

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO ~~DRILL~~ **DEEPEN** ~~OR~~ **PLUG BACK**

5. LEASE DESIGNATION AND SERIAL NO.  
NM 13635  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME

1. TYPE OF WORK

DRILL ☐

DEEPEN ☒

PLUG BACK ☒

7. UNIT AGREEMENT NAME

8. DATE OF WORK

DATE ☒ JAN ☒ FEB ☐ MAR ☐ APR ☐ MAY ☐ JUN ☐ JUL ☐ AUG ☐ SEP ☐ OCT ☐ NOV ☐ DEC

OCT 25 1979

SINGLE ZONE

MULTIPLE ZONE ☐

9. FARM OR LEASE NAME

Federal RV-4

10. WELL NO.

1

11. FIELD AND POOL OR WILDCAT

Revelation Morrow

12. SEC. T. R. M. OR BLK. AND SURVEY OR AREA

Sec. 4, T-22-S, R-15-E

13. COUNTY OR PARISH 14. STATE

Eddy

New Mexico

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

(Also to nearest drilg unit line, if any)

1980'

16. NO. OF ACRES IN LEASE

799.72

17. NO. OF ACRES ASSIGNED TO THIS WELL

320

18. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST WELL, DRILLING, COMPLETION, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

PBTD 10,200

20. ROTARY OR CABLE TOOLS

Pulling unit

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3600' Ground

22. APPROX. DATE WORK WILL START\*

10/24/79

23.

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|--------------------|
|              |                |                 |               |                    |
|              |                |                 |               |                    |
|              |                |                 |               |                    |
|              |                |                 |               |                    |

\* Zone to be abandoned in the Morrow, 10,440-10,800'. Recompleted in the New Canyon zone.

1. MISC PU, kill well, install BOP, release pkr & EOH w/tbg & 10,390' 30'
2. Set DEEP @ 10,200' cap w/20' cmt.
3. TIE w/packer, set @ 3650'.
4. Perforate 5-1/2" casing from 8724-38' with 2 SPF using a 1-9/16" thru tubing perforating gun.
5. Test.
6. A 1size w/3000 gals. Swab load back & test.

18. ABOVE SKETCH DESCRIBE PROPOSED PROGRAM. If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Also blow-out prevention program, if any.

24

SIGNED

*M. E. Moore*

TITLE

District Engineer

DATE

10/22/79

(This space for Federal or State office use)

PERMITTED

APPROVAL DATE

(Geo. S&L) GEORGE H. STEWART

TITLE

DATE

WORKOVER PROCEDURE

WELL: FEDERAL RV 4-1  
LOCATION: 660' FSL & 1980' FEL  
Sec. 4, T-22-S, R-25-E,  
Eddy Co., New Mexico

DATE: October 22, 1977  
BY: M. E. Moore



SITUATION:

This well was drilled and completed in the Morrow. Subsequently the well began producing large quantities of water. Several attempts were made to squeeze off the water, treat the producing zone, and produce the well. None of the efforts was successful. It is recommended that the Morrow zone be abandoned and a completion in the Cisco Canyon be attempted.

PROCEDURE:

1. MI & RU Well Service Unit.
2. Kill well, install BOP, release pkr & POH w/tbg & pkr.
3. RU GO International W.L. truck, Set CIBP @ <sup>10,370</sup> ~~10,200~~ <sup>35'</sup> cap w/20' cmt. Using dump bailer.
4. Run GR CCL & CBL from 9000' to top of cement. A temp. survey indicated cement top to be 8560'. If cement is good across proposed perforations, continue w/step 5. If cement is not good, perforate at 8680' and squeeze.
5. TIH w/ Otis permalach packer to 8800' and spot 200 gallons acetic perforating acid.
6. Pull up and set packer at  $\pm$  8650'.
7. Swab FL to 3500'.
8. Perforate 5-1/2" casing from 8724-38' (Neutron log) with 2 SPF using a 1 9/16" thru tubing perforating gun.
9. Break down formation with acetic acid. Swab test.
10. Acidize with 3,000 gallons of Halliburton's MOD 202 acid containing 2 gallons per 1000 gallons of HAI 50 inhibitor plus 3-5 gallons 15N, non-emulsifier. Shut well in 20-30 minutes. Swab load back.

# BELCO

PETROLEUM CORPORATION

1,000 Old Katy Road • Suite 100 • Houston, Texas 77055

## WELL COMPLETION DIAGRAM

DATE: 10/28/78

September 28, 1978

| LEASE AND WELL NUMBER | FIELD OR PROSPECT   | COUNTY | STATE |
|-----------------------|---------------------|--------|-------|
| Federal RV 4-1        | Revelation (Morrow) | Eddy   | NM    |

75.00% BPO  
BELCO W.I. 50.00% APO  
BELCO N.I. 56.25% BPO  
40.75% APO

ELEVATIONS: RKB 3613.5' DF GL 3600'

Depths measured from RKB 13.5 ft. above GL

SURFACE CASING: 13-3/8" 48# CSA 316'  
with 300 sacks. Cement top @ surface

INTERMEDIATE CASING: 9-5/8" 36# CSA 2320'  
with 1200 sacks. Cement top @ N/A

PRODUCTION CASING: 5 1/2" 17 & 20# CSA 10936'  
with 1275 sacks. Cement top @ 8560' (temp. survey)

### PRODUCTION CASING DETAIL

| Size         | Wt. | Grade  | Cplg.        | No. Jts. | Length  | Depth    |
|--------------|-----|--------|--------------|----------|---------|----------|
| Datum        |     |        |              |          | 14.50'  | 0-       |
| 5 1/2"       | 20# | N-80   | LT&C         | 2        | 62.42   | 14.50    |
| 5 1/2"       | 17# | N-80   | LT&C         | 161      | 6399.30 | 76.92    |
| 5 1/2"       | 17# | SOC-95 |              | 80       | 3479.80 | 6476.22  |
| 5 1/2"       | 20# | N-80   | LT&C         | 24       | 938.87  | 9956.02  |
| Float Collar |     |        |              |          | 1.60    | 10094.88 |
| 5 1/2"       | 20# | N-80   | LT&C         | 1        | 38.71   | 10096.49 |
| Guide Shoe   |     |        |              |          | 0.80    | 10097.29 |
|              |     |        | Casing set @ |          |         | 10098.00 |

### TUBING:

| Size                                   | Wt. | Grade | Cplg. | No. Jts. | Length   | Depth    |
|----------------------------------------|-----|-------|-------|----------|----------|----------|
| K.B.                                   |     |       |       |          | 14.50    |          |
| 338 jts 2-3/8" EUE 8rd N-80            |     |       |       |          | 10213.28 | 10227.78 |
| 1 Otis on-off overshot on top of pkr   |     |       |       |          |          |          |
| 1.94" ID                               |     |       |       |          | 1.35     | 10219.13 |
| 1 Otis Perma Lach pkr 5 1/2-20-23# csg |     |       |       |          | 5.87     | 10225.00 |
| 1 - 6' 2-3/8" EUE 8rd N-80 sub         |     |       |       |          | 6.03     | 10231.03 |
| 1 - Otis X Nip 2-3/8" OD x 1.875" ID   |     |       |       |          | .95      | 10231.98 |
| 1 - 6' 2-3/8" EUE 8rd N-80 sub         |     |       |       |          | 6.06     | 10238.04 |
| 1 - Otis N-nip 2-3/8" OD x 1.791" ID   |     |       |       |          | 1.00     | 10239.04 |
| 1 - 2-3/8" EUE Mule shoe               |     |       |       |          | 3.65     | 10242.69 |

### PERFORATIONS / OPEN HOLE:

| Interval   | No. Shots/ft. | Formation | Date Squared     | Sacks Cnt. |
|------------|---------------|-----------|------------------|------------|
| 10440-54'  | 1 SPF         | Morrow    |                  |            |
| 10484-88'  | "             | "         |                  |            |
| 10550-58'  | "             | "         | 4/23/78          | 150 w 1/2" |
| 10578-84'  | "             | "         |                  | 3/10/78    |
| 10612-20'  | "             | "         |                  |            |
| 10790-800' | "             | "         | 11/21/77         | 100 w 1/2" |
|            |               |           | Drld out 1/24/78 |            |
|            |               |           | 1/26/78          | 100 w 1/2" |

BELO PETROLEUM CORPORATION  
WELLBORE RECOMMENDATION

WELL: Federal RV 4-1  
FIELD: Revelation - Morrow  
COUNTY/STATE: Eddy County, New Mexico

DATE: July 26, 1979  
PREPARED BY: J. C. Ball  
BELCO W.I.: 75.00%  
BELCO N.R.I.: 56.25%

PRESENT ZONE(S) (1) Morrow  
(2)  
(3)  
(4)

PERFORATIONS (1) 10442-10449'  
(2)  
(3)  
(4)

PROPOSED ZONE(S) (1) Cisco Canyon  
(2)  
(3)  
(4)

PROPOSED PERFORATIONS (1) 8724-8738'  
(2)  
(3)  
(4)

PRESENT STATUS: Shut down.

RECOMMENDATION: It is recommended that the Morrow zone be abandoned and the Cisco Canyon be tested.

EST. PROD. INC. BOPD MCFD EST. ADDED RESERVES MBL MMCF  
EST. COST \$37,000 EST. PAYOUT: TIME PROD.

PRODUCTION DATA ON THIS WELL AND OFFSET WELLS

| WELL          | DAILY PRODUCTION |     |       |      |        |         | CUMULATIVE PRODUCTION<br>AS OF 9-1-78 (DATE) |       |       |             |
|---------------|------------------|-----|-------|------|--------|---------|----------------------------------------------|-------|-------|-------------|
|               | OIL              | GAS | WATER | T.P. | DATE   | ZONE(S) | OIL                                          | GAS   | WATER | COMPL. DATE |
| Federal RV4-1 | 0                | 0   | 0     | 920  | 9/1/78 | Morrow  | 204                                          | 46577 | -     | 10/10/77    |
|               |                  |     |       |      |        |         |                                              |       |       |             |
|               |                  |     |       |      |        |         |                                              |       |       |             |
|               |                  |     |       |      |        |         |                                              |       |       |             |
|               |                  |     |       |      |        |         |                                              |       |       |             |
|               |                  |     |       |      |        |         |                                              |       |       |             |
|               |                  |     |       |      |        |         |                                              |       |       |             |

MECHANICAL DATA

BO 14.5 FT(G.L.) PBD CASING 5 1/2" OD 17 & 20 LBS, AT 10936 FT.  
TUBING LENGTH 10252 DESCRIPTION 2-3/8" N-80 EUE

MISC. (LINER, PUMP, RODS, ANCHOR, ETC.)

FLD. 10937 CMT. TOP 8560' ZONE DRD. WITH 9.1 #/GAL. ANNULUS FLUID  
EST. BHP PSI PACKER(S): MAKE Otis DEPTH 10,235  
EST. STIP 920 PSI

ATTACHMENTS (CHECK)

APPROVALS

AFE X  
DETAILED PROGNOSIS X  
PRODUCTION CURVE  
MAP OR PLAT  
WELL SKETCH X  
LOG SECTIONS

PROD.  
ENGR. J.C. Ball  
MGT.

CANYON 8552 (-4938)

148' low to Junc:

8600

FROM PENNSYLVANIA  
#1 BROWN

PW = 24  
F = 1/32

P R Sd

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10% 230 52%

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