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Hobbs, NM 88241-1980  
District II - (505) 748-1283  
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Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Road  
Aztec, NM 87410  
District IV

New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division

2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-1  
Originated 11/1

Submit Original  
Plus 2 Copies  
to appropriate  
District Office

H-0508

APPLICATION FOR  
QUALIFICATION OF WELL WORKOVER PROJECT  
AND CERTIFICATION OF APPROVAL

THREE COPIES OF THIS APPLICATION AND ALL ATTACHMENTS MUST BE FILED WITH THE APPROPRIATE DISTRICT OFFICE OF THE OIL CONSERVATION DIVISION.

- I. Operator: Enron Oil & Gas Company OGRID #: 7377  
Address: P.O. Box 2267, Midland, Texas, 79702  
Contact Party: Lee Roark Phone: 915/686-3608
- II. Name of Well: Hallwood 12 Federal No. 8 API #: 3002532740  
Location of Well: Unit Letter B, 660 Feet from the North line and 1980 feet from the East line,  
Section 12, Township 25S, Range 33E, NMPM, Lea County
- III. Date Workover Procedures Commenced: 2/20/98  
Date Workover Procedures were Completed: 3/01/98
- IV. Attach a description of the Workover Procedures undertaken to increase the production from the Well.
- V. Attach an estimate of the production rate of the Well (a production decline curve or other acceptable method, and table showing monthly oil and/or gas Project Production) based on at least twelve (12) months of established production which shows the future rate of production based on well performance prior to performing Workover.
- VI. Pool(s) on which Production Projection is based:  
Red Hills (Bone Spring)
- VII. AFFIDAVIT:  
State of Texas )  
County of Midland ) ss.

Lee Roark, being first duly sworn, upon oath states:

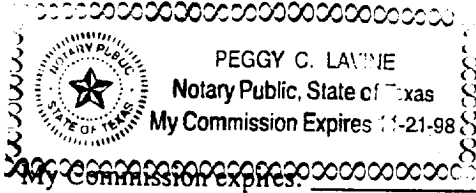
1. I am the Operator or authorized representative of the Operator of the above referenced Well.
2. I have made, or caused to be made, a diligent search of the production records which are reasonably available and contain information relevant to the production history of this Well.
3. To the best of my knowledge, the data used to prepare the Production Projection for this Well is complete and accurate and this projection was prepared using sound petroleum engineering principles.

(Name)

Engineer Tech

(Title)

SUBSCRIBED AND SWORN TO before me this 9th day of October, 1998.



Peggy C. Lavine  
Notary Public

FOR OIL CONSERVATION DIVISION USE ONLY:

VIII. CERTIFICATION OF APPROVAL:

This Application for Qualification of Well Workover Project is hereby approved and the above referenced Well is designated as a Well Workover Project pursuant to the "Natural Gas and Crude Oil Production Incentive Act" (Laws 1995, Chapter 15, Sections 1 through 8). The Oil Conservation Division hereby verifies the Production Projection for the Well Workover Project attached to this application. By copy of this Application and Certification of Approval, the Division notifies the Secretary of the Taxation and Revenue Department of this Approval and certifies that this Well Workover Project has been completed as of 3-1-, 1998.

[Signature]  
District Supervisor, District 1  
Oil Conservation Division

Date: 10/15/98

IX. DATE OF NOTIFICATION TO THE SECRETARY OF THE TAXATION AND REVENUE DEPARTMENT.

DATE: \_\_\_\_\_

HALLWOOD 12 FEDERAL NO. 8  
660' FNL & 1,980' FEL  
Sec 12, T25S, R33E  
LEA Co., NM  
Spud Date: 11/16/94  
Nearest Lease Line: 660'

ENRON L & GAS COMPANY  
DEV W/O: 12,600' BONE SPRING  
RED HILLS Field  
EOG%: 71.8125% WI 58.5272% NRI  
AFE No.: 10-1513  
DHC: 0; CWC: 186,000

02/17/98      Install surface and subsurface pumping equipment.  
  
Fulfer electric set 4 deadman anchors. WTG MI and spread caliche chat, set concrete base and set American 456 pumping unit with BOHP. DWC \$44,074. CWC \$44,074.

02/20/98      Fulfer electric finished electric line construction.      DWC \$17,499. CWC \$61,573.

02/24/98      6 hrs MIRU Yale E. Key. Offload and strap 2-7/8" 6.50# N80 tbg. Set and load tanks. Run flowline. DWC \$4,100. CWC \$65,673.

02/25/98      4 hrs FCP 140 psi on FO chk. RU and hot oil 5-1/2" csg with 150 bbls lease oil @ 225 deg. Csg loaded with 114 bbls pumped. Fin pumping 36 bbls hot oil with 2550 psi by pumping intermittently. 1-3/4 hrs RU kill truck. Pump PW down csg. Pressure builds to 3500 psi. Shut down and leaks off to 3100 psi in 2 min then resume pumping. Pumped total of 47 bbls PW. RD kill truck. RU flowline. Oil @ surface. 16-1/4 hrs flow to battery on FO chk. DWC \$5,020. CWC \$70,693.

02/26/98      1-1/2 hrs FCP TSTM. Pump 12 bbls PW and caught pressure. Flowed back 5 bbls. Pumped 5 bbls PW and pressured up to 1000 psi. SI and bled off to 400 psi. Flowed back 1 bbls. ND Tree. Pull solid hanger. NU BOP's. RU Floor. 3 hrs PU and RIH with 4-3/4" bit, scraper and 2-7/8" tbg to 800'. Tbg began flowing. Displace hole with PW. Returns to battery. RIH to 5550' thru stripper. Overflow to battery. 2-1/2 hrs pump 75 bbls hot oil @ 250 deg down annulus. Displace hole with 116 bbls PW. Overdisplace with 54 bbls PW to hot oil flowline from wellhead to battery. 4 hrs PU and RIH with tbg. Tagged fill @ 12,224'. Bone Springs perfs 12,250'-12,320'. POOH to 12,167'. SWI. SDON. DWC \$3,740. CWC \$74,433.

02/27/98      5-1/2 hrs tbg and csg static. RIH and tag fill @ 12,224'. RU and est returns. Wash from 12,224' to 12,239'. Circ out heavy oil and gas. Wash from 12,239' to 12,403'. Had sporadic hard fill. Circ hole clean. Lost 40 bbls PW to form. TLTR 299 bbls. (hole cap + 40 bbls). 3 hrs POOH, LD 7 jts. TOOHL with 66 stands to 7,990'. Shut down for rig repair. SWI. DWC \$52,953. CWC \$127,386.

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ENRON OIL & GAS COMPANY  
DEV W/O: 12,600' BONE SPRING  
RED HILLS Field  
EOG#: 71.8125% WI 58.5272% NRI  
AFE No.: 10-1513  
DHC: 0; CWC: 186,000

02/28/98 SITP and SICP 0 psig/3-1/2 hrs. FOOH with 2-7/8" tbg. LD bit and scraper. 5 hrs RIH with purge valve, MA, Perf sub, 2-3/8" SN, 7 jts 2-7/8" tbg, TAC & 376 jts 2-7/8" tbg. TAC @ 11,928.06'. ND BOP's, NU tbg slip type flange. Set TAC with 15000# tension. Install wellhead. Bone Springs perfs 12,250-12,320'. 2 hrs PU and RIH with GA, pump, 1" x 2' pony rod, 26K shear tool, 10-1" steel rods, 160-3/4" steel rods, SWI. SDON. DWC \$3,450. CWC \$130,836.

03/01/98 SITP and CSG 0 psig. 8 hrs Finish running total of 240-3/4" steel rods, 120-7/8" steel rods, 112-1" steel rods. Seated pump. PU and space out with 1-8' x 1" and 1-6' x 1" steel pony rods. Install PR and liner. HUNG WELL ON UNIT. Load tbg with 9 bbls PW. Test to 500 psi. TLTR 308 bbls. Attempt to start unit. Blew breaker on pole. WO Fulfer electric and repalce breakers. Start unit. Continued to trip breakers on pole. WTG will chk motor, brake + gear box 3/2/98. SWI.

Tbg Detail:

|  |          |          |
|--|----------|----------|
| Purge valve                                | .75      |          |
| 1 MA, 2-7/8", 6.50#, N80, EUE              | 31.69    |          |
| 1 perf sub, 2-7/8", EUE                    | 4.10     | 12153.76 |
| 1 SN, 2-3/8                                | 1.10     | 12152.66 |
| 7 jt tbg, 2-7/8", 6.5#, N80, EUE           | 221.80   | 11930.86 |
| 1 TAC, 2-7/8" x 5-1/2" EUE                 | 2.80     | 11928.06 |
| 376 tbg, 2-7/8", 6.5#, N80, EUE            | 11913.76 |          |
| Total ftg picked up                        | 12176.00 |          |
| Plus KB to GL                              | 14.30    |          |
| Setting depth @ RKB                        | 12190.30 |          |
| Bone Springs 12,250-12,320'                |          |          |
| Washed to 12,403' (2/26/98)                |          |          |
| Tree, gate valves, hanger to Cooper 3/2/98 |          |          |

Rod Detail:

1 1" x 12' Gas anchor  
1 2" x 1-1/4" x 20' x 22' x 26' pump  
1 1" x 1' steel pony rod  
1 26K shear tool  
10 1" steel rods  
240-3/4" steel rods  
120-7/8" steel rods  
112-1" steel rods  
1-1" x 8' steel pony rod  
1 1" x 6' steel pony rod  
1-1/2" x 26' PR  
1-1/2" x 1-3/4" x 14' liner

DWC \$31,834. CWC \$162,670.

03/02/98 SDOS. Will RDMO this a.m.. CWC \$162,670.

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ENRON OIL & GAS COMPANY  
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AFE No.: 10-1513  
DHC: 0; CWC: 186,000

03/03/98 WO WTG pump service. Free up brake and start uit. PU wts and chain down bull wheel. RD Yale E. Key. Remove brake. Plumb in tbg with hose. Well on pump @ 12:30 p.m. 3/2/98. TLTR 308 bbls FW. Will plumb in permanent ASAP. DWC \$1,660. CWC \$164,330.

03/04/98 21 hr pump 18 MCF, 64 BO, 8-1/2 x 100" SPM, TP 200, CP 50, 89 BLW, 219 BLWTR. DWC \$309. CWC \$164,639.

03/05/98 24 hrs pump, 114 MCF, 114 BO, 8-1/2 x 100" SPM, 150 TP, 150 CP, 79 BLW, 168 cum BLW, 140 BLWTR. CWC \$164,639.

03/06/98 24 hrs pump, 153 MCF, 106 BO, 8-1/2 x 100" SPM, 130 TP, 75 CP, 74 BLW, 242 cum BLW, 66 BLWTR. CWC \$164,639.

03/07/98 24 hrs pump, 162 MCF, 124 BO, 8-1/2 x 100" SPM, 130 TP, 50 CP, 67 BW, 62 LP. CWC \$164,639.

03/08/98 24 hrs pump, 171 MCF, 131 BO, 8-1/2 x 100" SPM, 135 TP, 55 CP, 23 BW, -62 BLWTR, 56 LP. CWC \$164,639.

03/09/98 24 hrs pump, 168 MCF, 110 BO 8-1/2 x 100" SPM, 125 TP, 55 CP, 19 BW, 389 cum BW. CWC \$164,639.

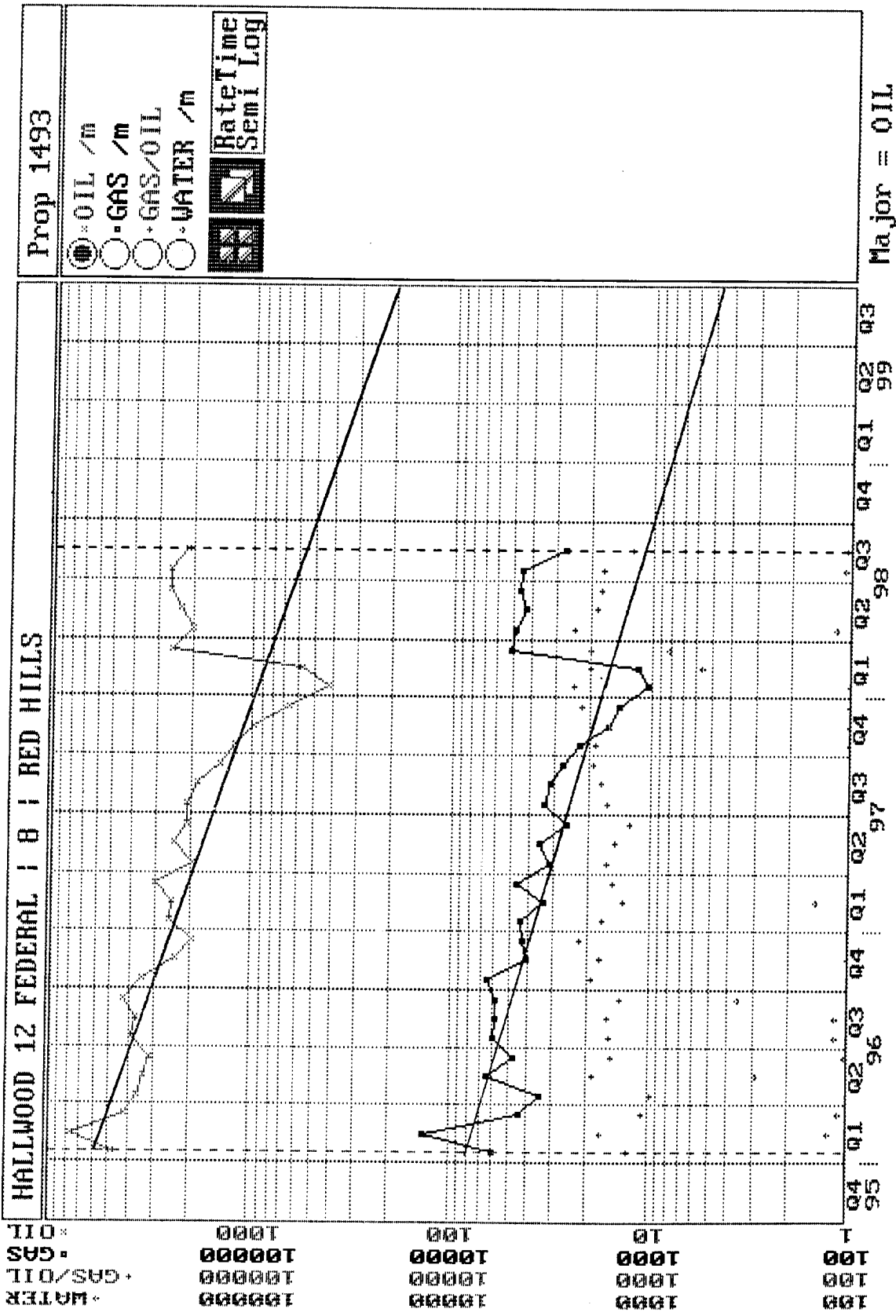
03/10/98 24 hrs pump, 154 MCF, 94 BO, 8-1/2 x 100", 120 TP, 65 CP, 14 BW, 403 cum BW. CWC \$164,639.

03/11/98 24 hrs pump, 127 MCF, 100 BO, 8-1/2 x 100" SPM, 110 TP, 60 CP, 9 BW, 412 cum BW. CWC \$164,639.

03/12/98 24 hrs pump, 173 MCF, 100 BO, 8-1/2 x 100" SPM, 130 TP, 65 CP, 10 BW. CWC \$164,639.

03/13/98 24 hrs pump, 173 MCF, 106 BO, 8-1/2 x 100" SPM, 130 TP, 65 CP, 8 BW. Drop from report. CWC \$164,639.

04/16/98 Production before PU: 15 BOPD, 40 MCFD, FCP 50  
Production after PU: 120 BOPD, 180 MCFD, 14 BWPD  
Estimated Well cost \$176,000.  
AFE cost: \$186,000.  
FINAL REPORT



Hallwood 12 Federal No. 8

Future Production Before Workover

IP Rate at WO on 12/97

Oil 1000 BOPM

Gas 1600 mcf/mo

Decline(exp)

63 %/yr

55 %/yr

| Date     | Oil<br>BOPM | Gas<br>MCF/Mo |
|----------|-------------|---------------|
| 3/15/98  | 1000.0      | 1600.0        |
| 4/15/98  | 948.9       | 1528.3        |
| 5/15/98  | 900.3       | 1459.9        |
| 6/15/98  | 854.3       | 1394.5        |
| 7/15/98  | 810.6       | 1332.0        |
| 8/15/98  | 769.1       | 1272.3        |
| 9/15/98  | 729.8       | 1215.3        |
| 10/15/98 | 692.5       | 1160.9        |
| 11/15/98 | 657.0       | 1108.9        |
| 12/15/98 | 623.4       | 1059.2        |
| 1/15/99  | 591.6       | 1011.7        |
| 2/15/99  | 561.3       | 966.4         |
| 3/15/99  | 532.6       | 923.1         |
| 4/15/99  | 505.4       | 881.8         |
| 5/15/99  | 479.5       | 842.3         |
| 6/15/99  | 455.0       | 804.5         |
| 7/15/99  | 431.7       | 768.5         |
| 8/15/99  | 409.6       | 734.1         |
| 9/15/99  | 388.7       | 701.2         |
| 10/15/99 | 368.8       | 669.8         |
| 11/15/99 | 349.9       | 639.8         |
| 12/15/99 | 332.0       | 611.1         |
| 1/15/00  | 315.1       | 583.7         |
| 2/15/00  | 298.9       | 557.6         |
| 3/15/00  | 283.7       | 532.6         |
| 4/15/00  | 269.1       | 508.7         |
| 5/15/00  | 255.4       | 485.9         |
| 6/15/00  | 242.3       | 464.2         |
| 7/15/00  | 229.9       | 443.4         |
| 8/15/00  | 218.2       | 0.0           |
| 9/15/00  | 207.0       | 0.0           |
| 10/15/00 | 196.4       | 0.0           |
| 11/15/00 | 186.4       | 0.0           |
| 12/15/00 | 176.8       | 0.0           |
| 1/15/01  | 167.8       | 0.0           |
| 2/15/01  | 159.2       | 0.0           |
| 3/15/01  | 151.1       | 0.0           |
| 4/15/01  | 143.3       | 0.0           |
| 5/15/01  | 136.0       | 0.0           |
| 6/15/01  | 129.1       | 0.0           |
| 7/15/01  | 122.5       | 0.0           |
| 8/15/01  | 116.2       | 0.0           |
| 9/15/01  | 110.3       | 0.0           |

| Date     | Oil<br>BOPM | Gas<br>MCF/Mo |
|----------|-------------|---------------|
| 10/15/01 | 104.6       | 0.0           |
| 11/15/01 | 99.3        | 0.0           |
| 12/15/01 | 94.2        | 0.0           |
| 1/15/02  | 89.4        | 0.0           |
| 2/15/02  | 84.8        | 0.0           |
| 3/15/02  | 80.5        | 0.0           |
| 4/15/02  | 76.3        | 0.0           |
| 5/15/02  | 72.4        | 0.0           |
| 6/15/02  | 68.7        | 0.0           |
| 7/15/02  | 65.2        | 0.0           |
| 8/15/02  | 0.0         | 0.0           |