March 11, 2005	Well No. 1 (T-4660-Expl) City of Alamogordo -- Lithologic Log
	cuttings logged wet, collected in shovel from discharge trench, direct mud
depth, ft	description
0-10	alluvium: mix vf-f ss clasts (50%), med. gray ls clasts (30%), unconsolidated sand (20%), & calcareous matrix
10-20	clayey sand; clay-rich vf-c sand, calcareous matrix. 30% gray & black ls clasts up to 1.0 cm
20-40	clayey sand; clay-rich f-vc sand, quartz clasts, calcareous matrix., 20% gray & black Ls clasts up to 1.0 cm
40-50	clayey sand; clay-rich f-vc sand, quartz clasts, calcareous matrix, 30% gray & black ls clasts up to 2.0 cm
50-60	sandy clay: sand vf-f, light tan color, less calcareous matrix than above, 15% gray & black ls clasts up to 0.5 cm
60-70	clayey gravel and sand; clast up to 0.5 cm of black & gray ls, ss, qtz, calcareous matrix
70-80	clayey sand: 60% clayey vf sand, slightly calcareous matrix. 40% black ls clasts up to 1.0 cm
80-100	slightly clayey sand & gravel: clasts up to 1.0 cm of black ls, ss, & qtz. Slightly calcareous matrix
100-110	clayey sand: 80% clayey vf-m sand, very slight calcareous matrix. 20% black ls clasts up to 0.4 cm
110-140	gravel: 60% gray & black ls clasts up to 0.4 cm, median size of 0.2 cm. 30% m-vc sand & gravel, qtz and minor misc lithics eg. Feldspar. 10% sandy clay (ash?)
140-150	gravel: 70% grey & black ls clasts 2-3 mm. 30% m-vc sand & gravel mostly qtz
150-160	gravel; 60% m-vc grey & black ls clasts. 30% clay-rich vf-f sand. 10% f-m qtz & feldspar clasts
160-180	sandy gravel: 50% m-vc grey & black ls clasts. 30% clay-rich vf-f sand. 10% f-m qtz & feldspar clasts
180-190	gravel; 80% black & gray ls clasts 2-3 mm up to 5mm. 20% qtz, feldspar, fine ss clasts
190-200	gravelly clay: 50% clay or ash rich fine sand. 40% grey & black ls clasts 1-5 mm. 10% qtz & minor metamorphic clasts 2-4 mm
200-210	gravel: granite, volcanics, metamorphic, minor limestone subrounded to subangular 2-10 mm
210-220	silty clay: 80%silty clay (ash?) 20% vf-vc sand some black ls gravel to 4 mm

March 11, 2005	Well No. 1 (T-4660-Expl) City of Alamogordo -- Lithologic Log
	cuttings logged wet, collected in shovel from discharge trench, direct mud
depth, ft	**description**
220-230	silty clay: 50% silty clay (ash?) 30% ls and dolomite gravel 3-10 mm, 15% m-vc qtz, feldspar lithics. 5% granite clasts 5-10 mm
230-260	gravelly clay: 60% ashy clay. 40% granite, volcanic, ls clasts subrounded to subangular 2-10 mm
260-270	clayey gravel: 30%m-vc qtz & ss clasts, 30% black ls clasts, 10% red ss clasts, 30% ashy clay.
270-280	clayey gravel: 30%vf-c qtz & feldsparclasts, 35% black ls clasts up to 8mm 5% red siltstone clasts to 2mm, 30% ashy clay.
280-290	gravel: 1-15 mm of 35% black ls, 30% pale pink tuff, 10% qtz & feldspar, 5% pale pink chert, and 20% ashy clay
290-310	gravel: 30% black mudstone clasts subrounded 1-5 mm, 25% pale pink tuff subrounded 3-8 mm, 15% ls 2-3 mm, 10% pink chert angular, 2-7 mm, 20% other lithics, 15% silty clay
310-320	silty gravel; 35% pale pink tuff up to 15 mm, 20% pale pink chert up to 6mm, 5% red mudstone up to 18 mm, 5% black mudstone up to 7 mm, 5 grey ls up to 4 mm, 30% silty clay
320-330	silty clay and gravel: 30% pale pink tuff 3-25 mm subangular and subrounded, 10% pale pink chert 2-4 mm, 5% red siltstone2-9 mm subangular, 5% black mudstone, 50% silty clay
330-340	silty clay and gravel: 30% pale pink tuff 2-15 mm 10% andesite/volcanics 1-8 mm, 10% black mudstone, 50% silty clay
340-360	silty clay and gravel: 20% pale pink chert 1-8mm, 20% black mudstone, 10% pink tuff 2-15 mm, 50% silty clay
360-410	siltstone: yellow, slightly effervescent
410-420	shale: grey, slightly effervescent
420-440	siltstone: yellow, slightly effervescent
440-570	shale: grey, moderately effervescent; minor yellow siltstone interbeds at 480-490, and 550-560.
570-620	shale: grey, moderately effervescent; minor reddish and gypsic siltstone interbeds at 580-600
620-700	limestone: white to light grey, moderately-strongly effervescent
700-750	dolomite: dark grey, slightly effervescent
750- 800	limestone: white to light grey, moderately-strongly effervescent; dolomitic limestone interbed at 770-780.

March 11, 2005	Well No. 1 (T-4660-Expl) City of Alamogordo -- Lithologic Log
	cuttings logged wet, collected in shovel from discharge trench, direct mud
depth, ft	description
800-810	no sample:
810-860	dolomite: dark grey, slightly effervescent
860-890	gypsic dolomite: dark grey, slightly effervescent
890-970	dolomite: dark grey, slightly effervescent
970-1010	sandstone: reddish, moderately effervescent

T-4660
TRN-311229

File Number: T 4660

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: City of Alamogordo — Work Phone: 505-439-4240
Contact: Mr. Pat McCourt — Home Phone: _____
Address: 1376 E. Ninth St.

City: Alamogordo — State: NM Zip: 88310

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

A. SW 1/4 ____ 1/4 ____ 1/4 Section: 31 Township: 12S Range: 10E N.M.P.M.
in Otero County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: ____ d ____ m ____ s Longitude: ____ d ____ m ____ s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. ____, Map No. ____ of the _____ Hydrographic Survey

F. Lot No. 5, Block No. ____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Bureau of Land Managment

3. DRILLING CONTRACTOR

License Number: WD-331
Name: Stewart Brothers Drilling — Work Phone: 505-287-2986
Agent: Mr. Randy Stewart — Home Phone: _____
Mailing Address: P.O. Box 2067
306 Airport Rd.
City: Milan — State: NM Zip: 87021

05 MAY 6 PM 4:28
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4. DRILLING RECORD

Drilling began: 3/29/05 ; Completed: 5/6/05 ; Type tools: Mud ;
Size of hole: 20.5 in.; Total depth of well: 1147ft.;
Completed well is: 1000 (shallow, artesian);
Depth to water upon completion of well: 250 ft.

File Number: T 4660 — Trn Number: _____
Form: wr-20

June 3, 2005

31.12S.10E
T-4660

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File Number: T4660

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
500	980	480	Sandy gravels and clay	180

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
14	54.56	Welded	0	480	480			
14	72.09	Welded	480	500	20			
14	SS Screen		500	980	480			
14	46.75	SS Sump						
22	88.63	Surface	0	40	40			

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0	40	26		81	Tremi

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

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STATE ENGINEER OFFICE
LAS CRUCES NEW MEXICO

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

June 3, 2005

31.12S.10E
T-4660

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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	200		Sand, Gravels and clay.
200	600		Clay, with sands and some gravel.
600	800		Clay and some silty sands and gravels.
800	1000		Sands and gravels with clay.
1000	1100		Sands and gravels less clay.
1100	1147		Clay sands and gravels.

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LAS CRUCES, NEW MEXICO

T-4660
TRN-311229

File Number: T 4660

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

This well was drilled as a test well for the City of Alamogordo.

The well was constructed with 40ft of 22 inch surface casing. It was completed with 14 inch SSScreen from a depth of 500 - 980 ft. There is a 20ft SS Blank Sump from 980-1000. From 0 - 500 ft there is 14inch low carbon steel pipe with a heavy wall joint from 480-500.
1 1/4 inch sounding tube entersthe well just above the screen at appr. 487 ft bgs.

This well will yeild appr. 200 gpm.

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.

Randell Stewart
Driller

5/10/05
(mm/dd/year)

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FOR STATE ENGINEER USE ONLY

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

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LAS CRUCES, NEW MEXICO

Figure 3. Diagram showing recommended well construction, Large Diameter Test Well

John R. D Antonio, Jr., P.E.
State Engineer

Las Cruces Office
1680 HICKORY LOOP, SUITE J
LAS CRUCES, NM 88005

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 311229
File Nbr: T 04660
Well File Nbr: T 04660

Jun. 03, 2005

PAT MCCOURT
CITY OF ALAMOGORODO
1376 E. NINTH STREET
ALAMOGORDO, NM 88310

Greetings:

Enclosed is your copy of the well record for the above numbered permit, which has been accepted for filing.

Sincerely,

Sarah Rodriguez
(505)524-6161

Enclosure
cc: Santa Fe Office

wellrrcv