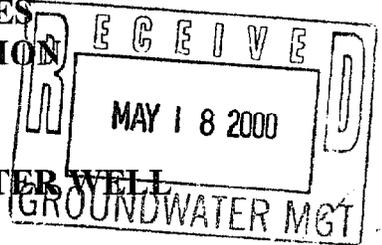


ARIZONA DEPARTMENT OF WATER RESOURCES  
GROUNDWATER MANAGEMENT SUPPORT SECTION

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458  
FOR INFORMATION: CALL MONICA ORTIZ AT (602) 417-2470



NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING.

1. Well/Land Location:

14 N 13 E 24  
Township Range Section  
NW 1/4 SW 1/4 NE 1/4  
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 32 ° 12 ' 06 "  
Longitude 110 ° 58 ' 09 "

3. County: Pima

4. Owner of the well:

Michael Katcher  
Name  
347 Pauls Crescent  
Mailing Address  
Osler, Saskatchewan, Canada  
City State Zip  
SOK3A0  
Telephone No. 306-239-4647

5. Lessee of the land of wellsite:

Michael Katcher  
Name  
347 Pauls Crescent  
Mailing Address  
Osler, Saskatchewan, Canada  
City State Zip  
SOK3A0  
Telephone No. 306-239-4647

6. Owner of the Land of Wellsite:

Michael Katcher  
Name  
347 Pauls Crescent  
Mailing Address  
Osler, Saskatchewan, Canada  
City State Zip  
SOK3A0  
Telephone No. 306-239-4647

7. Consulting firm:

EEC, Inc.  
Name  
Michael Murray  
Contact Person  
Telephone No. 520-321-4625

8. Purpose of well drilled pursuant to this notice:

Monitor   
Piezometer

9. If for deepening or modifying, list well registration number:

55-\_\_\_\_\_

10. Will this proposed well be associated with a permit: Yes \_\_\_\_\_ No

If yes, Permit No. \_\_\_\_\_

11. Construction will start **VARIANCE GRANTED**

Month Day Year  
\_\_\_\_\_ 2000

12. Period well will remain in use:

2 years \_\_\_\_\_ Months/\_\_\_\_\_  
Years

13. For monitoring wells, is pump equipment to be installed?

Yes \_\_\_\_\_ No

(a) If yes, design pump capacity: \_\_\_\_\_

(b) What use will be made of the water: \_\_\_\_\_

14. Drilling Firm:

Geomechanics Southwest  
Name  
7700 S. Nogales Hwy  
Mailing Address  
Tucson AZ 85706  
City State Zip  
520-889-7787  
Telephone No.  
498  
DWR License Number  
079441 A-4  
ROC License Category

FOR DEPARTMENT USE ONLY  
File No. DC(14-13) 24ACB  
Filed 5-18-00 By WLS  
Input 5-26-00 By GM  
DUPLICATE  
Mailed 6-8-00 By GM  
Registration 55- 581291  
AMA/INA Tucson  
W/S 09 S/B 16

15. Proposed method of abandonment of well after project is completed: Cement grout by tremie

\_\_\_\_\_, pursuant to R12-15-816.

16. Is this well to monitor existing contamination?  Potential contamination: \_\_\_\_\_ Please explain: Expanded assessment of perched groundwater contamination from leaking UST

17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? Kevin Synder

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact? \_\_\_\_\_

19. WELL CONSTRUCTION PLAN:

- a) Drilling method (mud rotary, hollow-stem auger, etc.) Hollow-stem auger
- b) Borehole diameters: 11 inches from 0 feet to 90 feet.  
0 inches from \_\_\_\_\_ feet to \_\_\_\_\_ feet.
- c) Casing materials (PVC, steel, hollow-stem auger, etc.)  
 material shed. 40 PVC diameter 4 inches from 0 feet to 90 feet.  
 material \_\_\_\_\_ diameter \_\_\_\_\_ inches from \_\_\_\_\_ feet to \_\_\_\_\_ feet.
- d) Method of sealing at reductions NA
- e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated):  
 material neat cement method tremie from 0 feet to 20 feet.  
 material \_\_\_\_\_ method \_\_\_\_\_ from \_\_\_\_\_ feet to \_\_\_\_\_ feet.
- f) Filter packs (state material):  
 material 10-20 silica sand from 60 feet to 90 feet.  
 material \_\_\_\_\_ from \_\_\_\_\_ feet to \_\_\_\_\_ feet.
- g) Perforations or screen specifications:  
 Type 020" slot from 60 feet to 90 feet.  
 Type \_\_\_\_\_ from \_\_\_\_\_ feet to \_\_\_\_\_ feet.
- h) Method of well development (bail, air lift, surge) surge and bail
- i) Will surface or conductor casing extend above grade?: Yes \_\_\_\_\_ No X

20. Include detailed construction diagram showing expected water depth in feet below land surface, and details of vault, if specified.

I state that this Notice is filed in compliance with Rule A.A.C. R12-15-809, is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on this form.

Michael Katcher Michael Katcher 4-5-2000  
 Typed or Printed Name and Title Signature [ ] Land Owner [X] Lessee of Wellsite, Title Date

Necessary Steps and Instructions to Obtain Drilling Authority (Monitor/Piezometer Wells)

1. Arizona Revised Statutes ("A.R.S.") § 45-596 provides that prior to drilling a monitor or piezometer well, a Notice of Intention to Drill must be filed with the Department. To assist you in understanding the substantive requirements for this application, copies of A.R.S. § 45-596 and Arizona Administrative Code ("A.A.C.") R12-15-810 are available thru the department bookstore.
2. Information to complete items 1, 2, and 3 may be available from your County Tax Receipt or your County Assessors Office.
3. Information to complete item 9 is available from your copy of the original Notice of Intent to Drill or our Records Division at (602)417-2405.
4. Information to complete items 11, 14 and 15 may be available from your driller.
5. If an individual other than the land owner or lessee signs this notice, an original notarized letter of authorization from the land owner/lessee, stating that the individual has permission to sign this specific Notice on his or her behalf, must accompany the Notice of Intention to Drill a Monitor/Piezometer Well.
6. Please complete two original notices with original signatures and include a \$10.00 check or money order for the processing fee, in accordance with A.R.S. § 45-113. Submit them to: P.O. Box 458, Phoenix, Arizona 85001-0458.

TIME FRAME FOR REVIEW OF YOUR APPLICATION

Within 15 days after receipt of your Notice of Intention, the Arizona Department of Water Resources ("Department") will determine whether your application should be granted or denied, unless this time is extended for lack of a complete application. If your application is incomplete, the Department will notify you in writing and will specify what information is necessary to make the application complete. Until the missing information is received, the time frame for review of your application will be suspended. Your application will not be complete until all of the requested information is received. If you do not supply the missing information within sixty (60) days, the Department may deem your application withdrawn and close the file.

At the end of its review, the Department will send you written notice either granting or denying your application for drilling authority. If your application is approved, the Drill Card will be mailed directly to the drilling company. If denied, the Department's notice will state justification for the denial and an explanation of your right to appeal.

Construction and Follow-up Requirements

1. Construction and abandonment standards for all wells must be in accordance with Department Rules.
2. A.A.C. Rule R12-15-811(H)(2) requires a monitor well to be identified as such on the vault cover or at the top of the steel casing. Identification information must include the well registration number.
3. Pursuant to A.R.S. § 45-596(E), drilling, deepening or modification of the well must be completed within one year after the date of the Notice of Intent.
4. A Well Driller Report is required within thirty (30) days of completion of drilling. Within thirty (30) days after installation of pumping equipment in monitor wells, a Completion Report must be filed with the Department.
5. Pump equipment may not be installed on a well drilled for piezometer purposes. If a monitor well is pumped, pumping is limited to the maximum amount required for monitor purposes, but in no case may exceed 35 gallons per minute and an annual total volume of 10 acre feet.
6. Special construction standards required pursuant to A.A.C. Rule R12-15-821: \_\_\_\_\_

**ARIZONA DEPARTMENT OF WATER RESOURCES  
GROUNDWATER MANAGEMENT SUPPORT SECTION  
500 North Third Street  
Phoenix, Arizona 85004**

**VARIANCE GRANTED**

**THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS**

**WELL REGISTRATION NO: 55-581291**

**AUTHORIZED DRILLER: GEOMECHANICS SOUTHWEST, INC.**

**LICENSE NO: 498**

**NOTICE OF INTENTION TO DRILL A MONITOR WELL(S) HAS BEEN FILED WITH THE DEPARTMENT BY:**

**WELL OWNER: MICHAEL KATCHER 347 PAULS CRESCENT OSLER, SA S0K3A0**

**The well(s) is/are to be located in the:**

**NW ¼ of the SW ¼ of the NE ¼ Section 24 Township 14 SOUTH Range 13 EAST**

**No. of wells in this project: 1**

**THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 17TH DAY OF MAY, 2001**

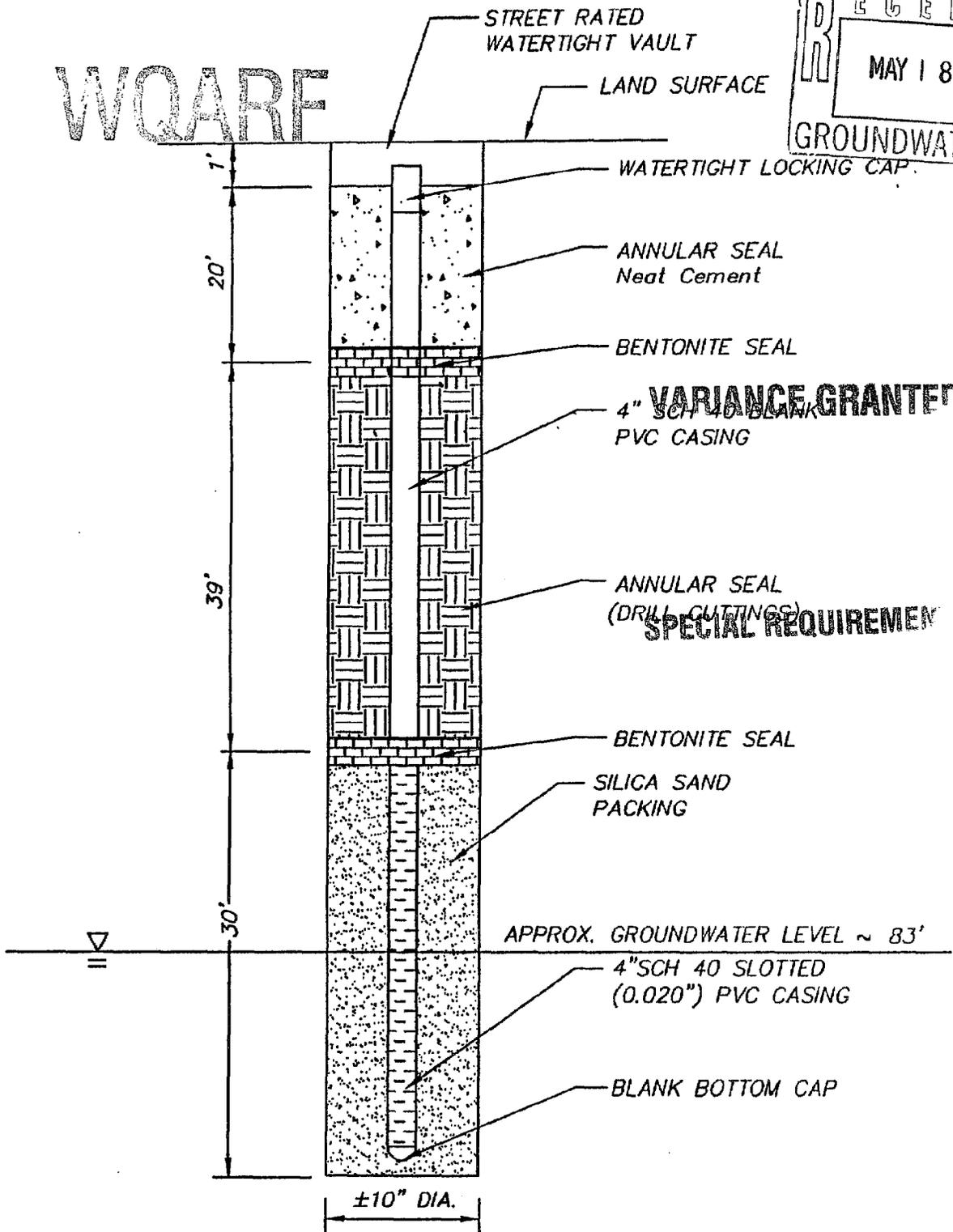
*ARJ*  
**GROUNDWATER MANAGEMENT SUPPORT**

**THE DRILLER MUST FILE A LOG OF THE WELL  
WITHIN 30 DAYS OF COMPLETION OF DRILLING**



# WQARF

RECEIVED  
MAY 18 2000  
GROUNDWATER MGT



ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.  
4625 E. FT. LOWELL RD. • TUCSON, ARIZONA • 85712

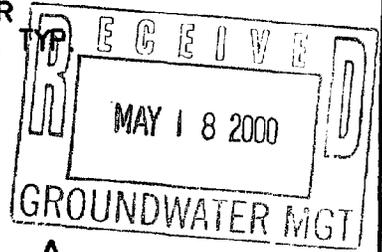
DESIGNED BY:	JTM
DRAWN BY:	WJC
CHECKED BY (DESIGN):	JJH
DATE:	05/00
SCALE:	N/A
HORIZ. VERT.:	NTS

MONITORING WELL SCHEMATIC  
**KATCHER PROPERTY**

1700 S. 6th AVE.  
TUCSON, ARIZONA

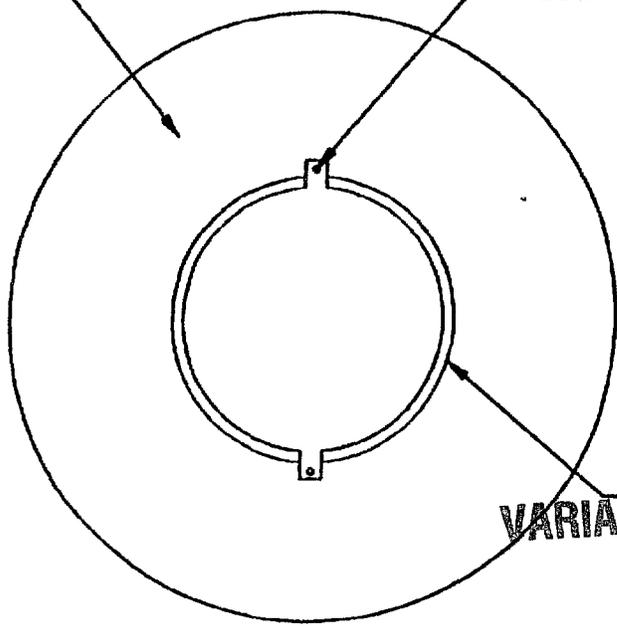
RAISED CONCRETE  
VAULT COLLAR

VAULT COVER  
LOCK-DOWN, TYP.



A

A



VARIANCE UNOBTAINED  
RING SEAL

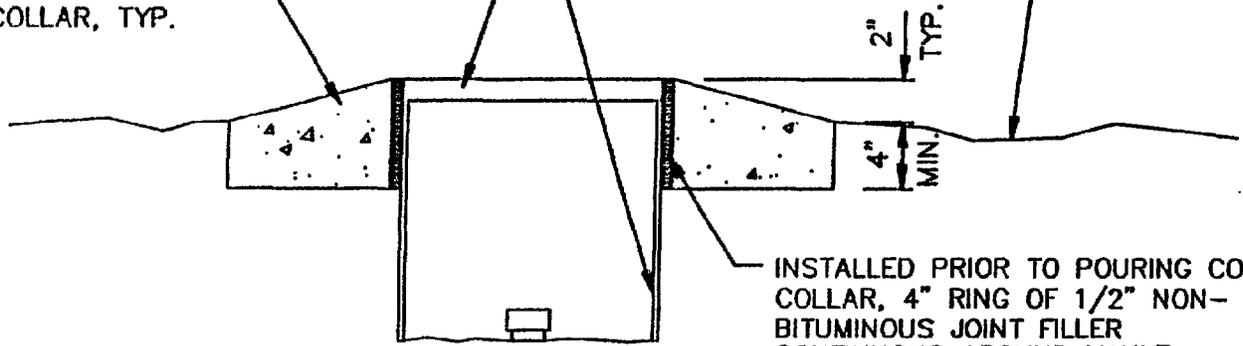
PLAN VIEW

SPECIAL REQUIREMENTS

NEAT CEMENT  
WELL HEAD  
COLLAR, TYP.

STREET RATED  
WATERTIGHT VAULT

FINISH GRADE



INSTALLED PRIOR TO POURING CONC.  
COLLAR, 4" RING OF 1/2" NON-  
BITUMINOUS JOINT FILLER  
CONTINUOUS AROUND VAULT

SECTION A-A  
NTS

WELL VAULT DETAIL

**ARIZONA DEPARTMENT OF WATER RESOURCES**

**Hydrology Division**  
500 North Third Street, Phoenix, Arizona 85004  
Telephone 602-417-2448  
Fax 602-417-2425



May 23, 2000

**JANE DEE  
HULL  
Governor**

Mr. Michael Katcher  
347 Pauls Crescent  
Osler, Saskatchewan, Canada SOK3A0

**Re: Notice of Intent to Drill Five Monitor Wells  
Registration Numbers 55-581291 through 55-581295**

Dear Mr. Katcher:

The Arizona Department of Water Resources received your request dated May 18, 2000 for construction of five monitor wells to be located in Pima County.

The Department has reviewed the above referenced application to determine if the application meets the substantive requirements of A.R.S. §45-596(D) and A.A.C. R12-15-820. Pursuant to A.R.S. §41-1075, the Department has determined that additional information is required and is being requested through Geomechanics Southwest.

The following information must be submitted before the Department can complete its review.

- A variance request to use thermoplastic casing with a watertight cap in lieu of steel

Failure to submit the information requested within 62 days may result in the denial of the application. The Department's substantive review time frame is suspended until all of the requested information is provided.

If you have any questions, please contact Bruce Hammett of my staff at 602-417-2400 extension 7301.

Sincerely,

Frank Corkhill  
Technical Support Section Supervisor

# Geomechanics Southwest, Inc.

"GeoEnvironmental Exploration and Well Construction"

ADWR Lic. No. 498

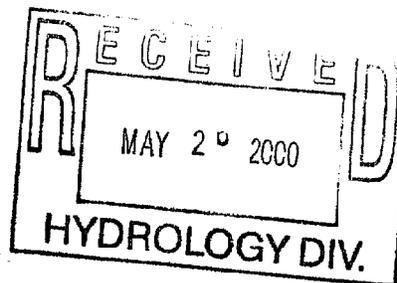
AROC Lic. No. 079441, Class. A-04

May 24, 2000

Arizona Department of Water Resources  
Hydrology Division  
500 North 3rd Street  
Phoenix, Arizona 85004

ATTN: Mr. Greg Wallace  
Chief Hydrologist

**RE: Request for Variance, Monitor Wells  
Pima County, Arizona  
Registration Numbers 55-581291 through 55-581295**



Mr. Wallace:

Geomechanics Southwest, Inc., hereby submits this request for a construction variance relating to a notice of intent to drill five monitor wells, identified by the above referenced registration numbers. The purpose of these wells will be to evaluate potential groundwater contamination.

We are requesting the following construction variance from the provisions of section R12-15-811., "Minimum well construction requirements":

**Sub-section B.1 , Surface Seal**

\* Thermoplastic (PVC) inner casing (riser) with a locking watertight cap will be used in lieu of steel surface casing. The riser will comply with ASTM Standard Guide D5092, Section 6.5.

**Sub-section I. , Completion at the Surface**

\* The wells will be completed below the land surface in a flush-to-ground, vandalproof, traffic-rated vault per ASTM Standard Guide D5092, Section 8.9.2.3.

Your prompt attention to this matter would be greatly appreciated. Please contact me personally if you have any questions or need additional information or assistance.

Respectfully submitted by,

GEOMECHANICS SOUTHWEST, INC.

A handwritten signature in black ink, appearing to read "Timm Porter".

Timm Porter  
Operations Manager / Tucson

TDP/tp  
Copies (1) addressee  
DWR0524M

**ARIZONA DEPARTMENT OF WATER RESOURCES**

**Hydrology Division**  
500 North Third Street, Phoenix, Arizona 85004  
Telephone 602-417-2448  
Fax 602-417-2425

May 26, 2000



JANE DEE HULL  
Governor

RITA P. PEARSON  
Director

Geomechanics Southwest, Inc.  
7400 S Nogales Hwy #4  
Tucson, AZ 85706

Attn: Timm Porter

**RE: Variance for Construction of Five Monitor Wells**  
**Registration Numbers 55-581291 through 55-581295**

Dear Mr. Porter:

The Arizona Department of Water Resources received your request dated May 26, 2000 for a construction variance for five monitor wells to be located in Pima County. The purpose of these wells will be to evaluate existing groundwater contamination.

The Arizona Department of Water Resources approves this request for the following variance:

- Thermoplastic casing with a watertight cap may be used in lieu of steel (R12-15-811.B.1).

The following *special requirements* are conditions for these variances (R12-15-821.):

- The casing shall comply with ASTM Standard Guide D5092, Section 6.5.
- The wells shall be constructed per the "Variance Granted" Notice of Intention to Drill.
- The well shall be abandoned (decommissioned) in accordance with A.A.C. R12-15-816.

If you have any questions, contact Bruce Hammett of my staff at 602-417-2400 ext. # 7301.

Sincerely,

Frank Corkhill  
Technical Support Section Supervisor

**ARIZONA DEPARTMENT OF WATER RESOURCES**

500 North 3rd Street, Phoenix, Arizona 85004

Telephone (602) 417-2470

Fax (602) 417-2422



**JANE DEE HULL**  
Governor

**RITA P. PEARSON**  
Director

June 02, 2000

MICHAEL KATCHER  
347 PAULS CRESCENT  
OSLER, SA S0K3A0

Registration No. 55-581291  
File No. D(14-13) 24 ACB

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill a well. This is returned to you as evidence of compliance with A.R.S. §45-596. A drilling card has been mailed to your designated driller. Prior to drilling he must have it in his possession.

Since this well is being drilled as a Monitor well, or for Cathodic Protection, Grounding, Geotechnical or Piezometer purposes, our standard driller report form is also being furnished to the driller. He is required to complete it and return it to the Department within 30 days after the completion of the well. A Completion Report form is being furnished for monitor wells where pump installation is authorized. This must be completed within thirty days of installation as required by A.R.S. §45-600.

A Change of Well Information form is enclosed for your future use. If you deem it necessary to change the location of the proposed well, please notify the Department on the enclosed form. A properly amended Drilling Card will then be issued and must be in possession of the driller before drilling begins. During the drilling of a new well, if it is determined that it must be abandoned, then a Well Abandonment Completion Report must be submitted per R12-15-816.F.

Per A.R.S. §45-593, the person to whom a well is registered shall notify this Department of a change of 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.

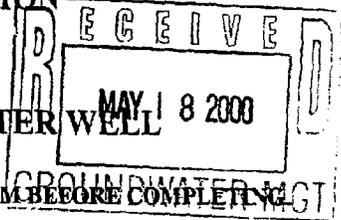
Sincerely,

Gloria Moss  
Water Resource Technician  
Groundwater Management Support Section

Enclosures

**ARIZONA DEPARTMENT OF WATER RESOURCES  
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458  
FOR INFORMATION: CALL MONICA ORTIZ AT (602) 417-2470



**NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL**

**EASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING**

**1. Well/Land Location:**

14 N/S 13 E/W 24  
Township Range Section  
NW 1/4 SW 1/4 NE 1/4  
10 Acre 40 Acre 160 Acre

**2. Position location of the well on the land:**

Latitude 32 ° 12 ' 06 "  
Longitude 110 ° 58 ' 09 "

3. County: Pima

**4. Owner of the well:**

Michael Katcher  
Name  
347 Pauls Crescent  
Mailing Address  
Osler, Saskatchewan, Canada  
City State Zip  
SOK3A0  
Telephone No. 306-239-4647

**6. Owner of the Land of Wellsite:**

Michael Katcher  
Name  
347 Pauls Crescent  
Mailing Address  
Osler, Saskatchewan, Canada  
City State Zip  
SOK3A0  
Telephone No. 306-239-4647

**7. Consulting firm:**

EEC, Inc.  
Name  
Michael Murray  
Contact Person  
Telephone No. 520-321-4625

**8. Purpose of well drilled pursuant to this notice:**

Monitor    
Piezometer \_\_\_\_\_

**9. If for deepening or modifying, list well registration number:**

55- \_\_\_\_\_

**10. Will this proposed well be associated with a permit: Yes \_\_\_\_\_ No**

If yes, Permit No. \_\_\_\_\_

**11. Construction will start:**

4 24 2000  
Month Day Year

**12. Period well will remain in use:**

2 years \_\_\_\_\_ Months/Years

**13. For monitoring wells, is pump equipment to be installed?**

Yes \_\_\_\_\_ No

(a) If yes, design pump capacity: \_\_\_\_\_

(b) What use will be made of the water: \_\_\_\_\_

**14. Drilling Firm:**

**ENGINEERING & ENVIRONMENTAL CONSULTANTS, INC.**  
4625 EAST FORT LOWELL ROAD, SUITE 200  
TUCSON, ARIZONA 85712  
(520) 321-4625

COMMERCIAL FEDERAL BANK  
7225 NORTH ORACLE  
TUCSON, ARIZONA 85704  
91-506/1221

CHECK NO. 20463  
20463

Exactly Fifty and xx / 100 Dollars

DATE 5/15/00 AMOUNT \$50.00

TO THE ORDER OF Arizona Dept. of Water Resources  
P.O. Box 458  
Phoenix AZ 85001-0458

[Signature]  
AUTHORIZED SIGNATURE

Kevin Snyder

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact? \_\_\_\_\_

Michael Katcher

VARIANCE CHECKLIST - HYDROLOGY

DATE RECEIVED 5/18/00
DATE TO HYDRO 5/19/00
DATE TO GMSS 5-30-00

POTENTIAL REG. No 55- 581291-95
55- THRU 55-

FRONT OF N.O.I COMPLETE/CORRECT: YES [checked] NO

VARIANCE (?) LETTER RECEIVED YES NO [checked]
WELL DIAGRAM (?) RECEIVED YES [checked] NO
SITE PLAN (?) RECEIVED YES NO

TYPE AND NUMBER OF WELLS:

5 MONITOR CATHODIC PROTECTION
PIEZOMETER
GEOTECHNICAL HEAT PUMP
MINERAL EXPLORATION
WATER PRODUCTION OTHER

DESCRIBE TYPE OF WELL

VARIANCE:

[checked] REQUIRED [checked] GRANTED
NOT REQUIRED NOT GRANTED
LETTER ISSUED

ATTENTION!!! NOTICE OF INTENT TEAM:

HARD COPY OF LETTER TO FOLLOW
CALL FOR PICKUP

COMMENTS: Clock stopped 5-24-00 bal.
Variance letter received 5-26-00
Okay - bal

Handwritten initials