Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
1625 N. French Dr
Hobbs, NM 88240

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: LC 031621A

6. If Indian, Allottee or Tribe Name:

7. If Unit or CA, Agreement Designation:

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.: H.M. Britt No. 4

2. Name of Operator: Doyle Hartman

9. API Well No.: 30-025-05992

3. Address and Telephone No.: 500 N. Main St., Midland, Texas 79701 (915) 684-4011

10. Field and Pool, or Exploratory Area: Eumont (Y-7R-Qn) Gas

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 660' FNL & 1980' FEL (B) Section 7, T-20-S, R-37-E, NMPM

11. County or Parish, State: Lea Co., NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☒ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☒ Casing ~~Repair~~ & cement repair	☒ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other RETURN WELL TO BENEFICIAL USE	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinet details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markders and zones pertinent to this work.)*

In compliance with the BLM's notice of 7/24/00, the following well operations, as described on pages 1 of 14, 2 of 14, 3 of 14, 4 of 14, 5 of 14, 6 of 14, 7 of 14, 8 of 14, 9 of 14, 10 of 14, 11 of 14, 12 of 14, 13 of 14 and 14 of 14 (attached hereto), have been performed, to return the long shutin-and-abandoned H. M. Britt No. 4 well to beneficial use.

ACCEPTED FOR RECORD
OCT 3 2001
ALEXIS C. SWOBODA
PETROLEUM ENGINEER

14. I hereby certify that the foregoing is true and correct

Signed Steve Hartman Title Steve Hartman, Engineer Date 09/27/01

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

DETAILS OF COMPLETED OPERATIONS

Moved in and rigged up well service unit.

Pulled and laid down (39) 7/8" x 25' rods, (105) 3/4" x 25' rods, and 2 1/2" x 2" x 16' RWBC pump.

Released anchor-catcher. Pulled old 2 7/8" O.D. tubing string.

116 jts 2 7/8" O.D., 6.5 lb/ft. EUE tubing	3614.56'
(1) 7" x 2 7/8" x 2.35' anchor-catcher	2.35'
1 jt 2 7/8" O.D., 6.5 lb/ft, EUE tubing	31.16'
(1) 2 7/8" EUE seating nipple	1.10'
(1) 2 7/8" O.D. x 3' EUE perforated nipple	3.00'
1 jt 2 7/8" O.D., 6.5 lb/ft, EUE tubing with bull plug on bottom	31.66'
Total	3683.83'

Dug dirt out of bottom of concrete cellar. Replaced connections corresponding to 13 3/8" x 9 5/8" and 9 5/8" x 7" casingheads. Installed 2" risers back to surface.

Ran Baker 7" Model "C" RBP, 7" Model "C" packer, 112 joints of new 2 3/8" O.D., 4.7 lb/ft, J-55, EUE tubing, and 6' of 113th joint. Set 7" Model "C" RBP, at 3600', with 7" Model "C" packer at 3594'. Loaded tubing with 8 bbls of water (FL @ 2067'). Pressure tested 7" Model "C" RBP, to 2000 psi.

Released 7" Model "C" packer. Loaded 7" O.D. casing, with 2% KCL water.

Pressure tested 7" O.D. casing, from 0' to 3600', to 2500 psi. Pressure held okay.

While holding 2500 psi, on 7" O.D. casing, incrementally increased pressure on 9 5/8" O.D.

intermediate casing. At a pressure of 1400 psi, commenced pumping into formation. Established a pump rate, down 9 5/8" O.D. casing, of 4 BPM, at 750 psi. ISIP = 650 psi. Shut in pressure, on 9 5/8" O.D. casing, held constant, at 650 psi. Observed no returns back up 13 3/8" O.D. casing.

Bled pressure off of 9 5/8" O.D. casing. Bled down pressure, on 7" O.D. casing, to 900 psi. Shut down for remainder of weekend. 39-hr SICP = 650 psi.

Pulled 7" Model "C" packer. Left 7" Model "C" RBP, at 3600'.

Rigged up Schlumberger. Logged well, from 2400' to 3600', with DS-CNL-GR-CCL (dated 6-11-01) and VDCBL-GR-CCL log (dated 6-11-01). Found top of cement, on outside of 7" O.D. casing, at 2465'.

Ran 2 3/8" O.D. tubing equipped with retrieving head. Pulled 7" Model "C" RBP. Finished logging well, from 3600' to 3715'.

Rigged up Capitan Corporation. Perforated 7" O.D. casing, from 3488' to 3627', with (18) 0.44" x 23" squeeze holes, with one shot each at:

3488'	3536'	3571'	3614'
3501'	3543'	3575'	3619'
3509'	3552'	3581'	3627'
3516'	3558'	3591'	
3528'	3563'	3602'	

Ran 2 3/8" O.D. tubing, 7" Model "C" RBP, and 7" Model "C" packer. Set 7" Model "C" RBP, at 3653.50'. Raised 7" Model "C" packer, to 3637'. Spotted acid across and above perfs, by pumping 750 gallons of 15% NEFE acid, followed by 12 bbls of 2% KCL water.

Raised and set packer, at 3100'. Allowed acid to soak, for 1 hour. Broke down perfs, at 1200 psi, at 1 BPM. Acidize perfs, from 3488' to 3627', with an additional 750 gallons (total of 1500 gal) of 15% NEFE acid, at an average treating rate of 3.5 BPM and average treating pressure of 1500 psi. TP_{mx} = 1525 psi.

ISIP = 800 psi
1-min SIP = 600 psi
2-min SIP = 525 psi
4-min SIP = 225 psi
6-min SIP = 0 psi

Established an injection rate of 4 BPM, at 1550 psi.

Lowered packer. Latched onto RBP, at 3653'. Pulled 2 3/8" O.D. tubing, 7" Model "C" packer, and 7" Model "C" RBP.

Rigged up Capitan Corporation. Set Halliburton 7" EZ-Drill retainer, at 3378'.

Ran 2 3/8" O.D. tubing equipped with cementing stinger. Loaded 7" O.D. casing, with 58 bbls of water. Stung into retainer. Placed stinger into test position. Pressure tested 2 3/8" O.D. tubing, to 4500 psi. Pressured 7" x 2 3/8" annulus, to 500 psi.

Established an injection rate, of 5.9 BPM, at 1148 psi. Cemented squeeze perfs, from 3488' to 3686', with 1200 sx of API Class "C" neat cement, plus 300 sx of API Class "C" cement containing 2% $CaCl_2$ (344 bbls of total slurry). Final squeeze pressure was 1760 psi, at 2.1 BPM.

Pulled out of retainer. Backwashed excess cement.

Pulled 2 3/8" O.D. tubing and cementing stinger.

Loaded 7" O.D. casing. Pressured 7" O.D. casing, to 1000 psi.

Hooked up Halliburton. Cemented down 9 5/8" x 7" casing annulus, with 148 bbls of cement slurry consisting of 125 sx of API Class "C" cement containing 1.4% $CaCl_2$, 1.5 lb/sx Gilsonite, and 0.13 lb/sx Flocele, followed by 300 sx of API Class "C" cement contained 3% $CaCl_2$, 3 lb/sx Gilsonite, and 0.13 lb/sx Flocele, followed by 200 sx of API Class "C" neat cement. Displaced cement, at an average pump rate of 5.3 BPM, at 620 psi. ISIP = 424 psi. Observed no returns out 13 3/8" O.D. casing.

Released pressure on 7" O.D. casing. Rigged down Halliburton.

Ran 100 joints of 2 3/8" O.D. tubing and 186.07' bottom-hole drilling assembly, consisting of 6 1/4"

bit and (6) 4 3/4" O.D. drill collars. Tagged retainer, at 3378'.

Hooked up reverse drilling equipment. Drilled cement (including 7" retainer), from 3378' to 3550'.

Tied reverse-drilling pump to 13 3/8" x 9 5/8" annulus. Could not pump down 13 3/8" x 9 5/8" annulus, at a pump-in pressure of 2000 psi.

Circulated hole clean. Pulled bottom-hole drilling assembly.

Rigged up welder. Welded new 7" O.D., 23 lb/ft tieback nipple, to flange-to-thread changeover, on top of 9 5/8" casinghead. Wrapped all exposed piping, with corrosion-resistant tape. Filled concrete cellar with redi-mix concrete.

Rigged up Capitan Corporation wireline truck. Perforated 7" O.D. casing, from 3289' to 3475', with (21) 0.44" x 23" squeeze holes, with one shot each, at:

3289'	3356'	3394'	3437'	3475'
3301'	3365'	3408'	3441'	
3305'	3382'	3411'	3444'	
3321'	3384'	3429'	3447'	
3349'	3391'	3431'	3461'	

Ran 2 3/8" O.D. tubing and Baker 7" Model "C" packer, to 3485'. Spotted acid across and above squeeze perfs, by pumping 500 gallons of 15% NEFE acid, followed by 12.3 bbls of 2% KCL water.

Raised and set packer, at 3110'. Allowed acid to soak, for 30 minutes. Acidized squeeze perfs, from 3298' to 3475' (21 holes), with an additional 300 gallons (total of 800 gal) of 15% NEFE acid, at an average treating rate of 3.2 BPM, and average treating pressure of 1025 psi. Flushed acid with 19.5 bbls of 2% KCL water.

ISIP = 350 psi
1-min SIP = 100 psi
2-min SIP = 0 psi

Rigged up Halliburton. Pressured 7" x 2 3/8" casing-tubing annulus, to 1000 psi. Cemented squeeze perfs, from 3298' to 3475', with 700 sx of API Class "C" neat cement and 300 sx of API Class "C" cement, containing 2% $CaCl_2$, to a maximum squeeze pressure of 4016 psi.

Released squeeze pressure. Observed no backflow. Bled off casing pressure. Released packer. Raised and set packer, at 2971'. Pressured tubing, to 2000 psi. WOC for 18 hrs.

Pulled 2 3/8" O.D. tubing and 7" Model "C" packer.

Ran 186.07' bottom-hole drilling assembly equipped with new 6 1/4" bit and (6) 4 3/4" O.D. drill collars. Tagged top of cement, at 3146'. Drilled cement, from 3146' to 3691'.

Pulled 186.07' bottom-hole drilling assembly. Installed new 6 1/4" bit. Ran 186.07' bottom-hole drilling assembly, to 3715'. Drilled cement (including two retainers), from 3715' to 3814'. Pulled bottom-hole drilling assembly.

Rigged up Schlumberger. Logged hole, for second time, with DS-CNL-GR-CCL log (dated 6-20-01) and VDCBL-GR-CCL log (dated 6-20-01).

Rigged up Capitan Corporation wireline truck. Ran casing collar locator. Found bottom of 7" O.D. casing, at 3808'.

Ran and set Halliburton 7" EZ-Drill retainer, at 3760'.

Ran 2 3/8" O.D. tubing equipped with cementing stinger. Stung into retainer, but could not pump into previously-squeezed open-hole interval, at a surface pressure of 3000 psi. Pulled 2 3/8" O.D. tubing and cementing stinger.

Ran 186.07' bottom-hole drilling assembly, consisting of 6 1/4" bit and (6) 4 3/4" O.D. drill collars. Drilled on retainer, for 2 hrs, before slips relaxed.

Pushed remainder of retainer to 3814'. Circulated hole clean. Pulled 2 3/8" O.D. tubing and bottom-hole drilling assembly.

Rigged up casing crew. Ran 906.88' 5" O.D. liner, configured as follows:

(1) 5 1/2" x 7" TIW Type C setting collar	3.76'
(1) 5 1/2" x 7" TIW Type EJ-IB liner hanger	4.26'
(1) 5 1/2" x 5" Box x Pin crossover	1.72'
29 jts of 5" O.D., 15 lb/ft, J-55 casing equipped with (28) 7" x 5" slim-hole centralizers	877.80'
(1) TIW Type C-LF L-80 landing-float collar	1.14'
(1) 5" O.D., 15 lb/ft, J-55 pup joint	15.60'
(1) TIW Type-226 double-valve 5" O.D., 15 lb/ft, L-80 float shoe	2.60'
Total	906.88'

Established circulation, by pumping 60 bbls of water down tubing and around bottom of liner. Set top of liner at 2906', with bottom of liner at 3813', and landing-float collar at 3794'.

Cemented liner, with 75 sx of a 50-50 blend of API Class "C" cement and Pozmix "A", followed by 25 sx of API Class "C" neat cement, followed by 50 sx of API Class "C" cement containing 3 lb/sx Gilsonite and 0.25 lb/sx Flocele. Displaced cement, at 5 BPM, at 2000 psi. Plug down at 3:35 P.M., CDT, 6-22-01.

Released from liner. Pulled tubing and liner setting tool. Pressured 7" O.D. casing, to 750 psi, at 4:07 P.M., CDT. Released pressure, at 6:55 P.M., CDT.

Ran 186.07' large-bore bottom-hole drilling assembly, consisting of 6 1/4" bit and (6) 4 3/4" O.D. drill collars. Drilled relatively soft cement (from 7:50 P.M., CDT to 10:15 P.M., CDT, 6-22-01), to a depth of 2839'. Shut down for remainder of night.

Drilled hard cement, from 2839' to 2906' (top of liner), in 1.8 hours (37.2 ft/hr). Circulated hole clean. Pulled and laid down 186.07' large-bore bottom-hole assembly.

Ran 179.36' small-bore bottom-hole assembly, consisting of 4 1/4" bit, Baker 5" casing scraper, and (6) 3 1/8" O.D. drill collars. Drilled cement, from 2906' to 3793' (top of landing-float collar).

Circulated hole clean. Displaced hole with clean 2% KCL water.

Rigged up Schlumberger. Ran followup VDCBL-GR-CCL log (dated 6-25-01). Bond log indicated possible questionable bonding between 7" O.D. casing and 5" O.D. liner.

Rigged up Cardinal Surveys. Ran base temperature log and base GR log.

Rigged up Capitan Corporation wireline truck. Perforated 5" O.D. liner, from 3555' to 3769', with (17) 0.38" x 19" squeeze holes, with one shot each, at:

3555'	3611'	3652'	3766'
3558'	3614'	3658'	3769'
3566'	3630'	3666'	
3572'	3643'	3728'	
3578'	3642'	3757'	

Ran Baker 5" Model "C" RBP and 5" Model "C" packer. Packer would not go below 3048'. Pulled 5" Model "C" packer and 5" Model "C" RBP.

Ran redressed 5" Model "C" packer, and 118 joints of 2 3/8" O.D. tubing, to 3771'. Spotted 400 gallons of 15% MCA acid across and above squeeze perfs.

Raised and set 5" Model "C" packer, at 3234'. Allowed acid to soak for 30 minutes. Acidized squeeze perfs, from 3555' to 3769', with an additional 2800 gallons (total of 3200 gallons) of 15% MCA acid and 24 ball sealers, at an average treating rate of 4.6 BPM. TR_{mx} = 5.6 BPM. TR_{mn} = 3.6 BPM.

TP_{mx} = 3100 psi (at ballout). TP_{mn} = 1916 psi.

ISIP = 1040 psi
1-min SIP = 720 psi
2-min SIP = 498 psi
3-min SIP = 220 psi
4-min SIP = 20 psi
5-min SIP = 0 psi

While acidizing, tagged acid with short-half-life tracer material.

Rigged up Cardinal Surveys. Logged well with GR-Temp log. Found good treatment, of all squeeze perfs, with some acid also going below squeeze interval.

Rigged down Cardinal. Pulled 2 3/8" O.D. tubing and 5" Model "C" packer.

Rigged up Capitan Corporation. Set 5" EZ-Drill retainer, at 3543'. Capitan found fluid level at 1950'.

Ran 111 joints of 2 3/8" O.D. tubing and cementing stinger. Stung into retainer, at 3543'. After stinging into retainer, tubing went on a vacuum.

Pulled out of retainer. Loaded wellbore, with 50 bbls of 2 KCL water. Pressured tested 7" O.D. casing and 5" O.D. liner, from 0' to 3543', to 2560 psi. Pressure held okay.

Stung back into retainer. With stinger in test positions, tested 2 3/8" O.D. tubing, to 4600 psi. Pressure held okay.

Placed stinger into cementing position. Established an injection rate of 4.5 BPM, at 800 psi. Cemented squeeze perfs, from 3555' to 3679' (17 holes), with 600 sx of API Class "C" neat cement, followed by 100 sx of API Class "C" cement containing 2% $CaCl_2$, 3 lbs/sx Gilsonite, and 0.25 lb/sx Flocele. Final squeeze pressure was 4024 psi, at 1.4 BPM.

Pulled out of retainer. Backwashed cement from tubing. Pulled 2 3/8" O.D. tubing and cementing stinger.

Rigged up Cardinal Surveys. Ran GR-Temp log. Found top of cement, at 3522' (top of old channel behind 7" O.D. casing).

Rigged up Capitan Corporation. Perforated 5" O.D. liner, at 3292.5', with 1 9/16" casing punch, loaded with (2) 0.25" x 0.5" charges.

Ran and set 5" Model "C" packer, at 3265'. Checked integrity of cement, between 7" O.D. casing and 5" O.D. liner (at 3292.5'), by pressure testing wellbore, from 3265' to 3543', to 3500 psi. Observed no drop in pressure.

Pulled 5" Model "C" packer.

Ran open-ended 2 3/8" O.D. tubing, to 3282'. Hooked up air unit. Blew hole dry. Pulled 2 3/8" O.D. tubing.

Rigged up Capitan Corporation wireline truck. Perforated 5" O.D. liner, from 3106' to 3294', with (29) 0.38" x 19" production holes, with one shot each, at:

3106'	3156'	3211'	3235'	3255'	3279'
3123'	3158'	3216'	3238'	3257'	3283'
3134'	3179'	3224'	3240'	3264'	3285'
3139'	3188'	3228'	3246'	3266'	3294'
3141'	3205'	3233'	3248'	3271'	

Ran 2 3/8" O.D. tubing and 5" Model "C" packer, to 3301'. Spotted acid across and above perfs, by pumping 150 gallons of 15% MCA acid, followed by 0.5 bbls of 2% KCL water. Allowed acid to fall and equalize.

Raised and set 5" Model "C" at 3025'. Pumped an additional 500 gallons of 15% MCA acid down 2 3/8" O.D. tubing. Allowed acid to soak for 30 minutes.

Hooked up Cardinal Surveys' tracer injection pump, to Halliburton's acid treatment line. Acidized well, from 3106' to 3294' (29 holes), with an additional 3950 gallons of 15% MCA acid and 33 ball sealers, at an average treating rate of 3.3 BPM and average treating pressure of 2918 psi. Flushed with 16.5 bbls of 2% KCL water. TR_{mx} = 4.2 BPM. TR_{mn} = 0.2 BPM.

ISIP = 1617 psi
1-min SIP = 1438 psi
2-min SIP = 1182 psi
3-min SIP = 1031 psi
4-min SIP = 600 psi
5-min SIP = 441 psi
10-min SIP = 160 psi
15-min SIP = 21 psi
19-min SIP = 0 psi

While acidizing, observed the following treating pressures:

Balls on Formation	Wellhead Treating Pressure (psi)
3	2963
6	3100
9	3252
12	3373
15	2838
18	2654
21	3059
24	2928
27	2612
29	2712
31	2479
33	2848

Rigged up Cardinal Surveys. Ran Gamma Trol treating log. Found that Queen interval (3106' to 3188') had received majority of acid treatment, with only the very upper portion of the Penrose (3202' to 3260') receiving a partial treatment.

Lowered 5" Model "C" packer, to 3312'. Spotted 150 gallons of 15% MCA acid across lower perfs. Raised and set 5" Model "C" packer, at 3275' (above lower 4 perforations). Pumped down tubing, with an additional 175 gallons of 15 % MCA acid.

Set 5" Model "C" packer, at 3290' (above bottom perforation). Pumped 175 gallons of 15% MCA acid into bottom perf, at 3290'.

Raised and set 5" Model "C" packer, at 3044'.

Rigged up Cardinal Surveys. Ran base temperature log.

Rigged up Halliburton. Tied Cardinal Surveys' tracer injection pump, into Halliburton's acid treatment line. Acidized perforations, from 3106' to 3294' (29 holes), with an additional 4000 gallons of 15% MCA acid and 39 ball sealers, at an average treating rate of 3.5 BPM and average treating pressure of 2670 psi. Dropped 12 ball sealers, at beginning of acid job. Flushed with 16.5 bbls of 2% KCL water. TR_{mx} = 4.7 BPM. TR_{mn} = 3.0 BPM.

ISIP = 1821 psi	5-min SIP = 837 psi
1-min SIP = 1656 psi	10-min SIP = 301 psi
2-min SIP = 1508 psi	15-min SIP = 121 psi
3-min SIP = 1295 psi	20-min SIP = 32 psi
4-min SIP = 1060 psi	22-min SIP = 0 psi

While acidizing well, observed the following treating pressures and ball action:

Balls on Formation	Wellhead Treating Pressure (psi)
12	
14	1600
16	2261
18	2311
20	2427
22	2373
24	2441
26	2636

28	2640
30	2312
32	2900
34	2758
36	2950
39	2910

Rigged up Cardinal Surveys logging truck. Ran Gamma Trol Treating log. Log indicated that first 12 ball sealers shut off Queen interval (3106' to 3188'), with majority of 2nd acid treatment going into Penrose perforations, from 3205' to 3294'.

Pulled 2 3/8" O.D. tubing. Laid down 5" Model "C" packer.

Ran 2 3/8" O.D. tubing, to 3120'. Hooked up air unit. Unloaded water from hole. Landed 2 3/8" O.D. tubing, at 3478' (108 jts @ 31.96 ft/jt + 1.1' SN + 18' MA - 3' AGL + 10' KBC = 3477.78').

Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4" rod string, consisting of (138) 3/4" x 25' Axelson S-87 API Class "KD" rods, (1) 3/4" x 6' rod sub, (1) 1 1/4" x 16' polish rod.

Commenced pump testing well, at 6:30 P.M., CDT, 6-29-01.

Tested well, as follows:

7-20-01
Gas Rate = 82 MCFPD
Water Rate = 3.5 BPD
CP = 18.5 psi
OP = 18.5 psi
Orifice Plate = 0.375"

Shut in well, on 7-20-01, for pressure buildup. 62.25-hr SICP = 160 psi.

Moved well service unit back onto well. Removed 3" Balon 1500-psi production valves. Installed Halliburton 3" heavy-duty frac valves.

Pulled rods and pump. Raised bottom of 2 3/8" O.D. tubing, to 2905' RKB (90 jts @ 31.96 ft/jt + 1.1' SN + 18' MA + 2' CBJ - 3' AGL + 10' KBC = 2904.5').

Shut in well. At 8:00 A.M., CDT, 7-24-01, SICP = 142 psi.

Rigged up Halliburton. Performed CO_2 foam frac down casing-tubing annulus, with 166,409 gal of gelled water and CO_2 plus a combined total of 350,000 lbs of 20/40, 10/20, and 8/16 frac sand.

Left well shut in for one hour. Hooked well up to blowdown tank. Cleaned up well (overnight), to blowdown tank.

Killed well with 20 bbls of 2% KCL water. Removed 3" heavy-duty frac valves. Installed 3" Balon 1500-psi production valves.

Lowered tubing. Tagged top of frac sand, at 3303'. Hooked up air units (3 units). Cleaned out frac sand, to 3543' (PBTD).

Raised bottom of tubing, to 3480'. Flowed well to blowdown tank, for one hour. Lowered tubing. Found no sand fill.

Raised and landed bottom of tubing, at 3446' RKB (107 jts @ 31.96 ft/jt + 1.1' SN + 18' MA - 3' AGL + 10' KBC = 3445.82'). Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4" rod string consisting of (136) 3/4" x 25' API Class "KD" rods, (1) 3/4" x 2' rod sub, (1) 3/4" x 4' rod sub, (1) 3/4" x 8' rod sub, and 1 1/4' x 16' polish rod.

Resumed cleaning up and testing well, at 6:40 P.M., CDT, 7-25-01.

Wellbore has now been repaired, tested, and returned to beneficial use, after being shut in and abandoned, for 29 years.