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LAW OFFICES  
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AMERICAN HOME BUILDING  
P. O. DRAWER E  
ARTESIA, NEW MEXICO 88210

AREA CODE 505  
746-4151 • 746-2201  
John W. Fisk,  
Associate

August 11, 1978

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

Re: Application of Anne Burnett Tandy, dba Windfohr  
Oil Company, for administrative authority to  
inject water into the following proposed wells  
to be drilled for the Grayburg-Jackson (San Andres)  
Unit, to wit:

Unit Well No. 45 - NW $\frac{1}{4}$ NE $\frac{1}{4}$  Section 13, T-17-S,  
R-30-E; and  
Unit Well No. 46 - NW $\frac{1}{4}$ NE $\frac{1}{4}$  Section 12, T-17-S,  
R-30-E.

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The above application by the Unit Operator of the Grayburg-Jackson  
(San Andres) Unit in Eddy County, New Mexico, was submitted to the  
Commission by mail on August 2, 1978.

The purpose of the application was to obtain administrative authority  
to inject water at pressures up to 1640 psi (wellhead) into the two  
proposed injection wells to be drilled as described in the caption.

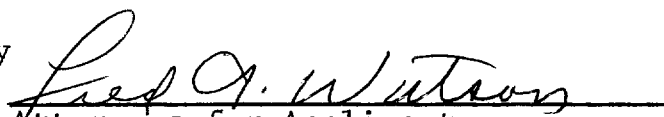
As mentioned in the application, the applicant had completed running  
radioactive tracer and temperature surveys in Unit Wells Nos. 6 and  
8 and found no escape of water from the zone being flooded, and it  
was further mentioned that Unit Well No. 8 had previously been in-  
jected at pressures up to 1640 psi. As further set forth in the  
application, copies of the survey logs would be submitted to the  
Commission at such time as they had been received by the applicant.  
Pursuant to the application, we are now submitting and herewith  
enclose copies of the survey logs as to the survey run on July 28,  
1978 on Unit Well No. 6 and on July 27, 1978 on Unit Well No. 8.

Applicant requests that the enclosed logs be considered along with  
all other information and exhibits heretofore submitted with the  
subject application.

Very truly yours,

WATSON & WATSON

by

  
Attorneys for Applicant,  
Anne Burnett Tandy, dba  
Windfohr Oil Company

FAW:js  
Enc.

cc: U.S.G.S., Artesia, NM  
cc: Atlantic Richfield Company, Midland, TX  
cc: Windfohr Oil Company, Ft. Worth, TX  
cc: Windfohr Oil Company, Loco Hills, NM  
cc: Mr. Ralph L. Gray, Artesia, NM

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John W. Fisk,  
Associate

August 2, 1978

Oil Conservation Commission  
State of New Mexico  
P. O. Box 2088  
Santa Fe, New Mexico 87501

100-467  
L-17-S

Gentlemen:

Re: Application of Anne Burnett Tandy, dba Windfohr Oil Company, for administrative authority to inject water into the following proposed wells to be drilled for the Grayburg-Jackson (San Andres) Unit, to wit:

Unit Well No. 45 - NW $\frac{1}{4}$ NE $\frac{1}{4}$  Section 13, T-17-S,  
R-30-E; and  
Unit Well No. 46 - NW $\frac{1}{4}$ NE $\frac{1}{4}$  Section 12, T-17-S,  
R-30-E.

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Application is hereby made on behalf of Anne Burnett Tandy, dba Windfohr Oil Company, Unit Operator of the Grayburg-Jackson (San Andres) Unit in Eddy County, New Mexico, for administrative authority to inject water at pressures up to 1640 psi (wellhead), at an estimated rate of 200 barrels per well per day, same to be injected into the San Andres Formation at a depth of 3,200 feet to 3,400 feet, in the two wells proposed to be drilled and located as described in the caption.

The locations of the two injection wells proposed to be drilled are within the Unit boundaries and are presently undrilled locations which will improve the flood performance of the Grayburg-Jackson (San Andres) Unit Waterflood Project, and the proposed footage locations of said two wells are as follows:

No. 45, 760' FNL and 1980' FEL of Section 13, T-17-S,  
R-30-E.

No. 46, 660' FNL and 1980' FEL of Section 12, T-17-S,  
R-30-E.

Anne Burnett Tandy, dba Windfohr Oil Company, is the operator of the Grayburg-Jackson (San Andres) Unit. The waterflood project was initiated in Case No. 3592 before the New Mexico Oil Conservation Commission, which issued Order No. R-3257 in said case. Further, the waterflood project was expanded in Case No. 5663 in which the New Mexico Oil Conservation Commission issued Order No. R-5206 expressly providing that the Secretary-Director of the Commission should have authorization for administrative approval of additional producing and injection wells, both as to orthodox and unorthodox locations. We are attorneys for Anne Burnett Tandy, dba Windfohr Oil Company, and are expressly authorized to make this application.

In support of said application, the following exhibits, with the applicant's comments where appropriate, are hereby tendered to the Commission:

EXHIBIT "A" is a map, as of May 1978, showing the unit boundary of the Grayburg-Jackson (San Andres) Unit and further showing well data for injection and producing wells, both within and offsetting said unit.

Data shown within squares by the respective wells are (a) as to injection wells, top left figure is barrels of water injected per day; top right figure is injection pressure (psi); and bottom figure is cumulative barrels of water injected; and (b) as to producing wells, top left figure is barrels of oil produced per day; top right figure is barrels of water produced per day; and bottom figure is cumulative oil (secondary) recovered.

Proposed Injection Wells No. 45 and No. 46 (the wells for which administrative authority to inject water is hereby sought) are indicated on Exhibit "A" by red circles and arrows.

By way of comment, the injection pressure sought for the two proposed wells, 1640 psi (wellhead), is lower than the injection pressures of some of the other wells in the unit which inject water at pressures up to 1660 psi. Further, injection pressures on the Grayburg-Jackson (San Andres) Unit are lower than offset operators are injecting, e.g., on the east, Atlantic Richfield Company is injecting water at 1850 psi and, on the west, Shenandoah Oil Company is injecting water at 1900 psi.

Applicant has just completed running radioactive tracer and temperature surveys in Unit Wells No. 6 and No. 8, and has found no escape of water from the zone being flooded. Unit Well No. 8 is injecting at 1640 psi. As soon as survey logs have been received by applicant, copies of the same will be furnished to the Commission.

EXHIBIT "B" is a map showing the general area in which the two proposed injection wells will be located and the leases operated by applicant are outlined in yellow and the two proposed injection wells are located by red dot and arrow.

EXHIBIT "C" is a diagrammatic sketch of the two proposed injection wells showing the manner in which it is proposed to complete and equip the same.

EXHIBIT "D" is a tabular summary of all wells within one-half mile of the two proposed injection wells which penetrate the injection zone, said exhibit showing casing strings, setting depths, sacks of cement used, cement tops, total depths, producing intervals, well identifications and locations.

EXHIBIT "E-1" is a narrative statement as to the Windfohr Oil Co. - Grayburg-Jackson (San Andres) Unit Well No. 18, being the only plugged and abandoned well within the one-half mile radius of the two proposed injection wells, and EXHIBIT "E-2" is a schematic diagram of said plugged and abandoned well.

Exhibits "A" through "E-2", inclusive, to this application were prepared by Ralph L. Gray, Consulting Petroleum Engineer, of Artesia, New Mexico.

In summary, the proposed locations for the two subject injection wells are within the boundaries of the Grayburg-Jackson (San Andres) Unit and are presently undrilled locations, and the drilling of said wells and authorized injection of water therein will result in improved performance of the waterflood project. The injection pressure sought, to wit, up to 1640 psi (wellhead), is well within limits presently established in the project and in the area. Radio-active tracer and temperature surveys at Unit Wells No. 6 and 8 reveal no escape of water from the flooded zone, and copies of the logs will be furnished at such time as operator receives the same. Accordingly, administrative approval to inject water into the two proposed unit wells, all as more particularly set forth hereinabove, is hereby requested.

A copy of this application for administrative approval is being sent, certified mail, return receipt requested, to Atlantic Richfield Company, the only operator offsetting locations of the two proposed injection wells.

Very truly yours,

WATSON & WATSON

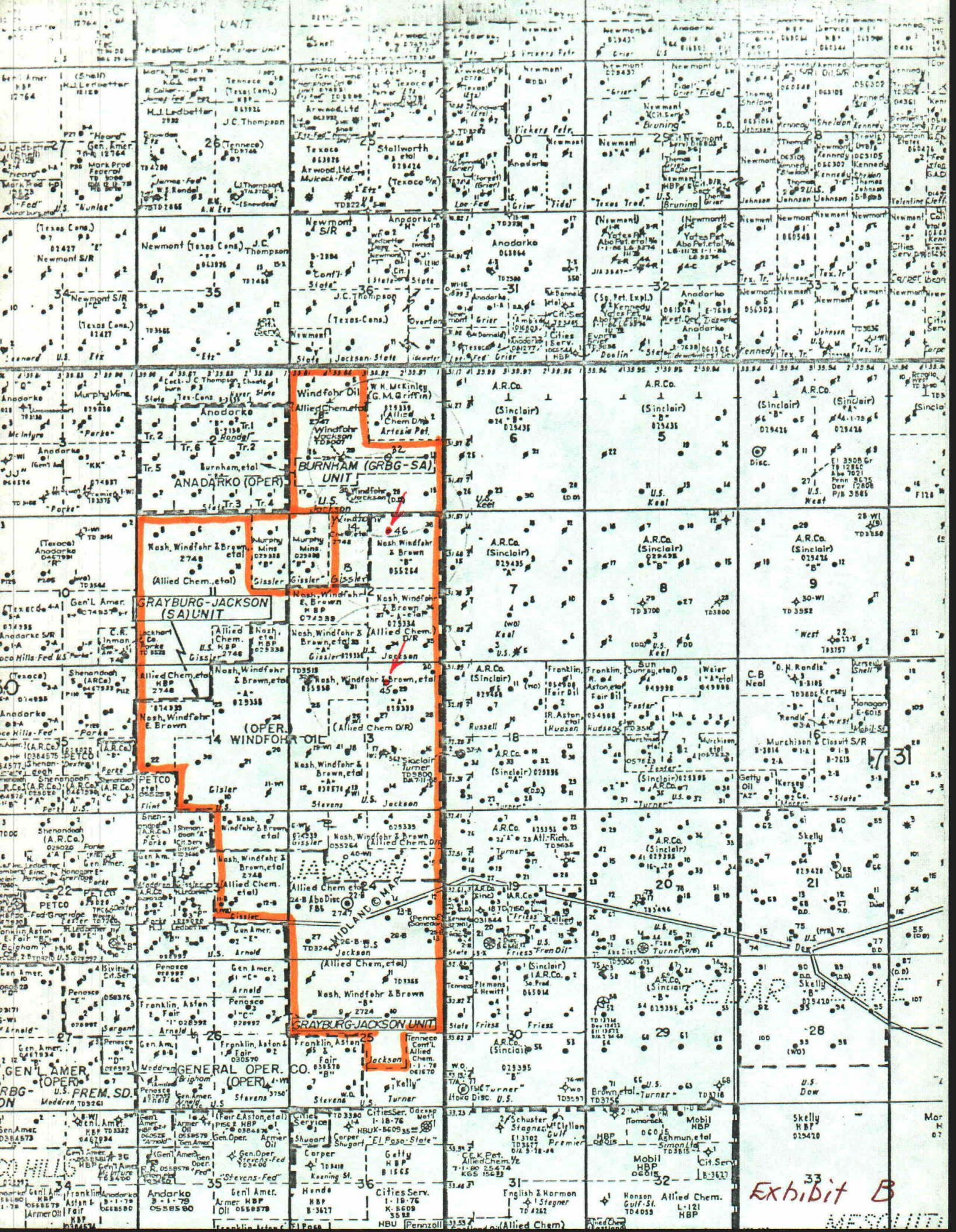
by Fred A. Watson  
Attorneys for Applicant,  
Anne Burnett Tandy, dba  
Windfohr Oil Company

FAW:js

cc: Atlantic Richfield Company  
P. O. Box 1610  
Midland, Texas 79701  
via Certified Mail, R.R.R.

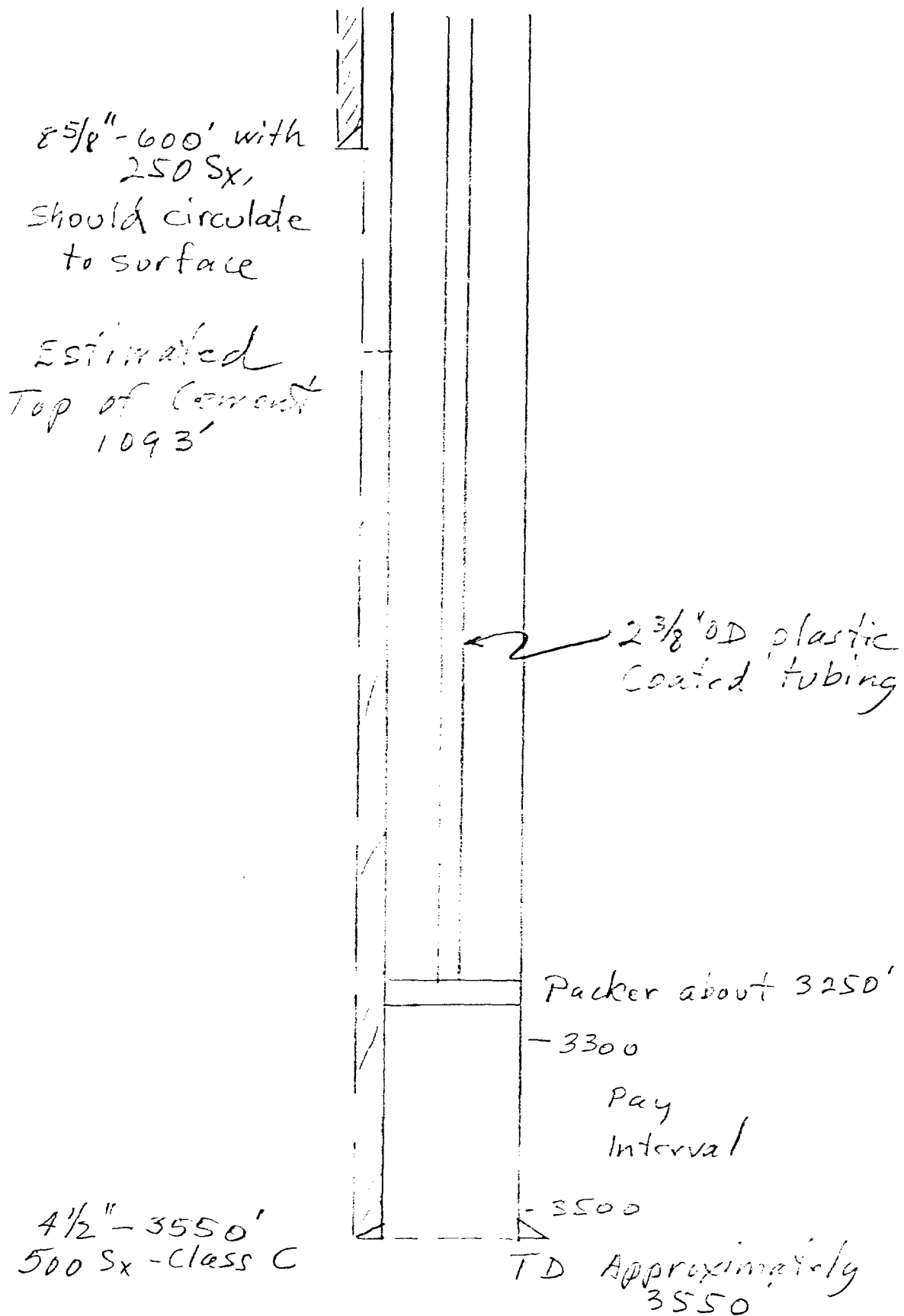
cc: United States Geological Survey  
Oil and Gas Division  
American Home Building  
Artesia, New Mexico 88210







Windfann Sil Co.  
GUSA Unit Wells 45 & 46



WELL DATA FOR WELLS LOCATED WITHIN 1/2 MILE OF WINDFOHR PROPOSED WATER INJECTION WELLS

COMPANY & WELL	SURFACE CASING & CEMENT		DEPTH	ESTIMATED CEMENT TOP		PRODUCTION CASING & CEMENT		DEPTH	ESTIMATED CEMENT TOP		TOTAL DEPTH	PRODUCING INTERVAL		LOCATION
SEC. 1-17S-30E														
W. H. McKinley														1980' f.N.
Artesia Pet.#1	8-5/8"-	75 sx	600'	440'		5 1/2"-	65 sx.***	3110'	2124'		3164'	OH-3110-3164		2310' f.E.
" #2	8-5/8"-	50 sx.	593'	485'		5 1/2"-	300 sx.	3086'	1566'		3086'	Perf. 3030-50, 3898-3906 & 2938-48		1980' f.N. 660' f.E.
Windfohr Oil Co.														
Jackson B #15	8-5/8"-	50 sx.	730	622		5 1/2"-	100 sx.	2850	2330		3161	2850-3161 2083'-7" pulled		1980' f.S. 660' f.W.
" #18	8-5/8"-	50 sx.	571	463		5 1/2"-	100 sx.	3222	2702		3224	Perf. 2980-86, 2916-30,3173-83, 3044-3056,3026-32		1980' f.S. 660' f.E.
" #19	8-5/8"-	50 sx	555	447		5 1/2"-	100 sx.	3197	2677		3197	Perf. 3164-72, 2899-2914,2864-72		660' f.S. 660' f.E.
" #20	8-5/8"-	50 sx	530	422		5 1/2"-	100 sx.	3188	2668		3188	Perf. 3140-49,3010- 3021, 2883-95, 2852-58		660' f.S. 1980' f.E.
" #29Y	8-5/8"-	250 sx	504	Surface		4 1/2"-	775 sx.	3173	1800		3190	2843-50, 2874-85, 2972-3008,3124-36		1839' f.S. 1689' f.W.
" #30	8-5/8"-	250 sx	512	Surface		4 1/2"-	700 sx.	3220	2000		3220	2871-75, 2903-18, 3033-46, 3163-75		660' f.S. 1980' f.W.
SEC. 12-17S-30E														
Windfohr Oil Co.														
GJSA Unit #38	8-5/8"-	50 sx	540	432		5 1/2"-	100 sx.	3491	2971		3540	OH-3491-3540 Perf.3386-3402, 3422-38		660' f.N. 660' f.E.
" #36	8-5/8"-	50 sx	570	464		7"	300 sx.	3403	103		3509	Perf.3004-10, 2907-13 OH-3403-3509		1760 f.S. 660 f.E.
" #37	8-5/8"-	50 sx	557	445		7"	125 sx.	3397	2057		3510	Perf.3203-25 OH 3397-3510		1760 f.S. 1980 f.E.
" #35**	8-5/8"-	50 sx	590	482		7"	100 sx	2936	1866		3482	OH 3415-3482		440 f.S. 660 f.E.
" #34	8-5/8"-	50 sx	592	480		7"	100 sx.	2935	1865		3539	OH 2935-3539		440' f.S. 1980' f.E.

Continued -

RALPH L. GRAY  
PETROLEUM ENGINEERING

Exhibit "D"

WELL DATA FOR WELLS LOCATED WITHIN 1/2 MILE OF WINDFOHR PROPOSED WATER INJECTION WELLS (Continued)

COMPANY & WELL	SURFACE CASING & CEMENT	DEPTH	ESTIMATED CEMENT TOP	PRODUCTION CASING & CEMENT	DEPTH	ESTIMATED CEMENT TOP	TOTAL DEPTH	PRODUCING INTERVAL	LOCATION
Sec. 12-17S-30E Windfohr Oil Co. GJSA Unit #33*	12-1/2"-20 sx	585'	477'	7" - 360 sx.	2860'	Surface	3615'	OH 3332-3615	440' f.S. 2200' f.W.
Gissler B #14	8-5/8"-250 sx	523	Surface	4 1/2" - 500 sx.	3235'	1295'	3240'	Perf. 3193-3210, 3044-78, 2894-2952	660' f.N. 1980' f.W.
Sec. 13-17S-30E Windfohr Oil Co. GJSA Unit #30	8-5/8"- 50 sx	555	447	7" - 100 sx	2950	1880	3541	OH 2950-3541	440' f.N. 440' f.E.
" " #29*****	12" ----- 20 sx.	498	435	10" - 40 sx.	1340	1180	3560	Old records missing	1320' f.N. 1320' f.E.
" " #31	8-5/8"- 50 sx	550	442	7" - 100 sx.	2950	1880	3500	OH 2950-3500	660' f.N. 1980' f.W.
" " #32	8-5/8"-200 sx.	540	Surface	4 1/2" - 225 sx.	3513	<u>2710</u>	3513	Perf. 3404-51	660' f.N. 660' f.W.
" " #26	8-5/8"- 50 sx Note: Cemented 4 1/2" liner from 3384' to 2865' w/130 sx.	547	439	7" - 100 sx.	2947	1877	3502	OH 3384-3502	1980' f.N. 1980' f.W.
" " #27	8-5/8"- 50 sx	550'	442	7" - 50 sx.	2995	2460	3511	OH 2995-3511	2200' f.N. 2200' f.E.
" " #28	8-5/8"- 50 sx Note: 4 1/2" liner cemented from 3453' to 2877' w/125 sx.	580	472	7" - 100 sx.	2995	1925	3574	OH 3453-3574	2080' f.N. 660' f.E.
" " 17	10" - 50 sx. Note: 4 1/2" liner was cemented from 3288' to 2826' w/100 sx.	563	365	7" - 100 sx.	2968	1898	3510	OH 3288-3510	1980' f.S. 2000' f.E.

\* 4 1/2" liner from 3332' to 2792' w/100 sx.

\*\* 4 1/2" liner from 3415 to 2842' w/120 sx.

\*\*\* Cemented to 2124' through perforations at 2500'.

\*\*\*\* Reports show 5 1/2" casing at 3428' but doesn't report cement.

Note: Cement top underlined is reported measured depth.



WINDFOHR OIL CO. - GRAYBURG JACKSON SAN ANDRES UNIT  
WELL #18 (Only P&A well within  $\frac{1}{2}$  mi.)

Well Data:

10-3/4" casing cemented at 480' with 25 sx. Estimated top of cement - 356'.

8-5/8" casing cemented at 2697' with 371 sx. Estimated top of cement - 917'.

7" casing landed at 3240'. No cement.

2" tubing at 3300'.

Total depth - 3464'.

There is a hole in 7" casing at 1249-57.

A high pressure water flow appeared between the 7" and 8-5/8" casing and it was necessary to abandon well.

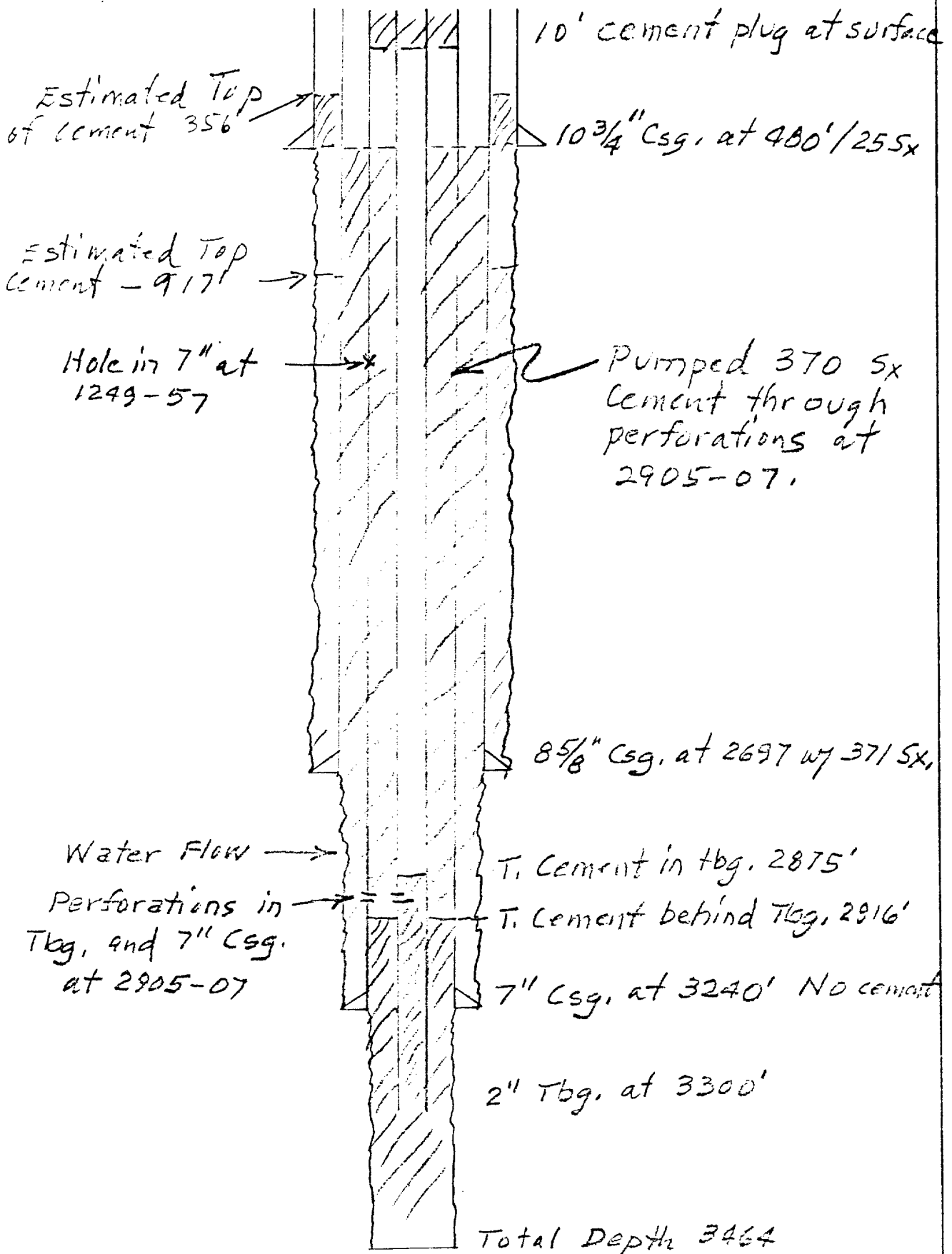
Cement was pumped around 2" tubing to 2916'.

2" tubing and 7" casing were perforated at 2905-07 and 370 sacks of cement were pumped down tubing, leaving top of cement inside tubing at 2875'. Temperature survey indicated top of cement inside 7" and 8-5/8" at 480'.

On Dec. 28, 1975, a 10' plug of cement was placed at surface and a marker set.

Exhibit "E-1"

Windfohr Oil Co. G.J.S.A. Unit #18  
P & A 12-28-75



LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE