

# Hualapai Ground Water Resources for Current and Future Generations



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HUALAPAI TRIBAL COUNCIL  
RESOLUTION NO. 13-2009  
OF THE GOVERNING BODY OF THE  
HUALAPAI TRIBE OF THE HUALAPAI RESERVATION

WHEREAS, the Hualapai Tribe is a federally recognized Indian Tribe located on the Hualapai Indian Reservation in Northwestern Arizona; and

WHEREAS, the Tribal Council finds and declares that development activities within the Reservation and other lands within the Tribe's jurisdiction have a direct effect on or may threaten the political integrity, the economic security, and the health, welfare and safety of the Tribe and its members, including the environmental and cultural resources of the Tribe; and

WHEREAS, the ground water resources (aquifers) of the Tribe are the primary sources of drinking water and are an invaluable resource that needs protection for current and future consumptive use; and an invaluable resource for the future potential economic development of the Hualapai Tribe and;

WHEREAS, the Hualapai Department of Natural Resources has developed a Ground Water Protection Overlay Ordinance to assist the Hualapai Tribe in the protection of all ground water resources that supply drinking water to tribal communities and facilities and;

WHEREAS, the Ground Water Protection Overlay Ordinance has undergone legal review to ensure consistency with the Hualapai Environmental Review Code, and has been distributed for public review and comment periods through the past six years, with the final review period published in the Gumyu (Hualapai Tribal Newsletter) Issue #19, September 19, 2008 and public notice postings throughout the community, beginning September 19, 2008 and ending October 19, 2008; where no additional comments were received and;

WHEREAS, the adoption of the Ground Water Protection Overlay Ordinance will assist the Hualapai Tribe in their efforts to protect ground water resources for current and future generations and asserts tribal jurisdiction to any reservation activities that may threaten the quality and quantity of ground water designated for drinking water supplies.

NOW THEREFORE BE IT RESOLVED, the Hualapai Tribal Council, governing body of the Hualapai Tribe pursuant to its constitution hereby enacts the Hualapai Ground Water Protection Overlay Ordinance, Subtitle P, Hualapai Environmental Review Code, into Law sixty (60) days from the passage of this resolution.

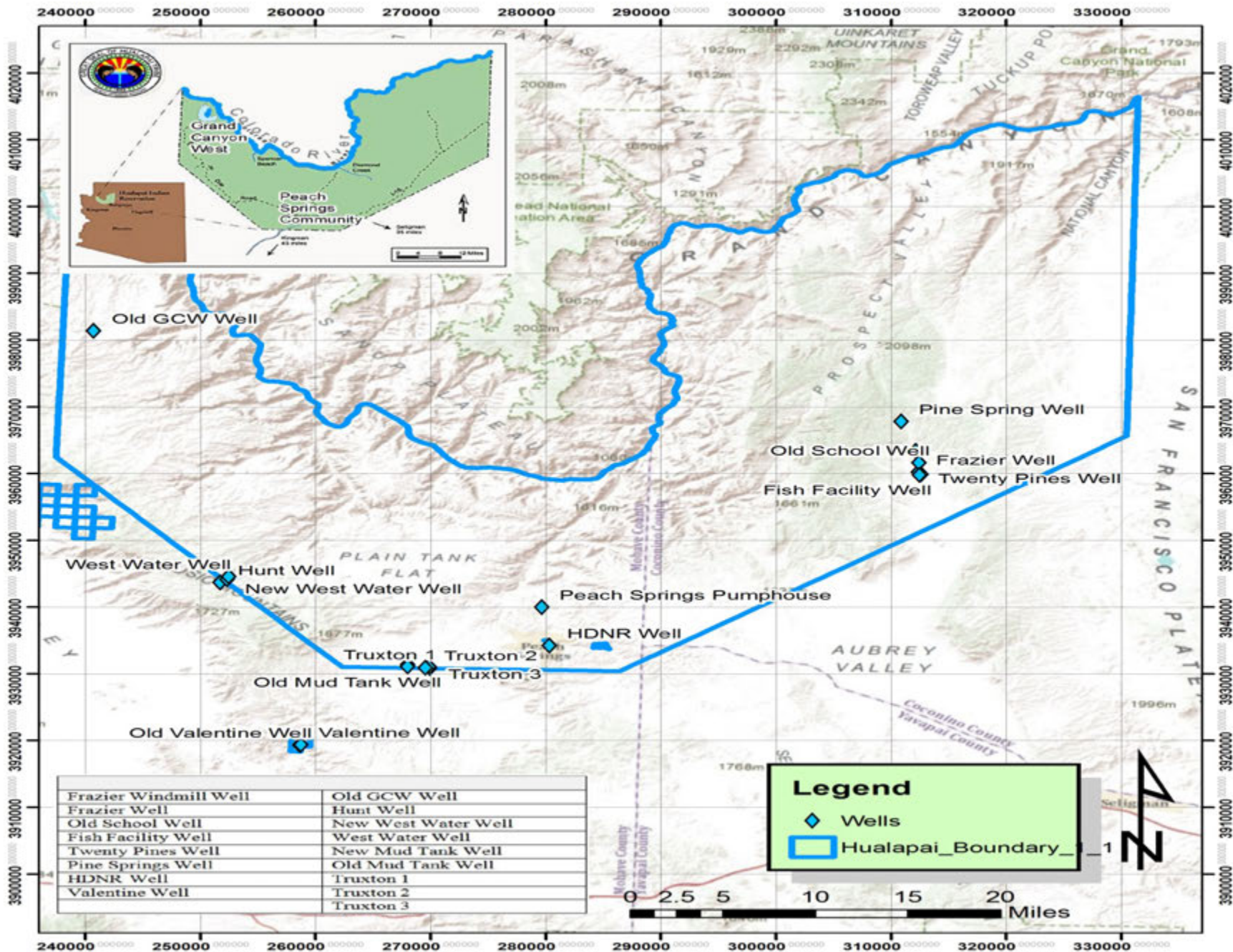
C E R T I F I C A T I O N

I, THE UNDERSIGNED AS Chairman of the Hualapai Tribal Council, hereby certify that the Hualapai Tribal Council of the Hualapai Tribe is composed of nine (9) members of whom 8 constituting a quorum were present at a Regular Meeting held this 9<sup>th</sup> day of March 2009; and that the foregoing resolution was duly adopted by a vote of 5 for, 0 against, 3 not voting and 1 excused, pursuant to authority of Article V, Section (a) of the Constitution of the Hualapai Tribe approved March 13, 1991.

\_\_\_\_\_  
Wilfred Whatoname, Chairman  
Hualapai Tribal Council

ATTEST:

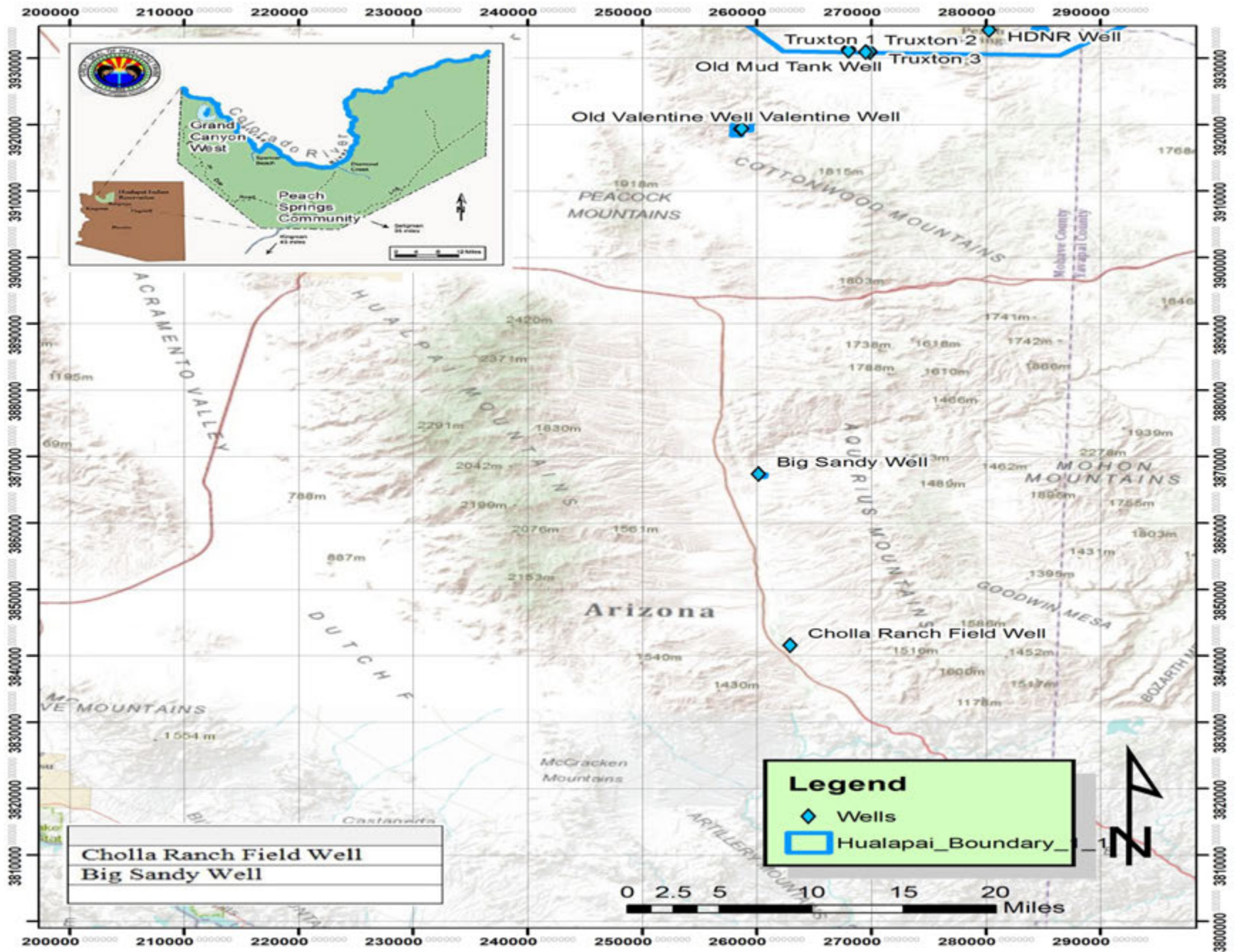
\_\_\_\_\_  
Christine Lee, Tribal Secretary



Frazier Windmill Well	Old GCW Well
Frazier Well	Hunt Well
Old School Well	New West Water Well
Fish Facility Well	West Water Well
Twenty Pines Well	New Mud Tank Well
Pine Springs Well	Old Mud Tank Well
HDNR Well	Truxton 1
Valentine Well	Truxton 2
	Truxton 3

**Legend**

- ◆ Wells
- Hualapai\_Boundary\_



Cholla Ranch Field Well  
Big Sandy Well









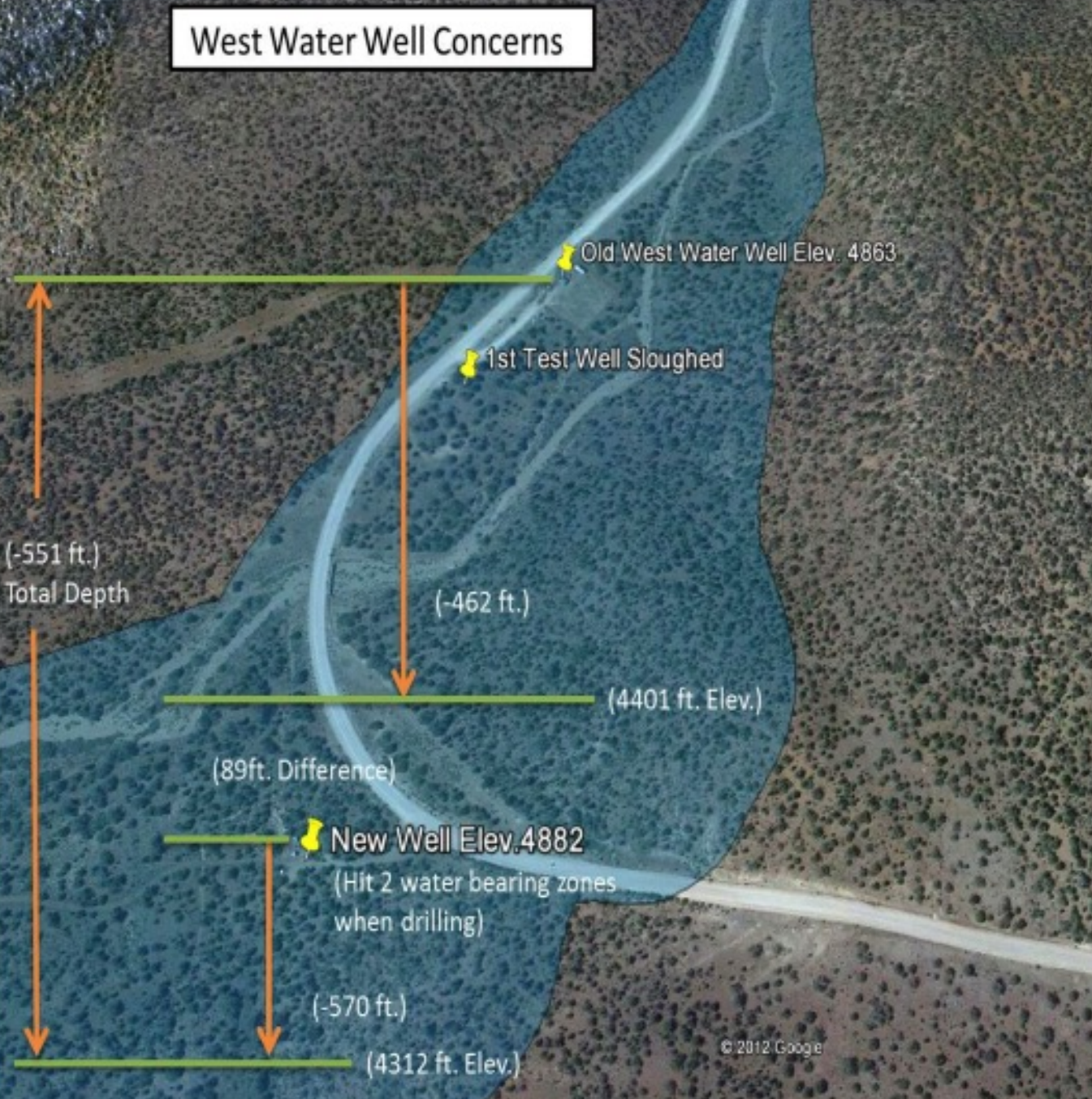
Valentine Community Wells , both are housed and protected inside trailer storage units. The Previous slides depict our efforts to clean up abandoned infrastructure that posed a threat to the drinking water source of the Valentine Reservation. Currently, the water quality in Valentine, has slightly elevated levels of arsenic above the MCL. 10 ppb that is currently being treated with reverse osmosis, for compliance with the Safe Drinking Water Limits.





**Westwater Well, recently upgraded to combine water from two wells and deliver Water to Grand Canyon West, through a new upgraded 6" water line. Concerns are that the aquifer is a perched aquifer and we monitor quantity to ensure that not too much water is pumped from the wells to ensure that we maintain a positive recharge capability**

# West Water Well Concerns



**Old Well:**  
(-462feet well casing)  
Pump was at: -257 ft. and moved to current depth of 350 ft.  
Static water level : approx. -301 ft.  
under pumping conditions  
Non-pumping static water level: approx. -220 ft.  
4401 Bottom Elevation of well casing.  
Current pumping rate of 12 gpm.  
June 2011 depth to water -45 ft.,  
depth to probe -196 ft.

**New Well:**  
(-570 feet well casing)  
Pump is at 470 ft.  
Non-pumping static water level: Approx. - 100 ft.  
4312 Bottom Elevation of well casing.  
Pump capacity 90 gpm

\*Waiting for well log information on 1<sup>st</sup> Well slough, Young dry hole and New well.

D. Young-dry hole

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Google earth



Deep well

07/07/2009



Water Storage Reservoir  
Hualapai Indian Tribe  
Grand Canyon West  
Engineer: Steven J. Anderson, P.E.  
Indian Health Service  
Contractor: Universal Drilling, Inc.  
Development: [unclear]  
Funded: State Department of Agriculture

07/07/2009

- **Frazier Wells pumps water to different locations on the east-side of the reservation. The water is then used for cattle, wildlife and human consumption. Source water protection is very important to ensure quality, quantity and to prevent contaminations. There are various threats to the water quality such as erosion, Fish Rearing Facility, cattle, feral animals and the petroleum from frequent travel on the roads. Some of the things that have been done to help prevent the aquifer from possibly losing its water quality and sustainability are: 1) we have installed exclusionary fences for cattle and wildlife and 2) equipped the wash with erosion catchments.**

## **Frazier Wells**

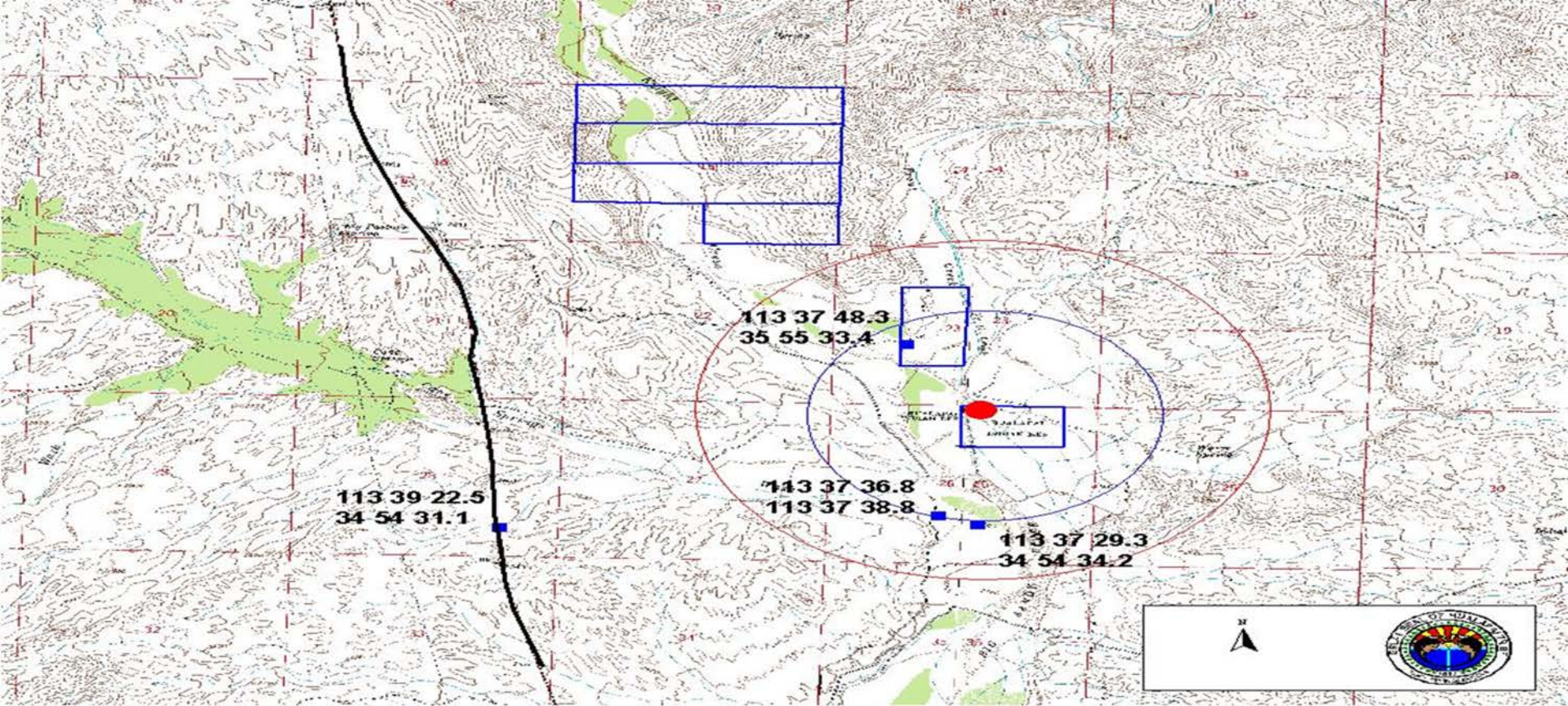




Upper left, Frazier Wells, well house on the East side of the Hualapai Indian Reservation. Emergency funding from the Natural Resource Conservation Service (NRCS), assisted us in the Installation of ripwrap bank stabilization structures and kilner Jacks placed in the stream bed to dissipate velocity and volume of sediments under extreme flood conditions.

Bottom right, photograph of the drainage, after the ripwrap bank stabilization structures and kilner jacks have been installed. On this part of the reservation there continues to be problems with erosion, to address this issue the tribe has received nonpoint source funding from U.S. EPA, to construct brush barriers in the headwater drainages above the Frazierwells valley, to diminish velocity and allow deposition of sediments.





The dark line is hwy 93 from mile marker 106 through mile marker 109.

The blue rectangles in the upper center represent personal tribal member allotments.

The blue rectangle in the middle with the red dot is the big sandy reservation and the red dot is the ground water well.

The two circles indicate the capture zones and the area of protection around the well.

The blue southern most point on the circle is the well head of Freeport- McMoran Copper Mine, formerly Phelps Dodge Mine.

The blue dot west of the first point represent a water pipe line which is connected to the blue point on hwy 93 which represents the location of 2 water pipe lines which converge into one line that transfers water to the copper mines in Bagdad, AZ approximately 60 miles away.













N34°36'18"

Mulholland Basin

N34°35'42"

W113°

W113°14'42"

N34°35'6"

W113°15'18"

W113°15'54"

W113°16'30"

W113°17'6"

N34°34'30"

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Google

34°34'59.35" N 113°15'47.82" W

elev 3328 ft

N34°33' Jul 4, 2007

Eye alt 16382 ft

## HUALAPAI ENVIRONMENTAL REVIEW CODE

SUBTITLE A.	HAUALAPAI ENVIRONMENTAL REVIEW CODE
SUBTITLE B.	NATURAL RESOURCE ORDINANCE
SUBTITLE C.	ADMINISTRATIVE PROCEDURES ORDINANCE
SUBTITLE .D	FORESTRY ORDINANCE
UBTITILE E.	HUALAPAI THREATENED AND ENDANGERED SPECIES ORDINANCE
SUBTITLE F.	CULTURAL RESOURCES ORDINANCE
SUBTITLE G.	AGRICULTURE ORDINANCE
SUBTITLE H.	PUBLIC WATER SYSTEMS ORDINANCE (DRAFT)
SUBTITLE I.	WATER RESOURCES ORDINANCE
SUBTITLE J.	AIR QUALITY ORDINANCE
SUBTITLE K.	WETLANDS ORDINANCE
SUBTITLE L.	HAZARDOUS AND TOXIC SUBSTANCES ORDIANCE (DRAFT)
SUBTITLE M.	EMERGENCY RESPONSE PLAN AND COMMUNITY RIGHT TO KNOW (DRAFT)
SUBTITLE N.	SOLID WASTE ORDINANCE
SUBTITLE O.	HOMESITE ORDINANCE
SUBTITLE P.	GROUNDWATER PROTECTION OVERLAY ORDINANCE



**The Hualapai Department of Natural Resources addresses problems, goals and objectives through an integrated resource management approach. This presentation reflects the efforts of the following programs within the Hualapai Department of Natural Resources: Air, Agriculture, Environmental, Forestry, Geographic Information Systems Coordination, Range Water, Water Resources and Wildlife, Fisheries and Parks.**