

**GTLT - \_\_\_\_\_4\_\_\_\_\_**

**AmeriCulture State 2  
or OSE Well A45-A-S-2  
Hidalgo County**

**Work Over:  
~7/2003**

**NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD**

**1. OWNER OF WELL**

Name: AmeriCulture Work Phone: 505-548-2328  
Contact: Damon Seawright Home Phone: \_\_\_\_\_  
Address: HC 65 Box 260C  
City: Animas State: NM Zip: 88020

**2. LOCATION OF WELL (A, B, C, or D required, E or F if known)**

- A. ~~NW~~ 1/4 NE 1/4 NE 1/4 Section: 7 Township: 25S Range: 19W N.M.P.M. in Hidalgo County.
- B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map SWALLOW FORK PEAK 7.5 MIN.
- C. Latitude: 32 d 9 m 4.6 s Longitude: 108 d 49 m 48.4 s
- D. East 704650 (m), North 3559080 (m), UTM Zone 12, NAD 27 (27 or 83)
- E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey
- F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
\_\_\_\_\_ Subdivision recorded in \_\_\_\_\_ County.
- G. Other: approximately 420 ft NSL and 825 ft ESL and 4217 ft elevation
- H. Give State Engineer File Number if existing well: A-45-S-2
- I. On land owned by (required): AmeriCulture

**3. DRILLING CONTRACTOR**

License Number: WD-1161  
Name: LANG EXPLORATORY DRILLING Work Phone: 801-973-6667  
Agent: Alan F. Lang Home Phone: \_\_\_\_\_  
Mailing Address: 2745 W. California Ave  
City: Salt Lake City State: UT Zip: 84104

**4. DRILLING RECORD**

Drilling began: 10/20/2001; Completed: 9/30/2003; Type tools: rotary  
Size of hole: 7 7/8 in.; Total depth of well: 2,100 ft.;  
Completed well is: geothermal exploration (shallow, artesian);  
Depth to water upon completion of well: 54 ft.

OFFICE OF THE  
STATE ENGINEER  
DENVER, NM

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**NEW MEXICO OFFICE OF THE STATE ENGINEER**

**WELL RECORD**

**5. PRINCIPAL WATER-BEARING STRATA**

Depth in Feet From	Thickness To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
<u>280</u>	<u>420</u>	<u>140</u>	<u>fractured conglomerate</u>	<u>&gt;1000 gpm airlift</u>

**6. RECORD OF CASING**

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From To
<u>16</u>	<u>42</u>	<u>welded</u>	<u>0</u>	<u>280</u>	<u>280</u>	<u>casing</u>	<u>N/A</u>
<u>12 3/4</u>	<u>36</u>	<u>welded</u>	<u>0</u>	<u>580</u>	<u>580</u>	<u>casing</u>	<u>N/A</u>
<u>8 5/8</u>	<u>29</u>	<u>welded</u>	<u>470</u>	<u>1455</u>	<u>985</u>	<u>cement float</u>	<u>N/A</u>

**7. RECORD OF MUDDING AND CEMENTING**

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>0</u>	<u>280</u>	<u>20 in</u>	<u>N/A</u>	<u>192</u>	<u>through casing, cement head</u>
<u>520</u>	<u>580</u>	<u>14 3/4 in</u>	<u>N/A</u>	<u>33</u>	<u>through casing, Haliburton</u>
<u>1355</u>	<u>1355</u>	<u>10 5/8 in</u>	<u>N/A</u>	<u>40</u>	<u>through casing, tremie stab</u>
<u>492</u>	<u>753</u>	<u>10 5/8 in</u>	<u>N/A</u>	<u>134</u>	<u>annulus, tremie cement basket</u>

**8. PLUGGING RECORD**

Plugging Contractor: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Plugging Method: \_\_\_\_\_  
 Date Well Plugged: \_\_\_\_\_  
 Plugging approved by: \_\_\_\_\_  
 State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____





STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

Oil Conservation Div  
2040 Pacheco St.  
Santa Fe, NM 87505

Form G-101  
Adopted 10-1-74  
Revised 10-1-78

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File	
N.M.B.M.	
U.S.G.S.	
Operator	
Land Office	

APPLICATION FOR PERMIT TO DRILL, DEEPEN,  
OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease  
STATE  FEE

5.a State Lease No.  
GTR-304-1

1a. Type of Work Drill  Deepen  Plug Back   
b. Type of Well Geothermal Producer  Temp Observation   
Low-Temp Thermal  Injection/Disposal

7. Unit Agreement Name  
8. Farm or Lease Name  
AmeriCulture

2. Name of Operator  
AmeriCulture, Inc.

9. Well No. AmeriCulture State 2  
or OSE Well A-45-A-S-2

3. Address of Operator  
HC 65 Box 260C, Animas, NM 88020

10. Field and Pool, or Wildcat  
Lightning Dock

4. Location of Well UNIT LETTER B LOCATED 319 FEET FROM THE north LINE  
AND 825 FEET FROM THE east LINE OF SEC. 7 TWP. 25S RGE. 19W NMPM

12. County  
Hidalgo

19. Proposed Depth 2,000'; 3,000'	19A. Formation Horquilla Formation?	20. Rotary or C.T. Rotary
21. Elevations (Show whether DF, RT, etc.) 4,265' RT	21A. Kind & Status Plug. Bond \$3,000 Single Well Geothermal	21B. Drilling Contractor Boart Longyear
		22. Approx. Date Work will start July, 2003

PROPOSED CASING AND CEMENT PROGRAM

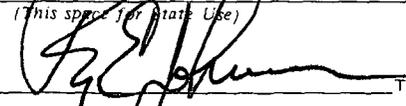
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
(Complete) 20 in.	16"	82.8	292'	160?	Circulation
(Complete) 14-3/4 in.	12-3/4"	53.6	581'	30	Vol. Est.
8-5/8 in.	7"	26.0	1,500'	28	Vol. Est.
6-1/4 in.	Open/TBD	N/A	2,000'; 3,000'	N/A	N/A

Deepening of existing well AmeriCulture State 2 (OSE A-45-A-S-2) detailed in Sundry Notice accepted by OCD on May 22, 2002. Well was drilled to a depth of 910' and left full of 50 viscosity dripac enriched mud to preserve for future drilling. Combination wire-line-coring/rotary-drilling rig to be mobilized over existing borehole; run 4-1/2-in. flush-joint casing with several welded centralizers to bottom depth of 910' through bentonite/polymer mud filling open section of borehole; hang casing off welded flange at top of existing 12-3/4 in. casing; rig up for continuous wire-line coring at the HQ core size (2-1/2 in. diameter); core out the bottom of the existing borehole at 910', to a final depth to be determined by the project geologist, but probably about 2,000 feet; at final cored TD, run a combination temperature/gamma log; pull and lay down the temporary string of 4-1/2 in. casing; rig up for conventional rotary drilling with an 8-5/8 in. rock bit; redrill the cored borehole to approximately 1,500', as determined by project geologist; run and hang, near the bottom of the 12-3/4 in. surface casing string, about 900' of 7-in. liner, using a high-temperature liner hanger; tag-cement the bottom 250' of the liner (from about 1,500' to 1,250'); drill out below the 7-in. liner with a 6-1/4 in. bit, to approximately 2,000', as determined by project geologist; displace the drilling fluid from the borehole with water; run a combination temperature/gamma log; conduct short duration flow assessment; rig down until data is analyzed (up to several months). Once a continuation drilling and casing strategy is formulated, and our intermediate depth one well bond is upgraded to a deep depth one well bond, a drilling rig will be re-mobilized and drilling will commence to a depth of approximately 3,000'.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed  Title Vice-President Date 6-5-03

(This space for State Use)  
APPROVED BY  TITLE DISTRICT SUPERVISOR DATE 6/19/03

CONDITIONS OF APPROVAL, IF ANY:

**GEOHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT**

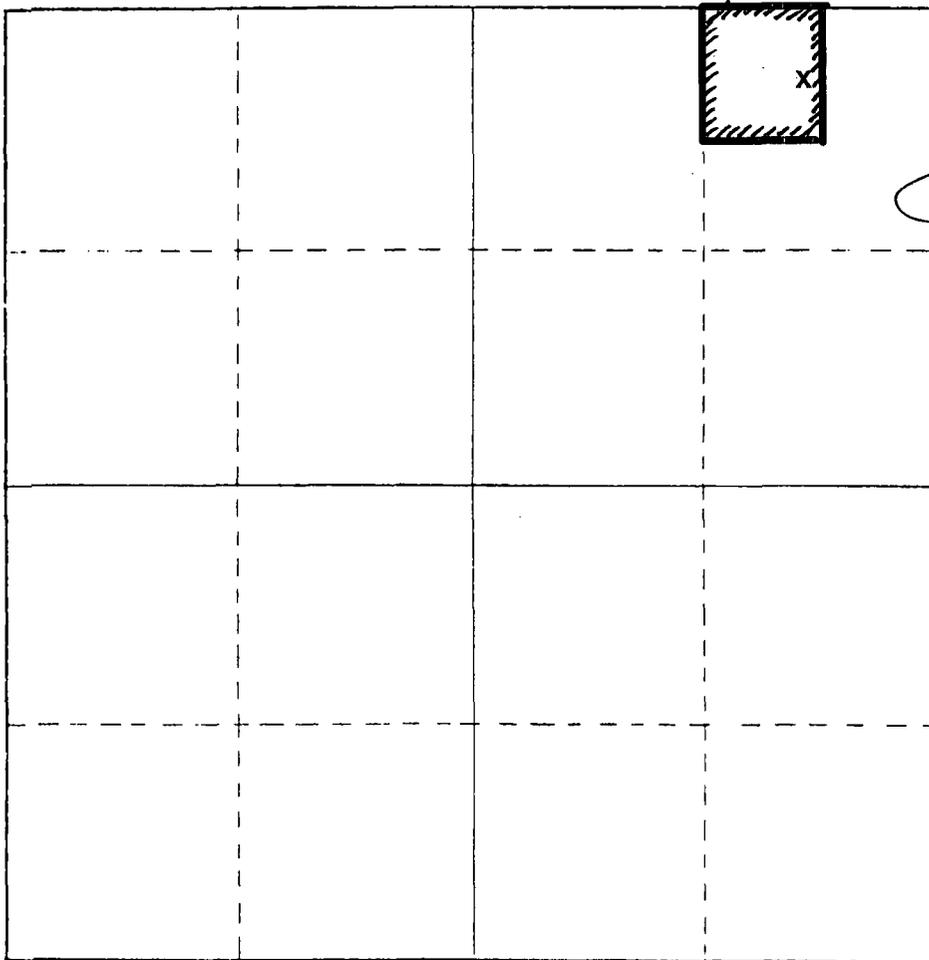
All distances must be from the outer boundaries of the Section.

Operator <b>AmeriCulture, Inc.</b>		Lease <b>GTR-304-1</b>			Well No. <b>OSE A-45-A-S-2</b> or AmeriCulture State 2
Unit Letter <b>B</b>	Section <b>7</b>	Township <b>25S</b>	Range <b>19W</b>	County <b>Hidalgo</b>	
Actual Footage Location of Well: <b>319</b> feet from the <b>north</b> line and <b>825</b> feet from the <b>East</b> line					
Ground Level Elev. <b>4,265' RT</b>	Producing Formation <b>Horquilla Formation?</b>	Pool <b>Lightning Dock</b>	Dedicated Acreage: <b>10.0</b> Acres		

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?  
 Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



**CERTIFICATION**

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.*

Name	<b>Damon E. Seawright</b>
Position	<b>Vice-President</b>
Company	<b>AmeriCulture, Inc.</b>
Date	<b>June 5, 2003</b>

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.*

Date Surveyed	
Registered Professional Engineer and/or Land Surveyor	

Certificate No. \_\_\_\_\_

