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-052956 (E)

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.: Wells B-6 No. 1

2. Name of Operator: Doyle Hartman

9. API Well No.: 30-025-11467

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

10. Field and Pool, or Exploratory Area: Jalmat (T-Y-7R)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
330' FNL & 330' FEL (Unit A)
Section 6, T-25-S, R-37-E, N.M.P.M.

11. County or Parish, State: Lea, 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 (Install 5" O.D. Liner)	☐ Conversion to Injection
	☒ Other Return of Abandoned Wellbore to Continuous Producing Status	☐ 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.)*

For details of completed operations, please refer to pages 2 of 6, 3 of 6, 4 of 6, 5 of 6 and 6 of 6 attached hereto, and made a part hereof.

ACCEPTED FOR RECORD
MAR 24 2003
GARY GOURLEY
PETROLEUM ENGINEER

RECEIVED
MAR 2003
HOBBS
OCD

14. I hereby certify that the foregoing is true and correct
Signed _____ Title Engineer Date 03/20/2003

(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

GWW

Details of Completed Repair Operations

Moved in well service unit, on 2-27-03. Pulled and laid down rods and tubing. Set 7" Model "C" RBP, at 132'. Moved off well service unit.

Moved in dirt equipment, on 3-3-03. Dug out around well. Rigged up welder. Cut off 13 3/8" O.D. casing, at 14'. Cut off 9 5/8" O.D. casing, at 13'. Cut off 7" O.D. casing, at 12.5'.

Replaced defective casing, with new casing. Welded 2" O.D. threaded collar onto side of 13 3/8" O.D. casing and 9 5/8" O.D. casing. Sealed 13 3/8" x 9 5/8" annulus with 13 3/8" x 9 5/8" x 1/2" steel seal plate. Sealed 9 5/8" x 7" annulus with 9 5/8" x 7" x 1/2" steel seal plate. Installed B & M Oil Tool 7" x 2 3/8" x 3 1/2" 3000-psi Type MR tubinghead.

Installed 52" O.D. x 17' corrugated steel cellar can. Backfilled around corrugated cellar can. Leveled and re-caliched location.

Moved in and rigged up well service unit, on 3-8-03. Installed BOP. Ran 4 jts of 2 7/8" O.D. work tubing equipped with retrieving head. Released 7" Model "C" RBP. Lowered and set 7" Model "C" RBP at 2850'. Unsuccessfully attempted to load 7" O.D. casing, with water.

Rigged up high-volume air unit. Unloaded water from 7" O.D. casing. Pulled and laid down 7" Model "C" RBP.

Ran replacement 7" Model "C" RBP and 7" Model "C" packer. Set replacement 7" Model "C" RBP at 2790', and 7" Model "C" packer at 2769'. Tested 7" replacement Model "C" RBP to 2000 psi.

Released 7" Model "C" packer. Loaded 7" O.D. casing with 2% KCl water. Pressured 7" O.D. casing to 1500 psi. While holding 1500 psi on 7" O.D. casing, pumped 35 bbls of water down 9 5/8" O.D. casing (and into Rustler formation), at 1.25 BPM, at 900 psi.

Tied pump truck to 13 3/8" O.D. casing. Pumped water down 13 3/8" O.D. casing. Observed water returns back to surface, on outside of 13 3/8" O.D. casing.

Performed second injectivity test down 9 5/8" O.D. casing, by pumping an additional 60 bbls of 2% KCl water, at 1.1 BPM, at 880 psi.

Hooked up high-volume air-foam unit. Unloaded water from 7" O.D. casing. Pulled and laid down 7" Model "C" packer and 7" Model "C" RBP.


BUREAU OF LAND MANAGEMENT

Ran 2 7/8" O.D. work string equipped with 358' bottom-hole drilling assembly, consisting of 6 1/4" rock bit and (12) 4 3/4" drill collars. Tagged up at 3333'. Hooked up high-volume air-foam unit. Commenced generating and pumping foam. Drilled cement, from 3333' to 3366'. Drilled on retainer, at 3366', for 4.5 hours. Drilled cement, from 3368' to 3519'.

Circulated hole clean and dry. Shut down for night. Overnight SICP = 32 psi (5.5 hrs).

Pulled 2 7/8" O.D. work string and 358' bottom-hole drilling assembly.

Ran 2 7/8" O.D. work string and 123' string-mill assembly, consisting of 4 3/4" bit, 6 1/4" string-mill, and (4) 4 3/4" O.D. drill collars. Rotated string-mill assembly, from 3377' to 3519'.

Pumped 60 bbls of 2% KCl water down 2 7/8" O.D. tubing. Pulled 2 7/8" work string and 123' string-mill assembly.

Rigged up Schlumberger. Logged well with DS-CNL-GR-CCL log and VDCBL-GR-CCL log. While logging, could not get tools to go below 3480'.

Ran 2 7/8" O.D. tubing and 123' string-mill assembly. Tagged up at 3489'. Hooked up high-volume air-foam unit.

Unloaded water from hole. Commenced generating and pumping foam. Rotated and circulated down to 3519'. Circulated off of bottom for an additional hour. Pulled 2 7/8" O.D. work string and 123' string-mill assembly.

Ran 2 7/8" O.D. work string and 5" O.D. liner (739.18'), arranged as follows:

5 7/8" x 5" x 0.97' liner setting collar
5 jts (195.29') of 5" O.D., 15 lb/ft, ST&C csg.
5" O.D. x 20.74' short jt
2 jts (85.64') of 5" O.D., 15 lb/ft, ST&C csg.
5" O.D. x 20.47' short jt
10 jts (413.20') of 5" O.D., 15 lb/ft, ST&C csg
5 9/16" x 5" x 2.88' Type 226-DV setshoe
(19) - 7" x 5" slim-hole centralizers (one per jt)

Landed bottom of 5" O.D. liner at 3516', with top of liner at 2777'. Pump 35 bbls of 2% KCl water down 2 7/8" O.D. tubing, to ensure that 5" O.D. liner was unobstructed. Unscrewed from liner setting collar. Pulled 2 7/8" O.D. work string.

Ran 2 7/8" O.D. work string and 7" Model "C" packer. Set packer at 2712'. Loaded 7" O.D. casing with water. Pressured 7" x 2 7/8" casing-tubing annulus to 500 psi.

Established an injection rate (down 2 7/8" O.D. tubing) of 12 BPM, at 2016 psi. Squeeze cemented 5" O.D. liner into place, utilizing a total of 1400 sx of cement, consisting of 200 sx of API Class "C" cement containing 2.5% $CaCl_2$, followed by 1100 sx of API Class "C" cement containing 2.5% $CaCl_2$, 3 lb/sx Gilsonite, 0.25 lb/sx Flocele, followed by 100 sx of API Class "C" cement containing 1.5% $CaCl_2$. Mixed and pumped cement at an average rate of 11.5 BPM. Maximum pump pressure was 3941 psi, at 11.3 BPM. Displaced cement with 16 bbls of water, at 2.2 BPM. Final displacement pressure was 1738 psi.

While pumping displacement, pressure on 7" x 2 3/8" casing-tubing annulus increased to 1500 psi, indicating a packer or tubing leak. After completion of displacement, promptly released packer. Pulled 2 7/8" O.D. work string and 7" Model "C" packer.

Loaded 7" O.D. casing, with 9 bbls of water. Upon increasing 7" O.D. casing pressure to 1050 psi, started pumping into well. Observed a corresponding decrease in pressure. Raised 7" O.D. casing pressure back to 850 psi, by pumping an additional 3 bbls of water. Closed in casing for remainder of night. SICP held constant, at 850 psi.

Cemented 13 3/8" O.D. casing, and upper portion of 9 5/8" O.D. casing, by pumping down 13 3/8" x 9 5/8" annulus, with 250 sx of API Class "C" cement containing 2.5% $CaCl_2$, 3 lbs/sx Flocele, and 0.25 lb/sx Flocele. Filled cellar can by continuing to pump cement down 13 3/8" O.D. casing, and back to surface on outside of 13 3/8" O.D. casing, until cellar can was full.

Tied Halliburton onto 9 5/8" O.D. casing. Cemented down 9 5/8" x 7" casing annulus, and into Rustler formation, with a total of 600 sx of API Class "C" cement containing 3% $CaCl_2$, 5 lb/sx Gilsonite, 0.25 lb/sx Flocele. Mixed and pumped cement at an average rate of 3.5 BPM. Final pump rate was 0.4 BPM, at 1028 psi. Released pressure on 7" O.D. casing, but not on 9 5/8" O.D. casing.

Ran 2 7/8" O.D. work string and 363' bottom-hole drilling assembly, consisting of 6 1/4" rock bit, 7" casing scraper, and (12) 4 3/4" O.D. drill collars. Tagged top of cement at 2495'. Drilled 282' of cement, to top of 5" O.D. liner, at 2777', in 4.9 hrs. Circulated hole clean. Pulled and layed down 2 7/8" O.D. work string and 363' bottom-hole drilling assembly.

Ran new string of 2 3/8" O.D. tubing and 175' bottom-hole drilling assembly, consisting of 4 1/4" blade bit and (6) 3 1/8" drill collars. Commenced drilling cement (inside of 5" O.D. liner), at 2777'. Fell out of cement at 2843'. Lowered drill string, and tagged up at 3485'. Cleaned out fill to top of 5" setshoe, at 3513'. Pressure tested wellbore (0' to 3513'), to 2000 psi. Pressure held okay. Pulled

and laid down 175' bottom-hole drilling assembly.

Ran 2 3/8" O.D. tubing equipped with 4 1/4" blade bit and 5" casing scraper. Scraped 5" O.D. liner, from 2777' to 3513'. Pulled and laid down 5" casing scraper and 4 1/4" blade bit.

Rigged up Schlumberger. Ran VDCBL-GR-CCL log. Found good 5" O.D. liner bonding.

Rigged up Capitan Corporation. Set 5" CIBP at 3505'.

Hooked up kill truck. Pressure tested wellbore (0' to 3505'), to 2900 psi. Pressure held okay.

Ran 2 3/8" O.D. tubing to 3200'. Hooked up high-volume air-foam unit. Unloaded water from wellbore. Pulled 2 3/8" O.D. tubing.

Rigged up Capitan Corporation. Re-perforated Jalmat interval, with 3 1/8" O.D. select-fire casing gun, with (24) 0.37" x 19" holes, with one shot each, at:

2881	2909	2943	2975	3006
2887	2921	2949	2980	3011
2892	2926	2959	2991	3016
2898	2932	2964	2996	3021
2904	2938	2970	3001	

Ran 2 3/8" O.D. tubing and 5" Model "C" packer, to 3050'. Spotted acid by pumping 150 gal of 15% MCA acid, followed by 1 bbl of 2% KCl water. Allowed acid to fall and equalize.

Raised and set 5" Model "C" packer at 2860'. Pumped 450 gal of 15% MCA acid down 2 3/8" O.D. tubing. Allowed acid to soak for 30 minutes.

Acidized perfs, from 2881' to 3021' (24 holes), with an additional 4700 gal of 15% MCA acid and 36 ball sealers, at an average treating rate of 4.5 BPM. Flushed acid with 12 bbls of 2% KCl water.

Treatment Schedule

Balls on Formation	Acid Rate (BPM)	Treating Pressure (psi)	Remarks
4	4.5	1014	
8	4.5	1076	
12	4.5	1145	
16	4.5	651	
20	4.5	1603	
24	4.5	2094	
28	4.5	2980	ballout
32	4.4	2202	
36	4.3	2158	

ISIP = 964 psi
1-min SIP = 683 psi
2-min SIP = 281 psi
3-min SIP = 0 psi

Lowered 5" Model "C" packer. Knocked off ball sealers. Pulled tubing. Laid down 5" Model "C" packer.

Ran and landed bottom of 2 3/8" O.D. tubing at 3372' RKB (101 jts @ 33.15'/jt + 1.1 SN + 18' MA - 2' AGL + 7' KBC = 3372'). Ran new string of 3/4" API Class "KD" rods and 2" x 1 1/4" x 12' RHAC insert pump. Loaded tubing and tested pump. Started pumping well, at 4:15 p.m., CST, 3-17-03. Moved off well service unit.