

# SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 NW 1/4 Sec 18 Twp 2N Rg 9E

Well Owner: USAF

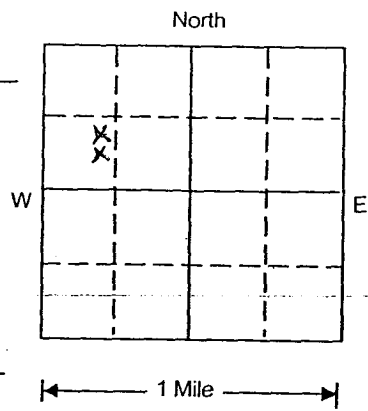
County  
Pennington

Business Name: \_\_\_\_\_

Address: 2103 SCOTT DRIVE

City, State, Zip: ELLSWORTH AFB, SD 57706

MW 112302  
MW 112303  
Please mark well location with an "X"



Well Completion Date  
6-2-11

FORMATION	DEPTH	
	FROM	TO
<u>See attached drilling logs</u>	<u>0'</u>	<u>17'</u>
<u>For SB112302 + SB112303</u>		

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)  
? \_\_\_\_\_ ft. from Unknown (identify source)

**PROPOSED USE:**  
 Domestic/Stock  
 Irrigation  
 Municipal Industrial  
 Business Institutional  
 Test Holes  
 Monitoring well

**METHOD OF DRILLING:**  
4.25" I.D. Hollow Stem Auger

**CASING DATA:**  Steel  Plastic  Other  
If other describe PVC - SCH 40

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	2 IN	+2.8 FT	7 FT	8.5 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

**GROUTING DATA:**  
Grout Type Cement Grout No. of Sacks \_\_\_\_\_ Grout Weight \_\_\_\_\_ Lb/gal From 0 Ft To 4 Ft

Describe grouting procedure  
Mixed before placed

**SCREEN:**  Perforated pipe  Manufactured  
Diameter 2 inches Length 10 Feet  
Material PVC - Sch 40  
Slot Size 0.010 Set From 7 Feet to 17 Feet  
Other information  
No. 16-30 Silica sand from 6' to 17'

**WAS A PACKER OR SEAL USED?**  Yes  No  
If so, what material? 3/8" Bentonite Pellets  
Describe packer(s) and location From 4' to 6'

**DISINFECTION:** Was well disinfected upon completion?  
 Yes, How? Monitoring Well  
 No, Why Not?

Lab sample sent to for water quality analysis

**STATIC WATER LEVEL** 14.5' For 42; 10' For 43 FEET BTC  
If flowing: closed in pressure \_\_\_\_\_ PSI  
GPM flow \_\_\_\_\_ through \_\_\_\_\_ inch pipe  
Controlled by  Valve  Reducers  Other \_\_\_\_\_  
Reduced flow rate \_\_\_\_\_ GPM  
Can well be completely shut in? Well heads were completed with a 4"x4"x7' Steel Protop.

**WELL TEST DATA:**  
 Pumped Describe: UNKNOWN  
 Bailed  
 Other  
Pumping Level Below Land Surface  
\_\_\_\_\_ Ft After \_\_\_\_\_ Hrs. pumped \_\_\_\_\_ GPM  
\_\_\_\_\_ Ft After \_\_\_\_\_ Hrs. pumped \_\_\_\_\_ GPM  
If pump installed, pump rate: \_\_\_\_\_ GPM

**REMARKS**

This well was drilled under license # 678  
And this report is true and accurate.  
Drilling firm: AMERICAN ENGINEERING TESTING, INC.  
Signature of License Representative:

Byron R. Schuf

Signature of Well Owner or Equitable Property Holder:  
Donald E. Styles

Date: 30 Aug 11



# DRILLING LOG

HOLE NUMBER  
SB112302

PROJECT  
Ellsworth AFB, ST-23 Site Characterization

INSPECTOR  
Joe Odegaard

SHEET 2 OF 2 SHEETS

ELEV (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNTS (g)	REMARKS (h)
		Grass surface					
	1	0-4', sandy CLAY (CL), dark brown, some gravel, trace cobbles, mod. plast., moist	SS=0				R = 14/48
	2						
	3						
	4	4-8', same as above					
	5		SS=0				
	6						R = 60/60
	7						
	8	8-9', sandy GRAVEL (GP), brown, fine to coarse grain, some clay, moist	SS=0.1				
	9	9-10', same as above					
	10	10-11', SAND (SP), brown, fine grain, moist	SS=0.2				
	11	11-11.3', CLAY (CL), tan, soft, moist					R = 20/60
	12	11.3-14', Gravelly SAND (SP), multicolored, trace cobbles, med. to coarse grain, wet	SS=3.2				
	13						
	14	14-14.5', same as above, black	SS=22				petroleum odor cobble in sample tip
	15	14.5-17', SHALE (SH), grayish brown, high plast., blocky, weathered, wet to 15'	SS=9				petroleum odor
	16	moist 15-17'					R = 36/36
	17	End of boring at 17'					
	18						
	19						

PROJECT  
Ellsworth AFB, ST-23 Site Characterization

SB112302

# DRILLING LOG

Ellsworth Air Force Base

HOLE NUMBER

SB112303

1. COMPANY NAME

URS

2. DRILL SUBCONTRACTOR

American Engineering Testing

SHEET

1

OF

2

SHEETS

3. PROJECT

Ellsworth AFB, ST-23 Site Characterization

4. SITE NAME

Ellsworth AFB, SD

5. NAME OF DRILLER

Brent Thomas

6. MANUFACTURER'S DESIGNATION OF DRILL

CME 75

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT

4 1/4-inch ID HSA

8. HOLE LOCATION

See location sketch

4-inch by 5 foot split spoon

samplers

9. SURFACE ELEVATION

3178.02

10. DATE STARTED

5-31-11

11. DATE COMPLETED

5-31-11

12. OVERBURDEN THICKNESS

12'

15. DEPTH GROUNDWATER ENCOUNTERED

8.7'

13. DEPTH DRILLED INTO ROCK

5'

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING

7.15 after 19 hrs.

14. TOTAL DEPTH OF HOLE

17'

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

NA

18. GEOTECHNICAL SAMPLES

DISTURBED

UNDISTURBED

19. TOTAL NUMBER OF CORE BOXES

0

0

20. SAMPLES FOR CHEMICAL ANALYSIS

VOC

METALS

OTHER (SPECIFY)

OTHER (SPECIFY)

OTHER (SPECIFY)

21. TOTAL CORE RECOVERY

0

NA %

22. DISPOSITION OF HOLE

BACKFILLED

MONITORING WELL

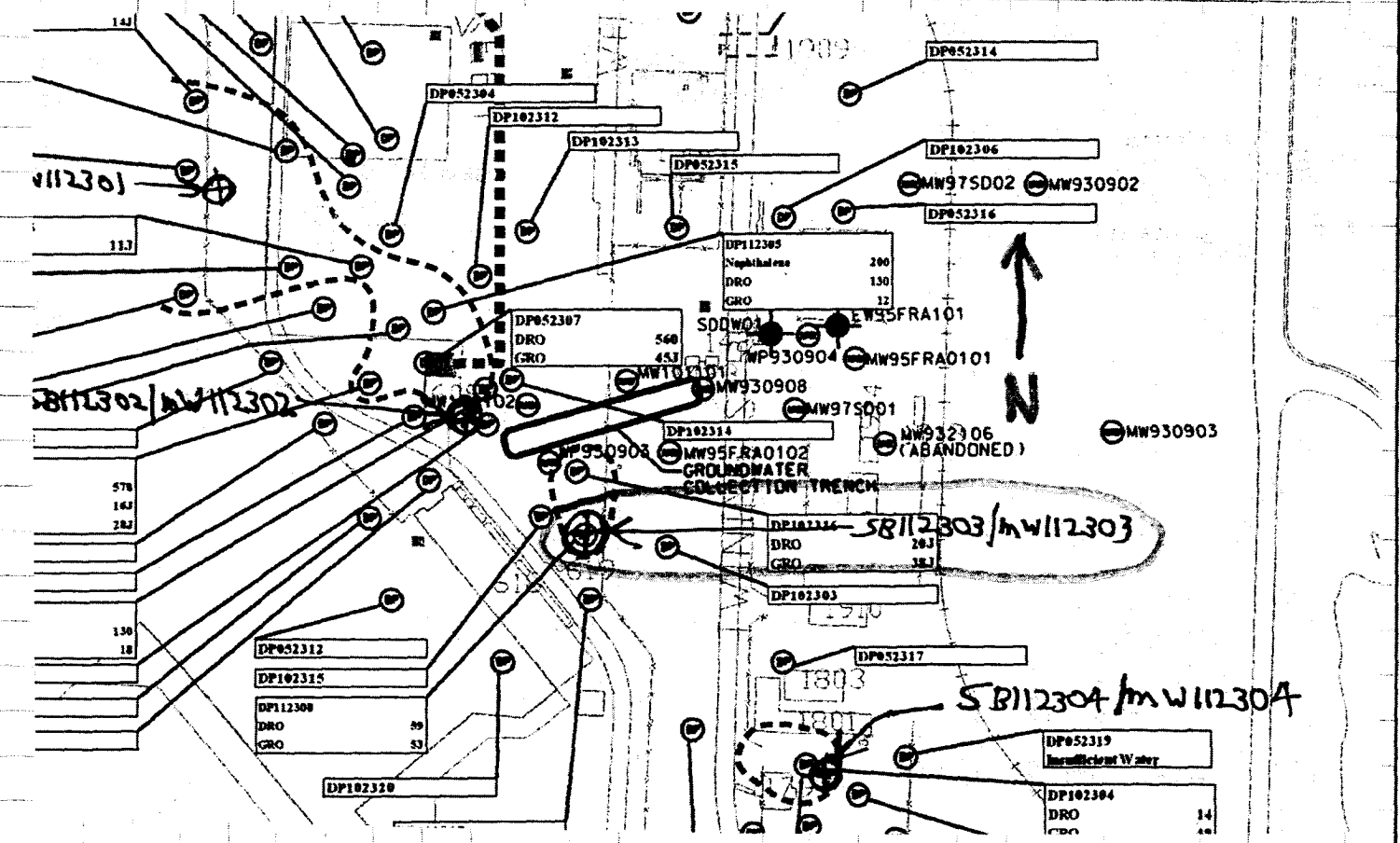
OTHER (SPECIFY)

23. SIGNATURE OF INSPECTOR

X

## LOCATION SKETCH/COMMENTS

SCALE: 1 inch = 300 feet



PROJECT

Ellsworth AFB, ST-23 Site Characterization

HOLE NO.

SB112303

# DRILLING LOG

HOLE NUMBER  
SB1123 03

PROJECT  
Ellsworth AFB, ST-23 Site Characterization

INSPECTOR  
Joe Odegaard

SHEET 2 OF 2 SHEETS

ELEV (b)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO (f)	BLOW COUNTS (g)	REMARKS (h)
	0	Grass surface					
	1	0-8" Gravelly CLAY (CL), brown, trace organics, moist fill					
	2	8"-2' crushed asphalt, black, moist, fill	SS=0.1 HS=0.2				R = 46/48
	3	2'-4' CLAY (CL), brown, low plast, soft, moist	SS=0				
	4	sand in sample tip					
	5	4-8.7' SAND (SP), brown, fine to med. grain, trace gravel, moist	SS=0				
	6						
	7						
	8						
	9	8.7-9' <del>fine</del> clayey gravel (GC), brown, some cobbles, wet	SS=2.1				
	10	9-12' same as above					
	11	gray 10.5-11.5', some sand 10-12'	SS=59				R = 46/60 slight petroleum odor
	12	12-14' CLAY (CH), grayish brown, some shale, high plast., moist	SS=0.8				
	13						
	14	more shale, blocky					
	15	14-17', same as above, more shale, wet in factures	SS=0.2				R = 48/35
	16	wet concrete at 16'	SS=0				
	17						
	18	End of boring at 17'					
	19						

PROJECT  
Ellsworth AFB, ST-23 Site Characterization

SB1123 03