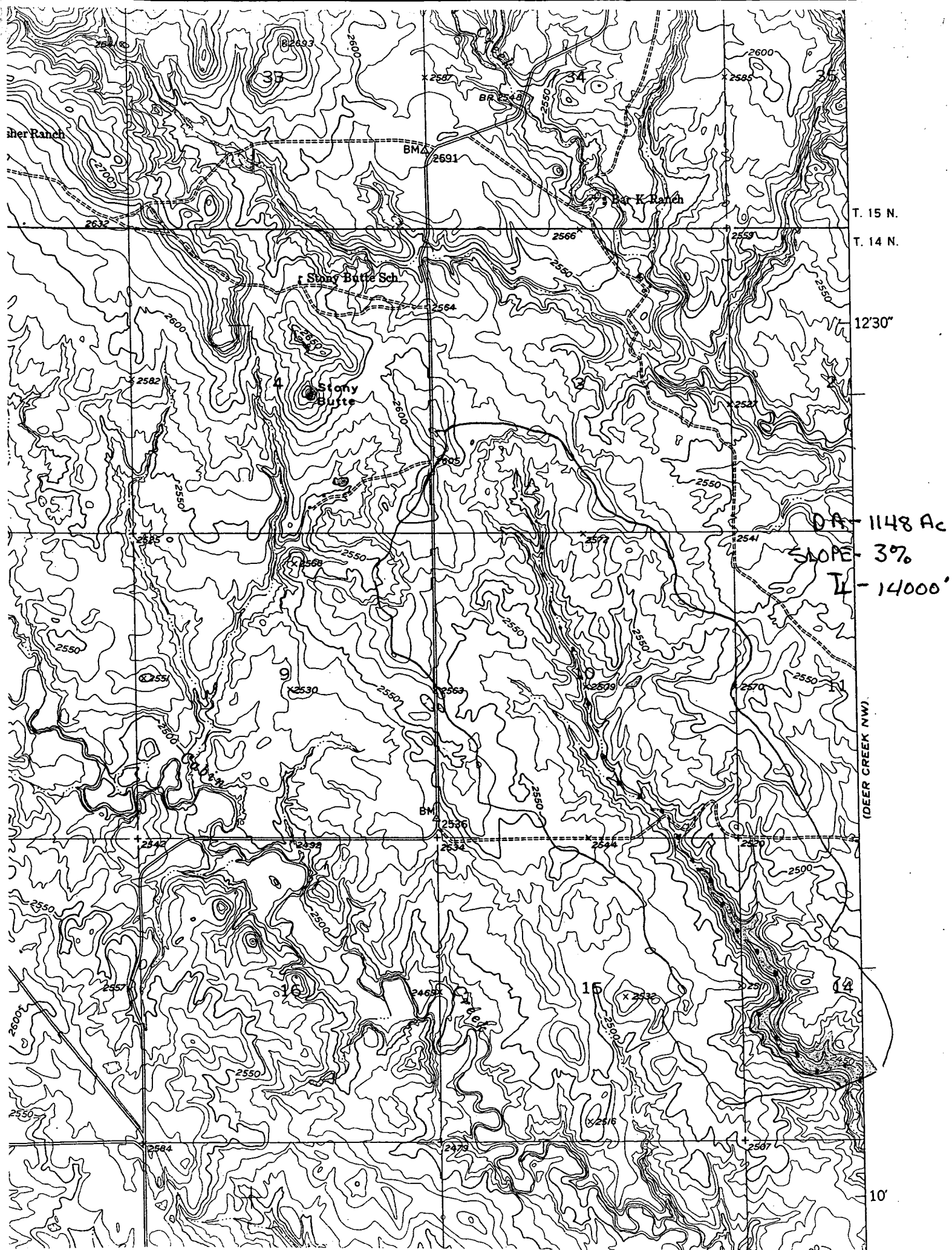
SCALE
1"=2000'

T14N

FAIRVIEW RANCH DAM

MAP PREPARED BY: TOM VER HELST
Ag Engineer, NRCS
Thomas D. Ver Helst





Client: Squeak Haines
 County: PERKINS SW
 Practice: Dam
 Calculated By: TVH
 Checked By: _____

State: SD

Date: 10/10/2003

Date: _____

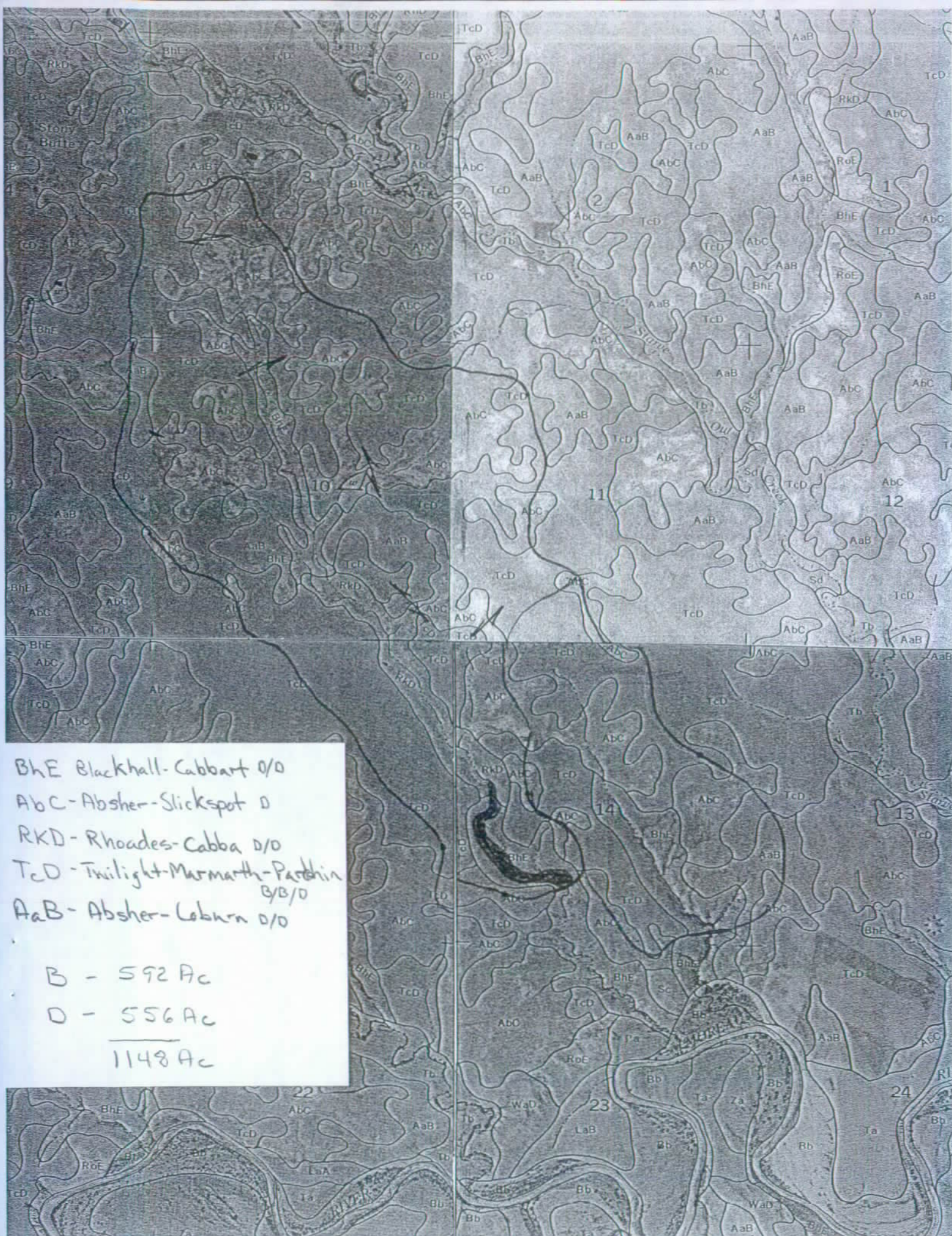
Drainage Area: 1148. Acres (Provided from CN Calculator)
 Curve Number: 70 (Provided from CN Calculator)
 Watershed Length: 14000 Feet
 Watershed Slope: 3 Percent
 Time of Concentration: 3.370 Hours (Calculated value)
 Rainfall Type: II

Storm Number	1	2	3	4	5	6	7
Frequency (yrs)	1	2	5	10	25	50	100
24-Hr rainfall (in)	1.60	1.70	2.40	2.70	3.30	3.70	4.10
Ia/P Ratio	0.54	0.50	0.36	0.32	0.26	0.23	0.21
Used	0.54	0.50	0.36	0.32	0.26	0.23	0.21
Runoff (in)	0.11	0.14	0.41	0.55	0.89	1.13	1.40
Unit Peak Discharge (cfs/acre/in)	0.144	0.135	0.181	0.193	0.207	0.212	0.217
Peak Discharge (cfs)	18	22	85	123	210	276	347

Client: Squeak Haines
 County: PERKINS SW
 Practice: Dam
 Calculated By: TVH
 Checked By: _____

State: SD
 Date: 10/10/2003
 Date: _____

COVER DESCRIPTION	Acres (CN)			
	Hydrologic Soil Group			
	A	B	C	D
OTHER AGRICULTURAL LANDS Pasture, grassland or range good	-	592(61)	-	556(80)
Total Area (by Hydrologic soil Group)		592		556
TOTAL DRAINAGE AREA: 1148 Acres		WEIGHTED CURVE NUMBER: 70		

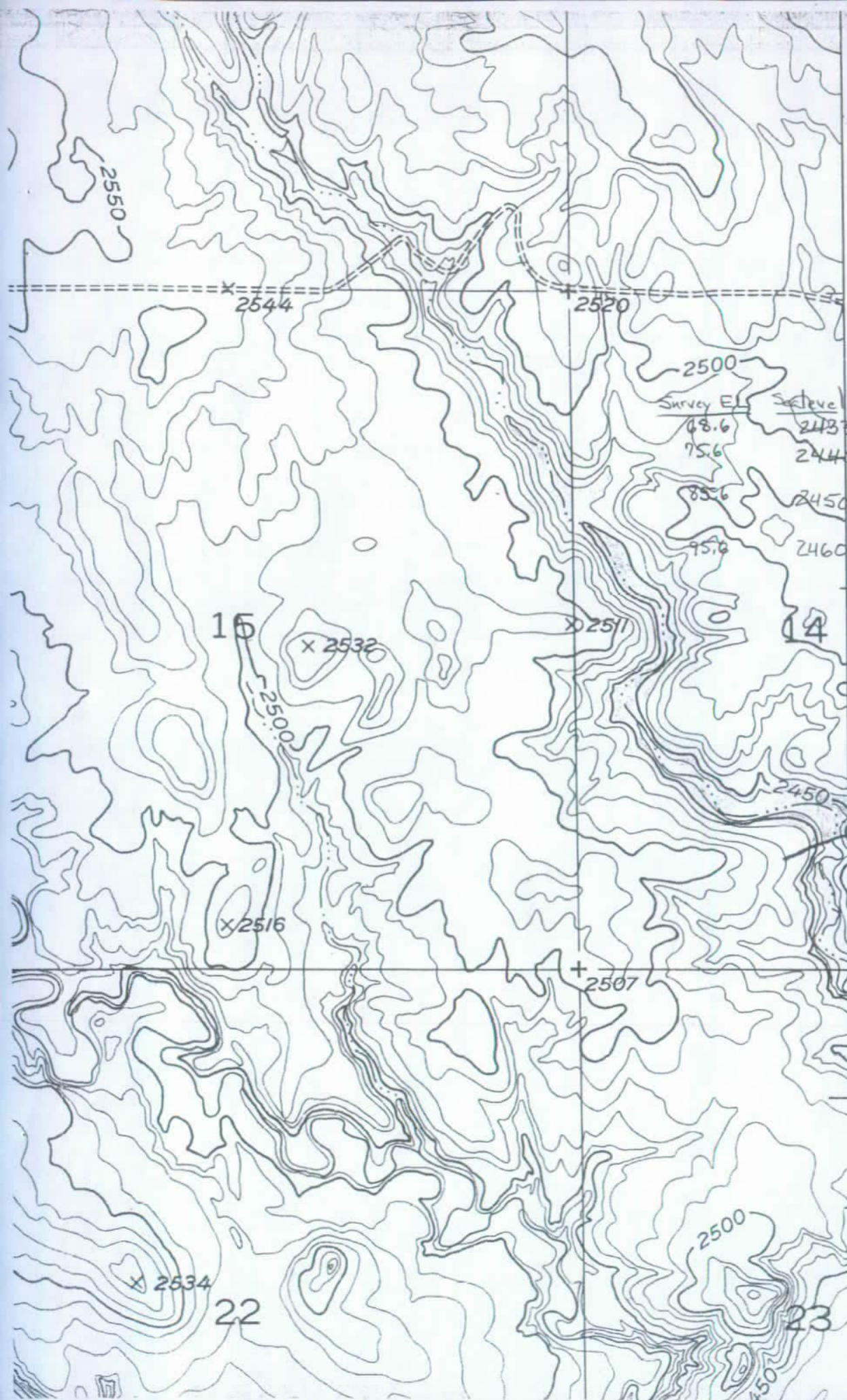


BHE Blackhall-Cabbart 0/0
AbC-Absher-Slickspot 0
RkD-Rhoades-Cabba 0/0
TcD-Twilight-Marmarth-Parchin
 3/3/0
AaB-Absher-Leburn 0/0

B - 592 Ac
D - 556 Ac

1148 Ac

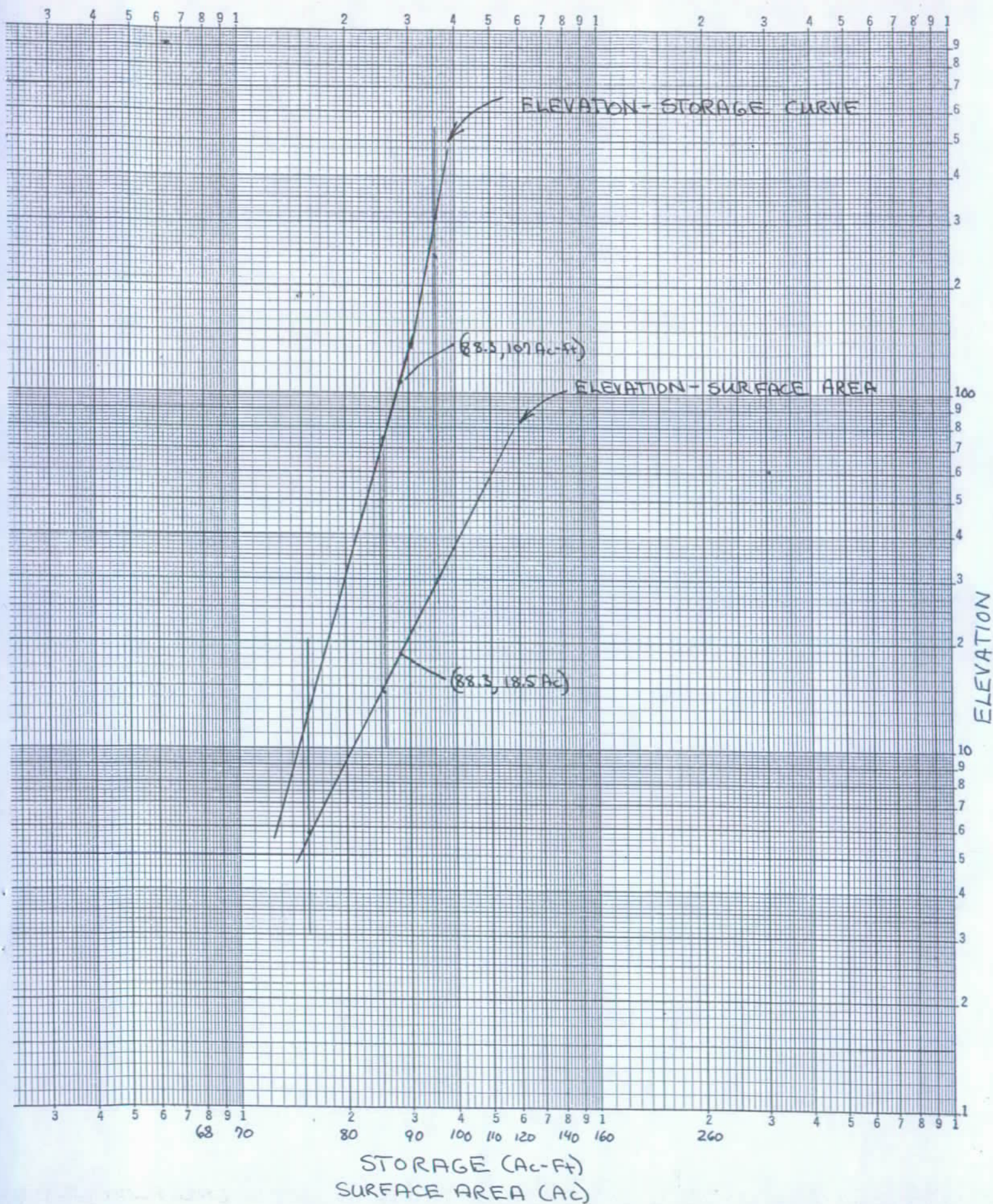
DEER CREEK NW



Survey El	Set level
68.6	2433
75.6	2440
85.6	2450
95.6	2460

Depth	Ac	Ac-Ft
0		
7	6.2, 30.1	17.4
	5.8	12.3
17	15.6, 30.1	106.1
	14.3	94.5
27	33.3	389.6
30	38.3	310.2

10'



	18pipe40es	12pipe40es	15pipe40es	15hood40es
Site Identification	S1	S1	S1	S1
Watershed Runoff Curve Number	65.	70.	70.	70.
Total Watershed Drainage Area (Sq.Miles)	1.79	1.79	1.79	1.79
Watershed Time of Concentration (Hours)	3.85	3.37	3.37	3.37
SDH Rainfall Total (Inches)	N/A	N/A	N/A	N/A
SDH Rainfall Duration (Hours)	N/A	N/A	N/A	N/A
FBH or Storm Rainfall Total (Inches)	3.30	3.30	3.30	3.30
FBH or Storm Rainfall Duration (Hours)	24.0	24.0	24.0	24.0
SDH Inflow Peak (CFS)	N/A	N/A	N/A	N/A
FBH or Storm Inflow Peak (CFS)	123.1	199.6	199.6	199.6
Initial Reservoir Elevation (Feet)	86.90	89.00	88.70	88.46
Maximum WS SDH (Feet)	N/A	N/A	N/A	N/A
Maximum WS FBH or Storm (Feet)	88.04	91.87	91.47	91.41
Storage at Maximum WS FBH or Storm (Acre-Ft)	168.0	177.3	159.1	157.4
Top Dam (Feet)	90.15	93.33	93.15	93.07 < Use 93.9
Storage, Top Dam (Acre-Ft)	221.0	202.0	221.0	218.0
Emb. Yardage (CY)	N/A	N/A	N/A	N/A
PSH Drawdown (Days)	4.64	3.41	2.51	N/A
378 Drawdown (Days)	2.76	3.35	2.40	N/A
PS Crest (Feet)	86.90	89.00	88.70	88.30 < Use 88.3
PS Conduit Diameter (Inches)	18.0	12.0	15.0	15.0
PS Conduit Height (Feet)	N/A	N/A	N/A	N/A
PS Conduit Width (Feet)	N/A	N/A	N/A	N/A
PS Conduit Area (Sq. Feet)	1.77	0.79	1.23	1.23
Storage, PS Crest (Acre-Ft)	139.	129.	112.	107.
PS Discharge at AS Crest (CFS)	35.2	15.9	26.4	25.3
PS Discharge for SDH (CFS)	N/A	N/A	N/A	N/A
PS Discharge FBH or Storm (CFS)	35.3	16.1	26.7	25.6
AS Crest (Feet)	87.90	91.11	90.93	90.85 < Use 90.9
Storage, AS Crest (Acre-Ft)	164.4	164.6	139.3	138.1
AS Width (Feet)	40.	40.	40.	40. < Use 52ft
AS Exit Slope (%)	10.00	6.00	6.00	6.00
AS Ret. Curve Index	0.03	0.03	0.03	0.03
AS Veg. Cover Factor	0.65	0.65	0.65	0.65
AS Maintenance Code	3	3	3	3
AS Max. Head SDH (Feet)	N/A	N/A	N/A	N/A
AS Peak Discharge SDH/Storm (CFS)	4.1	40.9	20.7	23.3
AS Exit Velocity SDH or Storm (Ft/S)	2.10	4.46	3.41	3.58
AS Stress SDH or Storm (Lb./Sq.Ft.)	0.187	0.516	0.343	0.369
Hp FBH or Storm (Feet)	0.14	0.75	0.54	0.57
AS Peak Discharge FBH/Storm (CFS)	4.	41.	21.	23.
AS Integ. Dist. FBH or Storm (Feet)	N/A	N/A	N/A	N/A
Oe/B FBH or Storm (Acre-Ft/Ft)	0.0	0.6	0.4	0.4
Uncontrolled Drainage Area (Sq.Miles)	1.79	1.79	1.79	1.79
Number of Errors	0	0	0	0
Number of Warnings	2	2	1	0

1*****
 SITES XEQ 10/15/2003 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
 VER 2000 (USER MANUAL - DATED MAY 2001)
 TIME 13:22:12

***** 80-80 LIST OF INPUT DATA *****

SITES	05/01/2000	Haines Dam	1.79375	H5
SAVMOV	0 101			
SAVMOV	101 1			1
*	Principal Spillway Hydrograph - 10yr 24hr storm			
*	Emergency Spillway Hydrograph - 25yr 24hr storm			
*	15" Hooded Inlet			
STRUCTURE	Haines Dam			
	68.6		0	
	75.6		12.3	
	85.6		74.5	
	90.9		138.8	
	95.6		310.2	
ENDTABLE				
WSDATA	5A1 AC 70	1148	14000	3
BASEFLOW	0			
PDIRECT	2.7		.00	3.30
POOLDATA	ELEV 88.3	88.3	69.3	66.4 HD
PSHOOD	115		68.4	1.0 S
PSDATA	1	15	.009	67.4
ASDATA	41 128 164		2	.06 2
ASINSURF	41	.03		
ASINLET	41 0.0	0.0	128	0.0 3
	164	2.3		
ENDTABLE				
ASEXSURF	41	.03		
		.65	0	
		3		
		2	0	
		.02		
ENDTABLE				
ASEXIT	41 N			100
BTMWIDTH	FEET 40			
GRAPHICS	I			
GO,DESIGN	HL TYPE2	24	TYPE2378	24
SAVMOV	2 101 1			
ENDJOB				

1SITES XEQ 10/15/2003 ----- COMMENT PAGE -----
 VER 2000 Haines Dam WSID =

Principal Spillway Hydrograph - 10yr 24hr storm

Emergency Spillway Hydrograph - 25yr 24hr storm

15" Hooded Inlet

***** MESSAGE - ALTERNATE STRUCTURE ID (S 1) BEING USED
 SINCE USER DID NOT INPUT AN ID.

***** MESSAGE - ALTERNATE SUBWATERSHED ID (A) BEING USED SINCE
 USER DID NOT INPUT AN ID.

***** MESSAGE - DRAINAGE AREA FROM WSDATA CONTROL BEING CONVERTED FROM
ACRES TO SQUARE MILES FOR COMPUTATION PURPOSES.

1SITES -----
XEQ 10/15/2003 Haines Dam WSID=
VER 2000 Haines Dam SUBW= A
TIME 13:22:12 SITE = S 1 PASS= 1 PART= 1

***** BASIC DATA *****
CLIMATE AREA - NOT DEFINED DESIGN CLASS A1 = LT 3000.

STORM DISTRIBUTION-PSH 24 HOUR TYPE II RAINFALL DISTRIBUTION

STORM DISTRIBUTION AUX. -24 HOUR TYPE II RAINFALL DISTRIBUTION

PRECIP. - P-PS,1-DAY P-PS,10-DAY P-SD P-FB -25yr
2.70 0.00 0.00 3.30

WSDATA - CN DA-SM TC/L -/H ORF
70.00 1.79 14000.00 3.00 0.00

SITEDATA- PERM POOL CREST PS FP SED VALLEY FL 378?
88.30 88.30 0.00 66.40 YES

BASEFLOW INITIAL EL EXTRA VOL SITE TYPE
0.00 0.00 0.00 DESIGN

PSDATA - NO. COND COND L DIA/W -/H
1.00 0.00 15.00 0.00

PS N KE WEIR L TW EL
0.009 0.00 0.00 67.40

2ND STG ORF H ORF L START AUX.
0.00 0.00 0.00 0.00

PSHOOD - OUTLET MITER LENGTH LENGTH
ELEV. ELEV. INLET TO MITER TO
68.40 0.00 115.0 0.0
OUTLET (FT)

ASCRESTS - AUX.1 AUX.2 AUX.3 AUX.4 AUX.5
0.00 0.00 0.00 0.00 0.00

AUX.DATA - REF.NO. RETARD. Ci TIE STATION INLET LENGTH
41 0.00 128.00 164

AUX.DATA - INLET N SIDE SLOPE EXIT N EXIT SLOPE ACTUAL AUX?
0.030 2.00 0.030 0.060 NO

BTM WIDTH - BW1 BW2 BW3 BW4 BW5
ft 40.00 0.00 0.00 0.00 0.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
XEQ 10/15/2003 Haines Dam WSID=
VER 2000 Haines Dam SUBW= A
TIME 13:22:12 SITE = S 1 PASS= 1 PART= 2

PERM POOL	88.30 FT	107.3 ACFT	0.00 AC	0.0 CFS
CREST PS	88.30 FT	107.3 ACFT	0.00 AC	0.0 CFS
SED ACCUM	88.30 FT	107.3 ACFT	0.00 AC	0.0 CFS
START ELEV	88.30 FT	107.3 ACFT	0.00 AC	0.0 CFS
NRCS-PSH	D= 24.00 HR	P= 2.70 IN	Q= 0.55 IN	DA= 1.79 SM
	TC= 3.37 HR	CN= 70.00	VOL= 53.0 ACFT	

Q₁₀ PEAK = 116.5 CFS, AT 14.4 HRS.

ROUTED RESULT - HYD TYPE	EMAX	VOL-MAX	AMAX	QMAX
NRCS-PSH	90.85 FT	138.1 ACFT	0.00 AC	25.3 CFS

PS STORAGE 30.9 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST 88.30 FT 107.3 ACFT 0.00 CFS
CONTROL IS 0.000 DETENTION STORAGE

TIME LIMIT REACHED = 10.00 DAYS; FLOW WAS 0.13 CFS, ELEV = 88.40
ROUTING CONTINUING.

RATING TABLE DEVELOPED, SITE = S 1:
BY PROGRAM FOR PS AND AUX. SPILLWAYS
AUX. RATING USED WSPVRT METHOD.

RATING TABLE NUMBER 1

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	88.30	0.00	0.00	0.00	107.26	0.00
2	88.72	0.58	0.58	0.00	112.31	0.00
3	89.13	2.32	2.32	0.00	117.37	0.00
4	89.55	4.59	4.59	0.00	122.42	0.00
5	89.70	5.09	5.09	0.00	124.28	0.00
FULL CONDUIT FLOW, ELEV = 90.06 FT						
6	90.06	24.85	24.85	0.00	128.57	0.00
7	90.85	25.31	25.31	0.00	138.18	0.00
8	91.64	25.77	25.77	0.00	165.81	0.00
9	92.43	26.21	26.21	0.00	194.69	0.00
10	93.22	26.65	26.65	0.00	223.57	0.00
11	94.02	27.09	27.09	0.00	252.44	0.00
12	94.81	27.51	27.51	0.00	281.32	0.00
13	95.60	27.93	27.93	0.00	310.20	0.00

1SITES

XEQ 10/15/2003	Haines Dam	WSID=
VER 2000	Haines Dam	SUBW= A
TIME 13:22:12	SITE = S 1	PASS= 1 PART= 3

AUX. CREST	90.85 FT	138.1 ACFT	0.00 AC	25.3 CFS
------------	----------	------------	---------	----------

PS STORAGE 30.9 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 88.40 FT 108.4 ACFT 0.00 AC 0.1 CFS

EFFECTIVE HEIGHT(H)= 21.5 FEET, PRODUCT= 2976. (H * STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-FBH D= 24.00 HR P= 3.30 IN Q= 0.89 IN DA= 1.79 SM
 TC= 3.37 HR CN= 70.00 VOL= 84.8 ACFT

Q₅ PEAK = 199.6 CFS, AT 14.4 HRS.

RATING TABLE DEVELOPED, SITE = S 1:
BY PROGRAM FOR PS AND AUX. SPILLWAYS
AUX. RATING USED WSPVRT METHOD.

RATING TABLE NUMBER 2

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	88.30	0.00	0.00	0.00	107.26	0.00
2	88.50	0.13	0.13	0.00	109.69	0.00
3	88.70	0.53	0.53	0.00	112.12	0.00
4	88.90	1.22	1.22	0.00	114.55	0.00
5	89.10	2.15	2.15	0.00	116.99	0.00
6	89.30	3.27	3.27	0.00	119.42	0.00
7	89.50	4.38	4.38	0.00	121.85	0.00
8	89.70	5.09	5.09	0.00	124.28	0.00
9	89.88	14.97	14.97	0.00	126.43	0.00
FULL CONDUIT FLOW, ELEV = 90.06 FT						
10	90.06	24.85	24.85	0.00	128.57	0.00
11	90.32	25.00	25.00	0.00	131.76	0.00
12	90.58	25.16	25.16	0.00	134.95	0.00
13	90.85	25.31	25.31	0.00	138.14	0.00
14	91.08	30.87	25.45	5.42	145.49	0.00
15	91.32	40.28	25.58	14.69	154.16	0.00
16	91.75	80.38	25.83	54.55	169.76	0.00
17	92.27	158.32	26.12	132.19	188.84	0.00
18	93.22	379.12	26.65	352.47	223.51	0.00
19	94.41	751.09	27.30	723.79	266.86	0.00
20	95.60	1234.65	27.93	1206.72	310.20	0.00

SUMMARY OF AUXILIARY SPILLWAY SURFACE CONDITIONS USED IN COMPUTATIONS BY REACH

REACH	FROM STA (ft)	TO STA (ft)	SLOPE (%)	RETARDANCE CURVE INDEX@	VEGETAL COVER FACTOR	MAINT. CODE	ROOTING DEPTH (ft)	REACH LOCATION *
1	-36.	0.	-6.4	0.030	**	**	**	INLET
2	0.	128.	0.0	0.030	**	**	**	CREST
3	128.	228.	6.0	0.030	0.65	3	2.0	EXIT !

@ The program interprets retardance curve index entries of less than 1 as Manning's n values.

* Upper case indicates a reach of constructed spillway channel.

** The program does not use vegetal cover factor, maintenance code, and rooting depth for inlet and crest reaches in computations.

! Reach 3 used in computing exit channel velocities.

LOG SHEET FOR SOIL BORINGS

Cooperator: Squeak Haines Practice: Dam

County & Project Location _____

Farm ID No. _____ Technician _____ Date _____

Sec. _____ T _____ R _____ Hole No. _____ Hole El. _____

Hole Location _____

Depth, Feet:	Unified Symbol:	Description of Material:
0		TH#1
1		ML - Sandy loam - light brown
		SP - light brown
		SP
		SP
5		CL - fine sandy clay loam - dark grey 22% clay 2.5/2.5/1
		CL
		CL
		CL
		ML - coarse sandy clay loam - grey brown - 12% clay
10		ML - END HOLE @ 9.5' 2.5/3/2
		TH#2
0		
1		SP - sandy - light brown
2		ML - grey brown
3		ML
4		CL 40"-50" Dark grey - 50% clay - 2.5/2.5/1
5		SM
		5.5' hard layer
		SP - sand - light tan
		TH#3
0		
		ML - Sandy loam - brown
		ML
		SP - Coarse sand - yellow
		SP
		SP
		Hard Sand to Soft Sandstone @ 5.5'
		End Hole @ 9'

PROJECT NAME: Haines Dam

TYPE OF WORK: Fill

RUN DATE: 10-10-2003

RUN BY: Tom

STATION	AREA	ECCENT.	DISTANCE	VOLUME	CUM. VOLS.
0+00	0.00	0.00			0.00
0+45	413.78	7.51	45.00	344.82	344.82
0+69	870.26	10.40	24.00	570.68	915.50
0+92	2121.79	19.45	23.00	1274.39	2189.89
1+09	2253.65	12.10	17.00	1377.45	3567.35
1+31	2129.84	-1.50	22.00	1785.87	5353.21
1+46	1673.08	-6.53	15.00	1056.37	6409.58
1+81	915.81	5.38	35.00	1677.99	8087.56
2+18	216.78	1.18	37.00	776.04	8863.60
2+49	0.00	0.00	31.00	124.45	8988.05

TOTAL VOLUME IS 8988.05 CUBIC YARDS
1.05 5% settlement
9437.5 CY

Topsoil -

ES:

$$\frac{52 \times 120 \times .5}{27} = 115.6 \text{ CY}$$

Face: Top:

$$\frac{249' \times (16+20) \times .5}{27} = 166 \text{ CY}$$

282 CY

Class A Fill

$$\begin{array}{|c|} \hline 42'' \\ \hline \end{array} = 12.25 \text{ ft}^2 \times 110' = \frac{1347.5}{27} = 49.9 \text{ CY}$$

PROJECT NAME: Haines Dam
TYPE OF WORK: Fill
RUN DATE: 10-15-2003

RUN BY: Tom

STATION 0+00

AREA= 0.00 SQ.FT. ECCENTRICITY= 0.00 FT.

STATION 0+45

ENTRY #	ELEVATION	DISTANCE
1	85.10	-34.40
2	93.90	-8.00
3	93.90	8.00
4	79.20	66.80
5	83.10	45.00
6	86.60	0.00
7	85.10	-34.40

AREA= 413.78 SQ.FT. ECCENTRICITY= 7.51 FT.

STATION 0+69

ENTRY #	ELEVATION	DISTANCE
1	80.90	-47.00
2	93.90	-8.00
3	93.90	8.00
4	71.60	97.20
5	80.80	42.00
6	81.30	0.00
7	80.90	-47.00

AREA= 870.26 SQ.FT. ECCENTRICITY= 10.40 FT.

STATION 0+92

ENTRY #	ELEVATION	DISTANCE
1	77.20	-58.10
2	93.90	-8.00
3	93.90	8.00
4	68.60	109.20
5	69.20	0.00
6	78.30	-38.00
7	77.20	-58.10

AREA= 2121.79 SQ.FT. ECCENTRICITY= 19.45 FT.

STATION 1+09

ENTRY #	ELEVATION	DISTANCE
1	75.70	-62.60
2	93.90	-8.00
3	93.90	8.00
4	71.70	96.80
5	71.70	96.00

6	67.10	0.00
7	76.00	-55.00
8	75.70	-62.60

AREA= 2253.65 SQ.FT. ECCENTRICITY= 12.10 FT.

PROJECT NAME: Haines Dam

TYPE OF WORK: Fill

RUN DATE: 10-15-2003

RUN BY: Tom

STATION 1+31

ENTRY #	ELEVATION	DISTANCE
1	69.40	-81.50
2	93.90	-8.00
3	93.90	8.00
4	76.40	78.00
5	69.30	0.00
6	69.40	-81.50

AREA= 2129.84 SQ.FT. ECCENTRICITY= -1.51 FT.

STATION 1+46

ENTRY #	ELEVATION	DISTANCE
1	66.40	-90.50
2	93.90	-8.00
3	93.90	8.00
4	77.80	72.40
5	75.50	0.00
6	66.40	-90.50

AREA= 1673.08 SQ.FT. ECCENTRICITY= -6.53 FT.

STATION 1+81

ENTRY #	ELEVATION	DISTANCE
1	80.60	-47.90
2	93.90	-8.00
3	93.90	8.00
4	79.70	64.80
5	79.60	0.00
6	80.60	-47.90

AREA= 915.81 SQ.FT. ECCENTRICITY= 5.38 FT.

STATION 2+18

ENTRY #	ELEVATION	DISTANCE
1	87.50	-27.20
2	93.90	-8.00
3	93.90	8.00
4	88.00	31.60
5	88.20	0.00
6	87.50	-27.20

AREA= 216.78 SQ.FT. ECCENTRICITY= 1.19 FT.

STATION 2+49

AREA= 0.00 SQ.FT. ECCENTRICITY= 0.00 FT.

PROJECT NAME: Haines Dam
TYPE OF WORK: Stripping
RUN DATE: 10-09-2003

RUN BY: Tom

STATION	AREA	ECCENT.	DISTANCE	VOLUME	CUM. VOLS.
0+00	8.00	0.00			0.00
			45.00	48.83	
0+45	50.60	0.00			48.83
			24.00	54.53	
0+69	72.10	0.00			103.37
			3.00	8.65	
0+72	83.65	0.00			112.02
			17.00	51.42	
0+89	79.70	0.00			163.44
			22.00	64.96	
1+11	79.75	0.00			228.41
			15.00	44.78	
1+26	81.45	0.00			273.18
			35.00	89.31	
1+61	56.35	0.00			362.50
			37.00	58.75	
1+98	29.40	0.00			421.25
			31.00	21.47	
2+29	8.00	0.00			442.72

TOTAL VOLUME IS 442.72 CUBIC YARDS

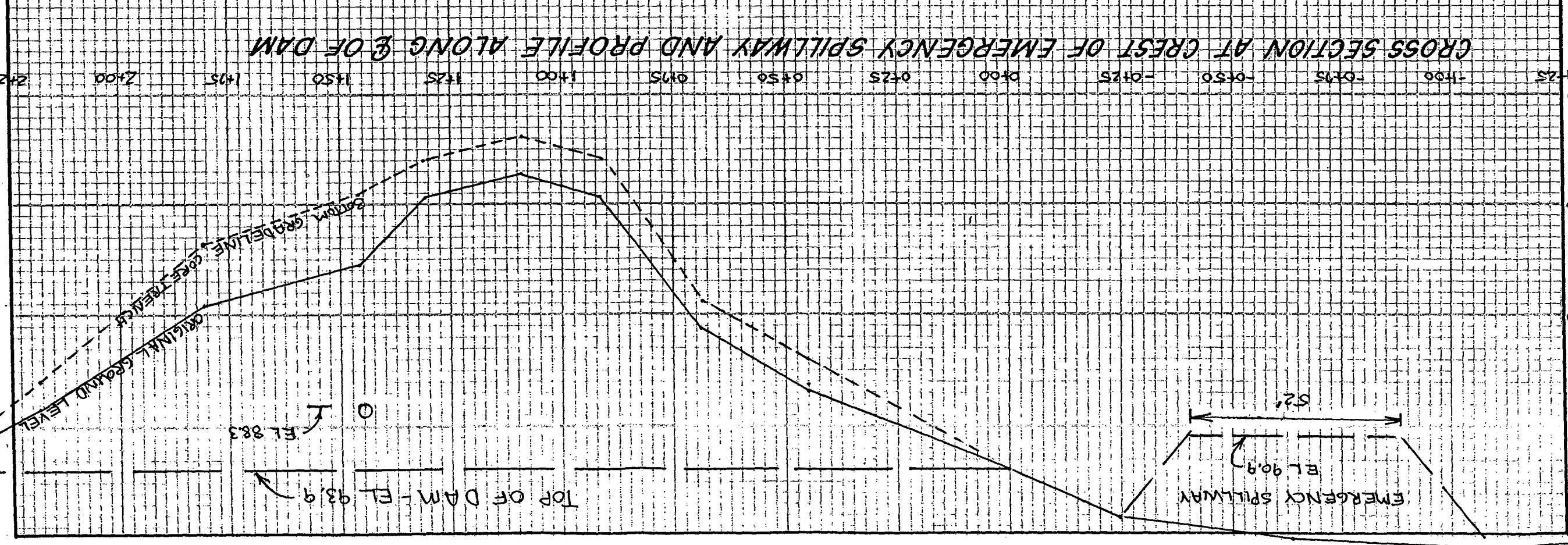
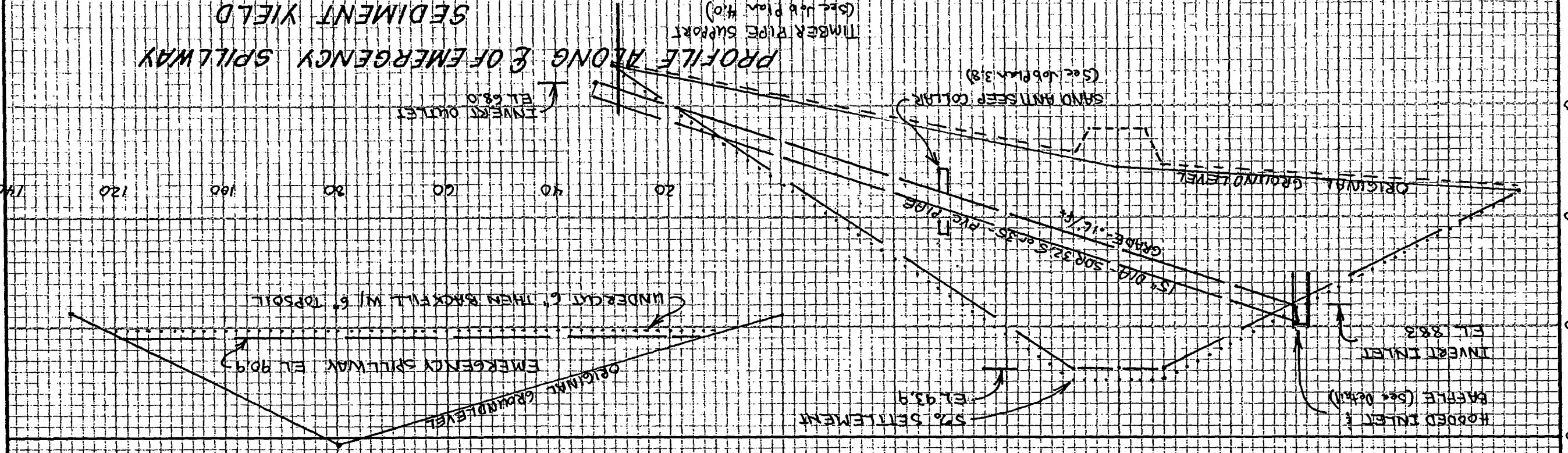
PROJECT NAME: Haines Dam
TYPE OF WORK: Core Trench
RUN DATE: 10-20-2003

RUN BY: Tom

STATION	AREA	ECCENT.	DISTANCE	VOLUME	CUM. VOLS.
0+00	0.00	0.00			0.00
			45.00	20.00	
0+45	24.00	0.00			20.00
			24.00	21.33	
0+69	24.00	0.00			41.33
			23.00	26.83	
0+92	39.00	0.00			68.17
			17.00	24.56	
1+09	39.00	0.00			92.72
			22.00	31.78	
1+31	39.00	0.00			124.50
			15.00	26.11	
1+46	55.00	0.00			150.61
			35.00	71.30	
1+81	55.00	0.00			221.91
			37.00	54.13	
2+18	24.00	0.00			276.04
			31.00	13.78	
2+49	0.00	0.00			289.81

TOTAL VOLUME IS 289.81 CUBIC YARDS

1148	1001	1148	15	25	4.3
ERODIBILITY	GROSS RATE	DRAINAGE AREA	DELIVERY RATE	DESIGN PERIOD	REQ'D. SEDIMENT VOLUME
ACRES	A.F./AC./YR.	ACRES	%	YEARS	AC.FT.



MAXIMUM CROSS SECTION OF DAM

CROSS SECTION AT CREST OF EMERGENCY SPILLWAY AND PROFILE ALONG E OF DAM

PROFILE ALONG E OF EMERGENCY SPILLWAY

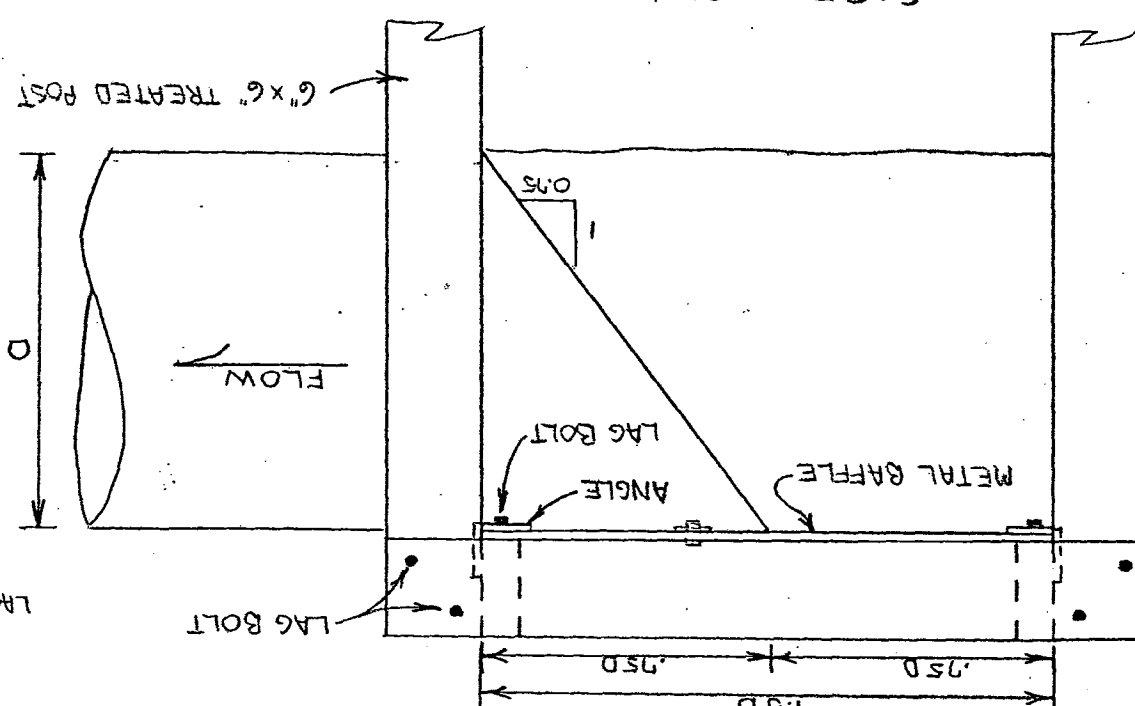
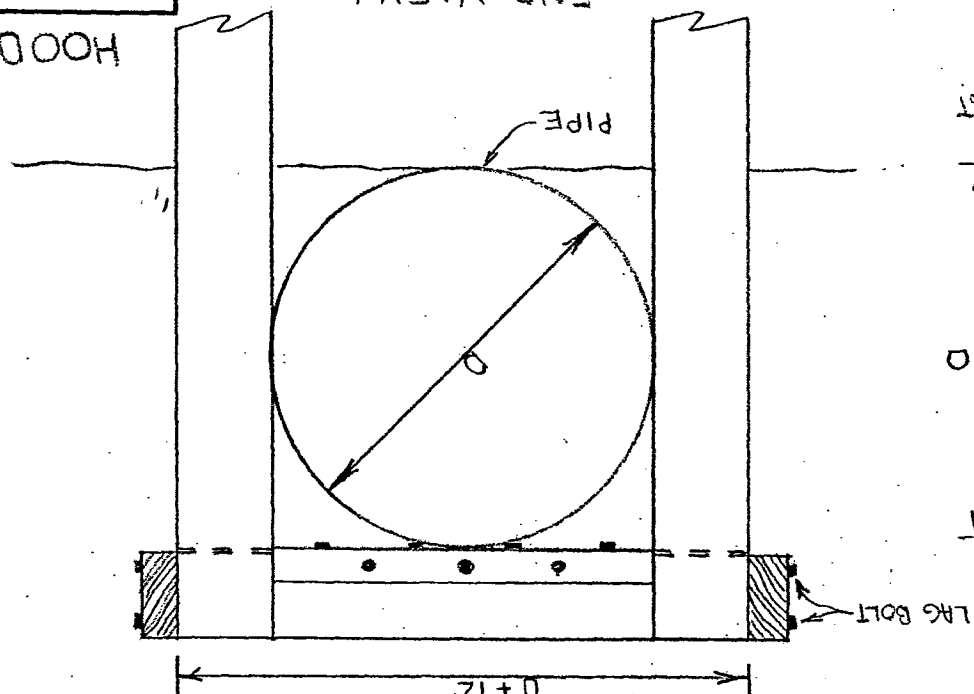
SEDIMENT YIELD

FAIRVIEW RANCH

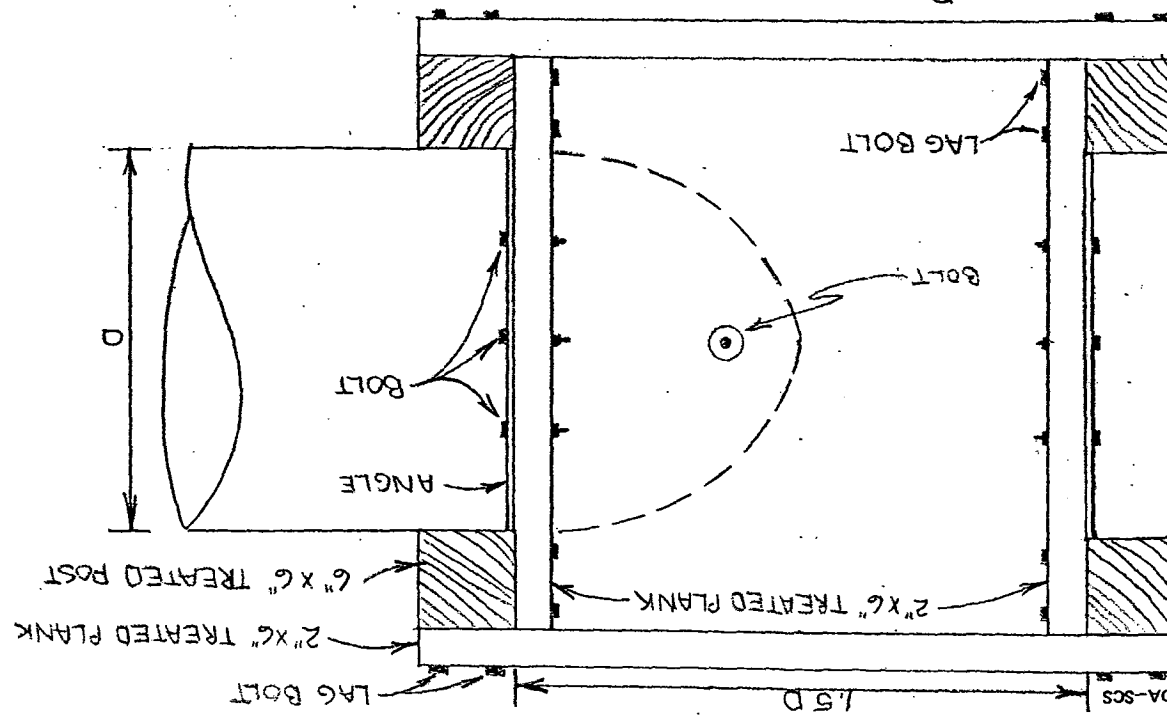
HOODED INLET & BAFFLE

END VIEW

SIDE VIEW



PLAN VIEW



NOTES: 1) ALL NUTS, BOLTS & WASHERS SHALL BE GALVANIZED.

- ON PLASTIC SIDE.
- (3) ALL LAG BOLTS SHALL HAVE WASHERS.
 - (4) ALL PLANKS & POSTS SHALL BE PRESSURE TREATED LUMBER.
 - (5) PAINT METAL BAFFLE W/ 3 COATS OF ZINC DUST-ZINC OXIDE PRIMER.
 - (6) BOLT THRU TOP OF PIPE SHALL BE 5/8" X 2 1/2" W/ LARGE WASHER.

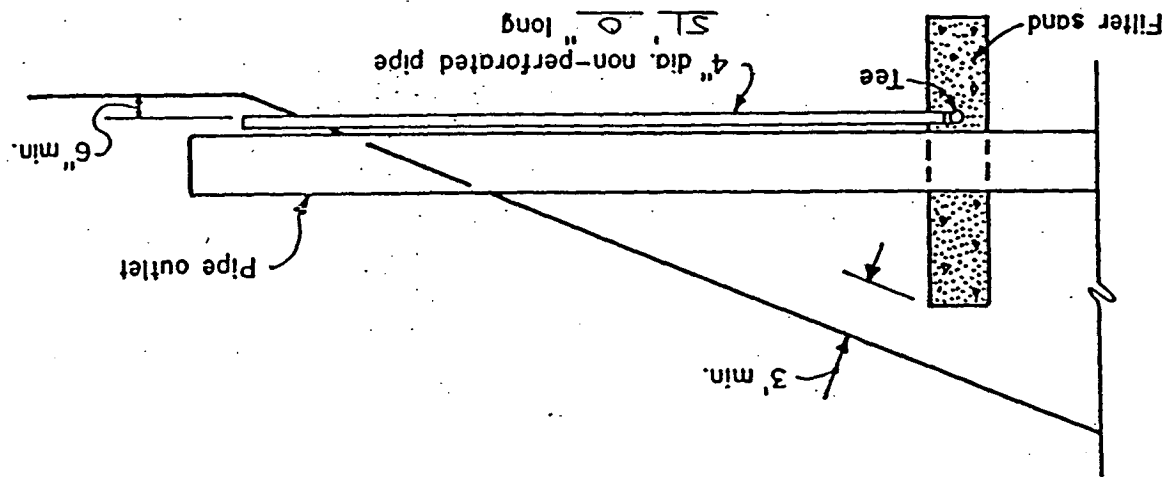
PIPE DIA	BAFFLE THICKNESS	BAFFLE SIZE	ANGLE IRON LENGTH	L.A.G BOLT SIZE	BOLT SIZE	2"x6" PLANK LENGTH	6"x6" POST LENGTH
12	0.25	18 x 24	12	1/4 x 3	3/4 x 2 1/2	20 x 30 x 2 1/2	72
15	0.25	22.5 x 27	15	"	"	20 x 34.5 x 2 1/2	"
18	0.25	27 x 30	18	"	"	20 x 39 x 2 1/2	"
21	0.25	31.5 x 33	21	"	"	20 x 43.5 x 3 1/2	"
24	0.25	36 x 36	24	"	"	20 x 48 x 3 1/2	"
27	0.25	40.5 x 39	27	"	"	20 x 52.5 x 3 1/2	"

DIMENSIONS

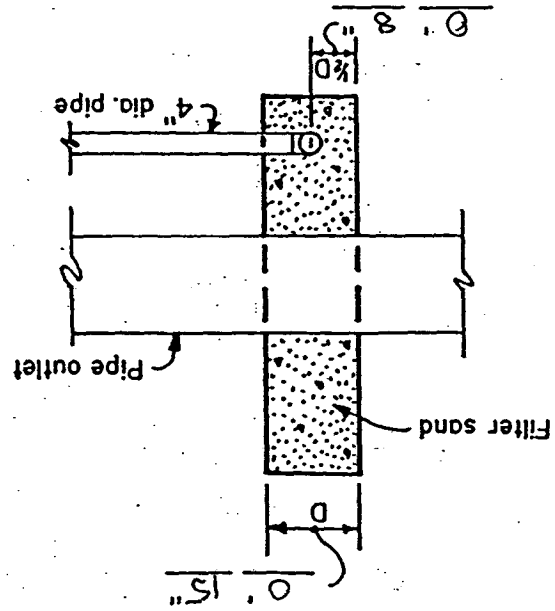
Sec. 14, T. 14N, R. 13E
PERKINS
County LOCATION

FILTER GRADATION	
SIEVE SIZE	PERCENT PASSING
3/8"	100
	4
	8
	16
	30
	50
	100

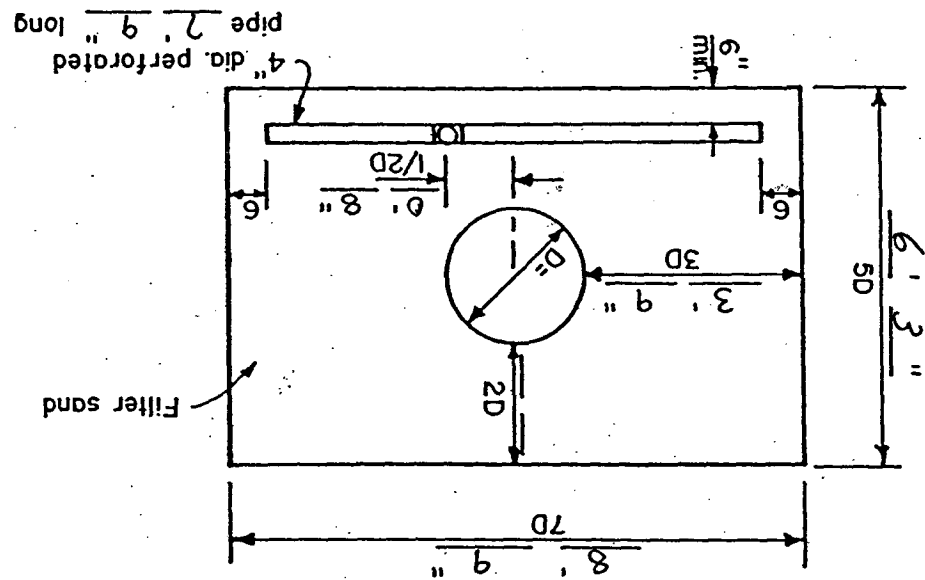
OUTLET DETAIL



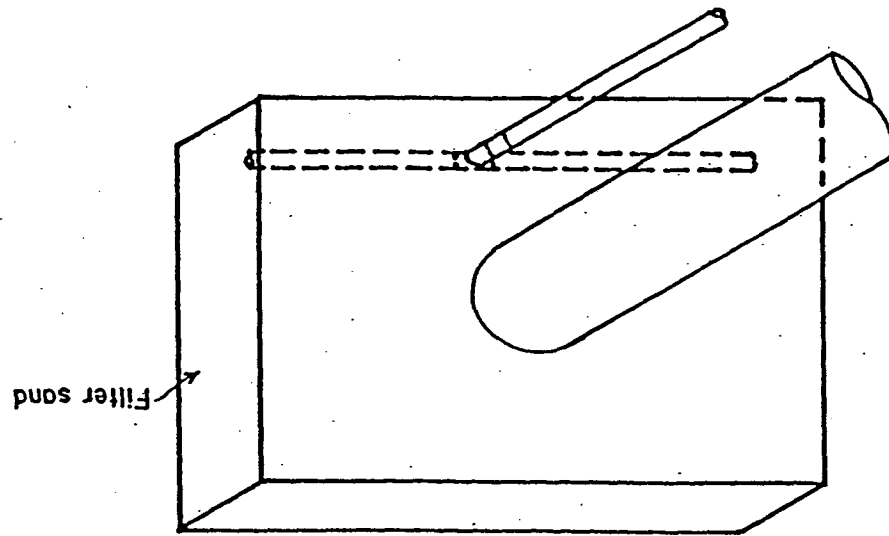
SIDE VIEW



UPSTREAM VIEW



ISOMETRIC VIEW



- NOTE:
1. THE 4" DIA. PIPE SHALL BE ASTM D1785, SCHEDULE 40, PVC.
 2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL 2, 1/2" DIA. HOLES, ON 6" FROM END OF PIPE AND PLACE A 3/8" DIA, 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).

JOB PLAN NO. 3.8

Checked	of	
Traced	No Sheet	Drawing No.
Drawn	Title	
Designed	Title	
Date	Approved By	

5-N-29,073.40

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
OPERATOR: FAIRVIEW RANCH	
CONSERVATION DISTRICT: PERKINS	
Date	Approved By
Drawn	Title
Sheet	Drawing No.
Traced	No
Checked	No

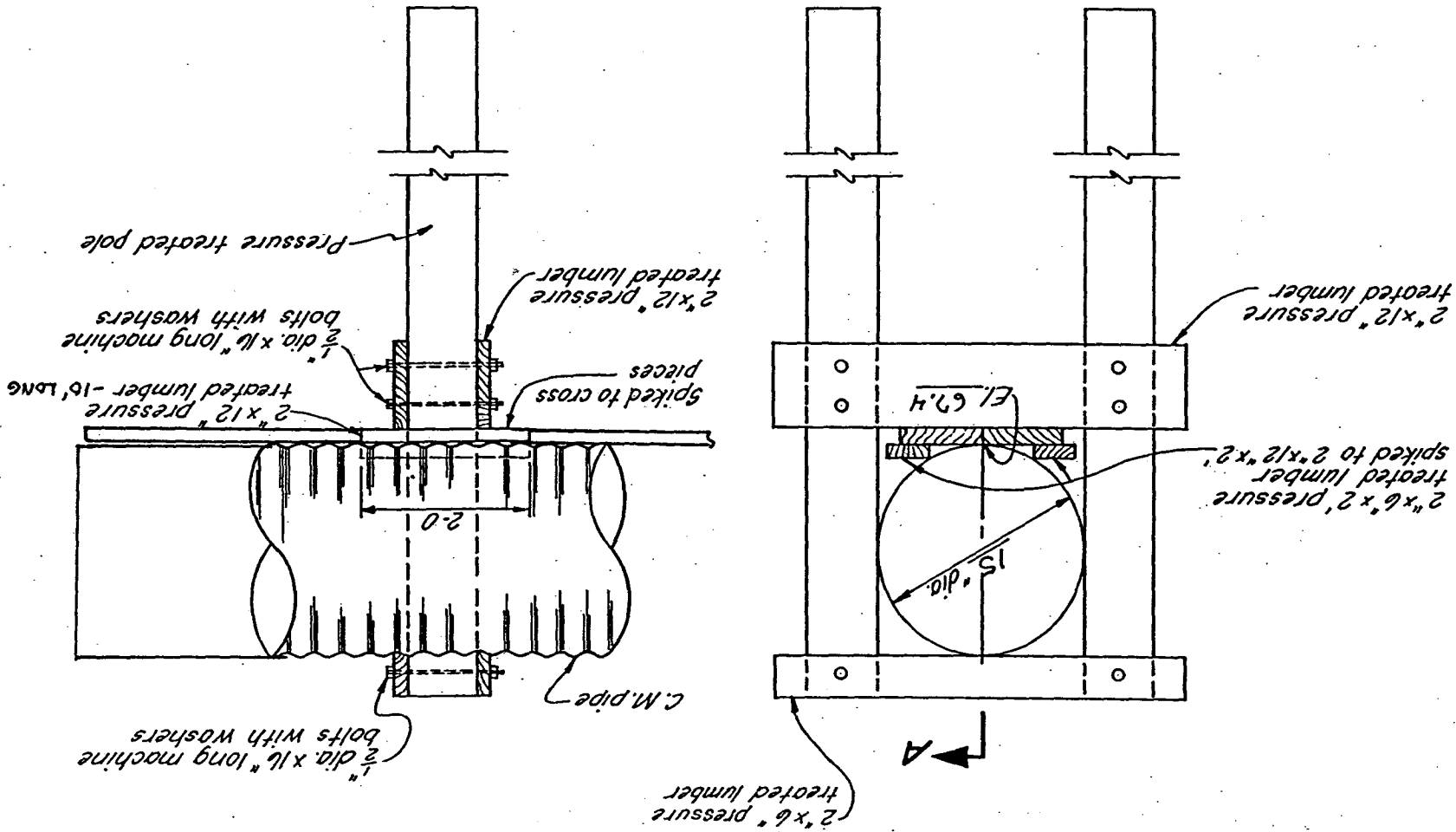
JOB PLAN NO. 4.0

REFERENCE: GUIDE PLAN NO. 4.0

ITEM	LENGTH FOR 15" DIA. PVC OR K. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE 10" DIA.	8-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	10-0	EACH	1
2" X 6" PRESSURE TREATED LUMBER	4-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	4-0	EACH	2
2" X 6" PRESSURE TREATED LUMBER	2-0	EACH	2
1/2" DIA. MACHINE BOLTS WITH NUTS	1-4	EACH	6
1/2" DIA. WASHERS		EACH	12

TABLE OF QUANTITIES

SECTIONAL ELEVATION A-A



NOTES:
1. HAND OR MACHINE TAMP BACKFILL THOROUGHLY AROUND FOOTINGS AND COLUMNS.

REPORT ON
WATER PERMIT APPLICATION No. 1809-1
Fairview Ranch, Inc.
November 14, 2003

Water Permit Application No. 1809-1 has been filed by Fairview Ranch, Inc. c/o Mike Haines, Pres., to impound 107 acre-feet of water by constructing a dam located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 14-T14N-R13E, in Perkins County. The application also requests impoundment of sufficient water to maintain water at the outlet elevation. The water will be used for fish and wildlife production and livestock use.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The Natural Resources Conservation Service (NRCS) has designed the dam. The plans and specifications have been reviewed and will be approved.

The dam will be 27.5 feet high with a normal storage capacity of 107 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 240 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

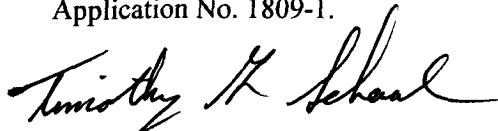
The dam has a drainage area of 1148 acres or 1.79 square miles. A 25-year frequency event produces a peak runoff of approximately 289 cfs and a 100-year frequency event produces a peak runoff of approximately 526 cfs. The dam is designed to have a 15 inch PVC pipe with 5.6 feet of freeboard as the primary spillway, and a 52 foot wide earthcut spillway with 3 feet of freeboard as the secondary spillway. The earthcut secondary spillway will have the capacity to pass approximately 700 cfs.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 4 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 14 acre-feet and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 94 acre-feet.

The Haines Dam will be located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 14-T14N-R13E on an unnamed tributary to the Moreau River, about one-half mile upstream of the confluence of the unnamed tributary and the Moreau River. There are no existing Water Permit/Rights located between the dam and the Moreau River.

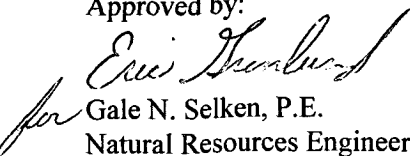
Conclusions:

1. Water Permit Application No. 1809-1 should be approved since unappropriated water is available and approval should not have an adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 1809-1.



Timothy G. Schaal, P.E.
Natural Resources Engineer Specialist

Approved by:



Gale N. Selken, P.E.
Natural Resources Engineer Director



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1809-1, Fairview Ranch, Inc.**

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. 1809-1, Fairview Ranch, Inc., c/o Mike Haines, 15935 Bixby Road, Faith SD 57626.

The Chief Engineer is recommending APPROVAL of Application No. 1809-1 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 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. 1809-1 authorizes a dam with a storage capacity of 107 acre feet of water and sufficient water annually to maintain the water level to an outlet elevation.
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 21, 2003



**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 24, 2003

Fairview Ranch, Inc.
c/o Mike Haines, Pres.
15935 Bixby Rd.
Faith SD, 57626

Dear Mr. Haines:

We have reviewed the plans and specifications for your dam project located in the SE ¼ SW ¼ of Section 14-T14N-R13E, in Perkins County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the dam. The construction of the dam may not begin until Water Permit No. 1809-1 is approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release you, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The Haines Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 27.5 feet and a normal storage capacity of 107 acre-feet and a maximum storage capacity of 240 acre-feet.

If you have any questions, please feel free to contact us.

Sincerely,

Timothy H. Schaal
for Gale N. Selken, P.E.
Natural Resources Engineer Director
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Tom VerHelst, NRCS, Belle Fourche



**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 24, 2003

Fairview Ranch Inc
% Mike Haines Pres
15935 Bixby Rd
Faith SD 57626

Dear Mr. Haines:

Water Permit Application No. 1809-1 for fish & wildlife propagation and livestock water use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Bison Courier printed at Bison, SD (Ph # 605-244-7199). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application 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 of Hearing 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 with the last publication to occur twenty days before the board meeting. 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 application.

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

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.



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 24, 2003

The Bison Courier
PO Box 429
Bison SD 57620-0429

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 1809-1 to Appropriate Water to be published twice. Please publish the first notice on December 4, 2003 with the second publication 7 days later.

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 Fairview Ranch Inc., % Mike Haines, Pres., 15935 Bixby Rd., Faith SD (Ph # 605-748-2420 or 748-2412).

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. 1809-1

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

Date _____

We are in receipt of your letter of November 24, 2003 enclosing Notice of Hearing to Appropriate Water by Application No. 1809-1 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name _____

Newspaper _____

Instruction to Newspaper - Publish first Notice on December 4, 2003 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 1809-1 to Appropriate Water

Notice is given that Fairview Ranch, Inc., c/o Mike Haines, Pres, 15935 Bixby Rd, Faith SD 57626 has filed an application for a water permit to impound 107 acre-feet of water from runoff by constructing a dam located in the SE ¼ SW ¼ Section 14 with water impounded in the SW ¼, SW ¼ NW ¼ Section 14; all in T14N-R13E. This application request impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1809-1 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 the 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 the 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 22, 2003.

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.

PUBLISHER'S AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

SS

COUNTY OF PERKINS

Elizabeth Hulm, of said County and State, being duly sworn, on oath says: THE BISON COURIER is a weekly newspaper of general circulation, printed and published in Bison, in said County and State and has been such newspaper during the times hereinafter mentioned; that the said BISON COURIER is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than 200 bonafide subscribers; that I, the undersigned, am Legal Advertising Manager, of said newspaper, and in charge of the advertising department thereof, and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed
Notice of Application

a printed copy of which is hereto attached, was printed and published in said newspaper for 2 successive issues, the first publication being on the 4 day of Dec., 20 03 and the last publication on the 11 day of Dec., 20 03 that \$ 39.17 being the full amount of the fee for publication of the annexed notice insures solely to the benefit of the publishers of the said newspaper; that no arrangement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.



Subscribed and sworn to before me this 18 day of Dec., 20 03



Notary Public, Perkins County

My commission expires:

June 27, 2006

RECEIVED

DEC 19 2003

WATER RIGHTS
PROGRAM

NOTICE OF APPLICATION NO. 1809-1 TO APPROPRIATE WATER

Notice is given that Fairview Ranch, Inc., c/o Mike Haines, Pres, 15935 Bixby Rd, Faith SD 57626 has filed an application for a water permit to impound 107 acre-feet of water from runoff by constructing a dam located in the SE1/4SW1/4 Section 14 with water impounded in the SW1/4, SW1/4NW1/4 Section 14; all in T14N-R13E. This application request impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1809-1 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 the 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 the 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 22, 2003.

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. Pinner, Secretary, Department of Environment and Natural Resources.

[Publish December 4 and 11, 2003]



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

DEC 29 2003

Fairview Ranch Inc
% Mike Haines Pres
15935 Bixby Rd
Faith SD 57626

Dear Mr. Haines:

Enclosed is Water Permit No. 1809-1 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

Permit No. 1809-1
Moreau River - Water District

Report Of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, October 26, 2005, made a thorough examination of the water use system constructed by Fairview Ranch, Inc. of 15935 Bixby Road, Faith, SD 57626 holder of Permit No. 1809-1, bearing the priority of October 27, 2003 authorizing the storage of 107 acre-feet of the waters of runoff for fish & wildlife propagation and livestock water purposes, in Perkins County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

A 27.5 foot high dam with a normal storage capacity of 107 acre-feet

B. Works used to transport water to place of use:

N/A

C. Works used to apply water to beneficial use:

A 27.5 foot high dam with a normal storage capacity of 107 acre-feet

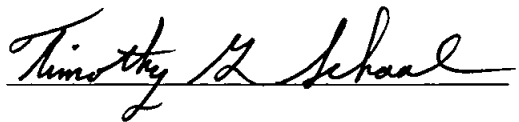
The system is in the following condition good. The point of diversion is located 1000 ft. north & 2000 ft. east of the SW corner of Sec. 14-T14N-R13E (SE ¼ SW ¼) (Lat. 45.172272, Long. -102.50086). The works are capable of storing 107 acre-feet of water which is to be used for fish & wildlife propagation and livestock water purposes. Water has been put to beneficial use to the maximum extent as follows:

A 27.5 foot high dam with a normal storage capacity of 107 acre-feet

and the license should be issued for 107 acre-feet of storage.

Applicable permit qualifications have been complied with: Yes X

Exceptions to compliance are: none Date Report Completed: January 30, 2006



Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 1809-1

DATE OF INSPECTION: October 26, 2005

NAME & ADDRESS OF INSPECTION CONTACT/ Mike Haines

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: President

NAME & ADDRESS OF PERMIT HOLDER: Fairview Ranch, Inc., 15935 Bixby Road,
Faith, SD 57626

DIVERSION POINT LEGAL LOCATION: 1000 ft. north & 2000 ft. east of the SW corner of
Sec. 14-T14N-R13E (SE ¼ SW ¼) (Lat. 45.172272, Long. -102.50086).

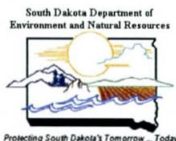
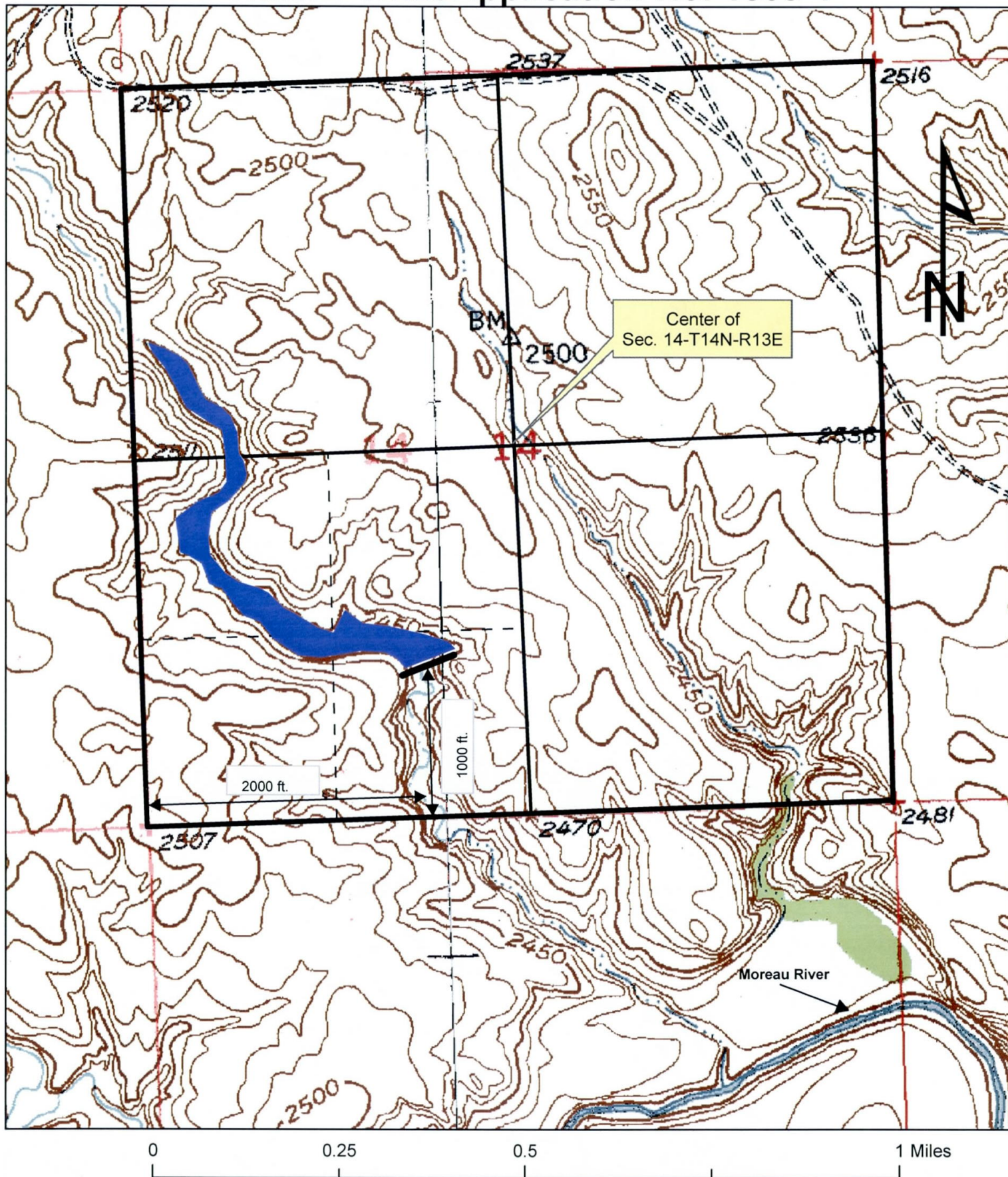
DAM INFORMATION:

- 1) Height to crest 27.5 feet
- 2) Height to primary spillway 22 feet
- 3) Height to secondary spillway 24.5 feet
- 4) Crest width 16 feet
- 5) Crest length 249 feet
- 6) Spillway length XXX feet
- 7) Spillway width 40 feet
- 8) Approx. storage (Normal) 107 acre-feet
- 9) Approx. storage (Maximum) 240 acre-feet
- 10) Date constructed: 2004

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit N/A
- 2) Special qualifications to permit being abided by yes
- 3) All structures, wells and lands on map yes
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A

Water Permit Application No. 1809-1



Timothy G. Schaal
Timothy G. Schaal, P.E.
Natural Resources Engineering Specialist
DENR, Water Rights Program

1/30/06

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1809-1

(1) Fairview Ranch Inc., % Mike Haines, 15935 Bixby Rd, Faith SD 57626 made Application No. 1809-1, October 27, 2003 for a water permit to impound 107 acre-feet of water from runoff, Perkins County, South Dakota for fish and wildlife propagation and domestic livestock watering purposes. Permit No. 1809-1, with a priority date of October 27, 2003 was approved December 22, 2003 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 22, 2008 and for the application to beneficial use of said water on or before December 22, 2012.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to construction of the storage dam and is entitled to impound 107 acre-feet of water for beneficial use with sufficient water annually to maintain the water level to the outlet elevation.

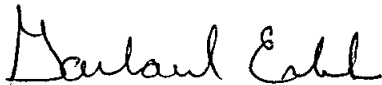
The location of the storage dam (spillway) is: 1,000 feet north and 2,000 feet east of the SW corner of Section 14, T14N, R13E (SE ¼ SW ¼).

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use for fish and wildlife propagation and domestic livestock watering purposes.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Fairview Ranch Inc, 15935 Bixby Rd, Faith SD 57626 the holder and/or owner of Water Right No. 1809-1 is issued a license to appropriate water, the right to impound 107 acre-feet of runoff water with sufficient water annually to maintain the water level to the outlet elevation from the location specified in (2) of this license. Water Right No. 1809-1 carries a priority date of October 27, 2003.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 1809-1 and subject to the following qualifications:

- Water Right No. 1809-1 authorizes a dam with a storage capacity of 107 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.



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

APR 07 2006

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

APR 07 2006

1809-1

Mike Haines
Fairview Ranch Inc
15935 Bixby Rd
Faith SD 57626

Dear Mr. Haines:

Enclosed is your Water License No. 1809-1 and a map prepared by the staff engineer who conducted the field investigation. Water License No. 1809-1 is the final document which completes the process of obtaining a water right.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

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

enclosures