

WELL DRILLER REPORT

This report should be prepared by the driller in all detail and filed with the Department within 30 days following completion of the well.

1. Owner HOWARD NEEDLES TAMMEN & BERGENDORFF
Name
9200 WARD PARKWAY KANSAS CITY MISSOURI 64141
Address

2. Lessee or Operator
Name
Address

3. Driller Sargent, Hauskins & Beckwith - Ralph E. Weeks
Name
3940 West Clarendon Avenue, Phoenix, Arizona 85019
Address

4. Location of well: T1N, R3E, Sec. 8; SE 1/4, SE 1/4, SW 1/4

5. Permit No. 319
(if issued)



DESCRIPTION OF WELL

6. Total depth of hole 100 ft.

7. Type of Casing Steel & PVC

8. Diameter and length of casing 4 in. from 0 to 20', 2 in from 0 to 99'.

9. Method of sealing at reduction points Steel surface casing grouted

10. Perforated from 59' to 99', from to, from to

11. Size of cuts 0.2' long, 0.03" wide Number of cuts per foot 2

12. If screen was installed: Length N/A ft. Diam in. Type

13. Method of construction Drilled, Air
drilled, dug, driven, bored, jetted, etc.

14. Date started 1 28 83
Month day year

15. Date completed 1 29 83
Month day year

16. Depth to water 53.7 ft. (If flowing well, so state.)

17. Describe point from which depth measurements were made, and give sea-level elevation if available.
Ground surface elevation = 1076.7'

18. If flowing well, state method of flow regulation

19. REMARKS: Steel surface casing was
grouted and extends 1.2 feet above
the ground surface. The PVC pipe
extends 1.0 feet above ground
surface. Sand and gravel used as
backfill below surface grout.

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
Registration No. 55-504684
Received By
Entered 3-16-83 By
File No. A(1-3)8cdd

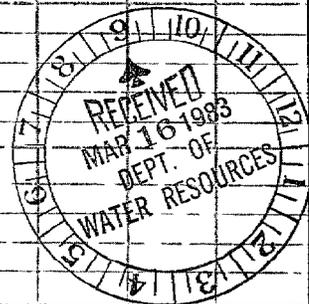
MICROFILMED

West Papago/Inner Loop
 PROJECT Offsite Drainage Study
 JOB NO. E83-11 DATE 1-28 & 1-29-83

1 of 2
LOG OF TEST BORING NO. 5

RIG TYPE Becker Hammer Drill
 BORING TYPE 6 5/8" O.D. Pipe
 SURFACE ELEV. 1076.7'
 DATUM City of Phoenix

Depth in Feet	Blows Per Foot	Graphical Log	Sample	Sample Type	Blows per foot 140 lb. 30" free-fall drop hammer	Dry Density Lbs. per cu. ft.	Moisture Content Per Cent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION	
0	3	[Diagonal hatching]							slightly moist	SANDY CLAY, medium plasticity, brown	
	8										
	13										
	18										
5	25										
	29						CL				
	14	[Diagonal hatching]							slightly moist	CLAYEY SAND, predominantly fine to medium grained, moderately lime cemented, low plasticity, light brown	
	24										
	20										
10	16										
	12										
	13						SC				
	12	[Diagonal hatching]							slightly moist	SILTY SAND & GRAVEL, occasional cobbles, nonplastic, light brown	
	21										
15	27										
	31		X A					GM			
	15										
	26							slightly moist	RIVER-RUN (SGC)		
20	45	X A									
	54	[Dotted pattern]							slightly moist to moist	SAND, GRAVEL & COBBLES, poorly graded, nonplastic, brown	
	54										
	82										
	64										
25	49										
	43										
	54										
	55										
	48										
30	45										
	95							slightly moist to moist	note: sand lens at 35' to 36'		
	105										
	123	[Dotted pattern]							slightly moist to moist	note: some silt & trace of clay at 45' to 75'	
	65										
	38										
35	23										
	54										
	*56							slightly moist to moist	note: some silt & trace of clay at 45' to 75'		
	43										
40	43	[Dotted pattern]							slightly moist to moist	note: some silt & trace of clay at 45' to 75'	
	52										
	76										
	*195										
	*135										
45	*156							slightly moist to moist	note: some silt & trace of clay at 45' to 75'		
	*83										
	*60	[Dotted pattern]							slightly moist to moist	note: some silt & trace of clay at 45' to 75'	
	*85										
	*136										
50	*115										



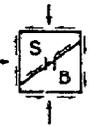
MICROFILMED

REh

*Turbocharged Energy = 12,000 ft.-lbs.

GROUND WATER		
DEPTH	HOUR	DATE
63.1'	3:00p	2-8

SAMPLE TYPE
 A - Auger cuttings. B - Block sample
 S - 2" O.D. 1.38" I.D. tube sample.
 U - 3" O.D. 2.42" I.D. tube sample.
 T - 3" O.D. thin walled Shelby tube.



SERGEANT, HAUSKINS & BECKWITH
 CONSULTING GEOTECHNICAL ENGINEERS
 PHOENIX • ALBUQUERQUE • SANTA FE • SALT LAKE CITY

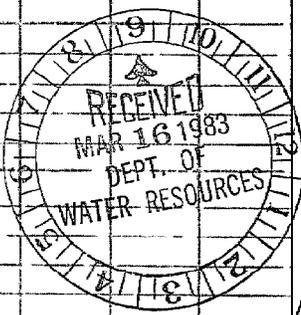
Depth in Feet	Blows Per Foot	Graphical Log	Sample	Sample Type	Blows per foot 140 lb. 30" free-fall drop hammer	Dry Density Lbs per cu. ft.	Moisture Content Per Cent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
50	85								moist to saturated	
55	65									
60	109									
65	81									
70	119									
75	131									
80	91									
85	88									
90	103									
95	53									
100	35									
105	35									
110	100									
115	72									
120	76									
125	66									
130	84									
135	86									
140	66									
145	73									
150	110									
155	182									
160	76									
165	90									
170	86									
175	61									
180	87									
185	210									
190	87									
195	81									
200	68									
205	69									
210	50									
215	35									
220	41									
225	34									
230	86									
235	110									
240	39									
245	186									
250	155									
255	99									
260	202									
265	207									
270	96									
275	70									
280	131									
285	89									
290	120									
295	65									

RIG TYPE Becker Hammer Drill
 BORING TYPE 6 5/8" O.D. Pipe
 SURFACE ELEV. 1076.7'
 DATUM City of Phoenix

note: some to considerable clay at 78' to 80'

note: set 2" PVC at 99', lower 40' perforated

Stopped hammer at 100'



GROUND WATER		
DEPTH	HOUR	DATE

SAMPLE TYPE

A - Auger cuttings. B - Block sample
 S - 2" O.D. 1.38" I.D. tube sample.
 U - 3" O.D. 2.42" I.D. tube sample.
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SERGEANT, HAUSKINS & BECKWITH
 CONSULTING GEOTECHNICAL ENGINEERS
 PHOENIX • ALBUQUERQUE • SANTA FE • SALT LAKE CITY



Registration No. 55-504684
Owner of _____
Well Site H NEEDLES TAMMEN & BERGENDOFF
File No. A(1-3)8cdd

COMPLETION REPORT

1. Completion Report to be filed with the Department within 30 days after installation of pump equipment.
2. The tested pumping capacity of the well in gallons per minute for a non-flowing well should be determined by measuring the discharge of the pump after continuous operation for at least 4 hours and for a flowing well by measuring the natural flow at the land surface.
3. Drawdown of the water level for a non-flowing well should be measured in feet after not less than 4 hours of continuous operation and while still in operation and for a flowing well the shut-in pressure should be measured in feet above the land or in pounds per square inch at the land surface.
4. The static groundwater level should be measured in feet from the land surface immediately prior to the well capacity test.

LOCATION OF THE WELL

T1N, R3E, Sec. 8; SE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$.

Date Well Completed 1-29-83 Depth of Well 100'

1. Well Test:
Test Pumping Capacity Not Tested Date Well Tested _____
(Gal. per min.)

Method of Discharge Measurement _____
(weir, orifice, current meter, etc.)

Static Groundwater Level _____ ft. Drawdown _____ ft.
Total Pumping Lift _____ ft. Drawdown _____ lbs.
(Flowing Well)

2. Equipment Installed:

Kind of Pump None
(turbine, centrifugal, etc.)

Kind of Power _____ H.P. Rating of Motor _____
(Elec., Nat. Gas, Etc.)

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

REW
Signature
3940 West Clarendon Avenue
Address

March 14, 1983
Date

Phoenix Arizona 85019
City State Zip

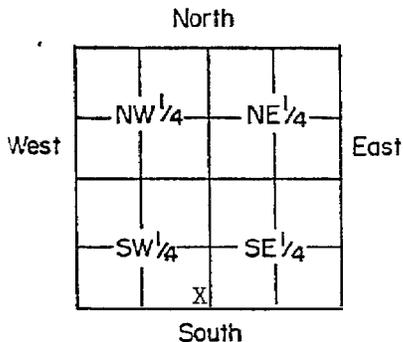
APPROVED

EMPT WELL
LING FEE: \$10.00

DEPARTMENT OF WATER RESOURCES
NOTICE OF INTENTION TO DRILL OR DEEPEN
AN EXEMPT WELL

EXEMPT WELL

Section 45-596, Arizona Revised Statutes, provides: A person may not drill or cause to be drilled by well or deepen or replace an existing well without first filing a Notice of Intention to Drill with the Department on a form prescribed and furnished by the Department. The well shall be completed within one year after the date of Notice. An exempt well means a well having a pump with maximum design capacity of not more than 35 gallons per minute which is used to withdraw groundwater. An exempt well may include the non-commercial irrigation of less than 2 acres of land.



- Indicate Well Location by X
(Above diagram represents one 640 acre section)

WELL/LAND LOCATION:

1. Township T1N
2. Range R3E
3. Section 8
4. SE 1/4 SE 1/4 SW 1/4
10 acre sub-division
County Maricopa
Month January Year 1983

Owner of Well:
Howard Needles Tammen & Bergendoff

Name 9200 Ward Parkway
Address Kansas City, Missouri 64141
City State Zip

Owner of Land:
City of Phoenix
Name 125 East Washington
Address Phoenix, Arizona 85004
City State Zip

DESCRIPTION OF WELL:
8. Diameter 6"
Depth 100'
9. Type of Casing 2" PVC & 4" Steel Surface Casing
10. Principal use of Water.
Monitoring only.

11. Other uses Intended
None
(If for non-commercial irrigation, state approximate area being cultivated.)

12. Construction will start about:
January 1983

07

DO NOT WRITE IN THIS SPACE
OFFICE RECORD

FILE NO A(1-3)8 cdd
FILED 1-21-83 BY EK
INPUT 1-26-83 BY ---

DUPLICATE MAILED 1-24-83 BY EK
REGISTRATION NO 55-504684
AMA NON EXPANSION AREA PH

PLACE OF USE:
13. Township _____
14. Range _____
15. Section _____
16. Legal description of land water is to be used on:

17. Design Pump Capacity
None

18. Action Requested:
Drill X
Deepen _____
Replace _____

19. This notice filed by:
Owner _____
Lessee _____
Driller X

Sergent, Hauskins & Beckwith
Name
3940 West Clarendon
Address
Phoenix, Arizona 85019
City State Zip

20. Drillers Name:
Ralph E. Weeks
Sergent, Hauskins & Beckwith
Name
3940 West Clarendon
Address
Phoenix, Arizona 85019
City State Zip
319
Department License Number

. Fill out this form in duplicate and mail to P.O. Box 2600, Phoenix, Arizona, 85002, or deliver to 99 East Virginia, Suite 100, Phoenix, Arizona 85004.
. If the Exempt Well is in fact a replacement (or deepening) well, state the registration number of the existing well.
. Construction standards for new and replacement wells and the deepening and abandonment of existing wells, shall be in accordance with Department Rules and Regulations.
Norman H. Wetz, P.E., state that the construction will be under the direct and personal supervision of the well driller designated on this form and that the designated driller holds contractors license pursuant to ARS 45-595.

January 21, 1983
Date

Norman H. Wetz
Signature of Person Filing

State of Arizona
DEPARTMENT OF WATER RESOURCES

99 E Virginia Avenue, Phoenix, Arizona 85004



BRUCE BABBITT, Governor
WESLEY E. STEINER, Director

1/24/83

HOWARD NEEDLES TAMMEN & BERGENDOFF
9200 WARD PARKWAY
KANSAS CITY MISSOURI 64141

File No. A(1-3)8cdd A(1-3)17dbb A(1-3)5dcc
A(1-3)18caa A(1-3)7cad A(1-3)7abb
Registration No. 55-504683 55-504684 55-504685
55-504686 55-504687 55-504688

Dear Well Owner:

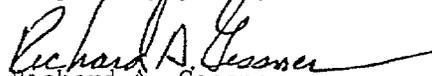
Enclosed for your records is a copy of the Notice of Intention to drill a well which you recently filed with this Department. This is returned as evidence of your compliance with ARS 45-596. Your driller has been mailed separately a Well Drilling Card, Well Drilling Report form and a Completion Report form.

In the event that you determine it necessary to change the location of the proposed well, you should obtain the written permission of the Department of Water Resources before proceeding with the drilling. A properly signed amended drilling card must be in the possession of the driller before drilling commences at a different location than originally authorized.

ARS 45-600 requires the driller to furnish this Department a complete and accurate log of the well within 30 days after completion of drilling and a Completion Report within 30 days after the installation of pumping equipment. You should insist and ensure that this is done.

For your future use, a Change of Well Information form is enclosed should it become needed. Per ARS 45-593, the person to whom a well is registered shall notify this Department of a change in ownership of the well and/or information pertaining to the physical characteristics of the well in order to keep the well registration file current and accurate.

Very truly yours,


Richard A. Gessner
Chief, Operations Branch

RAG :ek
Enclosures

Think Conservation!

Office of Director 255 1554

Administration 255 1550, Water Resources and Flood Control Planning 255 1566, Dam Safety 255 1541,
Flood Warning Office 255 1548, Water Rights Administration 255 1581, Hydrology 255 1586

STURGEON HALLS & BODIN
 3940 N CLAYTON AVE
 PHOENIX AZ 85018

STATE OF ARIZONA
 DEPARTMENT OF WATER RESOURCES
 WATER RIGHTS ADMINISTRATION
 99 EAST VIRGINIA
 PHOENIX, ARIZONA 85004

RECEIPT

KIND ENTRY	FILE REFERENCE NO.
55	504623
	THRU
55	504628

HOWARD NEEDLES TAMON & BERGENDOFF

FUND SOURCE	ACCOUNT NO.			INT. ACCT.	ITEM DESCRIPTION	RATE	\$ AMOUNT
	AGENCY	CHAPTER	DIV.				
					FILED FEE FOR NOTICE OF INTENTION TO DRILL	10.00	60.00
					(6) Exempt Wells		
					FILE#A(1-3)17dbb Reg#55-504623	QUESTS	6
					A(1-3)20db Reg#55-504624	CHY NO	41185
					A(1-3)5dco Reg#55-504625	SI-1	60.00
					A(1-3)13coz Reg#55-504626	TR	10.00
					A(1-3)7cad Reg#55-504627	TOTAL	60.00
					A(1-3)7adb Reg#55-504628	GEN. CHG	60.00
					CHECK# 41115	504628	10.00

1/24/83/ek

TOTAL

\$	60.00
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1-10-83 10:17 AM

ARIZONA DEPARTMENT OF WATER RESOURCES
Operations Division
15 South 15th Avenue
Phoenix, Arizona 85007

04

CHANGE OF WELL INFORMATION

Well Reg. No. 504684

File (location) No. A(1-3)820090

I/We request the following well information be changed:

Date: _____, 19____

Signature of current Well Owner

(DO NOT CUT THIS FORM IN HALF)

STATEMENT OF CHANGE OF WELL OWNERSHIP

I, THOMAS R. WARNE, state that I am (~~XXXXXXXX~~) the (new)
(please print)
owner of the well described below:

Township 1N Range 3E Section 8; SE 1/4 SE 1/4 SW 1/4

Well Registration No. 55-504684 File (location) No. A01003008CDD

Tammen & Bergendoff
Previous Owner

ADOT
PRINT New Owner's Name

9200 Ward Parkway
Address

[Signature]
Signature of New Owner

Kansas City, MO 64141
City State Zip

2140 West Hilton Avenue
Address

DATED:

Phoenix AZ 85009
City State Zip

NOTE: A.R.S. §45-593.C. requires that the Department be notified of change of well ownership and that the well owner is required to keep the Department's Well Registration records current and accurate. Well data and ownership changes must be submitted within thirty (30) days after changes take place.

SAVE THIS FORM TO REPORT FUTURE CHANGES IN OWNERSHIP, CHANGES IN ADDRESS, OR CHANGE IN WELL DATA SUCH AS PUMP CAPACITY, CORRECTION OF LEGAL DESCRIPTION, CHANGE OF WELL DRILLER, PRIOR TO DRILLING THE WELL, IN ADDITION TO AMENDING INFORMATION PREVIOUSLY FILED.

MICROFILMED **ENTERED OCT 12 1990**