Robert J. Huston, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Kathleen Hartnett White, *Commissioner*
Margaret Hoffman, *Executive Director*

PWS ID #1110059 CO

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 18, 2002

Mr. Douglas C. Hearn, P.E.
Hearn Engineering, Inc.
2101 North Mays
Round Rock, Texas 78664

Re: Lake Country Acres - Public Water System I.D. #1110059
Well Completion for Well No. 3
Plan Review Log Number 210-044
Hood County, Texas

Dear Mr. Hearn:

The constructed well **is approved for interim use** and may now be placed into service based on our review of well completion material received on October 4, 2002, with your letter dated October 3, 2002. The project generally meets the minimum requirements of the TCEQ's Chapter §290 - Rules and Regulations for Public Water Systems (Rules).

The preliminary chemical samples collected by the water system or their contractor are for interim approval only. **For final approval prior to the new well being placed into service the following conditions must be met:**

1. It is the water system's responsibility to **contact the TCEQ's Drinking Water Quality Team in Austin at 512/239-4691** to arrange for the collection of the official chemical samples which must be **completed within 120 days** from the date of this letter.

2. The results of the official chemical analysis of these samples will be used to conduct a vulnerability assessment, develop a chemical monitoring plan and grant final approval for the new source.

3. If official chemical analysis testing confirms that a regulated constituent does not meet secondary constituent levels, you must obtain **written approval from the executive director** to use your well for public drinking water; and,

4. Additional treatment, blending, or public notice may be required. The Drinking Water Quality Team will notify the water system of any additional special requirements for this public water supply source. Plans for water treatment must be reviewed and approved by the

Utility Creation and Plan Review Team.

The completion data consisted of the following:

- State of Texas Well Report;
- Material setting and cementing data;
- 36-hour pumping test results;
- Executed and recorded sanitary control easement;
- U. S. Geological Survey 7.5 minute map showing the well location;
- Three bacteriological sampling results showing no coliform contamination; and,
- Chemical analysis results (commercial lab).

The completion data describes construction of the following:

- One public water supply well drilled to 410 feet with 250 linear feet (l.f.) of 6 $^5/_8$-inch o.d. pressure-cemented steel casing, 70 l.f. of 6 $^5/_8$-inch o.d. stainless steel screen, 54 l.f. of 6 $^5/_8$-inch o.d. blank liner, with 190 l.f. 12 $^1/_4$-inch underream and gravel pack; the well is rated for 50 g.p.m. yield with a 10 horsepower, submersible pump set at 400 feet deep.

The well is located in the Lake Country Acres subdivision on lot No. 8 in Parker County at grid 32-26-6

Please complete a copy of the most current Public Water System Plan Review Submital form for future submital to TCEQ for review of improvements to a Public Water System. Every blank on the form must be completed to minimize any delays in review of your project. The document is available on our WEB site at the address shown below.

http://www.tceq.state.tx.us/permitting/waterperm/ud/sf.wpd

For future reference, you can review part of the Utility Creation & Plan Review Team's database to see if we have received your project. This is available on the TCEQ's homepage on the Internet at the following address:

http://www.tceq.state.tx.us/permitting/waterperm/ud/planrev.html

You can download most of the well construction checklists and the latest revision of Chapter 290 "Rules and Regulations for Public Water Systems" from this site.

If you have any questions please contact me at (512)239-0963 or the Internet address: "BDICKEY@tceq.state.tx.us " or if by correspondence, include MC 153 in the letterhead address below.

Sincerely,

(b) (6) [redacted]

Brian D. Dickey
Utility Creation & Plan Review Team
Water Supply Division MC-153

(b) (6) [redacted]

David D. Laughlin, P.E.
Utility Creation & Plan Review Team
Water Supply Division, MC 153

BDD/DDL/bdd

cc: TCEQ Central Records PWS File #1110059
TCEQ Region No. 4 Office - Arlington
TCEQ Public Drinking Water - Vulnerability Assessment (w/enclosures)
TCEQ Public Drinking Water- Attn: Marie Knipfer

HEARN ENGINEERING, INC.

2101 N. Mays • Round Rock, Texas 78664 • Telephone (512) 310-0176 • FAX (512) 244-7316

January 4, 2002

Plan Review Section, Water Utility Division
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

RE: Public Water System
Lake Country Acres W.S., ID # 1110059 well #3
Water Plant Improvement
Parker, Texas
Plan Review Log # 904-026

JAN 11 2002

Dear Gentlemen:

Please find the well completion information attached. AquaSource owns all land within 150' of the well and is filing a Declaration of Easement. Once we receive a copy of the filed instrument, we will forward it to TNRCC.

If you should have any questions please contact me at (512) 310-0176.

Sincerely,

(b) (6) [redacted]

Douglas Hearn, P.E., R.P.L.S.

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

STATE OF TEXAS
WATER WELL REPORT

1) OWNER: AQUA SOURCE/GRANBURY ADDRESS: 1327 N PLAZA DR CITY: GRANBURY STATE: TX ZIP: 76048-

2) ADDRESS OF WELL:
County: PARKER GRID # 32-26-6
Street or RFD: LAKE COUNTRY ACRES WELL #7, LOT 8 ATWOOD CT
City, State, Zip code: GRANBURY , TX 76048-

5)

3) TYPE OF WORK: NEW WELL

4) PROPOSED USE: PUBLIC SUPPLY
If Public Supply well, were plans submitted to the THRCC? Yes

6) WELL LOG: 00576

DATE DRILLING:
STARTED: 04/09/00
COMPLETED: 07/20/00

DIAMETER OF HOLE

DIAMETER	FROM	TO
12 1/4	SURF	410

7) DRILLING METHOD: MUD ROTARY

8) BOREHOLE COMPLETION:
GRAVEL PACKED
IF GRAVEL... FROM 220 FT. TO 410 FT.
FROM FT. TO FT.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

DIA	NEW/USED	DESCRIPTION	FROM	TO	GAGE CASING SCREEN
6 5/8	N	BLANK A53 GRADE B	+2	250	
6 5/8	N	SS SCREEN PIPE BASE	250	320	.020GA
6 5/8	N	A-53 GRADE B 18.97LB	336	390	

GEOLOGICAL DESCRIPTION:

FROM	TO	DESCRIPTION
0	5	RED CLAY
5	18	CALICHE
18	54	BLUE SHALE LIME
54	107	LIME GREY SHALE
107	133	GREY SHALE
133	160	LIME
160	243	LIME GREY SHALE
243	267	SAND DORMANT
267	320	SAND AND SHALE
320	337	RED BED
337	390	SAND AND SHALE
390	410	SAND AND LIME

9) CEMENTING DATA:
Cemented from No. of Sacks Used
250 FT. TO +2GL FT. 180
FT. TO FT.
Method used: PRESSURE CEMENTED
Cemented by: PUMPCO SERVICES
Distance to septic field lines: 150+ ft.
Method of verification of above distance:
SANITARY CNTROL

10) SURFACE COMPLETION:
SURFACE SLAB INSTL.

11) WATER LEVEL:
STATIC LEVEL : 280 FT. DATE: 04/30/00
ARTESIAN FLOW: GPM. DATE:

12) PACKERS: TYPE N/A DEPTH -0-

13) TYPE PUMP:
SUBMERSIBLE
DEPTH TO PUMP: 399

14) WELL TEST:
PUMP
YIELD: 50 GPM WITH 88 FT DRAWDOWN AFTER 36 HRS

15) WATER QUALITY:
TYPE OF WATER: N/A DEPTH OF STRATA: N/A
NO STRATA OF UNDESIRABLE WATER PENETRATED

CHEMICAL ANALYSIS MADE
19 GRAINS OF HARDNESS
826 T.D.S.

COMPANY NAME: WATTS DRILLING CO., INC. WATER WELL DRILLER'S LICENSE NO.: 4813WI 2457WI
ADDRESS: 14310 HWY 377 SO. CITY: FT. WORTH STATE: TX ZIP CODE: 76126

FOR TWC USE ONLY
WELL NO. _____
LOCATED ON MAP _____

I HEREBY CERTIFY THAT THIS WELL WAS DRILLED BY ME (OR UNDER MY SUPERVISION) AND THAT EACH AND ALL OF THE STATEMENTS HEREIN ARE TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I UNDERSTAND THAT FAILURE TO COMPLETE ITEMS 1 THRU 15 WILL RESULT IN THE LOG(S) BEING RETURNED FOR COMPLETION AND/OR RESUBMITTAL.

(signed) (b) (6) [redacted] (LICENSED WATER WELL DRILLER)

(signed) _____ (REGISTERED DRILLER TRAINEE)

DUAL INDUCTION FOCUSED LOG

Company	WATTS DRILLING COMPANY
Well	LAKE COUNTRY ACRES , WELL #3
Field	
County	HOOD
Location	AQUA SOURCE LAKE COUNTRY ACRES
Other Services	NONE

Field
County

Elevation

Elevation
K.B.
D.F.
G.L.

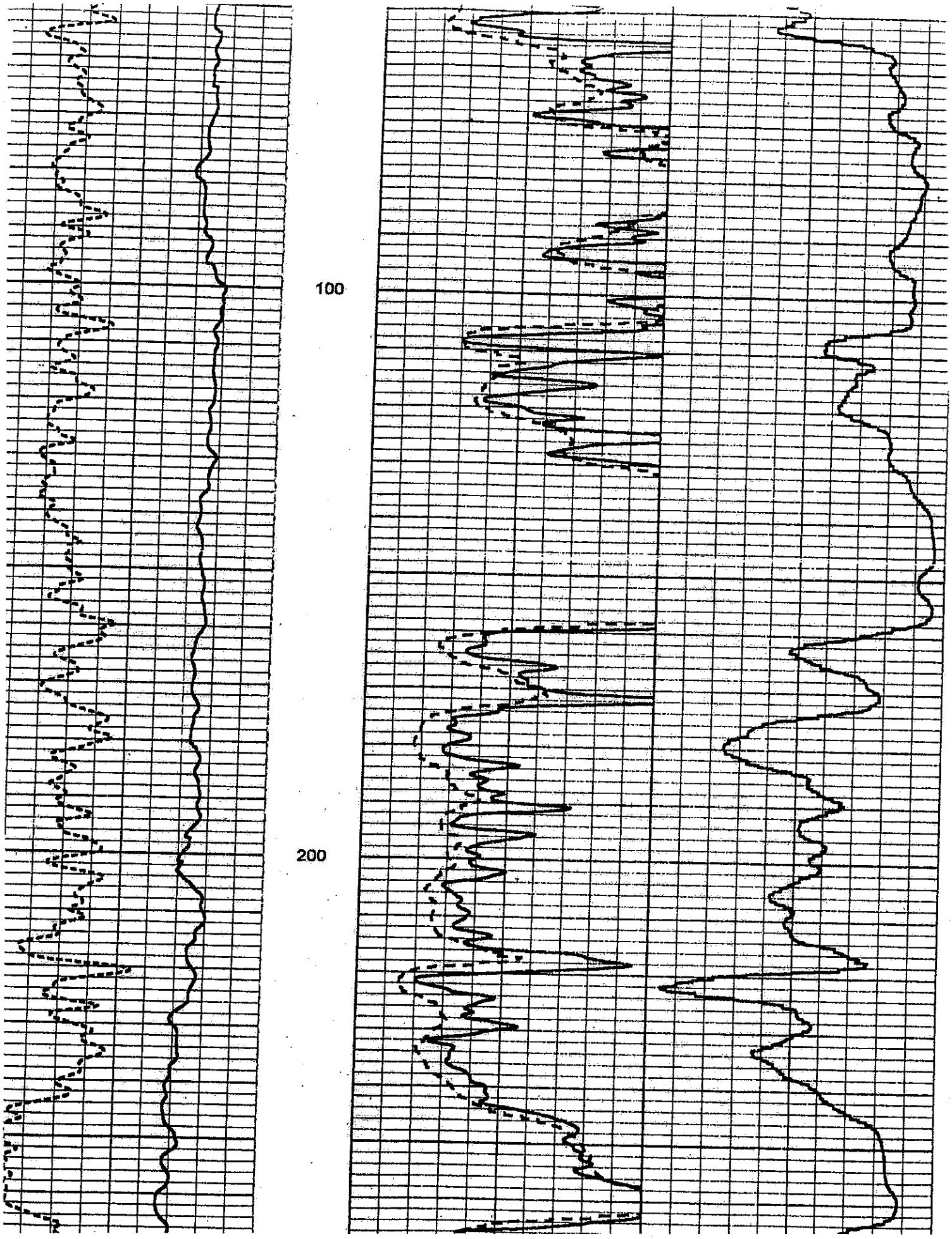
Datum			
ured From			
easured From			
	04-11-00		
er	ONE		
ler	410		
ger	407		
gged Interval	407		
nterval	22		
iler	NA		
gger	NA		
	12.250		
in Hole	WATER		
Viscosity	NA		
Loss	NA		
Sample	NONE		
as. Temp	NA		
as. Temp	NA		
as. Temp	NA		
Rmf / Rmc	NONE		
	NA		
ation Stopped	0930		
r on Bottom	1000		
Recorded Temperature	80		
Number	8837		
	GRAHAM		
y	JOHN PURYEAR		
by	MR. WATTS		

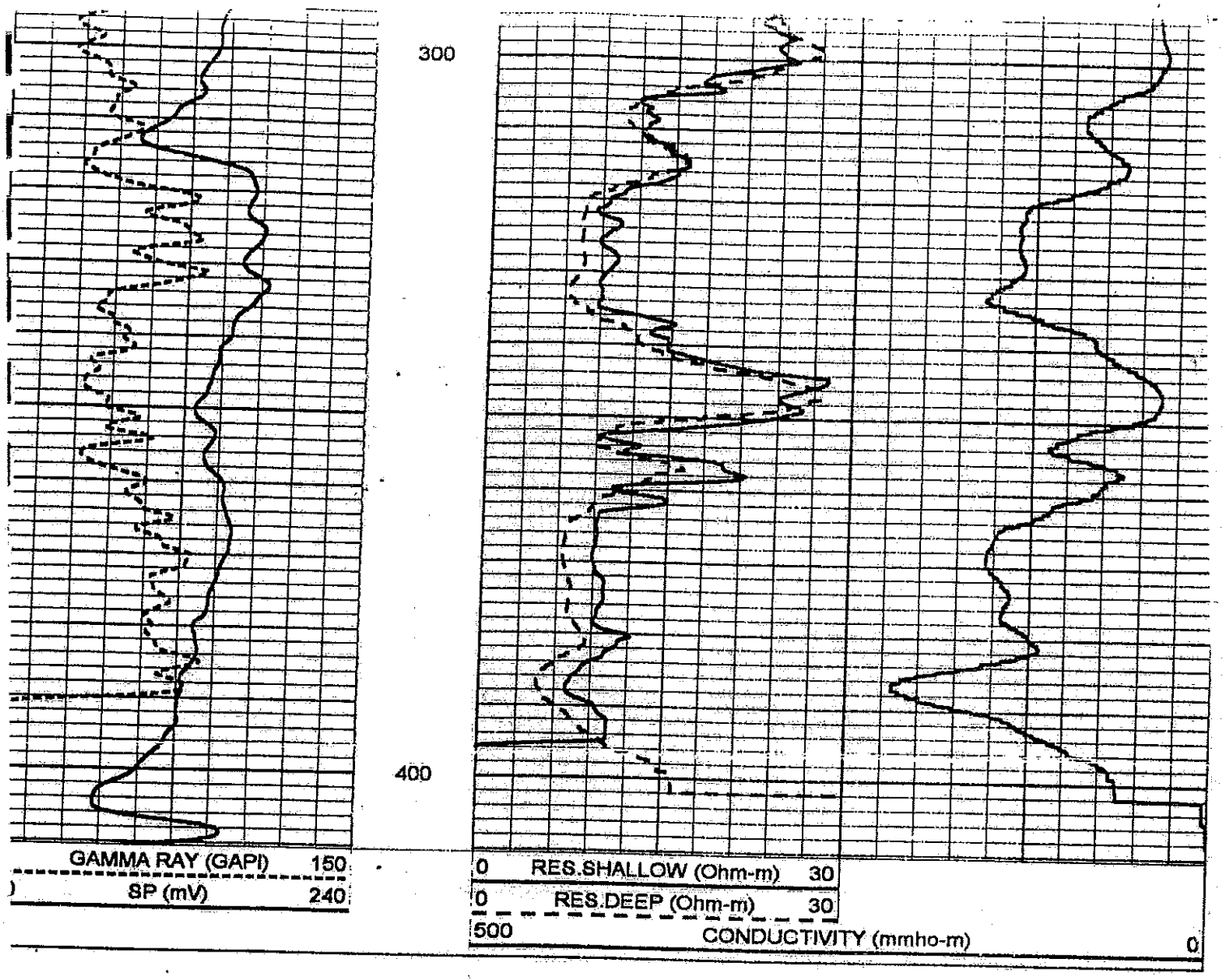
Interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

FILE: 4005

tabase File:	4005.db
taset Pathname:	pass3
esentation Format:	2-Inch.prs
taset Creation:	Tue Apr 11 08:59:35 2000 by Log VER_5.4
arted by:	Depth in Feet scaled 1:240


100
200



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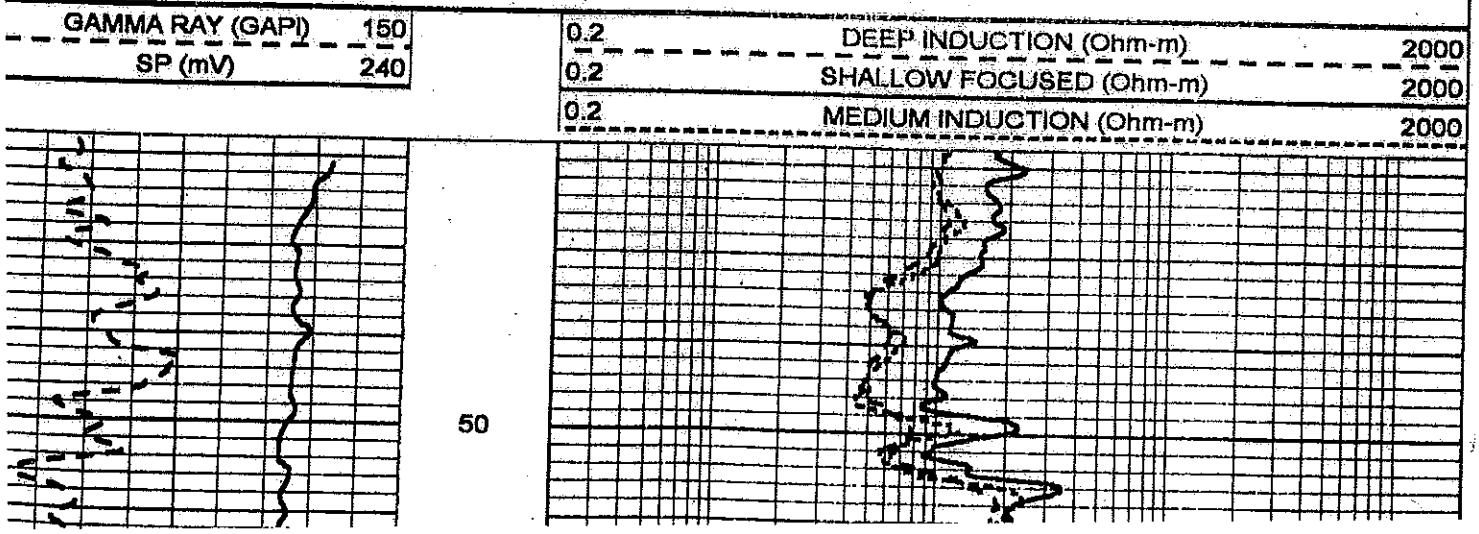
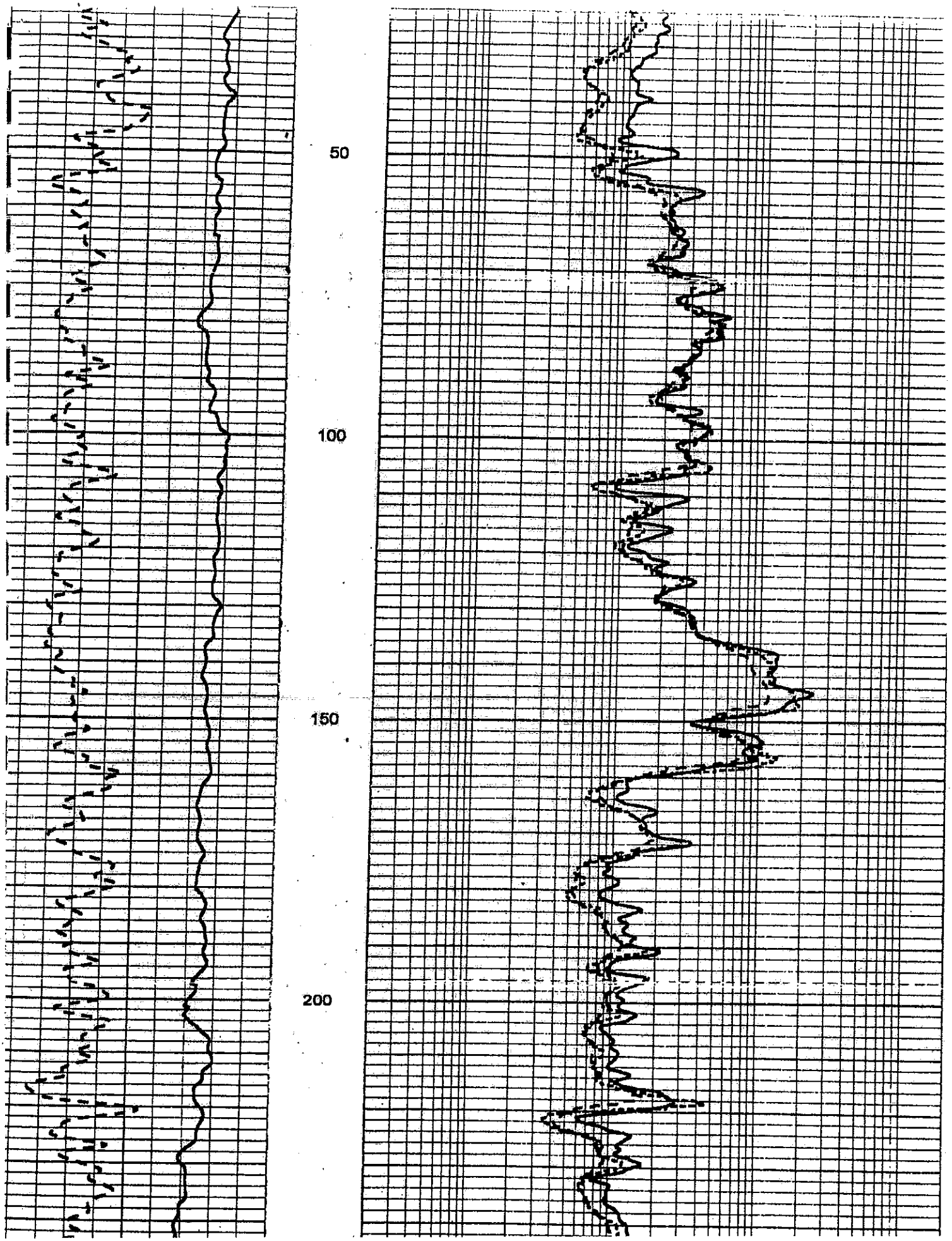
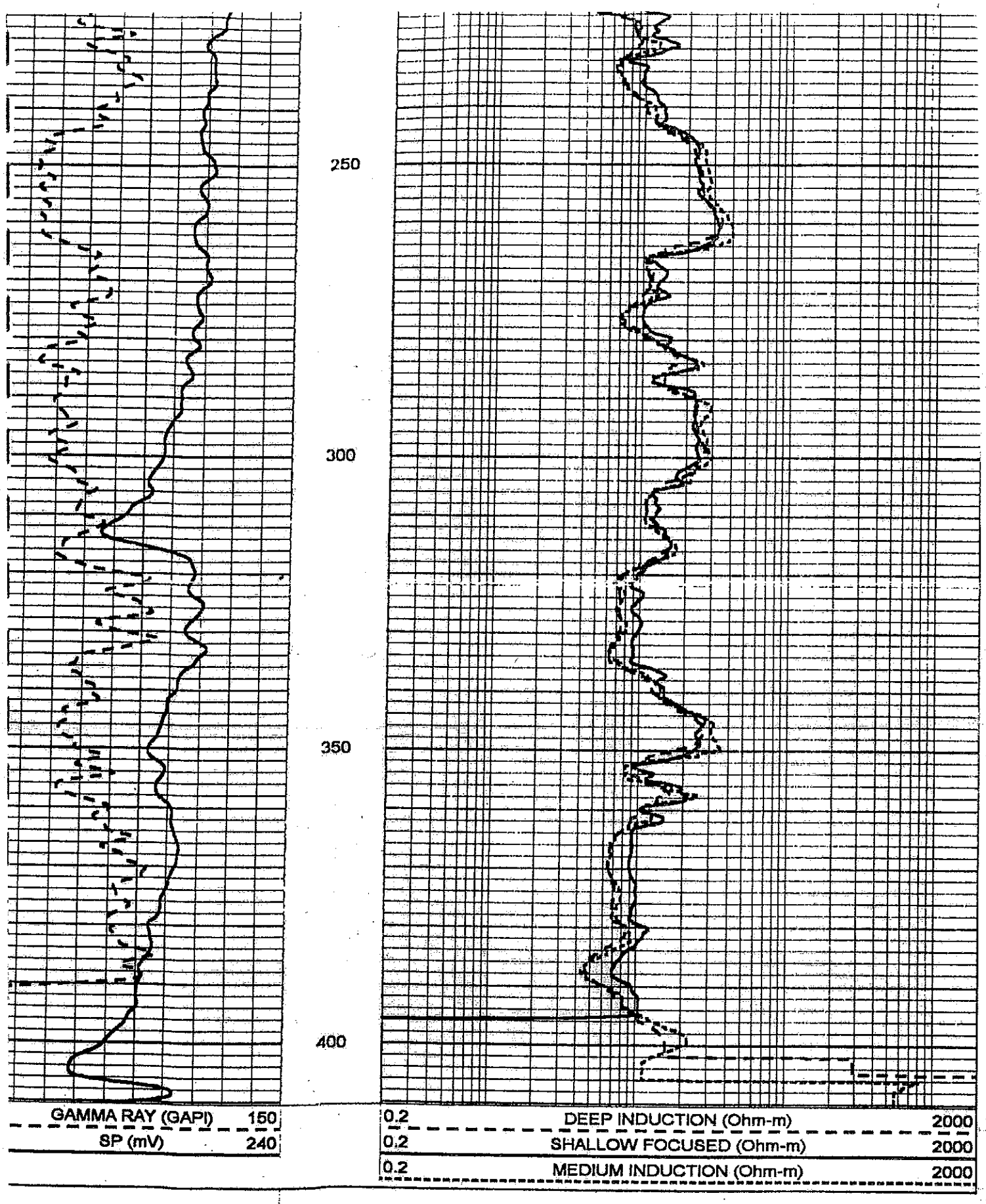
Dataset Pathname: pass3
Presentation Format: 5-inch.prs
Dataset Creation: Tue Apr 11 09:59:35 2000 by Log VER_5.4
Charted by: Depth in Feet scaled 1:240




50
100
150
200


250
300
350
400
GAMMA RAY (GAPI) 150
SP (mV) 240
0.2 DEEP INDUCTION (Ohm-m) 2000
0.2 SHALLOW FOCUSED (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000

Cementer: Fill in shaded areas.
Operator: Fill in other items.

Form W-15
Cementing Report
Rev. 4/1/83
483-045

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

1. Operator's Name (As shown on Form P-5, Organization Report)	2. RRC Operator No.	3. RRC District No.	4. County of Well Site
Aqua Source			Parker

5. Field Name (Wildcat or exactly as shown on RRC records)	6. API No.	7. Drilling Permit No.
	42-	

8. Lease Name	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No.
Lake Country Acres			3

CASING CEMENTING DATA:	SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
			Single String	Multiple Parallel Strings	Tool	Shoe
12. Cementing Date	4/27/00					
13. •Drilled hole size						
•Est. % wash or hole enlargement						
14. Size of casing (in. O.D.)						
15. Top of liner (ft.)						
16. Setting depth (ft.)						
17. Number of centralizers used						
18. Hrs. waiting on cement before drill-out						
1st Slurry — 19. API cement used: No. of sacks ▶	140					
1st Slurry — Class ▶	"C"					
1st Slurry — Additives ▶	8% gel					
2nd Slurry — No. of sacks ▶						
2nd Slurry — Class ▶						
2nd Slurry — Additives ▶						
3rd Slurry — No. of sacks ▶						
3rd Slurry — Class ▶						
3rd Slurry — Additives ▶						
1st — 20. Slurry pumped: Volume (cu. ft.) ▶	289.8					
1st — Height (ft.) ▶	425'					
2nd — Volume (cu. ft.) ▶						
2nd — Height (ft.) ▶						
3rd — Volume (cu. ft.) ▶						
3rd — Height (ft.) ▶						
Total — Volume (cu. ft.) ▶						
Total — Height (ft.) ▶						
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?	yes					

22. Remarks Water Well

OVER ▶

CEMENTING TO PLUG AND ABANDON	PLUG # 1	PLUG # 2	PLUG # 3	PLUG # 4	PLUG # 5	PLUG # 6	PLUG # 7	PLUG # 8
23. Cementing date								
24. Size of hole or pipe plugged (in.)								
25. Depth to bottom of tubing or drill pipe (ft.)								
26. Sacks of cement used (each plug)								
27. Slurry volume pumped (cu. ft.)								
28. Calculated top of plug (ft.)								
29. Measured top of plug, if tagged (ft.)								
30. Slurry wt. (lbs/gal)								
31. Type cement								

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Tim Schniederjan- Cementer — Name and title of cementer's representative

Pumpco Services — Cementing Company

(b) (6) [redacted] — Signature

P.O. Box 1586 — Address

Gainesville, Tx 76241 — City, State, Zip Code

940/665-8062 — Tel.: Area Code Number

4/27/00 — Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Watts Drilling Co. — Typed or printed name of operator's representative

Vice President — Title

(b) (6) [redacted] — Signature

14310 Hwy 377-S — Address

Ft Worth — City,

TX 76126 — State, Zip Code

(817) 443-0244 — Tel.: Area Code Number

4/27/00 — Date: mo. day yr.

Instructions to Form W-15, Cementing Report

IMPORTANT: Operators and cementing companies must comply with the requirements of the Commission's Statewide Rules 8 (Water Protection), 13 (Casing, Cementing, Drilling, and Completion), and 14 (Well Plugging). For offshore operations, see the requirements of Rule 13 (c).

A. **What to file.** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form. Form W-15 should be filed with the following:

- An initial oil or gas completion report, Form W-2 or G-1, as required by Statewide or special field rules;
- Form W-4, Application for Multiple Completion, if the well is a multiple parallel casing completion; and
- Form W-3, Plugging Record, unless the W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.

B. **Where to file.** The appropriate Commission District Office for the county in which the well is located.

C. **Surface casing.** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Texas Department of Water Resources, Austin. Before drilling a well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable rules, an operator must obtain a letter from the Department of Water Resources stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

D. **Centralizers.** Surface casing must be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In nondeviated holes, a centralizer must be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers must meet API specifications.

E. **Exceptions and alternative casing programs.** The District Director may grant an exception to the requirements of Statewide Rule 13. In a written application, an operator must state the reason for the requested exception and outline an alternate program for casing and cementing through the protection depth for strata containing usable-quality water. The District Director may approve, modify, or reject a proposed program. **An operator must obtain approval of any exception before beginning casing and cementing operations.**

F. **Intermediate and production casing.** For specific technical requirements, operators should consult Statewide Rule 13 (b) (3) and (4).

G. **Plugging and abandoning.** Cement plugs must be placed in the wellbore as required by Statewide Rule 14. The District Director may require additional cement plugs. For onshore or inland wells, a 10-foot cement plug must be placed in the top of the well, and the casing must be cut off three feet below the ground surface. All cement plugs, except the top plug, must have sufficient slurry volume to fill 100 feet of hole, plus ten percent for each 1,000 feet of depth from the ground surface to the bottom of the plug.

To plug and abandon a well, operators must use only cementers approved by the Director of Field Operations. Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

WATTS DRILLING CO., INC.

LAKE COUNTRY ACRES
WELL #3
36 HOUR WATER PRODUCTION TEST

WELL DEPTH: 410'
PUMP SETTING: 400'
STATIC WATER LEVEL: 280'
MEASURING DEVICE: 2" FLOW METER
TEST PUMP: 70L-10HP

TIME	GPM	PUMPING LEVEL
4:00 pm 05-28-00	59	362
5:00	54	376
6:00	50	370
7:00	50	370
8:00	52	370
9:00	51	368
10:00	48	370
11:00	50	390
12:00 am 05-29-00	50	366
1:00	49	375
2:00	48	375
3:00	48	370
4:00	48	370
5:00	48	370
6:00	47	370
7:00	47	368
8:00	48	368
9:00	50	366
10:00	52	360
11:00	52	358
12:00 pm	52	358
1:00	52	360
2:00	52	363
3:00	50	360
4:00	49	356
5:00	49	356
6:00	49	356
7:00	49	356
8:00	46	355
9:00	43	355
10:00	47	355

WATTS DRILLING CO., INC.

LAKE COUNTRY ACRES
WELL #3
36 HOUR WATER PRODUCTION TEST

TIME	GPM	PUMPING LEVEL
11:00	50	356
12:00 am 5/30/00	50	356
1:00	50	356
2:00	50	356
3:00	51	356
4:00	51	356

RECOVER: SHUT DOWN

TIME	WATER LEVEL
4:01	356
4:06	320
4:11	301
4:16	203
4:21	293
4:26	284
4:31	281
4:36	280
4:41	280
4:46	280
4:51	280
4:56	280

(b) (6) [redacted]

WITNESSED BY:

END OF TEST

DW 6/2/00
cc: RW
Doug Heavy.

POPE Testing LABORATORIES, Inc.

CONSULTING ANALYTICAL CHEMISTS
AND TESTING ENGINEERS

FOODS, FEEDS, DAIRY PRODS
WATER, MINERAL ANALYSES
PETROLEUM PRODUCTS
PACKING HOUSE PRODUCTS

DALLAS, TEXAS 75221
AC 214 742-8481
FAX 214 748-5817
June 2, 2000

NATIONAL CHEMISTS
WEIGHERS AND INSPECTORS
NATL. CITRUSGRAD PRODUCTS ASS'N.
REFERCE CHEMISTS
AMERICAN OIL CHEMISTS SOCIETY

Date Rec'd: 5-19-00

To: Watts Drilling Company
14310 Highway 377 South
Ft Worth, TX 76126

Report of Tests on Water

Identification Marks: Aqua Source Lake County Acres #3

Values reported are for minerals in solution

	mg/L
Calcium	1.6
Magnesium	0.4
Iron	0.04
Manganese	0.0
Sodium	234.7
Carbonate	19.2
Bicarbonate	524.6
Sulphate	34.9
Chloride	12.5
Fluoride	0.7
Nitrate	0.0
Phenolphthalein Alkalinity as CaCO3	16.0
Total Alkalinity as CaCO3	462.0
Total Hardness as CaCO3	5.8
Total Dissolved Solids	828.6
Arsenic	< 0.005
Barium	0.015
Beryllium	< 0.004
Chromium	< 0.005
Nickel	< 0.02
Selenium	< 0.04
Aluminum	0.04
Copper	< 0.005
Silver	< 0.005
Zinc	0.01
Nitrice (N)	< 0.005

Continued