

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

July 9, 1991

Shell Western E & P Inc.
P.O. Box 576
Houston, Texas 77001

Attention: W. F. N. Kelldorf

Re: Exception to Rule No. 10
Division Order No. R-6199

Dear Mr. Kelldorf:

Reference is made to your request dated May 6, 1991 for an exception to Rule No. (10) of the Special Rules and Regulations for the North Hobbs Grayburg San Andres Unit Pressure Maintenance Project as promulgated by Division Order No. R-6199. It is our understanding that approximately 31 injection wells currently do not meet the packer setting depth requirements. It is further our understanding that re-seeting the packers to a lower depth at this time in the subject wells would likely be unsuccessful due to the condition of the casing.

You are hereby authorized an exception to Rule No. (10) of the Special Rules and Regulations for the North Hobbs Grayburg San Andres Unit Pressure Maintenance Project for the 31 wells shown on Exhibit "A" attached hereto.

Please direct any questions on this action to Mr. David Catanach at (505) 827-5800.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. LeMay".

William J. LeMay
Director

xc: OCD-Hobbs
Case File-6653 ✓

EXHIBIT "A"

<u>WELL NUMBER</u>	<u>TOP PERFORATION DEPTH</u>	<u>PACKER SETTING DEPTH</u>
18-331	4052	3951
18-341	3999	3895
19-112	4162	4034
19-142	4112	3997
19-311	4210	4107
19-411	4256	3942
19-431	4197	4087
20-131	4227	4061
20-233	4258	4138
24-311	4200	4054
24-442	4165	3914
25-431	3977	3840
27-111	4161	4056
28-232	4141	4027
28-441	4102	3906
29-122	4154	4037
29-322	4160	4057
29-331	4100	3929
30-141	4006	3905
30-333	4137	4026
30-422	4124	4023
30-442	4162	3993
31-312	4189	4046
32-141	4123	4008
32-142	4135	4001
32-321	4056	3777
32-341	4092	3971
32-342	4091	3970
32-432	4062	3941
33-342	4068	3938
33-422	4144	4035

OIL CONSERVATION DIVISION
RECEIVED

Shell Western E&P Inc.
An Affiliate of Shell Oil Company



P.O. Box 576
Houston, TX 77001

'91 MAY 10 AM 8 34

May 6, 1991

CERTIFIED MAIL

Mr. David R. Catanach
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

Dear Mr. Catanach:

SUBJECT: REQUEST FOR VARIANCE TO NEW MEXICO OIL
CONSERVATION DIVISION ORDER R-6199 - RULE 10
NORTH HOBBS UNIT, LEE COUNTY

On April 8, 1991, I visited with you and with Mr. Jerry Sexton on the telephone concerning injection well casing packer setting depths in the SWEPI operated North Hobbs Unit. At that time, I mentioned that thirty-one wells in the Unit have casing packers set more than the required one hundred feet above the perforated interval. Attachment A is a list of the wells showing the perforated intervals, the packer setting depths and the packer to perforation distance.

During our conversation, you suggested that SWEPI attempt to lower the packer in wells where the packer is set more than two hundred and fifty feet above the perforated interval. Three wells, NHU 19-411W, NHU 24-442W and NHU 32-321W met this request. If that operation was successful, then we should reset packers in the other twenty-eight wells to within one hundred feet of the top perforation.

Upon close review of well logs, well files and field information, we do not believe we can lower any of the three packers and as a result, improve well integrity, reduce potential environmental damage or, in the case of two wells, obtain a packer seat closer to the perforations, successfully. These conclusions are based on the following data:

Well No. 19-441W - Packer is set immediately above old cement squeezed perforations. These perforations will not hold a sustained pressure; however, pressure bleed-off is so slight additional cement squeezing is not practical. See Attachment B for a wellbore description.

Well No. 24-442W - Packer is set immediately above old cement squeezed perforations. A casing evaluation log (Vertilog) indicated 80% casing loss as high as 3960 feet, 205 feet above the perforated injection interval; therefore, a casing packer could not be expected to seal in this casing loss interval. See Attachment C for a wellbore description.

Well No. 32-321W - Well has a fiberglass liner from 3808 feet to total depth. Because we cannot set a mechanical set, slip-type packer in the fiberglass liner, we placed a mechanical set packer in the 6-5/8 inch casing at 3777 feet and a cup-type sealing packer in the fiberglass at 3843 feet. It makes little sense to lower the fiberglass cup packer in order to be closer to the perforations and to protect the fiberglass liner since it is non-corrosive. See Attachment D for a wellbore description.

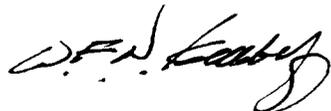
Based on the above conclusions, we do not believe it is good engineering practice to attempt resetting the packers based on the condition of the casing in the wells.

We also do not believe it would be prudent or logical to require that the packers in the other 28 wells be lowered a few feet to meet the rule in this field.

Therefore, we respectfully request that we be issued a variance to continue our current operations and not to be required to move packers in any of the 31 wells.

We apologize for our oversight in this matter, but it appears that good judgement and engineering practice has been utilized in selecting packer setting depths. We simply do not believe additional expense required to meet the letter of the rule is justified or would gain additional protection in the cases cited above or in the remaining 28 wells.

Yours very truly,



W. F. N. Kelldorf
Division Environmental Engineer - HS&E
Western Division

WFNK:r1b

Attachments

cc: Mr. Jerry Sexton
Oil Conservation Division
P. O. Box 1980
Hobbs, NM 88240

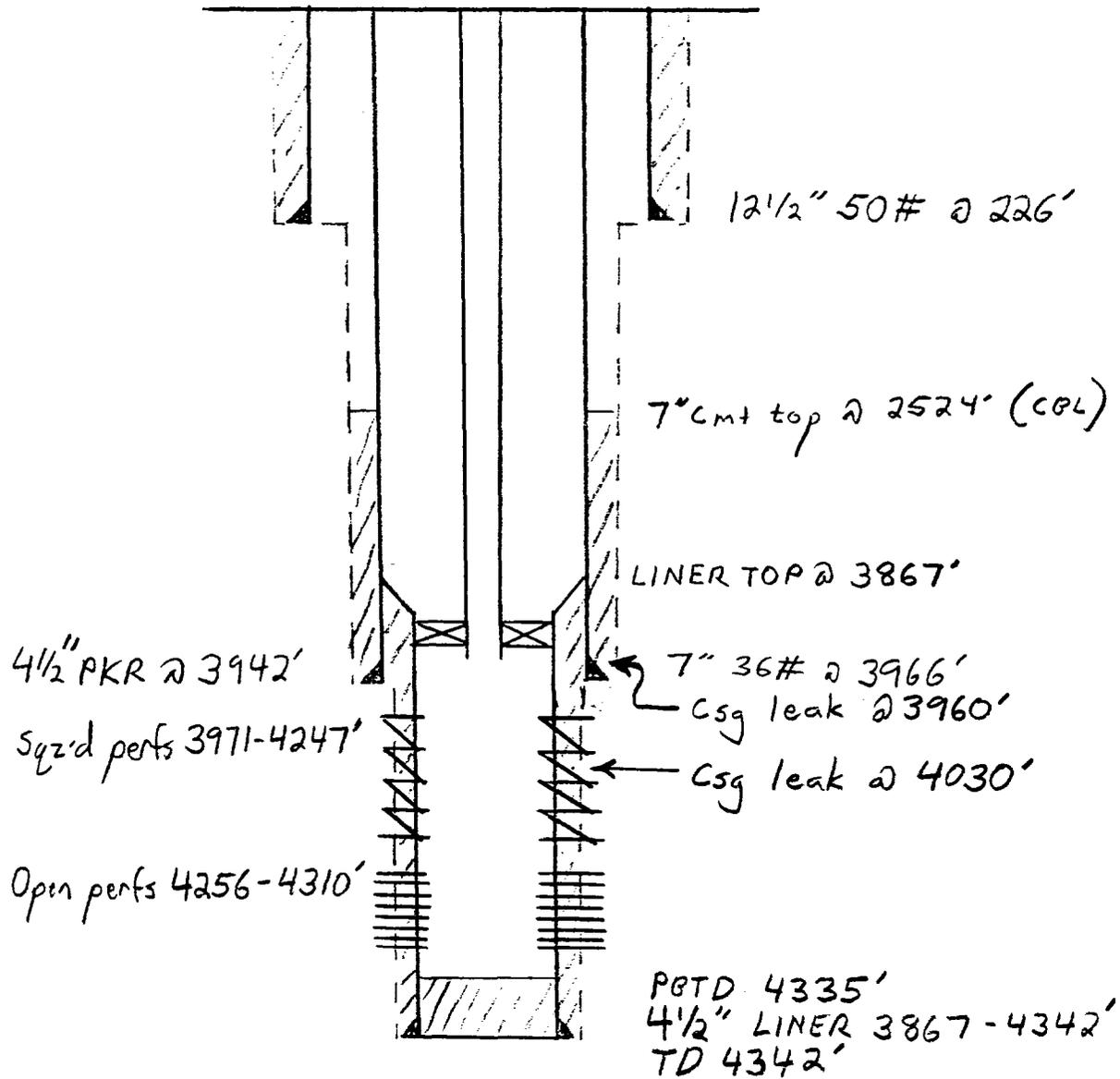
BNND9112002 - 0002.0.0

ATTACHMENT A

NORTH HOBBS UNIT WELLS
RULE 10 NONCOMPLIANCE

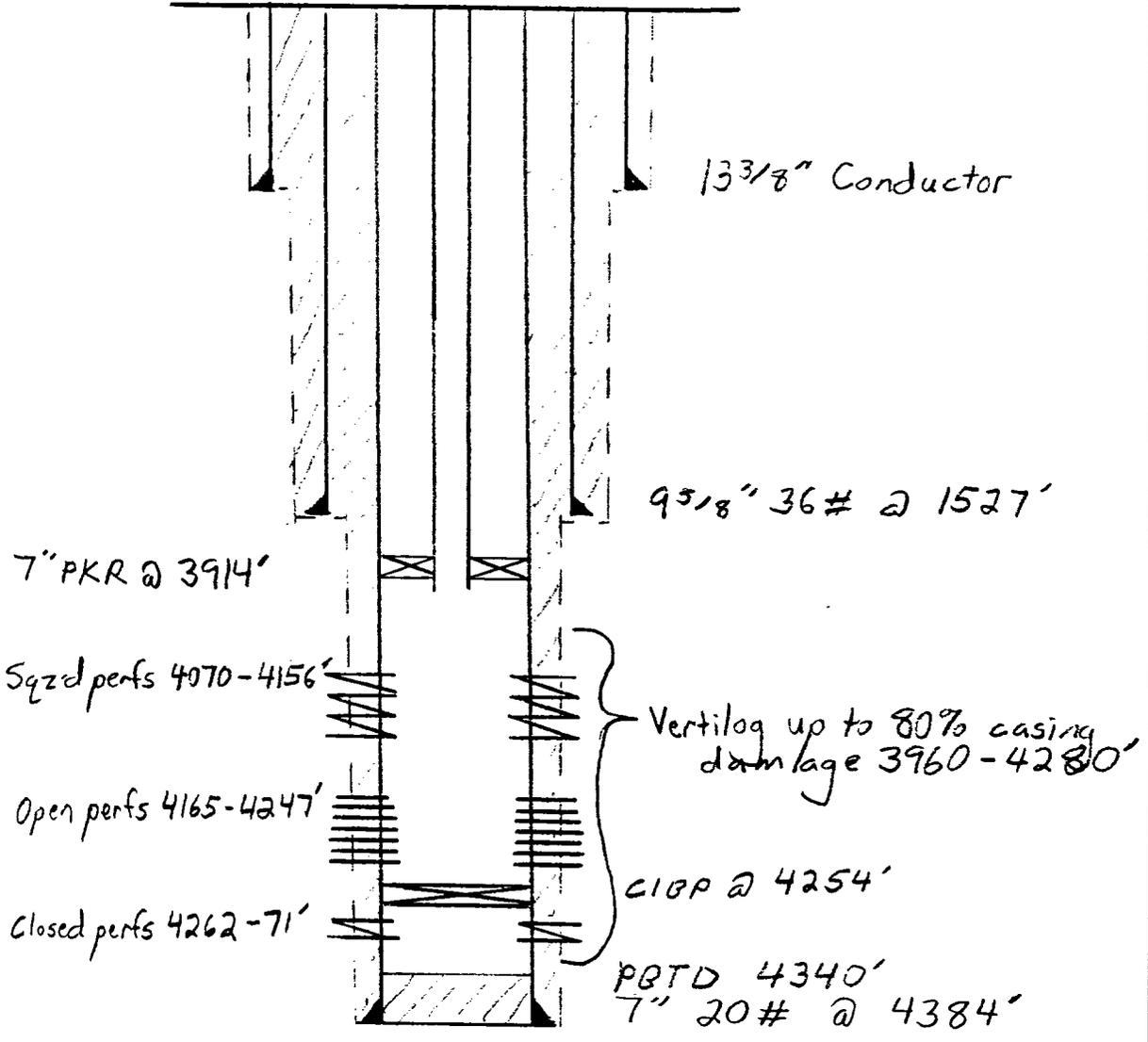
<u>WELL NO.</u>	<u>TOP PERF DEPTH (FT)</u>	<u>PACKER DEPTH (FT) AS OF 3/91</u>	<u>PACKER TO PERF DISTANCE (FT)</u>	
1.	18-331W	4052	3951	101
2.	18-341W	3999	3895	104
3.	19-112W	4162	4034	128
4.	19-142W	4112	3997	115
5.	19-311W	4210	4107	103
6.	19-411W	4256	3942	314
7.	19-431W	4197	4087	110
8.	20-131W	4227	4061	166
9.	20-233W	4258	4138	120
10.	24-311W	4200	4054	146
11.	24-442W	4165	3914	251
12.	25-431W	3977	3840	137
13.	27-111W	4161	4056	105
14.	28-232W	4141	4027	114
15.	28-441W	4102	3906	196
16.	29-122W	4154	4037	117
17.	29-322W	4160	4057	103
18.	29-331W	4100	3929	171
19.	30-141W	4006	3905	101
20.	30-333W	4137	4026	111
21.	30-422W	4124	4023	101
22.	30-442W	4162	3993	169
23.	31-312W	4189	4046	143
24.	32-141W	4123	4008	115
25.	32-142W	4135	4001	134
26.	32-321W	4056	3777	279
27.	32-341W	4092	3971	121
28.	32-342W	4091	3970	121
29.	32-432W	4062	3941	121
30.	33-342W	4068	3938	130
31.	33-422W	4144	4035	109

North Hobbs Unit 19-411W
as of April, 1991



42,381 50 SHEETS 5 SQUARE
42,382 100 SHEETS 5 SQUARE
42,389 200 SHEETS 5 SQUARE
NATIONAL

North Hobbs Unit 24-442W
as of April, 1991



3, 181, 30 SHEETS 3 SQUARE
42, 381, 100 SHEETS 3 SQUARE
42, 389, 200 SHEETS 3 SQUARE
NATIONAL

North Hobbs Unit 32-321W
as of April, 1991

43-381 50 SHEETS 3 SQUARE
42-382 100 SHEETS 3 SQUARE
MATERIAL

