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August 23, 1993

Zonia Mine  
Leach Basin #3 Primary Containment Dam  
Yavapai County, Arizona

APPLICATION FOR PERMIT TO APPROPRIATE  
PUBLIC WATER OF THE STATE OF ARIZONA

Submitted by: Allen E. Wells  
Engineer

ARIMETCO, INC.  
6245 East Broadway Blvd. Suite 350  
Tucson, Arizona 85711

Table of Contents

1.0	INTRODUCTION . . . . .	3
2.0	LOCATION . . . . .	3
3.0	MINING BACKGROUND . . . . .	3
4.0	WATER SOURCE . . . . .	4
5.0	BENEFICIAL USE OF WATER . . . . .	4
6.0	DAM SPECIFICATIONS . . . . .	4
7.0	MEMORANDUM OF MINING LEASE AGREEMENT . . . . .	5

**MAPS**

LOCATION MAP . . . . .	Enclosed
ENLARGED SITE PLAN . . . . .	Enclosed
BLM: MTP PLAT . . . . .	Enclosed
LAND OWNERSHIP MAP . . . . .	Enclosed
CONSTRUCTION DETAILS . . . . .	Enclosed

## 1.0 INTRODUCTION

In conjunction with our request for a Temporary Aquifer Protection Permit this application is being submitted to the Arizona Department of Water Resources in order to appropriate public waters. Several containment structures are required to alleviate alleged water pollution problems resulting from potential surface water discharges reporting to tributaries of the Hassayampa River. Historically, these points of diversion have existed since 1966. This application is to enhance the methods used to divert the waters in order to protect the environment from further damage. It is requested that a Permit To Appropriate Public Water Of The State Of Arizona be issued for the Zonia Mine.

## 2.0 LOCATION

The Zonia Mine is located in the Walnut Grove mining district, Sections 10,11,13, and 14 T11N R4W GRB&M in southwestern Yavapai County Arizona. It is approximately 70 miles NNW of Phoenix, about halfway between Wickenburg and Prescott. The Leach Basin No. Three Primary Containment Dam is located on the western portion of the property in the NE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section, 14 Township 11N Range 4W.

## 3.0 MINING BACKGROUND

The Zonia Mine was last operated in 1974 by the MacAllester Fuels Corporation as an open pit oxide copper mine and metallurgical recovery facility using heap leach followed by iron cementation process. During this period three principal leach basins were constructed. These leach basins, unlike leach dumps, were interiorly dammed. Perforated pipe extending out through the dam carried solution to the iron cementation plant. These leach basins are reported to be lined with asphalt based soil cement to prevent possible solution escape and contamination of the subgrade.

In-Situ mining techniques were also employed at the Zonia Mine during the early 1970's. In-place blasting fractured the rock and numerous injection and recovery wells were installed. A cone of depression encompassing the area was believed sufficient to contain the solution.

In 1988 the Zonia Company and Zonia Landfill Inc. acquired the property which is currently under evaluation by Arimetco Inc. to determine the feasibility of mining the low grade copper oxide. The proposed mining operation will consist of an open pit heap leach, solvent-extraction, and electrowinning process.

#### 4.0 WATER SOURCE

Horton overland flow and leach basin runoff constitute the contained waters of Leach Basin #3 Primary Containment Dam. There are no water channels reporting to the dam site and the flows are ephemeral.

#### 5.0 BENEFICIAL USE OF WATER

The water is to be developed by construction of containment structures in various locations throughout the facility. The catchments are required for containment of surface water runoff and leach solution recovery. The diverted waters will be used for make-up water to partially account for evaporative losses. Environmental protection will be provided by containing surface water runoff affected by mined land disturbance.

The amount and measure of beneficial water use is 23 million gallons per year.

#### 6.0 DAM SPECIFICATIONS

Name: Leach Basin #3 Primary Containment Dam

Height: 49 feet

Maximum storage: 4.0 acre-feet

Per foot capacities:

<u>Elev (ft)</u>	<u>Volume (cu ft)</u>	<u>Elev (ft)</u>	<u>Volume (cu ft)</u>
4639	28339	4628	10687
4638	26550	4627	9698
4637	24760	4626	8709
4636	22970	4625	7721
4635	21181	4624	6732
4634	19477	4623	5743
4633	17774	4622	4754
4632	16071	4621	3766
4631	14368	4620	2777
4629	11676	TOTAL	276416

Copy of

MEMORANDUM OF MINING LEASE  
AGREEMENT

File located in ZONDA LEASE FILE

LOCATION MAP

LEACH BASIN # 3  
PRIMARY CONTAINMENT  
DAM

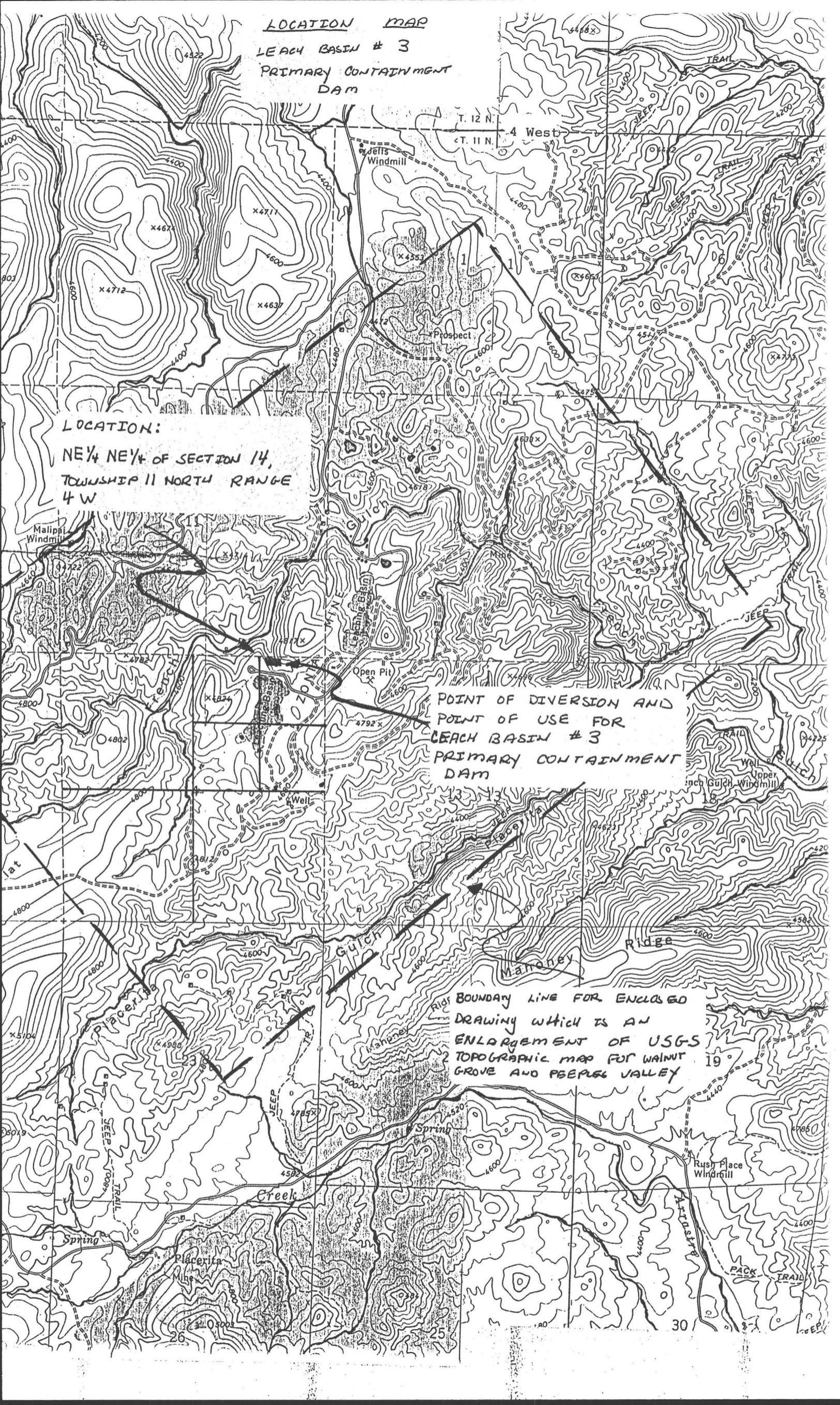
T. 12 N.  
R. 4 West

LOCATION:

NE 1/4 NE 1/4 OF SECTION 14,  
TOWNSHIP 11 NORTH RANGE  
4 W

POINT OF DIVERSION AND  
POINT OF USE FOR  
LEACH BASIN # 3  
PRIMARY CONTAINMENT  
DAM

BOUNDARY LINE FOR ENCLOSED  
DRAWING WHICH IS AN  
ENLARGEMENT OF USGS  
TOPOGRAPHIC MAP FOR WALNUT  
GROVE AND PEEPLE VALLEY



Copy of

ENLARGED

SITE

PLAN

DRAWING LOCATED:

ZONIA

DRAWING

DRAWER

Copy of

BLM: MTP PLAT

Drawing Located: ZONIA CLAIM DRAWN

LEACH BASIN # 3  
PRIMARY CONTAINMENT DAM

ARIZONA STATE OFFICE  
BU. LAND MANAGEMENT

JUN 11 1981

7:45 A.M.  
PHOENIX, ARIZONA

SHADED AREA INDICATES  
LOCATION OF GEOCHEMICAL  
AND GEOPHYSICAL SURVEYS

LOCATION OF LEACH BASIN #3  
CONTAINMENT DAM. THE  
DAM IS COMPLETELY CONTAINED  
ON PATENTED MINING CLAIMS  
AS SHOWN IN EXHIBIT A OF THE  
APPLICATION.

ZONIA, et al CLAIM GROUPS  
and  
COPPER CROWN CLAIM GROUP  
Yavapai County, Arizona

PROPERTY MAP  
Showing location of Geochemical  
and  
Geophysical Surveys

At the expense of:  
~~AMERICAN SELCO, INC.~~

during the  
1980-1981 assessment year

SCALE: 1" = 2000'

COPY OF

CONSTRUCTION

DETAILS

DRAWING LOCATED: 486/33 C:/ALAD/ZONBA  
EEE-001

APPLICATION FOR PERMIT TO APPROPRIATE  
PUBLIC WATER OF THE STATE OF ARIZONA

No. \_\_\_\_\_  
Filed \_\_\_\_\_

1. Name Arimetco, Inc., Allen E. Wells, Agent, Telephone (602) 745-8882

Address 6245 East Broadway, Suite 350, Tucson, Arizona, 85711

2. Type of water source and name, if any: Please see attachment

being tributary to: Hassayampa River on the \_\_\_\_\_ watershed  
(for office use only)

3. Proposed beneficial use of water:

- A. Domestic: Number of persons \_\_\_\_\_ number of families \_\_\_\_\_
- B. Municipal: Describe population served and estimate of future population and water requirements on an attachment.
- C. Irrigation:

1) Location of the acreage to be irrigated:

\_\_\_\_ ¼ \_\_\_\_ ¼ \_\_\_\_ ¼ of Section \_\_\_\_\_, Township \_\_\_\_\_ N/S, Range \_\_\_\_\_ E/W

\_\_\_\_ ¼ \_\_\_\_ ¼ \_\_\_\_ ¼ of Section \_\_\_\_\_, Township \_\_\_\_\_ N/S, Range \_\_\_\_\_ E/W

2) Total number of acres to be irrigated: \_\_\_\_\_ 3) Type of crop: \_\_\_\_\_

D. Stockwatering:

1) Kind of stock: \_\_\_\_\_ 2) Number of stock: Max \_\_\_\_\_, Min. \_\_\_\_\_, Avg. \_\_\_\_\_

E. Power: Describe on attachment.

F. Mining: Describe the type of mining and the method of supplying and using the water on an attachment, must also submit copy of accepted plan of operation if located on Federal or State lands.

G. Recreation: Describe: \_\_\_\_\_  
\_\_\_\_\_

H. Wildlife: Describe kind of wildlife and character of area to be served: \_\_\_\_\_  
\_\_\_\_\_

I. Groundwater recharge: Describe on an attachment.

4. Amount of proposed beneficial water use:

Proposed Use	Amount and Measure	Specific Months of Use
<u>Containment of Horton</u>	<u>23 million gallons/year</u>	<u>yearly</u>
<u>overland flow and runoff</u>	_____	_____
<u>from LB #3,2 along with</u>	_____	_____
<u>evaporation</u>	_____	_____

NE 1/4 NE 1/4 of Section, 14 Township 11N Range 4W

6. Location of proposed place(s) of use: County: Yavapai

NE 1/4 NE 1/4 of Section, 14 Township 11N Range 4W

       1/4        1/4 of Section,        Township        Range       

7. Describe how the appropriated water is to be developed and put to the stated beneficial use: \_\_\_\_\_

Please see attachment

8. Storage of water: A. Name of reservoir: Leach Basin #3  
Primary Containment B. Dam height at downstream face: 49  
Dam

C. Maximum storage: 3.99 acre-feet. D. Capacity for each foot in depth in cubic feet:

Please see attachment

9. Construction of facility or diversion works: Number of months to begin construction: 0; Number of months to complete project 1; and put the water to the proposed beneficial use: 1

If the facility or diversion is in place and the appropriated water has been put to the beneficial use, give the date of construction completion of the facility and first date of beneficial use: \_\_\_\_\_

10. Owner of land on which the appropriation is located: The Zonia Company

A. Indicate land ownership: Private X, State \_\_\_\_\_, BLM \_\_\_\_\_, National Forest \_\_\_\_\_, Other \_\_\_\_\_

B. Does the applicant have legal access to both the proposed diversion point and place(s) of use?  
Yes X No \_\_\_\_\_ If "No", explain in item 12 below.

C. If the land is held by lease, give the lease or allottee number: \_\_\_\_\_, and submit copy of lease. For proposed appropriations located on BLM or Forest Service lands, the applicant must obtain a letter of authorization for the proposed appropriation and submit the letter to the Department with the application.

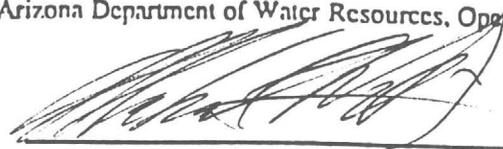
11. Is the water to be used supplementally with other water(s)? Yes \_\_\_\_\_ No X If "yes", identify other waters or water rights, and explain: \_\_\_\_\_

12. Additional comments or explanations: The catchment serves as the primary containment for LB #3, 2 where as Leach Basin #3 Secondary Containment Dam will only be used as needed.

13. Attach examination fee of \$25.00. Also attach a United States Geological Survey topographic quadrangle map, or copy thereof, clearly showing the proposed point of diversion, any conveyance system, and the place(s) of use. Attach copy of deed showing land ownership or letter of authorization from landowner.

Submit the completed application, with examination fee, to the Arizona Department of Water Resources, Operations Division, 15 South 15th Avenue, Phoenix, Arizona 85007.

AUG 26, 1993  
date

  
AGENT:  
Armetco  
Signature of Applicant/ or Representative  
(if representative, submit documentation)



ARIZONA DEPARTMENT OF WATER RESOURCES

15 South 15th Avenue  
Phoenix, Arizona 85007

AFFIDAVIT OF POSTING NOTICE

STATE OF ARIZONA

APPLICATION TO APPROPRIATE

County of \_\_\_\_\_ )

)  
) ss.  
)

NO. 33-96294.0000

ALLEN EDWARD WELLS, being first duly sworn, states that two copies of the Notice of Application for a Permit to Appropriate Public Water of the State of Arizona No. 33-96294.0000, a copy of which is hereto attached, were posted on the 22 day of OCTOBER, 19 93, at:

1. ZONIA MINE OFFICE ~ SITE OF THE APPROPRIATION

2. LOCAL POST OFFICE ~ (KIRKLAND)

Each of the notices was posted in a conspicuous place in the locality to be affected by the proposed appropriation of water and remained posted for thirty consecutive days ending on the 6 day of DECEMBER, 19 93.

  
Affiant

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires:  
\_\_\_\_\_

Arizona Department of Water Resources  
15 South 15th Avenue  
Phoenix, Arizona 85007

## NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATER

On the 2nd day of September, 1993, Arimetco Inc., 6245 East Broadway, Suite 350, Tucson, Arizona 85711, filed an Application for Permit to Appropriate Public Water, No. 33-96294.0000.

The application states:

1. Source of Water: an unnamed tributary of French Gulch, a tributary of the Hassayampa River, a tributary of the Gila River.
2. Proposed use and amount: 70.58 acre-feet per annum for mining.
3. Point of diversion and place(s) of use: The Northeast quarter of the Northeast quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$ ), Section 14, Township 11 North, Range 4 West, Gila and Salt River Base and Meridian, Yavapai County, Arizona.
4. Description of dam and reservoir: 3.99 acre-feet to be stored in Leach Basin #3 Primary Containment.

Any person alleging that the proposed appropriation conflicts with vested water rights, is a menace to public safety, or is against the interests and welfare of the public may submit a statement of protestant against the application. The statement may be submitted either in writing or on a form provided by the Department for that purpose. The statement of protestant should be filed with the Arizona Department of Water Resources, Operations Division, 15 South 15th Avenue, Phoenix, Arizona 85007, within sixty (60) days of the date of issuance of the Notice. A copy of the statement of protestant should also be forwarded to the applicant.

The Notice is issued this 1st day of October, 1993.

ARIZONA DEPARTMENT OF WATER RESOURCES

LOCATION MAP

LEACH BASIN # 3  
PRIMARY CONTAINMENT  
DAM



LOCATION:

NE 1/4 NE 1/4 OF SECTION 14,  
TOWNSHIP 11 NORTH RANGE  
4 W

POINT OF DIVERSION AND  
POINT OF USE FOR  
LEACH BASIN # 3  
PRIMARY CONTAINMENT  
DAM

BOUNDARY LINE FOR ENCLOSED  
DRAWING WHICH IS AN

# ARIZONA DEPARTMENT OF WATER RESOURCES

15 South 15th Avenue, Phoenix, Arizona 85007

Telephone (602) 542-1581

Fax (602) 542-3383



August 17, 1993

ARIMETCO International Inc.  
Attn: Allen Edwards Wells  
6245 East Broadway, Ste. 350  
Tucson, Arizona 85711

FIFE SYMINGTON  
Governor

RITA P. PEARSON  
Director

Re: Three Applications for Permit to Appropriate Public Water

Dear Mr. Wells:

Enclosed please find the Applications for Permit to Appropriate Public Water you recently submitted to the Department and your check number 19017, dated August 12, 1993.

The locations listed on the three applications appear to be located on land held by the Bureau of Land Management (BLM). Please submit a letter of authorization from the Bureau of Land Management allowing appropriation and use of water on the BLM land. The application will not be accepted by the Department of Water Resources unless accompanied by the letter of authorization or proof of land ownership.

Please clarify the following items when resubmitting your applications:

1. Item 2 of each application: You have indicated the sources of water to be "Leach pad runoff". The exact sources of water are not clear. Please clarify the specific type of channel name the runoff flows into, such as; a wash, creek, stream, canyon, etc.
2. The maps you provided are inadequate. Enclosed are copies of U.S.G.S. topographic maps which include the places of use where your applications are located. Please clearly mark and label the location of the point of diversion and place of use on each map for each application and return the maps to us for inclusion in your files.

If you have any questions concerning these matters, please call me at (602) 542-1581.

Yours truly,

Miros Gutierrez  
Surface Water Rights Specialist  
Operations Division

MG:hs  
Enclosures

8/11/93

Arizona Department of Water Resources  
15 South 15th Avenue  
Phoenix, Arizona 85007

No. \_\_\_\_\_  
Filed \_\_\_\_\_

APPLICATION FOR PERMIT TO APPROPRIATE  
PUBLIC WATER OF THE STATE OF ARIZONA

1. Name Arimetco Inc., Allen E. Wells, Agent, Telephone (602) 745-8882

Address 6245 East Broadway Blvd., Suite 350, Tucson, Arizona, 85711

2. Type of water source and name, if any: Leach pad runoff & Surface water containment

*PLEASE SEE ATTACHMENT*

being tributary to: Hassayampa River on the \_\_\_\_\_ watershed  
(for office use only)

3. Proposed beneficial use of water:

- A. Domestic: Number of persons \_\_\_\_\_ number of families \_\_\_\_\_
- B. Municipal: Describe population served and estimate of future population and water requirements on an attachment.
- C. Irrigation:

1) Location of the acreage to be irrigated:

\_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 of Section \_\_\_\_\_, Township \_\_\_\_\_ N/S, Range \_\_\_\_\_ E/W

\_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 of Section \_\_\_\_\_, Township \_\_\_\_\_ N/S, Range \_\_\_\_\_ E/W

2) Total number of acres to be irrigated: \_\_\_\_\_ 3) Type of crop: \_\_\_\_\_

D. Stockwatering:

1) Kind of stock: \_\_\_\_\_ 2) Number of stock: Max \_\_\_\_\_, Min. \_\_\_\_\_, Avg. \_\_\_\_\_

E. Power: Describe on attachment.

XXX Mining: Describe the type of mining and the method of supplying and using the water on an attachment, must also submit copy of accepted plan of operation if located on Federal or State lands. Please see attachment

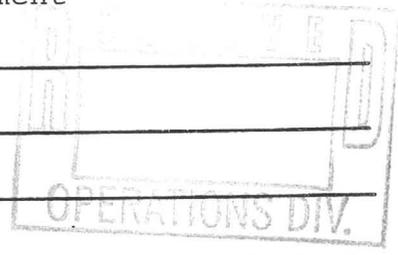
G. Recreation: Describe: \_\_\_\_\_

H. Wildlife: Describe kind of wildlife and character of area to be served: \_\_\_\_\_

I. Groundwater recharge: Describe on an attachment. *CONTRIBUTION OF HORTON OVERLAND FLOW RUNOFF AND EVAPORATION FROM LB #3, 2 ALONG WITH SUBSTANTIATION.*

4. Amount of proposed beneficial water use:

Proposed Use	Amount and Measure	Specific Months of Use
Surface water runoff containment from LB #3, 2 & evaporation	23 million gallons/year	yearly
_____	_____	_____
_____	_____	_____



5. Location of proposed point of diversion: County: Yavapai  
NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  of Section, 14 Township 11N Range 4W
6. Location of proposed place(s) of use: County: Yavapai  
NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  of Section, 14 Township 11N Range 4W  
        $\frac{1}{4}$          $\frac{1}{4}$  of Section,        Township        Range
7. Describe how the appropriated water is to be developed and put to the stated beneficial use: \_\_\_\_\_  
Please see attachment
8. Storage of water: A. Name of reservoir: Leach Basin #3  
Primary Containment B. Dam height at downstream face: 49 feet  
 C. Maximum storage: 3.99 acre-feet. D. Capacity for each foot in depth in cubic feet:  
Please see attachment
9. Construction of facility or diversion works: Number of months to begin construction: 0; Number of months to complete project 1; and put the water to the proposed beneficial use: 1.  
 If the facility or diversion is in place and the appropriated water has been put to the beneficial use, give the date of construction or completion of the facility and first date of beneficial use: \_\_\_\_\_
10. Owner of land on which the appropriation is located: The Zonia Company
- A. Indicate land ownership: Private , State \_\_\_\_\_, BLM \_\_\_\_\_, National Forest \_\_\_\_\_, Other \_\_\_\_\_
- B. Does the applicant have legal access to both the proposed diversion point and place(s) of use?  
 Yes  No \_\_\_\_\_ If "No", explain in item 12 below.
- C. If the land is held by lease, give the lease or allottee number: \_\_\_\_\_, and submit copy of lease. For proposed appropriations located on BLM or Forest Service lands, the applicant must obtain a letter of authorization for the proposed appropriation and submit the letter to the Department with the application.
11. Is the water to be used supplementally with other water(s)? Yes \_\_\_\_\_ No  If "yes", identify other waters or water rights, and explain: \_\_\_\_\_
12. Additional comments or explanations: This catchment serves as the primary containment for LB#3, 2 where as Leach Basin #3 Secondary Containment Dam will only be used as needed.
13. Attach examination fee of \$25.00. Also attach a United States Geological Survey topographic quadrangle map, or copy thereof, clearly showing the proposed point of diversion, any conveyance system, and the place(s) of use. Attach copy of deed showing land ownership or letter of authorization from landowner.

Submit the completed application, with examination fee, to the Arizona Department of Water Resources, Operations Division, 15 South 15th Avenue, Phoenix, Arizona 85007.

August 11, 1993  
 date

 AGENT:  
Arimeto  
 Signature of Applicant/ or Representative  
 (if representative, submit documentation)

August 25, 1993

Arizona Department of Water Resources  
Operations Division  
Attn: Miros Gutierrez  
Surface Water Rights Specialist  
15 South 15th Avenue  
Phoenix, Arizona 85007

Re: Applications for Permit to Appropriate Public Water

Dear Mr. Gutierrez:

Enclosed please find three resubmitted Applications for Permit to Appropriate Public Water along with a check in the amount of 75 dollars, dated August 12, 1993.

In response to your letter dated August 17, 1993 the applications are being resubmitted taking into account the clarifications you requested. Additional maps have been attached to show location, land ownership, and construction.

The following are responses to the concerns you stated.

- "1. Item 2 of each application: You have indicated the sources of water to be 'Leach pad runoff'. The exact sources of water are not clear. Please clarify the specific type of channel name the runoff flows into, such as; a wash, creek, stream, canyon, ect."

The exact source of water is the same for all three applications. There are no stream channels leading to the dam sites since the dams are located at the base of their respective leach basins. The water that will be collected comes from Horton overland flow and runoff from the aforementioned basins. Since there are no washes, creeks, streams, or canyons leading up to the site no actual containment of perenial flowing water is encountered. Also note that these points of diversion have existed in the past. The leach basins themselves contain interior dams that collect water. The dams that a being permitted are enhancements to these current methods of containment and are not "new" points of diversion.



ARIMETCO  
INTERNATIONAL INC.

- "2. The maps you provided are inadequate. Enclosed are copies of U.S.G.S. topographic maps which include the places of use where your applications are located. Please clearly mark and label the location of the point of diversion and place of use on each map for each application and return the maps to us for inclusion in your files."

The exact location of the points of diversion and place of use can be seen from the attached maps. Both the point of diversion and place of use are the same. Along with the enlarged U.S.G.S. topographic map originally submitted there is the map you requested be included.

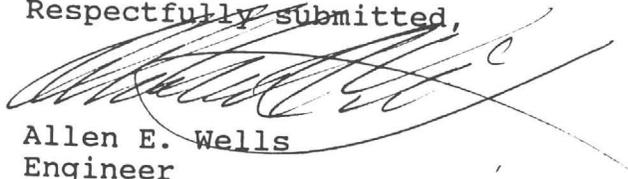
"The locations listed on the three applications appear to be located on land held by the Bureau of Land Management (BLM). Please submit a letter of authorization from the Bureau of Land Management allowing appropriation and use of water on the BLM land. The application will not be accepted by the Department of Water Resources unless accompanied by the letter of authorization or proof of land ownership."

The land that the dams are located on is owned by The Zonia Company. The Zonia Company hold patented and unpatented mining claims throughout the area. Enclosed you will find a master title plat from the Bureau of Land Management (BLM) showing the mineral surveys conducted in the area. Along with this is a map showing an overlay of the mining claims held by The Zonia Company. These maps show without a doubt that the dams are on The Zonia Company land and not on BLM land.

The enclosed Memorandum of Mining Lease Agreement gives a list of the claims afforded to Arimetco Inc. This agreement also gives Arimetco Inc. the right "to place thereon, construct, maintain, use and, at its election, to remove such structures, facilities, equipment, roadways, haulage ways and such other improvements as ARIMETCO may deem necessary...".

I would like to thank you in advance for the help and attention you have given this process and if you have any further questions or concerns please do not hesitate to contact me at (602) 745-8882.

Respectfully submitted,

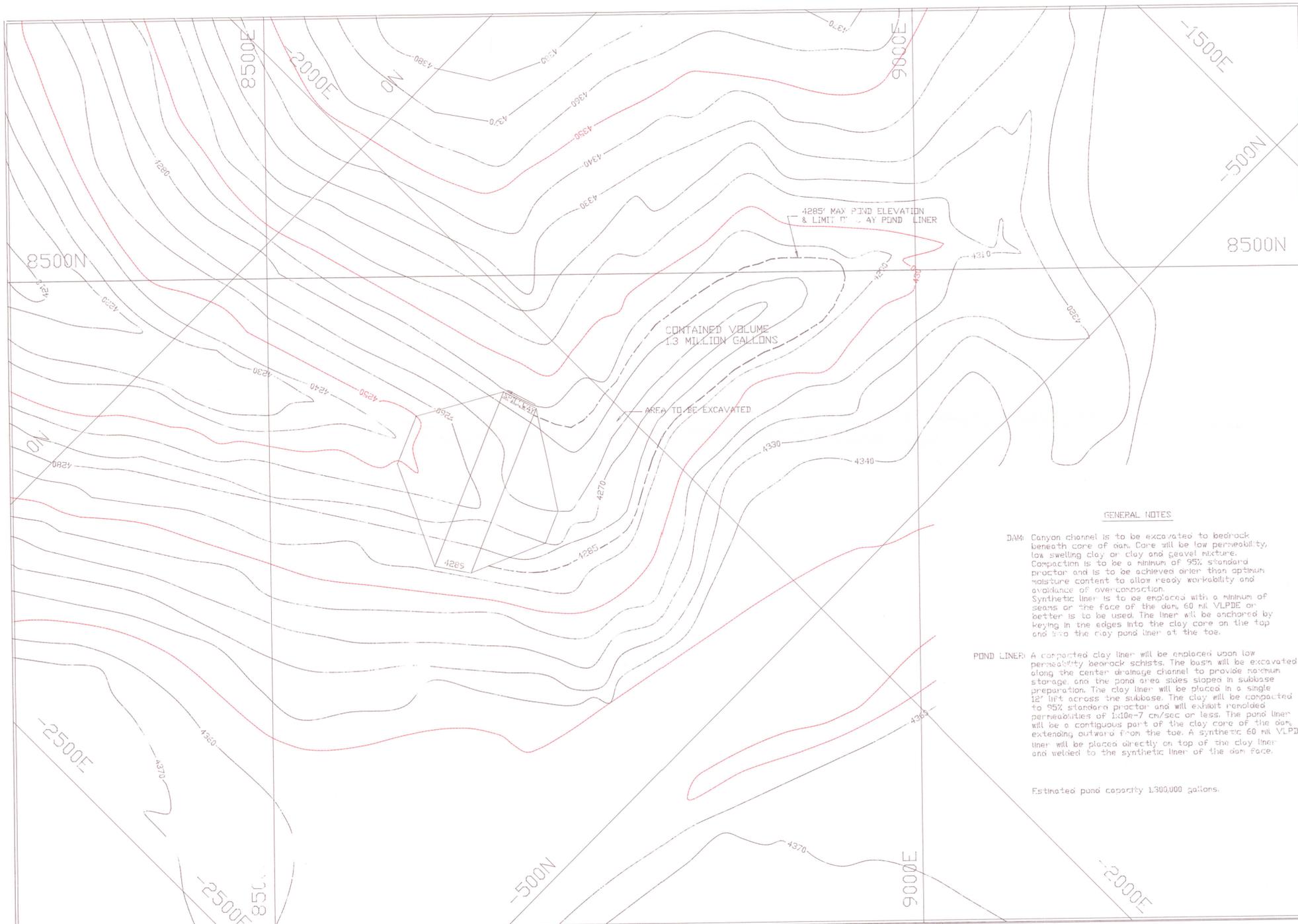
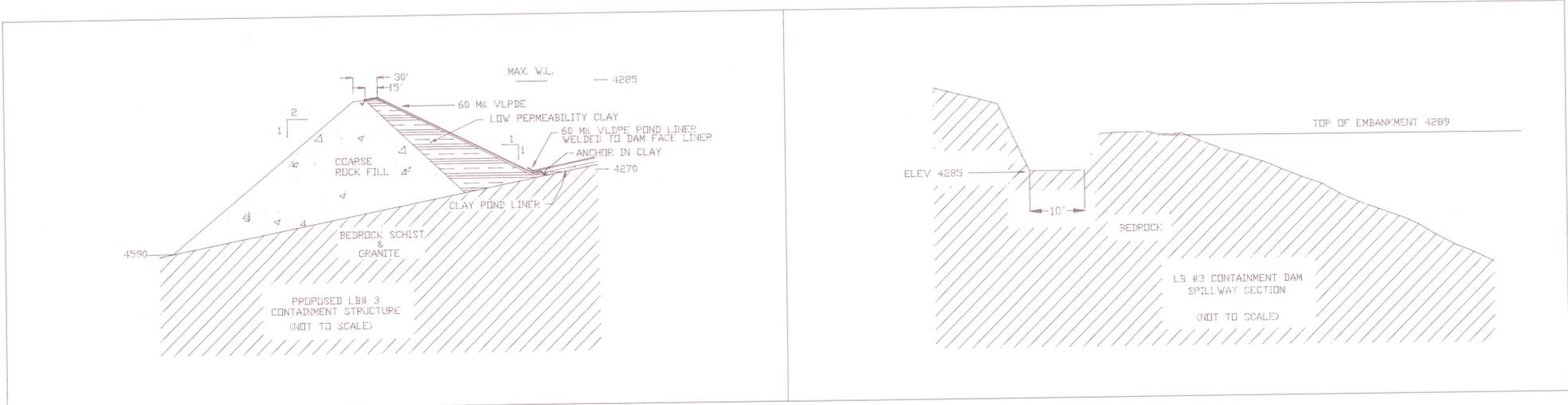


Allen E. Wells  
Engineer

**Volumes: LB #3 Primary Containment Pond**

Elevation	Volume	Elevation	Volume
ft.	cu. ft.	ft.	cu. ft.
4639	28339	4624	6732
4638	26550	4623	5743
4637	24760	4622	4754
4636	22970	4621	3766
4635	21181	4620	2777
4634	19477		
4633	17774		
4632	16071		
4631	14368		
4630	12664		
4629	11676		
4628	10687		
4627	9698		
4626	8709		
4625	7721		

**TOTAL 276416**

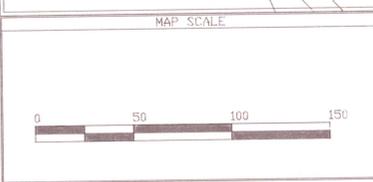


GENERAL NOTES

DAM: Canyon channel is to be excavated to bedrock beneath core of dam. Core will be low permeability, low swelling clay or clay and gravel mixture. Compaction is to be a minimum of 95% standard proctor and is to be achieved prior than optimum moisture content to allow ready workability and avoidance of over-compaction. Synthetic liner is to be emplaced with a minimum of seams on the face of the dam, 60 mil VLPDE or better is to be used. The liner will be anchored by keying in the edges into the clay core on the top and into the clay pond liner at the toe.

POND LINER: A compacted clay liner will be emplaced upon low permeability bedrock schists. The basin will be excavated along the center drainage channel to provide minimum storage and the pond area sides slopes in subbase preparation. The clay liner will be placed in a single 12" lift across the subbase. The clay will be compacted to 95% standard proctor and will exhibit remolded permeabilities of  $1 \times 10^{-7}$  cm/sec or less. The pond liner will be a contiguous part of the clay core of the dam, extending outward from the toe. A synthetic 60 mil VLPDE liner will be placed directly on top of the clay liner and welded to the synthetic liner of the dam face.

Estimated pond capacity 1,300,000 gallons.



NO	DATE	MADE BY	DESCRIPTION

DATE	DRAWN BY	CHECKED	APPROVED
04-29-93	MUNROE		

ARIMETCO INTERNATIONAL INC.  
 ZONIA PROJECT  
 YAPAVAI Co., Az.

OFFICE: CORPORATE  
 DEPARTMENT: ENGINEERING

LB# 3 PRIMARY CONTAINMENT STRUCTURES	
MAP INDEX NUMBER	SCALE
	1"=50.0 FT
DRAWN	BY
ZEE-001	