

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
DENING, NM

2012 JUN 22 AM 9:59

25S. 19W. 07. 22

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>>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
<u>1</u>	_____	_____	_____
<u>2</u>	_____	_____	_____
<u>3</u>	_____	_____	_____
<u>4</u>	_____	_____	_____
<u>5</u>	_____	_____	_____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth In Feet From To	Thickness in feet	Color and Type of Material Encountered
0 270	270	<u>Basin fill alluvium</u>
270 645	375	<u>Indurated conglomerate</u>
645 1105	460	<u>Rhyolite</u>
1105 1326	221	<u>Volcaniclastic sediments</u>
1326 1334	8	<u>Andesite</u>
1334 1653	319	<u>Sandstone, shale, and conglomerate</u>
1653 1850	197	<u>Limestone</u>
1850 1990	140	<u>Dacite</u>
1990 2030	40	<u>Limestone</u>
2030 2100	70	<u>Sandstone and siltstone</u>

OFFICE OF THE
STATE ENGINEER
DENING, NM

2012 JUN 22 AM 9:59

File Number: A-45-8-2
Form: wr-20

Trn Number: 25S, 19W

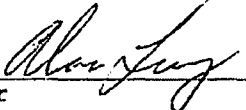
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

OCD NAME - AmeriCulture State #2 Well
NM State Geothermal Lease GTR-304-1

Under NMSEO permit A-601-EXPL this hole was drilled from 0-910 ft by
Ken McBee, McBee Drilling
P.O Box 1153
Willcox, AZ 85644
520-384-4570
NMSEO License WD-3

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.


Driller

5/28/04
(mm/dd/year)

=====

FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

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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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

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	19. Proposed Depth 2,000'; 3,000'	19A. Formation Horquilla Formation?	20. Rotary or C.T. Rotary	22. Approx. Date Work will start July, 2003
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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 [Signature] Title Vice-President Date 6-5-03

(This space for State Use)

APPROVED BY [Signature] 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.

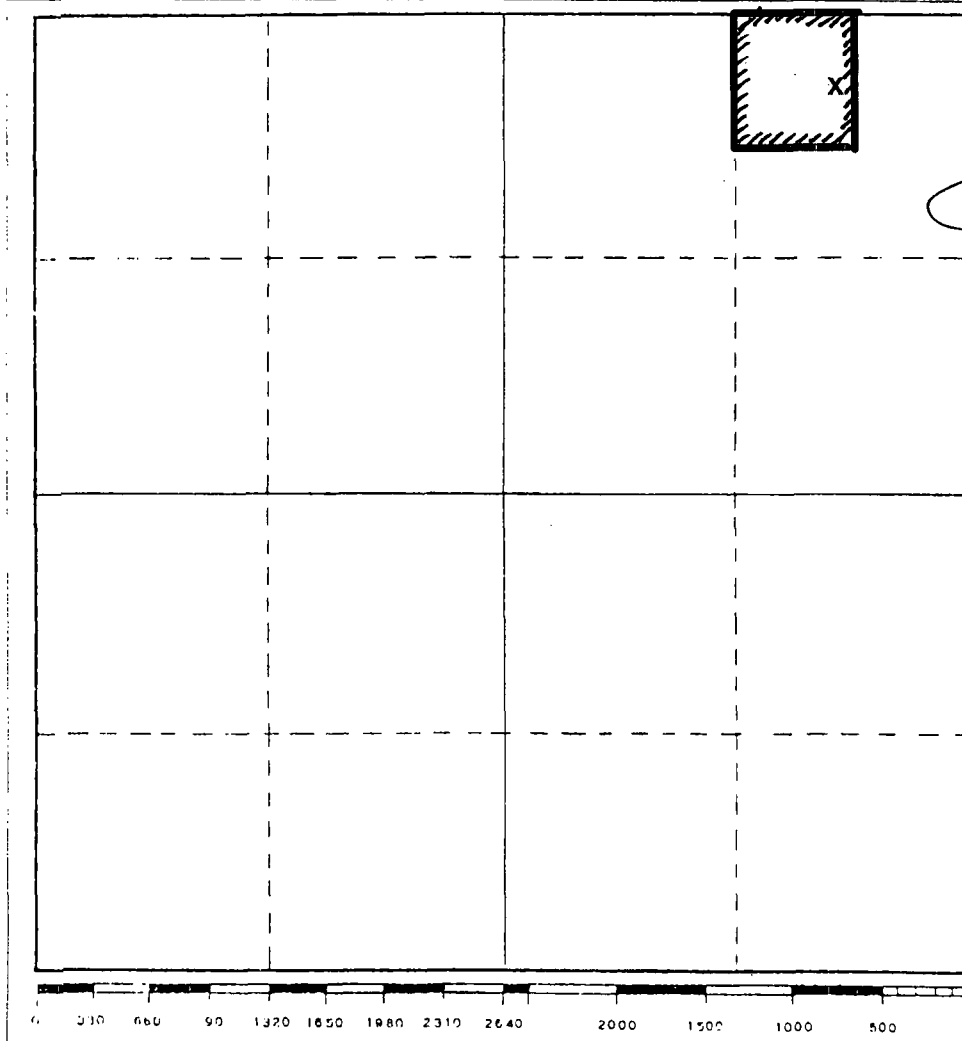
Operator AmeriCulture, Inc.		Lease GTR-304-1		Well No. OSE A-45-A-S-2 or AmeriCulture State 2	
Unit Letter B	Section 7	Township 25S	Range 19W	County Hidalgo	
Actual Footage Location of Well: 319 feet from the north line and 825 feet from the East line					
Ground Level Elev. 4,265' RT	Producing Formation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

Position
Vice-President

Company
AmeriCulture, Inc.

Date
June 5, 2003

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. _____