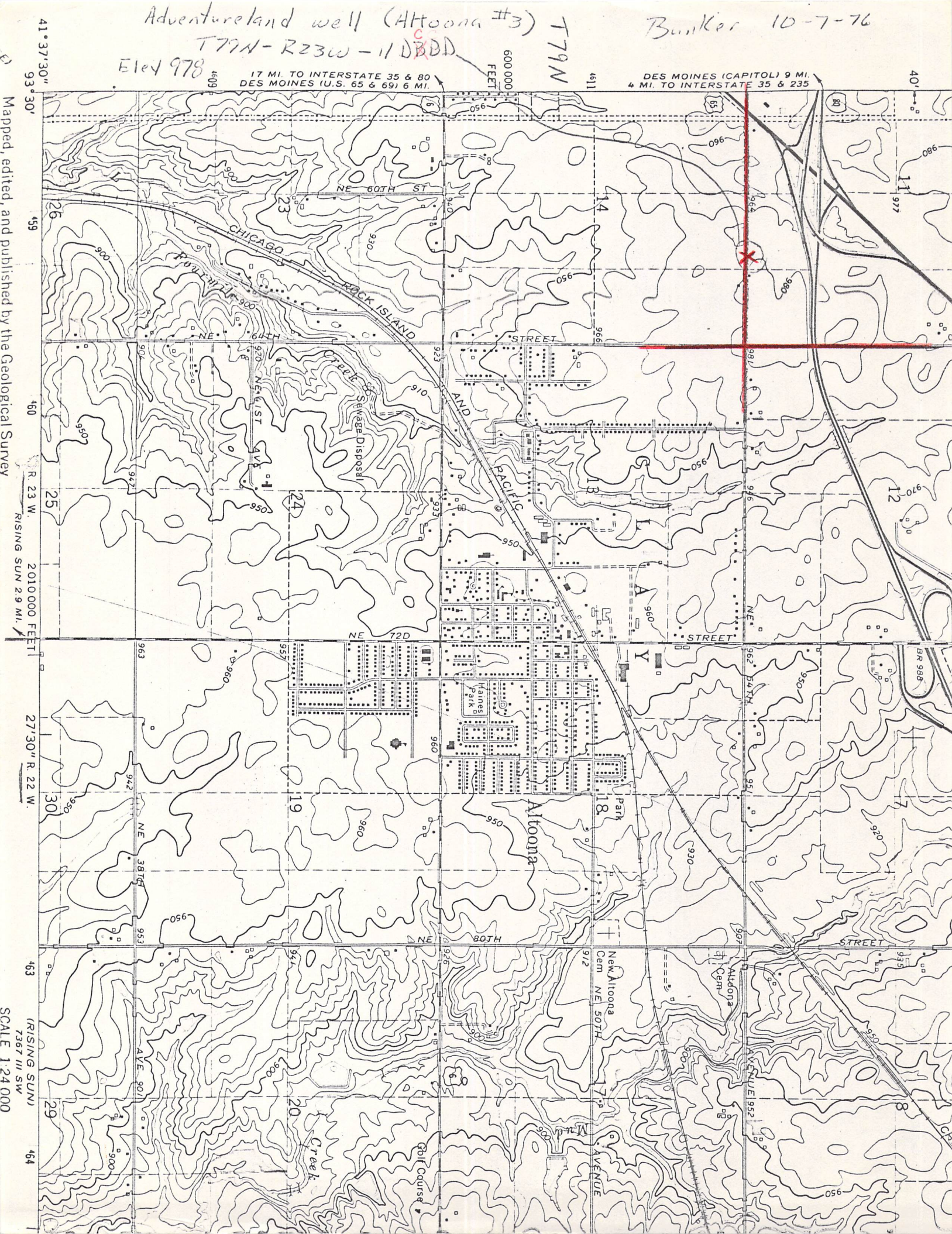

Adventureland well (Altoona #3)
T79N-R23W-11 DBCDD
Elev 978
Bunker 10-7-76
T79N
600 000 FEET
17 MI. TO INTERSTATE 35 & 80
DES MOINES (U.S. 65 & 69) 6 MI.
DES MOINES (CAPITOL) 9 MI.
4 MI. TO INTERSTATE 35 & 235
NE 60TH ST
CHICAGO ROCK ISLAND & PACIFIC R.R.
NE 64TH STREET
Creek
Sewage Disposal
NE 61ST AVE
NE 72D STREET
Haines Park
Altoona
Park
NE 80TH STREET
New Altoona Cem
Altoona Cem
NE 50TH AVENUE
Mud Creek
Golf Course
R. 23 W.
RISING SUN 2.9 MI.
2010 000 FEET
27'30" R. 22 W.
(RISING SUN)
7367 III SW
SCALE 1:24 000
Mapped, edited, and published by the Geological Survey

Altoona Well
Will be ready Thursday morning.

Engineer is John Hesslang
of Garden Engineering
Oskaloosa Iowa.

515-672-2526

Oct 15, 1976

Copies of the geophysical logs have been sent to the Water Superintendent of Altoona and the Engineering Firm.

BB

Don K ✓

Paul PSH

Jack

Note difference between
"Non-pumping level" and
"pumping level" with supposedly
no drawdown.

AE

10-6-76

Altoona

Loc.

At 1,000,000 standpipe off I-80 at Adventureland turn-off

20" 0-318

14" OD csg. 0-2050

open hole 2050-2253

Dave Stuart, Water Supt. (pick up well diagrams from him).

Memo
2-10-76

Altoona #3 (Adventure Land)

Vern(?) Gatewood of Varner Well Co. brought in samples from lower part of the hole to have the Jordan verified.

I examined the wet samples and picked the tops as follows:

Top Jordan ~ 2435'
Top St. Laws. 2481' (good break)

We have the samples from 2400 ft to 2510 ft.

Jack Gilmore

DAILY DRILLING REPORT

VARNER WELL AND PUMP CO.

BOX 237 DUBUQUE, IOWA 52001

Date 2-9-76
Job ALTOONA, IOWA
Hole No. #3
Rig No. BREWSTER
Tour M M

DEPTH FROM	DEPTH TO	TIME START	TIME FINISH	MINUTES	MUD VISCOSITY	MUD WEIGHT	FORMATION	REMARKS
2430	2431	9:50	9:57	7			DOLO.	
	32		10:04	7	*	UNLOAD		
	33		10:10	6				
	34		10:19	9				
	2435		10:28	9				
	36		10:37	9				
	37		10:42	10	*			Conn. @ 2437' Ser. Rig.
	38	11:11	11:20	9				
	39		11:27	7			—	
	2440		11:31	4				
	41		11:35	4				
	42		11:40	5				
	43		11:45	5				OUT OF FLUID
	44	11:56	12:01	6				
	2445		12:10	9				
	46		12:19	9				
	47		12:28	9				
	48		12:37	9				
	49		12:45	8				
	2450		12:55	10	*		DOLO.	
	51		1:04	9				
	52		1:10	6				
	53		1:20	10				
	54		1:35	15				
	2455		1:50	15				
	56		2:00	10				
	57		2:10	10				
	58		2:20	10				
	59		2:31	11				
	2460		2:41	10				

ADDITIONAL REMARKS, ETC. _____

APPROVED BY _____ DRILLER

DAILY DRILLING REPORT

VARNER WELL AND PUMP CO.

BOX 237 DUBUQUE, IOWA 52001

Date 2/16/76
Job Altoona, Iowa
Hole No. 3
Rig No. Drenutor
Tour M M

DEPTH FROM	DEPTH TO	TIME START	TIME FINISH	MINUTES	MUD VISCOSITY	MUD WEIGHT	FORMATION	REMARKS
2460	2461	2:41	2:48	7			Dolo.	
	62		2:54	6				
	63		2:59	5				
	64		3:05	6				
	2465		3:10	5				
	66		3:16	6				
	67		3:21	5				
	68		3:26	5				
	69		3:32	6				
	2470		3:37	5				Conn. @ 2,470' Ser. Rig.
	71	3:59	4:06	7				
	72		4:15	9				
	73		4:21	6				
	74		4:27	6				
	2475		4:34	7				
	76		4:42	8				
	77		4:50	8				
	78		4:58	8				
	79		5:06	8				
	2480		5:14	8				
	81		5:22	8				
	82		5:37	15	St. Lawr.			
	83		5:45	8				
	84		6:00	15				
	2485		6:15	15				
	86		6:25	10				
	87		6:35	10				
	88		6:45	10				
	89		7:00	15				
	2490		7:14	14				

ADDITIONAL REMARKS, ETC. _____

APPROVED BY _____ DRILLER

GW Altoona #3
well folder
Adventureland

October 15, 1976

Mr. John Hesling
% Garden & Associates Engineering
P. O. Box 451
Oakaloosa, Iowa 52577

Dear Mr. Hesling,

I renently ran a suite of barehole geophysical logs on the Altoona #3 well (Adventureland) for the Iowa Geological Survey. Mr. Stuart, the Water Superintendent, informed me that you would possibly like a copy of the logs for your files.

Enclosed are copies of 4 logs that were run. These include Natural Gamma, Specific Conductance and Temperature, Spontaneous Potential and Resistivity, and Caliper.

We appreciated the opportunity to log this well. If we can be of further assistance, please feel free to contact us.

Respectfully,

Bill J. Bunker
Research Geologist
Subsurface Division

BJB:kk

Enclosures

October 15, 1976

Mr. Dave Stuart
Water Superintendent Altoona
Altoona, Iowa 50009

Dear Mr. Stuart,

Enclosed are the geophysical logs that I recently ran on the Altoona #3 well. I am also sending a cppy to the engineer which you noted to me would also like a copy. You will also find enclosed a xerox copy of the sample ϕog for this well.

Thank you for your assistance and trouble for allowing us to log your well. If we can be of further help or assistance, please feel free to contact us.

Respectfully,

Bill J. Bunker
Research Geologist
Subsurface Division

BJB:kk

Enclosures

GARDEN & ASSOC.
P.O. BOX 451
OSKALOOSA, IOWA 52577
(AREA 515) 672-2526

To
Don
Kotch
I & S.

March 16, 1976

Honorable Mayor and City Council
Altoona
Iowa 50009

Gentlemen:

I hereby certify that the construction of the Deep Water Well # 3, Altoona, Iowa under contract with Varner Well and Pump Company, Dubuque, Iowa, bearing date of October 15, 1975, is complete and that said construction substantially complies with the requirements of the plans and specifications.

The quantities for such construction are as follows:

1.	Mobilize and de-mobilize	$10,000.00
2.	Drill 24" minimum hole, furnish and place 20" liner pipe 318 l.f. @ $77.00	24,486.00
3.	Drill 18" hole 1732 l.f. @ $36.00	62,352.00
4.	Furnish and place plain end 14" O.D. casing above the 20" liner and above ground surface 2,051 l.f. @ $20.00	41,020.00
5.	Cementing set up, including centralizers, cement shoes and misc.	2,000.00
6.	Cement grout for casing and liners 2657.77 sacks @ $5.00	13,288.85
7.	Drill 12 1/4" hole 483 l.f. @ $20.00	9,660.00
8.	Furnish and place test pump with 1500 gpm capacity at 500' setting	4,000.00
9.	Pump for development 8 hours @ $60.00	480.00
10.	Test pump 24 hours @ $60.00	1,440.00
11.	Acidizing well	---
12.	Disinfect well	500.00
Total Contract		$169,226.85

Respectfully submitted this 22nd day of March, 1976.

GARDEN & ASSOCIATES, LTD.

John W. Hesling, P. E.

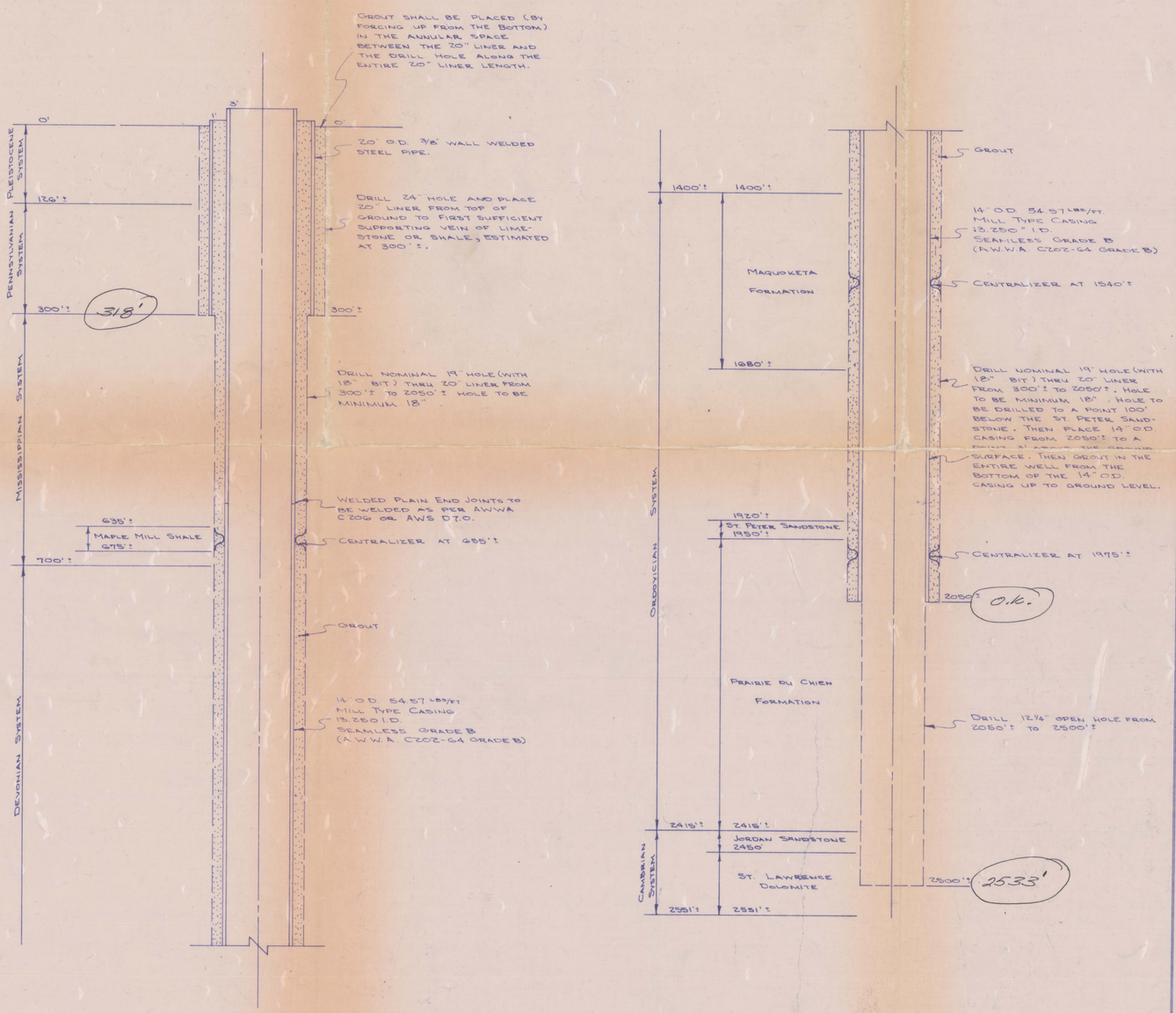
mb

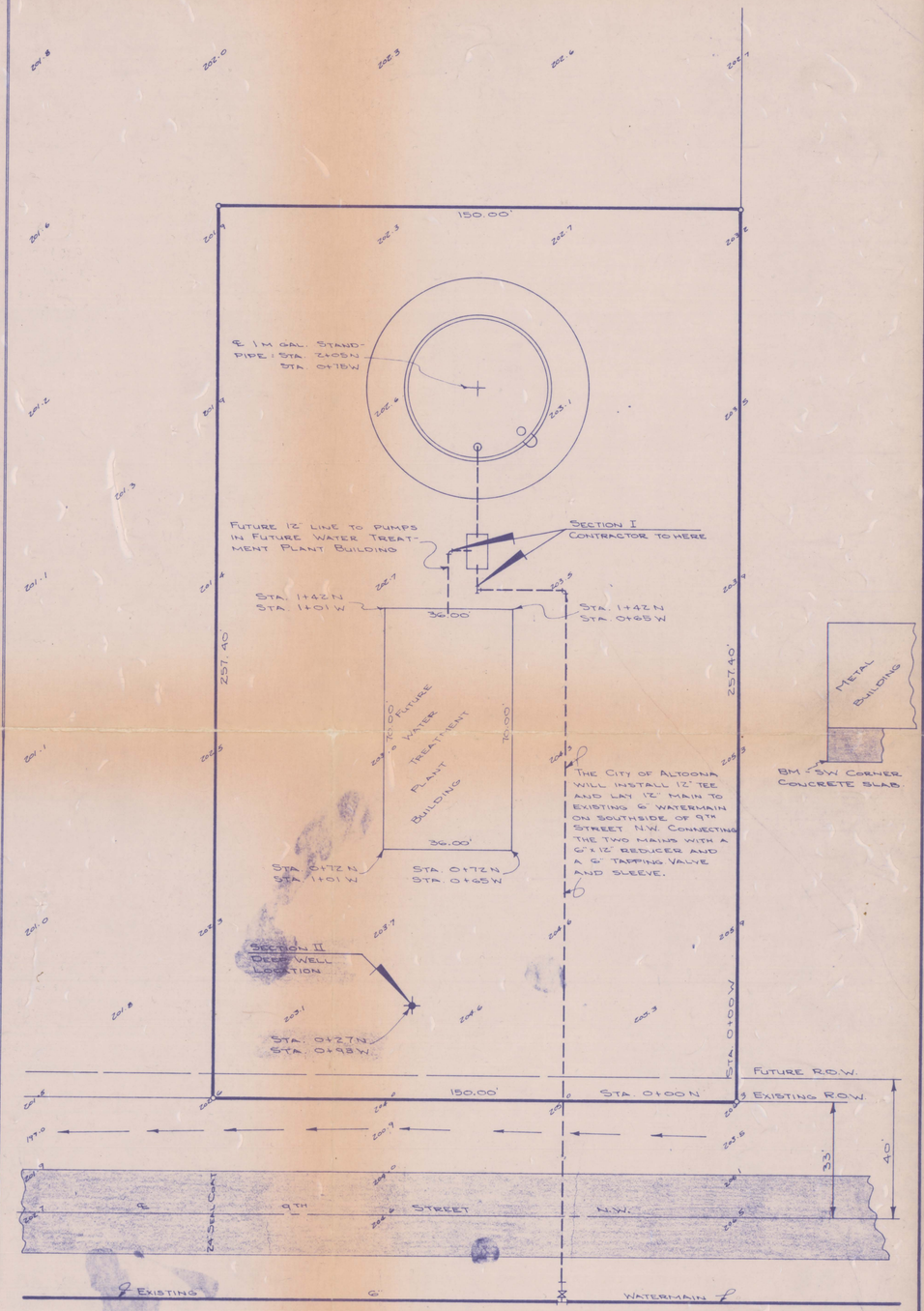
CONSULTING ENGINEERS

ROTARY WELL DESIGN

SCALE · 1" = 1'-0" Horizontal

1" = 100' Vertical





WELL SITE

SCALE · 1" = 20'

ROTARY WELL DESIGN – JORDAN SANDSTONE DEEP WELL #3 FOR THE CITY OF ALTOONA, IOWA		
SCALE As Shown	DATE June 1974	
DN: G.R.	CKD.	REV. 6-1-75
GARDEN ENGINEERING SERVICE OSKALOOSA, IOWA		
FLD. BK.	SHEET NO. 2 of 2	