

Considered: _____

WATER PERMIT NO. 5611-3

Phone: 605 339-7025

Name of Applicant: City of Sioux Falls

Post Office Address: 224 West 9th St, Sioux Falls SD 57102

Amount of Water Claimed: 4.23 (1460 ac-ft) Total Acres: NA

Source of Water Supply: groundwater (4 wells)

Water to be used for: municipal use County: Minnehaha & Lincoln

About _____ miles NW of Sioux Falls

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

F.F. & C/.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY Date Received: 1-29-92 Fee: _____ Remarks Construction

to use water from Future Use Permit No. 5522-3

Corrected Application Received _____ Period of Annual Use January 1 - Dec 31

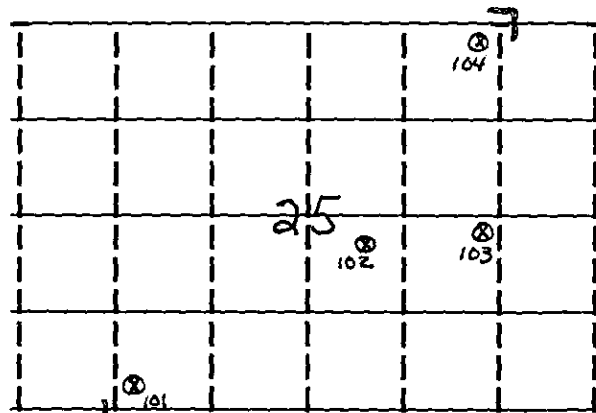
WATER QUALITY APPROVAL RECEIVED NA APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS _____

Diversion Point: SW 1/4 SW 1/4, NW 1/4 SE 1/4,

NE 1/4 SE 1/4, NE 1/4 NE 1/4 Sec 25-T103N-R51W

Land to be Irrigated: _____



Well Log: Driller: Layne Geosciences, Inc. Licensed YES _____ NO _____

Depth of Well: 29.5', 30', 31', 32' REMARKS _____

Type of Map: plat PREPARED BY: Lyle D Johnson Reviewed and the Number

Assigned on 1-30-92 By Karen Schlaak

No. 5611-3 Hydrologic Unit 10170203Map No. _____ Basin Big Sioux AquiferNewspaper Argus Leader, P.O. Box 5034, SE 57117-5034
331-2200

Mail to: Water Rights Div.

523 East Capitol

Pierre, SD 57501

(605) 773-3352

Lennox Independent, Box 76, Lennox 57039 (Thurs) 647-2467**Application for Permit to Appropriate Water Within the State of South Dakota**

Check use of water: Industrial ☐ Commercial ☐ Municipal ☒ Other Common Distribution System ☐
 Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
 Domestic ☐ (above 18gpm) Other ☐

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐☐ Amend Permit No. _____ with old priority date retainedChange diversion point(s) ☐ Add diversion point(s) ☐ Other ☐☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____☒ Construction to use water reserved by Future Use Permit No. 5522-3Agreement No. 136-92P.O. No. 35695Dollar Amt. \$1,879.00Dept. No. 75

Attorney _____

Finance _____

- Name of Applicant City of Sioux Falls Phone No. (605) 339-7025
Post Office Address 224 West Ninth Street, Sioux Falls State SD 57102
- Amount of water claimed (c.f.s) 4.23 cfs from 4 wells; 1460 acre-feet annually
- Source of water supply 4 wells in Middle Skunk Creek Aquifer
- Location of point of diversion T103N, R51W, Section 25: Well 101 @ SW 1/4 of SW 1/4; Well 102 @ NW 1/4 of SE 1/4; Well 103 @ NE 1/4 of SE 1/4; Well 104 @ NE 1/4 of NE 1/4
County Minnehaha
- Counties where water will be used Minnehaha and Lincoln
- Annual period during which water is to be used January - December 31
- Give a brief description of proposed 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 Engineering Report

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)

County of Minnehaha) SSI, Jack White, Mayor, City of Sioux Falls 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.Signed Jack White

MAYOR

Subscribed and sworn to before me this _____ day of JAN 21 1992 19Dianne Metli
Notary Public

SOUTH DAKOTA
WATER PERMIT No. 5611-3

Date of first receipt of application January 29, 1992.
Date of return to applicant for corrections, amendments or changes
January 30, 1992.
Date of receipt of corrected application February 26, 1992.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 5611-3 to the City of Sioux Falls, 224 West Ninth St., Sioux Falls SD 57102 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. 5611-3 will construct and place to beneficial use 4.23 cubic feet of water per second (1,460 acre-feet annually) from four wells 29 to 32 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SE 1/4, NE 1/4 SE 1/4, NE 1/4 NE 1/4 Section 25-T103N-R51W. This water was appropriated and reserved by Future Use Permit No. 5522-3.
2. The water appropriated shall be used for the purpose of supplying water to the City of Sioux Falls and may not exceed the amount of water needed for beneficial use for municipal purposes.
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. 5611-3 is April 29, 1992.
5. The date from which applicant may claim right is August 22, 1991.
6. One-fifth of the construction is to be completed on or before October 29, 1994.
7. All construction is to be completed on or before April 29, 1997.
8. Water is to be put to beneficial use on or before April 29, 2001.
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. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized pursuant to this permit shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04.

(continued)

3. Approval of Permit No. 5611-3 authorizes a total annual diversion of 1,460 acre-feet of water annually.
4. The City of Sioux Falls shall report to the Chief Engineer annually the amount of water withdrawn each year from the Big Sioux:Middle Skunk Creek Aquifer.
5. If development and pumping of Middle Skunk Creek Aquifer water authorized by Water Permit No. 5611-3 results in adverse impairment of adequate domestic wells or adequate wells having prior water rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered groundwater levels are due to drought, 2) the location of domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.

WATER MANAGEMENT BOARD

By: 

Chief Engineer, Water Rights Division
Department of Environment and Natural Resources

JUL 1 1992

date

Supplemental Information

Well 101

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 54 inches Depth 29.5 feet
- b) Casing Type Mild Steel Diameter 36 inches Thickness 0.5 inches
- c) Screen Type Stainless Steel Diameter 30 inches Thickness 0.5 inches
- d) Gravel Pack Thickness 12 inches Length of Gravel Pack 15 feet
- e) Depth to Top of Water Bearing Material 6 feet
- f) Depth to Water (ground surface to water level) 5 feet
- g) Distance to nearest existing domestic well:

On applicant's property _____ On property owned by others Estimated 1500 ft.

2. Dugout Information Estimates

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

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____
If pipe, diameter _____

f) Secondary Spillway Capacity _____
Spillway width _____

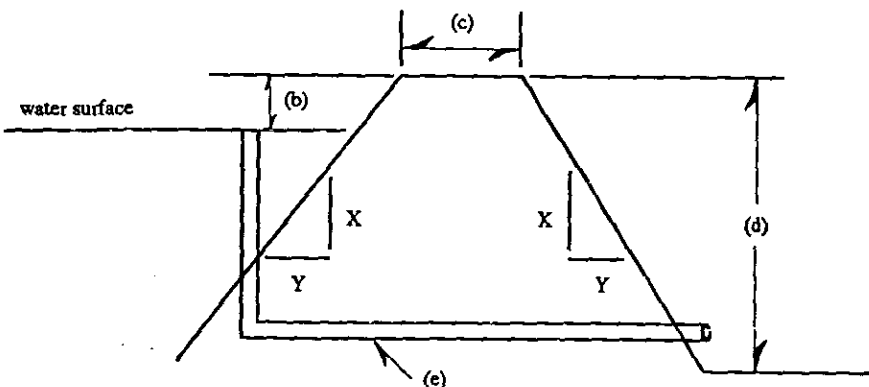
g) X & Y Slope
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



[Signature]
Signature of Applicant

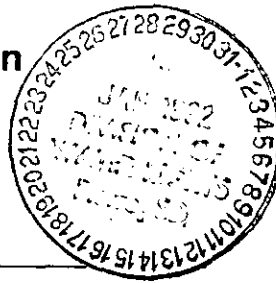
DTP/G37505.FM4

3B75-023/WP/075/03/3B75

Supplemental Information

Well 102

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 42 inches Depth 30 feet
- b) Casing Type Mild Steel Diameter 36 inches Thickness 0.5 inches
- c) Screen Type Stainless Steel Diameter 30 inches Thickness 0.5 inches
- d) Gravel Pack Thickness 6 inches Length of Gravel Pack 15 feet
- e) Depth to Top of Water Bearing Material 6 feet
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
 On applicant's property _____ On property owned by others Estimated 900 ft.

2. Dugout Information Estimates

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

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____
 If pipe, diameter _____

f) Secondary Spillway Capacity _____
 Spillway width _____

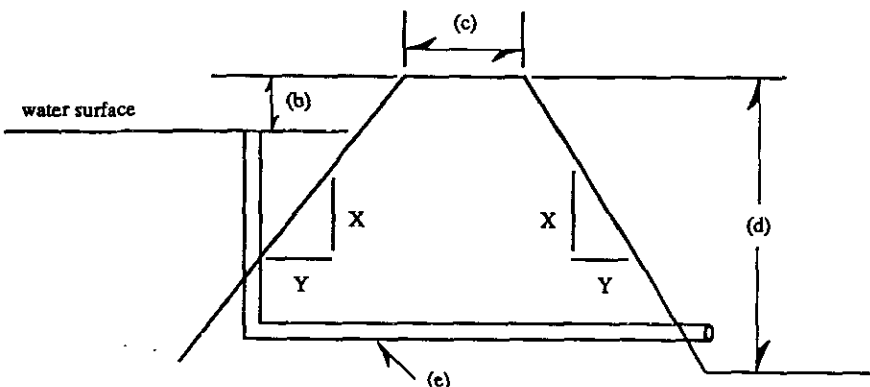
g) X & Y Slope
 Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



[Signature]
 Signature of Applicant

DTP/G37505/PM4

3B75-023/WP/075/03/3B75

Supplemental Information

Well 103

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 54 inches Depth 31 feet
- b) Casing Type Mild Steel Diameter 36 inches Thickness 0.5 inches
- c) Screen Type Stainless Steel Diameter 36 inches Thickness 0.5 inches
- d) Gravel Pack Thickness 9 inches Length of Gravel Pack 15 feet
- e) Depth to Top of Water Bearing Material 5 feet
- f) Depth to Water (ground surface to water level) 6 feet
- g) Distance to nearest existing domestic well:
- On applicant's property _____ On property owned by others Estimated 2200 ft.

2. Dugout Information Estimates

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

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____
If pipe, diameter _____

f) Secondary Spillway Capacity _____
Spillway width _____

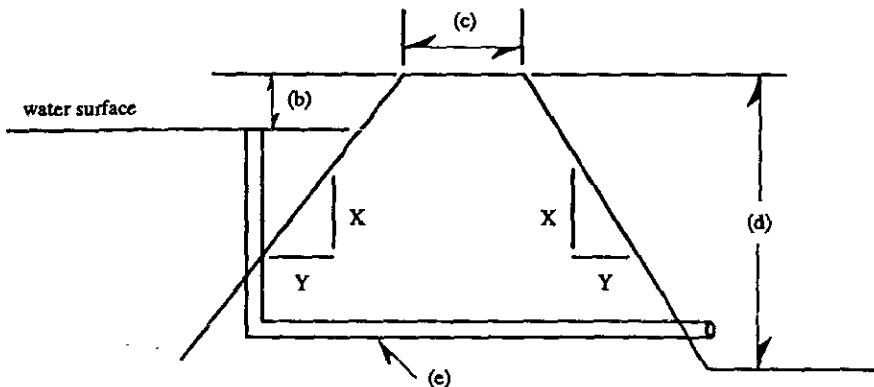
g) X & Y Slope
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



Signature of Applicant

DTP/G37305.PM4

2075-022/WD/075/02/3R75

Supplemental Information

Well 104

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 54 inches Depth 32 feet
- b) Casing Type Mild Steel Diameter 36 inches Thickness 0.5 inches
- c) Screen Type Stainless Steel Diameter 36 inches Thickness 0.5 inches
- d) Gravel Pack Thickness 9 inches Length of Gravel Pack 20 feet
- e) Depth to Top of Water Bearing Material 5 feet
- f) Depth to Water (ground surface to water level) 4 feet
- g) Distance to nearest existing domestic well:

On applicant's property _____ On property owned by others Estimated 2300 ft.

2. Dugout Information Estimates

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

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____
If pipe, diameter _____

f) Secondary Spillway Capacity _____
Spillway width _____

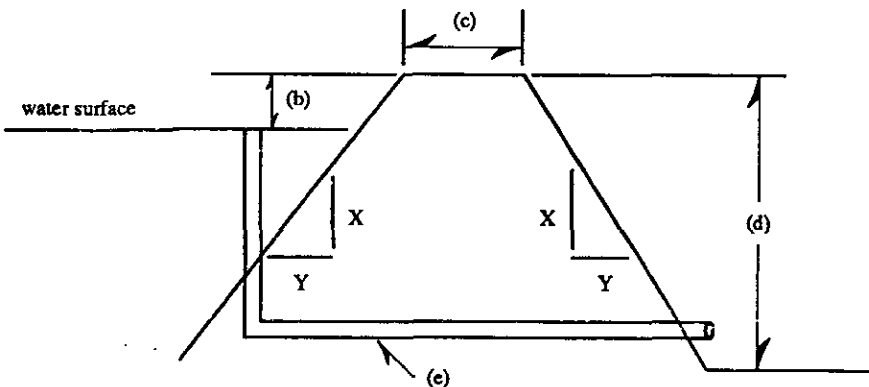
g) X & Y Slope
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____

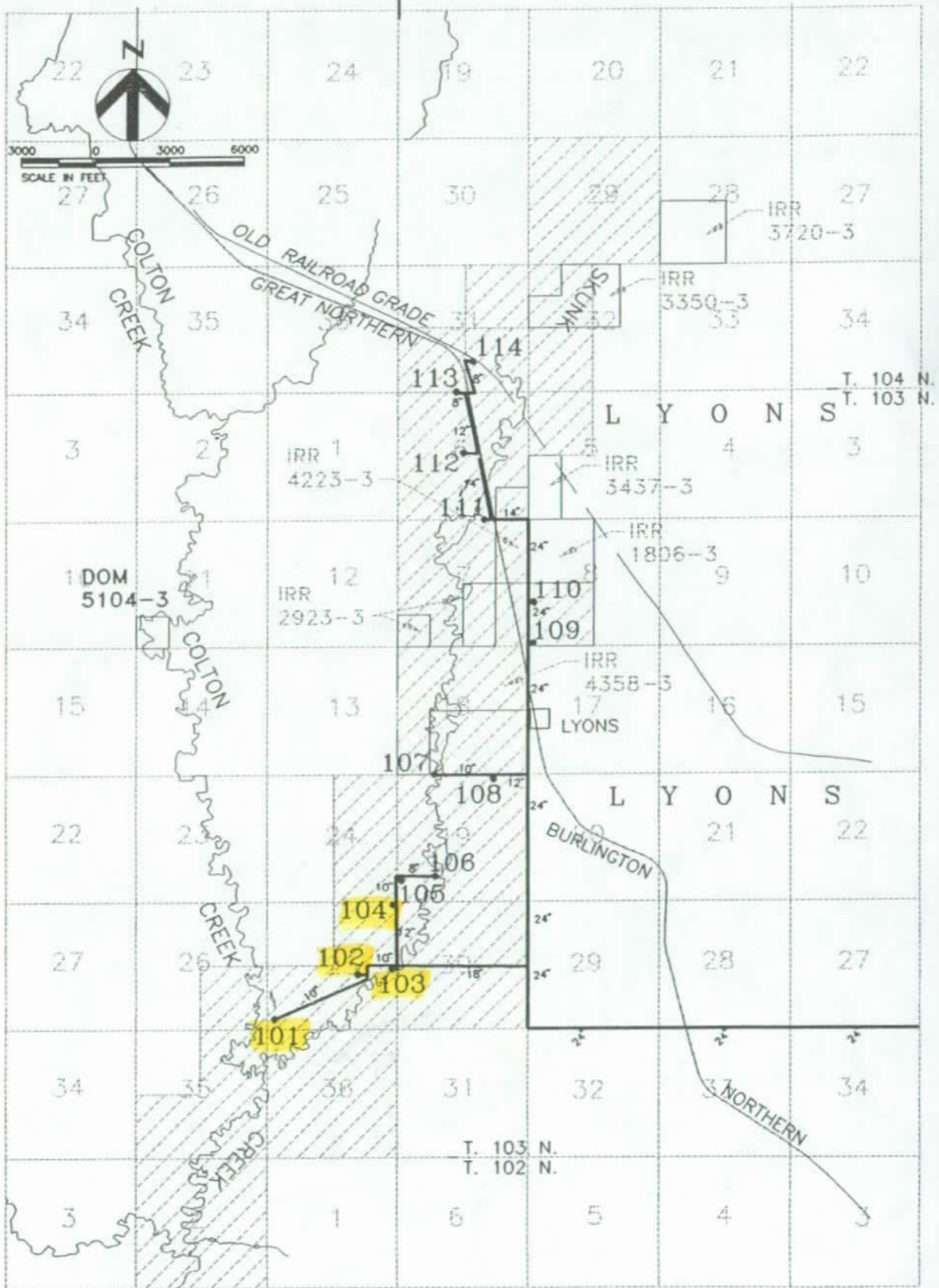


[Signature]
Signature of Applicant

DTP/G37505.FM4

3B75-023/WP/075/03/3B75

R51W R50W



HDR

**MIDDLE SKUNK CREEK
WELL FIELD PLAN**

HDR Engineering, Inc.

Thyl D. Johnson, PE #3861

Date
NOV 91

Figure

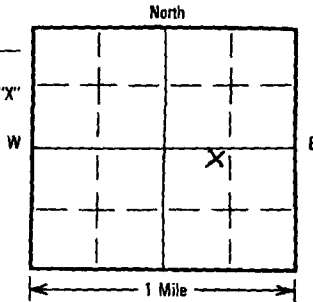
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SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location NE 1/4 SE 1/4 Sec 25 Twp 103N Rg 51WCounty MINNEAPOLIS

Please mark well location with an "X"

Well Completion Date 3-7-93

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? _____ ft. from _____ (identify source).

PROPOSED USE:

☐ Domestic/Stock ☒ Municipal ☐ Business ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>142 LB/FT</u>	<u>36 IN</u>	<u>16 FT</u>	<u>66 FT</u>	<u>54 IN</u>
<u>167 LB/FT</u>	<u>42 IN</u>	<u>13 FT</u>	<u>66 FT</u>	<u>IN</u>
<u>LB/FT</u>	<u>IN</u>	<u>FT</u>	<u>FT</u>	<u>IN</u>

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Slurry</u>	<u>35</u>	<u>lb./gal</u>	<u>ft</u>	<u>ft</u>
		<u>lb./gal</u>	<u>ft</u>	<u>ft</u>

Describe grouting procedure 1 1/2 cu yds - 23 bags p/xd
4 gal H₂O p/bag - Tremied in on top
of Bentonite Seal Just above
GRAVEL PACK

SCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 36 IN Length 15.4 FEETMaterial 304 SSSlot Size 1070 Set From 31.5 Feet to 16 FeetOther information 3' STEEL Sump on Bottom
of 36" 3/4 wall 47 3/8" Plate BottomWell Owner: City of Sioux Falls

Business Name:

Address: 1400 No. Minnesota
Sioux Falls SD 57102

WELL LOG:

FORMATION

DEPTH

FROM

TO

SEE ATTACHED LOG
Well # 104

STATIC WATER LEVEL 1 1/2 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

Pump test Data when Completed
ALSO 1 MONITORING
WELL ON SITE

This well was drilled under license # 513

And this report is true and accurate.

Drilling firm Layne-Western Co

Signature of License Representative:

W. G. Green

Signature of Well Owner or Equitable Property Holder:

Date: 4-14-93WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION:

Was well disinfected upon completion? _____ YES, How: _____

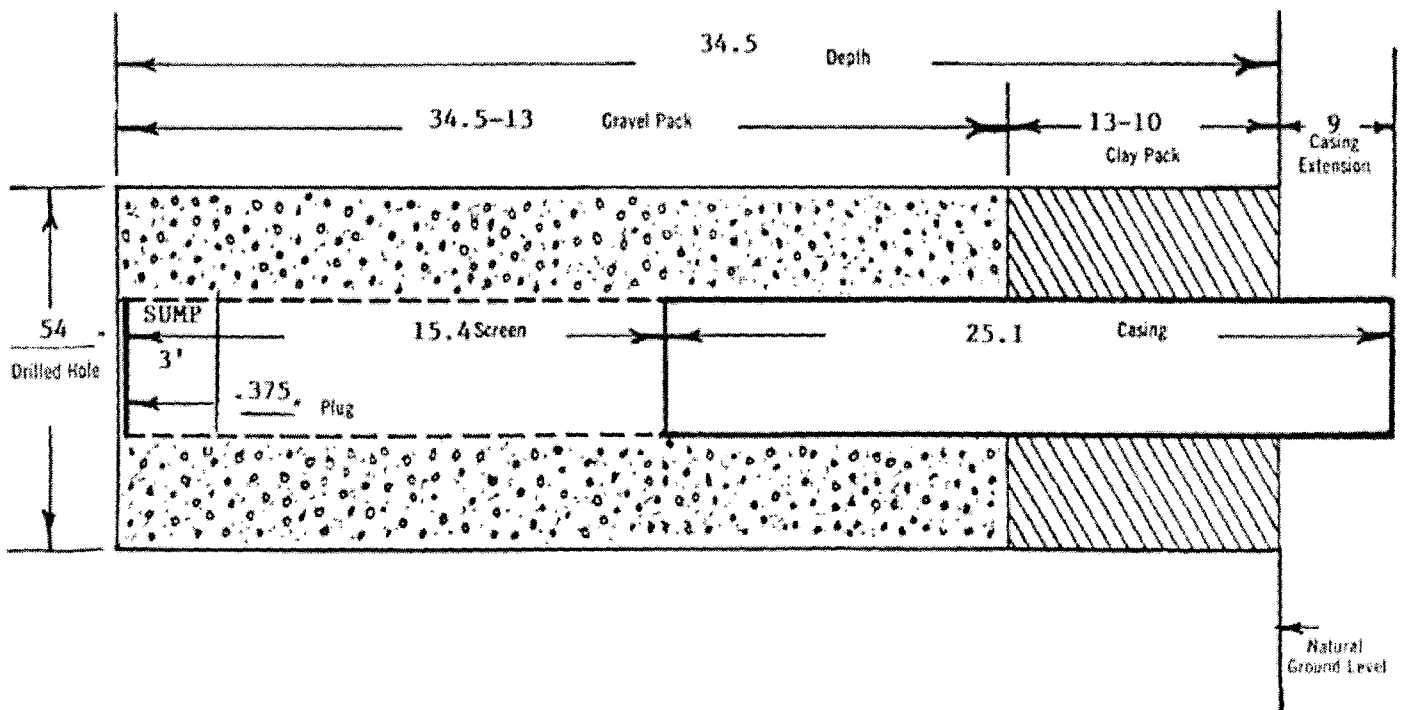
X NO, Why Not? Contractor
to use for Dewatering
Will be Disinfected at
Time of New Pump Install

Laboratory sent to for water quality analysis City LAB

CONTRACT **RICE LAKE CONTRACTING-CITY OF SIOUX FALLS, SD**

Well No. 104

Log of well from ground level:

[illegible]

07-92

Date: 4-11-93

Omaha, Nebraska

Date 3-2-93

Driller **GARY MCCRACKEN**

3. Well No. 101

at test hole No. Well location (attach map)

3. MATERIALS

LENGTH

DIA.

GAUGE OR
WALL THICKNESS

MATERIAL

TYPE

NO. OF
OPENINGS

6. System

10.4

30

.375

STAINLESS STEEL WIRE WRAP

100

7. Inner Casing

27.1

30

375

BLACK

BLANK

8. Outer Casing

21.5

36

373

BLACK

BLANK

Q. 13

9. 13 tons of gravel used in the well. Size "AA" LUTHER MADDOX

10. Test of well. Did you use test or permanent pump?

11. Size of orifice.....inch by.....inch. Orifice tube reading.....inches.

12. Pumping test -- measurements from ground level;

TIME

G.F.M.

STATIC

DRAWDOWN

PUMPING LEVEL

13. Recovery in 5 minutes..... in 30 minutes

14. Did you seal bottom of well? YES Thickness .375 inches, material STEEL

15. Well underreamed? NO From feet to feet, feet to feet.

16. If all screen was not placed at bottom, state how it was spaced.

From 29.5 feet to 19 feet; from _____ feet to _____ feet; from _____ feet to _____ feet.

17. Depth of well from ground level to top of plug 32.5 Size of drilled hole..... 54"

18. Was cement placed around or between any of the casings? YES

19. If so, state where, how much and method used. 7-10 FT 1.5 YARDS

Well No.

Feet 0 to 2 Feet

TOP SELL

Formation

CLAY

2 to 5

FINE SAND

5 to 15

MEDIUM TO COARSE SAND

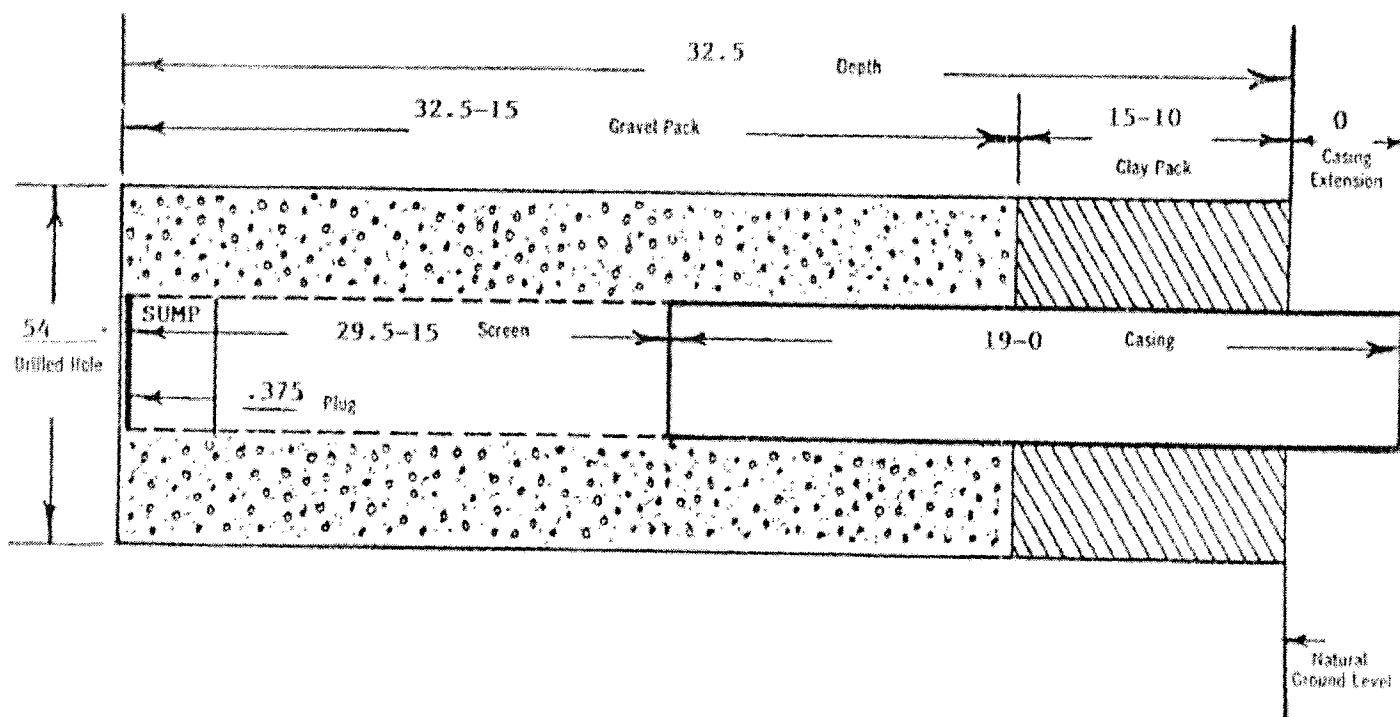
15 22

MEDIUM TO COARSE GRAVEL, SOME BOULDERS

22 to 29.5

CLAY

29.5 to 35



10-85

1-21-94

1. Contract Rice Lake Contracting Date 10/8/93

2. City and State Sioux Falls, SD. Driller Dave Deaver

3. Well No. 102 at test hole No. 102 Well location (attach map)
W 1/2 of SE 1/4 SEC 25 TWP 103N RG 51W

4. Work completed 10/8/93 No of man hours as charged to job on time sheet

5. MATERIAL:	LENGTH	DIA.	GAUGE OR WALL THICKNESS	MATERIAL	TYPE	NO. OF OPENINGS
6. Screen	<u>10.4'</u>	<u>30"</u>	<u>.375</u>	<u>SS</u>	<u>WR</u>	<u>.090</u>
7. Inner Casing	<u>13.6'</u>	<u>30"</u>	<u>.375</u>	<u>Black</u>	<u>Blank</u>	
8. Outer Casing	<u>22'</u>	<u>36"</u>	<u>.375</u>	<u>Black</u>	<u>Blank</u>	

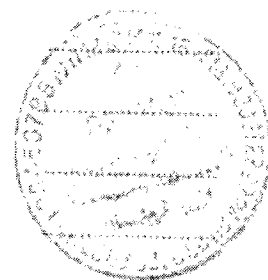
9. 8 tons of gravel used in the well. Size 1/4 x 10 Northern Gravel Co.

10. Test of well. Did you use test or permanent pump?

11. Size of orifice inch by inch. Orifice tube reading inches.

12. Pumping test — measurements from ground level:

TIME	G.P.M.	STATIC	DRAWDOWN	PUMPING LEVEL



13. Recovery in 5 minutes , in 30 minutes

14. Did you seal bottom of well? Yes Thickness .375 inches, material Black - 3' x 30" Sump

15. Well underreamed? No From feet to feet, feet to feet.

16. If all screen was not placed at bottom, state how it was spaced.

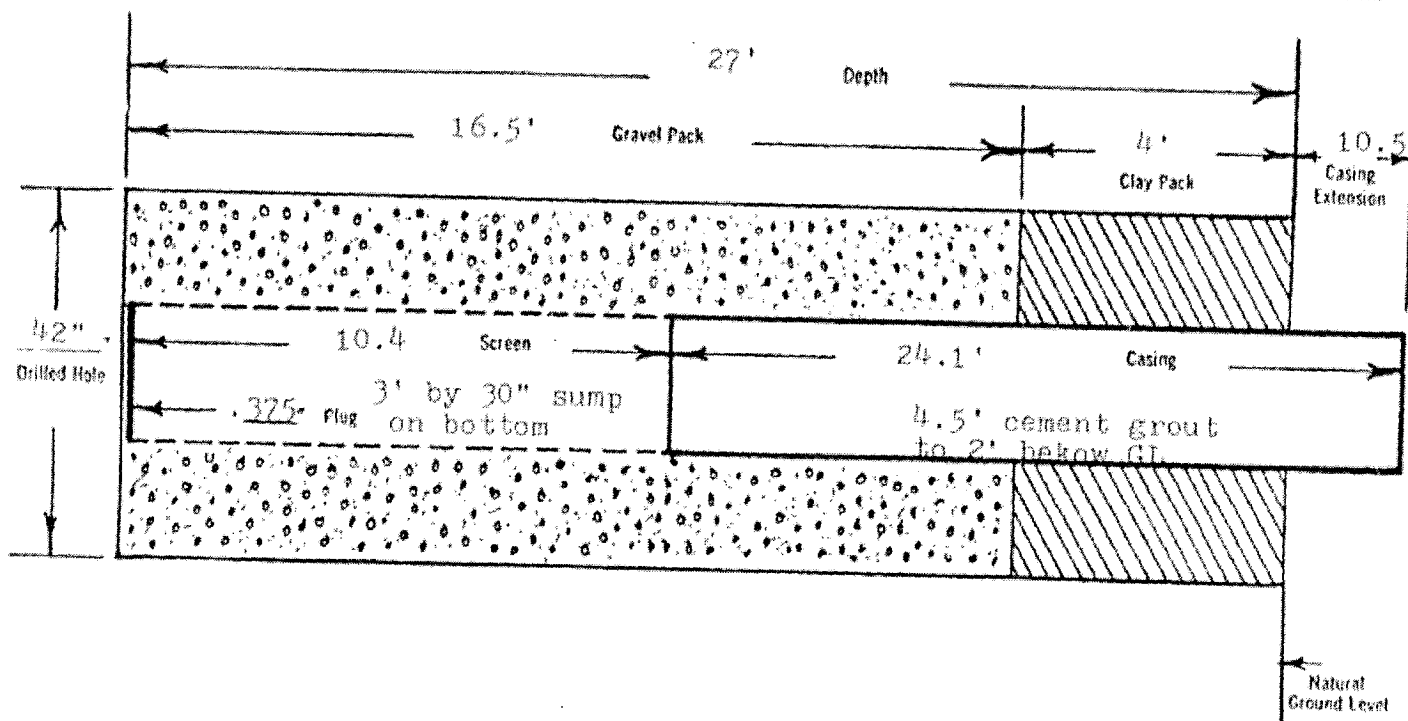
From 24' feet to 13.6' feet; from feet to feet; from feet to feet.

17. Depth of well from ground level to top of plug 22.4' Size of drilled hole 42"

18. Was cement placed around or between any of the casings? Yes

19. If so, state where, how much and method used 6.5' to 2', 1 cu. yd. by tremmie pipe

Well No. 102

[illegible]

Contract 4 - Sioux Falls, South Dakota
HDR Project No.: 01450-077-135

Construction of Well No. 102

Method used: Reverse

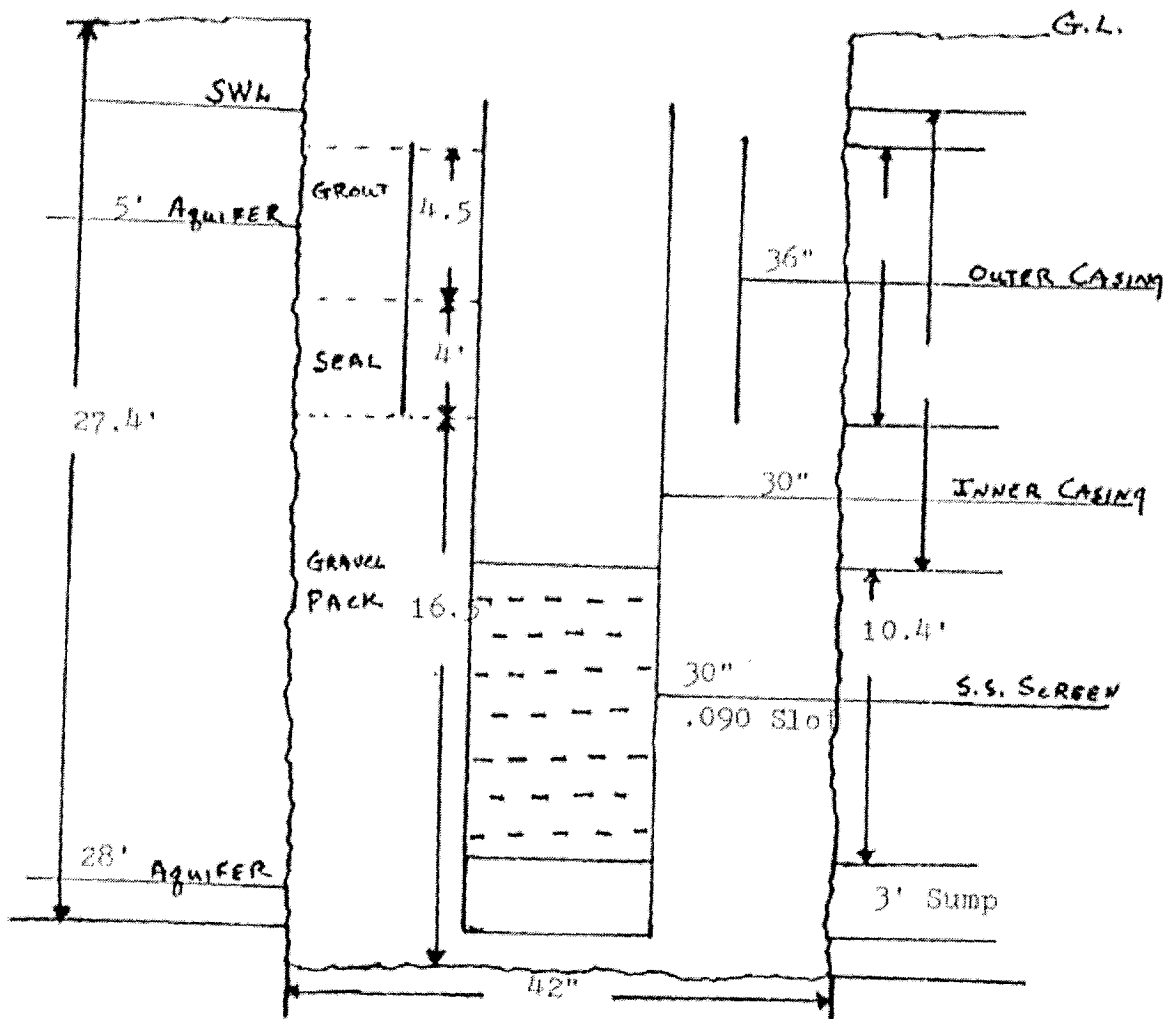
Date Started: 10/5/93

Drilling date(s): 10/6/93 10/7/93 10/8/93

Date casing and screen installed: 10/8/93

Date cement grouted: 10/9/93 No. cu. yards: 1
(Cement slurry - 23 bags per cubic yard with 6 gallons H₂O
weighing 15.6 # per gallons)
(Method - Hopper with tremie pipe)

Construction completion date: 10/9/93

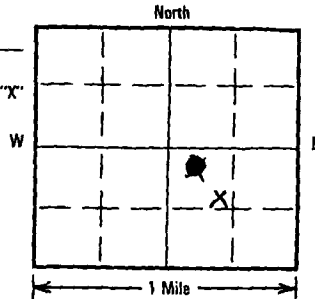


SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location NE 1/4 SE 1/4 Sec 25 Twp 103N Rg 51WCounty Minnehaha

Please mark well location with an "X"

Well Completion Date 3-5-93

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? _____ ft. from _____ (identify source).

PROPOSED USE:

☐ Domestic/Stock ☒ Municipal ☐ Business ☐ Test Holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>119 LB/FT</u>	<u>36 IN</u>	<u>19 FT</u>	<u>54 FT</u>	<u>54 IN</u>
<u>142 LB/FT</u>	<u>36 IN</u>	<u>19 FT</u>	<u>54 FT</u>	<u>54 IN</u>
<u>167 LB/FT</u>	<u>42 IN</u>	<u>13 FT</u>	<u>54 FT</u>	<u>54 IN</u>

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Slurry</u>	<u>46</u>	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure 2 cu yds - 23 bags of 1 yd
4 1/2 gal p/bag H₂O. TRENCH IN ON
Top of Bentonite Seal Just Above
Gravel PackSCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 36 IN Length 10.4 FEETMaterial 304 STAINLESS STEELSlot Size 100 Set From 31 Feet to 21 FeetOther information 3' STEEL Sump on Bottom
of 36" 3/8" wall 7 3/8" plate BottomWAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION:

Was well disinfected upon completion? _____ YES, How: _____

X NO, Why Not? Contractor
to use for Dewatering
Will be Disinfected at
Time of New Pump Install

Laboratory sent to for water quality analysis City LABWell Owner: City of Sioux Falls

Business Name: _____

Address: 1400 NO MINNESOTA
SIoux FALLS, SD 57102

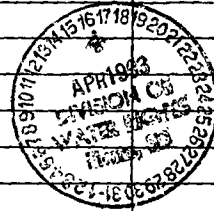
WELL LOG:

FORMATION

DEPTH

FROM

TO

See Attached LogWell #103STATIC WATER LEVEL 2' Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ PumpedDescribe: 16 HRS Step test AT
4 Rates, THEN 24 Hrs Constant
Test AT 450 GPM☐ Bailed☐ Other

Pumping Level Below Land Surface

16.4 ft. After 8 Hrs. pumped 340 GPM9.6 ft. After 32 Hrs. pumped 450 GPM

If pump installed, pump rate _____ GPM

REMARKS

Complete Data Available From
City Files OR H.D.R Engineering
ALSO 1 MONITORING
WELL ON SITE

This well was drilled under license # 513

And this report is true and accurate.

Drilling firm Layne-Western Co

Signature of License Representative

Signature of Well Owner or Equitable Property Holder:

Date: 4-13-93

1. Contract RICE LAKE CONTRACTING Date 3-5-93
2. City and State SIOUX FALLS, SD Driller GARY MCCracken
3. Well No. 103 at test hole No. _____ Well location (attach map) _____

4. Work completed _____, No of man hours as charged to job on time sheet _____

5. MATERIAL:	LENGTH	DIA.	GAUGE OR WALL THICKNESS	MATERIAL	TYPE	NO. OF OPENINGS
6. Screen	10.4	36"	.375	STAINLESS STEEL	WIRE WRAP	.100
7. Inner Casing	28.0	36"	.375	BLACK	BLANK	
8. Outer Casing	23.0	42"	.375	BLACK	BLANK	

9. 13 tons of gravel used in the well. Size "AA" LUTHER MADDOX

10. Test of well. Did you use test or permanent pump? _____ Size of Bowl _____ Stages _____

11. Size of orifice _____ inch by _____ inch. Orifice tube reading _____ inches.

12. Pumping test — measurements from ground level:

TIME	G.P.M.	STATIC	DRAWDOWN	PUMPING LEVEL

13. Recovery in 5 minutes _____, in 30 minutes _____

14. Did you seal bottom of well? YES Thickness .375 inches, material STEEL

15. Well underreamed? NO From _____ feet to _____ feet, _____ feet to _____ feet.

16. If all screen was not placed at bottom, state how it was spaced.

From 31 feet to 21 feet; from _____ feet to _____ feet; from _____ feet to _____ feet.

17. Depth of well from ground level to top of plug 34' Size of drilled hole 54"

18. Was cement placed around or between any of the casings? YES

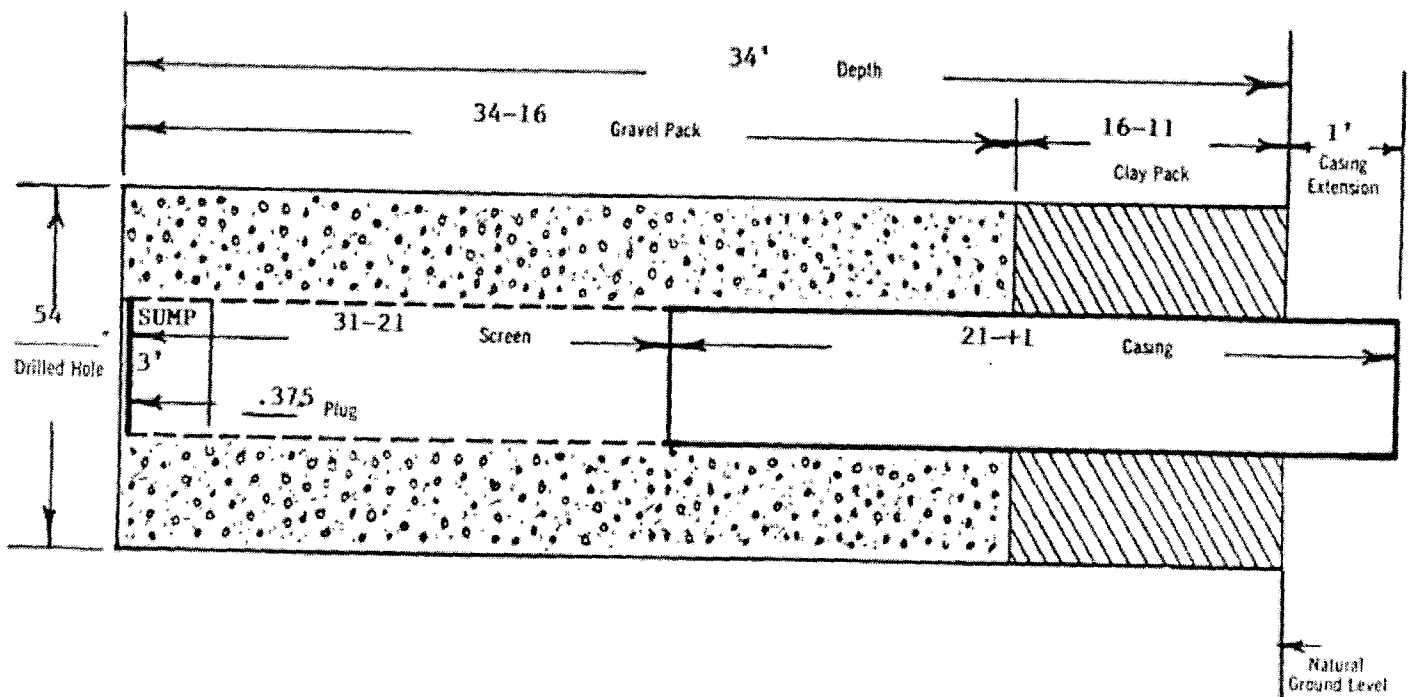
19. If so, state where, how much and method used. 11-6' 2 YARDS TREMIE

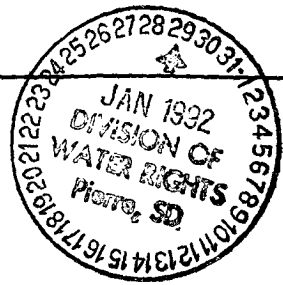
Well No. 103[illegible]

Formation

MEDIUM GRAVEL AND SAND

MEDIUM TO COARSE GRAVEL WITH A FEW BOULDERS





WELL NO: 101

TEST HOLE LOG
TH 541

3/8-INCH OUTER CASING SET 14.5 FEET ,
BELOW GROUND LEVEL INTO BENTONITE

GROUND LEVEL

Topsoil & Clay

NEAT CEMENT

6
Coarse Brown
Sand with Fine
Brown Sand

10 9.5'

BENTONITE

Coarse Gray Sand
and Some
Small Gravel

14.5'

36-INCH MILD STEEL BLANK CASING

20 19.5'

SCREEN: ³⁰/₃₆-INCH STAINLESS STEEL
100 SLOT

Coarse Gray Sand
and Rough
Gray Gravel

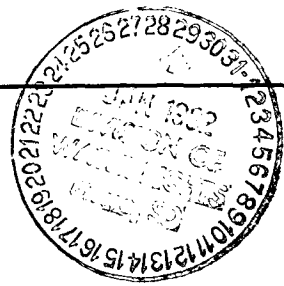
GRAVEL PACK

29.5 29.5'

BOREHOLE DIAMETER: 54 INCHES

Sandy Green Clay

WELL NO: 102



TEST HOLE LOG
TH 525

3/8-INCH OUTER CASING SET 15 FEET
BELOW GROUND LEVEL INTO BENTONITE

GROUND LEVEL

0

Top Soil

NEAT CEMENT

6

Gray Fine Sand

10'

BENTONITE

15

15'

Coarse Medium
Sand

20'

36-INCH MILD STEEL BLANK CASING

SCREEN: ³⁰
~~36~~-INCH STAINLESS STEEL
100 SLOT

25

Coarse Gravel

GRAVEL PACK

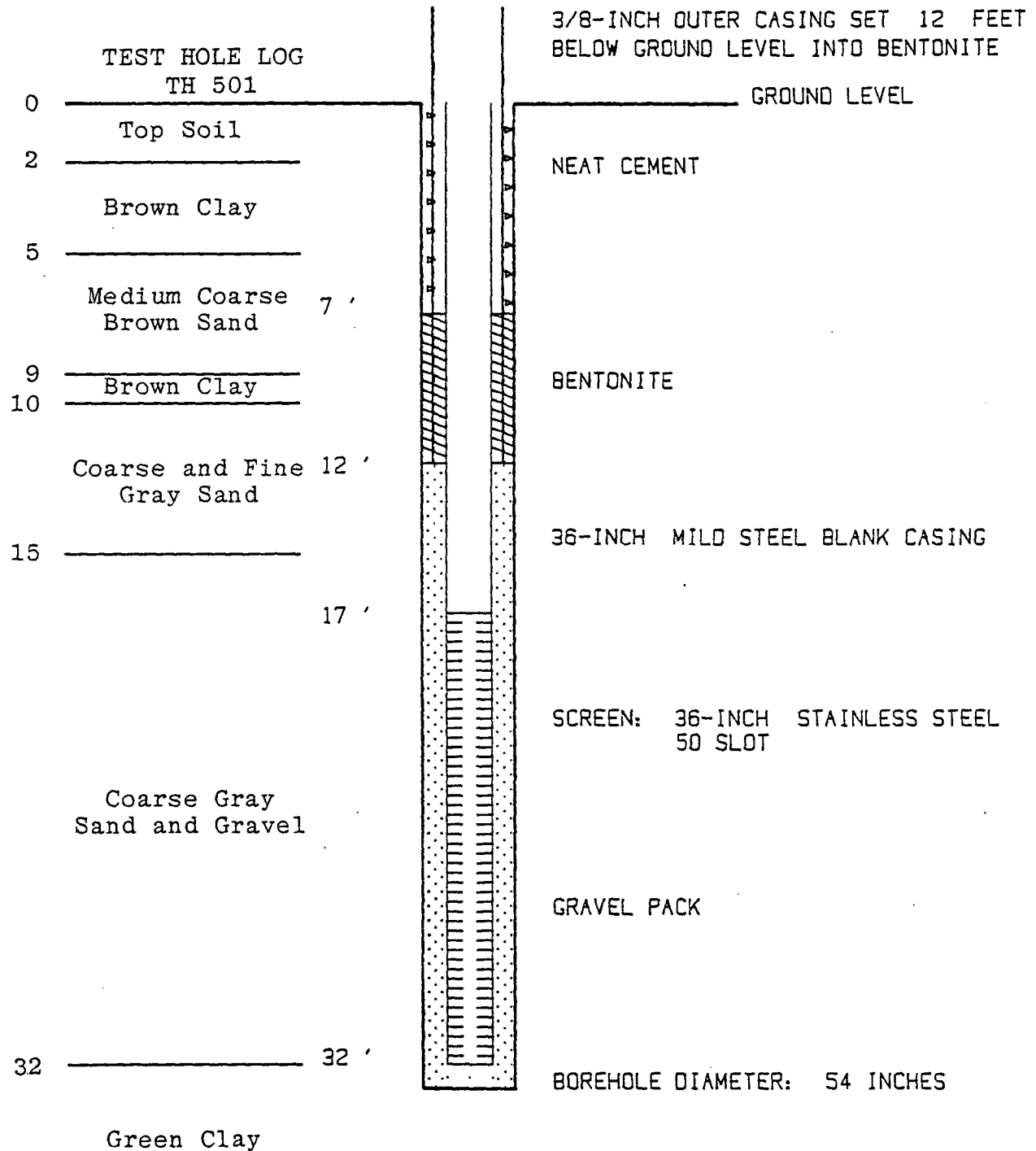
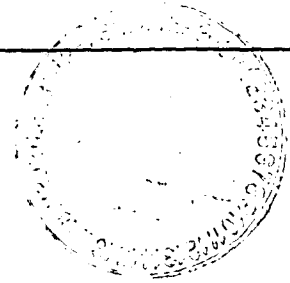
30.5

30'

Gray Clay

BOREHOLE DIAMETER: ⁴²
~~54~~ INCHES

WELL NO: 104



The Tyler Standard Screen Scale

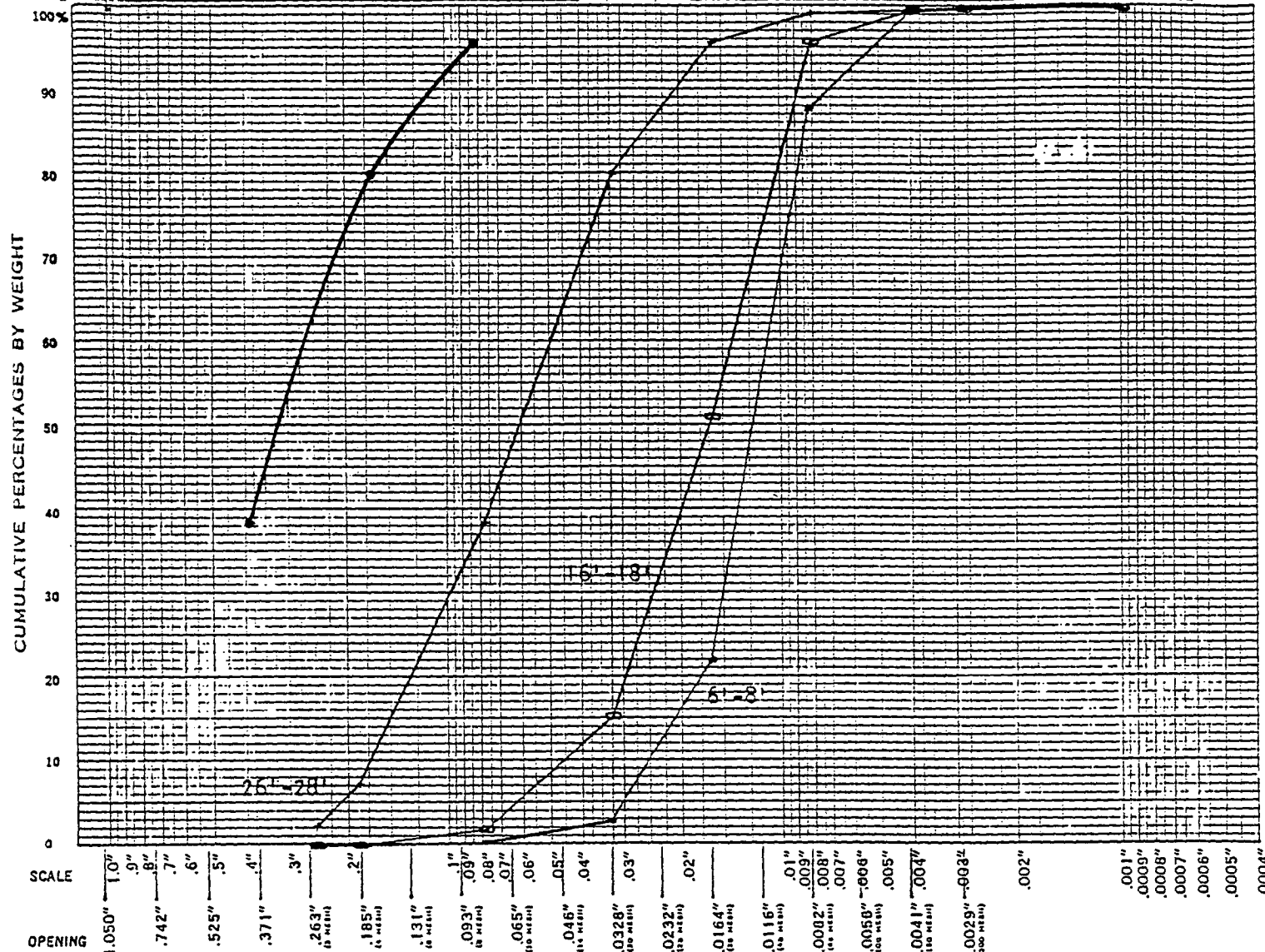
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 541

Name SIOUX FALLS, SOUTH DAKOTA

Date 8-23-91

L-5



SCREEN SCALE RATIO 1.414				6'-8'			16'-18'			26'-28'		
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters											
1.050	26.67											
.742	18.85											
.525	13.33											
.371	9.423											
.263	6.680	3										
.185	4.699	4	4									
.131	3.327	6	6									
.093	2.362	8	8									
.065	1.651	10	12									
.046	1.168	14	16									
.0328	.833	20	20									
.0232	.589	28	30									
.0164	.417	35	40									
.0116	.295	48	50									
.0082	.208	65	70									
.0058	.147	100	100									
.0041	.104	150	140									
.0029	.074	200	200									
Pass	.0029	.074	200									
Totals,												

The Tyler Standard Screen Scale

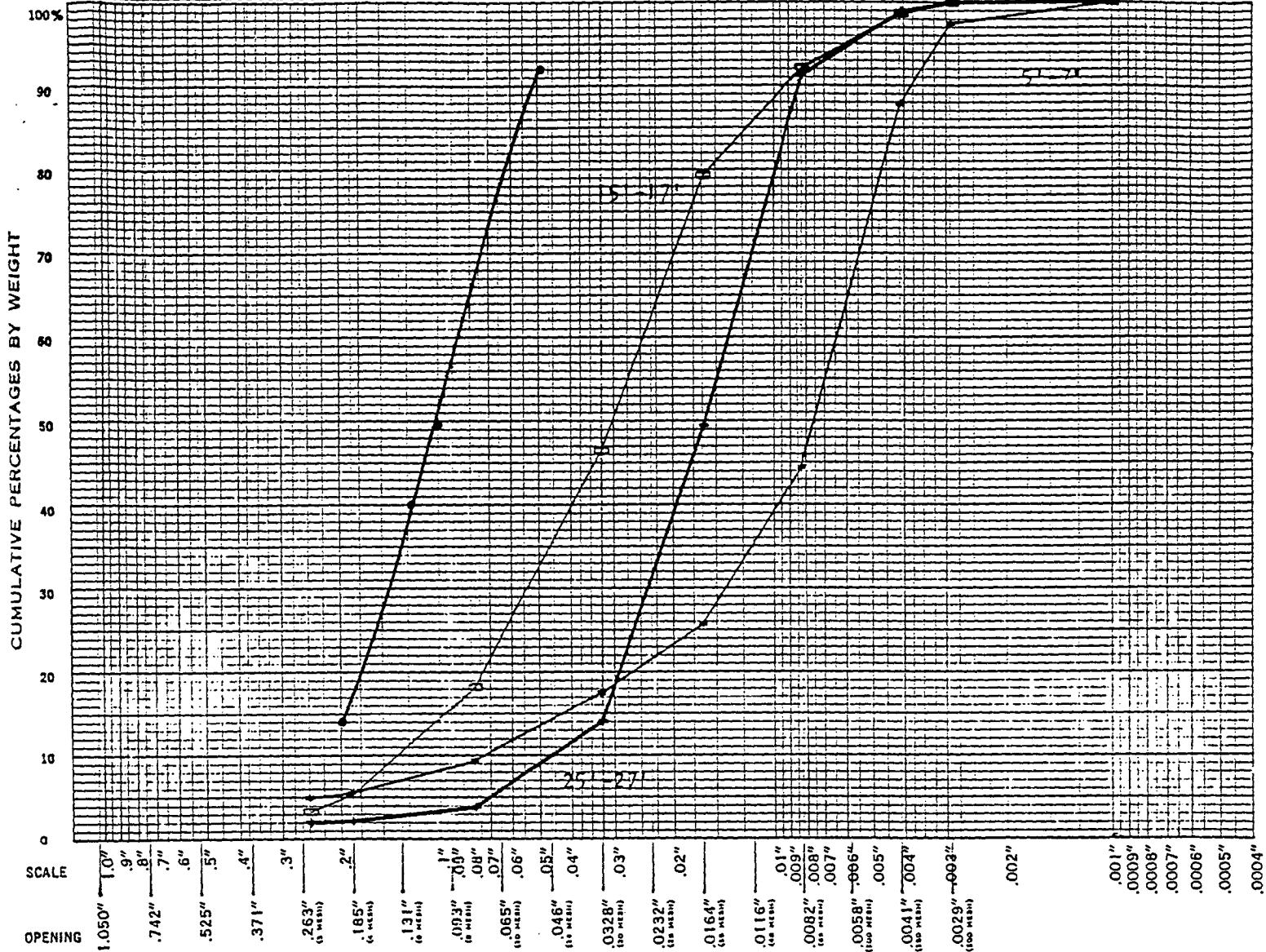
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 501

Name SIOUX FALLS, SOUTH DAKOTA

Date 7-12-91

L-5



SCREEN SCALE RATIO 1.414															
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters														
1.050	26.67														
.742	18.85														
.525	13.33														
.371	9.423														
.263	6.680	3													
.185	4.699	4	4												
.131	3.327	6	6												
.093	2.362	8	8												
.065	1.651	10	12												
.046	1.168	14	16												
.0328	.833	20	20												
.0232	.589	28	30												
.0164	.417	35	40												
.0116	.295	48	50												
.0082	.208	66	70												
.0058	.147	100	100												
.0041	.104	150	140												
.0029	.074	200	200												
Pass	.0029	200	200												
Totals,															

The Tyler Standard Screen Scale

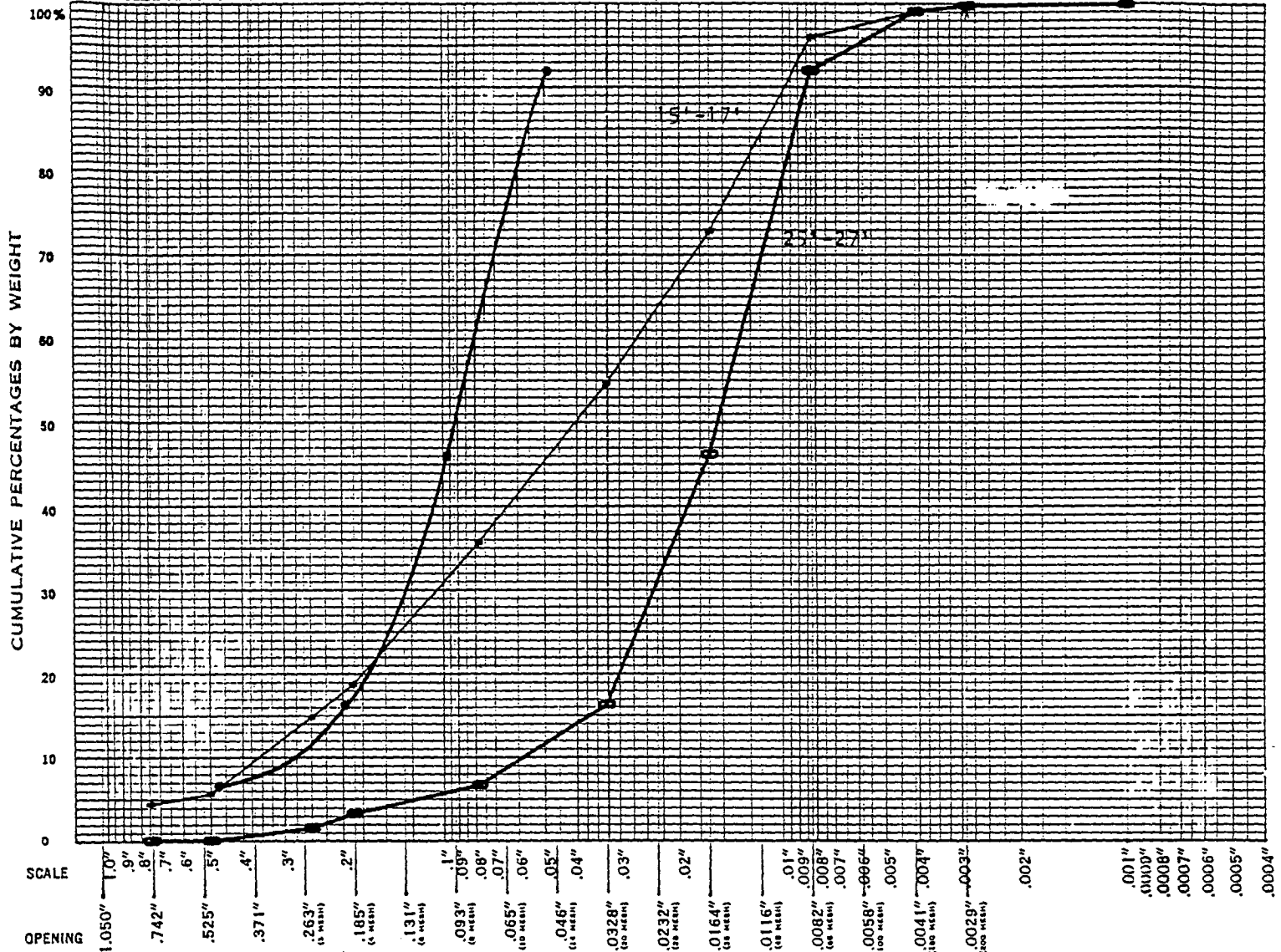
Form No. L-1
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 513

Name SIOUX FALLS, SOUTH DAKOTA

Date 7-12-91

L-5



SCREEN SCALE RATIO 1.414															
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters														
1.050	26.67														
.742	18.85														
.525	13.33														
.371	9.423														
.263	6.680	3													
.185	4.699	4	4												
.131	3.327	6	6												
.093	2.362	8	8												
.065	1.651	10	12												
.046	1.168	14	16												
.0328	.833	20	20												
.0232	.589	28	30												
.0164	.417	35	40												
.0116	.295	48	50												
.0082	.208	65	70												
.0058	.147	100	100												
.0041	.104	150	140												
.0029	.074	200	200												
.0029	.074	200	200												
Totals,															

The Tyler Standard Screen Scale

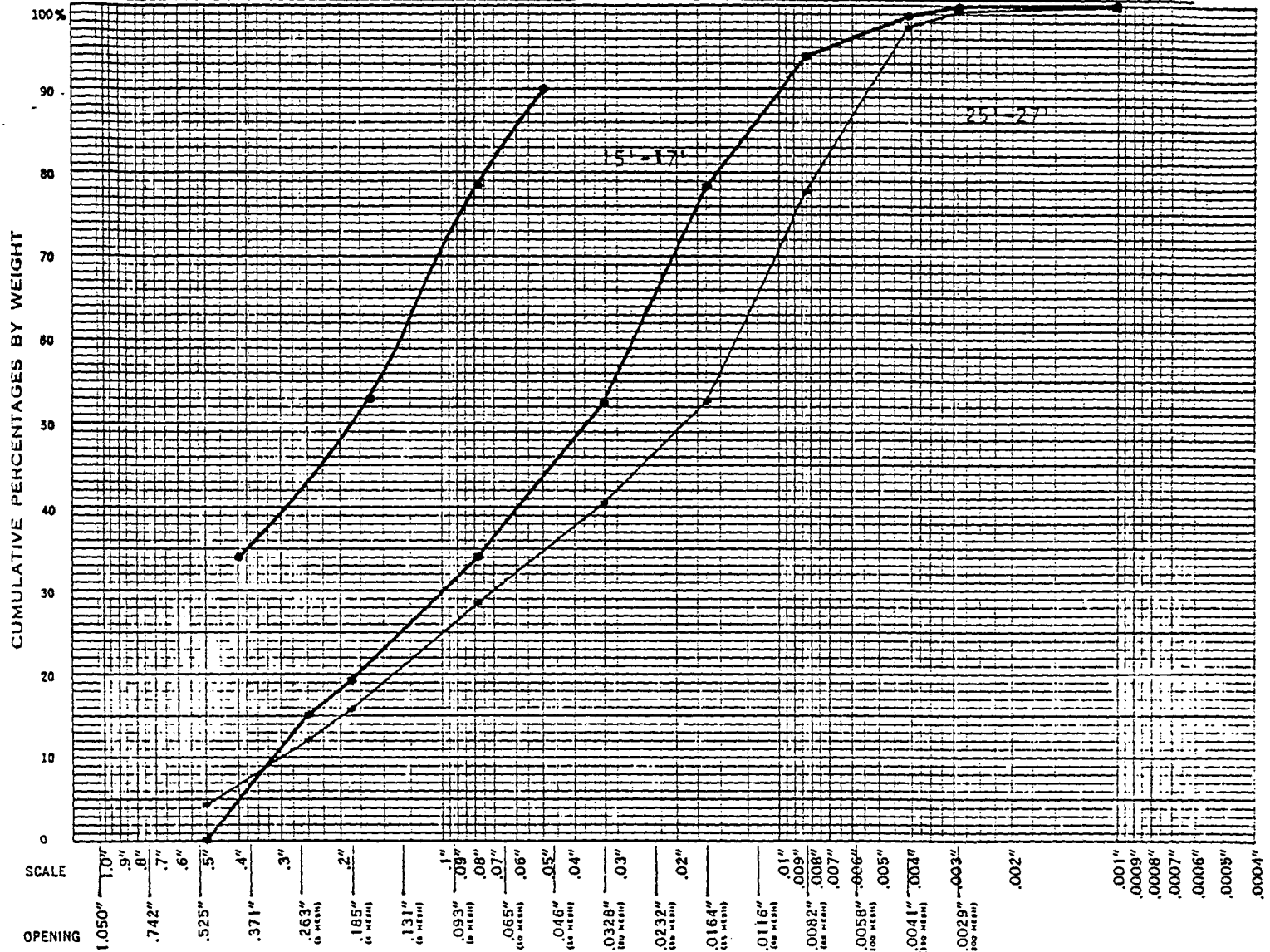
Form No. L-1
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 502

Name SIOUX FALLS, SOUTH DAKOTA

Date 7-12-91

L-5



SCREEN SCALE RATIO 1.414													
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	
Inches	Milli-meters												
1.050	26.67												
.742	18.85												
.525	13.33												
.371	9.423												
.263	6.680	3											
.185	4.699	4	4										
.131	3.327	6	6										
.093	2.362	8	8										
.065	1.651	10	12										
.046	1.168	14	16										
.0328	.833	20	20										
.0232	.589	28	30										
.0164	.417	35	40										
.0116	.295	48	50										
.0082	.208	65	70										
.0058	.147	100	100										
.0041	.104	150	140										
.0029	.074	200	200										
.0029	.074	200	200										
Pass													
Totals,													

The Tyler Standard Screen Scale

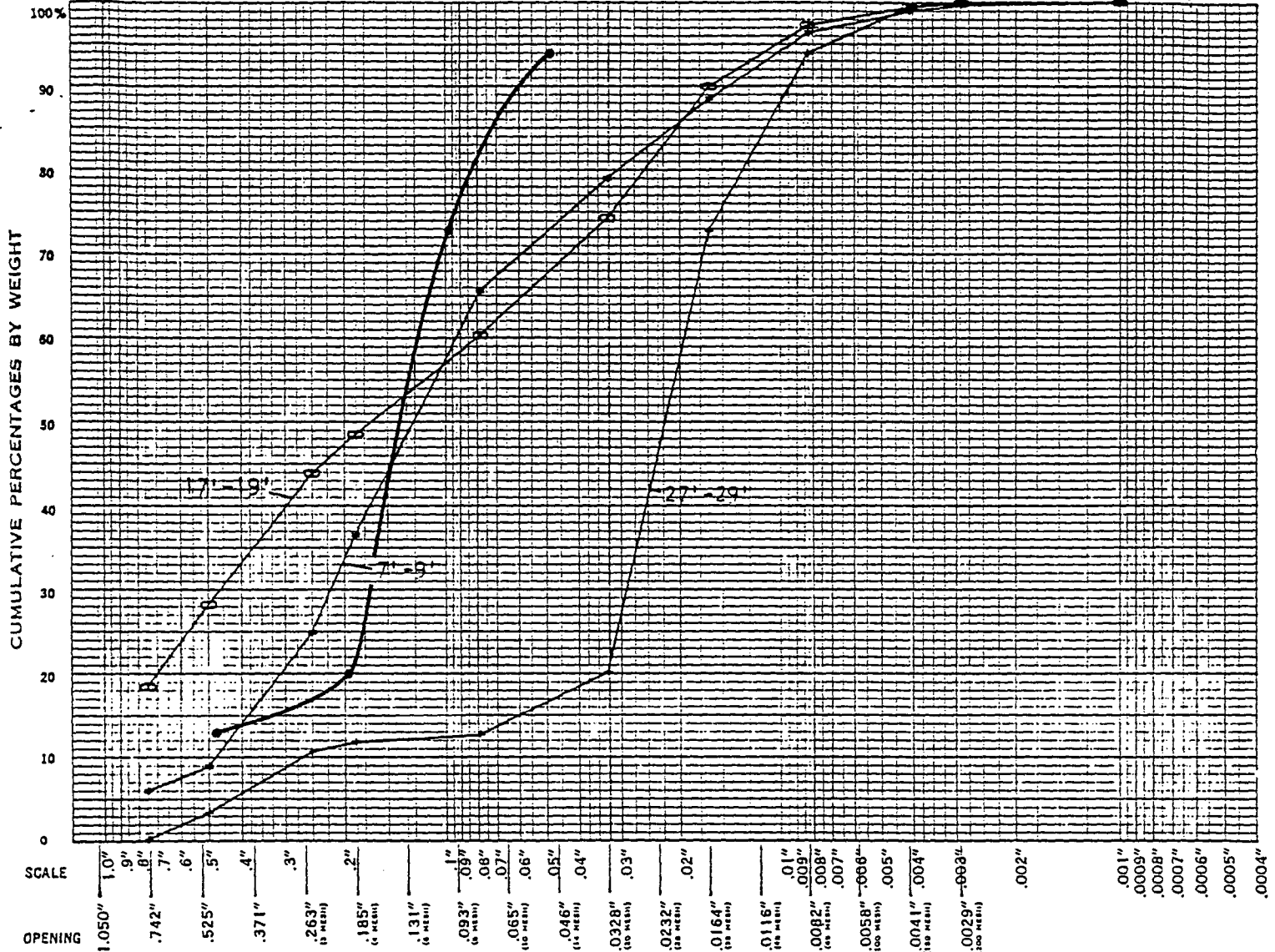
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 530

Name SIOUX FALLS, SOUTH DAKOTA

Date 7-23-91

L-5



SCREEN SCALE RATIO 1.414													
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	
Inches	Milli-meters												
1.050	26.67												
.742	18.85												
.525	13.33												
.371	9.423												
.263	6.680	3											
.185	4.699	4	4										
.131	3.327	6	6										
.093	2.362	8	8										
.065	1.651	10	12										
.046	1.168	14	16										
.0328	.833	20	20										
.0232	.589	28	30										
.0164	.417	35	40										
.0116	.295	48	50										
.0082	.208	65	70										
.0058	.147	100	100										
.0041	.104	150	140										
.0029	.074	200	200										
.0029	.074	200	200										
Pass													
Totals,													

The Tyler Standard Screen Scale

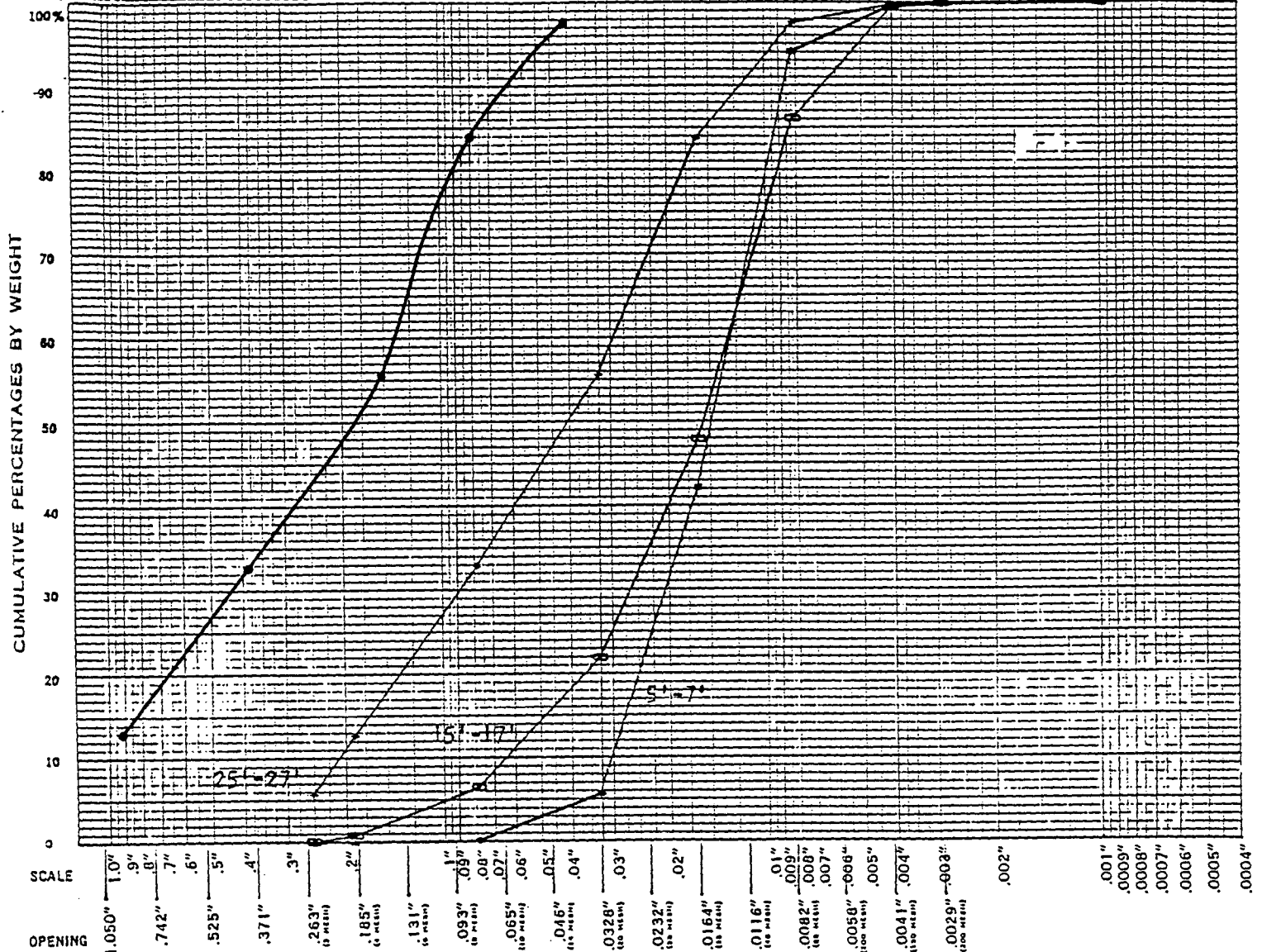
Form No. L-3
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 539

Name SIOUX FALLS, SOUTH DAKOTA

Date 8-23-91

L-5



SCREEN SCALE RATIO 1.414				5'-7'			15'-17'			25'-27'		
Goenings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters											
1.050	26.67											
.742	18.85											
.525	13.33											
.371	9.423											
.263	6.680	3										
.185	4.699	4	4									
.131	3.327	6	6									
.093	2.362	8	8									
.065	1.651	10	12									
.046	1.168	14	16									
.0328	.833	20	20									
.0232	.589	28	30									
.0164	.417	35	40									
.0116	.295	48	50									
.0082	.208	65	70									
.0058	.147	100	100									
.0041	.104	150	140									
.0029	.074	200	200									
Pass	.0029	200	200									
Totals,												

The Tyler Standard Screen Scale

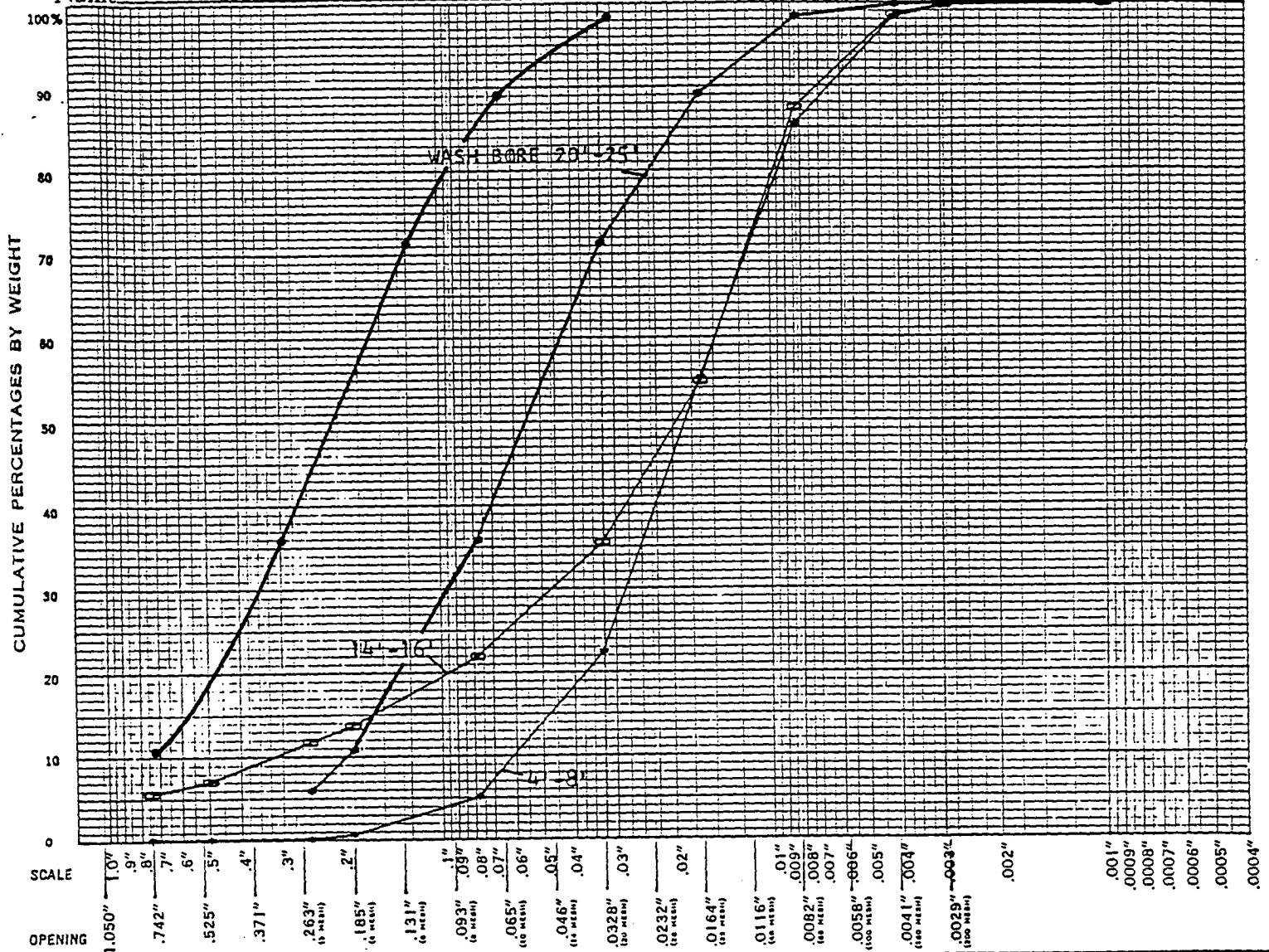
Form No. L-3
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 528

Name SIOUX FALLS, SOUTH DAKOTA

Date 7-23-91

L-3



SCREEN SCALE RATIO 1.414															
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters														
1.050	26.67														
.742	18.85														
.525	13.33														
.371	9.423														
.263	6.680	3													
.185	4.699	4	4												
.131	3.327	6	6												
.093	2.362	8	8												
.065	1.651	10	12												
.046	1.168	14	16												
.0328	.833	20	20												
.0232	.589	28	30												
.0164	.417	35	40												
.0116	.295	48	50												
.0082	.208	65	70												
.0058	.147	100	100												
.0041	.104	150	140												
.0029	.074	200	200												
Pass	.0029	200	200												
Totals,															

The Tyler Standard Screen Scale

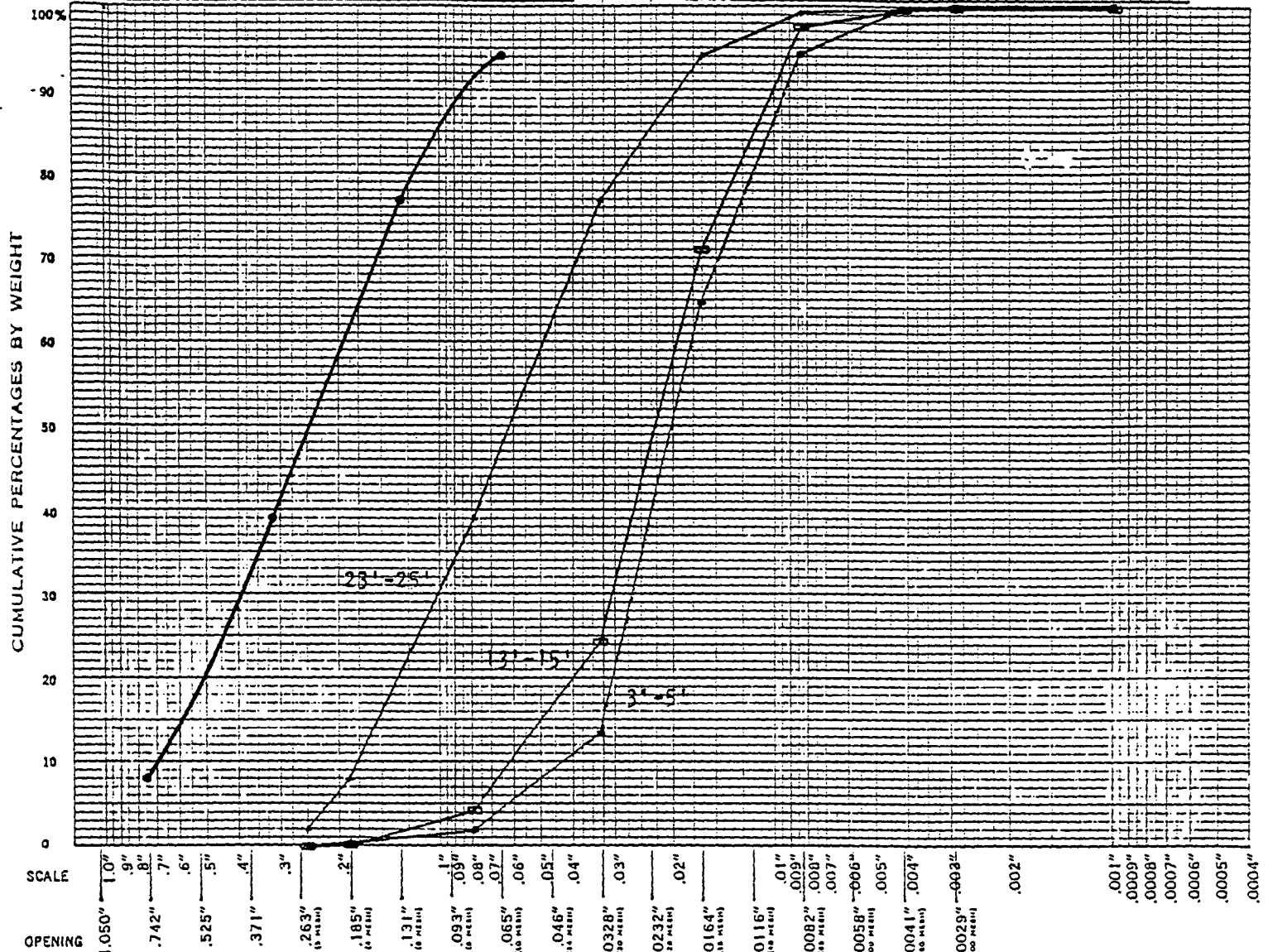
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 538

Name SIOUX FALLS, SOUTH DAKOTA

Date 8-23-91

L-5



SCREEN SCALE RATIO 1.414				3'-5'			13'-15'			23'-25'		
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters											
1.050	26.67											
.742	18.85											
.525	13.33											
.371	9.423											
.263	6.680	3										
.185	4.699	4	4									
.131	3.327	6	6									
.093	2.362	8	8									
.065	1.651	10	12									
.046	1.168	14	16									
.0328	.833	20	20									
.0232	.589	28	30									
.0164	.417	35	40									
.0116	.295	48	50									
.0082	.208	65	70									
.0058	.147	100	100									
.0041	.104	150	140									
.0029	.074	200	200									
Pass	.0029	.074	200									
Totals,												

The Tyler Standard Screen Scale

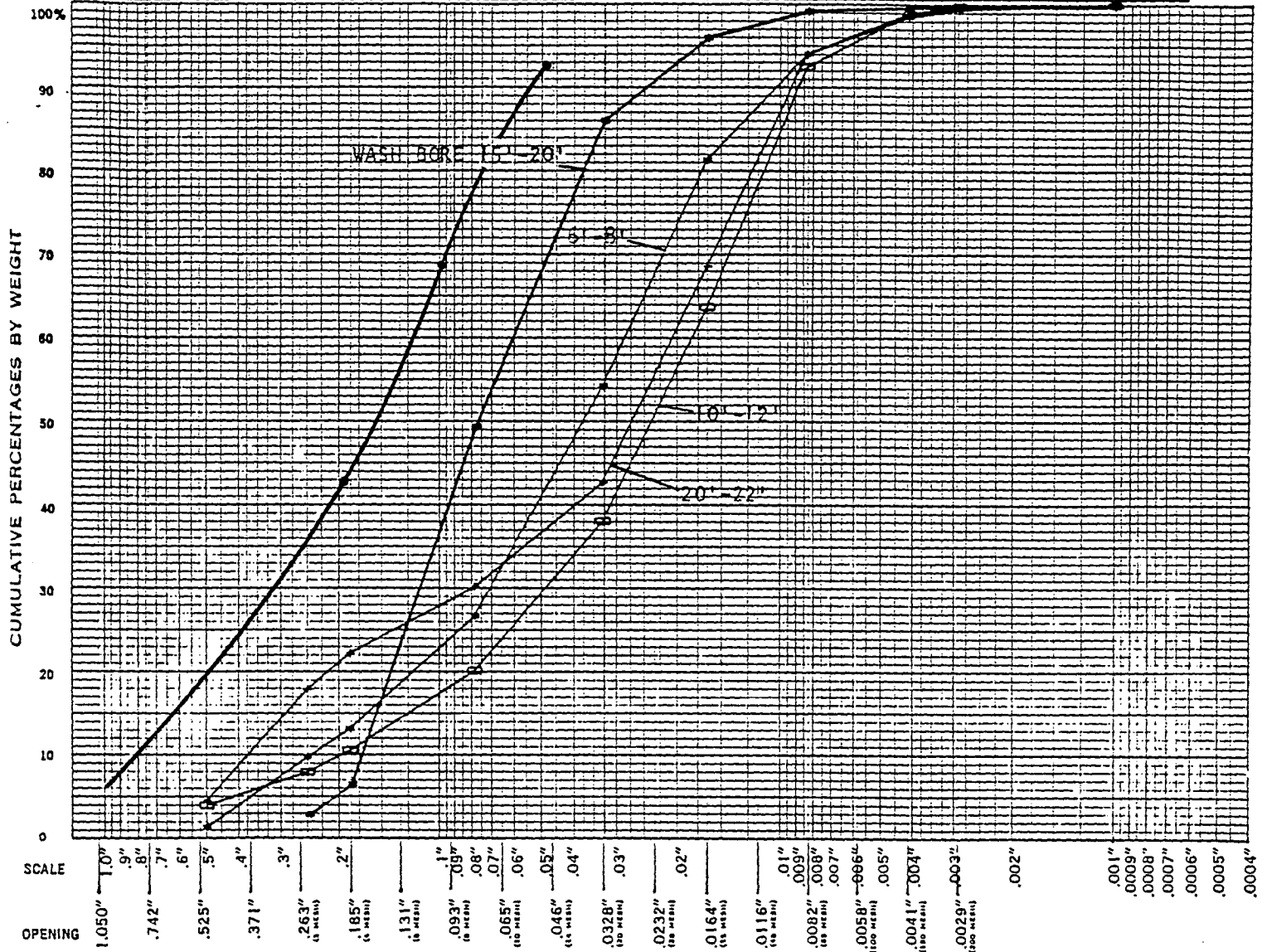
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TH 3-91 (517)

Name SIOUX FALLS, SOUTH DAKOTA

Date 5-9-91

L-5



SCREEN SCALE RATIO 1.414															
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters														
1.050	26.67														
.742	18.85														
.525	13.33														
.371	9.423														
.263	6.680	3													
.185	4.699	4	4												
.131	3.327	6	6												
.093	2.362	8	8												
.065	1.651	10	12												
.046	1.168	14	16												
.0328	.833	20	20												
.0232	.589	28	30												
.0164	.417	35	40												
.0116	.295	48	50												
.0082	.208	65	70												
.0058	.147	100	100												
.0041	.104	150	140												
.0029	.074	200	200												
Pass	.0029	200	200												
Totals,															

The Tyler Standard Screen Scale

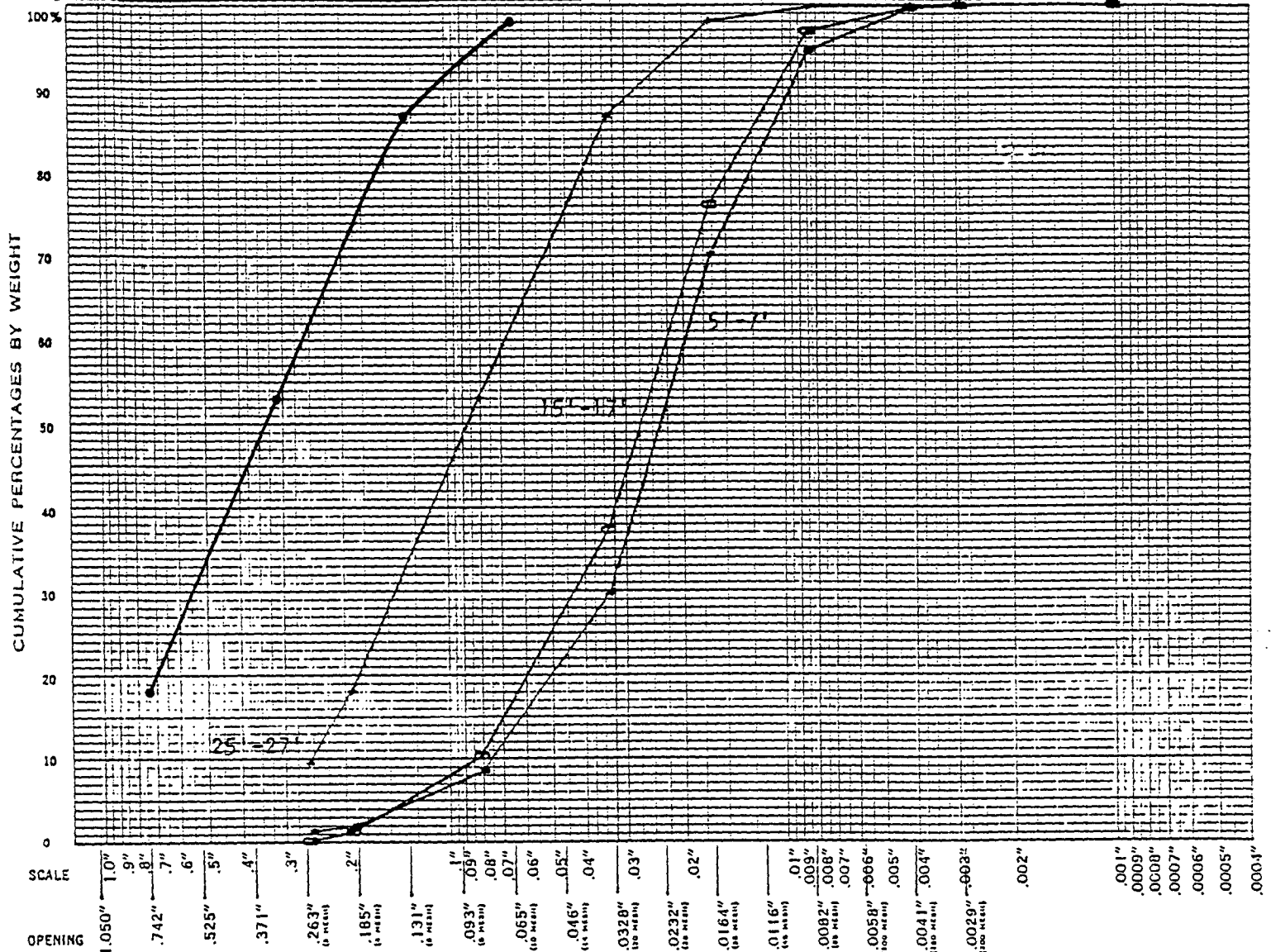
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 535

Name SIOUX FALLS, SOUTH DAKOTA

Date 8-23-91

L-5



SCREEN SCALE RATIO 1.414				5'-7'			15'-17'			25'-27'		
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters											
1.050	26.67											
.742	18.85											
.525	13.33											
.371	9.423											
.263	6.680	3										
.185	4.699	4	4									
.131	3.327	6	6									
.093	2.362	8	8									
.065	1.651	10	12									
.046	1.168	14	16									
.0328	.833	20	20									
.0232	.589	28	30									
.0164	.417	35	40									
.0116	.295	48	50									
.0082	.208	65	70									
.0058	.147	100	100									
.0041	.104	150	140									
.0029	.074	200	200									
.0029	.074	200	200									
Totals,												

The Tyler Standard Screen Scale

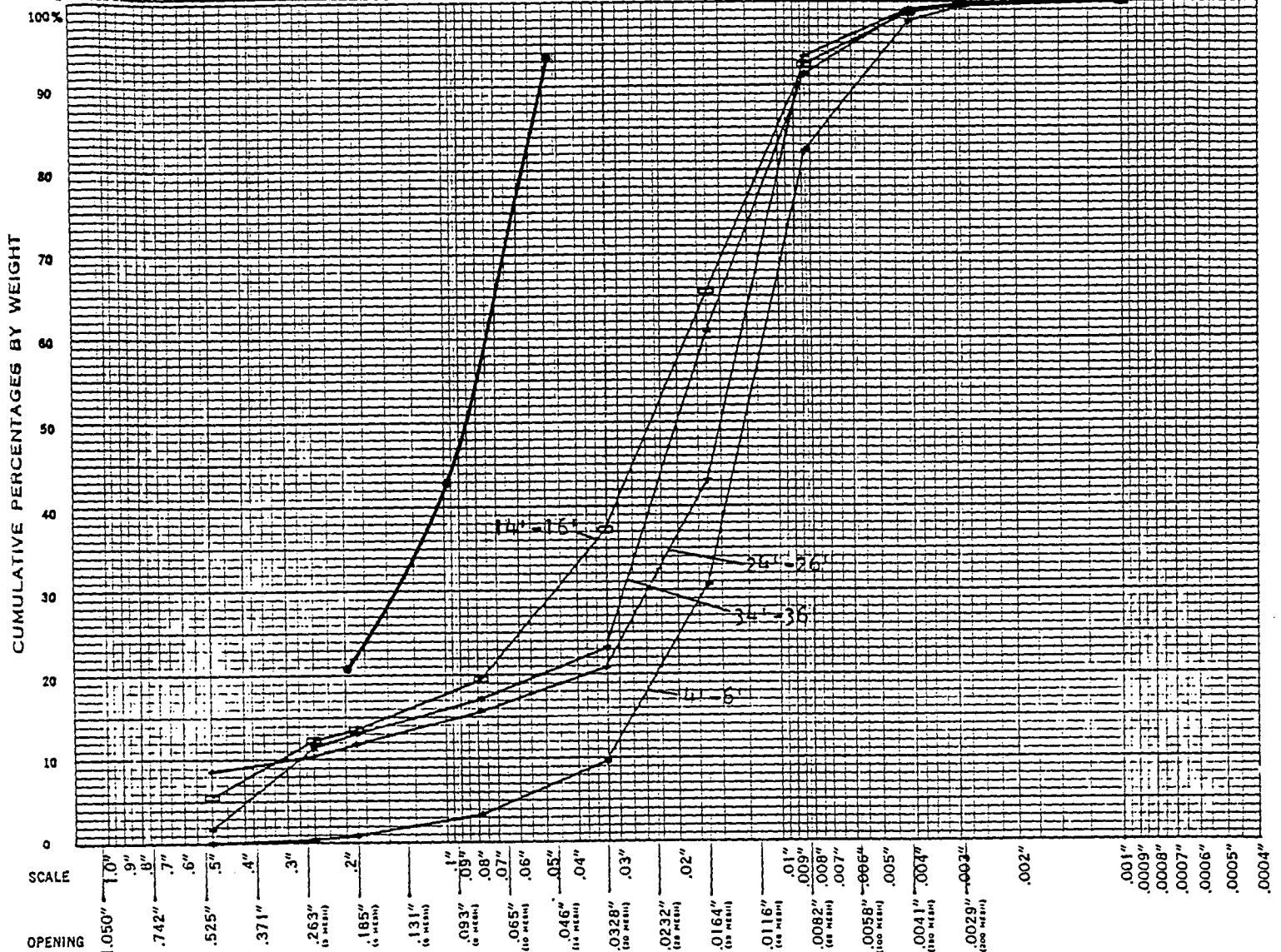
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 526

Name SIOUX FALLS, SOUTH DAKOTA

Date 7-15-91

L-5



SCREEN SCALE RATIO 1.414												
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters											
1.050	26.67											
.742	18.85											
.525	13.33											
.371	9.423											
.263	6.680	3										
.185	4.699	4	4									
.131	3.327	6	6									
.093	2.362	8	8									
.065	1.651	10	12									
.046	1.168	14	16									
.0328	.833	20	20									
.0232	.589	28	30									
.0164	.417	35	40									
.0116	.295	48	50									
.0082	.208	65	70									
.0058	.147	100	100									
.0041	.104	150	140									
.0029	.074	200	200									
.0029	.074	200	200									
Pass												
Totals,												

The Tyler Standard Screen Scale

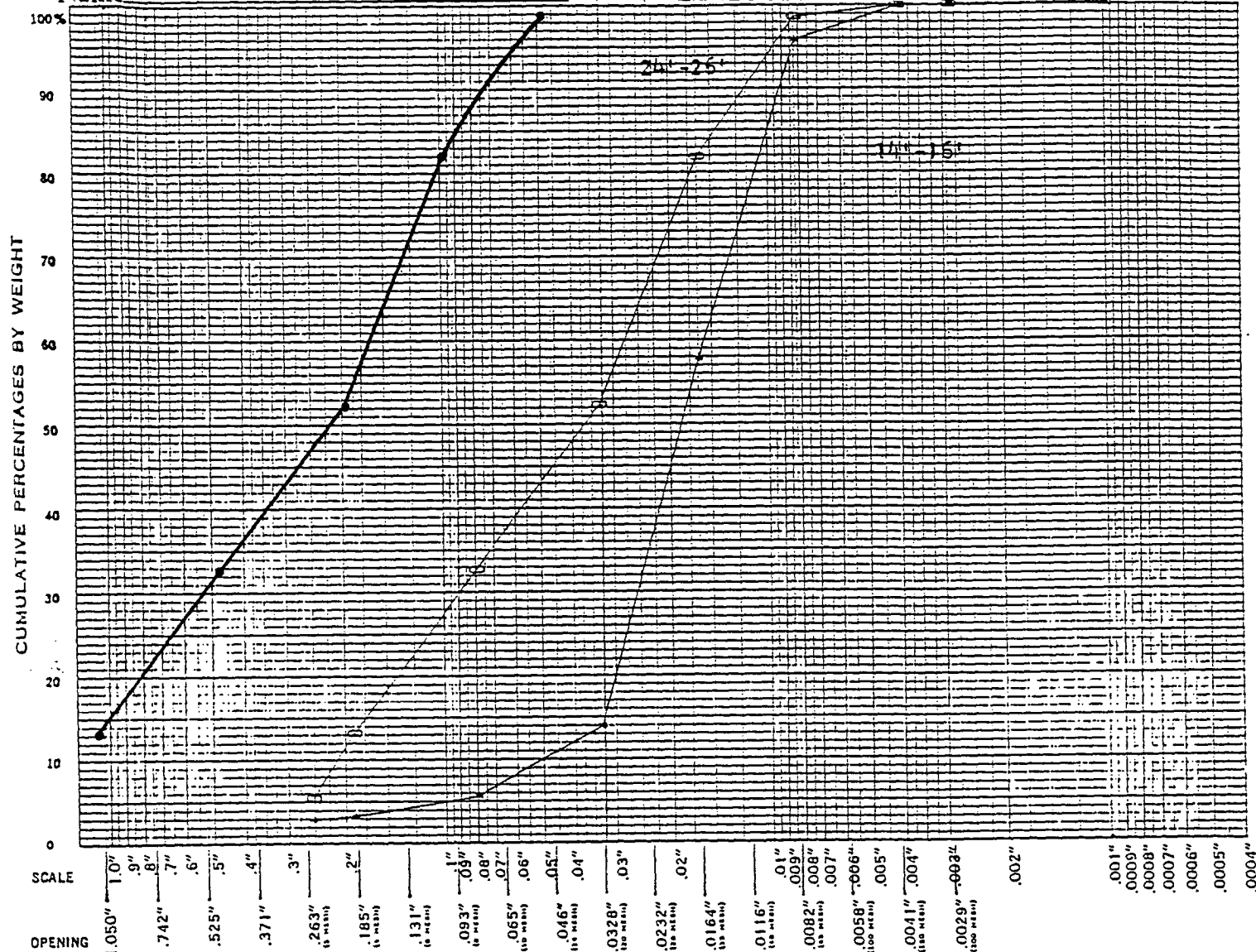
Form No. L-5
Please mention above
when ordering

Cumulative Logarithmic Diagram of Screen Analysis on Sample of TEST HOLE 531

Name SIOUX FALLS, SOUTH DAKOTA

Date 8-23-91

L-5



SCREEN SCALE RATIO 1.414				14'-16'			24'-26'					
Openings		Tyler Mesh	U. S. No.	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights	Sample Weights	Per Cent	Per Cent Cumulative Weights
Inches	Milli-meters											
1.050	26.67											
.742	18.85											
.525	13.33											
.371	9.423											
.263	6.680	3										
.185	4.699	4	4									
.131	3.327	6	6									
.093	2.362	8	8									
.065	1.651	10	12									
.046	1.168	14	16									
.0328	.833	20	20									
.0232	.589	28	30									
.0164	.417	35	40									
.0116	.295	48	50									
.0082	.208	65	70									
.0058	.147	100	100									
.0041	.104	150	140									
.0029	.074	200	200									
Pass	.0029	.074	200									
Totals,												

LIGHTS • (605) 339-7150
STORM DRAINAGE • (605) 339-7023

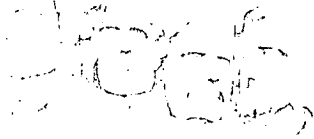
Re: Well Permits for Middle Skunk Creek Aquifer

Enclosed, please find five (5) permit applications, supporting documentation, and a purchase order copy in the amount of \$1879.00 for 14 wells in the Middle Skunk Creek Aquifer. We request that an annual reporting requirement on withdrawals from the Middle Skunk Creek Aquifer by the City of Sioux Falls be made a specific condition of the permits. We hope that this condition will help alleviate concerns by residents in the area.

Sincerely,

Enclosures

LDJ:seh



GREAT FACES. GREAT PLACES.

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

* I N V O I C E *

Invoice No. 20411 1-30

City of Sioux Falls
224 West 9th St
Sioux Falls SD 57102

Your Purchase Order #: 35695

Application for Permits to Appropriate Water
Within the State of South Dakota

Wells 101, 102, 103 & 104	500.00
Wells 105, 106, 107 & 108	450.00
Wells 109 & 110	300.00
Wells 111 & 112	300.00
Wells 113 & 114	375.00

Please pay this amount:

\$1,925.00

Karen Schlaak

KAREN SCHLAACK
Natural Resources Analyst
Water Rights Division
605 773-3352

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

Pierre, _____, 19__

RECEIVED OF City of Sioux Falls, S.D. 57101, Sioux Falls, S.D.

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

Fee for Application for Permit No. <u>5611-3</u> to Appropriate Water, to construct works and to put water to beneficial use _____		
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. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____ (Any Other Work Provided by Law)		
Total		

By [Signature]
Chief Engineer

WATER PERMIT APPLICATIONS NO. 5611-3, NO. 5612-3
NO. 5613-3, NO. 5614-3 & NO. 5615-3
CITY OF SIOUX FALLS
MARCH 12, 1992

Water Permit Application No's. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 propose to construct works and place to beneficial use water from the Middle Skunk Creek Aquifer which was reserved by Future Use Permit No. 5522-3.

Application No. 5611-3 proposes to construct works and place to beneficial use 4.23 cubic feet of water per second (cfs), (1,460 acre-feet/year) from four wells 29 to 32 feet deep. The wells are to be located in the SW 1/4 SW 1/4, NW 1/4 SE 1/4, NE 1/4 SE 1/4, and the NE 1/4 NE 1/4 Sec.25, T103N-R51W.

Application No. 5612-3 proposes to construct works and place to beneficial use 4.12 cfs, (1,275 acre-feet/year), from four wells 28 to 35 feet deep. The wells are to be located in the SW 1/4 SW 1/4, SE 1/4 SW 1/4, and the NE 1/4 NE 1/4 of Sec.19; and the SE 1/4 SW 1/4 of Sec.18; all in T103N-R50W.

Application No. 5613-3 proposes to construct works and place to beneficial use 2.40 cfs, (605 acre-feet/year), from two wells 28 and 36 feet deep. The wells are to be located in the SW 1/4 SW 1/4, and the NW 1/4 SW 1/4 of Sec. 8, T103N-R50W.

Application No. 5614-3 proposes to construct works and place to beneficial use 2.14 cfs, (570 acre-feet/year), from two wells 26 and 34 feet deep. The wells are to be located in the NW 1/4 NE 1/4 of Sec. 7; and the SW 1/4 NE 1/4 of Sec. 6; all in T103N-R50W.

Application No. 5615-3 proposes to construct works and place to beneficial use 3.34 cfs, (907 acre-feet/year), from two wells 45 and 41 feet deep. The wells are to be located in the SE 1/4 SW 1/4, and the SW 1/4 SE 1/4 of Sec.31, T104N-R50W.

The water was appropriated and reserved by Future Use Permit No. 5522-3. The water will be used by the City of Sioux Falls for municipal purposes.

AQUIFER: Big Sioux: Middle Skunk Creek

AQUIFER CHARACTERISTICS:

General:

The Middle Skunk Creek Management Unit of the Big Sioux Aquifer is an alluvium mantled, glacial outwash deposit, restricted to approximately 18,300 acres along the Skunk Creek Alluvial Valley. The management unit is bound at the north by the Northern Skunk Creek Aquifer, and the southern boundary of the management unit is an outcrop of Sioux Quartzite. The sand and gravel is approximately 1 mile wide in most places and has a maximum thickness of approximately 60 feet. The

average saturated thickness of the Middle Skunk Creek Aquifer is estimated to be 30 feet (HDR, 1991). The saturated thickness of the aquifer is 20 feet or less over an area of approximately 4,000 acres, or 22% of the areal extent of the aquifer. The aquifer is under unconfined conditions and the average specific yield of the Middle Skunk Creek Management Unit is assumed to be 0.20 (Ohland, 1990). The recoverable water in storage in the Middle Skunk Creek Aquifer is estimated to be 41,180 acre-feet (Hedges, 1982). Estimates for hydraulic conductivity of the aquifer range from 80 - 1980 ft/day with the average hydraulic conductivity estimated to be 400 ft/day (HDR, 1991). Information submitted with these applications identify hydraulic conductivities of test wells in the vicinity of the wells proposed by these applications, of 442 ft/day to 452 ft/day.

The Division of Water Rights monitors 7 observation wells completed into the Middle Skunk Creek Aquifer. Water level measurements indicate fluctuations in response to seasonal and climatic variations. The highest annual water level occurs around April, and the lowest annual water level occurs around August. The decline of water levels during the summer months is due to increased evapotranspiration and pumpage. Water levels rise during the late winter and spring due to recharge, if available.

Recharge:

Recharge to the Middle Skunk Creek Aquifer occurs primarily through direct infiltration of precipitation. It is estimated that 24% of the precipitation which falls on the surface of the Middle Skunk Creek Aquifer recharges the aquifer (Ohland, 1987). Recharge due to precipitation is therefore estimated to average 6 inches per year, or a total of 9,150 acre-feet per year (ac-ft/yr). Although a groundwater obstruction or constriction has been identified between management units, groundwater inflow from the Northern Skunk Creek Management Unit also provides a minor amount of recharge to the Middle Skunk Creek Aquifer. Ohland, (1987) estimates that recharge from this inflow averages 14 acre-feet/year. The Middle Skunk Creek Aquifer is hydraulically connected to Skunk Creek and the West Branch of Skunk Creek, resulting in gaining and losing stream conditions. The aquifer discharges to the streams when the hydraulic gradient is toward the streams and the streams recharge the aquifer when water levels in the aquifer are below stream stage. High stage levels in Skunk Creek and the West Branch of Skunk Creek follow precipitation and/or snowmelt runoff, which coincide with high water levels in the aquifer due to direct infiltration of precipitation. In general, gaining stream conditions prevail between the Middle Skunk Aquifer and area streams.

Withdrawals:

Natural discharge from the Middle Skunk Creek Aquifer occurs primarily through evapotranspiration. The maximum evapotranspiration rate from the aquifer has been estimated to be 32 inches per year (in/yr), and the evapotranspiration extinction depth is assumed to be 5 feet (Ohland, 1990). Natural discharge from the aquifer also occurs to

Skunk Creek and the West Branch tributary, and minor amounts of leakage may occur to the underlying Sioux Quartzite.

Withdrawals from the aquifer also occur through pumpage from domestic wells and wells supplying appropriative rights. Appropriative rights from the Middle Skunk Creek Aquifer represent a total combined diversion rate of 17.26 cubic feet per second. Irrigation permits or rights authorize the irrigation of 1,114 acres. Although the total annual pumping for irrigation from the Middle Skunk Creek Aquifer could be up to 3,810 ac-ft, the use of this amount of water each year is unlikely. Maximum reported irrigation use since 1979 has been 724 ac-ft in 1988.

Reported pumpage for irrigation from the Middle Skunk Creek for irrigation is shown below.

YEAR	PUMPAGE REPORTED (AC-FT)
1990	4
1989	494.1
1988	724
1987	260
1986	117
1985	497
1984	176
1983	372.57
1982	131.15
1981	620
1980	221
1979	91

The only non-irrigation permit from the Middle Skunk Creek Aquifer is Permit No. 5104-3, Tri-Valley School District, for 0.10 cfs. Correspondence on file (Water Rights Division, 1991), indicates that the school discontinued use of the well prior to 1988 due to unacceptable water quality. The School is currently supplied water by the Minnehaha Rural Water System. Unless the well is maintained for standby purposes, this permit may be subject to cancellation.

Although authorized annual withdrawals total more than 4,000 ac-ft/yr, the actual annual withdrawals under existing Water Rights/Permits from the Middle Skunk Creek should not exceed 1,000 ac-ft/yr.

DISCUSSION:

The applications discussed in this report propose to place to beneficial use water appropriated and reserved for future use by Permit No. 5522-3. The date of the Final Decision by the Water Management Board to approve Future Use Permit No. 5522-3 was March 4, 1992. Permit No. 5522-3 reserves 5,000 acre-feet annually from the Middle Skunk Creek Management Unit of the Big Sioux Aquifer for municipal use by the City of Sioux Falls.

Water Availability:

Water availability is not an issue for these permit applications. Approval of Future Use Permit No. 5522-3 appropriated 5,000 acre-feet of water from the Middle Skunk Creek Aquifer for future use with a 1991 priority date.

Affects on Existing Rights:

Unlawful impairment of groundwater rights may be due to "well interference" which is the overlapping of drawdown cones of depression of two or more wells; or by "cumulative pumping affects" which is the lowering of the water level throughout the entire aquifer, as the result of an extended interim between withdrawal and recharge causing a large "overdraft" from storage.

Well Interference:

The Division of Water Rights has records for 23 domestic wells completed into the Middle Skunk Creek Aquifer, and 9 Water Permits/Rights appropriating water from the aquifer. Permits/rights appropriating water from the Middle Skunk Creek Aquifer include:

Permit No.	Owner	Location	CFS
1806-3	R. Thompson	103N50W08	1.80
2918-3	R. Dressen	104N50W16	6.52
2923-3	M. Tellinghuisen	103N50W07	1.70
3350-3	J.P. Burggraft	104N50W32	1.22
3437-3	R. Thompson	103N50W05	1.10
4223-3	D.J. Fladmark	103N50W06	1.11
4358-3	McCrossan	103N50W18	3.71
	Foundation Inc.		
5104-3	Tri-Valley School	103N51W11	0.10
5522-3	City of Sioux Falls	5,000 ac-ft/yr Future Use	

Drawdown caused by individual well pumping is not be expected to be significant except in the immediate vicinity of a production well due to the nature of unconfined aquifers.

The four wells proposed by Application No. 5611-3, are located at least 1.5 miles from an irrigation well (Permit No. 4358-3). Division of Water Rights' Observation Well MA-78E is located approximately .25 miles from the wells proposed by Application No. 5611-3, and is between the diversion points proposed by this application and No. 4358-3 irrigation wells.

The wells proposed by Application No. 5612-3 are approximately 0.5 miles from the nearest irrigation well (Permit No. 4358-3). Division of Water Rights' Observation Well MA-78E is within .5 miles of the wells proposed by this application.

A well proposed by Application No. 5613-3, (No. 109), is to be located approximately 1750 feet from two irrigation wells (Permit No. 4358-3),

and approximately 1700 feet from an irrigation well authorized by Water Right No. 2923-3. Division of Water Rights' Observation Well MA-78D is across the road from one well proposed by this application and within .25 miles of the other well proposed by this application.

A well proposed by Application No. 5614-3 (No. 111) is approximately 600 feet from an irrigation well (Water Right No. 4223-3), approximately 1850 feet from an irrigation well authorized by Water Right No. 3437-3, and approximately 2000 feet from an irrigation well authorized by Water Right No. 1806-3. The Division of Water Rights monitors an observation well (MA -78C), approximately .5 miles north of well No. 112, and an observation well (MA-78D), approximately 1 mile south of well No. 111.

Application No. 5615-3 proposes to locate a well, (No. 113), approximately .75 miles from an irrigation well (Water Right No. 3437-3), and approximately 1 mile from an irrigation well authorized by Water Right No. 4223-3. The application also proposes to locate a well, (No. 114), approximately 1 mile from an irrigation well authorized by Water Right No. 3350-3. The Division of Water Rights monitors an observation well (MA-78C) within approximately .25 miles of either well proposed by this application.

Cumulative Affects:

As with any aquifer, recharge to the Middle Skunk Creek Aquifer is not instantaneous to withdrawal from the aquifer. Water must be withdrawn from storage during the interim between withdrawal and recharge. Fluctuations observed in Division of Water Rights observation wells, identify historic changes in storage of the aquifer ranging from 21% to 44% of the total storage capacity of the aquifer. Current pumpage from the Middle Skunk Creek Aquifer is relatively small in comparison to the amount of estimated water in storage in the aquifer (less than 1,000 ac-ft/yr maximum reported or 2.4 % of the water in storage). Increased pumpage from the aquifer may lead to greater depletions from storage. A significant lowering of the water levels of the Middle Skunk Creek Aquifer could affect the water supplies to some existing wells.

As stated previously, the saturated thickness of the Middle Skunk Creek Aquifer is estimated to be 20 feet or less over a fairly large portion of this aquifer. Completion reports on file with the Division of Water Rights for this area indicate that 7 of the 23 domestic wells penetrate less than 20 feet of saturated thickness, and in one case the log indicates only 9 feet of saturated thickness penetrated. If the thickness of the aquifer is less than 20 feet and the inlet of the pump can be placed as near the bottom of the aquifer as is practical, the wells would be adequate. If the aquifer thickness is greater than the thickness penetrated by the particular well, the wells may not be adequate. It is not clear from the completion reports, if the aquifer thickness is less than 20 feet at these locations. If the water level is lowered even a minor amount in an adequate well completed where the aquifer is thin, the water supply to that well may be reduced, and therefore, unlawfully impaired.

The amount of water in storage in an aquifer may be reduced to less than "normal" as the result of below normal recharge, and/or above normal pumping in relation to recharge. It is impossible to forecast when water levels will be below "normal" or identify a single contributing factor for why water levels are low. The Water Management Board recognized the potential difficulties this may pose when considering Future Use Permit No. 5522-3 and placed the following qualification on the future use permit:

"If development and pumping of Middle Skunk Creek Aquifer water reserved by Future Use Permit No. 5522-3 results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered groundwater levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04."

The total development of these permits (4,817 acre-feet per year), may lead to increased losses from Skunk Creek to the aquifer and to decreased discharge from the aquifer to Skunk Creek. Skunk Creek supports domestic users and one appropriative right downstream of this area. Permit No. 5148-3 authorizes diversion of 1.11 cfs with an annual appropriation of 1.6 ac-ft/yr. The frequency or duration of low or no flow in Skunk Creek is not expected to be increased significantly by the withdrawals proposed by these applications.

CONCLUSIONS:

1. Water Permit Application No's. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 propose to construct 14 wells and place to beneficial use up to 4,817 acre-feet annually from the Middle Skunk Creek Aquifer of water which was appropriated and reserved by Future Use Permit No. 5522-3.
2. Future Use Permit No. 5522-3 reserves 5,000 ac-ft/yr from the Middle Skunk Creek Aquifer for municipal use by the City of Sioux Falls.
3. Approval of these permits will not impact the amount of unappropriated water available in the Middle Skunk Creek Aquifer.
4. A total of 183 ac-ft/yr will remain reserved by Future Use Permit No. 5522-3 if these permits are approved.
5. Drawdown caused by individual well pumping is not expected to cause adverse interference between wells in the Middle Skunk Creek Aquifer.
6. The Water Management Board has recognized the potential for problems due to cumulative pumping affects by placing a

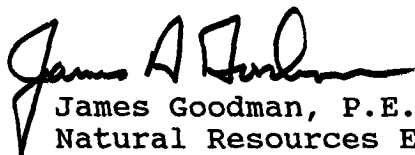
qualification on the future use permit which would also apply to the permits discussed in this report.

7. Since the quantity of water appropriated by these permits is less than the quantity of water which could be pumped at the authorized diversion rate. Water use reporting will be necessary for aquifer management.
8. The Division of Water Rights monitors 7 observation wells which are strategically located in relation to the diversion points proposed by these applications. Information obtained from these observation wells could be used to curtail impairment of existing rights or resolve conflicts which may arise.



Ken Buhler
Natural Resources Engineer

approved by:



James Goodman, P.E.
Natural Resources Engineer

REFERENCES:

Burr, M.J., R. Bensen, D. Hansen, 1990, Water Resources Data, South Dakota Water Year 1989, U.S. Geological Survey Water-Data Report SD-89-1, Huron, SD, 57350

Division of Water Rights, 1980-1990, "Irrigation Summary by Aquifer", DENR-Division of Water Rights, Joe Foss Building, Pierre, SD, 57501

Division of Water Rights, 1991, "Observation Well Files", SD DENR-Division of Water Rights, Joe Foss Building, Pierre, SD, 57501

Division of Water Rights, 1991, "Water Permit Files", SD DENR-Division of Water Rights, Joe Foss Building, Pierre, SD, 57501

HDR Engineering, Inc., 1991, Middle Skunk Creek Aquifer Study, prepared for City of Sioux Falls South Dakota

Hedges, L.S., S.Burch, D.Iles, R.Barari, R.Schoon, 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux

River, South Dakota and Iowa, U.S. Army Corps of Engineers
Contract DACW 45-80-C-0185, SD Dept. of Water and Natural
Resources, Office of Geological Survey, Vermillion, SD 57069

Ohland, G.L., 1990, Appraisal of the Water Resources of the Skunk
Creek Aquifer in Minnehaha County, South Dakota, U.S.G.S. Water
Resources Investigations Report 87-4156

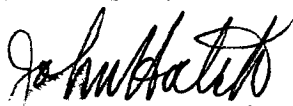
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5611-3, City of Sioux Falls

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 5611-3, City of Sioux Falls, 224 West 9th St, Sioux Falls, SD 57102.

The Chief Engineer is recommending APPROVAL of Application No. 5611-3 because 1) the proposed diversions can be developed without unlawful impairment of existing rights, 2) the proposed use is a beneficial use and 3) in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized pursuant to this permit shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04.
3. Approval of Permit No. 5611-3 authorizes a total annual diversion of 1,460 acre-feet of water annually.
4. The City of Sioux Falls shall report to the Chief Engineer annually the amount of water withdrawn each year from the Big Sioux:Middle Skunk Creek aquifer.
5. If development and pumping of Middle Skunk Creek aquifer water authorized by Water Permit No. 5611-3 results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered groundwater levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.

See report on application for additional information.


JOHN HATCH, Chief Engineer
March 26, 1992



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

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

March 27, 1992

Lyle Johnson, WS
City of Sioux Falls
224 W 9th St
Sioux Falls, SD 57102

Dear Mr. White:

Water Permit Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 for municipal 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 Argus Leader printed at Sioux Falls, SD (Ph # 331-2200) and the Lennox Independent printed at Lennox, SD (Ph # 647-2467). 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. 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 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
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**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

March 27, 1992

Argus Leader
PO Box 5034
Sioux Falls, SD 57117-5034

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 to be published twice. Please publish the first notice on April 2, 1992, 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 the City of Sioux Falls, 224 West 9th St, Sioux Falls, SD 57102 (Ph # 339-7025).

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

FIRST TRANSMITTAL NOTICE

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

No. _____

Date _____

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

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

March 27, 1992

Lennox Independent
Box 76
Lennox, SD 57039

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 to be published twice. Please publish the first notice on April 2, 1992, 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 the City of Sioux Falls, 224 West 9th St, Sioux Falls, SD 57102 (Ph # 339-7025).

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Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

FIRST TRANSMITTAL NOTICE

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

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to
Appropriate Water by Application No. _____ 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 April 2, 1992, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3
to Appropriate Water

Notice is given that the City of Sioux Falls, 224 West 9th Street, Sioux Falls, SD 57102 has filed applications for water permits to construct and place to beneficial use water reserved by Future Use Permit No. 5522-3 from the Big Sioux:Middle Skunk Creek aquifer.

Water Permit Application No. 5611-3 proposes to construct and place to beneficial use 4.23 cubic feet of water per second (cfs) (1,460 acre-feet annually) from four wells 29 to 32 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SE 1/4, NE 1/4 SE 1/4, NE 1/4 NE 1/4 Section 25-T103N-R51W.

Water Permit Application No. 5612-3 proposes to construct and place to beneficial use 4.12 cfs (1,275 acre-feet annually) from four wells 28 to 35 feet deep located in the SW 1/4 SW 1/4, SE 1/4 SW 1/4, NE 1/4 NE 1/4 Section 19; SE 1/4 SW 1/4 Section 18; all in T103N-R50W.

Water Permit Application No. 5613-3 proposes to construct and place to beneficial use 2.40 cfs (605 acre-feet annually) from two wells 28 and 36 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SW 1/4 Section 8-T103N-R50W.

Water Permit Application No. 5614-3 proposes to construct and place to beneficial use 2.14 cfs (570 acre-feet annually) from two wells 26 and 34 feet deep located in the NW 1/4 NE 1/4 Section 7; SW 1/4 NE 1/4 Section 6; all in T103N-R50W.

Water Permit Application No. 5615-3 proposes to construct and place to beneficial use 3.34 cfs (907 acre-feet annually) from two wells 45 and 41 feet deep located in the SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 31-T104N-R50W.

This water was appropriated and reserved by Future Use Permit No. 5522-3. The water will be used by the City of Sioux Falls for municipal purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Water Management Board will NOT CONDUCT a HEARING to consider these applications and the chief engineer will issue the permits as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

Any person interested in opposing or supporting these applications must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Division, 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 April 20, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3, and 2) the chief engineer's recommendations, a meeting at the Division of Water Rights office to hear these applications is scheduled for April 29, 1992, at 9:00 am in Room 413, Joe Foss Building, 523 E Capitol, Pierre SD. If these applications are opposed or the recommendations are contested, the April 29, 1992, hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and

place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The April 29, 1992, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the applications. The request for an automatic delay must be filed by April 20, 1992.

If a hearing is held, the Chief Engineer's recommendations are not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny the applications based on the facts presented at the public hearing. Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact the Water Rights Division to request copies of information pertaining to this application or to assure access to the hearing by the handicapped.

These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; 46-5-38 thru 46-5-40; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; 74:02:01:24 thru 74:02:01:25.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
 County Minnehaha) ss.

I, M. DEVISH

certify that the attached printed Notice was taken

from the Argus Leader

A newspaper which during the whole time of publication of said notice herein after stated, has been and is printed and published in the

city Sioux Falls of Minnehaha

County of Minnehaha and State of South Dakota; that the said notice was published in said newspaper on the following two dates:

Thursday, April 2, 1992

Thursday, April 9, 1992

(Signature)

(Title)

(Date Signed)

Cost of Printing: \$139.22



NOTICE OF HEARING on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 to

Appropriate Water

Notice is given that the City of Sioux Falls, 224 West 9th Street, Sioux Falls, SD 57102 has filed applications for water permits to construct and place to beneficial use water reserved by Future Use Permit No. 5522-3 from the Big Sioux: Middle Skunk Creek aquifer.

Water Permit Application No. 5611-3 proposes to construct and place to beneficial use 4.23 cubic feet of water per second (cfs) (1,480 acre-feet annually) from four wells 29 to 32 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SE 1/4, NE 1/4 SE 1/4, NE 1/4 NE 1/4 Section 25-T103N-R51W.

Water Permit Application No. 5612-3 proposes to construct and place to beneficial use 4.12 cfs (1,275 acre-feet annually) from four wells 28 to 35 feet deep located in the SW 1/4 SW 1/4, SE 1/4 SW 1/4, NE 1/4 NE 1/4 Section 19; SE 1/4 SW 1/4 Section 18; all in T103N-R50W.

Water Permit Application No. 5613-3 proposes to construct and place to beneficial use 2.40 cfs (805 acre-feet annually) from two wells 28 and 36 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SW 1/4 Section 8-T103N-R50W.

Water Permit Application No. 5614-3 proposes to construct and place to beneficial use 2.14 cfs (570 acre-feet annually) from two wells 26 and 34 feet deep located in the NW 1/4 NE 1/4 Section 7; SW 1/4 NE 1/4 Section 6; all in T103N-R50W.

Water Permit Application No. 5615-3 proposes to construct and place to beneficial use 3.34 cfs (907 acre-feet annually) from two wells 45 and 41 feet deep located in the SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 31-T104N-R50W.

This water was appropriated and reserved by Future Use Permit No. 5522-3. The water will be used by the City of Sioux Falls for municipal purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Water Management Board will NOT CONDUCT a HEARING to consider these applications and the chief engineer will issue the permits as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

Any person interested in opposing or supporting these applications must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Division, 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 April 20, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3, and 2) the chief engineer's recommendations, a meeting at the Division of Water Rights office to hear these applications is scheduled for April 29, 1992, at 9:00 am in Room 413, Joe Foss Building, 523 E Capitol, Pierre SD. If these applications are opposed or the recommendations are contested, the April 29, 1992, hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The April 29, 1992, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the applications. The request for an automatic delay must be filed by April 20, 1992.

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These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10; 46-2A-12; 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; 46-5-38 thru 46-5-40; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; 74:02:01:24 thru 74:02:01:25.

253

April 2, 9, 1992

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA }
COUNTY OF LINCOLN }

ss.

Kris Bordewyk

being first duly sworn, disposes and says: That (he) (she) is a resident of the County of Lincoln and State of South Dakota; that the LENNOX INDEPENDENT is a weekly legal newspaper of general circulation, printed and published in Lennox, in said County and State, and is now, and has been such newspaper continuously, during all the times hereinafter mentioned; that the affiant is affiliated with said newspaper as employer or employee and has personal knowledge of all the facts stated in this affidavit, and the notice and advertisement headed Notice of Hearing on Application

Nos. 5611-3, 5612-3, 5613-3,

5614-3 and 5615-3 to Appropriate Water

a printed copy of which is hereonto attached and made a part hereof, was printed and published in the said newspaper 2 successive issues. That the first publication of said notice in said newspaper aforesaid was on Thursday, the 2nd day of April A.D., 1992 and that the succeeding publication was severally on Thursday the 9th day of April A.D., 1992
on Thursday the _____ day of _____ A.D., 19____
on Thursday the _____ day of _____ A.D., 19____
on Thursday the _____ day of _____ A.D., 19____
on Thursday the _____ day of _____ A.D., 19____
on Thursday the _____ day of _____ A.D., 19____

that the fees charged for the printing and publication of said notice and advertisement in said newspaper as aforesaid were 70 Dollars 20 Cents, and that said fees for the printing and publishing of said notice and advertisement, and for the affidavit as aforesaid, have been fully paid; that the full amount of the fee charged for the publishing of the said attached and annexed notice and advertisement inures to the benefit of the publishers of the said Lennox Independent, that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person, whomsoever.

Kris Bordewyk

Subscribed and sworn to before me this 16th day of

July, 1992

Frederick J. Sawyer
Notary Public.

Lincoln County, South Dakota.

My Commission expires SEPTEMBER 18, 1997



**NOTICE OF HEARING
on Application Nos. 5611-
3, 5612-3, 5613-3, 5614-3
and 5615-3
to Appropriate Water**

Notice is given that the City of Sioux Falls, 224 West 9th Street, Sioux Falls, SD 57102 has filed applications for water permits to construct and place to beneficial use water reserved by Future Use Permit No. 5522-3 from the Big Sioux:Middle Skunk Creek aquifer.

Water Permit Application No. 5611-3 proposes to construct and place to beneficial use 4.23 cubic feet of water per second (cfs) (1,460 acre-feet annually) from four wells 29 to 32 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SE 1/4, NE 1/4 SE 1/4, NE 1/4 NE 1/4 Section 25-T103N-R51W.

Water Permit Application No. 5612-3 proposes to construct and place to beneficial use 4.12 cfs (1,275 acre-feet annually) from four wells 28 to 35 feet deep located in the SW 1/4 SW 1/4, SE 1/4 SW 1/4, NE 1/4 NE 1/4 Section 19; SE 1/4 SW 1/4 Section 18; all in T103N-R50W.

Water Permit Application No. 5613-3 proposes to construct and place to beneficial use 2.40 cfs (605 acre-feet annually) from two wells 28 and 36 feet deep located in the SW 1/4 SW 1/4, NW 1/4 SW 1/4 Section 8-T103N-R50W.

Water Permit Application No. 5614-3 proposes to construct and place to beneficial use 2.14 cfs (570 acre-feet annually) from two wells 26 and 34 feet deep located in the NW 1/4 NE 1/4 Section 7; SW 1/4 NE 1/4 Section 6; all in T103N-R50W.

Water Permit Application No. 5615-3 proposes to construct and place to beneficial use 3.34 cfs (907 acre-feet annually) from two wells 45 and 41 feet deep located in the SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 31-T104N-R50W.

This water was appropriated and reserved by Future Use Permit No: 5522-3. The water will be used by the City of Sioux Falls for municipal purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Water Management Board will NOT CONDUCT a HEARING to consider these applications and the chief engineer will issue the permits as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

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recommendations. The Chief Engineer's address is "Water Rights Division, 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 April 20, 1992. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application Nos. 5611-3, 5612-3, 5613-3, 5614-3 and 5615-3, and 2) the chief engineer's recommendations, a meeting at the Division of Water Rights office to hear these applications is scheduled for April 29, 1992, at 9:00 am in Room 413, Joe Foss Building, 523 E Capitol, Pierre SD. If these applications are opposed or the recommendations are contested, the April 29, 1992, hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The April 29, 1992, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the applications. The request for an automatic delay must be filed by April 20, 1992.

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These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26 46-5-38 thru 46-5-40; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; 74:02:01:24 thru 74:02:01:25.

L139w14-15c



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

JUL 1 1992

Lyle Johnson, WS
City of Sioux Falls
224 West Ninth Street
Sioux Falls, SD 57102

Dear Mr. Johnson:

Enclosed are Water Permit Nos. 5611-3, 5612-3, 5613-3, 5614-3, and 5615-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the systems and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water Licenses may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permits within the five year construction period, usually without affecting the priority dates provided applications to amend your permits are made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend the permits after the five year construction period will be assigned new priority dates. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

City of Sioux Falls
Public Works Adm.
224 W 9th St
Sioux Falls SD 57102

Attn: Darla

On July 24, 2002, Lynn Beck, a staff engineer accompanied by Randy Janssen conducted investigations of several of the City of Sioux Falls water permits, including the extent of application of water to beneficial use, as developed under the permits. The final water right documents, the water license, can now be issued.

State law requires that we charge a \$50.00 fee for each investigation and issuance of the water license. Enclosed is an invoice for a total of \$400.00. The check or money order for the fee should be made payable to the "Water Rights Program".

The licensed water right will be similar to a property right that can not be lost as long as the water use continues and the city abides by the permit requirements.

If you have any questions regarding the water permits, investigation of the water use systems or payment of the fee, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
(605) 773-3352



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

* INVOICE *

Invoice No. 20411-110602

City of Sioux Falls
Public Works Adm.
224 W 9th St
Sioux Falls SD 57102

Fee for investigation of the following water permits:	No. 5213-3	50.00
	No. 5214-3	50.00
	No. 5431-3	50.00
	No. 5611-3	50.00
	No. 5612-3	50.00
	No. 5614-3	50.00
	No. 5615-3	50.00
	No. 5726-3	50.00

PLEASE PAY THIS AMOUNT:	\$400.00
--------------------------------	-----------------

Karen Schlaak
Karen Schlaak
Environmental Scientist
Water Rights Program
(605) 773-3352

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date November 19, 20 02

RECEIVED OF City of Sioux Falls, 274 West Ninth St., Sioux Falls SD 57104-6407

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	50.00	
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>5611-S</u>		
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	50.00

No.

000000

By

J. Duane Eide
Chief Engineer

Permit No. 5611-3**X 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, **July 24, 2002**, made a thorough examination of the water use system constructed by **City of Sioux Falls** of **224 West 9th St., Sioux Falls SD 57102** holder of Permit No. **5611-3**, bearing the priority of **August 22, 1991** authorizing the diversion of **4.23** cu. ft. per second and/or **1,460** acre-feet annually of the waters of **Big Sioux: Middle Skunk Creek Aquifer** for **municipal use** purposes, in **Minnehaha** County.

Inspection contact & relationship
to permit holder, if applicable:

Randy Janssen, Water Superintendent for the City of Sioux Falls.

A. Works used to divert the water:

Well Information: City Well #101 in SW¼ SW¼ - Well Drilling Firm: <u>Layne Western Co.</u> - Depth(s) <u>32.5</u> feet - Well log is available <u>yes</u> - Comment: _____ Casing: - Diameter <u>30</u> inches - Length <u>19</u> feet - Type <u>steel</u> Screen: - Type <u>stainless steel</u> - Length <u>10.4</u> feet - Static water level <u>3</u> feet Pump: - Make <u>Layne & Bowler</u> - Model <u>Verti-Line</u> - Size <u>6"</u> - Capacity <u>500</u> GPM Motor: - Make <u>U.S. Electric</u> - Model No. _____ - Horsepower rating <u>50</u> hp	Well Information: City Well #102 in NW¼ SE¼ - Well Drilling Firm: <u>Layne Western Co.</u> - Depth(s) <u>27</u> feet - Well log is available <u>yes</u> - Comment: _____ Casing: - Diameter <u>30</u> inches - Length <u>14</u> feet - Type <u>steel</u> Screen: - Type <u>stainless steel</u> - Length <u>10.4</u> feet - Static water level <u>2.4</u> feet Pump: - Make <u>Layne & Bowler</u> - Model <u>Verti-Line</u> - Size <u>6"</u> - Capacity <u>450</u> GPM Motor: - Make <u>U.S. Electric</u> - Model No. _____ - Horsepower rating <u>50</u> hp
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Report of Examination of Works

Permit No. 5611-3

The system is in **good** condition with the point(s) of diversion located as follows: **well # 101 is 300' E of the SW corner; well #102 is 1,470' W and 1,855' N of the SE corner; well #103 is 110' W and 2,200' N of the SE corner; well #104 is 145' W and 175' S of the NE corner all of Section 25-T103N-R51W.** The works are capable of diverting and conveying to the place of use **3.78** cu. ft. per second of water and/or **1,460** acre-feet of water annually which is to be used for **the municipal water supply for the City of Sioux Falls.** Water has been put to beneficial use to the maximum extent as follows:

Municipal water supply for the City of Sioux Falls.

The license should be issued for **3.78** cfs and/or **1,460** acre-feet annually.

All structures, wells and lands on map **yes**

Comments or other permit(s) associated with the project: Permit No. 5611-3 places to beneficial use 1,460 acre-feet annually from Future Use Permit No. 5522-3.


Lynn Beck

Natural Resources Engineer Specialist
DENR, Water Rights Program

Date report completed: **October 17, 2002**

Well Information: City Well #103 in NE¼ SE¼ 1) Well Drilling Firm: <u>Layne Western Co.</u> 2) Depth(s) <u>31</u> feet 3) Well log is available <u>yes</u> 4) Comment: _____ Casing: 1) Diameter <u>36</u> inches 2) Length <u>20</u> feet 3) Type <u>steel</u> Screen: 1) Type <u>stainless steel</u> 2) Length <u>10.4</u> feet 3) Static water level <u>2</u> feet Pump: 1) Make <u>Layne & Bowler</u> 2) Model <u>Verti-Line</u> 3) Size <u>6"</u> 4) Capacity <u>400</u> GPM Motor: 1) Make <u>U.S. Electric</u> 2) Model No. _____ 3) Horsepower rating <u>40</u> hp	Well Information: City Well #104 in NE¼ NE¼ 1) Well Drilling Firm: <u>Layne Western Co.</u> 2) Depth(s) <u>32</u> feet 3) Well log is available <u>yes</u> 4) Comment: _____ Casing: 1) Diameter <u>36</u> inches 2) Length <u>16</u> feet 3) Type <u>steel</u> Screen: 1) Type <u>stainless steel</u> 2) Length <u>15.4</u> feet 3) Static water level <u>1.5</u> feet Pump: 1) Make <u>Layne & Bowler</u> 2) Model <u>Verti-Line</u> 3) Size <u>6"</u> 4) Capacity <u>350</u> GPM Motor: 1) Make <u>U.S. Electric</u> 2) Model No. _____ 3) Horsepower rating <u>40</u> hp
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B. Works used to transport water to place of use:

- 1) Type ductile iron 2) Size 6 inches 3) Length 4,280 feet
- 1) Type pvc 2) Size 8 inches 3) Length 630 feet
- 1) Type unknown 2) Size 10 inches 3) Length 1,580 feet
- 1) Type unknown 2) Size 12 inches 3) Length 2,500 feet
- 1) Type unknown 2) Size 18 inches 3) Length 5,280 feet

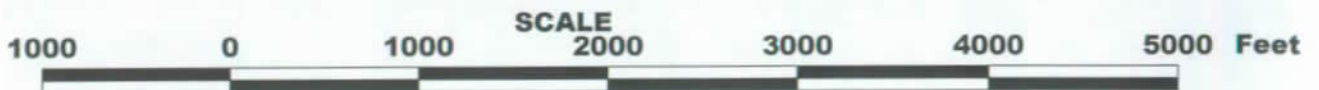
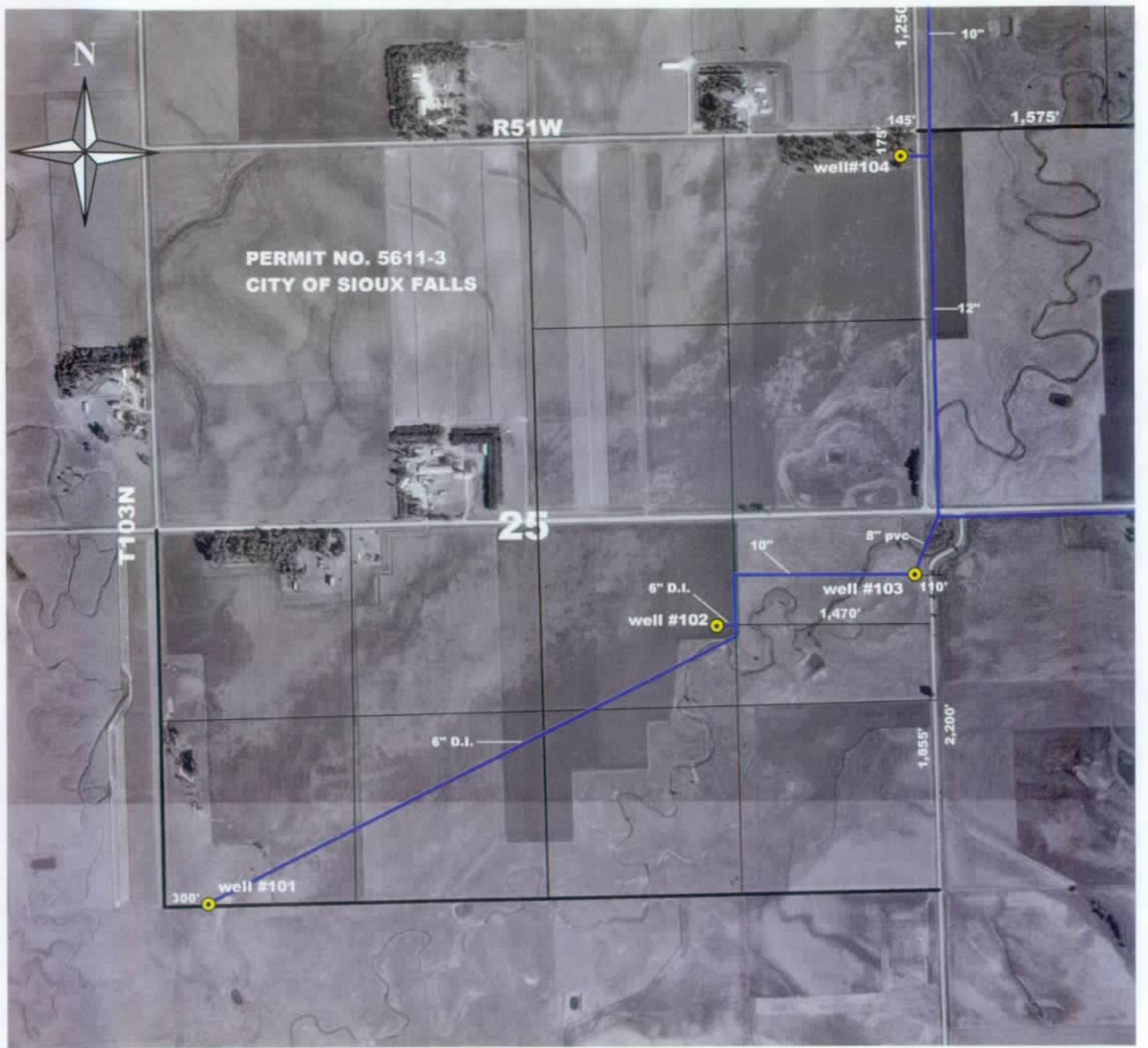
C. Works used to apply water to beneficial use: Water treatment plant and storage that provides a municipal water supply for the City of Sioux Falls.

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by yes

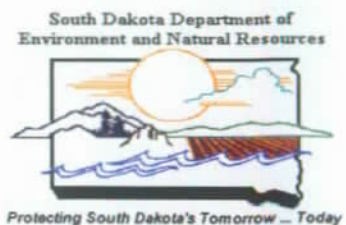
WATER RIGHT NO. 5611-3

City of Sioux Falls



Lynn Beck

Lynn Beck
Natural Resources Engineer Specialist
DENR, Water Rights Program
October 17, 2002



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 5611-3

(1) The City of Sioux Falls, 224 W 9th St, Sioux Falls SD 57102 made Application No. 5611-3, January 29, 1992 for a water permit to divert 4.23 cubic feet of water per second (1,460 acre-feet annually) from groundwater (four wells), Minnehaha County, South Dakota for municipal purposes. Permit No. 5611-3, with a priority date of August 22, 1991 (established by Future Use No. 5522-3) was approved April 29, 1992 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before April 29, 1997 and for the application to beneficial use of water on or before April 29, 2001.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 5611-3 is issued a license, bearing a priority date of August 22, 1991 to appropriate 3.78 cubic feet of water per second (1,460 acre-feet annually) from groundwater (four wells) for municipal purposes.

The diversion points are located as follows: all in **Section 25-T103N-R51W**

- Well # 101 – 300 feet east of the southwest corner (SW $\frac{1}{4}$ SW $\frac{1}{4}$);
- Well # 102 – 1,470 feet west and 1,855 feet north of the southeast corner (NW $\frac{1}{4}$ SE $\frac{1}{4}$);
- Well # 103 – 110 feet west and 2,200 feet north of the southeast corner (NE $\frac{1}{4}$ SE $\frac{1}{4}$);
- Well # 104 - 145 feet west and 175 feet south of the northeast corner (NE $\frac{1}{4}$ NE $\frac{1}{4}$).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 5611-3 including the following qualifications:

- The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The wells authorized by this permit shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04.
- Approval of Permit No. 5611-3 authorizes a total annual diversion of 1,460 acre-feet of water annually.
- The City of Sioux Falls shall report to the Chief Engineer annually the amount of water withdrawn each year from the Big Sioux:Middle Skunk Creek Aquifer.
- If development and pumping of Middle Skunk Creek Aquifer water authorized by Permit No. 5611-3 results in adverse impairment of adequate domestic wells or adequate wells having prior water rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered groundwater levels are due to drought, 2) the location of domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.

Garland Erbele

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

JUN 20 2003

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

JUN 20 2003

Randy Jenssen
Sioux Falls Water Superintendent
2100 N Minnesota Ave
Sioux Falls SD 57104

Dear Mr. Jenssen:

Enclosed are Water License Nos. 5213-3, 5214-3, 5431-3, 5611-3, 5612-3, 5614-3, 5615-3, 5726-3, 6210-3, 6214-3 and 6215-3 for the City of Sioux Falls. A map prepared by Lynn Beck is also included for each permit as well as receipts for payment of the license fees.

These are the final water right documents completing the city's process of obtaining Water Rights.

As long as the city uses the water beneficially, as stated in the Water Licenses, State Water Laws provide a continuing right to use the water.

Sincerely,

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

NOTE: The applicable portions of No. 5334-3 are incorporated into Water License No. 6210-3.
The applicable portions of Nos. 2923-3 and 5613-3 are incorporated into Water License No. 5726-3.

enclosures