CLEAN OUT AND SQUEEZE COSTS
BOREN-GREER LEASE
NE/4 Section 20 and NW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico

Boren-Greer No. 1

Equipment Rental	14,069.85
Water	3,980.04
Contract Labor	443.27
Foam Unit	26,920.00
Salt Water Disposal	536.63
Squeeze Job	9,152.73
Connections	72.46
Service Unit	22,923.74
Total	$ 78,098.72

Boren-Greer No. 2

Equipment Rental	529.80
Contract Labor	157.63
Squeeze Job	10,949.79
Connections	43.05
Service Unit	2,852.38
Total	$14,532.64

1. Boren-Greer No. 1 was T&A from 1969-1985 during which time water cross-flow occurred from the upper Seven Rivers Jalmat porosity unit into the middle Seven Rivers productive Jalmat gas porosity units. All perforations have now been squeezed and cross-flow halted.

2. In the Boren-Greer No. 2 water cross-flow occurred from the upper Seven Rivers Jalmat porosity units into the middle Seven Rivers productive Jalmat gas porosity units from 1980 until January 29, 1985 at which time all perforations were squeezed.

BEFORE EXAMINER STOGNER
Oil Conservation Division
Hartman Exhibit No. 5
Case No. 8770

ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☒ OTHER-

7. Unit Agreement Name

2. Name of Operator
Doyle Hartman

8. Farm or Lease Name
Boren Greer Gas Com

3. Address of Operator
Post Office Box 10426 Midland, Texas 79702

9. Well No.
1

4. Location of Well
UNIT LETTER D , 660 FEET FROM THE North LINE AND 660 FEET FROM THE West LINE, SECTION 21 TOWNSHIP 22S RANGE 36E NMPM.

10. Field and Pool, or Wildcat
Jalmat (Gas)

15. Elevation (Show whether DF, RT, GR, etc.)
3537 G.L.

12. County
Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
OTHER ☐		OTHER Squeezed existing perforations ☒	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Moved in and rigged up service unit. Pulled out of hole with rods, pump, and tubing. Ran in hole with overshot and mill. Washed over and recovered tubing from 3228 to 3349. Ran in hole with Halliburton E-Z Dril cement retainer on 2-3/8 tubing and set at 2878. Mixed and pumped 150 sx Thixotropic cement followed by 700 sx of Class C neat cement. Maximum pressure and final pressure 2400 psi. Lay down 2-3/8 tubing.

Job complete 4-12-85.

Following perforations are now squeezed: 3065 to 3094, 3103 to 3117, 3133 to 3140, 3153 to 3203, 3217 to 3250, 3343 to 3349, 3391 to 3395, 3412 to 3438, and 3461 to 3470. All perforations are now squeezed off and well is temprarily abandon awaiting further evaluation.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Larry A. Nenney TITLE Engineer DATE October 25, 1985

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Expires 10/30/86

OCT 31 1985

NERGY AND MINERALS DEPARTMENT

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CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL ☐ GAS WELL ☒ OTHER-

7. Unit Agreement Name

Name of Operator
Doyle Hartman

8. Farm or Lease Name
Boren Greer Gas Com

Address of Operator
Post Office Box 10426 Midland, Texas 79702

9. Well No.
2

Location of Well
UNIT LETTER C , 890 FEET FROM THE North LINE AND 1780 FEET FROM THE West LINE, SECTION 21 TOWNSHIP 22S RANGE 36E NMPM.

10. Field and Pool, or Wildcat
Jalmat (Gas)

15. Elevation (Show whether DF, RT, GR, etc.)
3523 G.L.

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐			COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐	CHANGE PLANS	☐	CASING TEST AND CEMENT JOB	☐		
OTHER	☐			OTHER Squeezed existing perforations	☒		

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Moved in and rigged up service unit. Pulled out of hole with rods, pump, and tubing. Ran in hole with Halliburton E-Z Drill cement retainer on 2-3/8" tubing and set at 2000'. Mixed and pumped 150 sx Thixotropic cement followed by 900 sacks of Class C Neat cement. Maximum pressure and final pressure 2500 psi. Pulled out of cement retainer and reversed out 25 sacks of cement. Pull and lay down 2-3/8" tubing. Job complete: 1-29-85.

Following perforations are now squeezed: 3515, 3517, 3519, 3521, 3523, 3541, 3543, 3545, 3444, 3446, 3448, 3452, 3454, 3456, 3459, 3461, 3481, 3483, 3485, 3491, 3493. All perforations are now squeezed off and well is temporarily abandoned awaiting further evaluation.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Larry A. Kenyon TITLE Engineer DATE March 21, 1985

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Expires 4/8/86

APR 9 1985

May 9, 1968

PR-4 Boren & Greer Gas Unit #1
Install Compressor

TO: John Hastings

Jalmat Gas Reserves lost due to Sun's negligent operations.

RECOMMENDATION:

The Boren & Greer Gas Unit #1 is not capable of delivering gas to the gas purchaser's line. It is recommended that Sunray DX install a compressor on the well so that gas can continue to be sold.

DISCUSSION:

The Boren & Greer Gas Unit #1 was shut-in by the gas purchaser in December, 1967 because the well was producing too much water. Unsuccessful efforts have been made to locate and shut-off the water producing zone and to recomplete an offset well in the gas zone. Before being shut-in, this well produced a net income, to Sunray DX, of $41,850 in 1967.

The reserves on this well are between 880 MMCF and 1920 MMCF as stated in my letter of January 19, 1968. (See attached P/Z curve). The well will produce approximately 800 MCFPD and 80 BWPD. This was determined from the flow test conducted between January 5 and January 21, 1968. (See attachment). We do not believe that the well could be produced through a separator and overcome the 100 psi pressure on the gas company's line. Even if some gas could be sold in this manner, there would be the problem of the well loading up with water because of the high back pressure it would be carrying.

The installation of a compressor will allow the well to be floved with a minimum of back pressure, which should eliminate the problem of the well loading-up with water. Of even greater benefit will be the increased gas deliverability. This will be limited by the capacity of the compressor, which should be approximately 1 MMCFPD. The estimated cost of the project is $24,600 which will be paid out in six months.

R. S. Mitchell

RSM/nsh

Attachments

BEFORE EXAMINER STOGNER
Oil Conservation Division
Hanagan Exhibit No. 6
Case No. 3770

SDX-5-4

HK-4

INTER-OFFICE CORRESPONDENCE

Date January 19, 1968

Subject: PR-3 Boren & Greer Gas Unit

To: J. B. Hastings

The Boren & Greer Gas Unit #1 was recently shut-in by the gas purchaser because it was making too much water. Present efforts to isolate the water producing zone have been successful. Unfortunately the water is coming from the main gas zone. The well is producing approximately 850 MCFPD and 80 BWPD. Most of the wells in this pool are making a small amount of water but can be blown down to temporarily eliminate the problem.

An estimate of the remaining reserves gives a minimum of 880 MMCF and a maximum of 1920 MMCF of gas in place. The reason for the difference in the two numbers is the recent large departure from the established deadline of the P/Z vs. Cumulative Production curve. There is considerable doubt as to the accuracy of the last two points, since the pressure data is taken from the surface measurements and we feel this is being adversely affected by the water column.

Rather than attempt to stop the flow of water into the present well or attempt to handle the water on the surface, it is recommended that the present well be temporarily abandoned. This would be preceeded by recompleting Boren #1 in the Jalmat gas pay. The recompletion of Boren #1 in the gas zone has several advantages. Tests in the present gas well, indicated that the water could not be shut off, without plugging the main gas zone. It would be cheaper to recomplete than attempt to handle the water on the surface and the opportunity to recover a greater share of the gas would be available in a new well. Also the Boren #1 is slightly higher in the structure.

If the Boren & Greer Gas Unit #1 is produced with the water, it is unlikely that it will be able to continue making its allowable. If Boren #1 should produce water, we would have two wells on 160 acre spacing. Both of the wells should be able to make their allowable while producing water.

R. S. Mitchell

R. S. Mitchell

Approved: J. B. Hastings

J. B. Hastings

C. T. McClanahan

C. T. McClanahan

RSM/pcr

S-122-1 A

PR-4

THIS FORM TO BE SUBMITTED ALONG WITH [illegible] A PROMPTLY AFTER CLEANING OUT, DEEPENIN[illegible]ING BACK, SHOOTING, ACIDIZING, PULLING OR RUNNING CASING OR PACKERS, OR LOSING [illegible]AL IN ANY PRODUCING WELL. GIVE REASON [illegible] DONE; GIVE ALL DETAILS INCLUDING HOLE MEASUREMENT, FLUID LEVEL OR BOTTOM HOLE P[illegible]URE BEFORE AND AFTER DOING WORK, LOG IF DEEPENED.

SHOTS: GIVE TOP AND BOTTOM OF SHOTS, SIZE OF SHELLS, NUMBER OF QUARTS, TIME BOMBS, AMOUNT OF TAMP, NAME OF SHOOTING COMPANY, ETC.

ACIDIZING: SHOW TOP AND BOTTOM OF HOLE EXPOSED TO TREATMENT, NUMBER OF GALLONS, BLANKET IF USED, LOG OF PRESSURES AND TIME, NAME OF ACIDIZING COMPANY, ETC.

PLUG JOBS: GIVE TOP AND BOTTOM OF PLUG, KIND OF MATERIAL, ETC

FISH: GIVE AN ACCURATE DESCRIPTION OF ALL TOOLS OR FISH LEFT IN HOLE TOGETHER WITH DETAILS OF HOW MATERIAL WAS LOST. FULLY DESCRIBE ANY PART OF FISH THAT IS LATER RECOVERED.

MEASUREMENTS: ALL DEPTHS ARE FROM TOP OF KELLY BUSHING; WHEN DERRICK IS REMOVED GIVE NEW POINT OF REFERENCE AND DISTANCE FROM OLD POINT TO NEW POINT.

LEASE Boren-Greer Gas Unit WELL NO. 1

SEC. 20 T. 22S R. 36E COUNTY Lea

STATE New Mexico FIELD South Eunice

A.F.E. NO. 60-27200-91

SUPPLEMENTAL WELL RECORD

PR-4 To Plug back to Jalmat

USE TYPEWRITER

12-27-67: Kill well. Hole would not load. Install BOP. Pull 111 jts, 2-3/8 tbg, tally tbg out hole. Pick up scraper. Ran 114 jts, scrape csg. to 3591. Run RTTS pkr, set pkr @ 3043. Pressure on top. Check csg to 1500#, no leak. Ran to 3500'. Pressure plug below perfs 1500#, no leak. Move pkr to 3376, swab perfs 3391 to 3470. Shut in. Will swab test these perfs this A. M.

12-28-67: Ran swab to test perfs 3391 to 3470. Found fluid at 2176. Had 190# csg. press. 1st hr. swab 6 BLW, 2nd hr. 4 BLW, 3rd hr. 2 BLW. Approx 40' fluid in hole. Very slight flow gas. Load hole, reset pkr. Reset pkr @ 3376 to test perfs 3391 to 3470 further. Ran swab, found fluid 1876' from surface. Swab 30 bbls in 6 hrs. as follows. 1st hr. 8.4 bbls, 2nd hr. 8.7, 3rd hr. 3.5 bbls, 4th hr. 3.5 bbls LW, 5th hr. 3.5 bbls, 6th hr. 1.7 bbls. Approx 20' fluid in bottom of hole. Shut well in 6 P.M. Had 100# press. on csg at that time. 13 hr. SIP 430# csg, 580# tbg. Blew tbg. down, no appreciable vol. gas. Ran swab to seating-nipple, rec. no fluid.

3rd TR zone OK

12-29-67: Pull RTTS. Run Ret BP w/RTTS. Set BP 3376, set pkr 3147. Testing perfs 3153 to 3203, 3217 to 3250, 3343 to 3349. Start swab. Fluid level 2340 from top. Swab 85 bbls in 6 hrs. 1st hr. 10 bbls, 2nd hr. 17 bbls wtr., 3rd hr. 18 bbls wtr., 4th hr. 14 bbls wtr., 5th hr. 11 bbls wtr., 6th hr. 14 bbls wtr. Fluid level at SI time 3000 from top of hole. 14 hr. SIP 570# tbg., 0# on csg.

Lower Yates & 1st & 2nd TR making wtr

12-30-67: Swb 91 BLW in 9 hrs. 10# csg pressure. Fair flow gas when shut in for night. 14 hr. SIP. tbg 580#, csg 15#. Measured vol. stability gas flow from perf. 3391 to 3470'. 27 MCF PD. Measured from perf. 3153' to 3349' 350 MCFPD rate.

12-31-67: Shut in 14 hrs. tbg press. 570#, csg 15#. Open well to pit to flow down. Well started flowing w/45# tbg. Tbg came down to 30# after 3 hrs. Flow 45 BW in 8 hrs. Measured gas again 350 MCFPD. The next 14 hrs, flow 72 BW 30# tbg press. 20# csg. avg. rate 5.1 bbls wtr per hr.

3153-3349

12-30-67 Flow could not have been 27 MCFPD from 3391-3470 since this interval was beneath bridge plug @ 3376.

SUPERINTENDENT John Hastings

S-127-1 A

THIS FORM TO BE SUBMITTED ALONG WITH [illegible] 14 A PROMPTLY AFTER CLEANING OUT, DEEPENI[illegible]GING BACK, SHOOTING, ACIDIZING, PULLING OR RUNNING CASING OR PACKERS, OR LOSING [illegible]RIAL IN ANY PRODUCING WELL. GIVE REASON [illegible]K DONE; GIVE ALL DETAILS INCLUDING HOLE MEASUREMENT, FLUID LEVEL OR BOTTOM HOLE P[illegible]SSURE BEFORE AND AFTER DOING WORK, LOG IF DEEPENED.

SHOTS: GIVE TOP AND BOTTOM OF SHOTS, SIZE OF SHELLS, NUMBER OF QUARTS, TIME BOMBS, AMOUNT OF TAMP, NAME OF SHOOTING COMPANY, ETC.

ACIDIZING: SHOW TOP AND BOTTOM OF HOLE EXPOSED TO TREATMENT, NUMBER OF GALLONS, BLANKET IF USED, LOG OF PRESSURES AND TIME, NAME OF ACIDIZING COMPANY, ETC.

PLUG JOBS: GIVE TOP AND BOTTOM OF PLUG, KIND OF MATERIAL, ETC

FISH: GIVE AN ACCURATE DESCRIPTION OF ALL TOOLS OR FISH LEFT IN HOLE TOGETHER WITH DETAILS OF HOW MATERIAL WAS LOST. FULLY DESCRIBE ANY PART OF FISH THAT IS LATER RECOVERED.

MEASUREMENTS: ALL DEPTHS ARE FROM TOP OF KELLY BUSHING; WHEN DERRICK IS REMOVED GIVE NEW POINT OF REFERENCE AND DISTANCE FROM OLD POINT TO NEW POINT.

LEASE Boren-Greer Gas Unit WELL NO. 1

SEC. 20 T. 22S R. 36E COUNTY Lea

STATE New Mexico FIELD South Eunice

A.F.E. NO. 60-27200-91

SUPPLEMENTAL WELL RECORD

PR-4 Plug back to Jalmat

USE TYPEWRITER

T 12 3140
3063

1-1-68: Load tbg. w/20 bbls water. Move BP to 3147', Set RTTS 3020. to test perfs 3065 to 3140'. Made two runs tbg swb dry. Rec. 6 BW. Check pkr location 3020' OK. After 1 hr. check fluid level tbg dry. Shut well in. After 18 hrs. SIP 510 tbg pressure. 0# csg. press. Blew press. off tbg. Swbd tbg. dry. Apparently all water coming in 3153' to 3349'. Approx. middle of zone & gas coming from same place.

1-2-68: NR.

1-3-68: 18 hr. SI tbg. press. 510#, Csg. press. 0. Bled tbg to 0 in 5 min. Ran swab to check fluid. Tbg. was dry. Pull RTTS & Ret. BP. Ran 2-3/8 tbg to 3153 w/SN @ 3120 w/pin collar on end of tbg. Swab 74 BW in 5 hrs. 500' fluid in bottom of hole, 410# cp. Shut well in 14 hrs. Csg Press 390#, 570# tbg. Open well to pit. Did not flow. Ran swab, found fluid 1900' from surface. Swabbing.

1-4-68: NR.

1-5-68: Flowing well, all perfs open through separator. Making 395 MCFPD at 30# flowing press. & 144 BWPD. Will continue flowing hoping to partially exhaust water.

1-5-68: Flow 490 MCF gas, 126 BW. Tbg. Press. 55#, Csg. 300#.

1-6-68: Flow 620 MCF gas, 125 BW. Tbg. Press. 55#, Csg. 320#.

1-7-68: Flow 615 MCF gas, 125 BW. Tbg. Press. 55#, Csg. 320#.

1-8-68: Flow 715 MCF gas, 113 BW. Tbg. Press. 60#, Csg. 300#.

1-9-68: Flowing 910 MCF, 96 BW. Tbg. Press. 70, Csg. 300.

1-10-68: Flow 910 MCF, 125 BW. FTP 70#, FCP 300#.

1-11-68: Flow 980 MCF, 87 BW. Tbg 110#, Csg. 300#.

1-12-68: Flow 150 MCF, 51 BW, Tbg. 230#, Csg. 350#.

1-13-68: F 680 MCF, 76 BW. Tbg 150#, csg. 300#.

1-14-68: F 760 MCF, 50 BW. Tbg 160#, csg. 300#.

1-15-68: F 780 MCF, 74 BW. Tbg 150#, csg. 300#.

1-16-68: F 820 MCF gas, 73 BW. Tbg. 150, csg. 300.

SUPERINTENDENT John Hastings

5-127-1 A

THIS FORM TO BE SUBMITTED ALONG WITH [illegible] 4 A PROMPTLY AFTER CLEANING OUT, DEEPEN[illegible] P[illegible]ING BACK, SHOOTING, ACIDIZING, PULLING OR RUNNING CASING OR PACKERS, OR LOSI[illegible]RIAL IN ANY PRODUCING WELL. GIVE REASON [illegible] DONE, GIVE ALL DETAILS INCLUDING HOLE MEASUREMENT, FLUID LEVEL OR BOTTOM HOLE PR[illegible]URE BEFORE AND AFTER DOING WORK, LOG IF DEEPENED.

SHOTS: GIVE TOP AND BOTTOM OF SHOTS, SIZE OF SHELLS, NUMBER OF QUARTS, TIME BOMBS, AMOUNT OF TAMP, NAME OF SHOOTING COMPANY, ETC.
ACIDIZING: SHOW TOP AND BOTTOM OF HOLE EXPOSED TO TREATMENT, NUMBER OF GALLONS, BLANKET IF USED, LOG OF PRESSURES AND TIME, NAME OF ACIDIZING COMPANY, ETC.
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MEASUREMENTS: ALL DEPTHS ARE FROM TOP OF KELLY BUSHING; WHEN DERRICK IS REMOVED GIVE NEW POINT OF REFERENCE AND DISTANCE FROM OLD POINT TO NEW POINT.

LEASE Boren-Greer Gas Unit WELL NO. 1
SEC. 20 T. 22S R. 36E COUNTY Lea
STATE New Mexico FIELD South Eunice
A.F.E. NO. 60-27200-91

SUPPLEMENTAL WELL RECORD

PR-4 To Plug back to Jalmat

USE TYPEWRITER

1-17-68: F 915 MCF & 87 BW. Tbg 150#, csg. 300#.

1-18-68: F 980 MCF & 56.78 BW in 24 hrs. Tbg. 150#, Csg. 300#, Sep. 23#.

1-19-68: F 980 MCF gas, 74 BW. Tbg. 150#, csg. 300#. Will stop testing. Cannot control wtr. production. Will have to explore other means to deplete gas reserves. COMPLETE.

well produced at approx
850 MCFPD
80 BWPD
} all perfs

SUPERINTENDENT John Hastings