



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

November 3, 1986

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Anadarko Production Company
P.O. Box 1330
Houston, Texas 77251-1330

Attention: Theresa A. Rausheck
Senior Regulatory Assistant

Re: Administrative Order NFL-142

Dear Ms. Rausheck:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and Oil Conservation Division Order No. R-6013 for the following described well:

E.W. Walden Well No. 14, located 550 feet from the South line and 2125 feet from the West line of Section 15, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) The well for which a finding is sought is to be completed in the Penrose Skelly Pool, and the standard spacing unit in said pool is 40 acres.

(4) A standard 40-acre oil proration unit comprising the SE/4 SW/4 (Unit N) of Section 15, Township 22 South, Range 37 East, is currently dedicated to the applicant's E.W. Walden Well No. 6 also located in Unit N of said Section.

(5) Said unit is not being effectively and efficiently drained by the existing well(s) on the unit.

(6) The drilling and completion of the well for which a finding is sought should result in the production of additional gas reserves underlying the subject proration unit which would not otherwise be recovered.

(7) All the requirements of Division Order No. R-6013 have been complied with, and the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

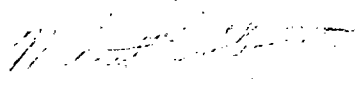
(8) In order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well spacing requirements for the pool.

IT IS THEREFORE ORDERED THAT:

(1) The applicant is hereby authorized to drill the E.W. Walden Well No. 14 as described above, as an infill well on the existing 40-acre oil proration unit comprising the SE/4 SW/4 (Unit N) of Section 15, Township 22 South, Range 37 East, NMPM, Penrose Skelly Pool, Lea County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Sincerely,


Michael E. Stogner
Examiner

N.M.O.C.D. - Hobbs

Anadarko Production Company
P.O. Box 1330
Houston, Texas 77251-1330

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Sincerely,

Michael E. Stogner
Examiner

N.M.O.C.D. - Hobbs



19 September 1984

NFLRK01

*Received
Sept. 21, 1984*

State of New Mexico
Energy & Minerals Department
525 Camino de los Marquez
Santa Fe, New Mexico 87501

Attention: Michael E. Stogner

Gentlemen:

Enclosed pursuant to Order No. R-6013-A of the New Mexico Oil Conservation Division are (2) two copies of the Infill Finding for the E. W. Walden #14 well.

If additional information is required to complete the NGPA Application on this well, please advise.

Sincerely,

ANADARKO PRODUCTION COMPANY

Theresa A. Rausheck

Theresa A. Rausheck
Senior Regulatory Assistant

Enclosures

TR/lmm

**NATURAL GAS POLICY ACT
Infill Findings**

E. W. Walden No. 14

Rule 5 - Forms C101 & C102 - Attached

**Rule 6 - Penrose Skelly Pool
40 Acre Proration Units**

Rule 7 - NA

Rule 8A-F - Attached

Rule 8G - The E. W. Walden No. 6 was originally drilled into the upper Grayburg. An attempt to deepen to the lower Grayburg found the casing collapsed. The No. 6 was converted to injection in the Penrose Sand. The upper Grayburg open hole section was also left open. The No. 14 is a replacement well in the Grayburg.

Rule 9A - Structure Map - Attached

B - The ultimate recovery on the No. 14 is estimated to 50 MBO. This was determined through decline curve analysis and volumetrics.

Lease Decline Curve and Porosity Log - Attached

Rule 8A-F - Wells drilled on Proration Unit
SE/4 SW/4 Section 15, T22S,R37E

E. W. Walden No. 6

660 FSL & 1980 FWL Section 15, T22S, R37E

Lea County, New Mexico

Spud Date - 3-25-37

Completion Date - 6-14-37

Mechanical Problems - Collapsed Casing

Converted to Water Injection in Penrose & Upper Grayburg - 2-21-73.

Current Injection Rate - 321 BW/PD @ 1375 psi.

2-225-78224

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-83

5A. Indicate Type of Lease
STATE FEDERAL

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name
b. Type of Well OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Name of Lease Name E.W. Walden
2. Name of Operator Anadarko Production Company		9. Well No. 14
3. Address of Operator P.O. Box 806 Eunice, New Mexico 88231		10. Field and Loc. of Well Penrose Skelly
4. Location of Well UNIT LETTER <u>N</u> LOCATED <u>2125'</u> FEET FROM THE <u>West</u> LINE AND <u>550'</u> FEET FROM THE <u>South</u> LINE OF SEC. <u>15</u> TWP. <u>22S</u> RGE. <u>37E</u> NMPM		11. County Lea
18. Proposed Depth 4000'		19A. Formation Grayburg
20. Rotary or C.T. Rotary		
21. Elevations (Show whether DF, RT, etc.) 3389.1 GR	21A. Kind & Status Plug. Round Blanket	21B. Drilling Contractor Unknown
		22. Approx. Date Work will start May 2, 1983

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11"	8-5/8"	24#	1150'	500 8x	Surface
7-7/8"	5 1/2"	15.5#	4000'	600 8x	1000'

1. MIRURT.
2. Drill 11" hole to 1150' or into top of Anhydrite.
3. Run 1150' of 8-5/8", 24# csg. Circ cement (Class C) w/2% Cacl.
4. Nipple Up. Set BOP. Test to 800# Psi after 12 hrs WOC. Drill out w/7-7/8" bit.
5. Drill to 4000' or about 100' into top of San Andres.
6. Run 4000' of 5 1/2", 15.5# csg to TD. Cement w/Class C cement, using sufficient cement to put TOC @1000' from surface.
7. Run Gamma Ray Neutron Logs.
8. Complete as Grayburg producer.
9. POP.

APPROVAL VALID FOR 180 DAYS
PERMIT EXPIRES 10/26/83
UNLESS DRILLING UNDERWAY

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW ZONE. GIVE SHUT-IN PREVENTION PROGRAM, IF ANY.

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

Original John C. English Title Area Supervisor Date April 25, 1983

ORIGINAL SIGNED BY HARRY SEXTON
DISTRICT I SUPERVISOR

APR 26 1983

APPROVED BY _____ TITLE _____ DATE _____

ACTING TITLE OF APPROVAL IF ANY:

NO. OF COPIES RECEIVED	
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FILE	
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LAND OFFICE	
OPERATOR	

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

Form O-102
Revised 1-1-62

See Instructions Type of Lease
State Fee

3. State Oil & Gas Lease No.

1. TYPE OF WELL

OIL WELL GAS WELL GUY OTHER _____

2. TYPE OF COMPLETION

NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. REDEV. OTHER _____

7. Unit Agreement Name

8. Farm or Lease Name
E.W. Walden

9. Well No.
14

10. Field and Pool, or Wildcat
Penrose Skelly

11. Name of Operator
Anadarko Production Company

12. Address of Operator
P.O. Box 806 Eunice, New Mexico 88231

UNIT LETTER **N** LOCATED **2125** FEET FROM THE **WPA** LINE AND **550** FEET FROM _____

13. Date Spudded **5-11-83** 14. Date T.D. Reached **5-20-83** 15. Date Compl. (Ready to Prod.) **5-28-83**

12. County
Lea

16. Elevations (DF, HKB, NT, CK, etc.) **3389.7 GR** 17. Elev. Casinghead **3387'**

18. Total Depth **4060'** 19. Ring Neck T.D. **4045'** 20. If Multi-Stage Complet., How Many _____

21. Intervals Drilled By: Rotary Tools _____ Cable Tools _____
0-4060'

22. Producing Interval(s), of this completion - Top, bottom, Name
3651'-3844' Grayburg

23. Was Directional Sur Made
Yes

24. Type Electric and Other Logs Run
Dual Spaced Neutron Log

25. Was Well Cared
No

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	MOLE SIZE	CEMENTING RECORD	AMOUNT PULL
8-5/8"	24#	1102'	12 1/2"	930 Δ x Class C	
5 1/2"	15.5# & 14#	4046'	7-7/8"	350 Δ x Light	
				200 Δ x Class C	

27. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

28. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-3/8"	3918'	

29. Perforation Record (Interval, size and number)

Interval	Size	Number
3651-55'	3857-61'	2 SPF
3716-20'	3686-92'	76 holes
3776-80'	3761-65'	1/2" holes
3814-18'	3790-94'	3840-44'

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
3651'-3844'	Acidized w/3000 gals 15%
3651'-3844'	Fractured w/60,000 gals gel fluid w/93,000# 20/40 sand
	65,000# 10/20 sand.

31. PRODUCTION

Date First Production **5-28-83** Production Method (Flowing, gas lift, pumping - Size and type pump) **2" x 1 1/2" x 16' Insert Pump** Well Status (Prod. or Shut-in) **Producing**

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Hbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
6-4-83	24			43	21.9	173	509

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)
	25#					35.7

32. Disposition of Gas (Sold, used for fuel, vented, etc.) **Sold** Test Witnessed By **Dale Kelton**

33. List of Attachments
Copy of Dual Spaced Neutron Log.

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.

Dale Kelton Field Engineer

INSTRUCTIONS

This form is to be filed 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. Anby <u>1121</u> | T. Canyon _____ | T. Ojo Alamo _____ | T. Penn "B" _____ |
| T. Salt <u>1256</u> | T. Strawn _____ | T. Kirtland-Fruitland _____ | T. Penn "C" _____ |
| B. Salt <u>2400</u> | T. Atoka _____ | T. Pictured Cliffs _____ | T. Penn "D" _____ |
| T. Yates <u>2587</u> | T. Miss _____ | T. Cliff House _____ | T. Leadville _____ |
| T. 7 Rivers <u>2785</u> | T. Devonian _____ | T. Menefee _____ | T. Madison _____ |
| T. Queen <u>3340</u> | T. Silurian _____ | T. Point Lockout _____ | T. Ebert _____ |
| T. Grayburg <u>3646</u> | T. Montoya _____ | T. Manco _____ | T. McCracken _____ |
| T. San Andrea <u>3900</u> | T. Simpson _____ | T. Gallup _____ | T. Ignacio Qute _____ |
| T. Glorieta _____ | T. McKee _____ | Base Greenhorn _____ | T. Granite _____ |
| T. Pedregal _____ | T. Ellenburger _____ | T. Dakota _____ | T. _____ |
| T. Elmhurst _____ | T. Gt. Wash _____ | T. Morrison _____ | T. _____ |
| T. Tebo _____ | T. Granite _____ | T. Todilto _____ | T. _____ |
| T. Diskard _____ | T. Delaware Sand _____ | T. Estrada _____ | T. _____ |
| T. Abo _____ | T. Bone Springs _____ | T. Wingate _____ | T. _____ |
| T. Wolfcamp _____ | T. _____ | T. Chinle _____ | T. _____ |
| T. Penn _____ | T. _____ | T. Permian _____ | T. _____ |
| T. Cisco (Bough C) _____ | 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	215	215	Sand & Redbed				
215	1120	905	Redbed				
1120	1260	140	Anhydrite				
1260	2400	1140	Salt				
2400	2817	417	Salt & Anhydrite				
2817	3635	818	Lime & Sand				
3635	4060	425	Dolomite & Lime				

RECEIVED
 JUN 15 1983
 C.C.O.
 HOBBS OFFICE

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form O-102
Supersedes O-
110-110-1-1-1

All distances must be from the outer boundaries of the Section

Anadarko Production Company		E. W. Walden		14
-----------------------------	--	--------------	--	----

Section	Range	Township	County
N	15	22 South	Lea County

Actual Section Containing Well: 2125 feet from the West 550 feet from the South

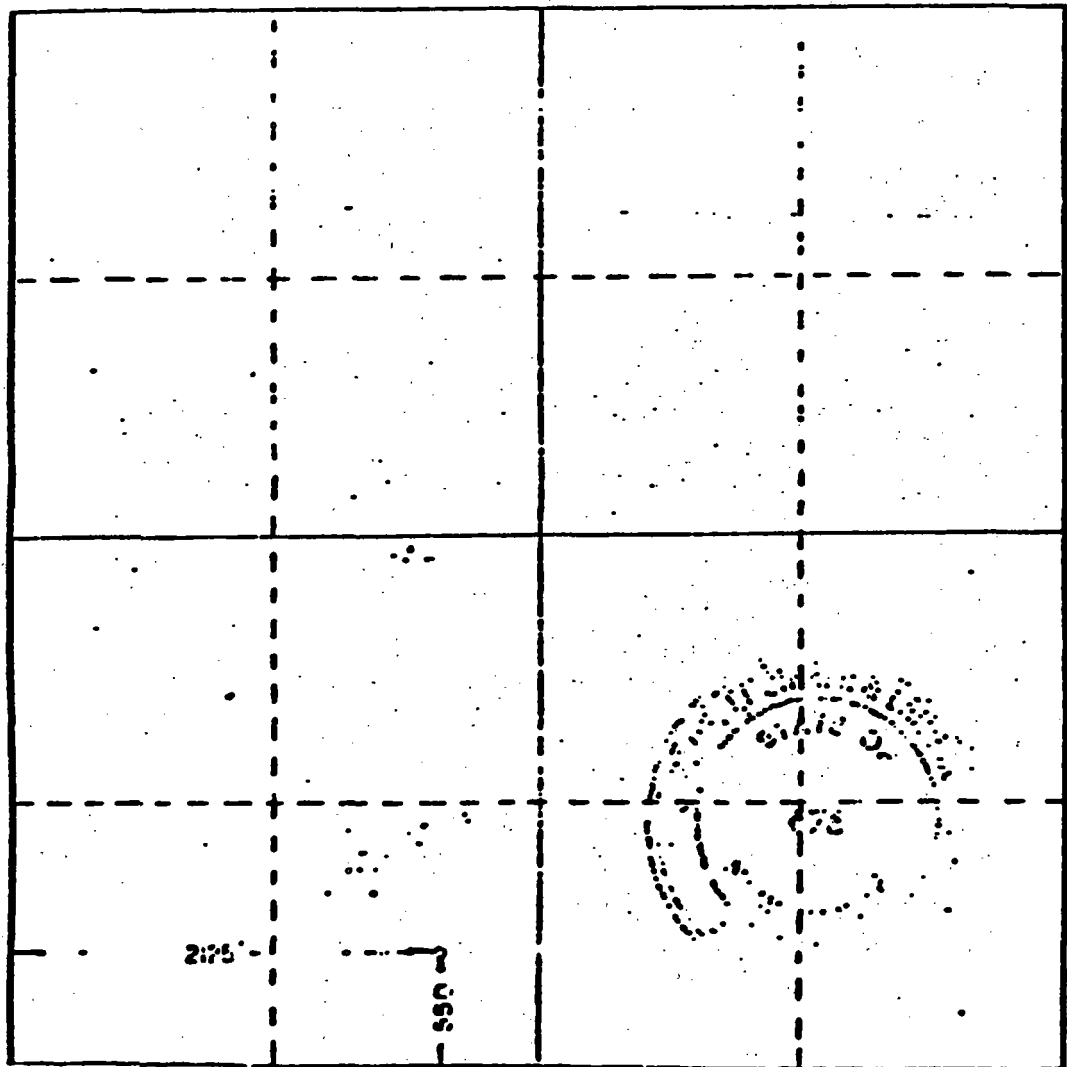
Section and Legal Description	Owner	Acres
3389.1	Walden, E. W.	40

1. Outline the acreage dedicated to the subject well in colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, lease-pooling etc.

Yes No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated (if so reverse side of this form if necessary.) _____

No allowance will be assigned to the well until all interests have been consolidated (by communitization, unitization, lease-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

E. W. Walden
E. W. Walden

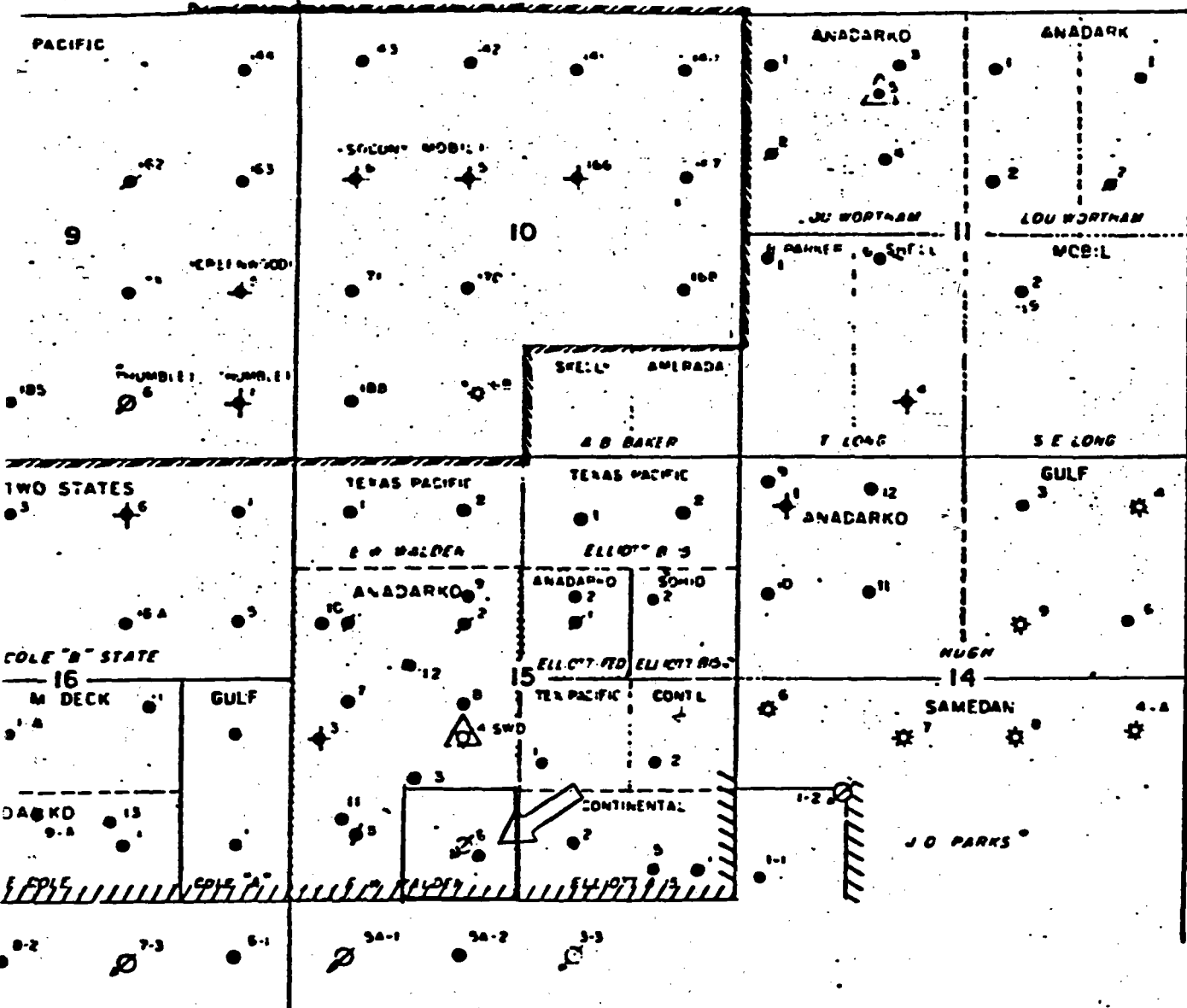
I hereby certify that the well location shown on this plat was plotted from the notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

April 21, 1983

E. W. Walden
E. W. Walden

Certification No. _____

R 37 E



T
22
S

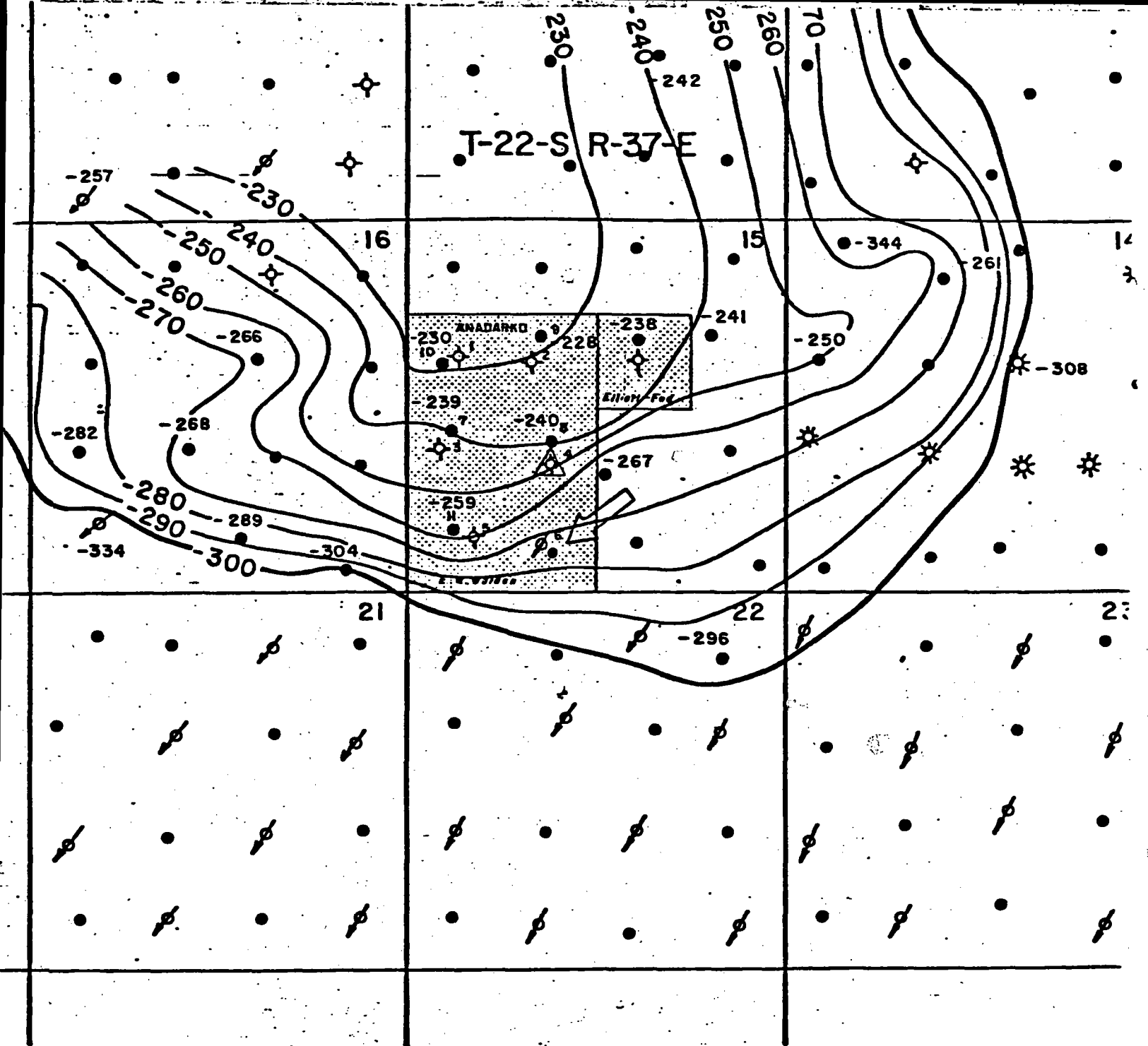
Anadarko
Production Company


E. W. WALDEN LEASE
LEA CO., NEW MEXICO

PROPOSED LOCATION

Interpretation By: M. O. B.

Date: 4-82 Scale: 1" = 2000'




Anadarko
 Production Company

E.W. WALDEN LEASE
Penrose Skelly Field
 Lea County, New Mexico

STRUCTURE MAP
TOP OF GRAYBURG
 C. I. - 10'

Interpretation By: M. O. B.
 Date: NOV. 1981 Scale: 1" = 2000'

EXHIBIT 3

FIELD: PENROSE Skelly

RESERVOIR: GRAYBUIRG

STATE: NM

LEASE/UNIT: E.W. Walden "P"

PERFS: _____

OPERATOR: APC

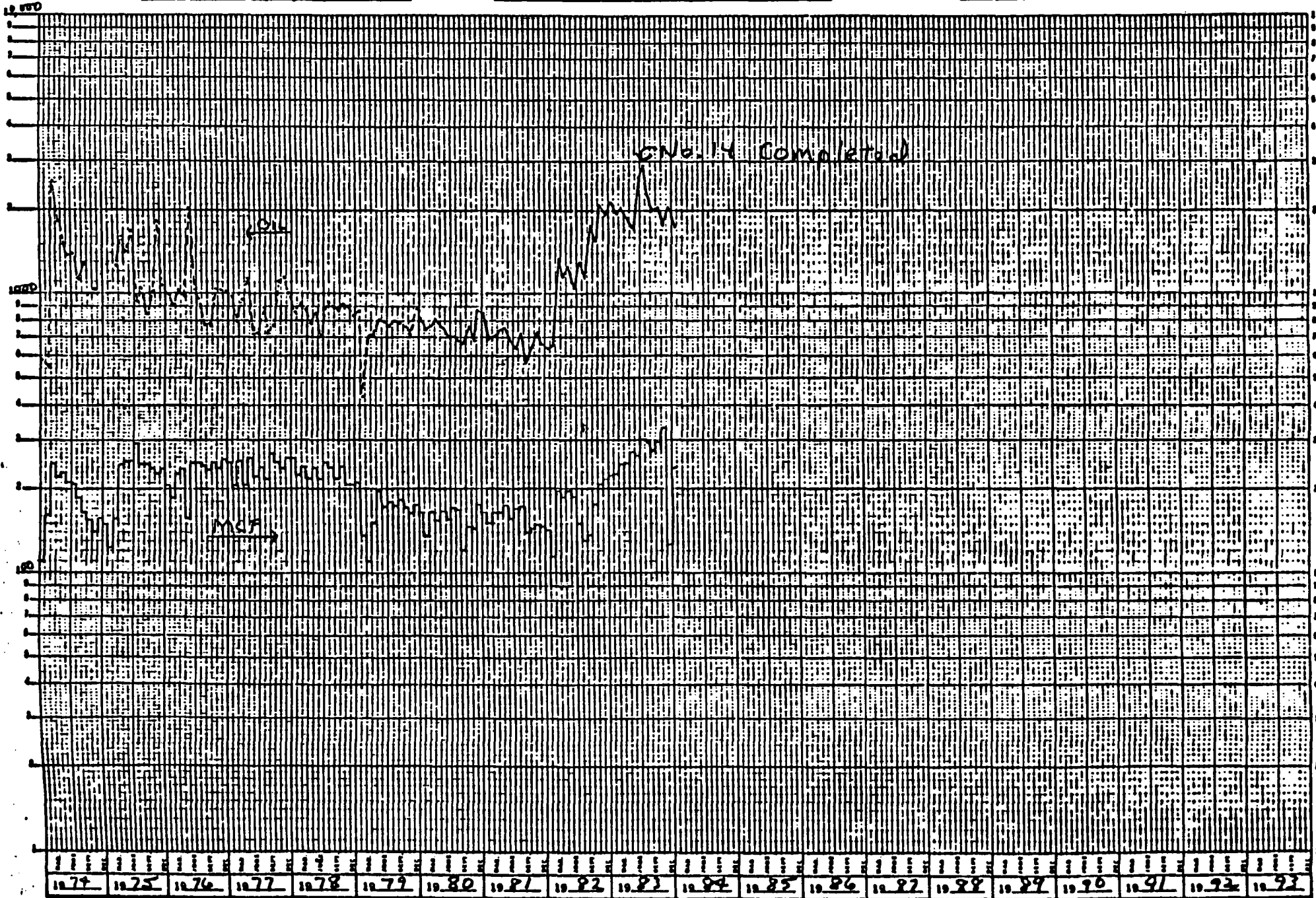
NO. WELLS: 5 10

CO./PH. _____

LOCATION: 15-22-37

10
K
A
V

BBL. OR MCF PER MO



WELL CODE NO. 2029179 (OIL)

LEASE NAME E.W. Walden

WELL NO. _____



DUAL SPACED NEUTRON LOG

COMPANY Anoderka Production Company
 WELL E.W. Walden #14
 FIELD Penrose Skally
 COUNTY Lea STATE New Mexico
 Location 550' FSL & 2125' FEL
 Sec. 15 Twp. 22-S Rge. 37-E

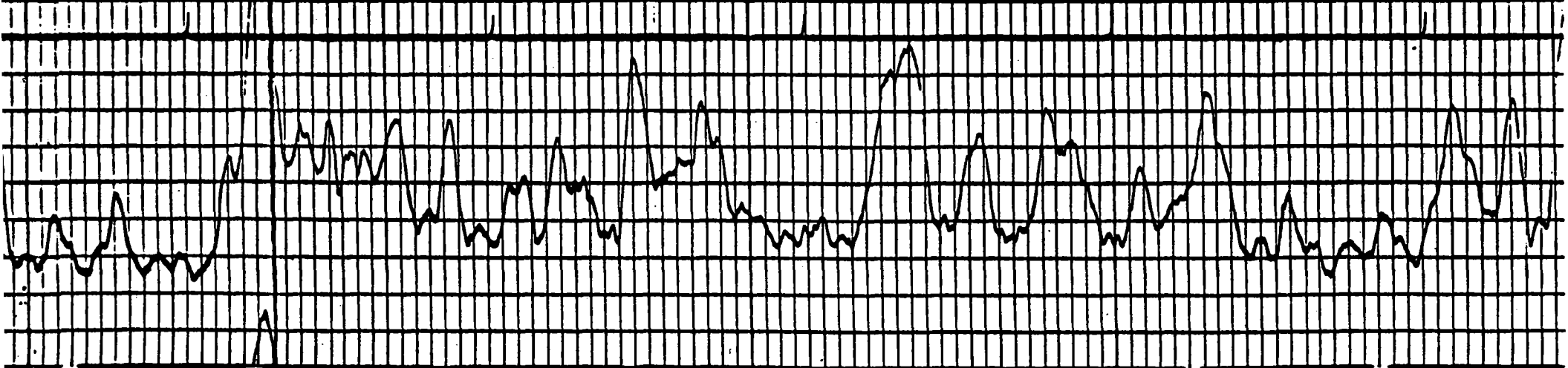
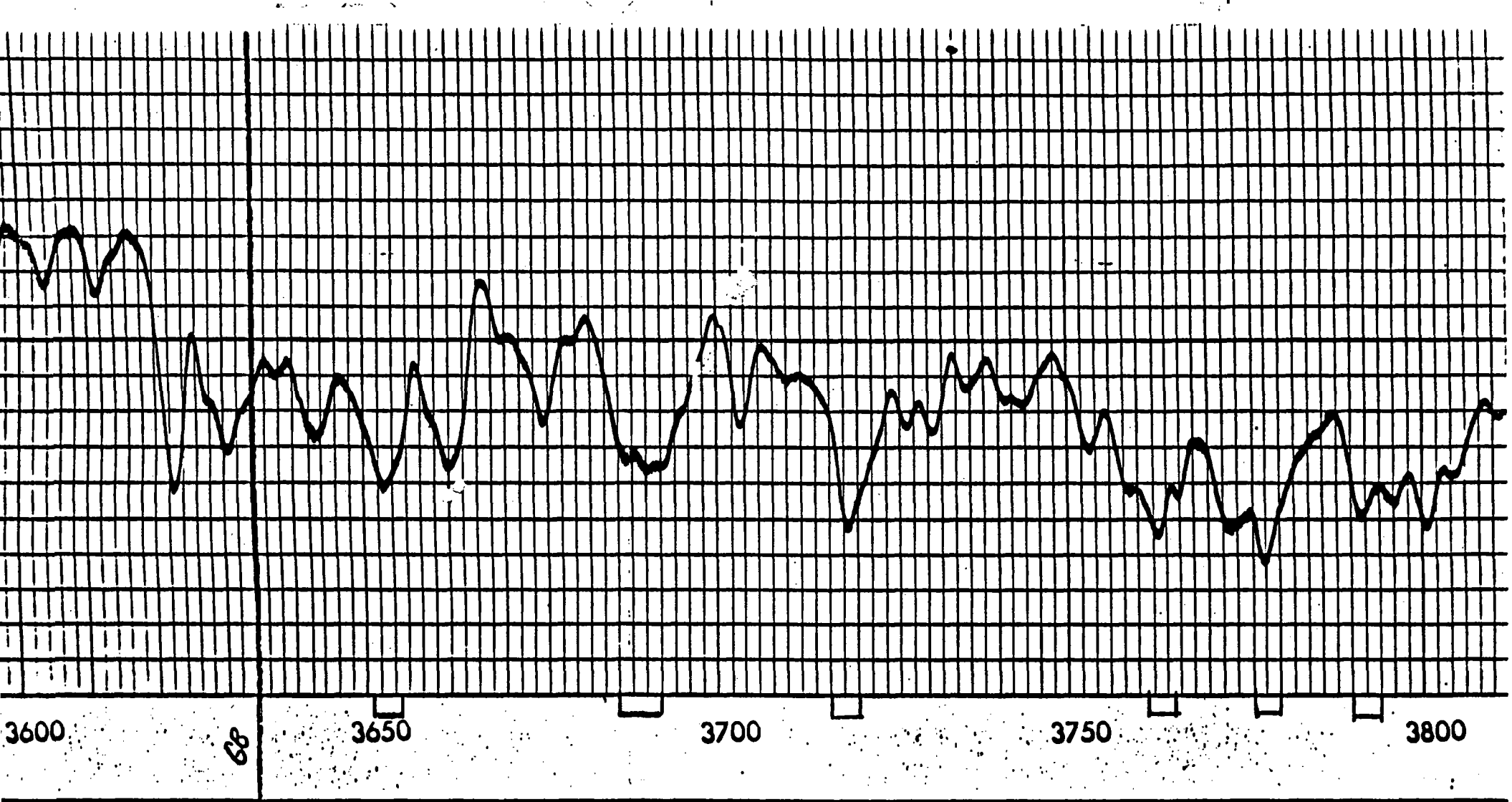
COMPANY Field Print
 WELL
 FIELD
 County
 State

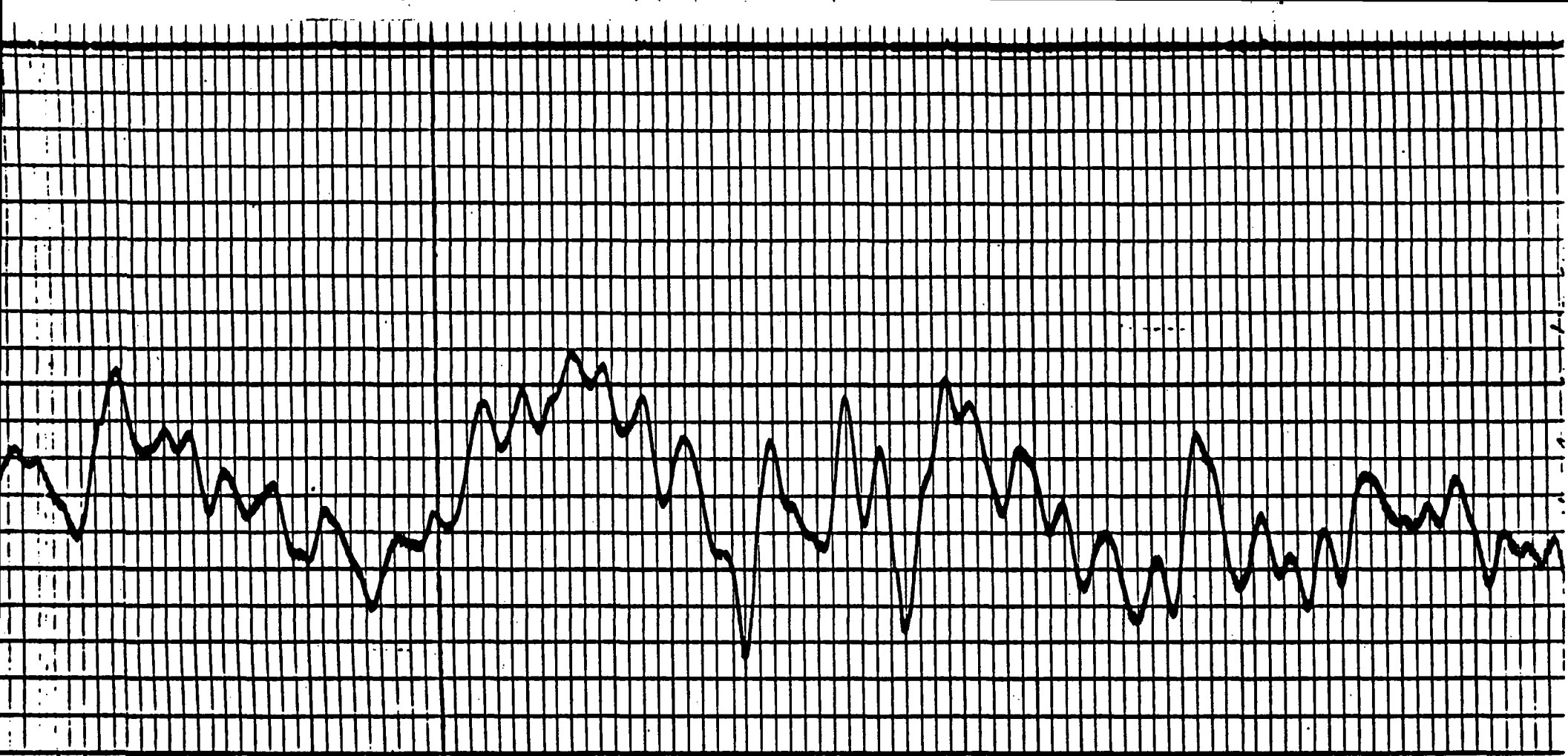
Other Services:
Perf & Tops
Perfs & Tops
MARKED

Permanent Datum GL Elev. 3392.7 Elev.: K.B. 3390.9
 Log Measured From KB 9 Ft. Above Perm. Datum D.F. NA
 Drilling Measured From KB G.L. 3392.7

Date	<u>5-24-83</u>
Run No.	<u>0NR</u>
Type Log	<u>DSN</u>
Depth—Driller	<u>4047</u>
Depth—Welex	<u>4049</u>
Bottom Logged Interval	<u>4048</u>
Top Logged Interval	<u>2048</u>
Type Fluid in Hole	<u>water</u>
Salinity, PPM Cl.	<u>NA</u>
Density	<u>NA</u>
Level	<u>Fall</u>
Max. rec. temp., deg. F.	<u>NA</u>
Operating Rig time	
Recorded By	<u>C. Paulk</u>
Witnessed by	<u>Mr. Ziebert</u>

RUN No.	Bit	BORE-HOLE RECORD		Size	Wgt.	CASING RECORD	
		From	To			From	To
				<u>5 1/2</u>	<u>16.5</u>	<u>500'</u>	<u>4050'</u>





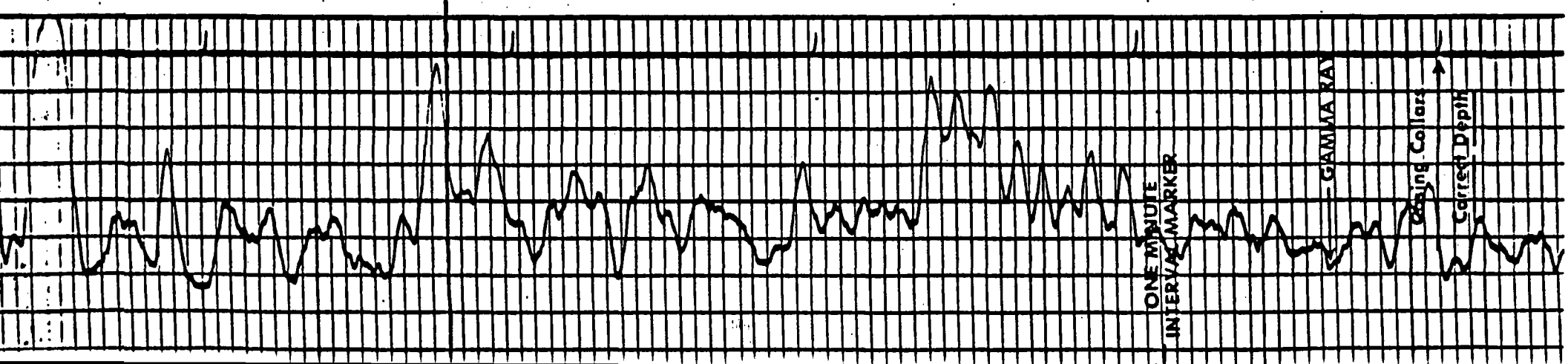
3850

SA

3900

3950

4000



ONE MINUTE
INTERVAL MARKER

GAMMA RAY

Casing Collars

Correct Depth

CERTIFICATE OF SERVICE


This is to certify that I have served upon the below listed Offset operators copies of the Infill Findings as required under Rule 11 of the New Mexico Oil Conservation Division Order No. R-6013-A.

Gulf Oil Corporation
P. O. Box 1635
Houston, Texas 77251

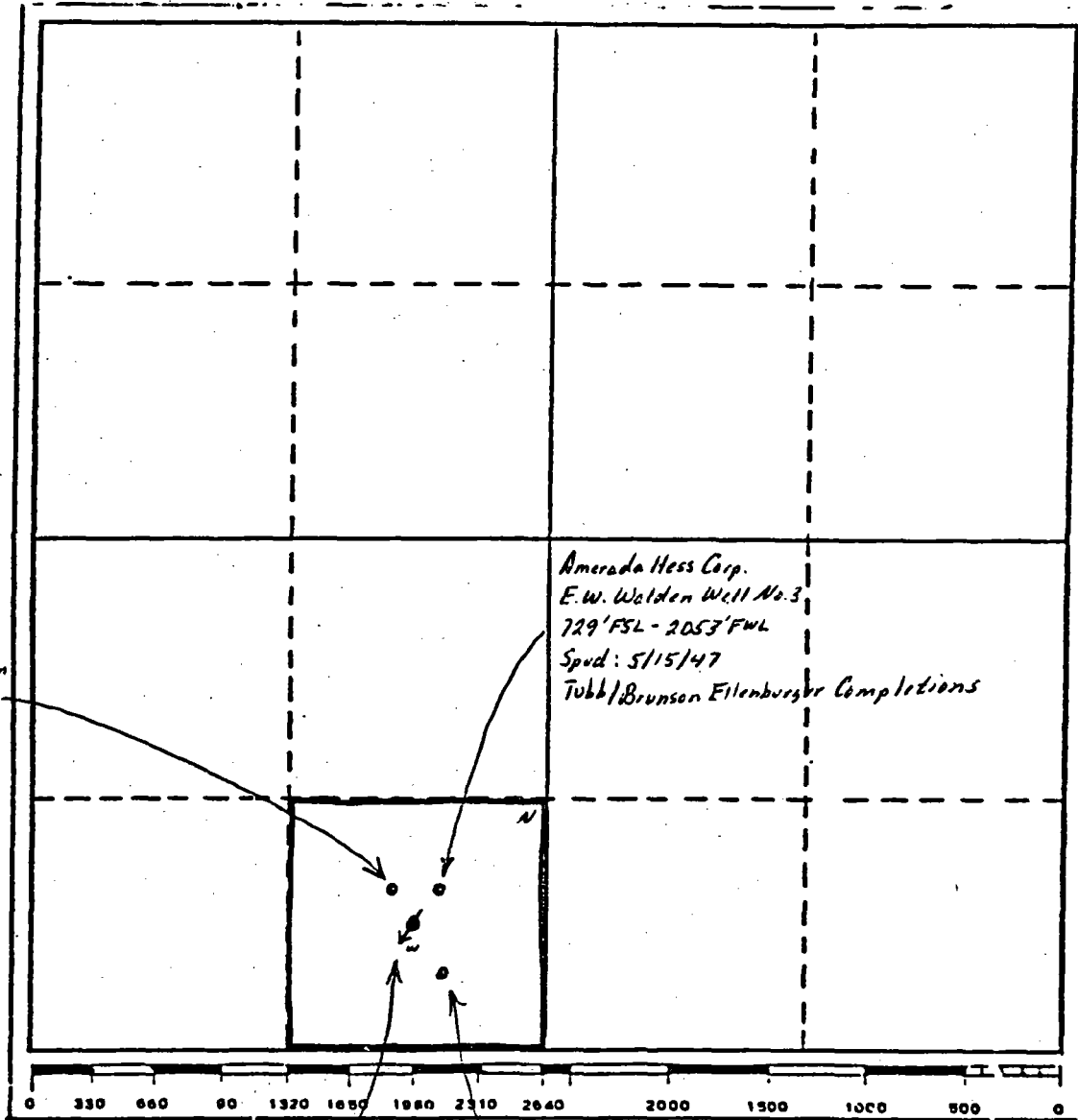
Sun Oil
P. O. Box 2880
Dallas, Texas 75221

Conoco
P. O. Box 2197
Houston, Texas 77252

ANADARKO PRODUCTION COMPANY


Richard J. Peterson
Manager, Hydrocarbon Sales

Section 15, Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico



Amerada Hess Corporation
 E.W. Walden Well No. 7
 754' FSL - 1957' FWL
 Spud: 10/22/47
 Blinbery/Drinkard
 Completions

Amerada Hess Corp.
 E.W. Walden Well No. 3
 729' FSL - 2053' FWL
 Spud: 5/15/47
 Tubb/Brunson Ellenburger Completions

Anadarko Production Company
 E.W. Walden Well No. 6
 660' FSL - 1980' FWL
 Spud: 3/26/37
 Penrose-Skelly Producer until
 converted to a water injection well in
 the Penrose Skelly Pool 2/20/73

Application well

Cumulative Production:
 131150 MCF
 75293 B.O.

(PB - 1974)
 (1976)

(Langlie Men Queen)

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4760
Order No. R-4374

APPLICATION OF ANADARKO PRODUCTION
COMPANY FOR A WATERFLOOD PROJECT,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 9, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 28th day of August, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Anadarko Production Company, is the operator of the Langlie Mattix Penrose Sand Unit Waterflood Project, Langlie Mattix Pool, Lea County, New Mexico.
- (3) That the applicant seeks authority to institute two cooperative waterflood projects adjacent to said waterflood project by injection of water into the Queen and Grayburg formations through two injection wells in Sections 15 and 16, Township 22 South, Range 37 East, NMPM, Penrose Skelly Pool, Lea County, New Mexico.
- (4) That the wells in the project areas are in an advanced state of depletion and should properly be classified as "stripper" wells.
- (5) That the proposed waterflood projects should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.
- (6) That the subject application should be approved and the projects should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(7) That applicant further requests establishment of an administrative procedure whereby the conversion of additional wells to injection may be approved administratively without a showing of well response to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Anadarko Production Company, is hereby authorized to institute two waterflood projects in the Penrose-Skelly Pool, by the injection of water into the Queen and Grayburg formations through the following-described wells in Township 22 South, Range 37 East, NMPM, Lea County, New Mexico:

ANADARKO COLE PENROSE SKELLY WATERFLOOD PROJECT

Well Name	Well No.	Unit	Sec.	Twn.	Rge.
R. E. Cole	3	M	16	22 S	37 E

ANADARKO WALDEN PENROSE SKELLY WATERFLOOD PROJECT

Well Name	Well No.	Unit	Sec.	Twn.	Rge.
E. W. Walden	6	N	15	22 S	37 E

(2) That the subject waterflood projects shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood projects herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That the Secretary-Director may approve expansion of the subject waterflood projects to include such additional lands and injection wells in the area of the projects as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for conversion of additional wells to water injection.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

-3-
CASE NO. 4760
Order No. R-4374

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

dr/

**NATURAL GAS POLICY ACT
Infill Findings**

E. W. Walden No. 14

Rule 5 - Forms C101 & C102 - Attached

**Rule 6 - Penrose Skelly Pool
40 Acre Proration Units**

Rule 7 - NA

Rule 8A-F - Attached

Rule 8G - The E. W. Walden No. 6 was originally drilled into the upper Grayburg. An attempt to deepen to the lower Grayburg found the casing collapsed. The No. 6 was converted to injection in the Penrose Sand. The upper Grayburg open hole section was also left open. The No. 14 is a replacement well in the Grayburg.

Rule 9A - Structure Map - Attached

B - The ultimate recovery on the No. 14 is estimated to 50 MBO. This was determined through decline curve analysis and volumetrics.

Lease Decline Curve and Porosity Log - Attached

Rule 8A-F - Wells drilled on Proration Unit
SE/4 SW/4 Section 15, T22S,R37E

E. W. Walden No. 6

660 FSL & 1980 FWL Section 15, T22S, R37E

Lea County, New Mexico

Spud Date - 3-25-37

Completion Date - 6-14-37

Mechanical Problems - Collapsed Casing

Converted to Water Injection in Penrose & Upper Grayburg - 2-21-73.

Current Injection Rate - 321 BW/PD @ 1375 psi.

3-25-83

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-83

5A. Indicate Type of Lease
STATE FEDERAL
5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
b. Type of Well
OIL WELL GAS WELL OTHER
DRILL DEEPEN PLUG BACK
SINGLE ZONE MULTIPLE ZONE

2. Name of Operator
Anadarko Production Company

3. Address of Operator
P.O. Box 806 Eunice, New Mexico 88231

4. Location of Well
UNIT LETTER *N* LOCATED *2125'* FEET FROM THE *West* LINE
AND *550'* FEET FROM THE *South* LINE OF SEC. *15* TWP. *22S* REC. *37E* NMPM

7. Unit Agreement Name
8. Name of Lease Name
E.W. Walden

9. Well No.
14

10. Field and Tract, or Wellcut
Penrose Shelly

11. County
Lea

19. Proposed Depth
4000'

19A. Formation
Grayburg

20. Rotary or C.T.
Rotary

21. Elevations (Show whether DF, RT, etc.)
3389.1 GR

21A. Kind & Status Plug. Bond
Blanket

21B. Drilling Contractor
Unknown

22. Approx. Date Work will start
May 2, 1983

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOF
11"	8-5/8"	24#	1150'	500 & X	Surface
7-7/8"	5 1/2"	15.5#	4000'	600 & X	1000'

1. MIRURT.
2. Drill 11" hole to 1150' or into top of Anhydrite.
3. Run 1150' of 8-5/8", 24# csg. Circ cement (Class C) w/2% Cacl.
4. Nipple Up. Set BOP. Test to 800# Psi after 12 hrs WOC. Drill out w/7-7/8" bit.
5. Drill to 4000' or about 100' into top of San Andres.
6. Run 4000' of 5 1/2", 15.5# csg to TD. Cement w/Class C cement, using sufficient cement to put TOC @1000' from surface.
7. Run Gamma Ray Neutron Logs.
8. Complete as Grayburg producer.
9. POP.

APPROVAL VALID FOR 180 DAYS
PERMIT EXPIRES 10/26/83
UNLESS DRILLING UNDERWAY

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Original John C. English Title Area Supervisor

Date April 25, 1983

ORIGINAL SIGNED BY HARRY SEXTON
DISTRICT I SUPERVISOR

APR 26 1983

APPROVED BY _____ TITLE _____ DATE _____

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

Form O-100
Revised 1-1-83

See Indicate Type of Lease
State Fee

3. State Oil & Gas Lease No.

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

B. TYPE OF COMPLETION
NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. GRADE OTHER _____

7. Unit Agreement Name

8. Farm or Lease Name
E.W. Walden

6. Well No.
14

2. Name of Operator
Anadarko Production Company

3. Address of Operator
P.O. Box 806, Eunice, New Mexico 88731

4. Location of Well

10. Field and Pool, or Wildcat
Penrose Shelly

UNIT LETTER N LOCATED 2125 FEET FROM THE West LINE AND 550 FEET FROM _____

THE South LINE OF SEC. 15 TWP. 22S RGE. 37E

12. County
Lea

15. Date Spudded 5-11-83 16. Date T.D. Reached 5-20-83 17. Date Compl. (Ready to Prod.) 5-28-83 18. Elevations (DT, RKU, KT, GR, etc.) 3389.7 GR 19. Elev. Caselength 3387'

20. Total Depth 4060' 21. King hole T.D. 4045' 22. If Multiple Complet., How Many _____ 23. Intervals Drilled By: Rotary Tools 0-4060' Cable Tools _____

24. Producing Interval(s), of this completion - Top, bottom, name
3651'-3844' Grayburg

25. Was Directional Sur Made
Yes

26. Type Electric and Other Logs Run
Dual Spaced Neutron Log

27. Was Well Cored
No

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	MOLE SIZE	CEMENTING RECORD	AMOUNT PULL
8-5/8"	24#	1102'	12 1/2"	930 # x Class C	
5 1/2"	15.5# & 14#	4046'	7-7/8"	350 # x Light	
				200 # x Class C	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-3/8"	3918'	

31. Perforation Record (Interval, size and number)

3651-55'	3857-61'	2 SPF
3716-20'	3686-92'	76 holes
3776-80'	3761-65'	1/2" holes
3814-18'	3790-94'	3840-44'

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
3651'-3844'	Acidized w/3000 gals 15%
3651'-3844'	Fractured w/60,000 gals gel fluid w/93,000# 20/40 sand

33. PRODUCTION

65,000# 10/20 sand.

Date First Production 5-28-83 Production Method (Flowing, gas lift, pumping - Size and type pump) 2" x 1 1/2" x 16' Insert Pump Well Status (Prod. or Shut-in) Producing

Date of Test	Hours Tested	Choke Size	Prod'n. Per Test Period	Oil - Hbl.	Gas - MCF	Water - Bbl.	Gas-Oil Ratio
6-4-83	24			43	21.9	173	509

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API / Corr.
	25#					35.7

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Sold

Test Witnessed By
Dale Kelton

35. List of Attachments
Copy of Dual Spaced Neutron Log.

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.

Dale Kelton Field Engineer

T. No. 12 1062

INSTRUCTIONS

This form is to be filed 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, zones 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. Anby _____ <u>1121</u>	T. Canyon _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____ <u>1256</u>	T. Strawn _____	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____ <u>2400</u>	T. Atoka _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____ <u>2587</u>	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____ <u>2785</u>	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____ <u>3340</u>	T. Silurian _____	T. Point Lockout _____	T. Elbert _____
T. Grayburg _____ <u>3646</u>	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____ <u>3900</u>	T. Simpson _____	T. Gallup _____	T. Ignacio Quarz _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Padlock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Hineberry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todillo _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	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	215	215	Sand & Redbed				
215	1120	905	Redbed				
1120	1260	140	Anhydrite				
1260	2400	1140	Salt				
2400	2817	417	Salt & Anhydrite				
2817	3635	818	Lime & Sand				
3635	4060	425	Dolomite & Lime				

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NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form O-102
Supercedes C-
110-110-1-1

All distances must be from the outer boundaries of the Section

Anadarko Production Company		E. W. Walden		14
Section	Township	Range	County	
N	22 South	37 East	Lea County	

Actual Well Location: Well is 2125 feet from the West side and 550 feet from the South side.

Section: 3389.1

Owner: *Walden*

Tract: *Thomas Shell*

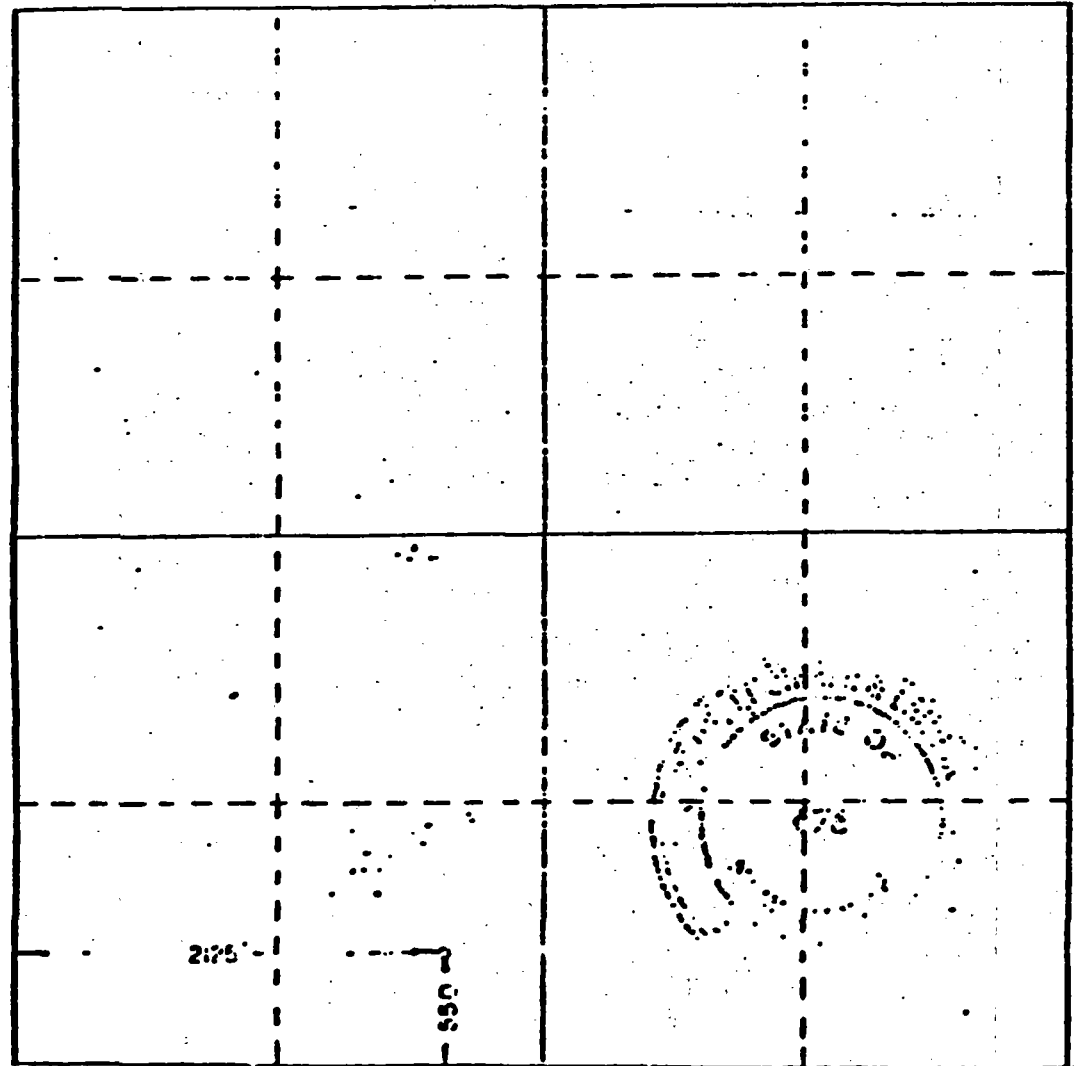
Acres: *40*

1. Outline the acreage dedicated to the subject well in colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, lease-pooling etc?

Yes No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated (if on reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



DECLARATION

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

John P. Engler

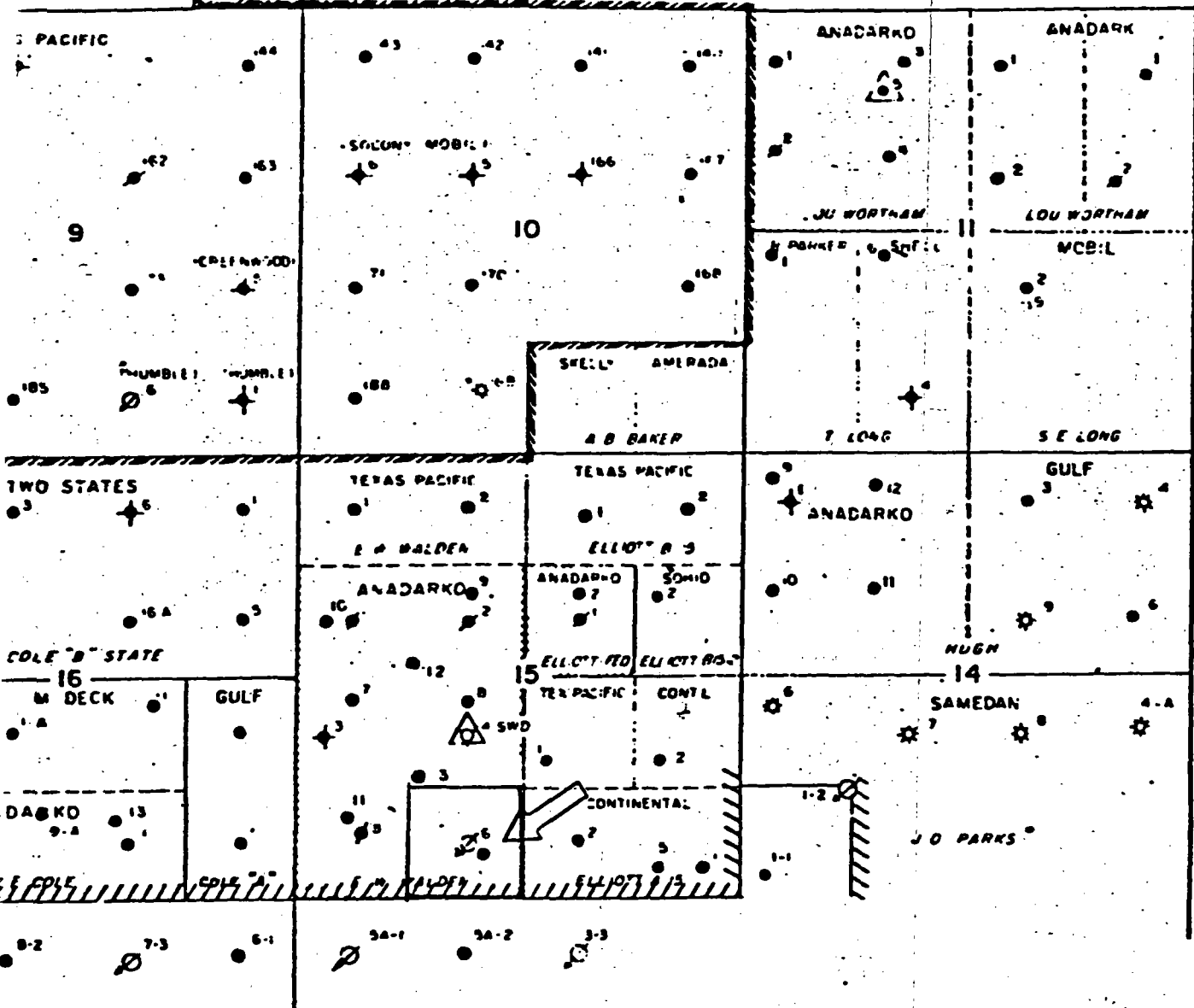
I hereby certify that the well location shown on this plat was plotted from the notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

APR 21 1983

Surveyor

John P. Engler

R 37 E



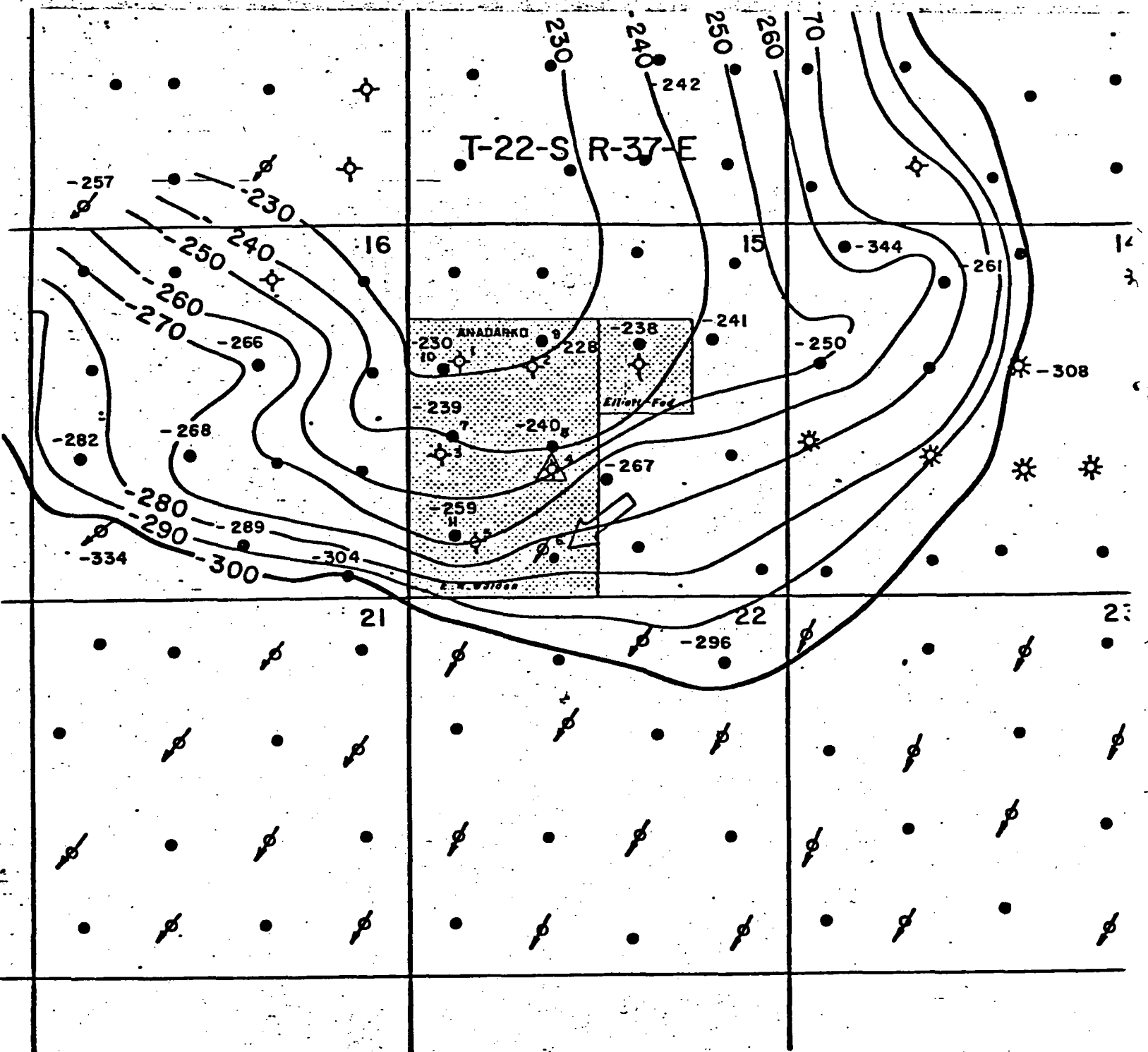
T
22
S




E. W. WALDEN LEASE
LEA CO., NEW MEXICO

PROPOSED LOCATION

Interpretation By: M. O. B.
Date: 4-82 Scale: 1" = 2000'




Anadarko
 Production Company

E.W. WALDEN LEASE
Penrose Skelly Field
 Lea County, New Mexico

STRUCTURE MAP
TOP OF GRAYBURG
 C. I. - 10'

Interpretation By: M. O. B.
 Date: NOV. 1981 Scale: 1"=2000'

EXHIBIT 3

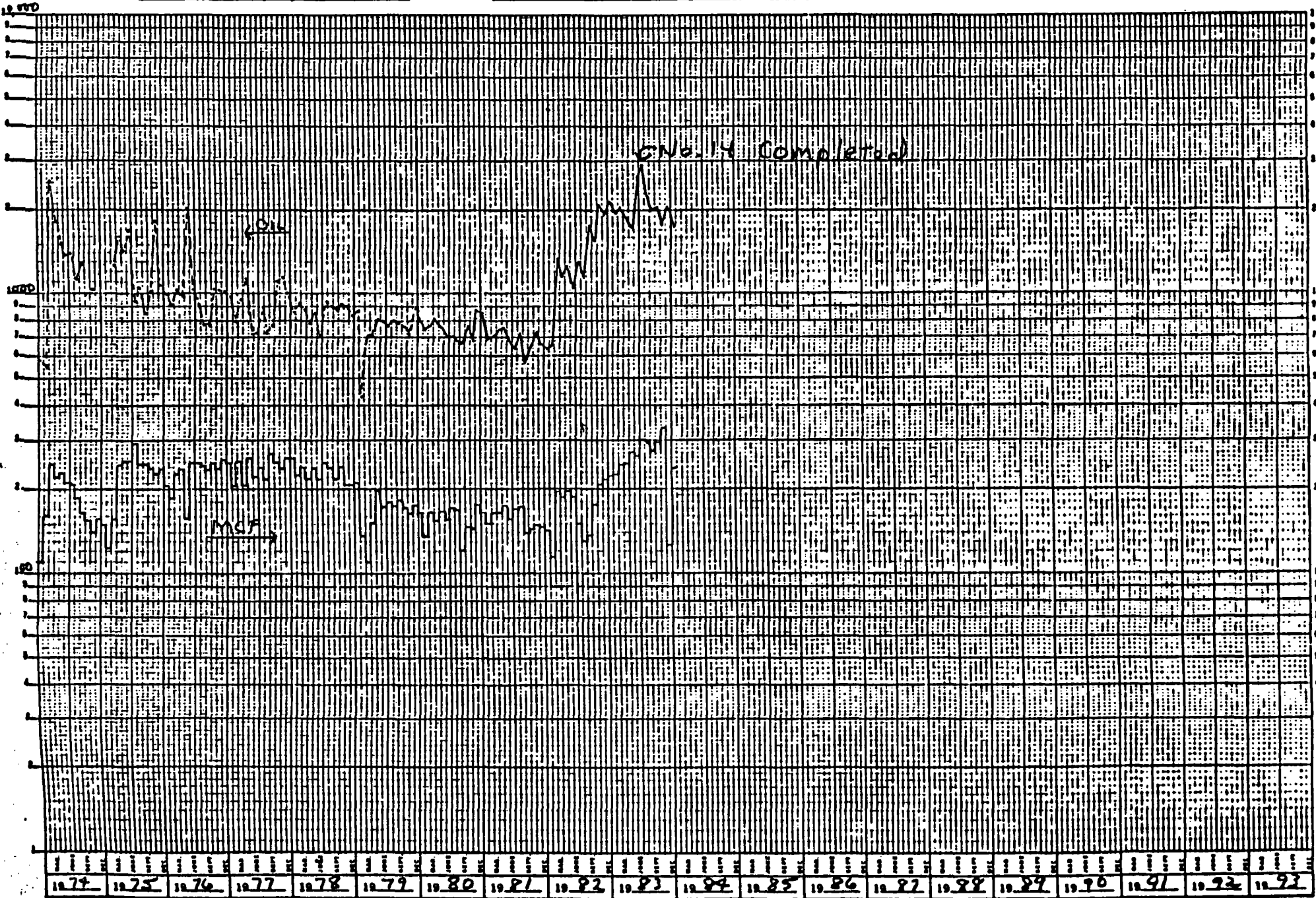
FIELD: PENROSE Skelly
 LEASE/UNIT: E.W. Walden "P"
 NO. WELLS: 5 10

RESERVOIR: GRAYBURG
 PERFS: _____
 CO./PH: _____

STATE: NM
 OPERATOR: APC
 LOCATION: 15-22-37

10
11
12

BBL. OR-MCF PER MO



ACCT. CODE NO. 3029179 (OIL) LEASE NAME E.W. Walden WELL NO. _____



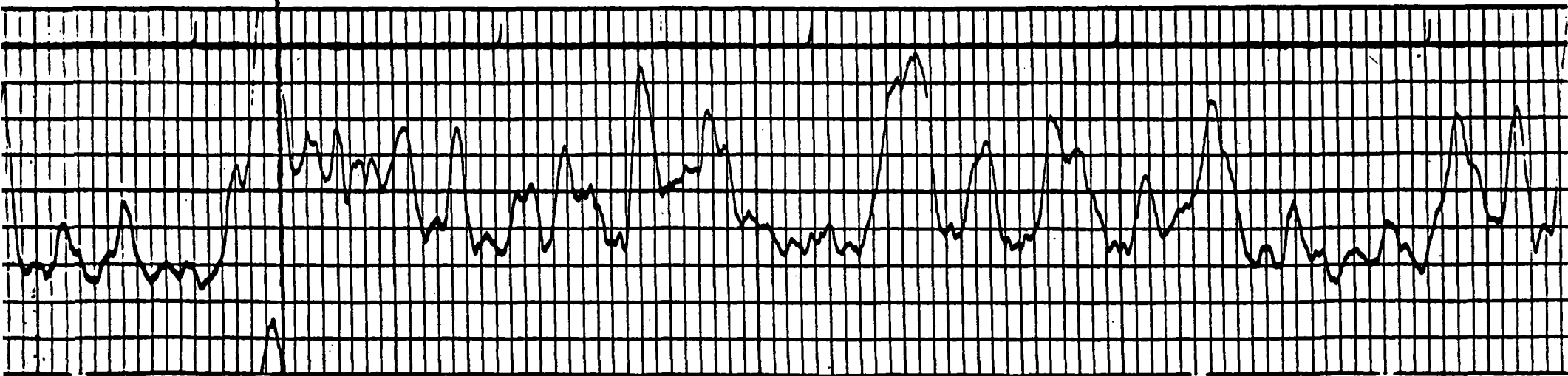
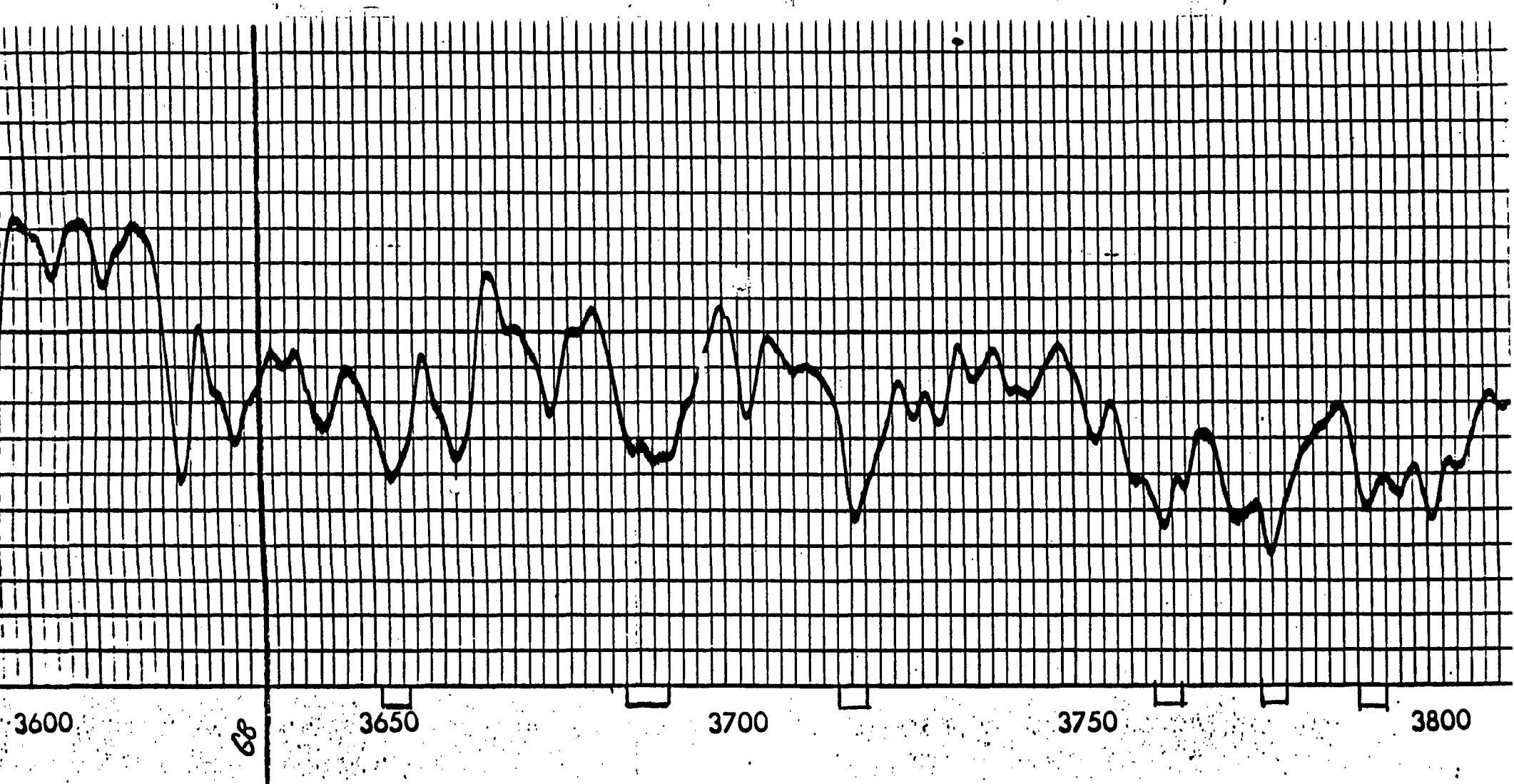
DUAL SPACED NEUTRON LOG

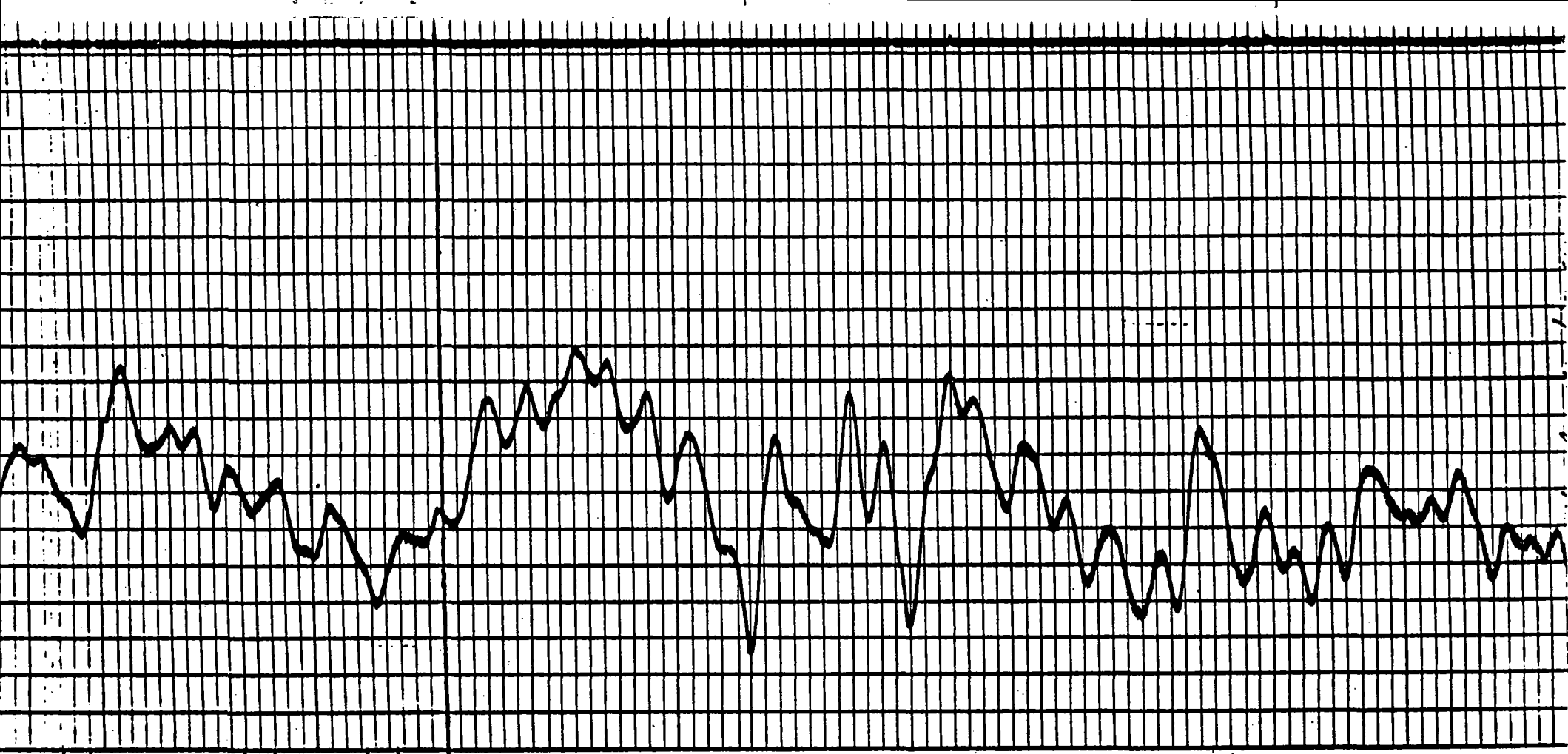
COMPANY *Anadarko Production Company*
WELL *E.W. Walden #14*
FIELD *Penrose Skelly*
COUNTY *Lea* STATE *New Mexico*
Location *550' FSL ; 2125' FEL* Other Services: *Perf Perfs & Tops MARKED*
Sec. *15* Twp. *22-5* Rge *37-E*

Permanent Datum *GL* Elev. *3392.7* Elev.: K.B. *3390.9*
Log Measured From *KB* *9* Ft. Above Perm. Datum D.F. *NA*
Drilling Measured From *KB* G.L. *3392.7*

Date	<i>5-24-83</i>
Run No.	<i>ONE</i>
Type Log	<i>DSN</i>
Depth—Driller	<i>4047</i>
Depth—Welex	<i>4049</i>
Bottom Logged Interval	<i>4048</i>
Top Logged Interval	<i>2048</i>
Type Fluid in Hole	<i>water</i>
Salinity, PPM Cl.	<i>NA</i>
Density	<i>NA</i>
Level	<i>Full</i>
Max. rec. temp., deg. F.	<i>NA</i>
Operating Rig time	
Recorded By	<i>C. Paulk</i>
Witnessed by	<i>Mr. Ziebert</i>

RUN No.	BORE-HOLE RECORD				CASING RECORD			
	Bit	From	To	Size	Wgt.	From	To	
				<i>5 1/2</i>	<i>15.5</i>	<i>500</i>	<i>4050</i>	





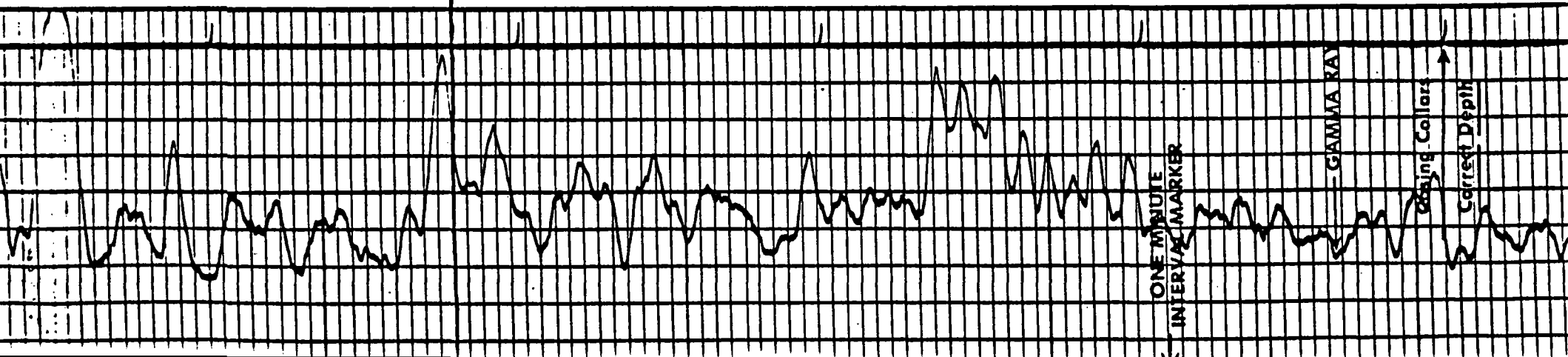
3850

SA

3900

3950

4000



ONE MINUTE
INTERVAL MARKER

GAMMA RAY

Casing Collars

Correct Depth

CERTIFICATE OF SERVICE

This is to certify that I have served upon the below listed Offset operators copies of the Infill Findings as required under Rule 11 of the New Mexico Oil Conservation Division Order No. R-6013-A.

Gulf Oil Corporation
P. O. Box 1635
Houston, Texas 77251

Sun Oil
P. O. Box 2880
Dallas, Texas 75221

Conoco
P. O. Box 2197
Houston, Texas 77252

ANADARKO PRODUCTION COMPANY

A handwritten signature in black ink, appearing to read "Richard J. Peterson", written over a horizontal line.

Richard J. Peterson
Manager, Hydrocarbon Sales

