



Arizona Department of Water Resources  
 Records Management Section  
 500 N. 3rd Street • Phoenix, Arizona 85004  
 (602) 417-2405 • (800) 352-8488  
 www.water.az.gov

**Project Completion Report for  
 Mineral Exploration Drilling**

- ❖ Review instructions prior to completing form in black or blue ink.
- ❖ This report should be prepared by the well owner or exploration firm in detail and filed with the Department within 30 days following completion of the project as a whole.

FILE NUMBER  
 D(4-28)5  
 WELL REGISTRATION NUMBER  
 55-217427

\*\* PLEASE PRINT CLEARLY \*\*

**SECTION 1. LOCATION OF WELL**

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
4S	29E	5	¼	¼	¼

Layne Job # 34-1805 & 1819

SECTION 2. OWNER INFORMATION		SECTION 3. DRILLING AUTHORIZATION	
<b>Well Owner</b>		<b>Drilling Firm</b>	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL Phelps Dodge Morenci, Inc		NAME Layne Christensen Co.	
MAILING ADDRESS 4521 US Highway 191		DWR LICENSE NUMBER 7	
CITY / STATE / ZIP CODE Morenci, AZ 85540		TELEPHONE NUMBER 480-895-9336 ext. 7103	FAX
CONTACT PERSON NAME AND TITLE Julian Tellez - Geologist			
TELEPHONE NUMBER	FAX		

**SECTION 4.**

DATE DRILLING PROJECT STARTED 2-19-08	DATE DRILLING PROJECT COMPLETED 2-19-09	NUMBER OF HOLES NONE
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Casing (if installed)				Geologic Log of Well	
OUTER DIAMETER (inches)	MATERIAL ( T )			CHECK ONE	
	STEEL	PVC	ABS	<input type="checkbox"/> Unconsolidated Formation	<input type="checkbox"/> Consolidated Formation:
	IF OTHER TYPE, DESCRIBE			STATIC WATER LEVEL (IF ENCOUNTERED OR DETECTED)	
				Feet Below Land Surface	

**SECTION 5. ACTUAL WELL ABANDONMENT DESIGN (if abandoned)**

Casing Treatment (if applicable)					Sealing or Fill Material												
DEPTH FROM SURFACE		TREATMENT TYPE ( T )			IF OTHER TYPE, DESCRIBE OR IF CASING WAS PERFORATED, DESCRIBE SPACING AND SIZE OF PERFORATIONS THAT WERE ADDED	DEPTH FROM SURFACE		MATERIAL TYPE ( T )							MIXING RATIO by (check one) <input type="checkbox"/> Weight <input type="checkbox"/> Volume	VOLUME OF MATERIAL USED (cubic feet)	
FROM (feet)	TO (feet)	SONAR JET	BRUSH OR SCRAPER	MILLS KNIFE		FROM (feet)	TO (feet)	NEAT CEMENT	CONCRETE	SAND CEMENT GROUT	CEMENT-BENTONITE GROUT	SAND-BENTONITE GROUT	GROUT	CHIPS			PELLETS

I state that this report is filed in compliance with A.A.C. R12-15-817(C) and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE Mitchel Daniels / Operations Manager	SIGNATURE OF WELL OWNER OR EXPLORATION FIRM <i>Mitchel Daniels</i>	DATE 3/12/09
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**ARIZONA DEPARTMENT OF WATER RESOURCES  
WATER MANAGEMENT SUPPORT SECTION**

3550 N. Central Avenue  
Phoenix, Arizona 85012

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

WELL REGISTRATION NO: 55-217427

AUTHORIZED DRILLER: LAYNE CHRISTENSEN COMPANY

LICENSE NO: 7

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

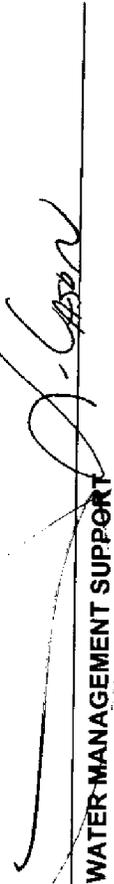
WELL OWNER: FREEPORT-MCMORAN COPPER & GOLD INC 4521 US HWY 191 MORENCI, AZ 85540

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

$\frac{1}{4}$  OF THE  $\frac{1}{4}$  OF THE  $\frac{1}{4}$  SECTION 5 TOWNSHIP 4 SOUTH RANGE 29 EAST

NO. OF WELLS IN THIS PROJECT: 100

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 19TH DAY OF FEBRUARY, 2009

  
WATER MANAGEMENT SUPPORT

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



## ARIZONA DEPARTMENT OF WATER RESOURCES

3550 N. Central Avenue, Phoenix, Arizona 85012

Telephone (602) 771-8500

Fax (602) 771-8691

March 06, 2008



Janet Napolitano  
Governor

Herbert R. Guenther  
Director

FREEMONT-MCMORAN COPPER & GOLD INC  
4521 US HWY 191  
MORENCI, AZ 85540

Registration No. 55-217427

File No. D(4-29) 5 000

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill (NOI) and Abandon an Exploration/Specialty Well, which you recently filed with this Department pursuant to A.R.S. § 45-596. This is to inform you that the Department has approved the NOI and has mailed a drilling card authorizing the drilling of the well to your designated well drilling contractor. The driller may not begin drilling until he has received the drilling card, which he must keep in his possession at the well site during drilling.

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, you must file a new NOI before proceeding with further drilling. If it is necessary to change the location of the proposed well, you may not proceed with drilling until you file an amended NOI with the Department. A properly amended drilling card will then be issued and must be in the possession of the well drilling contractor before drilling begins.

If this well is being drilled as a heat pump, cathodic protection, or grounding well, or for exploration purposes, our standard Well Driller Report and Well Log form (DWR form 55-55) will be furnished to the well drilling contractor. If this well is being drilled as a mineral exploration well, a Project Completion Report (DWR form 55-57) will be furnished to the well drilling contractor. These forms must be filed with the Department within 30 days after completion of the well. A Pump Installation Completion Report form (DWR form 55-56) is being furnished to the well owner if pump installation is authorized. This must be completed within 30 days of installing a pump as required by A.R.S. § 45-600. During the drilling of a new well, if it is determined that it must be abandoned, then a Well Abandonment Completion Report (DWR form 55-58) must be submitted per R12-15-816(F).

Please be advised that A.R.S. § 45-593(C) requires the person to whom a well is registered to notify the 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. Any change in well information or a request to change well driller must be filed on a Request to Change Well Information form (DWR form 55-71A), which is enclosed for your future use.

Sincerely,

Natasha Conner

NOI Unit

Water Management Support Section

Enclosures



**Arizona Department of Water Resources**  
 Water Management Support Section  
 P.O. Box 458 • Phoenix, Arizona 85001-0458  
 (602) 417-2470 • (800) 352-8488  
 www.water.az.gov

**Notice of Intent to  
 Drill and Abandon an  
 Exploration / Specialty 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. Only one Notice of Intent to Drill is required for all wells that are drilled by or for the same person to obtain geophysical, mineralogical or geotechnical data within a single section of land.
  - Well construction diagram showing all proposed well construction features listed in Section 5 and the proposed abandonment specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.
- \*\* PLEASE PRINT CLEARLY \*\***

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

Handwritten: 2/20/08, Sd, 15

FILE NUMBER
WELL REGISTRATION NUMBER

Handwritten: (4-29) 5000, 55-217427

**SECTION 1. REGISTRY INFORMATION**

<b>Well Type</b>	<b>Location of Well</b>						
CHECK ONE	WELL LOCATION ADDRESS (IF ANY)						
<input checked="" type="checkbox"/> Mineral Exploration							
<input type="checkbox"/> Geotechnical							
<input type="checkbox"/> Heat Pump	TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE	Number of Wells (holes) per 10-acre location
<input type="checkbox"/> Cathodic Protection	4S	29E	5	1/4	1/4	1/4	100
<input type="checkbox"/> Grounding	Use additional boxes to the right to list 160,40,10 acre descriptions for multiple wells drilled to obtain geophysical or geotechnical data on different 10-acre parcels within a single section of land (160, 40, 10 acre descriptions are not required for mineralogical exploration wells).						
<input type="checkbox"/> Other (please specify):							
COUNTY WHERE WELL(S) ARE LOCATED:	Greenlee						

**SECTION 2. OWNER INFORMATION**

<b>Well Owner</b>	<b>Landowner (if different from Well Owner)</b>
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
Freeport-McMoran Copper & Gold INC.	Freeport-McMoran Copper & Gold INC.
MAILING ADDRESS	MAILING ADDRESS
4521 US Hwy 191	4521 US Hwy 191
CITY / STATE / ZIP CODE	CITY / STATE / ZIP CODE
Morenci, AZ 85540	Morenci, AZ 85540
CONTACT PERSON NAME AND TITLE	CONTACT PERSON NAME AND TITLE
Raymond E. Irwin, Senior Geologist	Raymond E. Irwin, Senior Geologist
TELEPHONE NUMBER	TELEPHONE NUMBER
(928) 865-6270	(928) 865-6270
FAX	FAX
(928) 865-3944	(928) 865-3944

**SECTION 3. DRILLING AUTHORIZATION**

<b>Drilling Firm</b>	<b>Consultant (if applicable)</b>	
NAME	CONSULTING FIRM	
Layne Christensen Co	N.A.	
OWR LICENSE NUMBER	CONTACT PERSON NAME	
7		
TELEPHONE NUMBER	TELEPHONE NUMBER	FAX
(480) 895-9336	(480) 895-9536	
ROC LICENSE CATEGORY	E-MAIL ADDRESS	
071734 Class A-04		

**SECTION 4.**

Questions	Yes	No	If Yes:
1. Is the proposed well site within 100 feet of a septic tank system, sewer disposal area, landfill, hazardous materials or petroleum storage area or tank?		NO	You must submit a letter requesting a variance from the 100-foot setback requirement (A.A.C. R12-15-818). However, if the proposed well is a geotechnical well that will be abandoned before the drill rig leaves the well site, a variance may be requested by simply checking the box below. <input type="checkbox"/> I request a variance from the 100-foot setback requirement for a geotechnical well.
2. If applicable, are you requesting a variance to use thermoplastic casing in lieu of steel in the surface seal?		NO	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
3. Is there another well name or identification number associated with this well?		NO	PLEASE STATE

**Notice of Intent to Drill and Abandon an Exploration / Specialty Well**

Provide a well construction diagram showing all existing well construction features listed in Section 5 and the proposed abandonment specifications listed in Section 6. Please submit additional sheets (page 2) and additional well construction diagrams if multiple wells are to be drilled and construction or abandonment details vary.

WELL REGISTRATION NUMBER  
**55-217427**

**SECTION 5. PROPOSED WELL CONSTRUCTION PLAN** (attach additional page if needed) DATE CONSTRUCTION TO BEGIN  
**1/8/08**

**\*\* Required Information \*\***

Borehole			Casing (if applicable)													
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		IF OTHER TYPE, DESCRIBE
0	1,200	5.5	None													
1,200	1,500	3.02	None													

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	BENTONITE			IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	
						GROUT	CHIPS	PELLETS				
									None			

**RECEIVED**  
FEB 20 2008  
**WATER MGMT**

**SECTION 6. PROPOSED WELL ABANDONMENT DESIGN** (Refer to ADWR'S Well Abandonment Handbook for additional information.)

DEPTH FROM SURFACE		Casing Treatment (if applicable)				DEPTH FROM SURFACE		Sealing or Fill Material														
FROM (feet)	TO (feet)	TYPE ( T )				FROM (feet)	TO (feet)	GROUT TYPE ( T )														
		SONAR JET	BRUSH OR SCRAPE	MILLS KNIFE	CASING REMOVAL (explain in Remarks)			IF OTHER TYPE, DESCRIBE OR IF CASING IS TO BE PERFORATED, DESCRIBE SPACING AND SIZE OF PERFORATIONS TO BE ADDED	NEAT CEMENT	CONCRETE	SAND-CEMENT GROUT	CEMENT-BENTONITE GROUT	SAND-BENTONITE GROUT	HIGH SOLIDS BENTONITE			SAND					
					None	0	20															
						20	1,200															3.3
						1,200	1,500															198.0
																						15.0

**Proposed Abandonment Method** (See Well Abandonment Handbook)  
CHECK ONE  
 Standard Method  
 Alternative 1  
 Alternative 2  
 Alternative 3  
 Alternative 4  
 Variance Option \*  
 Alternative 5  
 Variance Option 1\* \* requires a letter requesting a variance  
 Variance Option 2\*

**Emplacement Method of Sealing or Fill Material**  
CHECK ONE  
 Gravity  
 Pressure Grouting  
 Tremie Pumped  
 Other (please specify):

REMARKS

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  
**Raymond E. Irwin, Senior Geologist**

SIGNATURE OF WELL OWNER OR EXPLORATION FIRM  
*Raymond E. Irwin (For Freeport-McMoran)*

SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)  
*Raymond E. Irwin (For Freeport-McMoran)*

DATE  
**2/8/08**

DATE  
**2/8/08**

55-2174/27

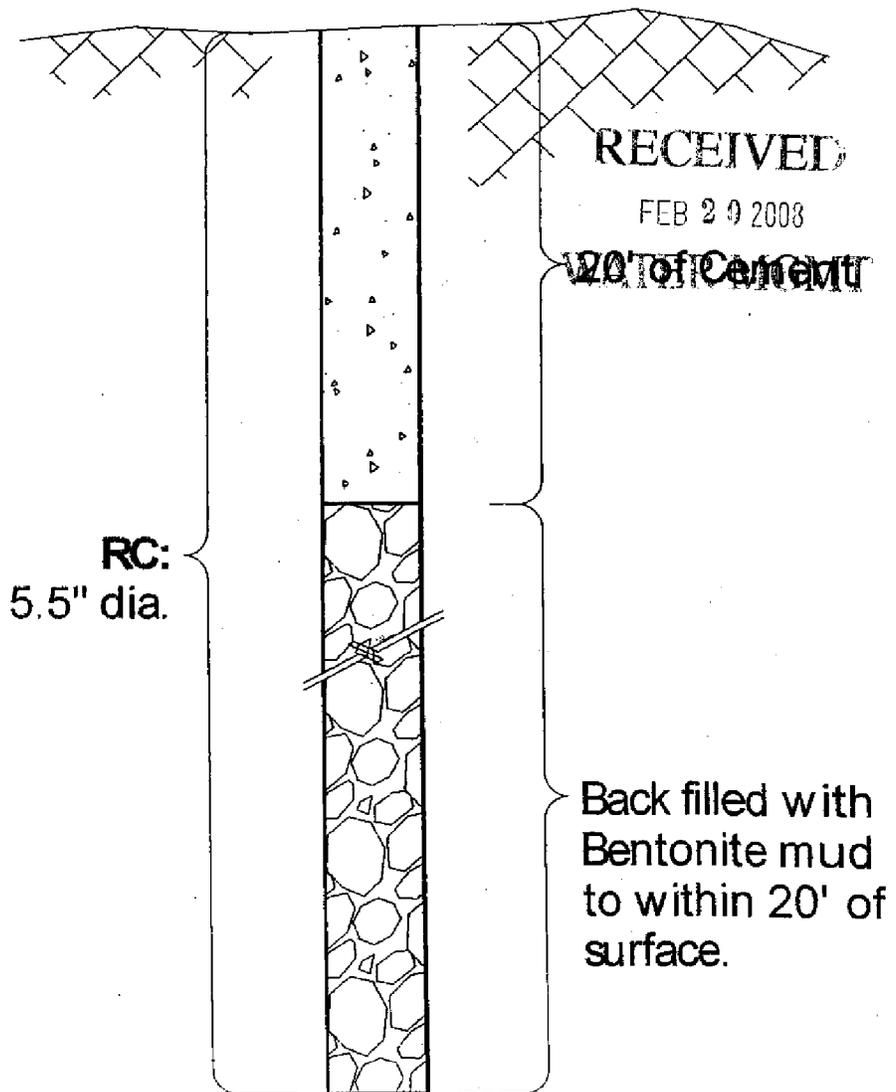


# "RC" Reverse Circulation Drill hole Well Construction Diagram

55217

Depth of Drill holes  
Varies;

Type of  
Back Fill



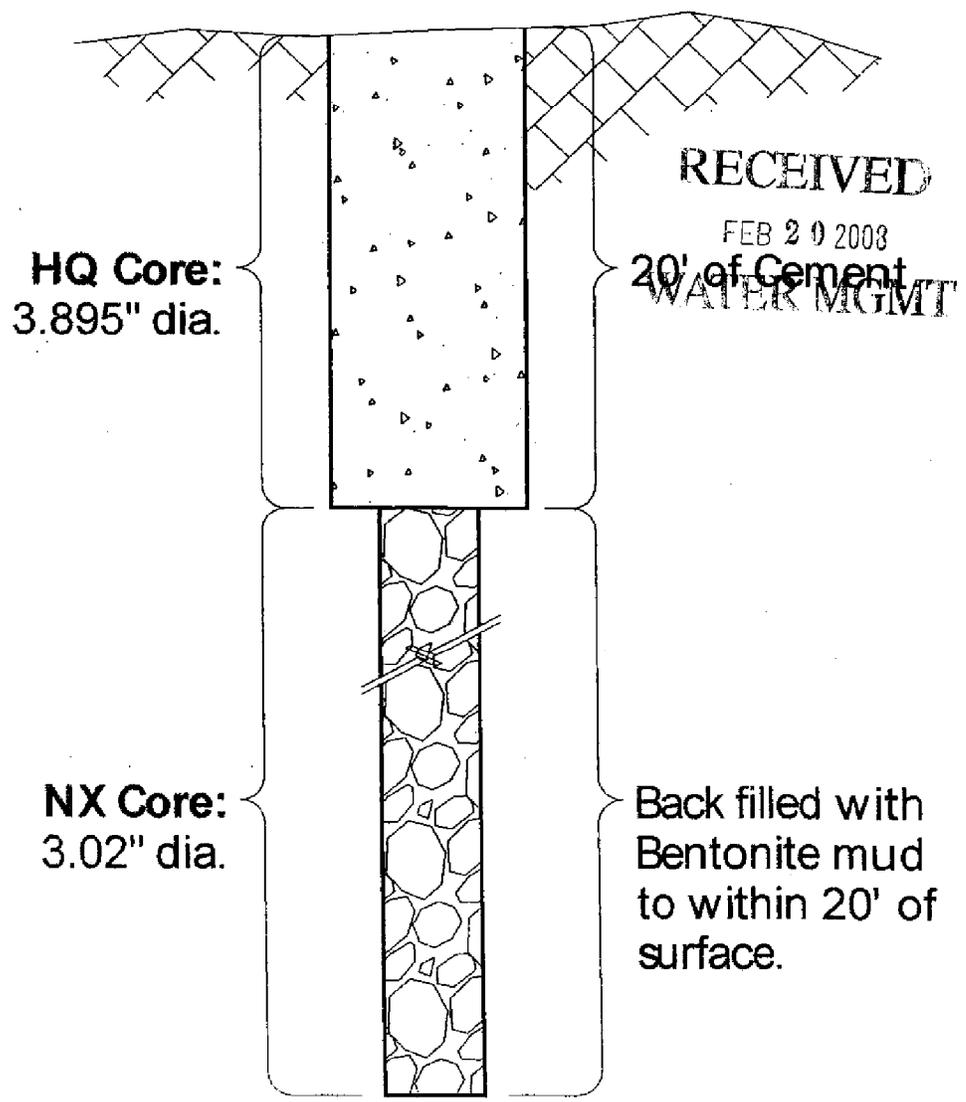
55-217427



# “Core” Drill hole Well Construction Diagram

Depth of Drill holes  
Varies;

Type of  
Back Fill



Back filled with  
Bentonite mud  
to within 20' of  
surface.

### Arizona Department of Water Resources

3550 N Central Ave  
Phoenix AZ 85012

FREEPORT-MCMORAN  
COPPER & GOLD  
4521 US HWY 191  
MORENCI,AZ 85540  
928-865-6270

Date: 2/20/2008  
Cashier: WRPAB  
Type: Mail

**RECEIVED**  
FEB 20 2008  
**WATER MGMT**

DCS/INV#	DESCRIPTION	ATTR	SIZE	QTY	PRICE	EXT PRICE
F 72	4439-06 NOTICE OF INTENT TO DRILL WELL	15245		34	150.00	5,100.00
				1 Unit(s)	Subtotal:	5,100.00
<b>RECEIPT TOTAL:</b>						<b>5,100.00</b>
Tendered:						5,100.00

Check #: 5,100.00 # 049394

FREEPORT-MCMORAN  
WELL OWNER