

APPENDIX F
Well and Right-of-Way Permits

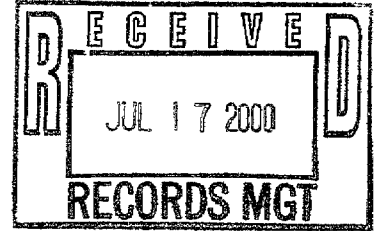
ARIZONA DEPARTMENT OF WATER RESOURCES

500 North 3rd Street
Phoenix, Arizona 85004

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 THF DRILLING, INC.
2420 SOUTH 16TH AVENUE
PHOENIX, AZ 85007-4403



2 Owner Name Kachina Village LLC
Address 8134 N. 41st Pl. Phoenix AZ 85018
City State Zip

3 Location: 2 NWS 5 SW 23 1/4 SE 1/4 SE 1/4 SE
Township Range Section 10-acre 40-acre 160-acre

4 Well Registration No. 55-580860 (Required)

5 Permit No. _____ (If Issued)

DESCRIPTION OF WELL

6 Total depth of hole 60 ft.

7 Type of casing PVC

8 Diameter and length of casing 4 in from 30 to 0, _____ in from _____ to _____

9 Method of sealing at reduction points BENT

10 Perforated from _____ to _____, from _____ to _____ from _____ to _____

11 Size of cuts _____ Number of cuts per foot _____

12 If screen was installed: Length 30 ft. Diam 4 in. Type 20

13 Method of construction DRILLED
(drilled, dug, driven, bored, jetted, etc)

14 Date started 6 8 00
Month Day Year

15 Date completed 6 8 00
Month Day Year

16 Depth to water 37 ft. (If flowing well, so state)

17 Describe point from which depth measurements were made, and give sea_level elevation if available

18 If flowing well, state method of flow regulation _____

19 Remarks _____

ANSWERED JUL 25 2000

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
Registration No. 55- 580860
File No. A(2-3) 23 DDD
Received _____ By _____
Entered _____ By _____

LOG OF WELL

Indicate depth at which water was first encountered, and the depth and thickness of water bearing beds. If water is artesian, indicate depth at which encountered, and depth to which it rose in well.

From (feet)	To (feet)	Description of formation material
0	2	Backfill
0	20	SILTS
20	40	SILTS w/ cobbles
40	60	SILTS w/ pebbles & sand

I hereby certify that this well was drilled by me (or under my supervision), and that each and all statements herein contained are true to the best of my knowledge and belief.

Driller Name THF DRILLING, INC.

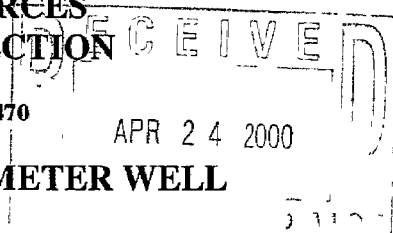
2420 SOUTH 16TH AVENUE
 Street

PHOENIX, AZ 85007-4403
 City State Zip

Signature of Driller *M. Dem...* Phone No.
 Date 6/12/00

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:

2 N/S 3 E/W 23
Township Range Section
SE 1/4 SE 1/4 SE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 33 ° 0 ' 46 "
Longitude 112 ° 29 ' 46 "

3. County: MARICOPA

4. Owner of the well:

Kachina Village LLC
Name 5134 No. 41st Place
Mailing Address Phoenix AZ 85018
City State Zip
Telephone No. (602) 381-1342

5. Lessee of the land of wellsite:

Not Applicable
Name
Mailing Address
City State Zip
Telephone No.

6. Owner of the Land of Wellsite:

Kachina Village LLC
Name 5134 No. 41st Place
Mailing Address Phoenix AZ 85018
City State Zip
Telephone No. (602) 381-1342

7. Consulting firm:

BROWN & CALDWELL
Name KEVIN HEBERT
Contact Person
Telephone No. (602) 222-4499

8. Purpose of well drilled pursuant to this notice:

Monitor
Piezometer

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

55- _____

* FOR DEPARTMENT USE ONLY
File No. A(2-3)23 DDD
Filed 4-24-00 By W/S
Input _____ By _____
Mailed 5-4-00 By W/S
Registration 55- 580860
AMA/INA PHX
W/S 07 S/B 04
W-4XX

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

If yes, Permit No. _____

11. Construction will start:

05 15 2000
Month Day Year

12. Period well will remain in use:

10 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:

THF DRILLING, INC.
Name 2420 S 16TH AVENUE
Mailing Address PHOENIX AZ 85007
City State Zip
Telephone No. (602) 254-6586
611
DWR License Number A-04
ROC License Category

15. Proposed method of abandonment of well after project is completed: REMOVE CASING AND GROUT

_____, pursuant to R12-15-816.

16. Is this well to monitor existing contamination? _____ Potential contamination: X Please explain: SITE IS LOCATED

NEAR WQARE AREA

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

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

VARIANCE GRANTED

SPECIAL REQUIREMENTS

19. WELL CONSTRUCTION PLAN:

- a) Drilling method (mud rotary, hollow-stem auger, etc.) HOLLOW-STEM AUGER
- b) Borehole diameters: 7 10" inches from 0 feet to 60 feet
 inches from _____ feet to _____ feet
- c) Casing materials (PVC, steel, hollow-stem auger, etc.)
 material PVC SCHED 40 diameter 4 inches from 0 feet to 58 feet
 material _____ diameter _____ inches from _____ feet to _____ feet
- d) Method of sealing at reductions N/A
- e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated):
 material CEMENT/GROUT method TREMIED from 0 feet to 21 feet
 material BENTONITE PELLET SEAL method TREMIED from 21 feet to 23 feet
- f) Filter packs (state material):
 material 10-20 COLORADO SILICA SAND from 23 feet to 60 feet
 material _____ from _____ feet to _____ feet
- g) Perforations or screen specifications:
 Type 4-INCH PVC, 0.020-INCH SLOT from 28 feet to 58 feet
 Type _____ from _____ feet to _____ feet
- h) Method of well development (bail, air lift, surge) BAIL AND PUMP
- 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.

JAMES E. ROGERS, Manager [Signature] 9/10/2000
 Typed or Printed Name and Title Signature Land Owner 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.

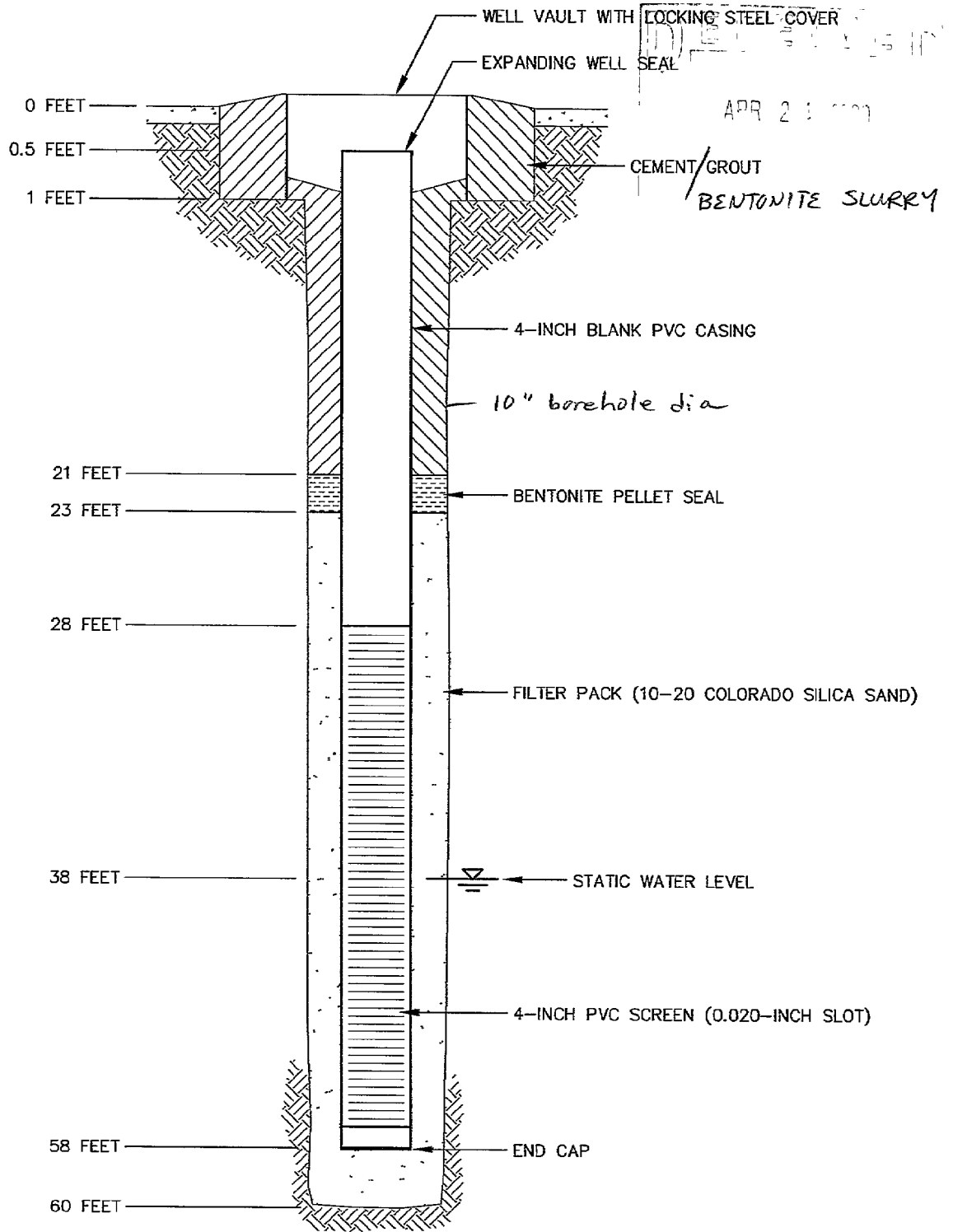
TIME FRAME FOR REVIEW OF YOUR APPLICATION

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: _____



NOT TO SCALE

VARIANCE GRANTED

SPECIAL REQUIREMENTS

BROWN AND CALDWELL
Phoenix, Arizona

MARONEY'S CLEANERS
PROPOSED MONITOR
WELL No. 3
3192 EAST INDIAN SCHOOL ROAD
PHOENIX, ARIZONA

Phoenix Arizona 85012 1931

Tel (602) 222-4441
Fax (602) 222-4466

May 2, 2000



Ms. Kay McNeely
Hydrologist II
Arizona Department of Water Resources
P.O. Box 458
Phoenix, Arizona 85001-0458

15/18585.002

Subject: Notice of Intention to Drill Monitor/Piezometer Wells

Dear Ms. McNeely:

Per our telephone conversation today, I authorize the Arizona Department of Water Resources (ADWR) to make the following revisions to the Notice of Intention forms to drill monitor/piezometer wells at the Kachina Village property. The revisions are as follows:

- Change the borehole diameter to 10-inches
- Note that the portion of the annular seal materials that will contain cement will consist of a cement/bentonite slurry.

If you require any additional information, please call me at (602) 222-4499.

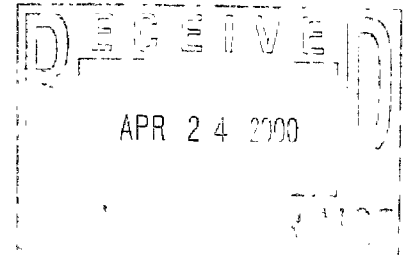
Very Truly Yours,

BROWN AND CALDWELL

Kevin D. Hebert, R.G.
Principal Geologist

THF DRILLING, INC.

2420 South 16th Avenue
Phoenix, Arizona 85007
Phone (602) 254-6586
Fax: (602) 254-6648



April 24, 2000

Arizona Department of Water Resources
Hydrology Division
Atten: Jim Johnson
500 North 3rd Street
Phoenix, Arizona 85004

Subject Request for Variance

Dear Jim.

On behalf of Brown & Caldwell, Inc. THF Drilling, Inc. requests a variance in the construction of three (3) groundwater monitoring wells to a depth of 60', at Maroneys Cleaners Site located at Township 2 North, Range 3 East, of the SE ¼, SE ¼, SE ¼ of Section 23 in Phoenix, Arizona.

1. The groundwater monitoring wells will be constructed with SCH. 40 PVC casing in the upper 20' of the well, in lieu of the required 20' of steel casing.
2. The groundwater monitoring well will be completed in flush-mount, traffic-rated, watertight vaults, in lieu of the required above grade type completion

Thank you for your attention to this request for variance. If you have any questions please call us at (602) 254-6586 / or Kevin Hebert at (602) 222-4499.

Sincerely,
THF Drilling, Inc.

Ray Quintero
Operations Manager

ARIZONA DEPARTMENT OF WATER RESOURCES

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



JANE DEE HULL
Governor

RITA P. PEARSON
Director

May 3, 2000

RAY QUINTERO
THF DRILLING, INC.
2420 SOUTH 16TH AVENUE
PHOENIX, AZ 85007

Re: **Variance for Three Monitor Wells**
Well Registry No. 55-580860 through -580862
T2N, R3E, Section 23DDD

Dear Mr Quintero:

The Arizona Department of Water Resources received your request on April 27, 2000, for a variance in the construction of three monitor wells to be located in Maricopa County for Kachina Village LLC. The purpose of these wells is to monitor potential groundwater contamination.

ADWR approves the request for the following variance:

- Thermoplastic inner casing (riser) with a watertight cap may be used in lieu of steel (R-12-15-811.B.1).

The following *special requirements* are conditions for this variance (R-12-15-821):

- The PVC inner casings (risers) 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 wells shall be abandoned (decommissioned) per A.A.C. R-12-15-816.

Any questions should be directed to Kay McNeely at 602-417-2400, x7258.

Sincerely,

A handwritten signature in cursive script, appearing to read "Frank Corkhill".

Frank Corkhill,
Supervisor, Technical Support Section

cc: Owner
File

ARIZONA DEPARTMENT OF WATER RESOURCES

Water Quality Assurance Program
500 North Third Street, Phoenix, Arizona 85004
Telephone 602 417-2473
Fax 602 417-2426



JANE DEE HULL
Governor

RITA P. PEARSON
Director

April 28, 2000

Kachina Village LLC
Attn: Mr. James E. Rogers
5134 North 41st Place
Phoenix, Arizona 85018

RE: Well Registration No(s). 55-580860, 55-580861, 55-580862

Dear Mr. Rogers:

The Department of Water Resources recently received your Notices of Intention to Drill three (3) monitor wells located in Township 2 North, Range 3 East, Section 23. This location has been determined to be in proximity to two contaminated groundwater areas known as the East Central Phoenix – 38th & Indian School and 40th & Indian School Water Quality Assurance Revolving Fund (WQARF) remedial sites; see attached map.

Please be advised that according to R12-15-851, you are required to notify the Department at least two (2) business days in advance of commencement of well drilling activities for the above referenced wells. You may submit this required notice to the Department by either letter or facsimile, and the Department must receive it at least two (2) business days prior to drilling.

Mailing Address:
Water Quality Assurance Program
Arizona Department of Water Resources
500 N. 3rd Street
Phoenix, AZ 85004

Facsimile Number:
(602) 417-2426

If you have any questions, please contact the WQARF Section at (602) 417-2473.

Sincerely,


Shannon L. Reif
Water Quality Section

attachments: as stated

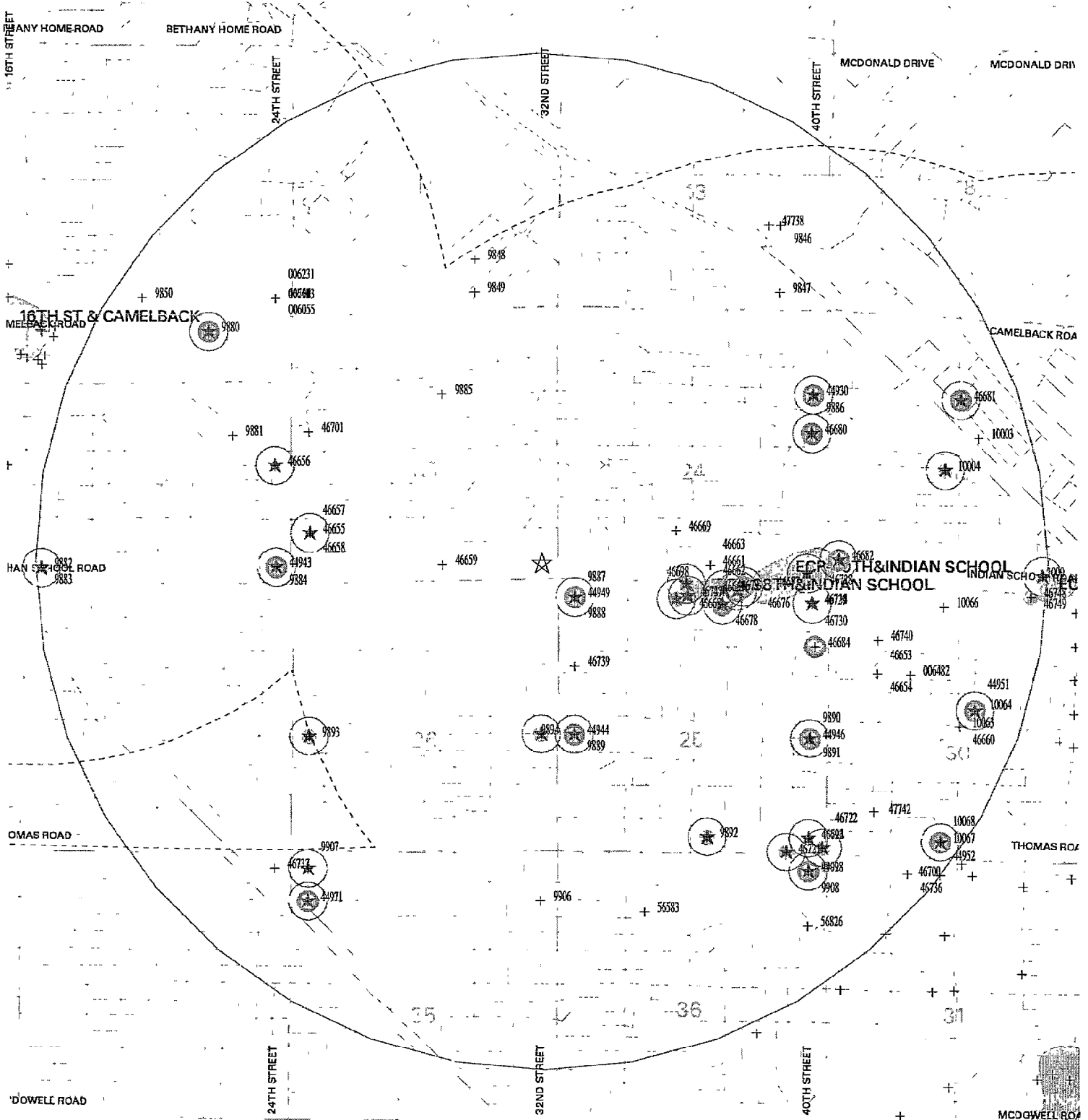
Working Together



Arizona Department of Environmental Quality



ARIZONA DEPARTMENT OF WATER RESOURCES



- 19 points > HBGL shown
- 42 points > Secondary MCL shown
- ★ 52 points > MCL shown
- + No Exceedences or Outside Radius

Water Quality Sample Test Results for
ADEQ Wells within 10000 Feet of
T 02.0 N R 03.0 E S 23 DDD

Printed 04/28/00 Scale 1:auto
Map Number 000428075845

- ⋯ 1.5 Mile Buffer Around WQARF Sites
- ▨ WQARF Sites
- ⌒ Specified Radius
- ★ Specified Center Point

Information provided is preliminary and subject to revision. It may not represent the full extent of known water quality concerns.

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

May 05, 2000

KACHINA VILLAGE LLC
5134 NO 41ST PLACE
PHOENIX, AZ 85018

Registration No. 55-580860

File No. A(2-3) 23 DDD

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.

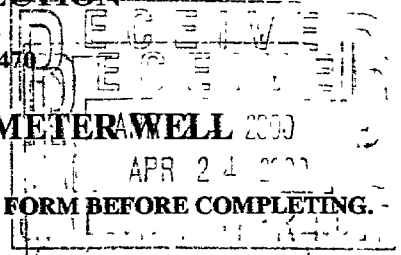
Sincerely,

Toni Bergeman
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

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

1. Well/Land Location:

2 NS 3 D/W 23
Township Range Section
SE 1/4 SE 1/4 SE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 33 ° 0 ' 46 "
Longitude 112 ° 29 ' 46 "

3. County: MARICOPA

4. Owner of the well:

Kachina Village LLC
Name 5134 N 41st Place
Mailing Address Phoenix AZ 85018
City State Zip
Telephone No. (602) 381-1342

5. Lessee of the land of wellsite:

Not Applicable
Name
Mailing Address
City State Zip
Telephone No.

6. Owner of the Land of Wellsite:

Kachina Village LLC
Name 5134 N 41st Place
Mailing Address Phoenix, AZ 85018
City State Zip
Telephone No. (602) 381-1342

7. Consulting firm:

BROWN & CALDWELL
Name KEVIN HEBERT
Contact Person
Telephone No. (602) 222-4499

8. Purpose of well drilled pursuant to this notice:

Monitor
Piezometer

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

55- _____

FOR DEPARTMENT USE ONLY			
File No. _____	By _____		
Input _____	By _____		
DUPLICATE			
Mailed _____	By _____		
Registration 55- _____			
AMA/INA _____			
W/S _____	S/B _____		

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

If yes, Permit No. _____

11. Construction will start:

05 15 2000
Month Day Year

12. Period well will remain in use:

10 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:

THE DRILLING, INC
Name 2420 S 116th AVENUE
Mailing Address PHOENIX AZ 85007
City State Zip
(602) 254-6586
Telephone No. 611
DWR License Number A-04
ROC License Category

15. Proposed method of abandonment of well after project is completed: REMOVE CASING AND GROUT

16. Is this well to monitor existing contami

NEAR WQARF AREA

17. If construction plans have been coordinat

18. If construction plans have been coordinat

DWR-55-44a (Rev 1/99)

	LEONARD J. SIMMS LYNN SIMMS 17600 N 64TH DR 602-938-5276 GLENDALE, AZ 85308	7150 91-101/1221 01
	Pay to the Order of <u>Arizona Department of Water Resources</u> \$ <u>30.00</u> <u>Thirty and 00/100</u> Dollars	Date <u>4-21-00</u>
Arizona Bank Headquarters Regional Banking Center 120 N Stone Avenue Tucson, AZ 85701	CHARTER CUSTOMER	
For _____		
⑆ 1 2 2 1 0 1 0 1 0 ⑆ 7 1 5 0 ⑆ 0 0 0 3 0 4 9 7 3 0 ⑆		

Kachuna Village

WOARF/CERCLA ROUTING SHEET

REGISTRATION N° 55-580860-62

CADASTRAL LOCATION *A(2-3)23000*

Date Received *4-24-00*

Date to Water Quality *4-27-00*

Date Returned to GMSS _____

Date to Hydrology *4-28-00 @ 0820 hrs*

Variance Letter Received

Yes

No _____

Well Diagram received

Yes

No _____

TYPE OF WELL:

Monitor/Piezometer 3

Other _____

Domestic _____

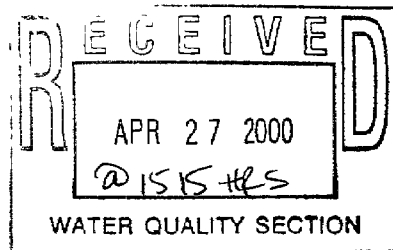
NOI to Abandon _____

Geotechnical _____

WATER QUALITY - WOARF ANALYST COMMENTS:

Drilling 3 monitor wells located in the buffer zone of the East Central Phoenix WOARF sites (38th & Indian School and 40th & Indian School)

Site Map attached - Referred to Hydrologist
Subbasin map attached - returned to GMSS _____



WATER QUALITY APPROVAL:

Granted

Not granted _____

Letter issued

Signature: *Shannon L. Reif*

Date: *4-28-00*

HYDROLOGY DIVISION - WOARF HYDROLOGIST COMMENTS:

HYDROLOGY DIVISION APPROVAL:

Granted

Not Granted _____

Letter Issued _____

Variance

Not Required _____

Granted

Not Granted _____

Letter issued

Signature: *Kay McWally*

Date: *5-2-00*

Revision Date: 12/2/99

CERCLARTNG

KB

**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: 55-580860

AUTHORIZED DRILLER: THF DRILLING, INC.

LICENSE NO: 611

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

WELL OWNER: KACHINA VILLAGE LLC 5134 NO 41ST PLACE PHOENIX, AZ 85018

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

SE ¼ of the SE ¼ of the SE ¼ Section 23 Township 2 NORTH Range 3 EAST

No. of wells in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 23RD DAY OF APRIL, 2001

AKS
GROUNDWATER MANAGEMENT SUPPORT

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





City of Phoenix
Planning And Development Department

RIGHT-OF-WAY
PERMIT

To find out about Phoenix construction code adoption news and to research your permits or projects, please visit <http://www.phoenix.gov/PDD>

200 West Washington Street
 Phoenix, Arizona 85003
 General Information 602-262-7811

STATUS: OPEN

POST THIS PERMIT ON JOB SITE

Before you start to dig, call Blue Stake 602-263-1100

Permit # CMC 15006536 **Bond #** 15346 **Issued** 20-MAR-2015 **Expires** 19-MAR-2017
Permit Description 4 POTHoles 32ND ST & INDIAN SCHOOL RD
Project 15-3 **CIVIL MISCELLANEOUS PERMIT**

Address 0 N 0 W 0 N 0 W Q-S: Q1-3 ZONING: A-1 **Zoning Suite**

Description/Scope of Work: MISCELLANEOUS CIVIL WORK
 DESCRIPTION OF WORK: 4 POTHoles @ 32ND ST & INDIAN SCHOOL RD
 ALL WORK TO BE APPROVED BY THE CIVIL INSPECTOR

Valuation: \$2,000

Owner Information

Name
 Address

Certificate of Occupancy Type: **COFC**

Contractor Information

Name CASCADE DRILLING LP
 Address PO BOX 1184

Type
 Ins CHARTIS SPECIALTY IN 14213432
 City/St/Zip WOODINVILLE WA 98072

Contact Phone
 Exp 02-OCT-15
 Phone 623-935-0124

Instructions and Comments

Permit Issued By AFL Entered By JCH

Permit Categories:

Inspections Required: PEI

Call 48 hours before beginning work 602-262-7811

NOTICE - This permit authorizes the above described work to be done in accordance with the approved plans and all applicable City codes and ordinances. Plan approval and permit issuance does not authorize violation of any city code or ordinance. The contractor(s) doing the work and the property owner or tenant/occupant authorizing the work are all legally responsible for complying with all codes and ordinances. By applying for this permit, I am requesting and hereby consent to periodic inspections of the above referenced project in accordance with Arizona Revised Statutes, Title 9, Chapter 7, Article 4. This permit expires by limitation and is null and void if work has not started within or ceased for any reason for 180 days, or if work is not completed by the expiration date printed above. Work after this time or beyond the scope of this permit requires a new supplemental permit. This permit can be suspended or revoked for failing to follow the approved plans or for violation of any City code or ordinance. Work within the public right-of-way shall comply with all City standard details and specifications. The contractor is responsible for maintaining streets and sidewalks safe and usable at all times. All barricades shall be approved in advance and shall comply with the City Traffic Barricade Manual.



Arizona Department of Water Resources
 Groundwater Permitting and Wells Section
 P.O. Box 36020 Phoenix, Arizona 85067-6020
 (602) 771-8500 • (602) 771-8690
 • www.azwater.gov

**Notice of Intent to
 Drill, Deepen, or Modify a
 Monitor / Piezometer / Environmental Well**

**\$150
 FEE**

- ❖ Review instructions prior to completing form in black or blue ink.
 - ❖ You **must** include with your Notice:
 - \$150 check or money order for the filing fee.
 - Well construction diagram, labeling all specifications listed in Section 6 and Section 7.
- Authority for fee: A.R.S. § 45-596 and A.A.C. R12-15-104.

AMA / INA	B	SB	FILE NUMBER
RECEIVED	DATE	WS	WELL REGISTRATION NUMBER
ISSUED	DATE	REMEDIAL ACTION SITE	55 -

SECTION 1. REGISTRY INFORMATION

To determine the location of well, please refer to the Well Registry Map (<https://qisweb.azwater.gov/WellRegistry/Default.aspx>) and/or Google Earth (<http://www.earthpoint.us/Townships.aspx>)

Well Type CHECK ONE	Proposed Action CHECK ONE	Location of Well WELL LOCATION ADDRESS (IF ANY)
<input type="checkbox"/> Monitor	<input checked="" type="checkbox"/> Drill New Well	3192 E Indian School Rd, Phoenix, AZ 85016
<input type="checkbox"/> Piezometer	<input type="checkbox"/> Deepen	TOWNSHIP(S) RANGE (E/W) SECTION 160 ACRE 40 ACRE 10 ACRE
<input type="checkbox"/> Vadose Zone	<input type="checkbox"/> Modify	2.0 N 3.0 E 23 SE ¼ SE ¼ SE ¼
<input type="checkbox"/> Air Sparging	WELL REGISTRATION NUMBER (if Deepening or Modifying)	COUNTY ASSESSOR'S PARCEL ID NUMBER
<input type="checkbox"/> Soil Vapor Extraction	55 -	BOOK 163 MAP 1 PARCEL 020B
<input checked="" type="checkbox"/> Other (please specify): SVE and Monitor		COUNTY WHERE WELL IS LOCATED MARICOPA

SECTION 2. OWNER INFORMATION

Land Owner	Well Owner (check this box if Land Owner and Well Owner are same <input type="checkbox"/>)
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL KV PARTNERS LLC	FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL Arizona Department of Environmental Quality
MAILING ADDRESS 5812 Darlington Rd	MAILING ADDRESS 1110 W Washington St, 4415B-1
CITY / STATE / ZIP CODE Pittsburgh, PA 15217	CITY / STATE / ZIP CODE Phoenix, AZ 85007
CONTACT PERSON NAME AND TITLE c/o Michael Wilson, Wilson Property Services, Inc.	CONTACT PERSON NAME AND TITLE Mel Bunkers, Project Manager
TELEPHONE NUMBER (480) 874-2600	TELEPHONE NUMBER (602) 771-4556
FAX (480) 874-2601	FAX

SECTION 3. DRILLING AUTHORIZATION

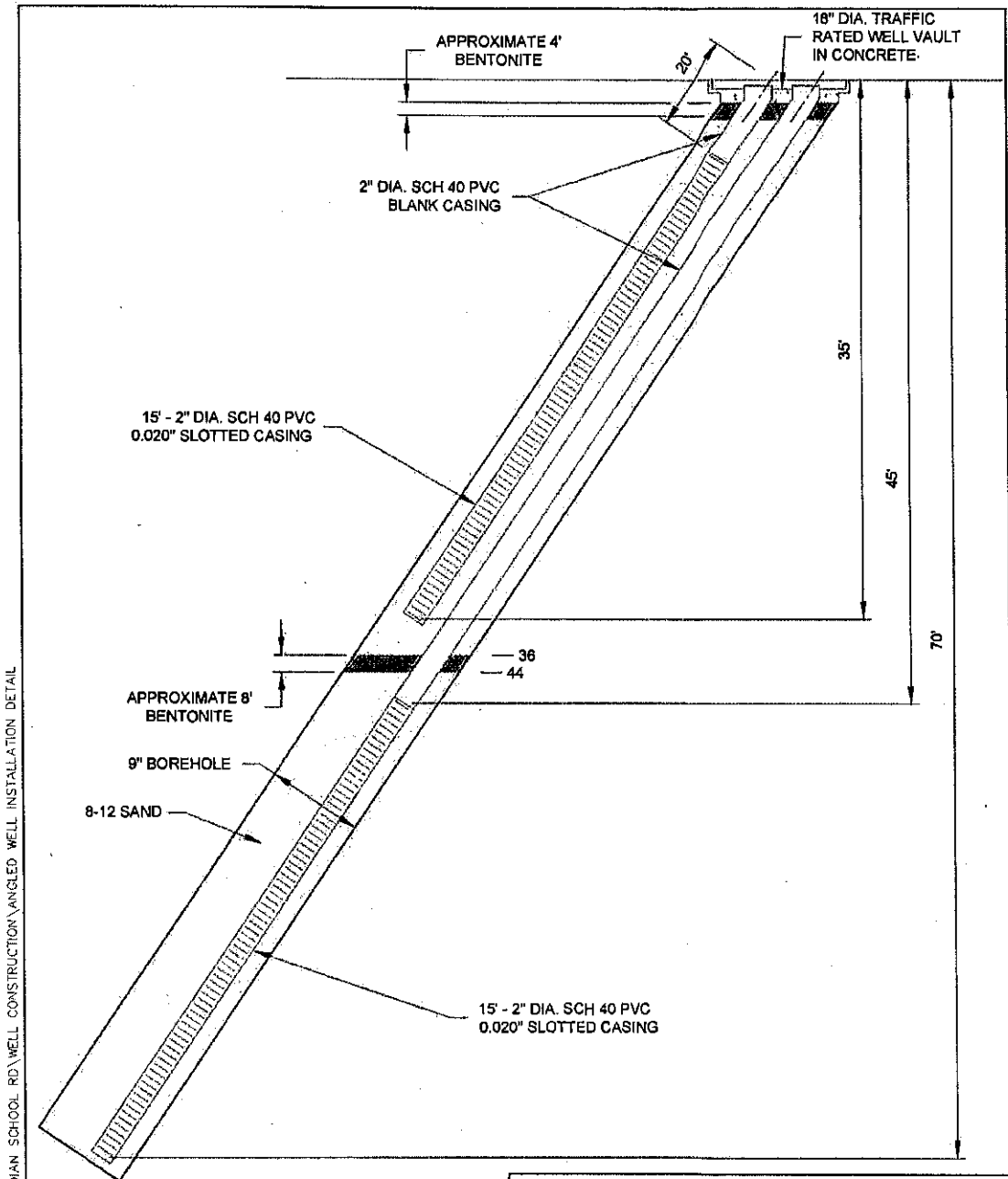
Drilling Firm	Consultant (if applicable)
NAME Cascade Drilling, LP	CONSULTING FIRM Geosyntec Consultants, Inc.
DWR LICENSE NUMBER 226	CONTACT PERSON NAME Chad Bird
ROC LICENSE CATEGORY A-4	TELEPHONE NUMBER 858-716-2908
TELEPHONE NUMBER (623) 935-0124	FAX 858-674-6586
FAX	EMAIL cbird@geosyntec.com
EMAIL ADDRESS gzekoff@cascade-env.com	ADDRESS

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The wells must be constructed in a vault. Pursuant to A.A.C. R12-15-801 (27) a "vault" is defined as a tamper-resistant watertight structure used to complete a well below the land surface.
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If yes, please state MSVE-11
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If yes, please state agency contact & phone number Mel Bunkers, 602-771-4556
6. For monitor wells, is dedicated pump equipment to be installed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, please state design pump capacity (Gallons per Minute)
7. Is this well a new well located in an Active Management Area AND intended to pump water for the purpose of remediating groundwater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	You must also file a supplemental form A.R.S. § 45-454(c) & (f) unless the well is a replacement well and the total number of operable wells on the site is not increasing. (See instructions)
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If no, where will the registration number be placed? Inside of vault

SECTION 5. Well Construction Diagram

Provide a well construction diagram showing all existing well construction features listed in Section 6 and Section 7.



N:\GEOSYNTEC\32ND AND INDIAN SCHOOL RD\WELL CONSTRUCTION\ANGLED WELL INSTALLATION DETAIL

PROPOSED SOIL VAPOR EXTRACTION WELL 32nd Street and Indian School Road Phoenix, Arizona	
Geosyntec[®] consultants	
Phoenix, AZ	May 2017
Figure 1	

SECTION 6. WELL CONSTRUCTION DETAILS

<p>Drill Method</p> <p>CHECK ONE</p> <p><input type="checkbox"/> Air Rotary</p> <p><input type="checkbox"/> Bored or Augered</p> <p><input type="checkbox"/> Cable Tool</p> <p><input type="checkbox"/> Dual Rotary</p> <p><input type="checkbox"/> Mud Rotary</p> <p><input type="checkbox"/> Reverse Circulation</p> <p><input type="checkbox"/> Driven</p> <p><input type="checkbox"/> Jetted</p> <p><input type="checkbox"/> Air Percussion / Odex Tubing</p> <p><input checked="" type="checkbox"/> Other (please specify): Sonic</p> <p>DATE CONSTRUCTION TO BEGIN 05/19/2017</p>	<p>Method of Well Development</p> <p>CHECK ONE</p> <p><input type="checkbox"/> Airlift</p> <p><input checked="" type="checkbox"/> Bail</p> <p><input type="checkbox"/> Surge Block</p> <p><input type="checkbox"/> Surge Pump</p> <p><input type="checkbox"/> Other (please specify):</p> <p>Method of Sealing at Reduction Points</p> <p>CHECK ONE</p> <p><input checked="" type="checkbox"/> None</p> <p><input type="checkbox"/> Welded</p> <p><input type="checkbox"/> Swedged</p> <p><input type="checkbox"/> Packed</p> <p><input type="checkbox"/> Other (please specify):</p>	<p>Grout Emplacement Method</p> <p>CHECK ONE</p> <p><input checked="" type="checkbox"/> Tremie Pumped (Recommended)</p> <p><input type="checkbox"/> Gravity</p> <p><input type="checkbox"/> Pressure Grout</p> <p><input type="checkbox"/> Other (please specify):</p> <p>Surface or Conductor Casing</p> <p>CHECK ONE</p> <p><input checked="" type="checkbox"/> Flush Mount in a vault</p> <p><input type="checkbox"/> Extends at least 1' above grade</p>
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SECTION 7. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole			Casing													
DEPTH FROM SURFACE		BOREHOLE DIAMETER (inches)	DEPTH FROM SURFACE		OUTER DIAMETER (inches)	MATERIAL TYPE (T)				PERFORATION TYPE (T)					SLOT SIZE IF ANY (inches)	
FROM (feet)	TO (feet)		FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS	KNIFE		SLOTTED
0	70	9	0	20	9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
			20	35	9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0.020"

DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)							FILTER PACK			
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
0	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
2	19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
19	36	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8"

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS: **2** EXPECTED DEPTH TO WATER (Feet Below Ground Surface): **60**

SECTION 8. PERMISSION TO ACCESS

By checking this box, I hereby provide ADWR permission to enter the property for the purpose of taking water level measurements at this well. (See instructions.)

SECTION 9. LAND OWNER AND WELL OWNER SIGNATURE

I state that this notice is filed in compliance with A.R.S. § 45-598 and is complete and correct to the best of my knowledge and

Land Owner	Well Owner (if different from Land Owner; See instructions)
PRINT NAME AND TITLE <i>M.D. Wilson Agent of Owner</i>	PRINT NAME AND TITLE <i>Mel Bunkers RG</i>
SIGNATURE OF LAND OWNER <i>M.D. Wilson</i>	SIGNATURE OF WELL OWNER <i>Mel Bunkers</i>
DATE <i>5/10/17</i>	DATE <i>5/9/17</i>
<input type="checkbox"/> By checking this box, you agree to allow ADWR to contact you via electronic mail.	<input checked="" type="checkbox"/> By checking this box, you agree to allow ADWR to contact you via electronic mail.
EMAIL ADDRESS <i>MWilson@WilsonPS.net</i>	EMAIL ADDRESS <i>mpb@azdeg.gov</i>

SECTION 6. WELL CONSTRUCTION DETAILS		
Drill Method CHECK ONE <input type="checkbox"/> Air Rotary <input type="checkbox"/> Bored or Augered <input type="checkbox"/> Cable Tool <input type="checkbox"/> Dual Rotary <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Reverse Circulation <input type="checkbox"/> Driven <input type="checkbox"/> Jetted <input type="checkbox"/> Air Percussion / Odex Tubing <input checked="" type="checkbox"/> Other (please specify): Sonic	Method of Well Development CHECK ONE <input type="checkbox"/> Airlift <input checked="" type="checkbox"/> Bail <input type="checkbox"/> Surge Block <input type="checkbox"/> Surge Pump <input type="checkbox"/> Other (please specify):	Grout Emplacement Method CHECK ONE <input checked="" type="checkbox"/> Tremie Pumped (Recommended) <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure Grout <input type="checkbox"/> Other (please specify):
DATE CONSTRUCTION TO BEGIN 05/19/2017	Method of Sealing at Reduction Points CHECK ONE <input checked="" type="checkbox"/> None <input type="checkbox"/> Welded <input type="checkbox"/> Swaged <input type="checkbox"/> Packed <input type="checkbox"/> Other (please specify):	Surface or Conductor Casing CHECK ONE <input checked="" type="checkbox"/> Flush Mount in a vault <input type="checkbox"/> Extends at least 1' above grade

SECTION 7. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)
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Borehole			Casing													
DEPTH FROM SURFACE		BOREHOLE DIAMETER (inches)	DEPTH FROM SURFACE		OUTER DIAMETER (inches)	MATERIAL TYPE (T)				PERFORATION TYPE (T)					SLOT SIZE IF ANY (inches)	
FROM (feet)	TO (feet)		FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHOTTER SCREEN	MILLS	KNIFE		SLOTTED
0	70	9	0	45	9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
			45	70	9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0.020"

Annular Material															
DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)							FILTER PACK						
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE			SAND	GRAVEL	.SIZE	
36	44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>		
44	70	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>		8-12

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS: **2** EXPECTED DEPTH TO WATER (Feet Below Ground Surface): **60**

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 I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and

Land Owner	Well Owner (if different from Land Owner; See instructions)
PRINT NAME AND TITLE	PRINT NAME AND TITLE
SIGNATURE OF LAND OWNER	SIGNATURE OF WELL OWNER
DATE	DATE
<input type="checkbox"/> By checking this box, you agree to allow ADWR to contact you via electronic mail.	<input type="checkbox"/> By checking this box, you agree to allow ADWR to contact you via electronic mail.
EMAIL ADDRESS	EMAIL ADDRESS