


PENNZOIL UNITED, Inc.

WESTERN DIVISION OFFICE • WALL TOWERS WEST - MIDLAND, TEXAS • PHONE (915) 682-7316
MAILING ADDRESS: P. O. DRAWER 1828 MIDLAND, TEXAS 79701

AM
NSL 5-31-71
issue to Rule 104-F

71 JUN 10 AM 8 28

May 6, 1971

Oil Conservation Commission
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87501

ATTENTION: Mr. A. L. Porter, Jr.
Secretary-Director

Re: Aid State No. 1
Undesignated Morrow Gas Pool
660 FNL & 660 FEL of Section
24, T-17-S, R-28-E, Eddy Co., N. M.

Gentlemen:

Pennzoil United, Inc. hereby seeks the approval of the Oil Conservation Commission for an unorthodox location for the subject well, under the provisions of Rule 104 of the Commission's Rules and Regulations.

This well was originally drilled by Inexco Oil Company to a total depth of 9050 feet in the Canyon section of the Pennsylvanian formation. The well was plugged on January 19, 1971. The well is at an orthodox location for completion as an oil well in the Canyon section.

Pennzoil United, Inc. re-entered the well on February 26, 1971. The well was cleaned out and deepened to 10,796 feet. The well has been completed as a Morrow gas well from perforations at 10,608-10,707 feet. On test the well produced 2,421 MCFPD plus 18 BCPMMCF, FTP 575 psi, SITP 3112 psi. The calculated open flow potential was determined to be 2,496 MCFPD.

In accordance with Rule 104, attached is a plat showing the proposed pro-ration unit for this well and the ownership of the offsetting leases. Also, attached are copies of Oil Conservation Commission Forms C-101, C-103, C-105, C-122 and C-123 which were filed in connection with this well.

The following offset operators have been furnished a copy of this application:

- General American Oil Company
- S. P. Yates
- Inexco Oil Company
- Humble Oil and Refining Company
- Continental Oil Company

Oil Conservation Commission
State of New Mexico
May 6, 1971
Page 2

It is respectfully requested that this application be approved.

Yours very truly,

PENNZOIL UNITED, INC.
Western Division



B. C. Sinclair
Petroleum Engineer

BCS:tb
Attachments:

APR 28 1971
MAY 10 1971

REQUEST FOR THE EXTENSION OF AN EXISTING POOL

OR

THE CREATION OF A NEW POOL

TO: The Oil Conservation Commission
State of New Mexico

Date: April 22, 1971

The Pennzoil United, Inc.
Name of Operator

Aid-State
Name of Lease

1-A Well No. Located 660 feet from the North line and 660 feet from the East line of 24 Section 17-S Township 28-E Range

is outside the boundaries of any pool producing from the same formation. On the basis of the information submitted herewith on form C-105, we hereby request that the pool be extended to include the following described area

or that a new pool be created to include the following described area N/2, Section 24, Township 17-S, Range 28-E

Suggested name: Aid Morrow Gas

Pennzoil United, Inc.
Operator

Name of Producing Formation: Morrow

J. C. Raney
Representative Petroleum Engineer

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LAND OFFICE	
OPERATOR	

Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
K 3630

1a. TYPE OF WELL
OIL WELL GAS WELL DRY OTHER _____

b. TYPE OF COMPLETION
NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER _____

7. Unit Agreement Name

8. Farm or Lease Name
Aid State

2. Name of Operator
Pennzoil United, Inc.

3. Address of Operator
P. O. Drawer 1828 - Midland, Texas 79701

9. Well No.
1

10. Field and Pool, or Wildcat
Wildcat

4. Location of Well
UNIT LETTER A LOCATED 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE OF SEC. 24 TWP. 17-S RGE. 28-E NMPM

12. County
Eddy

15. Date Spudded
2-26-71

16. Date T.D. Reached
3-15-71

17. Date Compl. (Ready to Prod.)
4-2-71

18. Elevations (DF, RKB, RT, GR, etc.)
3727 KB

19. Elev. Casinghead
3715

20. Total Depth
10,796'

21. Plug Back T.D.
10,752'

22. If Multiple Compl., How Many
-

23. Intervals Drilled By
Rotary Tools: All
Cable Tools: 0

24. Producing Interval(s), of this completion - Top, Bottom, Name
10,608 - 10,707' Morrow

25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run
BHC Sonic - S.N.P., Dual Induction Laterolog, Microlog

27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48	420'	17 1/2"	250 SX	None
8 5/8"	24	1,982'	11 3/4"	250 SX	None
5 1/2"	17 & 20	10,796'	7 7/8"	1,000 SX	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 3/8"	10,710	10,562

31. Perforation Record (Interval, size and number)

10,608 - 10,618	10 - 20 holes - .44"
10,631 - 10,639	8 - 16 holes - .44"
10,647 - 10,657	10 - 20 holes - .44"
10,699 - 10,707	8 - 16 holes - .44"

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	None

33. PRODUCTION

Date First Production
3-23-71

Production Method (Flowing, gas lift, pumping - Size and type pump)
Flowing (See attached Form C-122)

Well Status (Prod. or Shut-in)
Shut-in

Date of Test
4-2-71

Hours Tested
4

Choke Size
Various

Prod'n. For Test Period
Oil - Bbl. Gas - MCF Water - Bbl. Gas - Oil Ratio

Flow Tubing Press. Casing Pressure Calculated 24-Hour Rate
Oil - Bbl. Gas - MCF Water - Bbl. Oil Gravity - API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Vented during official 4-point test

Test Witnessed By
Lloyd Murphy

35. List of Attachments
DST Data, Logs, Deviation Survey, Form C-122, Form C-105

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED J. C. Raney TITLE Petroleum Engineer DATE 4-8-71

INSTRUCTIONS

This form is to be filled with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon <u>8918</u>	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn <u>9498</u>	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka <u>10095</u>	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates <u>812</u>	T. Mesa <u>Barnett 10,710</u>	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen <u>1634</u>	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres <u>2339</u>	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzte _____
T. Glorieta <u>3740</u>	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb <u>5220</u>	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo <u>5862</u>	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp <u>7070</u>	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) <u>8575</u>	T. _____	T. Penn. "A" _____	T. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	812		Red beds - Salt				
812	2339		Sand, Anhydrite				
2339	3740		Dolomite				
3740	5862		Sand & Dolomite				
5862	7070		Red-green shale & dolo				
7070	10095		Lime, Some shale				
10095	10475		Gray shale & lime				
10475	10710		Lime, sand & gray shale				
10710	10796		Gray shale				

MEXICO OIL CONSERVATION COMMISSION
 MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Form C-122
 Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 4-2-71	
Company Pennzoil United, Inc.			Connection None		
Pool Wildcat			Formation Morrow		Unit A
Completion Date 3-22-71		Total Depth 10,796	Plug Back TD 10,752	Elevation 3727 DF	Farm or Lease Name Aid-State
Csg. Size 5 1/2	Wt. 20.0 17.0	d 4.408 4.892	Set At 10,796	Perforations: From 10,608 To 10,707	Well No. 1
Tbg. Size 2 3/8 EUE	Wt. 4.7	d 1.995	Set At 10,710	Perforations: From To	Unit Sec. Twp. Rge. A 24 17S 28E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10,562	County Eddy
Producing Thru Tubing		Reservoir Temp. °F 156 @ 10,500	Mean Annual Temp. °F 60°	Baro. Press. - P _a 13.2	State New Mexico
L 10,658	H 10,658	G _g .667	% CO ₂ .0034	% N ₂ .0068	% H ₂ S 0
Prover			Meter Run X	Taps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow
SI							3112	47			
1.	3.068		2.00	470	7	67	2310	64			1.0 Hr
2.	3.068		2.00	480	10	75	1382	65			1.0 Hr
3.	3.068		2.00	490	14	75	870	66			1.0 Hr
4.	3.068		2.00	490	16	75	575	67			1.0 Hr
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Fl.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	21.32	58.158	483.2	.9933	1.224	1.052	1586
2	21.32	70.228	493.2	.9840	1.224	1.050	1893
3	21.32	83.933	503.2	.9840	1.224	1.051	2265
4	21.32	89.728	503.2	.9840	1.224	1.051	2421
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	36012	cf/bbl.
1.	.719	527	1.38	1.052	A.P.I. Gravity of Liquid Hydrocarbons	53.5 @ 60°F	Deg.
2.	.734	535	1.404	1.050	Specific Gravity Separator Gas	.667	X X X X X X X X
3.	.749	535	1.404	1.051	Specific Gravity Flowing Fluid	X X X X X	
4.	.749	535	1.404	1.051	Critical Pressure	671.7	P.S.I.A. P.S.I.A.
5.					Critical Temperature	380.9	R R

NO.	P _c 3941.1	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{15,532}{3,625}$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3187$
1	2323.2	3478.4	12098	3434		
2	1395.2	1903.9	3625	11907		
3	883.2	813.0	661	14871		
4	588.2	542.0	320	15212		
5						

Absolute Open Flow 2496 Mcfd @ 15.025 Angle of Slope θ 51° 27' Slope, n .79663

Remarks: _____

Approved By Commission: _____ Conducted By: West Texas Engineering Service, Inc. Calculated By: _____ Checked By: _____

J N Casparis H L Hagler

PENNZOIL UNITED, INC.

AID STATE NO. 1
660 FNL & FEL OF
SEC. 24, T-17-S, R-28-E
EDDY COUNTY, NEW MEXICO

71 MAY 10 AM 8 29

DRILL STEM DATA:

DST #1 10,309-400'; Morrow - 30" pre-flow, weak blow increased to good 5 min - decreased after 15 min to weak; 1 hr 30 min ISIP - 1 hr 30 min FF - very weak blow throughout; 2 1/2 hr FSIP; recovered 60' sli GCØM w/tr. dead oil; Sample chamber contained 80#; .5 CFG - no fluid; HPI 5076# - HPO 5064#; IF 94# - FF 94#; ISIP 151#; FSIP 207#; BHT 166 degrees

DST #2 10,633-663'; Morrow - 30" pre-flow, strong blow; GTS 7 min on 1/2" ck, TP 375#; G.V. 2.5 MMCFGPD; 1 hr 30 min ISIP - 2 hr FF, 5/8" ck - TP 775#; G.V. 7.5 MMCFPD w/strong spray of distillate after 1 hr 30 min on final flow, no gauge on dist. - 4 hr FSIP - R.O. undetermined amount of dist. & gas cut mud; Spl. chamber had 1450# pressure, 8.2 CFG, no liquids; HPI 5342# - HPO 5080#; IF 736#, FF 1427#; ISIP 4357#; FSIP 4405#; BHT 145 degrees

Str. Pkr DST #3 6970-7066'; Abo - 30" pre-flow, fair blow; 2 hr ISI 2 hr FF, fair blow decreased to weak - no gas to surface; 4 hr FSIP; rec 5650' of salt water (18,000 ppm) - Sample chamber had 200# press. & 2360cc salt water; HPI & HPO 3376#; IF 137# - FF 2413# - ISIP 2601# FSIP 2601# - Went in hole & circulated & conditioned mud -

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MAR 30 1971

O. C. C.

ALBUQUERQUE OFFICE

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee
5. State Oil & Gas Lease No.
K 3630

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 -" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL OTHER-	7. Unit Agreement Name
2. Name of Operator Pennzoil United, Inc.	8. Farm or Lease Name Aid State
3. Address of Operator P. O. Drawer 1828 - Midland, Texas 79701	9. Well No. 1
4. Location of Well UNIT LETTER <u>A</u> <u>660</u> FEET FROM THE <u>North</u> LINE AND <u>660</u> FEET FROM THE <u>East</u> LINE, SECTION <u>24</u> TOWNSHIP <u>17-S</u> RANGE <u>28-E</u> NMPM.	10. Field and Pool, or Wildcat Wildcat
15. Elevation (Show whether DF, RT, GR, etc.) 3715' G.L.	12. County Eddy

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

<p>NOTICE OF INTENTION TO:</p> <p>PERFORM REMEDIAL WORK <input type="checkbox"/></p> <p>TEMPORARILY ABANDON <input type="checkbox"/></p> <p>PULL OR ALTER CASING <input type="checkbox"/></p> <p>OTHER _____ <input type="checkbox"/></p> <p>PLUG AND ABANDON <input type="checkbox"/></p> <p>CHANGE PLANS <input type="checkbox"/></p>	<p>SUBSEQUENT REPORT OF:</p> <p>REMEDIAL WORK <input type="checkbox"/></p> <p>COMMENCE DRILLING OPNS. <input type="checkbox"/></p> <p>CASING TEST AND CEMENT JOBS <input checked="" type="checkbox"/></p> <p>OTHER _____ <input type="checkbox"/></p> <p>ALTERING CASING <input type="checkbox"/></p> <p>PLUG AND ABANDONMENT <input type="checkbox"/></p>
--	---

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Drilled 7 7/8" hole to 10,796'. Ran logs. - Ran 2037' of 5 1/2" OD, 20#, N-80 & 8759' of 5 1/2" OD, 17#, N-80 casing to 10,796' w/D.V. tool set @ 8999'. Cemented 1st stage w/375 sx Class "C" 2% gel w/7 1/2# salt & 3/4 of 1% CFR-2. Cemented 2nd stage w/625 sx Class "C" 2% gel w/7 1/2# salt per sack. Plug down @ 1:50 A.M. 3-17-71.

Ran temperature survey & located TOC @ 5430'

On 3-20-71 moved in completion unit. Tested casing to 4,000# for 30 minutes. Tested O.K. - Prep to commence completion operations.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED W.P. Sedwick TITLE Drilling Superintendent DATE 3-23-71

APPROVED BY W.A. Gessett TITLE OIL AND GAS INSPECTOR DATE MAR 30 1971

CONDITIONS OF APPROVAL, IF ANY:

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MAR 30 1971

O. C. C.

ARTESIA, OFFICE

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

MAY 10 1971

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
K 3630

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 -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL GAS WELL OTHER

2. Name of Operator
Pennzoil United, Inc.

3. Address of Operator
P. O. Drawer 1828 - Midland, Texas 79701

4. Location of Well
UNIT LETTER A 660 FEET FROM THE North LINE AND 660 FEET FROM
THE East LINE, SECTION 24 TOWNSHIP 17-S RANGE 28-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
3715' G.L.

7. Unit Agreement Name

8. Farm or Lease Name
Aid State

9. Well No.
1

10. Field and Pool, or Wildcat
Wildcat

12. County
Eddy

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

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Ran temperature survey & located TOC @ 5430'

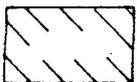
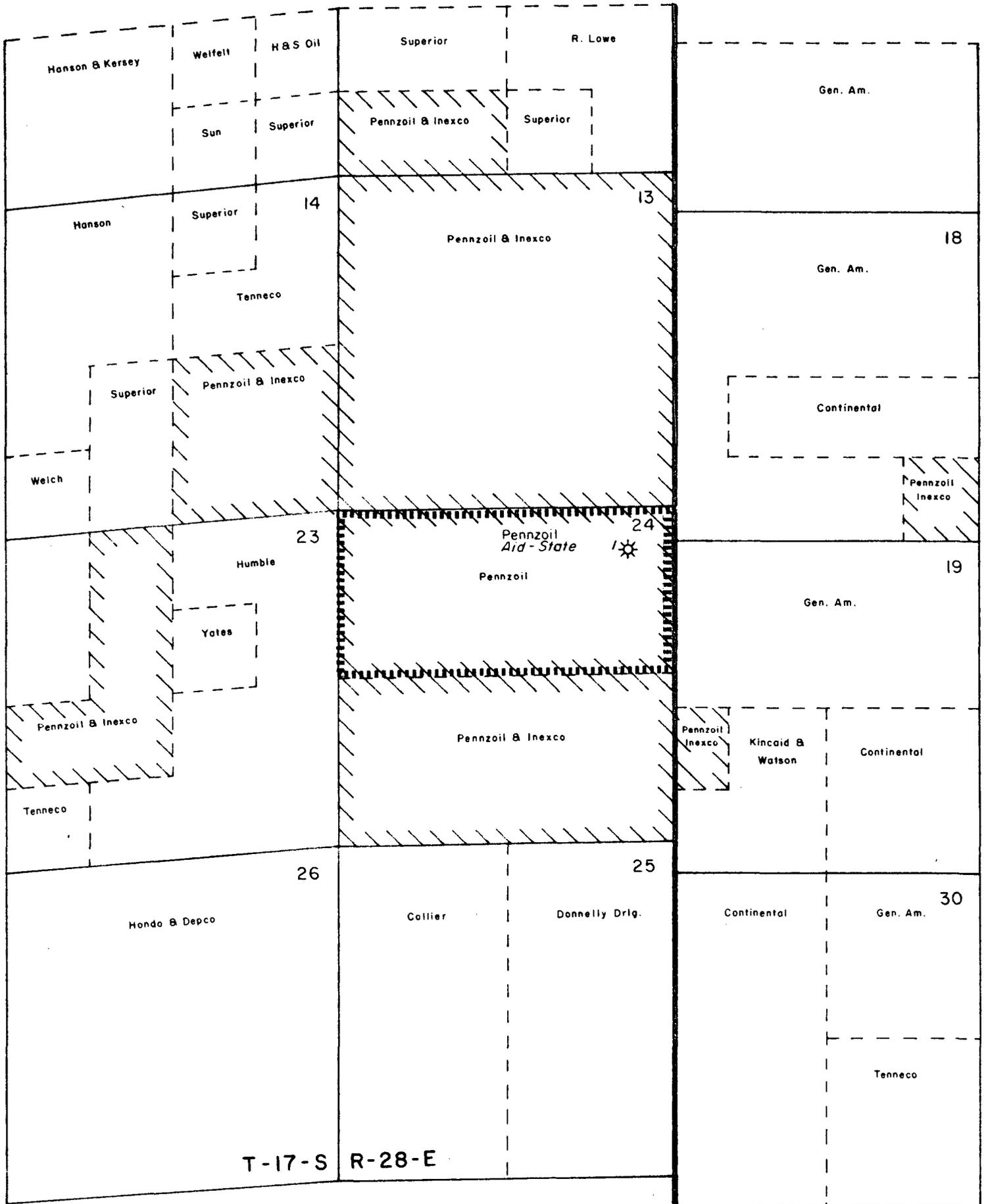
On 3-20-71 moved in completion unit. Tested casing to 4,000# for 30 minutes. Tested O.K. - Prep to commence completion operations.

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SIGNED W.P. Sedwick TITLE Drilling Superintendent DATE 3-23-71

APPROVED BY W.A. Gussett TITLE OIL AND GAS INSPECTOR DATE MAR 30 1971

CONDITIONS OF APPROVAL, IF ANY:



Pennzoil United, Inc. Acreage



Proration Unit Outline

No other wells drilled to Morrow or deeper.

PENNZOIL UNITED, Inc.

WESTERN DIVISION MIDLAND, TEXAS

AID AREA

EDDY COUNTY, NEW MEXICO

SCALE: 1" = 2000' MAY 5, 1971