

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 1004-0135  
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.  
LC-028784-93(b) Tr. A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Keely B Federal

9. WELL NO.

25

10. FIELD AND POOL, OR WILDCAT

Gb/Jackson-SR-Q-G-SA

11. SEC., T., R., M., OR BLK. AND  
SURVEY OR AREA

26 - 17S - 29E

12. COUNTY OR PARISH

Eddy

13. STATE

NM

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—" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR

Phillips Petroleum Company

3. ADDRESS OF OPERATOR

4001 Penbrook Street, Odessa, Texas 79762

4. LOCATION OF WELL (Report location clearly and in accordance with any State  
See also space 17 below.)  
At surface

Unit B, 25' FNL & 2615' FEL

MAR 29 1991

O. C. D.

14. PERMIT NO.

API #30-015-21302

15. ELEVATIONS (Show whether DF, RT, or AREA, OFFICE)

3573.9' GR

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETION

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

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

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent 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 markers and zones perti-  
nent to this work.)

Please see attached detailed procedure.

-over-

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

SIGNED L. M. Sanders

TITLE Reg. & Proration Supv.

DATE 03-22-91

(This space for Federal or State office use)

APPROVED BY L. M. Sanders  
CONDITIONS OF APPROVAL, IF ANY:

TITLE PETROLEUM ENGINEER

DATE 3-28-91

\*See Instructions on Reverse Side

KEELY "B" FEDERAL NO. 25  
RECOMMENDED PROCEDURE  
MARCH 18, 1991

NOTE: 1. This is a No Category well.  
2. Notify NMOCD and BLM 24 hours before commencing work.

1. MI and RU DDU. Pull rods and pump. Install BOP. COOH with 2-3/8" production tbg. Tag TD to check for fill. If necessary, clean out to PBTD @  $\pm 3444'$ .
2. MI & RU service company to perforate the following zones through the 4-1/2" csg with a 3-1/2" perforating gun and 1/2" GSC charges, 1 JSPF, at the following depths :

Keely

3336' - 3404' (69 shots)

Premier

2512', 2515', 2581', and 2583' (4 shots)

Metex

2356', 2358', 2388', 2392', 2396', and 2399' (6 shots)

Loco Hills

2269', 2274' (2 shots)

TOTAL = 81 shots

Note: Correlate perforating depths to Dresser Atlas' GR-Neutron log dated 8-8-74.

3. GIH with 4-1/2" RTTS-type pkr on 2-7/8", 6.5#/ft, EUE 8rd N-80 workstring to  $\pm 3300'$ . Test tubing in hole, above slips, to 5000 psi. Pump 400 gals 15% HCL down workstring; displace to end of tubing. Set packer at  $\pm 3280'$ .
4. Service company to acidize Keely zone at 3336'-3404' with 2500 gals 7-1/2% NEFe HCL containing fines suspension agents and clay stabilizers diverting with 70 1.3 SG RCN ball sealers, as follows:
  - a. Pressure test lines to 4000 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.

- b. Establish pump-in rate with produced water. If 5 BPM rate cannot be established, release pkr and spot 200 gals 15% HCl with fines suspension agents & stabilizers across perfs. Reset pkr and bullhead acid to break down perfs.
- c. Pump 500 gals 7-1/2% NEFe HCl.
- d. Pump 1500 gals 7-1/2% NEFe HCl dropping 70 balls spaced evenly.
- e. Pump 500 gals 7-1/2% NEFe HCl.
- f. Flush to 3404' with lease produced water.

Maximum Treating Pressure = 3000 psi  
Maximum Treating Rate = 6 BPM

- 5. Release pkr & knock ball sealers off perfs. Reset pkr @  $\pm 3236'$  & swab back load from Keely perfs.
- 6. Service company to fracture treat Keely zone at 3336'-3404' with 32,900 gals gelled (30 lb X-linker/1000 gals) 2% KCl water carrying 126,700 lbs 20/40 Vulcan Texsan sand, as follows:

**Note:**

- \* Nipple up wellhead so that well can be flowed back within 30 seconds of pump shut down.
  - \* Install flow meter so that a rate of 5-10 gals/min can be monitored.
  - \* Leave pressure connected to the van so that the fracture pressure can be monitored.
  - \* Ensure that choke is completely closed before start of flowback.
- a. Test all lines to 5000 psi. Install pressure relief valve on treating line and set it to relieve at 5000 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.
  - b. Pump 8400 gals X-linked gel (30 lb/1000 gals) as pad.
  - c. Pump 3500 gals with 2 ppg of 20/40 mesh sand.
  - d. Pump 4200 gals with 3.5 ppg of 20/40 mesh sand.
  - e. Pump 4200 gals with 4.5 ppg of 20/40 mesh sand.
  - f. Pump 4200 gals with 5.5 ppg of 20/40 mesh sand.
  - g. Pump 4200 gals with 6.5 ppg of 20/40 mesh sand.
  - h. Pump 4200 gals with 8.5 ppg of 20/40 mesh sand.
  - i. Flush to 3236' (RTTS depth) with gelled water. **DO NOT OVERFLUSH.**
  - j. SI, record ISIP, then flow back within 30 seconds of pump shutdown. Monitor for closure, and continue to flow at a maximum rate of 10 gal/min for 30 minutes after fracture closure. After closure, flow at a maximum rate of 1/2 bbl/min until well dies.

Max. Treating Pressure = 4500 psi  
Max. Treating Rate = 15 BPM

Minimum Inventory to Have on Location Prior to Treatment:

- \* 152,000 lbs Vulcan Texsan 20/40 sand.
- \* Frac tanks with 36,650 gals (873 bbls) gelled water.

7. COOH & LD RTTS. Stand back 2-7/8" workstring. PU & GIH with 2-3/8" workstring. Clean out to PSTD. COOH & stand back 2-3/8" workstring. PU 4-1/2" RBP & RTTS & GIH on 2-7/8" workstring. Test tubing in hole, above slips, to 5000 psi. Set RBP at  $\pm 3170'$ . Test RBP to 1000 psi.
8. RU service company to spot 500 gals Pentol 200 (20% NEFe HCl) across existing San Andres perfs at 3113'-3136'. Set packer @  $\pm 3060'$  & bullhead acid into perfs with produced water. Max Pressure = 3000 psi.
9. Shut-in four hours. Swab back load from San Andres. Reset pkr @  $\pm 3020'$ .
10. Service company to fracture treat San Andres zone at 3113'-3136' with 20,000 gals gelled (30 lb X-linker/1000 gals) 2% KCl water carrying 53,500 lbs 16/30 mesh Vulcan Texsan sand, as follows:

**Note: Review the four Notes listed in step 6, page 2.**

- a. Test all lines to 4000 psi. Install pressure relief valve on treating line and set it to relieve at 4000 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.
- b. Pump 7000 gals X-linked gel (30 lbs/1000 gals) as pad.
- c. Pump 2000 gals with 2 ppg of 16/30 mesh sand.
- d. Pump 2500 gals with 3 ppg of 16/30 mesh sand.
- e. Pump 3000 gals with 4 ppg of 16/30 mesh sand.
- f. Pump 3000 gals with 5 ppg of 16/30 mesh sand.
- g. Pump 2500 gals with 6 ppg of 16/30 mesh sand.
- h. Flush to 3020' (RTTS depth) with gelled water. **DO NOT OVERFLUSH.**
- i. SI, record ISIP, then flow back within 30 seconds of pump shutdown. Monitor for closure, and continue to flow at a maximum rate of 10 gal/min for 30 minutes after fracture closure. After closure, flow at a maximum rate of 1/2 bbl/min until well dies.

Max. Treating Pressure = 3500 psi

Max. Treating Rate = 10 BPM

Minimum Inventory to Have on Location Prior to Treatment:

- \* 64,200 lbs 16/30 mesh Vulcan Texsan sand.
  - \* Frac tanks with 23,688 gals (564 bbls) gelled water.
11. COOH & LD RTTS. Stand back 2-7/8" workstring. GIH with 2-3/8" workstring. Clean out to top of RBP. COOH & stand back 2-3/8" workstring. PU RTTS & RBP setting tool & GIH on 2-7/8" workstring. Test tubing in hole, above slips, to 5000 psi. Reset RBP at  $\pm 3000'$ . Test RBP to 1000 psi. Reset packer @  $\pm 2690'$ .
  12. Service company to acidize existing Jackson perfs at 2746'-2958' in three stages with 4800 gals Pentol 200 (20% NEFe HCl) using 500 lb rock salt in 500 gals 9 ppg brine as a blocking agent, as follows:
    - a. Pressure test lines to 4000 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.

- b. Pump 1600 gals Pentol 200.
- c. Pump 250 gals blocking agent.
- d. Repeat steps b and c.
- e. Pump 1600 gals Pentol 200.
- f. Flush to 2958' with produced water.

Maximum Treating Pressure = 3500 psi  
Maximum Treating Rate = 5 BPM

- 13. Shut-in four hours. Release pkr & knock ball sealers off perfs. Reset pkr @  $\pm 2690'$  & swab back load from Jackson perfs.
- 14. Reset RBP @  $\pm 2630'$ . Test RBP to 1000 psi. Reset RTTS @  $\pm 2460'$ . Swab to clean up new Premier perfs.
- 15. RU service company to spot 500 gals 7-1/2% NEFe HCl containing fines suspension agents and clay stabilizers across existing Premier perfs at 2512'-2583'. Set packer @  $\pm 2460'$  & bullhead acid into perfs with produced water. Max Pressure = 3000 psi.
- 16. Swab back load from Premier. Reset pkr @  $\pm 2425'$ .
- 17. Service company to fracture treat Premier perfs at 2512'-2583' with 9,800 gallons gelled (30 lb X-linker/1000 gals) 2% KCl water carrying 34,000 lbs 16/30 mesh Vulcan Texsan sand, as follows:

**Note:** Review the four Notes listed in step 6, page 2.

- a. Test all lines to 5000 psi. Install pressure relief valve on treating line and set it to relieve at 5000 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.
- b. Pump 3000 gals X-linked (30 lb/1000 gals) gel as pad.
- c. Pump 1000 gals with 2.5 ppg of 16/30 mesh sand.
- d. Pump 1200 gals with 3.5 ppg of 16/30 mesh sand.
- e. Pump 1200 gals with 4.5 ppg of 16/30 mesh sand.
- f. Pump 1200 gals with 5.5 ppg of 16/30 mesh sand.
- g. Pump 1200 gals with 6.5 ppg of 16/30 mesh sand.
- h. Pump 1000 gals with 7.5 ppg of 16/30 mesh sand.
- i. Flush to 2425' (RTTS depth) with gelled water. **DO NOT OVERFLUSH.**
- j. SI, record ISIP, then flow back within 30 seconds of pump shutdown. Monitor for closure, and continue to flow at a maximum rate of 10 gal/min for 30 minutes after fracture closure. After closure, flow at a maximum rate of 1/2 bbl/min until well dies.

Max. Treating Pressure = 4500 psi  
Max. Treating Rate = 15 BPM

Minimum Inventory to Have on Location Prior to Treatment:

- \* 40,800 lbs Vulcan Texsan 16/30 sand.
- \* Frac tanks with 11,844 gals (282 bbls) gelled water.

18. COOH & LD RTTS. Stand back 2-7/8" workstring. GIH with 2-3/8" workstring and clean out to the top of the RBP. COOH & stand back 2-3/8" workstring.
19. PU 4-1/2" RTTS & RBP setting tool & GIH on 2-7/8" workstring. Test tubing in hole, above slips, to 5000 psi. Reset RBP at  $\pm 2450'$ . Test RBP to 1000 psi. Reset packer @  $\pm 2310'$ . Swab to clean new Metex perfs.
20. Service company to acidize Metex perfs at 2356'-2399' with 1250 gals 7-1/2% NEFe HCl containing fines suspension agents and clay stabilizers, diverting with six 1.3 SG RCN ball sealers, as follows:
  - a. Pressure test lines to 4000 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.
  - b. Establish pump-in rate with produced water. If 5 BPM rate cannot be established, release pkr and spot 200 gals 15% HCl with fines suspension agents & stabilizers across perfs. Reset pkr and bullhead acid to break down perfs.
  - c. Pump 250 gals 7-1/2% NEFe HCl.
  - d. Pump 750 gals 7-1/2% NEFe HCl dropping 6 balls spaced evenly.
  - e. Pump 250 gals 7-1/2% NEFe HCl.
  - f. Flush to 2399' with lease produced water.

Maximum Treating Pressure = 3500 psi  
Maximum Treating Rate = 6 BPM

21. Release pkr & knock ball sealers off perfs. Reset pkr @  $\pm 2310'$  & swab back load from Metex perfs.
22. Service company to fracture treat Metex perfs at 2356'-2399' with 22,000 gallons polyemulsion (2/3 lease crude and 1/3 30 lb gelled 2% KCl water with non-ionic emulsifier) carrying 73,500 lbs 16/30 mesh Vulcan Texsan sand, as follows:

**Note:**

- \* Review Attachment I on safety precautions for polyemulsion treatments.
  - \* Nipple up wellhead so that well can be flowed back within 30 seconds of pump shut down.
  - \* Install flow meter so that a rate of 5-10 gals/min can be monitored.
  - \* Leave pressure connected to the van so that the fracture pressure can be monitored.
  - \* Ensure that choke is completely closed before start of flowback.
  - \* **LEASE CRUDE MUST BE IN FRAC TANKS OR STOCK TANK BARRELS AT LEAST 24 HOURS PRIOR TO JOB.**
- a. Test all lines to 5500 psi. Install pressure relief valve on treating line and set it to relieve at 5500 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.

- b. Pump 5000 gals polyemulsion as pad.
- c. Pump 2000 gals with 2 ppg of 16/30 mesh sand.
- d. Pump 3000 gals with 3 ppg of 16/30 mesh sand.
- e. Pump 3500 gals with 4 ppg of 16/30 mesh sand.
- f. Pump 4500 gals with 5 ppg of 16/30 mesh sand.
- g. Pump 4000 gals with 6 ppg of 16/30 mesh sand.
- h. Flush to 2310' (RTTS depth) with 1/4 polyemulsion and 3/4 gelled water.  
**DO NOT OVERFLUSH.**
- i. SI, record ISIP, then flow back within 30 seconds of pump shutdown. Monitor for closure, and continue to flow at a maximum rate of 10 gal/min for 30 minutes after fracture closure. After closure, flow at a maximum rate of 1/2 bbl/min until well dies.

Max. Treating Pressure = 5000 psi  
Max. Treating Rate = 15 BPM

Minimum Inventory to Have on Location Prior to Treatment:

- \* 88,200 lbs Vulcan Texsan 16/30 sand.
  - \* Frac tanks with 16,700 gals (398 bbls) lease crude.
  - \* Frac tanks with 8,700 gals (207 bbls) gelled water.
  - \* Firefighting equipment, sample bottles, and Fann 35 viscometer to be supplied by service company.
23. COOH & LD RTTS. Stand back 2-7/8" workstring. GIH with 2-3/8" workstring and clean out to the top of the RBP. COOH & stand back 2-3/8" workstring.
24. PU 4-1/2" RTTS & RBP setting tool & GIH on 2-7/8" workstring. Test tubing in hole, above slips, to 5000 psi. Reset RBP at  $\pm 2325'$ . Test RBP to 1000 psi. Reset packer @  $\pm 2225'$ . Swab to clean up Loco Hills perfs.
25. Service company to acidize existing Loco Hills perfs at 2278'-2289' in three stages with 800 gals Pentol 200 (20% NEFe HCl) using 200 lb rock salt in 200 gals 9 ppg brine as a blocking agent, as follows:
- a. Pressure test lines to 4000 psi. Load annulus & pressure to 500 psi. Monitor casing pressure throughout treatment for any indication of communication.
  - b. Pump 266 gals Pentol 200.
  - c. Pump 100 gals blocking agent.
  - d. Repeat steps b and c.
  - e. Pump 266 gals Pentol 200.
  - f. Flush to 2289' with produced water.
- Maximum Treating Pressure = 3500 psi  
Maximum Treating Rate = 5 BPM
26. Shut-in four hours. Release pkr & knock ball sealers off perfs. Swab back load from Loco Hills perfs. Reset pkr @  $\pm 2180'$ .
27. Service company to fracture treat Loco Hills perfs at 2278'-2289' with 13,500 gallons polyemulsion (2/3 lease crude and 1/3 30 lb gelled 2% KCl water with non-ionic emulsifier) carrying 37,000 lbs 20/40 mesh Vulcan Texsan sand, as follows:

**Note: Review the six Notes listed in step 18, page 5.**

- a. Test all lines to 5500 psi. Install pressure relief valve on treating line and set it to relieve at 5500 psi. Load annulus, if possible, and monitor casing pressure throughout treatment for any indication of communication.
- b. Pump 4500 gals polyemulsion as pad.
- c. Pump 500 gals with 1 ppg of 20/40 mesh sand.
- d. Pump 1000 gals with 2 ppg of 20/40 mesh sand.
- e. Pump 1500 gals with 3 ppg of 20/40 mesh sand.
- f. Pump 2000 gals with 4 ppg of 20/40 mesh sand.
- g. Pump 2000 gals with 5 ppg of 20/40 mesh sand.
- h. Pump 2000 gals with 6 ppg of 20/40 mesh sand.
- i. Flush to 2180' (RTTS depth) with 1/4 polyemulsion and 3/4 gelled water. **DO NOT OVERFLUSH.**
- j. SI, record ISIP, then flow back within 30 seconds of pump shutdown. Monitor for closure, and continue to flow at a maximum rate of 10 gal/min for 30 minutes after fracture closure. After closure, flow at a maximum rate of 1/2 bbl/min until well dies.

Max. Treating Pressure = 5000 psi

Max. Treating Rate = 15 BPM

Minimum Inventory to Have on Location Prior to Treatment:

- \* 44,400 lbs Vulcan Texsan 20/40 sand.
  - \* Frac tanks with 10,374 gals (247 bbls) lease crude.
  - \* Frac tanks with 5,124 gals (122 bbls) gelled water.
  - \* Firefighting equipment, sample bottles, and Fann 35 viscometer to be supplied by service company.
28. COOH laying down 2-7/8" workstring & RTTS. GIH with 2-3/8" workstring and clean out to the top of the RBP. Retrieve RBP. Clean out PBTD, if necessary. COOH and LD 2-3/8" workstring.
  29. PU & GIH with 2-3/8" production string. Remove BOP. Run rods & pump. Return to production. Report frequent well tests and fluid levels on the Daily Drilling Report until well stabilizes.



RKB@ 3584'  
CHP@ 3572'  
GLE 3574'

Area North Date: March 15, 1991  
Subarea Loco Hills  
Lease & Well No. Keely "B" Fed. #25 NOT A CATEGORY WELL  
Legal Description 25' FNL & 2615' FEL, Section 26,  
T-17-S & R-29-E, Eddy County, New Mexico  
Field Grayburg-Jackson  
Status Pumping 5.4 BO, 0.1 BW & 1.6 MCF (4-19-89)  
Tubing: 2-3/8", 4.7# J-55 @ 3330' (?)  
Packer: None  
Tubing Head: 4-1/2" x 2" Larkin Hinderliter Type HW

**Stimulation History: (All treatments down 2-7/8" tbg)**

	Interval	Date	Type	Gallons	Lbs. Sd	MP	ISIP	IR
1.	3113'-3136'	9/74	FRAC	30,000	30,000	4000	1500	23
2.	2918'-2958'	9/74	15%	3,500	---	4100	1600	12
3.	2830'-2843'	9/74	15%	3,500	---	4150	1400	10
4.	2746'-2794'	9/74	15%	3,500	---	4100	1500	18
5.	2278'-2289'	9/74	FRAC	20,000	20,000	3925	1400	22

Hole/Casing Condition: As shown. Drilled 1974.

Workover Proposal: Add Metex, Premier and Keely pay.  
Stimulate the new zones as well as the existing Loco Hills  
and Jackson zones individually.

Recommended Procedure: See Attached.

**Loco Hills:**

2278'-81', 2285'-89'

**Jackson:**

2746'-48', 2773'-75',  
2792'-94', 2830'-33',  
2840'-43', 2918'-20',  
2933'-36', 2956'-58'

**Lower San Andres:**

3113' - 3117',  
3132' - 3136'

PBTD = 3444'

XXXXXX  
XXXXXXXXXX

4-1/2" OD @ 3450'  
9.5#/ft, J-55 8rd  
7-7/8" Hole

4-1/2"  
9.5#/ft, J-55  
ID . . . . 4.090"  
Drift . . . 3.965"  
Collapse. . 3,130 psi  
Burst . . . 4,110 psi  
Tension . . 48,000 lbs

	2-3/8"	2-7/8"
	4.7#, J-55	6.5#, N-80
ID . . . .	1.995"	2.441"
Drift . . .	1.901"	2.347"
OD Cplg . .	3.063"	3.668"
Collapse. .	7,040 psi	9,710 psi
Burst . . .	6,290 psi	8,270 psi
Tension . .	47,700 lbs	93,500 lbs