Arizona Department of Water Resources
Information Management Unit
PO Box 36020 • Phoenix, Arizona 85067-36020
(602) 771-8527 • 602-771-8500

Well Driller Report and Well Log

KC

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

FILE NUMBER: B(1-1) 9 DDA
WELL REGISTRATION NUMBER: 55 - 919020
PERMIT NUMBER (IF ISSUED):

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm

Mail To:

NAME	DWR LICENSE NUMBER
LAYNE CHRISTENSEN COMPANY	7
ADDRESS: 12030 EAST RIGGS ROAD	TELEPHONE NUMBER: 480-895-9336
CITY / STATE / ZIP: CHANDLER, AZ, 85249-3701	FAX

RECEIVED JAN 27 2016 ARIZONA DEPARTMENT OF WATER RESOURCES

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: CRANE CO.

MAILING ADDRESS: 100 FIRST STAMFORD PLACE

CITY / STATE / ZIP: STAMFORD, CT, 06902--6784

CONTACT PERSON NAME AND TITLE: Anthony Pantaleoni, VP

TELEPHONE NUMBER: 602 438-0883

FAX: 203 363 7214

WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.): EPA- MW-66A

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	1W	09	SE 1/4	SE 1/4	NE 1/4

LATITUDE			LONGITUDE		
33°	26'	16.86"N	112°	21'	36.78"W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☑ *GPS: Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: 969 Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE): ☑ *GPS: Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☑ NAD-83 ☐ Other (please specify)

COUNTY: Maricopa

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)

BOOK	MAP	PARCEL
500	4	019R

SECTION 3. WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☑ Other (please specify): Percussion Hammer

Method of Well Development

CHECK ONE
- ☑ Airlift
- ☑ Bail
- ☐ Surge Block
- ☑ Surge Pump
- ☐ Other (please specify)

Condition of Well

CHECK ONE
- ☑ Capped
- ☐ Pump Installed

Method of Sealing at Reduction Points

CHECK ONE
- ☑ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify)

Construction Dates

DATE WELL CONSTRUCTION STARTED: 1-11-16

DATE WELL CONSTRUCTION COMPLETED: 1-15-16

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 belief.

SIGNATURE OF QUALIFYING PARTY: [signature]

DATE: 1-22-2016

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 919020

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILD) (attach additional page if needed)

Depth

DEPTH OF BORING	DEPTH OF COMPLETED WELL
200' Feet Below Land Surface	135' Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
79.1 Feet Below Land Surface	1-12-16	0730	☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
200	0	10"

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE (inches)
135	85	4.5		✓								✓		0.20
85	0	4.5		✓			✓							

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
200	138							✓				1/4
138	80										✓	10x20
80	75									✓		#60
75	65							✓				
65	20					✓						
20	0			✓								

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 919020

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	Description Describe material, grain size, color, etc.	Check (T) every interval where water was encountered (if known)
0	30	Sand + caliche	
30	40	silty sand	
40	80	sand, gravel, cobbles	T
80	95	Sand, clay, gravel	T
95	110	Flowing sands, gravels	T
110	125	silty clay	T
125	185	Silty Sand, clay	T

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 919020

SECTION 6. WELL SITE PLAN			
NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
CRANE CO.	500	4	019R

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.

N
W E
S

1" = _____ ft

Arizona Department of Water Resources
Water Management Division
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.
- Authority for fee: A.R.S. § 45-596 and A.A.C. R12-15-104.

AMA / INA	B	SB
RECEIVED DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type (CHECK ONE)
- [X] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action (CHECK ONE)
- [X] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well
WELL LOCATION ADDRESS (IF ANY)
S. Camino Oro Dr, south of W. Grant St., Goodyear

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1 N	1 W	09	SW ¼	SE ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER
BOOK 500 | MAP 04 | PARCEL 019R ROW

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
CRANE CO.
MAILING ADDRESS
100 FIRST STAMFORD PLACE
CITY / STATE / ZIP CODE
STAMFORD, CT 06902
CONTACT PERSON NAME AND TITLE
ANTHONY PANTALEONI, VP
TELEPHONE NUMBER: 203-363-7214 | FAX:

Landowner (if different from Well Owner)
FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
CITY OF GOODYEAR
MAILING ADDRESS
190 N. LITCHFIELD RD.
CITY / STATE / ZIP CODE
GOODYEAR, AZ 85338
CONTACT PERSON NAME AND TITLE
MARK HOLMES, WATER RESOURCES MANAGER
TELEPHONE NUMBER: 623-882-7608 | FAX:

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm
NAME: LAYNE CHRISTENSEN COMPANY
DWR LICENSE NUMBER: 7 | ROC LICENSE CATEGORY: A-4
TELEPHONE NUMBER: 480.895.9404 | FAX:
E-MAIL ADDRESS: BRIAN.DELLETT@LAYNE.COM

Consultant (if applicable)
CONSULTING FIRM: Amec Foster Wheeler E&I, Inc.
CONTACT PERSON NAME: STEPHANIE KOEHNE
TELEPHONE NUMBER: 480-348-1244 | FAX: 480-348-1245
E-MAIL ADDRESS: STEPHANIE.KOEHNE@AMECFW.COM

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?	X		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?		X	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?	X		The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE: EPA MW-66A
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER: BRIAN STONEBRINK 602-771-4197
6. For monitor wells, is dedicated pump equipment to be installed?	X		IF YES, PLEASE STATE DESIGN PUMP CAPACITY: <0.5 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?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

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

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method
CHECK ONE
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☒ Other (*please specify*): PERCUSSION HAMMER

DATE CONSTRUCTION TO BEGIN: 12/14/2015

Method of Well Development
CHECK ONE
- ☐ Airlift
- ☒ Bail
- ☒ Surge Block
- ☒ Surge Pump
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points
CHECK ONE
- ☒ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Grout Emplacement Method
CHECK ONE
- ☐ Gravity
- ☐ Pressure Grout
- ☒ Tremie
- ☐ Other (*please specify*):

Surface or Conductor Casing
CHECK ONE
- ☒ Flush Mount in a vault
- ☐ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	200	10

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	135	4.5		X			X						
135	175	4.5		X							X		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0 / 20	20 / 115			X/		/X						
115/180	125/200							X				
125/130	130/180											#60 / 10-20

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS:

EXPECTED DEPTH TO WATER: 85 Feet Below Ground Surface

SECTION 7. OPTIONAL BY PROPERTY OWNER AND WELL OWNER ONLY

☐ 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 8. WELL OWNER AND PROPERTY OWNER SIGNATURE

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 belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
STEPHANIE KOEHNE, PROJECT MANAGER	Stephanie Koehne	11/19/2015
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE
MARK HOLMES, WATER RESOURCES MANAGER	Mark Holmes	11/23/2015

ARIZONA DEPARTMENT OF WATER RESOURCES

Phoenix, Arizona 85012

DRILLING CARD

SPECIAL REQUIRMENTS APPLY (WQARF/SUPERFUND) VARIANCE GRANTED

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

WELL REGISTRATION NO: **55-919020**

AUTHORIZED DRILLER: **LAYNE CHRISTENSEN COMPANY** LICENSE NO: **7**

NOTICE OF INTENT TO **DRILL A ENV - MONITOR WELL** HAS BEEN FILED WITH THE DEPARTMENT BY:

WELL OWNER: **CRANE CO.**

ADDRESS: **100 FIRST STAMFORD PLACE, STAMFORD, CT, 06902**

THE WELL(S) IS/ARE TO BE LOCATED IN THE:

NE 1/4 of the **SE** 1/4 of the **SE** 1/4 Section **09** Township **01 N** Range **01 W**

NO. OF WELLS IN THIS PROJECT: **1** ASSESSOR'S PARCEL NO: **500-4-019R**

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE DAY OF **1/6/2017**

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

This drilling or abandonment authority was granted based upon the certifications made by the above-named Driller in the notice of intent to drill or abandon. Those certifications, along with any variances granted, are listed below. By drilling or abandoning the well pursuant to this authorization, the above-named driller acknowledges the accuracy of the driller certifications. If the certifications are in error, this authorization is invalid and driller must contact the Department of Water Resource's NOI Section in writing at the addres above to correct.

Variance(s) Granted To Driller:

- Thermoplastic Casing Surface Seal Variance in upper 20' of well.

Certification(s) Made By Driller:

þ By checking this box, I certify that I have all necessary Registrar of Contractor (ROC) licenses in all necessary license categories for this drilling or abandonment project and that those licenses are current.

þ By checking this box, I certify that I have been authorized by the above-named well owner to submit this Notice of Intent on the well owner's behalf.

þ By checking this box, I certify that I have read the applicable substantive policy statement regarding each variance that I am requesting, and that I shall comply with all of the requirements set forth therein.

þ By checking this box, I certify that the information above is complete and correct, and that the well shall be drilled or abandoned in compliance with all pertinent statutes and rules, including any special standards that may be required to protect the aquifer or other water sources.

þ By checking this box, I certify that this NOI application is not an application to replace, deepen, or modify an existing well.

þ By checking this box, I understand that the Authorization to drill this well DOES NOT constitute or guarantee an approval to use the well for the purpose of withdrawing groundwater for transportation to an Active Management

Area (AMA) pursuant to A.R.S. § 45-552, 45-553, 45-554 or 45-555(A) without official prior approval from the Department.

b I understand that this well site is located within the boundaries of a contamination area and that special construction or abandonment requirements shall be complied with, and by checking this box, I certify that I have read the applicable special requirements, and that I shall comply with those standards.

b If the landowner and the well owner are not the same, by checking this box, I certify that I have obtained written approval from the landowner in order to conduct this drilling or abandonment project. A copy of the written approval shall be submitted to ADWR with the Well Driller Report and Well Log or Well Abandonment Completion Report within 30 days of completion of drilling or abandonment.

ARIZONA DEPARTMENT OF WATER RESOURCES
Electronic Filing - NOI Report

Phoenix, Arizona

NOI Type: Notice of Intent to Drill, Deepen, Modify a Monitor/Piezometer/Environmental Well
Well Type: ENV - MONITOR
Date Received at ADWR Website: 1/6/2016

Fee Paid: $150.00 Order Number: -4773

Well Registration Number: 55 - 919020
Number of Wells/Holes: 1 Drilling Authority Expires On: 1/6/2017

Driller's ADWR License Number: 7

Authorized Driller: LAYNE CHRISTENSEN COMPANY
ROC License Number Entered By Driller: 071734
Qualifying Party License Categories: A-4

Well Owner Name: CRANE CO.
Well Owner Address: 100 FIRST STAMFORD PLACE
Well Owner City, State - Zip: STAMFORD, CT - 06902
Well Owner Phone: 203 3637214

Book: 500 Map:4 Parcel: 019R

Is the Land Owner the same as the Well Owner?: No

Land Owner Name: CITY OF GOODYEAR
Land Owner Address: 190 N. LITCHFIELD ROAD
Land Owner City, State - Zip: GOODYEAR, AZ - 85338
Land Owner Phone: 623 8827608

Well Location: **NE** 1/4 of the **SE** 1/4 of the **SE** 1/4 Section **9** Township **1 N** Range **1 W**

AMA: PHOENIX AMA
County: MARICOPA
Contamination Site: WITHIN 1 MILE OF A REMEDIAL ACTION SITE

Primary Water Use: **MONITORING**
Secondary Water Use(s): **N/A**

Is any portion of the land, on which the well is to be located, within 100 feet of a designated municipal provider's operating water distribution system as shown on the municipal provider's most recent digitized service area map filed by the municipal provider with the director of ADWR. **N/A**

Will you be installing a dedicated pump ?: **No**

Will the installed pump have a pumping capacity of greater than 35 GPM, or will the well will be used to withdraw greater than 10 Acre Feet per year?: **N/A**

Variance(s) Granted To Driller:

- Thermoplastic Casing Surface Seal Variance in upper 20’ of well.

Certification(s) Made By Driller:

- þ By checking this box, I certify that I have all necessary Registrar of Contractor (ROC) licenses in all necessary license categories for this drilling or abandonment project and that those licenses are current.
- þ By checking this box, I certify that I have been authorized by the above-named well owner to submit this Notice of Intent on the well owner’s behalf.
- þ By checking this box, I certify that I have read the applicable substantive policy statement regarding each variance that I am requesting, and that I shall comply with all of the requirements set forth therein.
- þ By checking this box, I certify that the information above is complete and correct, and that the well shall be drilled or abandoned in compliance with all pertinent statutes and rules, including any special standards that may be required to protect the aquifer or other water sources.
- þ By checking this box, I certify that this NOI application is not an application to replace, deepen, or modify an existing well.
- þ By checking this box, I understand that the Authorization to drill this well DOES NOT constitute or guarantee an approval to use the well for the purpose of withdrawing groundwater for transportation to an Active Management Area (AMA) pursuant to A.R.S. § 45-552, 45-553, 45-554 or 45-555(A) without official prior approval from the Department.
- þ I understand that this well site is located within the boundaries of a contamination area and that special construction or abandonment requirements shall be complied with, and by checking this box, I certify that I have read the applicable special requirements, and that I shall comply with those standards.
- þ If the landowner and the well owner are not the same, by checking this box, I certify that I have obtained written approval from the landowner in order to conduct this drilling or abandonment project. A copy of the written approval shall be submitted to ADWR with the Well Driller Report and Well Log or Well Abandonment Completion Report within 30 days of completion of drilling or abandonment.

Arizona Department of Water Resources
Information Management Unit
PO Box 36020 l Phoenix, Arizona 85067-36020
(602) 771-8527 l 602-771-8500

Well Driller Report and Well Log

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

FILE NUMBER **B(1-1) 9 DDA**

WELL REGISTRATION NUMBER **55 - 919020**

PERMIT NUMBER (IF ISSUED)

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm

Mail To:

NAME	DWR LICENSE NUMBER
LAYNE CHRISTENSEN COMPANY	7
ADDRESS: 12030 EAST RIGGS ROAD	TELEPHONE NUMBER: 480-895-9336
CITY / STATE / ZIP: CHANDLER, AZ, 85249-3701	FAX

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: CRANE CO.

MAILING ADDRESS: 100 FIRST STAMFORD PLACE

CITY / STATE / ZIP: STAMFORD, CT, 06902--6784

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER: 602 438-0883

FAX

WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.)

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE 1/4	40 ACRE 1/4	10 ACRE 1/4

LATITUDE			LONGITUDE		
°	'	"N	°	'	"W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE)
☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL — Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE)
☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE)
☐ NAD-83 ☐ Other (please specify)

COUNTY

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)

BOOK	MAP	PARCEL
500	4	019R

SECTION 3. WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
☐ Air Rotary
☐ Bored or Augered
☐ Cable Tool
☐ Dual Rotary
☐ Mud Rotary
☐ Reverse Circulation
☐ Driven
☐ Jetted
☐ Air Percussion / Odex Tubing
☐ Other (please specify)

Method of Well Development

CHECK ONE
☐ Airlift
☐ Bail
☐ Surge Block
☐ Surge Pump
☐ Other (please specify)

Condition of Well

CHECK ONE
☐ Capped
☐ Pump Installed

Method of Sealing at Reduction Points

CHECK ONE
☐ None
☐ Packed
☐ Swedged
☐ Welded
☐ Other (please specify)

Construction Dates

DATE WELL CONSTRUCTION STARTED

DATE WELL CONSTRUCTION COMPLETED

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 belief.

SIGNATURE OF QUALIFYING PARTY

DATE

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 919020

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILD) (attach additional page if needed)

Depth

DEPTH OF BORING	DEPTH OF COMPLETED WELL
Feet Below Land Surface	Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
Feet Below Land Surface			☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE		BOREHOLE DIAMETER (inches)
FROM (feet)	TO (feet)	

Installed Casing

DEPTH FROM SURFACE		OUTER (inches)	MATERIAL TYPE (T)				PERFORATION TYPE (T)						SLOT SIZE (inches)
FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	

Installed Annular Material

DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)								FILTER PACK		
						BENTONITE						
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

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 919020

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	**Description** Describe material, grain size, color, etc.	Check (T) every interval where water was encountered (if known)

Well Driller Report and Well Log

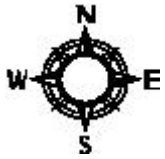
WELL REGISTRATION NUMBER
55 - 919020

SECTION 6. WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
CRANE CO.	500	4	019R

v Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.

v Please indicate the distance between the well location and any septic tank system or sewer system.

						
						1" = _____ ft

Well Driller Report and Well Log

Introduction
These instructions are a guide to filling out Form DWR 55-55 (Rev. 06/15/2010), entitled "Well Driller Report and Well Log." Please review the instructions prior to completing the form in black or blue ink. Forms may be obtained at any Arizona Department of Water Resources (ADWR) office and at ADWR's web site, http://www.azwater.gov. For information about the form or these instructions, contact Groundwater Permitting & Wells at (602) 771-8500. There is no fee for filing this form.

When Form DWR 55-55 Must be Filed
Within 30 days after completion of the drilling, deepening or modification of a well, the licensed well driller who performed the work must file a Well Driller Report and Log with ADWR. Because the information in the report describes the well as it was actually constructed, and comes from the person who constructed the well, the information is very valuable to ADWR. For that reason, it is very important to fill out the report with the most accurate information possible.

Instructions for Filling out the Form

Well Registration and Permit Numbers
Fill in the registration number of the well and any ADWR permit number associated with the well in the upper right-hand corner of the first page. Also fill in the well registration number in the upper right-hand corner of all other pages so that the well information on those pages can be identified when the pages are separated during computer imaging.

Section 1 - Drilling Authorization
Fill in the name, address, DWR license number and telephone and fax numbers of the drilling firm filing the report.

Section 2 - Registry Information

Well Owner
Fill in the name, mailing address, telephone number and fax number (if available) of the well owner. If the well owner is a corporation, governmental unit or other entity, provide the name of a contact person.

Location of Well
Fill in the following information relating to the location of the well:

- The street address of the property where the well is located. For monitor wells or other wells associated with contaminant investigations or remedial projects, this will usually be the same as the facility address.
- The legal description of the well site. The legal description is the township, range, section, and in decreasing order, the quarters of that section so that the well location falls in a 10-acre block within that section. Normally, the legal description will be the same as that given in the original Notice of Intent to drill the well, but occasionally a more accurate description is discovered after the Notice is filed.
- The latitude and longitude (in degrees-minutes-seconds format) and land surface elevation at the well, and the method used to determine these data. **Please note this information is mandatory.** Use of a Global Positioning System (GPS) receiver is the only method accepted by the Department. The GPS unit should be adjusted to use the NAD-83 datum. Please indicate if the geographic coordinate datum used was NAD-83, and if not, which datum was used.
- The name of the county and the tax assessor's parcel identification number for the land where the well is located. This information can normally be taken from the original Notice of Intent to drill the well, and may also be obtained from the county tax assessor's office. Federal or State land will not have a parcel identification number.

Section 3 - Well Construction Details
Section 3 requires details on the construction of the well. Indicate the drill method by checking the appropriate box. If the drill method is not listed, check the "Other" box and describe the method. To the right of that, indicate the method of well development by checking the

appropriate box. Next, indicate the method of sealing at reduction points. If the method used is not listed, check "Other" and provide a brief explanation. Under *Well Driller Completion Report and Well Log* Form 55-55 Instructions (Rev. 06/2010) Page 2

Condition of Well, indicate whether the well was capped, or a pump was installed, when you left it. Then fill in the date when well construction started, and the date when well construction was completed.

Signature Block

The form must be signed and dated by the qualifying party of the drilling firm.

Section 4 - Well Construction Design (As Built)

Section 4 contains tables to fill in information on the existing borehole, the installed casing and the installed annular material. The tables are broken down by depth interval.

In the first set of boxes, fill in the depth of the boring and the depth of the completed well, as measured in feet below the land surface.

Under **Water Level Information** please indicate the static water level in the well, as measured in feet below the land surface, and the date and time the water level was measured. If the well is a flowing well, include the method by which the artesian flow is regulated.

In the **Borehole** table, fill in the diameter of the borehole in inches, and indicate the depth interval for each change in diameter. In the **Installed Casing** table, fill in the outer diameter of the casing in inches, check the appropriate boxes indicating the type of casing material and the type of perforations, and fill in the slot size of any perforations. Fill in the depth interval for each change in information. Please note that not every interval will be perforated. Check the "Blank or None" box for non-perforated depth intervals. If the type of casing material or perforations is not listed, describe the type in the appropriate box.

In the **Installed Annular Material** table, check the appropriate boxes indicating the type of annular material or filter pack installed at each depth interval. Fill in the size of the filter pack used. Provide the depth interval for each change in information. If the type of annular material is not listed, describe the material in the appropriate box.

Section 5 - Geologic Log of Well

Section 5 requires the geologic or lithologic log of the well. Describe the various units encountered during drilling. Provide as much description as possible. The log description must be broken down by depth intervals below ground surface, and every interval where groundwater, including perched groundwater, was encountered must be checked. If a consulting firm was involved with the well construction, the consultant's lithologic log may be submitted in lieu of completing Section 5.

Section 6 - Well Site Plan

In the boxes at the top of Section 6, fill in the name of the well owner and the county tax assessor's parcel identification number for the land where the well is located. Below that, provide a scale drawing of where the well was actually constructed on the parcel, illustrating the property boundaries, the well location and any structures on the property. The drawing must also show the location of any septic tank or sewer systems on the property or within 100 feet of the well, even if on neighboring property, and the distance between the well and the septic tank or sewer system. The drawing should closely match the drawing on the original Notice of Intent to drill the well, but the purpose of this drawing is to show where the well was actually drilled, especially if the location is different than originally planned. This information will be shared with the county.

Where to File Form

Completed forms may be mailed to ADWR at the following address:

Arizona Department of Water Resources
Groundwater Permitting and Wells
PO Box 36020
Phoenix, AZ 85067-36020

Completed forms may also be submitted to ADWR's main office at 3550 North Central Avenue, Second Floor., Phoenix, AZ 85012.

The completed form must be legible and of good quality when received by ADWR so that it can be scanned into ADWR's permanent records.

ARIZONA DEPARTMENT of WATER RESOURCES
3550 North Central Avenue, Second Floor
Phoenix, AZ 85012
602-771-8500
azwater.gov

January 6, 2016

CRANE CO.
100 FIRST STAMFORD PLACE
STAMFORD, CT 06902--6784

DOUGLAS A. DUCEY
Governor

THOMAS BUSCHATZKE
Director

Registration No. 55- 919020
File Number: B(1-1) 9 DDA

Dear Well Applicant:

Enclosed is a copy of the Notice of Intention to Drill (NOI) a well which you or your driller recently filed with the Department of Water Resources. This letter is to inform you that the Department has approved the NOI and has mailed, or made available for download, a drilling authorization card to your designated well drilling contractor. The driller may not begin drilling until he/she has received the authorization, and must keep it in their possession at the well site during drilling. Although the issuance of this drill card authorizes you to drill the proposed well under state law, the drilling of the well may be subject to restrictions or regulations imposed by other entities.

Well drilling activities must be completed within one year after the date the NOI was filed with the Department. If drilling is not completed within one year, a new NOI must be filed and authorization from this Department received before proceeding with drilling. If the well cannot be successfully completed as initially intended (dry hole, cave in, lost tools, etc.), the well must be properly abandoned and a Well Abandonment Completion Report must be filed by your driller [as required by A.A.C. R12-15-816(F)].

If you change drillers, you must notify the Department of the new driller's identity on a Request to Change Well Information (form 55-71A). Please ensure that the new driller is licensed by the Department to drill the type of well you require. A new driller may not begin drilling until he/she receives a new drilling authorization card from the Department.

If you find it necessary to change the location of the proposed well(s), you may not proceed with drilling until you file an amended NOI with the Department. An amended drilling authorization card will then be issued to the well drilling contractor, which must be in their possession before drilling begins.

Arizona statute [A.R.S. § 45-600] requires registered well owners to file a Pump Installation Completion Report (form 55-56) with the Department within 30 days after the installation of pumping equipment, if authorized. A blank report is enclosed for your convenience. State statute also requires the driller to file a complete and accurate Well Drillers Report and Well Log (form 55-55) within 30 days after completion of drilling. A blank report form was provided to your driller with the drilling authorization card. You should insist and ensure that all of the required reports are accurately completed and timely filed with the Department.

Please be advised that Arizona statute [A.R.S. § 45-593(C)] requires a registered well owner to notify the Department of a change in ownership of the well and/or information pertaining to the physical characteristics of the well in order to keep this well registration file current and accurate. Any change in well information or a request to change well driller must be filed on a Request to Change Well Information form (form 55-71A) that may be downloaded from the ADWR Internet website at www.azwater.gov.

Sincerely,

Groundwater Permitting and Wells Section

ARIZONA DEPARTMENT of WATER RESOURCES
3550 North Central Avenue, Second Floor
Engineering and Permits Division
Phoenix, AZ 85012
602-771-8500

NOTICE TO WELL DRILLERS

This is a reminder that a valid drill card be present for the drilling of each and every well constructed on a site.* The problem seems to occur during the construction of a well when an unexpected problem occurs. Either the hole collapses, the hole is dry, a drill bit is lost and can't be recovered, or any number of other situations where the driller feels that he needs to move over and start another well. If you encounter this type of scenario, please be aware drillers do not have the authority to start another well without first obtaining drilling authority for the new well. Please note the following statutes and regulations pertaining to well drilling and construction:

ARIZONA REVISED STATUTE (A.R.S.)

A.R.S. § 45-592.A.

A person may construct, replace or deepen a well in this state only pursuant to this article and section 45-834.01. The drilling of a well may not begin until all requirements of this article and section 45-834.01, as applicable, are met.

****

A.R.S. § 594.A.

The director shall adopt rules establishing construction standards for new wells and replacement wells, the deepening and abandonment of existing wells and the capping of open wells.

****

A.R.S. § 600.A

A well driller shall maintain a complete and accurate log of each well drilled.

ARIZONA ADMINISTRATIVE CODE (A.A.C.)

A.A.C. R12-15-803.A.
A person shall not drill or abandon a well, or cause a well to be drilled or abandoned, in a manner which is not in compliance with A.R.S. Title 45, Chapter 2, Article 10, and the rules adopted thereunder.

****

A.A.C. R12-15-810.A.
A well drilling contractor or single well licensee may commence drilling a well only if the well drilling contractor or licensee has possession of a drilling card at the well site issued by the Director in the name of the well drilling contractor or licensee, authorizing the drilling of the specific well in the specific location.

****

A.A.C. R12-15-816.F.
In the course of drilling a new well, the well may be abandoned without first filing a notice of intent to abandon and without an abandonment card.

*** THIS REQUIREMENT DOES NOT PERTAIN TO THE DRILLING OF MINERAL EXPLORATION, GEOTECHNICAL OR HEAT PUMP BOREHOLES**

Arizona Department of Water Resources
Groundwater Permitting and Wells Section
PO Box 36020 , Phoenix, AZ 85067-36020
(602) 771-8527 ▪ 1-800-352-8488
www.azwater.gov

Landowner Authorization to Drill or Abandon a Well on Landowner's Parcel

Landowner Authorization to Drill or Abandon a Well by a Third Party on Landowner's Parcel Pursuant to A.R.S. § 45-596 and A.A.C. R12-15-809

FILE NUMBER **B(1-1) 9 DDA**

WELL REGISTRATION NUMBER 55 - 919020

The Arizona Department of Water Resources requires a well driller or well owner to obtain written permission from the owner of the land on which they intend to drill or abandon a well. Landowners, or their designated representative, must authorize the well to be drilled or abandoned with their signature on the Notice of Intent or on this form, to be attached to the Notice of Intent form.

PARCEL ADDRESS _____

COUNTY PARCEL ID 500 (BOOK) - 4 (MAP) - 019R (PARCEL) COUNTY MARICOPA

In accordance with A.R.S. § 45-496 and A.A.C. R12-15-809, I certify that:

¨ I am the owner of the parcel on which I am giving permission for a well to be ¨ drilled or ¨ abandoned.

¨ I am an authorized representative of the owner of the parcel on which I am giving permission for a well to be ¨ drilled or ¨ abandoned.

SIGNATURE	
TYPE OR PRINT NAME OF LANDOWNER / RESPRESENTATIVE	TITLE
SIGNATURE	DATE SIGNED