

9
WATER PERMIT NO. 1230-1

Name of Applicant: Harold Miller

Address: 15301 Sulpher Cut-off Rd, Newell SD 57760

Phone: 605 748-2269

Amount of Water Claimed: 102 AF

Total Acres: NA

Source of Water Supply: runoff

Water to be used for: fish and wildlife propagation and livestock

County: Butte

Type of Waste Disposal System:

Location: approximately 35 miles northwest of Pierre

PRIORITY

Date Received: 8-15-12

Application/License Fee: \$ 700

Corrected Application Received:

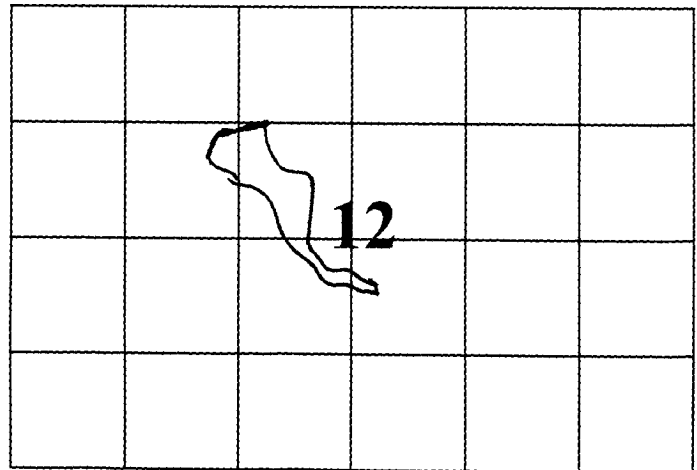
Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: S ½ NW ¼ Sec 12-T12N-R9E

Water Impounded: S ½ NE ¼, NE ¼ SW, NW ¼

SE ¼ Sec 12-T12N-R9E



Depth of Well: NA

Well Driller:

Remarks:

Type of Map: plat

Prepared by: Dave Konechne

Reviewed and the Number Assigned on: XX

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

FORM 2: Application for uses other than irrigation

(type or print)

Mail to:
PMB 2020
DENR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

(office use only)
No. 1930-1 Hydrologic Unit 10130304
Basin Moreau River 605-892-2528
Newspaper Butte Co. Post 614 State St. Belle Fourche 57717
Black Hills Pioneer PO Box 7 Spearfish 57783 605-642-2761

RECEIVED

AUG 15 2012

WATER RIGHTS
PROGRAM

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

Check use(s) of water:

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

Type of Application:
(check one)

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

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

- Name of Applicant Harold Miller Phone 605-748-2269
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 15301 Sulphur Cut-Off Rd. Newell SD 57760
(Address) (City) (State) (Zip Code)
- Amount of water claimed *CFS or **GPM 102.0 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Surface water run-off
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Butte
S1/2NW 1/4 Section 12 T12N R9E - Water impounded: S1/2NW1/4 SE1/4 S12 T12N R9E
- County or counties where water will be used Butte
- Annual period during which water is to be used Jan 1 - Dec 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
see attached engineering report

STATE OF SOUTH DAKOTA)
County of Butte) SS

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

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

Applicant's signature

Subscribed and sworn to before me this 2nd day of August 20 12

DIANA D. PAGE

My Commission Expires Jan. 10, 2014

Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 1930-1**

Date of first receipt of application August 15, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1930-1 to Harold Miller, 15301 Sulpher Cut-Off Rd, Newell SD 57760 authorizing the construction of the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 1930-1 authorizes impoundment of 102 acre-feet of water from runoff by reconstructing a dam located in the S 1/2 NW 1/4 Section 12 with water impounded in the S 1/2 SW 1/4, NW 1/4 SE 1/4 Section 12; all in T12N-R9E.
2. The water appropriated shall be used for the purpose of fish and wildlife propagation and livestock water and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 1930-1 is October 15, 2012.
5. The date from which applicant may claim right is August 15, 2012.
6. One-fifth of the construction is to be completed on or before April 15, 2015.
7. All construction is to be completed on or before October 15, 2017.
8. Water is to be put to beneficial use on or before October 15, 2021.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 1930-1 authorizes an impoundment with a storage capacity of 102 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

By: Garland Erbele

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

DEC 11 2012
date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

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

2. Wastewater Disposal System Information

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

3. Dugout Information

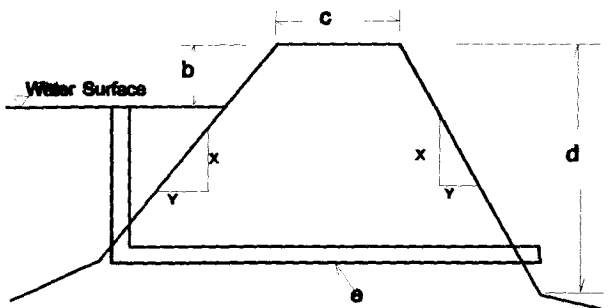
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

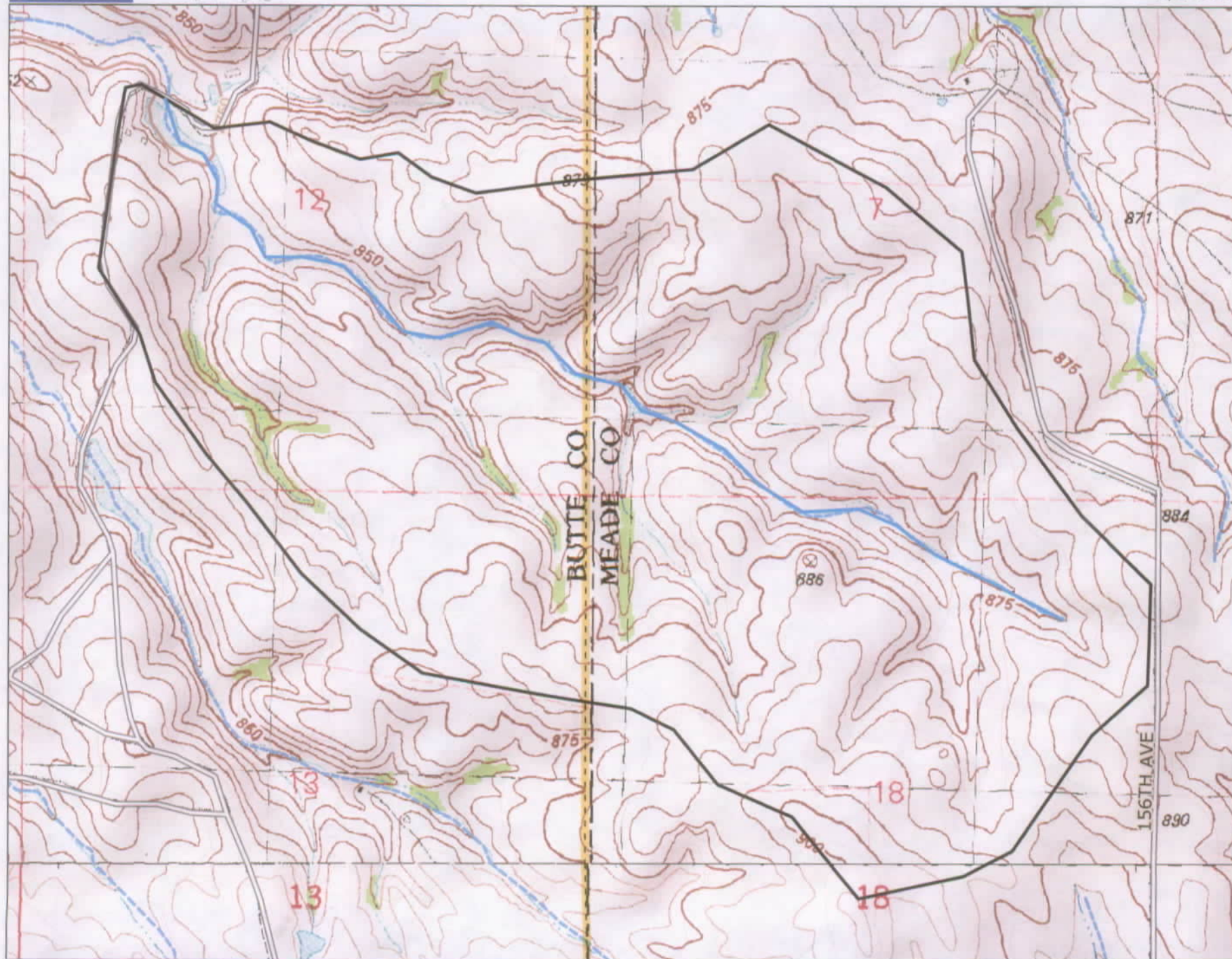
If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

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

Konechne Engineering
104 Capitol Hill Dr
Pierre, Sd 57501



- b) Freeboard _____ 4ft
- c) Crest Width _____ 12ft
- Crest Length _____ 400ft
- d) Height _____ 20
- e) Primary Outlet Capacity _____ 35cfs
- If pipe, diameter _____ 18"
- f) Secondary Spillway Capacity _____ 539cfs
- Spillway Width _____ 50ft
- g) X & Y Slope _____
- Upstream _____ 3:1
- Downstream _____ 3:1
- h) Surface Area of Impoundment _____ 14.4
- i) Storage _____ 102.0 Acre Feet
- j) Drainage Area Above Dam _____ 973.0 Acres



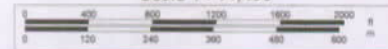
Data use subject to license.

© DeLorme. Topo USA® 8.

www.delorme.com



Scale 1 : 14,400



1" = 1,200.0 ft

Data Zoom 13-1

Dept of Environment & Natural Resources
Water Rights Program
523 E Capitol Ave
Pierre SD 57501

* INVOICE *

August 15, 2012
Invoice No. 81512USFWS

US FWS
Norma Martin
Brookings SD 57006

Application fee for Harold Miller

\$700.00

(\$500.00 application fee)
(\$200.00 license fee)

PLEASE PAY THIS AMOUNT:

BANKCARD SALES SLIP 2 PT. 59082

DO NOT WRITE ABOVE THIS LINE

EXPIRATION
☒ DATE
CHECKED

NORMA J. MARTIN
USFWS

XXXX XXXX XXXX 0807 06/14

SIGN HERE
X

PLEASE DO NOT WRITE ABOVE THIS LINE

1	INV 81512USFWS	700.00			
	HAROLD MILLER				
DATE	08/15/12	AUTHORIZATION	049405	SUB TOTAL	700.00
REFERENCE NO.	001	SERVER		TAX	
ID-FOLIO/CHECK NO./LIC. NO. STATE	REG./DEPT.	CLERK	TIP	MISC.	
5462820				TOTAL	700.00

SALES SLIP ORIGINAL

The issuer of the card identified on this item is authorized to pay the amount shown as TOTAL upon proper presentation. I promise to pay such TOTAL (together with any other charges due thereon) subject to and in accordance with the agreement governing the use of such card.

STRUCTURE DATA

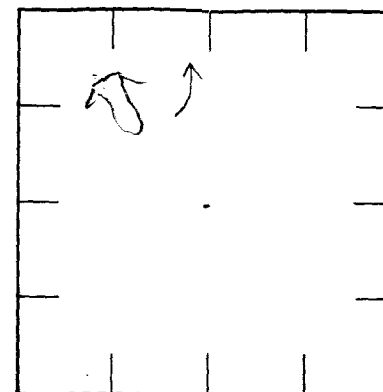
DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	25-YR. C.F.	C.F.S.	FEET	ACRES	AC. FT.	AC. FT.
973	41	631	539	14	14.4	—	102

Top of Dam 175

NOTE: Since minimum construction is scheduled, it is necessary to hire a competent contractor.

6ft of pipe should extend beyond pipe support

Concrete riser as furnished by Creter or equal

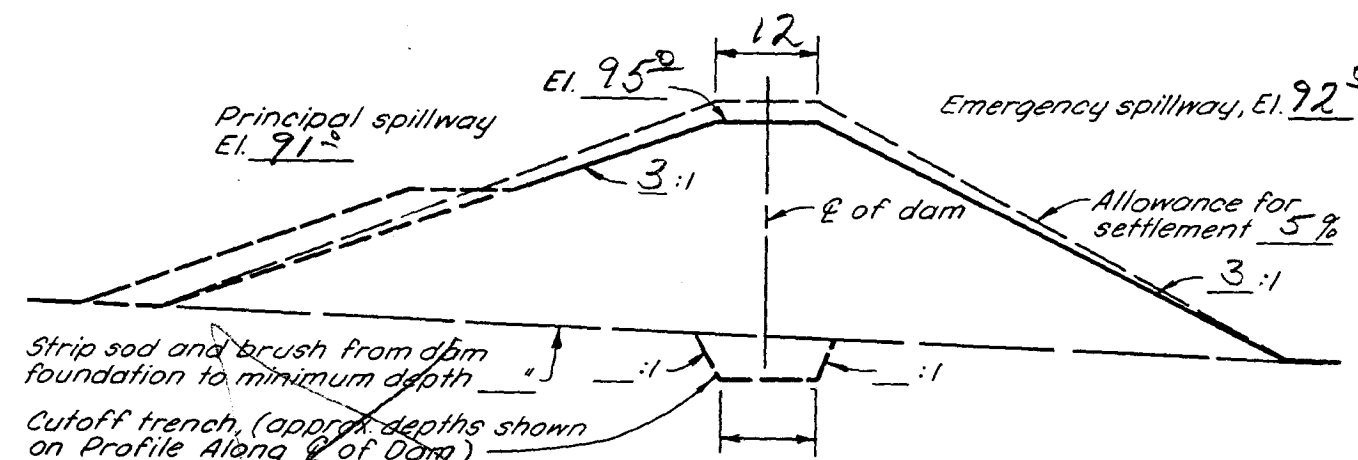
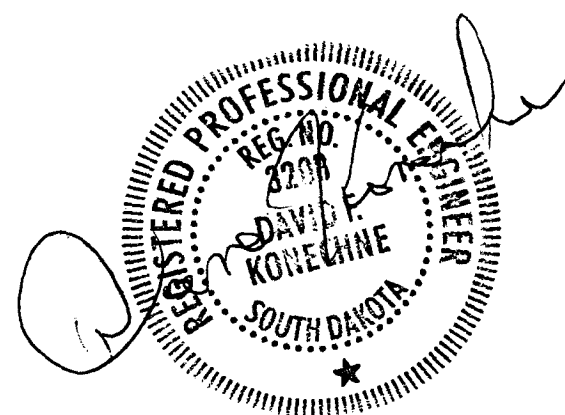


NW Sec. 12 T. 12 N. R. 9 E
Butte County

LOCATION

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
Earth Fill P.S. (estimate)	cy	460
Earth Cut P.S. (estimate)	cy	460
4ft x 4ft x 6ft long concrete riser	ea	1
18" dia PVC SDA-26	lin ft	90
Sand Seep collar	cy	4
4" dia pvc drain	lin ft	69
Timber Pipe Support	ea	1
Metal Anti-Vortex	ea	1
Mobilization	lum Sun	1
labor laying pipe	hr	10



TYPICAL CROSS SECTION OF DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

SD-2 Clearing
SD-7s Earth Fill
SD-9 Drain Fill
SD-16 Timber Fabrication
SD-17 Metal Fabrication
SD-19 PVC drain

EARTH DAM

OPERATOR: Harold Miller

CONSERVATION DISTRICT: _____

Class "A" Hazard

SKETCH PLAN OF DAM AND RESERVOIR AREA

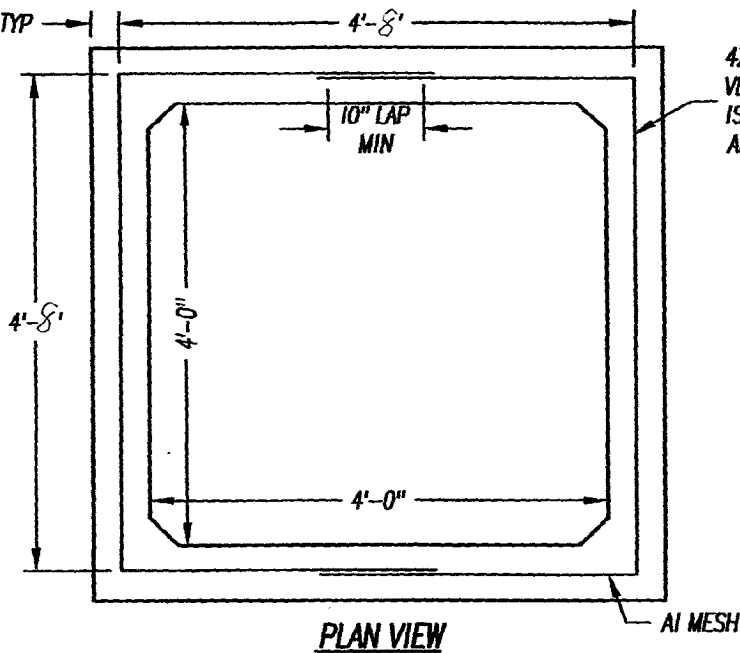
Approximate scale 1" = _____

REFERENCE: GUIDE PLAN NO. 1.0

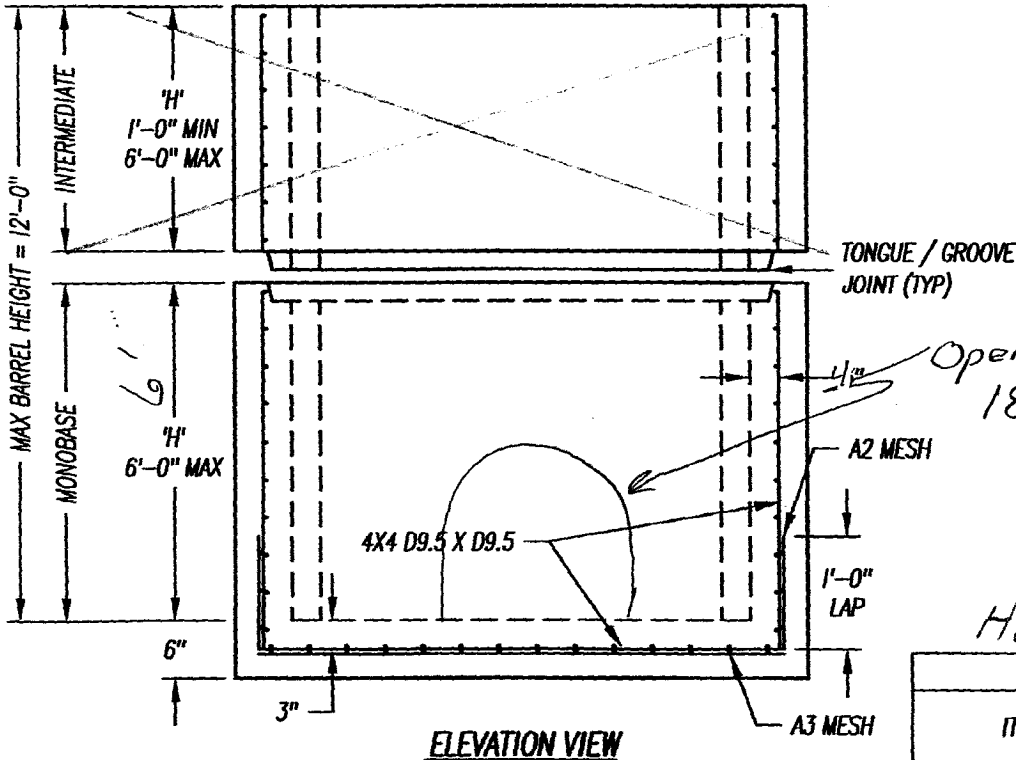
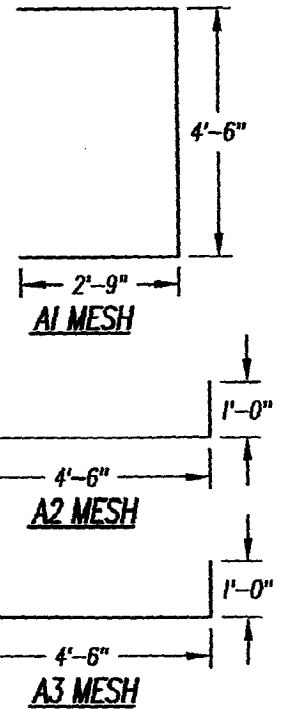
JOB PLAN NO. 1.0

Designed _____	Approved by _____
Drawn _____	Title _____
Traced _____	Title _____
Checked _____	Sheet _____
	No _____
	of _____
	Drawing No. _____

(Rev. 4-73) 5, N-29, 073.1a(1)



4X4 D9.5 X D9.5
VERTICAL AREA OF STEEL
IS 0.28 in², HORIZONTAL
AREA OF STEEL IS 0.28 in²



Harold Miller

ESTIMATED QUANTITIES			
ITEM	UNIT	CONSTANT QTY.	VARIABLE QTY.
*CLASS M6 CONCRETE	CuYd	0.469	0.338*H
REINFORCING STEEL	Lb	114	38.80*H

FOR INTERMEDIATE SECTIONS - IGNORE CONSTANT QTY.

REINFORCING SCHEDULE				
MARK	SIZE	TYPE	# REQ'D	DIMENSIONS
A1	4X4 D9.5/D9.5	BENT	2	10'-0" X H
A2	4X4 D9.5/D9.5	BENT	1	6'-6" X 4'-6"
A3	4X4 D9.5/D9.5	BENT	1	6'-6" X 4'-6"

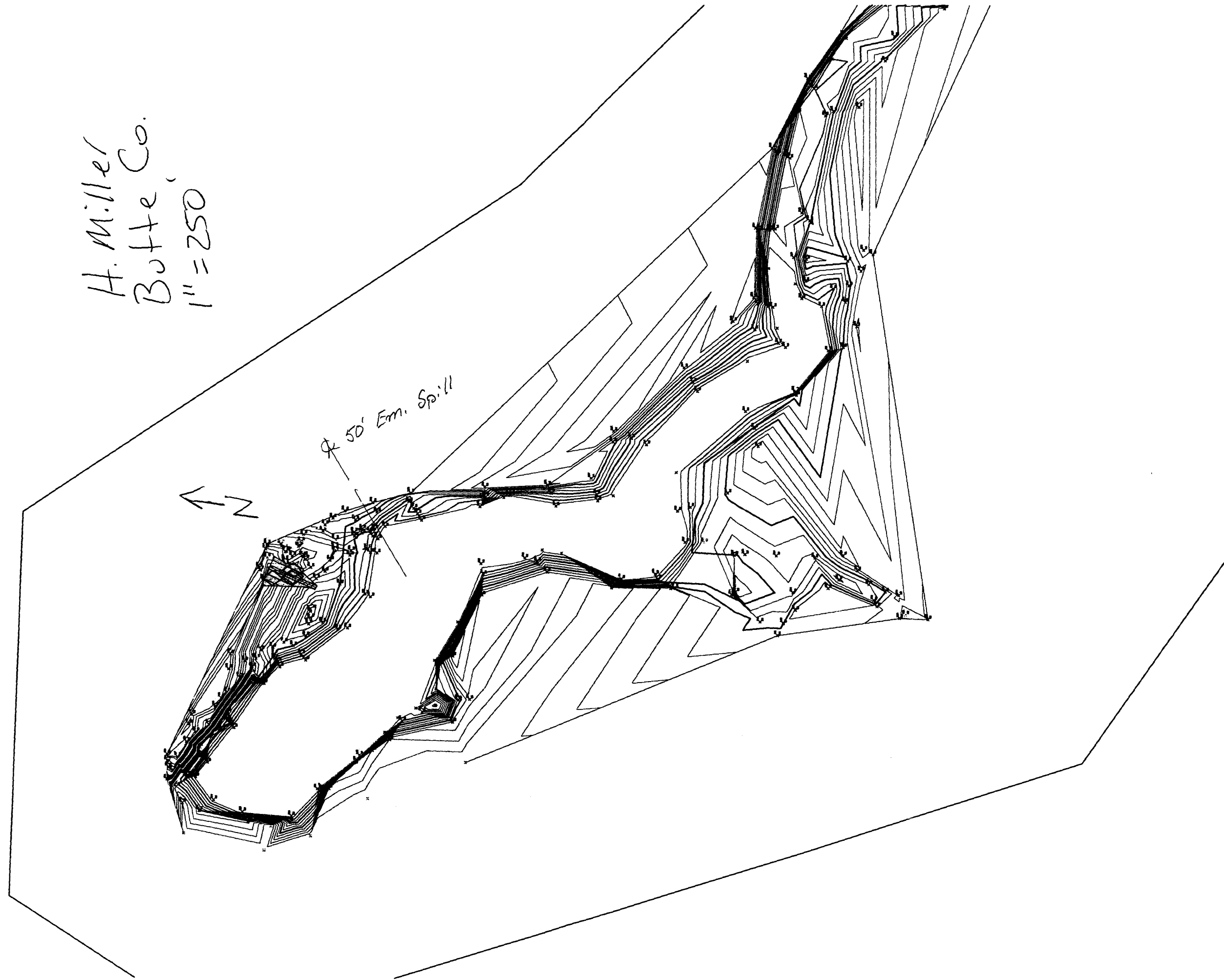
MONO ONLY

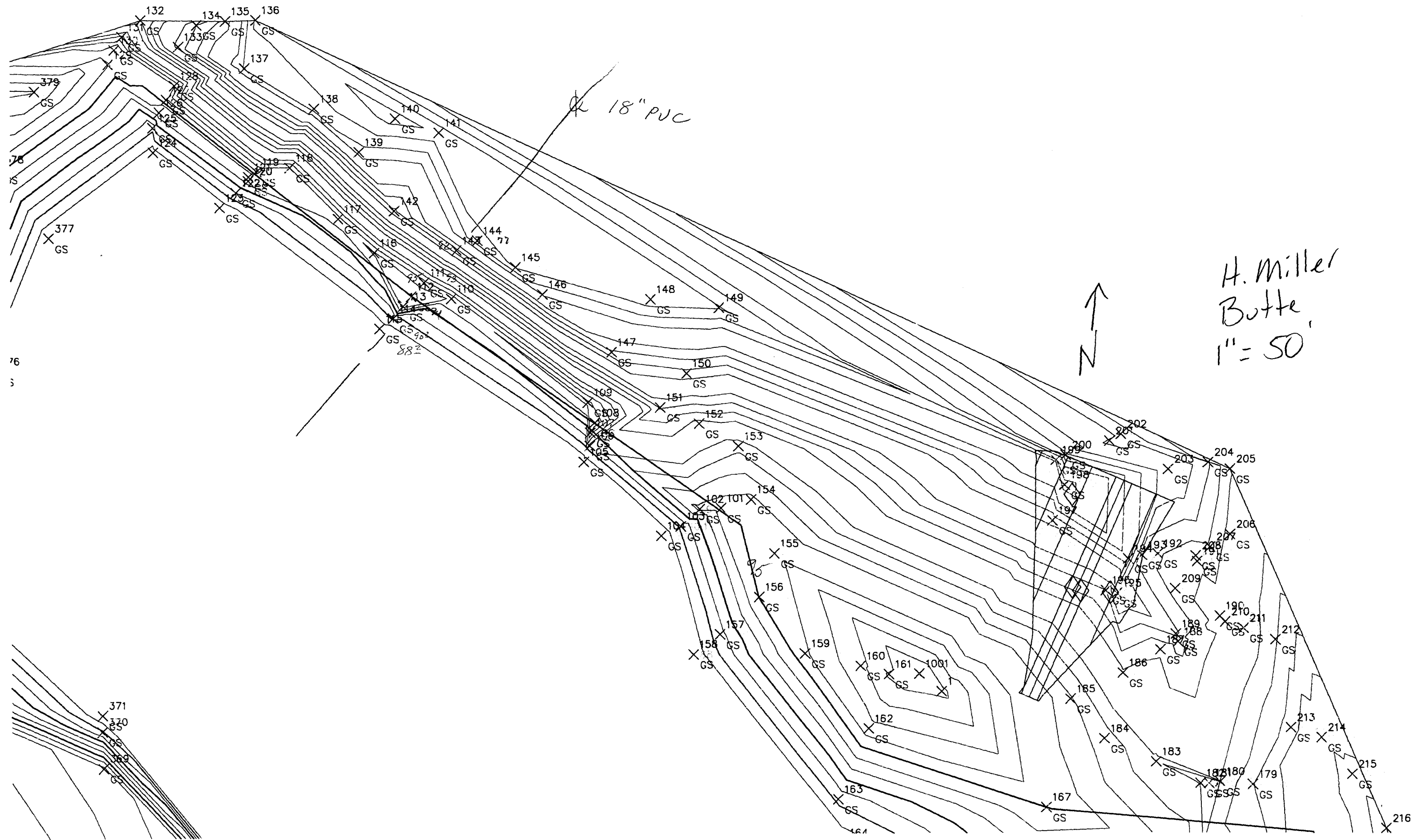
1. Reinforcing per Cretex West Standard Design.
2. 4,000 psi Air Entrained Concrete
3. * Reduce total quantities of concrete by the amount of concrete displaced by the pipe. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.

Cretex Concrete Products West, Inc.		OFFICES IN:	
		BISMARCK	HELENA
SCALE	NONE	TITLE	
DATE	11/17/05	4 X 4 INLET	
DRN BY	CLH	STANDARD DESIGN	
REV		CUSTOMER	
REV DATE		DWG NAME DK-10	

575

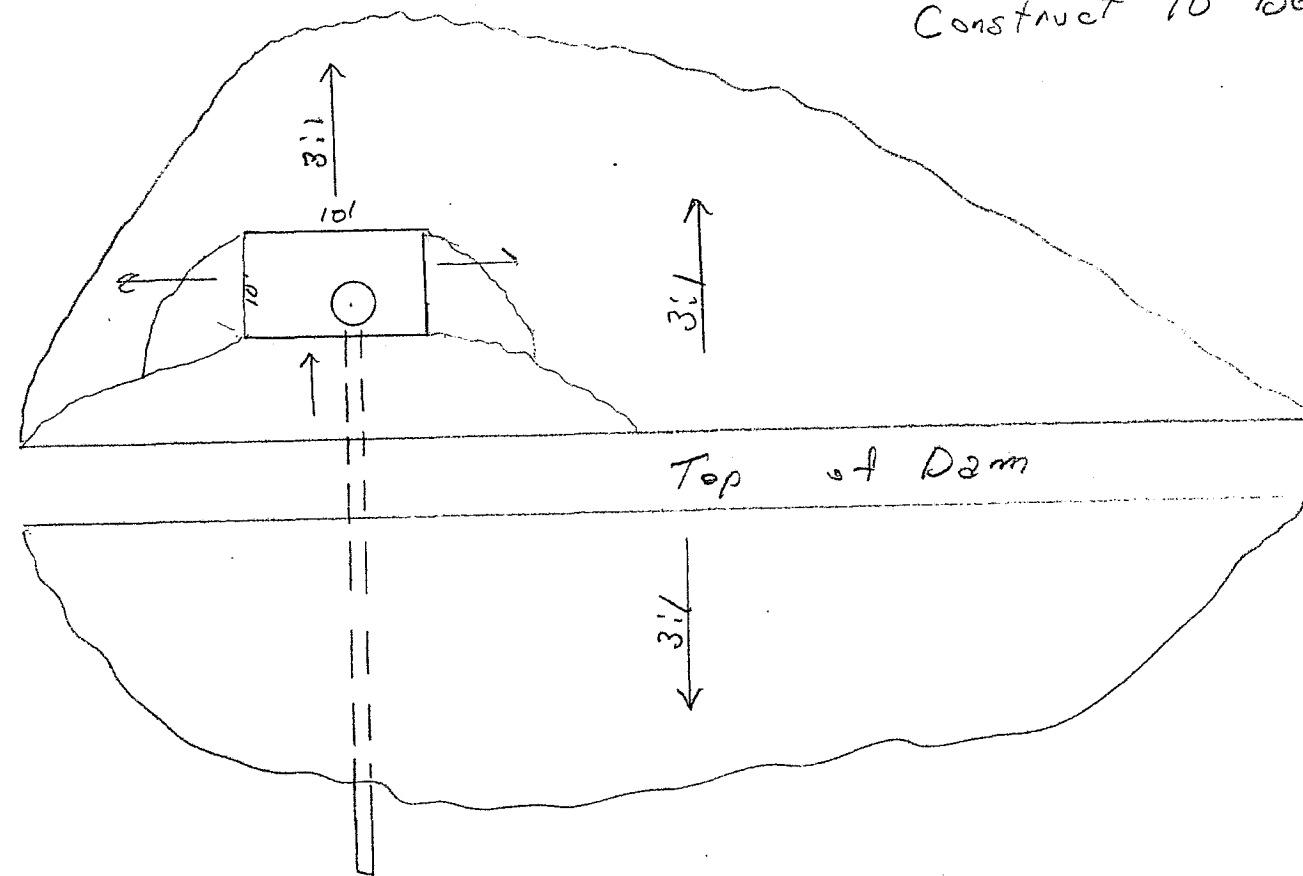
H. Miller
Botte, Co.
1" = 250





H. Miller
Butte,
1" = 50'

Construct 10' Berm at Riser

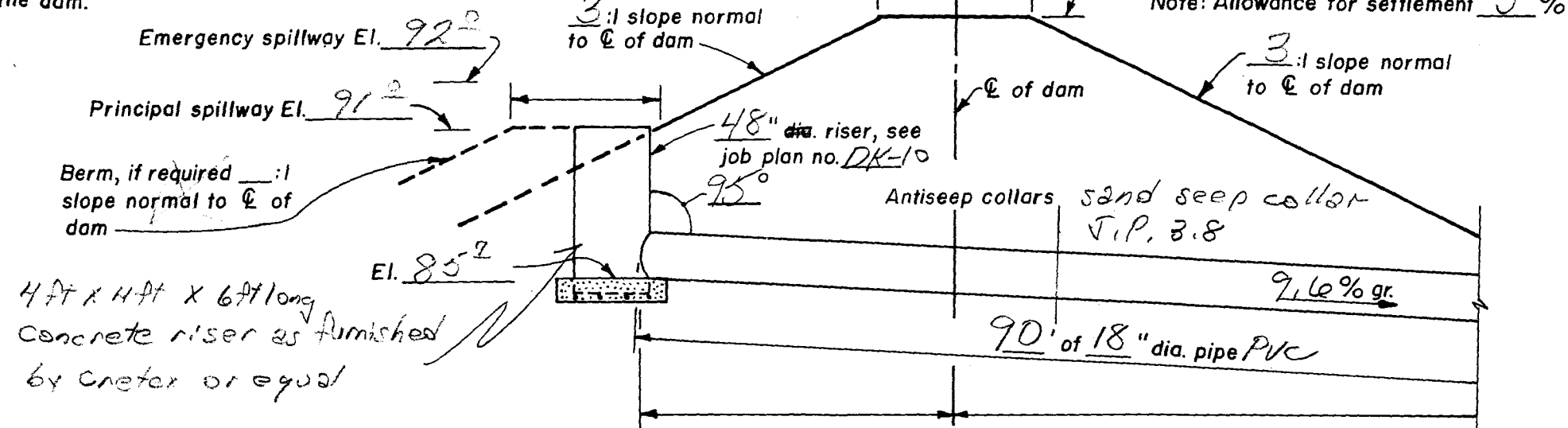


PLAN VIEW

Harold Miller

DK-1

Locate principal spillway pipe as directed by Technician at $\angle$ of dam sta. + at an angle of $^{\circ}$ to the $\angle$ of the dam.



CROSS SECTION OF DAM ALONG $\angle$ OF PRINCIPAL SPILLWAY
(Not to scale)

SPECIFICATION NOTES

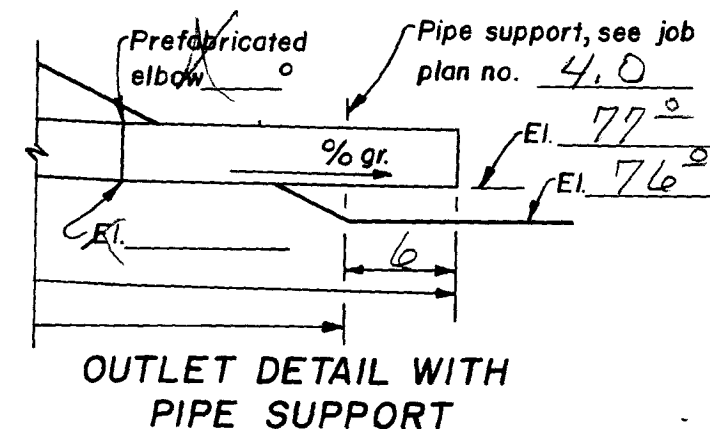
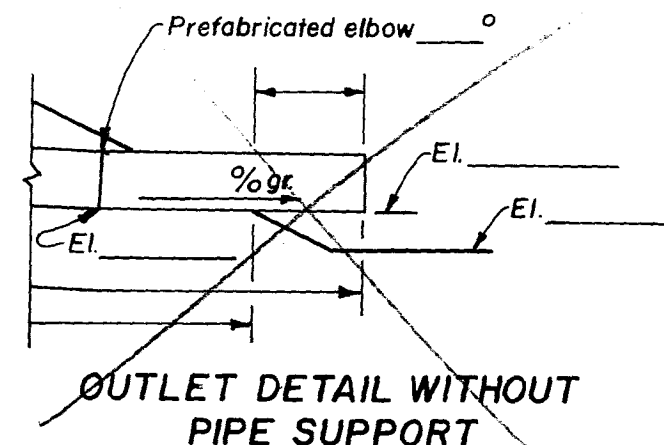
1. ELBOW, IF REQUIRED, MAY BE FABRICATED BY CONTINUOUS WELDING SEPERATE PIPE SECTIONS OR BY FABRICATING A CONTINUOUS WELDED JOINT ON THE UPSTREAM END OF LAST SECTION OF PIPE.
2. PIPE WALL THICKNESS SHALL BE GAGE OR INCHES.

PVC to be SDR-26

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY

APPLICABLE STANDARD S.C.S. SPECIFICATIONS



Sec. , T. , R.
County

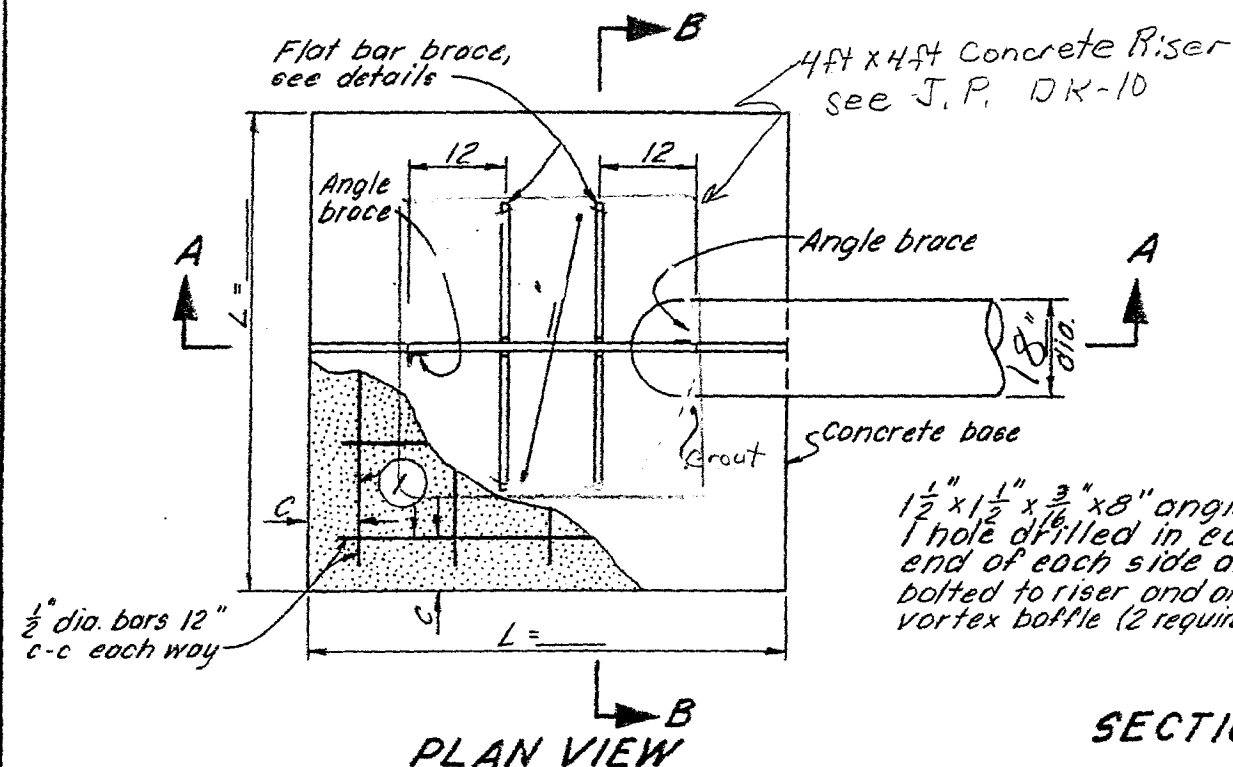
LOCATION

CORRUGATED METAL PIPE DROP INLET PRINCIPAL SPILLWAY

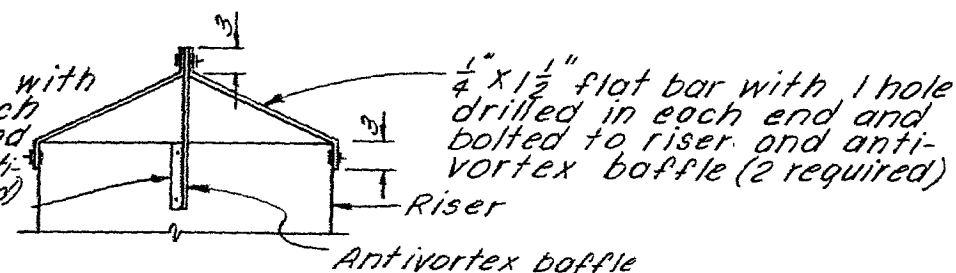
OPERATOR <u>Harold Miller</u>	
CONSERVATION DISTRICT <u> </u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed <u> </u>	Date <u> </u> Approved by <u> </u> Title <u> </u>
Drawn <u> </u>	Title <u> </u>
Traced <u> </u>	Sheet <u> </u> Drawing No. <u> </u>
Checked <u> </u>	No <u> </u> of <u> </u>

STEEL SCHEDULE AND CONCRETE QUANTITIES

RISER IN.	BARREL DIA. IN.	BAR SIZE	MARK	TYPE	NO. REQ'D.	LENGTH FT.-IN.	TOTAL LENGTH FT.-IN.	TOTAL WT. LB.	CONC. CU. YD.	C IN.	L FT.-IN.



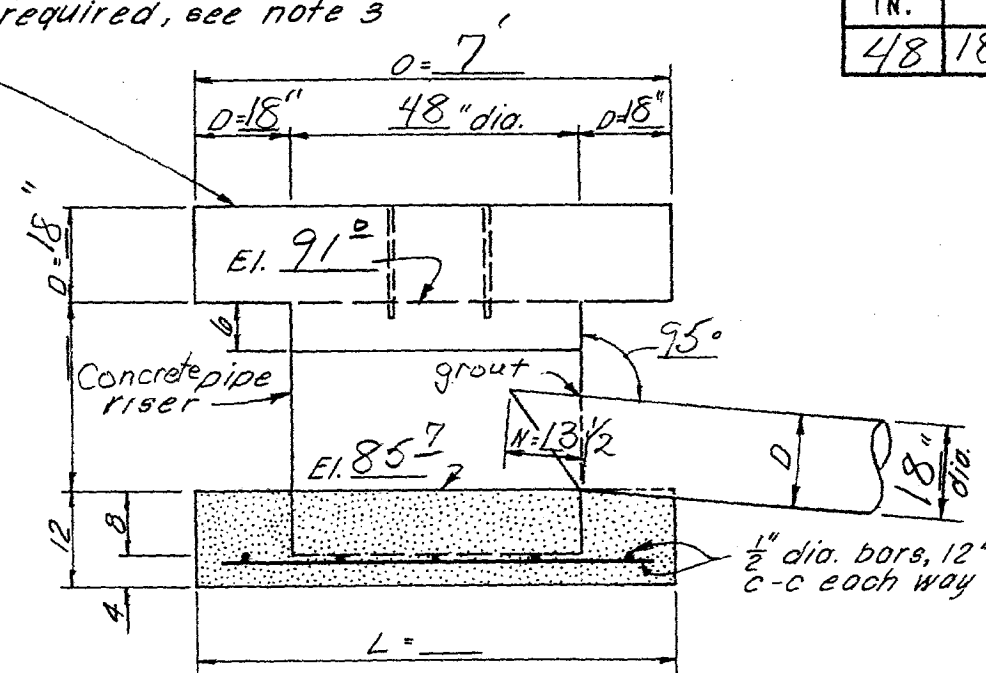
SECTIONAL ELEVATION B-B



STRUCTURAL STEEL AND ANTIVORTEX BAFFLE QUANTITIES

RISER IN.	D IN.	N IN.	O FT.-IN.	BAFFLE AREA SQ. FT.	BAFFLE WT. LB.	1/4" X 1 1/2" FLAT BAR LENGTH, FT. IN.	NO. REQ'D.	FLAT BAR WT. LB.	1 1/2" X 1 1/2" X 3/16" ANGLE INCHES	NO. REQ'D.	ANGLE WT. LB.
48	18	13 1/2	7	13	73	2-10	4	15	8	2	2.4

Antivortex baffle required, 0.138" thick, if trash rack is required, see note 3



NOTES:

1. ALL CUTS SHALL BE SAW OR SHEAR CUTS.
2. ALL GALVANIZING DAMAGED BY CUTTING, DRILLING, OR WELDING SHALL BE REPAIRED BY PAINTING WITH TWO COATS OF ZINC DUST-ZINC OXIDE PRIMER.
3. FOR TRASH RACK AND BAFFLE DETAILS, SEE PLAN SERIES 6.
4. ALL BOLTS SHALL HAVE A NUT AND SPLIT WASHER.
5. ALL BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED, CADMIUM PLATED, OR STAINLESS STEEL.
6. HOLES IN BRACES SHALL BE SPACED AND LOCATED TO MATCH CORRUGATIONS IN PIPE AND BAFFLE.

Metal Anti Vortex

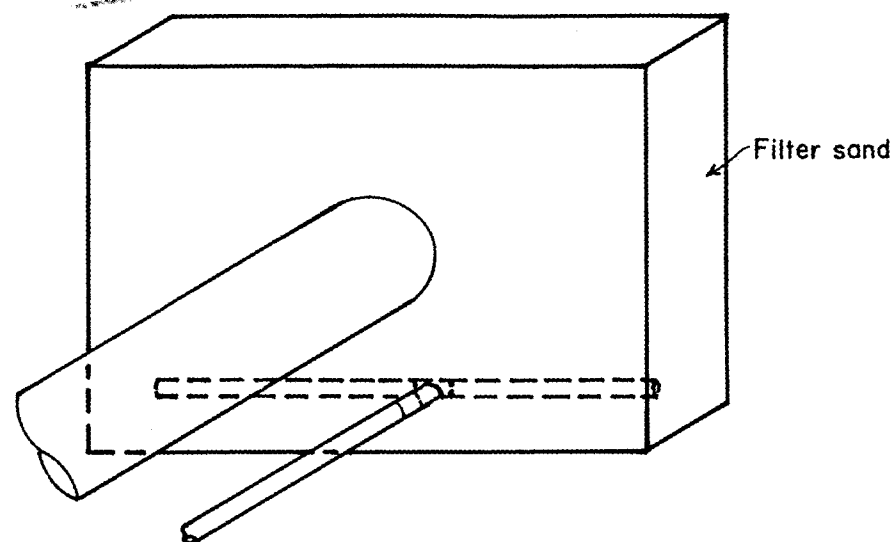
RISER AND HOOD INLET COMBINATION

OPERATOR: <u>Harold Miller</u>	
CONSERVATION DISTRICT: _____	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed _____	Date _____
Drawn _____	Approved by _____
Traced _____	Title _____
Checked _____	Sheet _____
	Drawing No. _____

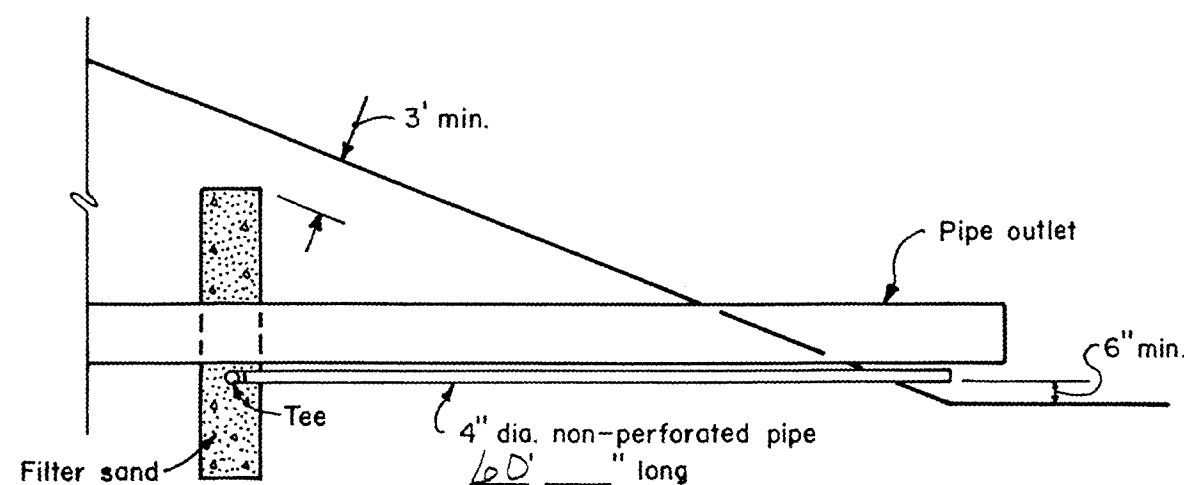
REFERENCE: GUIDE PLAN NO. 5.4

JOB PLAN NO. 5.4

5, N-29,073.5-40



ISOMETRIC VIEW

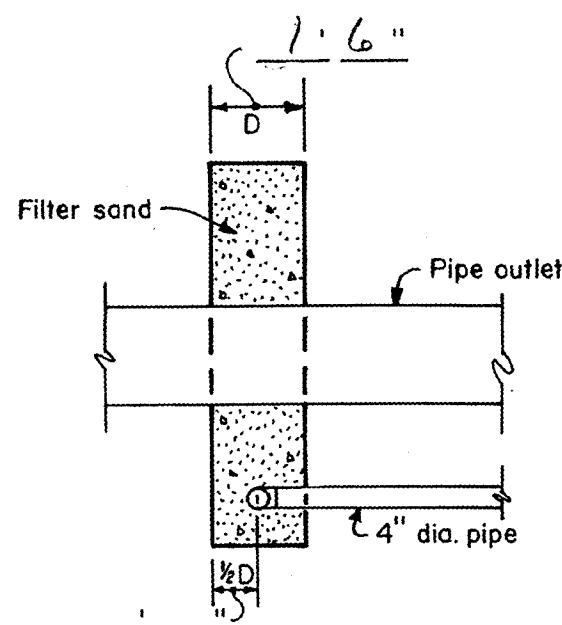


OUTLET DETAIL

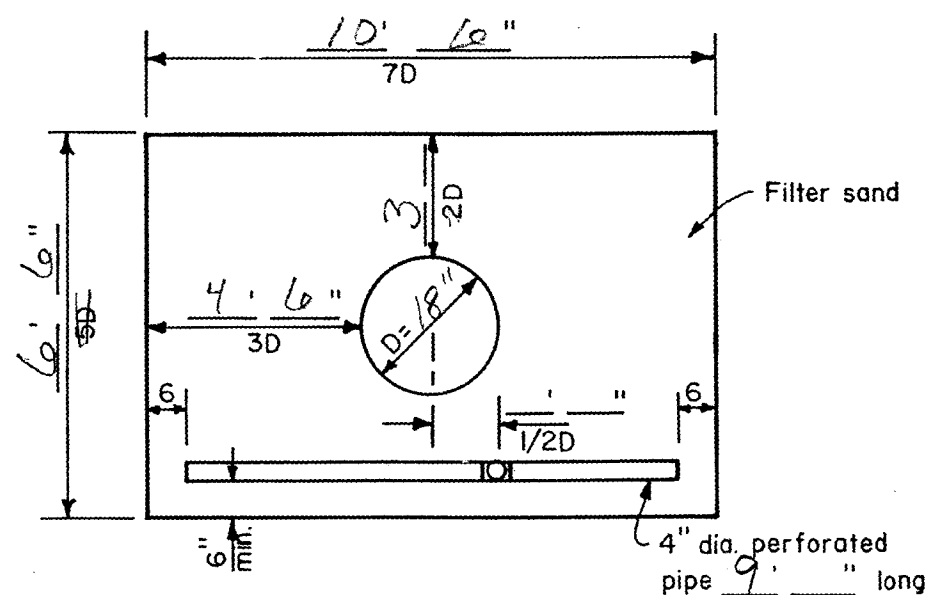
FILTER GRADATION

SIEVE SIZE	PERCENT PASSING
3/8"	100
4	95-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

see spec SD-9
4 cy



SIDE VIEW



UPSTREAM VIEW

NOTE:

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

Sec. _____, T. _____, R. _____

_____ County

LOCATION

SAND ANTISEEP COLLAR

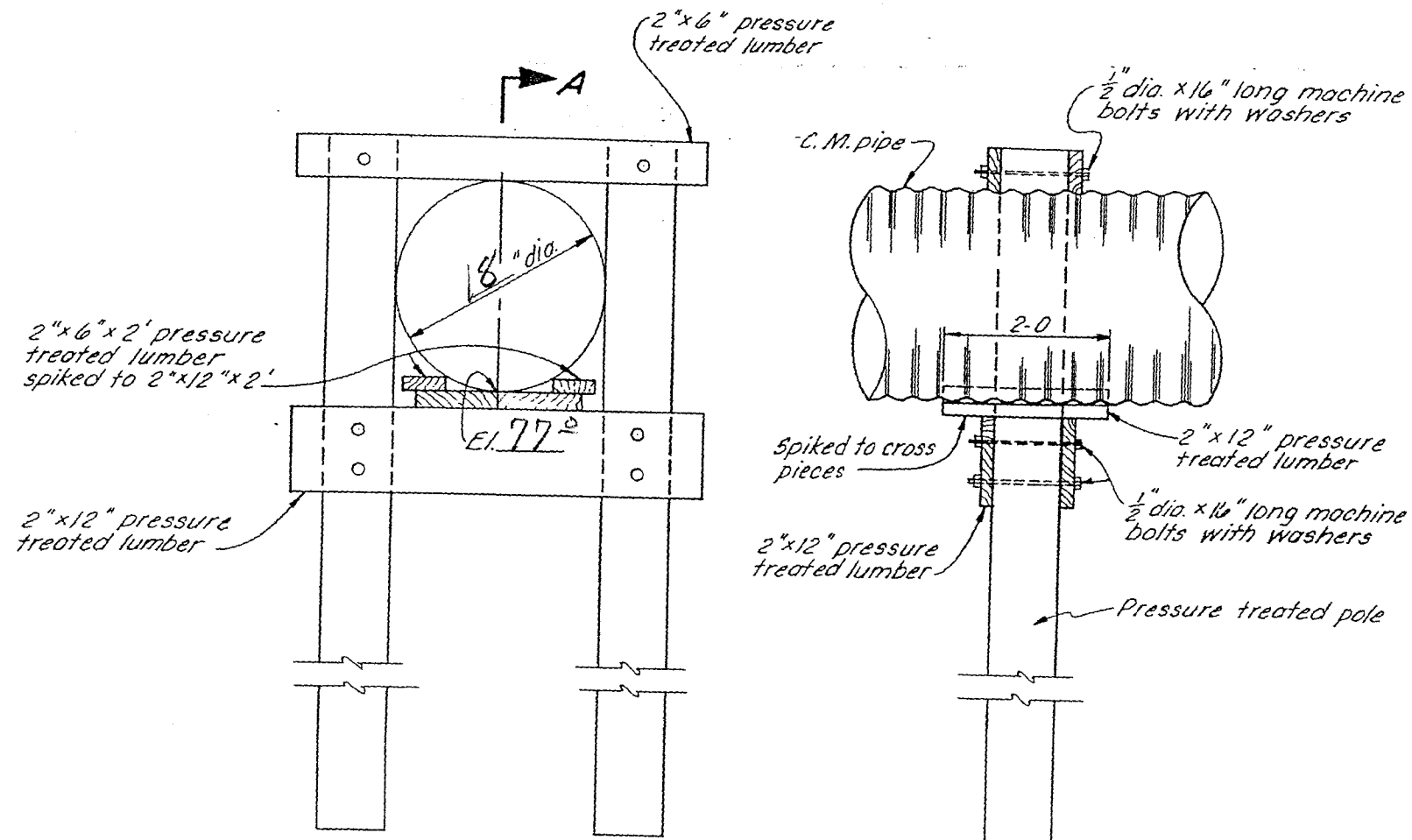
OPERATOR Harold Miller

CONSERVATION DISTRICT _____

**U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE**

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

JOB PLAN NO. 3.8



ELEVATION SECTIONAL ELEVATION A-A

TABLE OF QUANTITIES

ITEM	LENGTH FOR 18" DIA. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE 10" DIA.	8-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	4-0	EACH	2
2" X 6" PRESSURE TREATED LUMBER	4-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	2-0	EACH	3
2" X 6" PRESSURE TREATED LUMBER	2-0	EACH	2
1/2" DIA. MACHINE BOLTS WITH NUTS	1-4	EACH	10
1/2" DIA. WASHERS		EACH	20

REFERENCE: GUIDE PLAN NO. 4.0

NOTES:

- HAND OR MACHINE TAMP BACKFILL THOROUGHLY AROUND FOOTINGS AND COLUMNS.

TIMBER PIPE SUPPORT

OPERATOR: Harold Miller

CONSERVATION DISTRICT: _____

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

JOB PLAN NO. 4.0

RECEIVED

AUG 15 2012

WATER RIGHTS

PROGRAM

1*****
 SITES XEQ 07/20/2012 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
 VER 2005.1.05 (USER MANUAL - DATED DECEMBER 2005)
 TIME 15:15:12

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

SITES 01/01/2005 Harold Miller sec12, T12N, R9E1.5203125 H5
 SAVMOV 0 101
 SAVMOV 101 1 1
 STRUCTURE

76 0
 90 12.6
 92 16.1
 95 22.7

ENDTABLE
 WSDATA 5A1 AC 82 973 10348 7
 PDIRECT 1.6 3.00
 POOLDATA ELEV 91 91 76 76 SC
 PSINLET 1 12.56
 PSDATA 1 90 18 .01 77
 ASDATA 41 150 60 2 .1 2
 ASINSURF 41 .035
 ASINLET 41 0.0 0.0 80 0.0 3
 180 10

ENDTABLE
 ASEXSURF 41 .035
 .65 0
 3
 2 0
 .02

ENDTABLE
 ASEXIT 41 N 120
 BTMWIDTH FEET 50
 GRAPHICS I
 GO, DESIGN HL TYPE2 24 TYPE2378 24
 SAVMOV 2 101 1
 ENDJOB

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

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

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

1SITES -----
 XEQ 07/20/2012 Harold Miller sec12, T12N, R9E WSID=
 VER 2005.1.05 SUBW= A
 TIME 15:15:12 SITE = S 1 PASS= 1 PART= 1

***** BASIC DATA *****

CLIMATE AREA - NOT DEFINED

DESIGN CLASS A1 = LT 3000.

STORM DISTRIBUTION-PSH 24 HOUR TYPE II RAINFALL DISTRIBUTION

STORM DISTRIBUTION AUX. -24 HOUR TYPE II RAINFALL DISTRIBUTION

PRECIP. - P-PS, 1-DAY	P-PS, 10-DAY	P-SD	P-FB	
1.60	0.00	0.00	3.00	
WSDATA - CN	DA-SM	TC/L	-/H	ORF
82.00	1.52	10348.00	7.00	0.00
SITEDATA- PERM POOL	CREST PS	FP SED	VALLEY FL	378?
91.00	91.00	0.00	76.00	YES
BASEFLOW	INITIAL EL	EXTRA VOL	SITE TYPE	
0.00	0.00	0.00	DESIGN	
PSDATA - NO. COND	COND L	DIA/W	-/H	
1.00	90.00	18.00	0.00	
PS N	KE	WEIR L	TW EL	
0.010	1.00	12.56	77.00	
2ND STG	ORF H	ORF L	START AUX.	
0.00	0.00	0.00	0.00	
ASCRESTS - AUX.1	AUX.2	AUX.3	AUX.4	AUX.5
0.00	0.00	0.00	0.00	0.00
AUX.DATA - REF.NO.	RETARD. Ci	TIE STATION	INLET LENGTH	
41	0.00	150.00	60	
AUX.DATA - INLET N	SIDE SLOPE	EXIT N	EXIT SLOPE	ACTUAL AUX?
0.035	2.00	0.035	0.100	NO
BTM WIDTH - BW1	BW2	BW3	BW4	BW5
ft 50.00	0.00	0.00	0.00	0.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
XEQ 07/20/2012 Harold Miller sec12, T12N, R9E WSID=
VER 2005.1.05 SUBW= A
TIME 15:15:12 SITE = S 1 PASS= 1 PART= 2

MESSAGE ---- Climatic Index changed from 0.0 to 1.0 for this run.

PERM POOL	91.00 FT	101.7 ACFT	14.35 AC	0.0 CFS
CREST PS	91.00 FT	101.7 ACFT	14.35 AC	0.0 CFS
SED ACCUM	91.00 FT	101.7 ACFT	14.35 AC	0.0 CFS
START ELEV	91.00 FT	101.7 ACFT	14.35 AC	0.0 CFS

>>>> MINIMUM DEPTH (1.00 FT) USED FOR NHCP378 RUN - CREST PS TO CREST AUX.

NRCS-PSH D= 24.00 HR P= 1.60 IN Q= 0.40 IN DA= 1.52 SM
 TC= 1.22 HR CN= 82.00 VOL= 32.6 ACFT

PEAK = 158.9 CFS, AT 12.7 HRS.

ROUTED RESULT - HYD TYPE EMAX VOL-MAX AMAX QMAX
 NRCS-PSH 92.00 FT 116.9 ACFT 16.10 AC 31.8 CFS

PS STORAGE 15.2 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST 91.00 FT 101.7 ACFT 0.00 CFS
CONTROL IS 0.000 DETENTION STORAGE

DRAWDOWN TIME = 2.08 DAYS, TO 0.0 CFS (LIMIT = 10.00 DAYS)

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

RATING TABLE NUMBER 1

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	91.00	0.00	0.00	0.00	101.68	14.35
2	91.22	3.96	3.96	0.00	104.84	14.73
3	91.44	11.21	11.21	0.00	108.10	15.11
4	91.65	20.59	20.59	0.00	111.43	15.49
					FULL CONDUIT FLOW, ELEV = 91.87 FT	
5	91.87	31.71	31.71	0.00	114.85	15.88
6	92.26	32.13	32.13	0.00	121.21	16.68
7	92.65	32.54	32.54	0.00	127.90	17.54
8	93.04	32.94	32.94	0.00	134.93	18.40
9	93.44	33.34	33.34	0.00	142.29	19.26
10	93.83	33.74	33.74	0.00	149.99	20.12
11	94.22	34.13	34.13	0.00	158.02	20.98
12	94.61	34.51	34.51	0.00	166.39	21.84
13	95.00	34.89	34.89	0.00	175.10	22.70

1SITES

XEQ 07/20/2012 Harold Miller sec12, T12N, R9E WSID=
VER 2005.1.05 SUBW= A
TIME 15:15:12 SITE = S 1 PASS= 1 PART= 3

AUX. CREST 92.00 FT 116.9 ACFT 16.10 AC 31.8 CFS

PS STORAGE 15.2 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 91.00 FT 101.7 ACFT 14.35 AC 0.0 CFS

EFFECTIVE HEIGHT(H)= 16.0 FEET, PRODUCT= 1870. (H * STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-FBH D= 24.00 HR P= 3.00 IN Q= 1.38 IN DA= 1.52 SM
TC= 1.22 HR CN= 82.00 VOL= 111.9 ACFT

PEAK = 630.9 CFS, AT 12.7 HRS.

***** WARNING - UPSTREAM END OF CREST 70. IS UPSTREAM OF THE
FIRST GROUND POINT 90. STATION.

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

RATING TABLE NUMBER 2

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	91.00	0.00	0.00	0.00	101.68	14.35
2	91.22	3.96	3.96	0.00	104.84	14.73
3	91.44	11.21	11.21	0.00	108.10	15.11
4	91.65	20.59	20.59	0.00	111.43	15.49
FULL CONDUIT FLOW, ELEV = 91.87 FT						
5	91.87	31.71	31.71	0.00	114.85	15.88
6	91.89	31.73	31.73	0.00	115.11	15.90
7	91.90	31.75	31.75	0.00	115.36	15.93
8	91.92	31.77	31.77	0.00	115.62	15.96
9	91.94	31.79	31.79	0.00	115.87	15.99
10	91.95	31.80	31.80	0.00	116.13	16.02
11	91.97	31.82	31.82	0.00	116.39	16.04
12	91.98	31.84	31.84	0.00	116.64	16.07
13	92.00	31.85	31.85	0.00	116.90	16.10
14	92.15	36.52	32.01	4.51	119.34	16.43
15	92.30	41.19	32.17	9.02	121.83	16.76
16	92.57	62.29	32.45	29.84	126.43	17.35
17	92.90	105.66	32.79	72.87	132.28	18.08
18	93.50	230.46	33.41	197.06	143.53	19.40
19	94.25	440.74	34.16	406.58	158.69	21.05
20	95.00	710.44	34.89	675.54	175.10	22.70

SUMMARY OF AUXILIARY SPILLWAY SURFACE CONDITIONS USED IN COMPUTATIONS BY REACH

REACH	FROM STA (ft)	TO STA (ft)	SLOPE (%)	RETARDANCE CURVE INDEX@	VEGETAL COVER FACTOR	MAINT. CODE	ROOTING DEPTH (ft)	REACH LOCATION *
1	70.	150.	0.0	0.035	**	**	**	CREST
2	150.	270.	10.0	0.035	0.65	3	2.0	EXIT !

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

* Upper case indicates a reach of constructed spillway channel.

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

! Reach 2 used in computing exit channel velocities.

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 92.00 FT.

DRAWDOWN (DDT) TEST 91.00 FT 101.7 ACFT 0.00 CFS
CONTROL IS 0.000 DETENTION STORAGE

DRAWDOWN TIME = 1.78 DAYS, TO 0.0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
NRCS-FBH	50.0	93.62	145.9	19.7	1.62	29.0

^^^^ NOTE -- ACTUAL Hp OF 1.62 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS DISCHARGE =	Q-PS 33.5	Q-AUX. 229.2	Q-TOT. 262.7
------------------------	-----------	--------------	--------------

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-Sc FT/FT	25% OF Q Sc FT/FT
AUXILIARY SPILLWAY ---	0.86	5.17	0.019	0.026

EROSIONALLY EFFECTIVE STRESS FOR STABILITY ANALYSIS OF AUX. EXIT CHANNEL
(Refer to Ag. Handbook 667, Chapt. 3, for allowable stresses.)

Aux. Spillway Discharge = 229. cfs; Bottom Width = 50. ft

REACH NO.	FROM STA	TO STA	SLOPE %	MANNING'S n	VELOCITY ft/s	TOTAL STRESS lb/ft^2	EFFECTIVE STRESS lb/ft^2
2	150.	270.	10.00	0.035	8.58	3.27	1.988

AUXILIARY SPILLWAY DURATION FLOW =	13.3 HOURS
ATTACK, OE/B =	1.2 ACFT/FT

***** MESSAGE - NHCP378 CRITERIA USED BUT AUXILIARY SPILLWAY RATING NOT BASED ON ASFILE RATINGS.

EXIT CHANNEL FLOW SUPERCRITICAL: MAX VELOCITY=	8.6 FT/SEC
EXIT SLOPE =	0.100 FT/FT
FLOW DEPTH =	0.5 FT

>>>> NHCP378 RUN - MINIMUM FLOW IN AUX. SPILLWAY FROM TR60
USING FORMULA WITHOUT 200 CFS MINIMUM LIMIT (291. CFS).

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
MIN. AUX.	50.0	93.85	150.4	20.2	1.85	33.5

^^^^ NOTE -- ACTUAL Hp OF 1.85 RAISED TO MEET MIN. 378 CRITERIA.

PEAK - CFS DISCHARGE =	Q-PS 33.8	Q-AUX. 291.4	Q-TOT. 325.1
------------------------	-----------	--------------	--------------

	CRITICAL	CRITICAL	CRITICAL	25% OF Q
	DEPTH	VELOCITY	SLOPE-Sc	Sc
AUXILIARY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY ---	1.00	5.58	0.018	0.024

>>>> NHCP378 RUN - MINIMUM DEPTH, CREST AUX. TO TOP OF DAM IS 2.00 FT.
NEW TOP OF DAM ELEVATION = 94.00.

ROUTED	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	AUX.HP	VOL-AUX.
RESULTS	FT	FT	ACFT	AC	FT	ACFT
MINIMUM AUX.	50.0	94.00	153.6	20.5	2.01	36.7
PEAK - CFS		Q-PS	Q-AUX.	Q-TOT.		
DISCHARGES =		33.9	336.7	370.6		

	CRITICAL	CRITICAL	CRITICAL	25% OF Q
	DEPTH	VELOCITY	SLOPE-Sc	Sc
AUXILIARY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY ---	1.10	5.84	0.018	0.024

>>>> NHCP378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM; 1.00 FT REQUIRED
FOR THIS PASS. NEW TOP OF DAM ELEVATION = 94.62.

ROUTED	BTM WIDTH	MAX ELEV	VOL-MAX	AREA-MAX	AUX.HP	VOL-AUX.
RESULTS	FT	FT	ACFT	AC	FT	ACFT
MINIMUM AUX.	50.0	94.62	166.8	21.9	2.63	49.9
PEAK - CFS		Q-PS	Q-AUX.	Q-TOT.		
DISCHARGES =		34.5	539.0	573.5		

	CRITICAL	CRITICAL	CRITICAL	25% OF Q
	DEPTH	VELOCITY	SLOPE-Sc	Sc
AUXILIARY	FT	FT/SEC	FT/FT	FT/FT
SPILLWAY ---	1.50	6.77	0.016	0.021

Inflow Hyd 1 PSH-Peak = 31.80 CFS at 14.97 hrs., Location Point

Inflow Hyd 1 FBH-Peak = 262.73 CFS at 13.52 hrs., Location Point
HYDOUT 1

1SITES....JOB NO. 1 COMPLETE.

Harold Miller sec12, T12N, R9E

0 SUBWATERSHED(S) ANALYZED.

1 STRUCTURE(S) ANALYZED.

2 HYDROGRAPHS ROUTED AT LOWEST SITE.

0 TRIALS TO OBTAIN BOTTOM WIDTH FOR SPECIFIED STRESS OR VELOCITY.

SITES.....COMPUTATIONS COMPLETE

>>>										<<<
	SITE ID	SUBWS ID	SUBWS DA (SQ MI)	CURVE NO.	TC (HRS)	TOTAL DA (SQ MI)	TYPE DESIGN	STRUC CLASS		
	S 1	A	1.52	82.	1.22	1.52	378CR	A1		

PASS NO.	DIA./ WIDTH (IN/FT)	AUX.CREST ELEV (FT)	BTM. WIDTH (FT)	MAX. HP (FT)	MAX. ELEV (FT)	EMB. VOL. (CY)	INTEGR.* DIST. (FT)	EXIT* VEL. (FT/SEC)	TYPE HYD
1	18.0	92.0	50.0	2.6	94.6	0.	0.	8.6	MIN. AUX.

* INTEGRITY DIST. AND EXIT VEL. ARE BASED ON THE ROUTED HYDROGRAPH AND WILL NOT RELATE TO THE MAX. ELEV. (TOP OF DAM), WHICH IS SET BY MINIMUM DESIGN CRITERIA.

SITES.....SUMMARY TABLE 1 COMPLETED.

NRCS SITES VERSION 2005.1.05 ,01/01/2005
FILES

INPUT = C:\miller\48-18.D2C
OUTPUT = C:\miller\48-18.OUT
DATED 07/20/2012 15:15:12

GRAPHICS FILES GENERATED

OPTION "L" = C:\miller\48-18.DRG DATED 07/20/2012 15:15:12
OPTION "P" = C:\miller\48-18.DHY DATED 07/20/2012 15:15:12
OPTION "E" = C:\miller\48-18.DEM DATED 07/20/2012 15:15:12

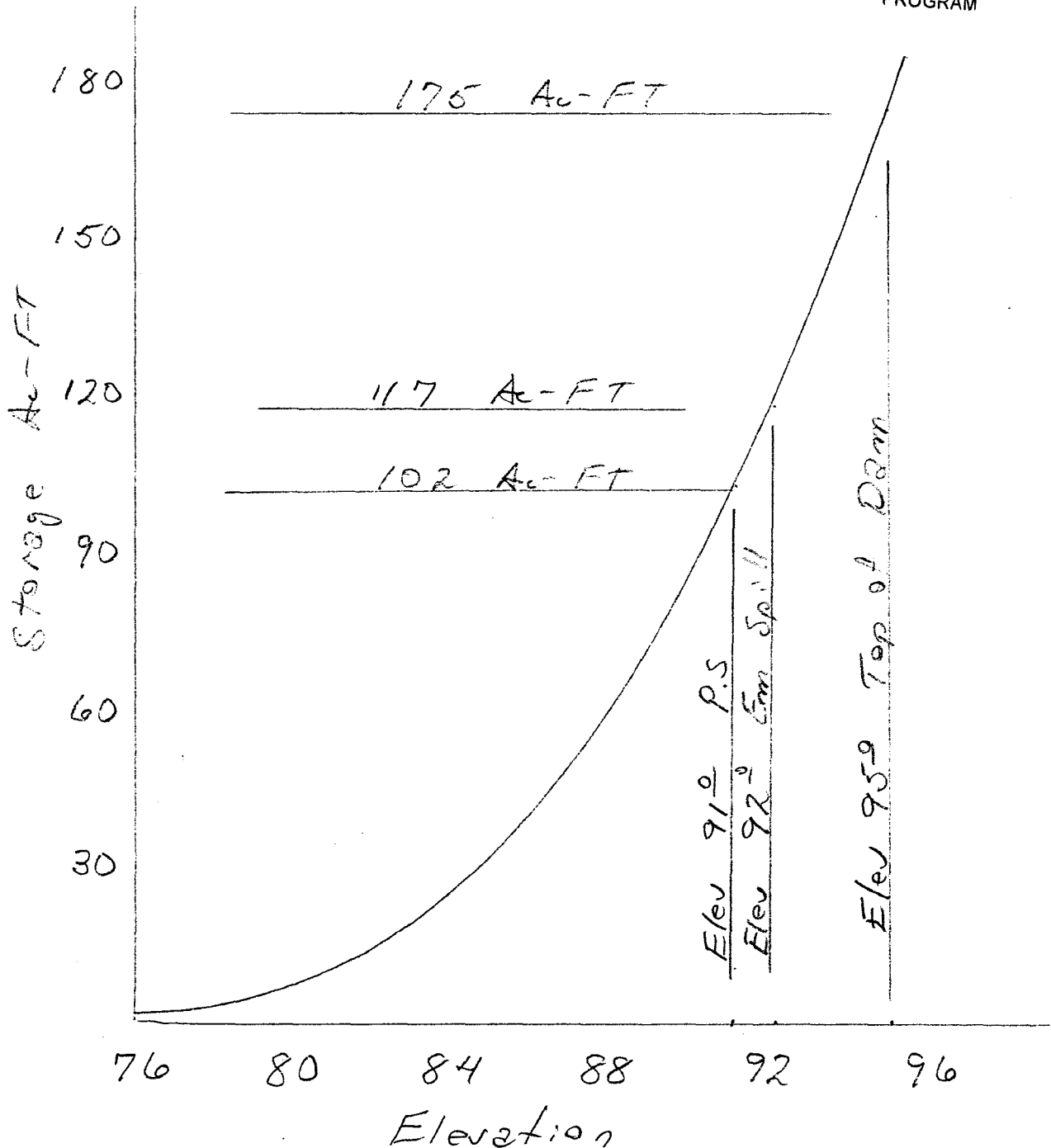
COMPUTATION SHEET

BY	DATE	PROJECT	SHEET ____ OF ____
CHKD BY	DATE	FEATURE <i>Harold Miller</i>	
DETAILS <i>NW12, T12N, R9E Butte Co.</i>			

RECEIVED

AUG 15 2012

WATER RIGHTS
PROGRAM



Water Permit Application No. 1930-1
Harold Miller

Top of Dam Elev. - 95
2nd Spillway Elev. - 92
P. Spillway Elev. - 91
Dis Emb. Toe Elev. - 75

Cat. 3 - Low Hazard Dam

Ht. = 20 ft.

Normal Storage Capacity - 102 Ac-Ft
Int. Storage Capacity - 117
Max. Storage Capacity - 175

Int. Capacity x Eff. Ht. = $117 \times 16 = 1872 < 3000 \therefore 25 \text{ yr}$
Minimum Spillway Design

From USGS WRI 94-4055 "Tech for Est. Peak Flows ... in SO"
Region C - DA = 973 Ac = 1.52 mi²

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

$$= 207 (1.52)^{.573}$$

$$= \underline{263 \text{ cfs}}$$

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

$$= 379 (1.52)^{.566}$$

$$= \underline{480 \text{ cfs}}$$

Secondary Spillway Capacity

$$Q = CLH^{3/2}$$

$$C = 2.6$$

$$L = 50$$

$$H = 3$$

$$= 2.6(50)(3)^{1.5}$$

$$= \underline{675 \text{ cfs}}$$

NRCS Annual Yield

$$DA = 973 \text{ Ac } CN = 82 \text{ ISO} = 1/42$$

Section 74:02:08:09

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

$$80\% \text{ chance} = 0.24$$

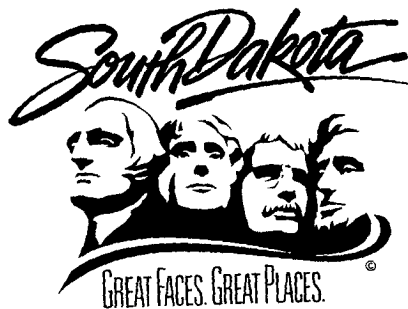
$$0.24 \times 973/12 = \underline{19 \text{ Ac-Ft.}}$$

$$50\% \text{ chance} = 0.60$$

$$0.60 \times 973/12 = \underline{49 \text{ Ac-Ft.}}$$

$$10\% \text{ chance} = 2.3$$

$$2.3 \times 973/12 = \underline{186 \text{ Ac-Ft.}}$$



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

September 24, 2012

Harold Miller
15301 Sulpher Cut-Off Rd.
Newell, SD 57760

Dear Mr. Miller:

We have reviewed the plans and specifications for your dam project located in the S ½ NW ¼ of Sec. 12-T12N-R9E, in Butte County. The plans and specifications for the reconstruction of the existing dam are approved. Approval of the plans and specifications does not authorize reconstruction of the dam. The reconstruction of the dam may not begin until Water Permit No. 1930-1 is approved.

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

The dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 20 ft. and a normal storage capacity of 102 acre-feet and a maximum storage capacity of 175 acre-feet.

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

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineer IV
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Steve Fairbairn, USFWS
Dave Konechne



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1930-1, Harold Miller**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 1930-1, Harold Miller, 15301 Sulphur Cut-Off Road, Newell SD 57760.

The Chief Engineer is recommending APPROVAL of Application No. 1930-1 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. Water Permit No. 1930-1 authorizes an impoundment with a storage capacity of 102 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
September 17, 2012

REPORT ON
WATER PERMIT APPLICATION No. 1930-1
Harold Miller
August 30, 2012

Water Permit Application No. 1930-1 has been filed by Harold Miller to impound 102 acre-feet of water from runoff by reconstructing an existing dam located in the S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 12-T12N-R9E, in Butte County. The application also requests impoundment of sufficient water to maintain water to the outlet elevation. The water will be used for fish and wildlife production and livestock water purposes.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The dam has been designed by Konechne Engineering. The plans and specifications have been reviewed and will be approved; however, reconstruction of the dam can not begin until Water Permit Application No. 1930-1 is approved.

The dam will be 20 feet high with a normal storage capacity of 102 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 175 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

The dam has a drainage area of 973 acres or 1.52 square miles. The dam is designed to have a 4 ft. by 4ft. concrete box riser with an 18 inch PVC barrel and 4.0 feet of freeboard as the primary spillway, and a 50 foot wide earthcut secondary spillway with 3 feet of freeboard. A 25 year frequency event produces a peak runoff of approximately 263 cfs and a 100 year frequency event produces a peak runoff of approximately 480 cfs. The earthcut spillway will have a capacity of approximately 675 cfs.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 19 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 49 acre-feet and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 186 acre-feet.

The Miller Dam will be located in the S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 12-T12N-R9E on Trail Creek, about four miles upstream of the confluence of Trail Creek and the South Fork of the Moreau River. There are no existing Water Permits/Rights filed on Trail Creek between the proposed dam and the South Fork of the Moreau River.

Conclusions:

1. Water Permit Application No. 1930-1 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for domestic use should be a qualification on Water Permit Application No. 1930-1.


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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

September 18, 2012

Butte County Post
614 State St
Belle Fourche SD 57717

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 1930-1 to Appropriate Water. Please publish the notice once on September 26, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Harold Miller, 15301 Sulphur Cut-Off Rd., Newell SD 57760 (Ph # 605-748-2269).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

September 18, 2012

Black Hills Pioneer
PO Box 7
Spearfish SD 57783

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 1930-1 to Appropriate Water. Please publish the notice once on September 26, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Harold Miller, 15301 Sulpher Cut-Off Rd., Newell SD 57760 (Ph # 605-748-2269).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATE, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.

September 18, 2012

Harold Miller
15301 Sulpher Cut-Off Rd
Newell SD 57760

Dear Mr. Miller:

Water Permit Application No. 1930-1 for fish and wildlife use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Butte County Post printed at Belle Fourche SD (Ph # 605-892-2528) and the Black Hills Pioneer printed at Spearfish SD (Ph # 605-642-2761). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and 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(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on September 26, 2012. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 1930-1 to Appropriate Water

Notice is given that Harold Miller, 15301 Sulphur Cut-Off Rd, Newell SD 57760 has filed an application for a water permit to impound 102 acre-feet of water from runoff by reconstructing a dam located in the S $\frac{1}{2}$ NW $\frac{1}{4}$ Section 12 with water impounded in the S $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 12; all in T12N-R9E. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1930-1 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by October 9, 2012.

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

Published once at the total approximate cost of _____.

RECEIVED

OCT - 1 2012

WATER RIGHTS
PROGRAM

Affidavit of Publication

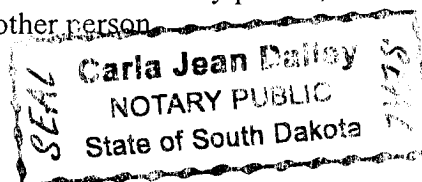
State of South Dakota
County of Butte

Karen L. Wallace, being duly sworn, says: That the *Butte County Post* is, and during all times hereafter mentioned, was a legal newspaper as deemed in SDCL 17-2-2, as amended, published at Belle Fourche, Butte County, South Dakota, By *Rapid City Journal*; that affidavit is and, during all of said times, was employed by the publisher of such newspaper and has personal knowledge of the facts stated in the affidavit; that the notice, order or advertisement, a printed copy of which is attached, was published in said newspaper for successive issues, bearing the following date(s):

Wed., Sept 26, 2012
_____, 2012
_____, 2012
_____, 2012

That the full amount of the fee charged for publishing the same, to with, that of \$ 23.41, insures solely to the benefit of the publisher of said newspaper that no agreement or understanding for the division of the fee has been made with any person, and that no part of the fee has been agreed to be paid to any other person.

Karen Wallace
Karen Wallace, Customer Service



Subscribed and sworn to before me this 26th day of September, 2012.

Carla Jean Dailley
Notary Public, South Dakota

My commission expires May 24, 2018

**NOTICE OF APPLICATION
NO. 1930-1 to Appropriate
Water**

Notice is given that Harold Miller, 15301 Sulphur Cut-Off Rd, Newell SD 57760 has filed an application for a water permit to impound 102 acre-feet of water from runoff by reconstructing a dam located in the S 1/2 NW 1/4 Section 12 with water impounded in the S 1/2 SW 1/4, NW 1/4 SE 1/4 Section 12; all in T12N-R9E. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1930-1 because:

- 1) Unappropriated water is available,
- 2) Existing rights will not be unlawfully impaired,
- 3) It is a beneficial use of water, and
- 4) It is in the public interest.

In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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

Steven M. Pirner, Secretary

Department of Environment and Natural Resources.

Published Wed., Sept. 26,
2012

Butte County Post

RECEIVED

OCT - 1 2012

WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA:

COUNTY OF LAWRENCE:

Letitia Lister of said County and State being first duly sworn, on her oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Letitia Lister, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and that I, Letitia Lister, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Notice of Application
No. 1930-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive and consecutive weeks, the first publication being made on the 26th day of Sept., 2012 and the last publication on the _____ day of _____, _____, that the full amount of fees charged for publishing same, to-wit: The sum of \$ 23.51, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Subscribed and sworn to before me this 26th day of Sept., 2012

Adrian R. Richards

Notary Public, Lawrence County, South Dakota

My commission expires: 10-24-2016

NOTICE OF APPLICATION NO. 1930-1 to Appropriate Water

Notice is given that Harold Miller, 15301 Sulpher Cut-Off Rd., Newell, SD 57760 has filed an application for a water permit to impound 102 acre-feet of water from runoff by reconstructing a dam located in the S 1/2 NW 1/4 Section 12 with water impounded in the S 1/2 SW 1/4 NW 1/4 SE 1/4 Section 12; all in T12N-R9E. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1930-1 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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

Published once at the
total approximate cost of
\$23.06.

#127
Sept. 26

comma
missing



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

October 2, 2012

Harold Miller
15301 Sulpher Cut-Off Rd
Newell SD 57760

Dear Mr. Miller:

The Notice of Application No. 1930-1 for fish, wildlife and livestock watering printed September 26, 2012, in the Black Hills Pioneer, Spearfish contained an error in the legal description of the area where water is to be impounded (copy enclosed). Therefore, the notice needs to be readvertised to correct the error and to ensure your water permit is free from any legal entanglements due to insufficient public notice.

The Black Hills Pioneer has been instructed to publish the notice again on October 3, 2012 with the date for submittal of petitions being October 15, 2012. If you have any questions, please contact me.

Sincerely,

Eric Gronlund /cs

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, October 02, 2012 10:52 AM
To: 'Black Hills Pioneer Spearfish (legals@bhpioneer.com)'
Subject: Notice of Application No. 1930-1 for Harold Miller
Attachments: 1930-1public.short.docx

Contacts: Black Hills Pioneer Spearfish

Vicki,
Attached is the notice to be published again on October 3rd. Please send us the affidavit as soon as possible after publication.

Thanks,
Karen Schlaak
Water Rights Program
Phone: 605 773-3352
Fax: 605 773-4068

NOTICE OF APPLICATION NO. 1930-1 to Appropriate Water

Notice is given that Harold Miller, 15301 Sulphur Cut-Off Rd, Newell SD 57760 has filed an application for a water permit to impound 102 acre-feet of water from runoff by reconstructing a dam located in the S 1/2 NW 1/4 Section 12 with water impounded in the S 1/2 SW 1/4, NW 1/4 SE 1/4 Section 12; all in T12N-R9E. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1930-1 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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Published once at the total approximate cost of _____.

RECEIVED

OCT 12 2012

WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA:

COUNTY OF LAWRENCE:

Letitia Lister of said County and State being first duly sworn, on her oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Letitia Lister, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and that I, Letitia Lister, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Notice Of Application
No. 1930-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive and consecutive weeks, the first publication being made on the 3rd day of Oct, 2012, and the last publication on the day of , , that the full amount of fees charged for publishing same, to-wit: The sum of \$ 23.51, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Subscribed and sworn to before me this 8th day of Oct, 2012

Deborah Richards

Notary Public, Lawrence County, South Dakota

My commission expires: 10-24-2016

NOTICE OF APPLICATION NO. 1930-1 to Appropriate Water

Notice is given that Harold Miller, 15301 Sulphur Cut-Off Rd, Newell SD 57760 has filed an application for a water permit to impound 102 acre-feet of water from runoff by reconstructing a dam located in the S 1/2 NW 1/4 Section 12 with water impounded in the S 1/2 SW 1/4, NW 1/4 SE 1/4 Section 12; all in T12N-R9E. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

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Steven M. Pirner,
Secretary,
Department of
Environment

and Natural Resources
Published once at the
total approximate cost of
\$23.06.

#149
Oct. 3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

DEC 11 2012

Harold Miller
15301 Sulphur Cut-Off Rd
Newell SD 57760

Dear Mr. Miller:

Enclosed is Water Permit No. 1930-1 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 1930-1

I have this day, November 9, 2016, made a thorough examination of the water use system constructed by Harold Miller, 15301 Sulpher Cut-Off, Newell, SD 57760 of Permit No. 1930-1, bearing the priority of 8/15/2012 authorizing the diversion and storage of 102 acre-feet of water of Trail Creek, tributary of the Moreau River for fish & wildlife and livestock purposes in Butte County.

Inspection contact & relationship to permit holder, if applicable:

Harold Miller, owner
605-748-2269

A. Dam Information:

- 1) Height to crest 19.0 feet from downstream toe
- 2) Height to primary spillway 15.0 feet from downstream toe
- 3) Height to secondary spillway 16.0 feet from downstream toe
- 4) Crest width 12 feet
- 5) Crest length 400 feet
- 6) Primary Spillway diameter 18 inches
- 7) Secondary Spillway width 50 feet
- 8) Approx. storage to primary spillway 102 ac-ft
- 9) Approx. storage to crest 175 ac-ft

Date constructed: 2013

B. Works used to put water to beneficial use:

This is an earth fill embankment utilizing a PVC pipe principal spillway and a vegetated earth emergency spillway. The water impounded in the reservoir is put to beneficial use in-place.

C. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by: Yes

Low flows as needed for downstream domestic use including livestock and prior water rights must be by-passed. A permanent by-pass structure was not installed. Any by-pass of flows if needed will use temporary means.

Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period. N/A

List any extended period of nonuse: **none**

- 2) Exceptions to compliance are: none

D. Condition and Location:

1. The system is in **good** condition with the point of diversion located as follows:
1,277' E and 1,706' S of the NW corner Section 12 T12N R9E (45.019082, -102.974036)

The works are capable of diverting to the place of use and storing **102.0** acre-feet of water which is to be used for **fish, wildlife and livestock** use. Water has been put to beneficial use to the maximum extent and the license should be issued for **102.0 acre-feet** storage.

2. All structures, wells and lands on map **Yes**

E. Comments or other permit(s) associated with the project: none



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: **11/14/2016**



pool and embankment

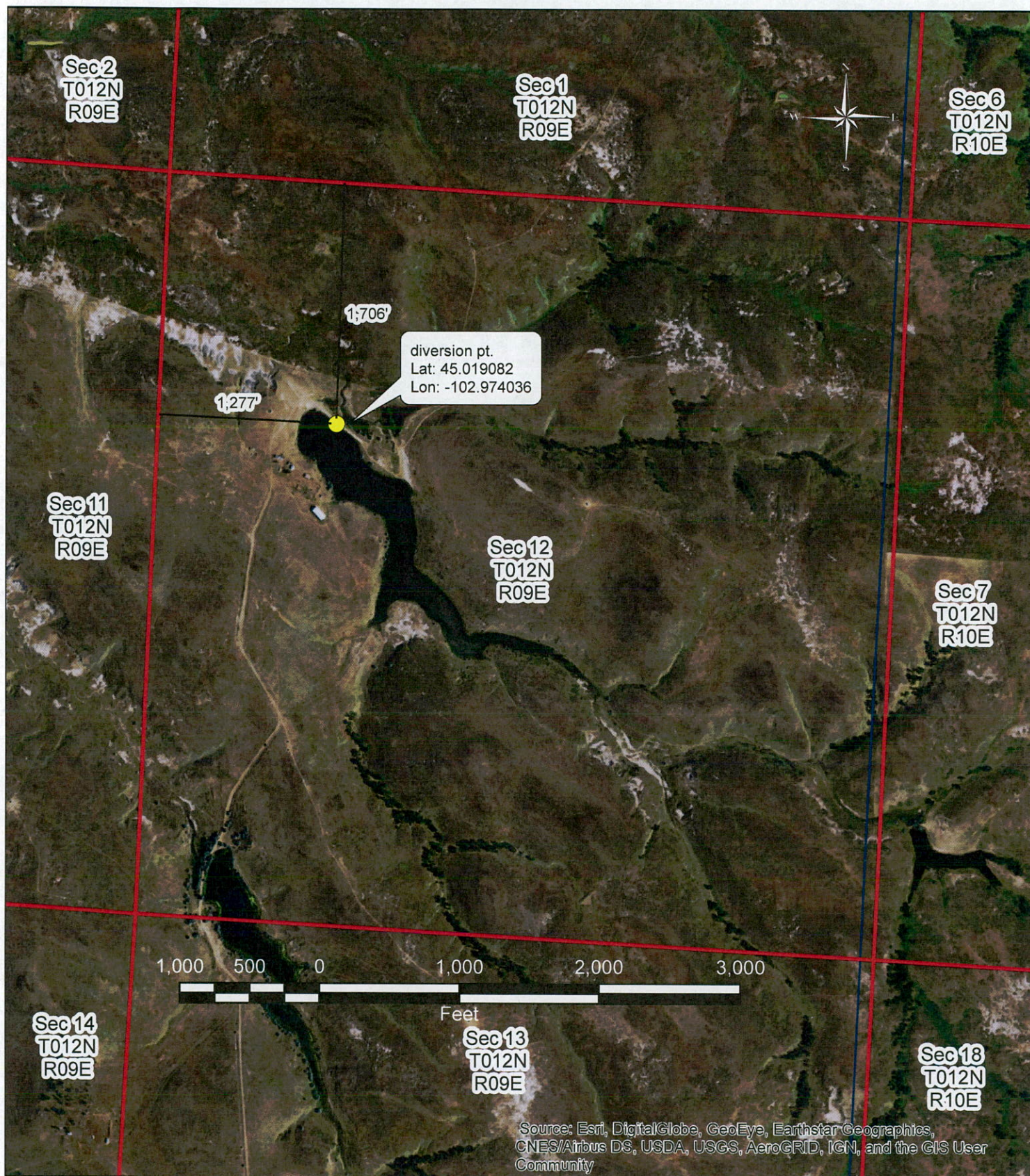


riser and trash rack



PVC principal spillway outlet

Water Right #1930-1
Harold Miller
11/9/2016



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1930-1

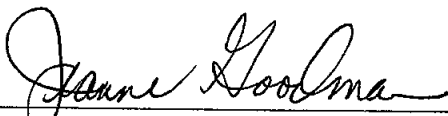
(1) Harold Miller, 15301 Sulpher Cut-Off Rd, Newell SD 57760 made Application No. 1930-1, August 15, 2012 for a water permit to impound 102 acre feet of water from runoff, Butte County, South Dakota for fish and wildlife propagation and livestock watering purposes. Permit No. 1930-1, with a priority date of August 15, 2012 was approved October 15, 2012 and issued to the applicant for impoundment of water with construction of the described water supply system to be completed on or before October 15, 2017 and for the application to beneficial use of water on or before October 15, 2021.

(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. 1930-1 is issued a license, bearing a priority date of August 15, 2012, to impound 102 acre feet of water from runoff on Trail Creek, a tributary of the Moreau River, for fish and wildlife propagation and livestock watering purposes.

The location of the storage dam (spillway) is 1,277 feet E and 1,706 feet S of the NW corner Section 12-T12N-R9E (S 1/2 NW 1/4).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 1930-1, including the following qualifications:

- Water Permit No. 1930-1 authorizes an impoundment with a storage capacity of 102 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.



Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JAN 30 2017
date





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

JAN 30 2017

1930-1

Harold Miller
15301 Sulpher Cut-Off Rd
Newell SD 57760

Dear Mr. Miller:

Enclosed is Water License No. 1930-1. This is the final water right document completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures