

APPLICATION TO INJECT FLUID  
INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS

Field Grayburg-Jackson County Eddy District \_\_\_\_\_  
Operator Ambassador Oil Corporation Date October 11, 1965  
Address P.O. Box 9338, Ft. Worth, Texas  
Lease (s) & Number (s) Grayburg-Jackson Unit (R-2323)  
Reservoir Premier Discovery Date April, 1930

HAVE ANY INJECTION PERMITS BEEN GRANTED PREVIOUSLY IN THIS RESERVOIR? \_\_\_\_\_  
IF ANSWER TO ABOVE QUESTION IS "NO", ALL OPERATORS IN THE RESERVOIR MUST BE  
NOTIFIED OF THIS APPLICATION, AND COPIES OF NOTIFICATION ATTACHED HERETO.

I. Reservoir and fluid characteristics

A. Information on entire reservoir

1. Name of formation Grayburg-Jackson-Premier Zone
2. Estimated productive area of entire reservoir unknown
3. Composition (sand, limestone, granite, etc.) sand
4. Type of structure Stratigraphic trap  
(Include cross-section and structural maps)
5. Subsea depth of oil-water contact none Gas-oil contact none
6. Type drive during primary production SOLUTION GAS
7. Original BHP 1,300 Current BHP 0
8. Was gas cap present originally? no At present? no
9. Ratio of gas cap volume to oil zone volume --
10. Saturation pressure -- Formation Volume Factor 1.28

B. Information on proposed project area

1. Number of productive acres in lease (s) within project area 1600
2. Average depth to top of pay 3300
3. Average effective pay thickness (feet) 23
4. Average porosity (%) \_\_\_\_\_
5. Average horizontal permeability (mds) 20 Range 5-60
6. Connate water content (% of pore space) 5
7. Gravity of oil (API) 37 Viscosity est. 1.5 CP

II. Primary Production history

1. Date first well completed on \_\_\_\_\_ (s) May 1930
2. Oil, gas, water production by months since discovery. (Graphically as well as in tabular form.)
3. Stage of depletion of project area Stripper
4. Number of producing wells on each lease in project area 35
5. Average daily oil production per well at present time 2.2
6. Average gas-oil ratio none Water production (%) none
7. Cumulative oil production to date from lease (s) 1,745,000

III. Results expected

1. Estimated original oil in place (bbls.) 9,000,000
2. Estimated oil saturation at present time (% of pore space) 50
3. Estimated residual oil saturation at abandonment 50
4. Estimated ultimate additional oil that will be recovered as a direct result of injection (bbls.) 1,750,000

IV. Injection

1. Type of Injection Fluid (water, gas, LPG) Water
2. Source of injected fluid (formation, depths) Commercial Water Supplier
3. Injection pattern and spacing 5 spot 80 acres
4. Maximum injection pressure to be used (psi) 1,200
5. Estimated maximum per well rate of injection (bbls.) 500
6. List complete injection well data on reverse side of this sheet.

(APPLICANTS MUST COMPLY WITH THE INSTRUCTIONS ON REVERSE SIDE HEREOF.)

**ILLEGIBLE**

EXHIBIT "D"

APPLICATION TO INJECT FLUID  
INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS

Field Grayburg-Jackson County Eddy District \_\_\_\_\_  
Operator ~~Ambassador Oil Corporation~~ Date October 11, 1965  
Address P.O. Box 9338, Ft. Worth, Texas  
Lease (s) & Number (s) Grayburg-Jackson Unit (R-2323)  
Reservoir Premier Discovery Date April, 1930

HAVE ANY INJECTION PERMITS BEEN GRANTED PREVIOUSLY IN THIS RESERVOIR? \_\_\_\_\_  
IF ANSWER TO ABOVE QUESTION IS "NO", ALL OPERATORS IN THE RESERVOIR MUST BE  
NOTIFIED OF THIS APPLICATION, AND COPIES OF NOTIFICATION ATTACHED HERETO.

I. Reservoir and fluid characteristics

A. Information on entire reservoir

1. Name of formation Grayburg-Jackson-Premier Zone
2. Estimated productive area of entire reservoir unknown
3. Composition (sand, limestone, dolomite, etc.) sand
4. Type of structure Stratigraphic trap  
(Include cross-section and structural maps)
5. Subsea depth of oil-water contact none Gas-oil contact none
6. Type drive during primary production SOLUTION GAS
7. Original BHP 1,300 Current BHP 0
8. Was gas cap present originally? no At present? no
9. Ratio of gas cap volume to oil zone volume --
10. Saturation pressure -- Formation Volume Factor 1.28

B. Information on proposed project area

1. Number of productive acres in lease (s) within project area 1600
2. Average depth to top of pay 3300
3. Average effective pay thickness (feet) 13
4. Average porosity (%) \_\_\_\_\_
5. Average horizontal permeability (mds.) 36 Range 5-60
6. Connate water content (% of pore space) 25
7. Gravity of oil (API) 37 Viscosity est. 1.5 CP

II. Primary Production history

1. Date first well completed on lease (s) May 1930
2. Oil, gas, water production by months since discovery. (Graphically as well as in tabular form.)
3. Stage of depletion of project area Stripper
4. Number of producing wells on each lease in project area 35
5. Average daily oil production per well at present time 2.2
6. Average gas-oil ratio nil Water production (%) none
7. Cumulative oil production to date from lease (s) 1,745,000

III. Results expected

1. Estimated original oil in place (bbls.) 9,000,000
2. Estimated oil saturation at present time (% of pore space) 50
3. Estimated residual oil saturation at abandonment 30
4. Estimated ultimate additional oil that will be recovered as a direct result of injection (bbls.) 1,750,000

IV. Injection

1. Type of Injection Fluid (water, gas, LPG) Water
2. Source of injected fluid (formation, depths) Commercial Water Supplier
3. Injection pattern and spacing 5 spot 80 acres
4. Maximum injection pressure to be used (psi) 1,200
5. Estimated maximum per well rate of injection (bbls.) 500
6. List complete injection well data on reverse side of this sheet.

(APPLICANTS MUST COMPLY WITH THE INSTRUCTIONS ON REVERSE SIDE HEREOF.)

**ILLEGIBLE**

**REBET "P"**

INJECTION WELL DATA

LEASE NAME & NO. WELL NUMBER		7A-2	13-1	13-4	13-5	13-8	
SURFACE CASING	SIZE	8"	8"	8"	8"	8"	
	LENGTH	508'	510'	510'	495'	515'	
	SACKS & TYPE CEMENT	50	50	50	50	50	
PRODUCTION CASING	SIZE	7"	7"	7"	7"	7"	
	LENGTH	3030'	3070'	3090'	3100'	3150'	
	SACKS & TYPE CEMENT	100	100	100	100	100	
TUBING	LENGTH	3010'	3050'	3070'	3080'	3130'	
	PACKER DEPTH	3010'	3050'	3070'	3080'	3130'	
INJECTION	DEPTH	3220'	3220'	3225'	3225'	3330'	
	THRU CASING	TUBING	TUBING	TUBING	TUBING	TUBING	

NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	X

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICOFORT WORTH, TEXAS  
(Place)OCTOBER 12, 1965  
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the ANADARKO PRODUCTION COMPANYOPERATED GRAYBURG-JACKSON UNIT (R 2323)

(Company or Operator)

Well No. 13-8 in N (Unit)SE SW  
(40-acre Subdivision)1/4 of Sec. 25T. 17SR. 30E

NMPM,

GRAYBURG-JACKSON

Pool

County.

FULL DETAILS OF PROPOSED PLAN OF WORK  
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

RE-ENTER THIS PLUGGED AND ABANDONED WELL AND CLEANOUT TO T.D. OF APPROXIMATELY 3370'. SET  $4\frac{1}{2}$ " CASING TO T.D. AND PERFORATE OPPOSITE THE PREMIER ZONE OF THE GRAYBURG- AND COMPLETE AS A WATER INJECTION WELL UNDER COMMISSION ORDER NO. (R 2323)

Approved....., 19.....  
Except as follows:Approved  
OIL CONSERVATION COMMISSION

By.....

Title.....

ANADARKO PRODUCTION COMPANY  
Company or OperatorBy E. A. RileyPosition E. A. RILEYSUPERINTENDENT, SECONDARY RECOVERY DIV.Name ANADARKO PRODUCTION CO.Address P.O. Box 9317, Fort Worth, Texas

EXHIBIT "E" (Well 13-8)

NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

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NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL		NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	X

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICOFORT WORTH, TEXAS  
(Place)OCTOBER 12, 1965  
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the ANADARKO PRODUCTION COMPANY

OPERATED GRAYBURG-JACKSON UNIT (R 2323) Well No. 13-4 in P (Unit)  
SE 1/4 SE 1/4 of Sec. 26, T. 17S, R. 30E, NMPM, GRAYBURG-JACKSON Pool  
Eddy County.

FULL DETAILS OF PROPOSED PLAN OF WORK  
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

RE-ENTER THIS PLUGGED AND ABANDONED WELL AND CLEANOUT TO T.D. OF APPROXIMATELY 3250'.  
SET 4 1/2" CASING TO T.D. AND CEMENT TO SURFACE; PERFORATE CASING OPPOSITE PREMIER ZONE  
OF GRAYBURG AND COMPLETE AS A WATER INJECTION WELL UNDER COMMISSION ORDER No. (R2323)

Approved....., 19.....  
Except as follows:ANADARKO PRODUCTION COMPANY  
Company or OperatorBy *E. A. Riley*E. A. RILEY  
Position..... SUPERINTENDENT SECONDARY RECOVERY DIV.  
Send Communications regarding well to:Approved  
OIL CONSERVATION COMMISSION

By.....

Name..... ANADARKO PRODUCTION COMPANY

Title.....

Address..... P.O. Box 9317, FORT WORTH, TEXAS

EXHIBIT "E" (Well 13-4)

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS - OIL RATIO TESTS

C-116  
Revised 1-1-65

Operator <b>ANADARKO PRODUCTION COMPANY</b>		County <b>GRAYBURG-JACKSON</b>												
Address <b>P.O. Box 9317 FORT WORTH, TEXAS</b>		TYPE OF TEST - (X) <input checked="" type="checkbox"/> Scheduled <input type="checkbox"/> Spectral <input checked="" type="checkbox"/>												
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.	
		U	S	T						R	WATER BBLs.	GRAV. OIL		OIL BBLs.
GRAYBURG-JACKSON	7A-1	G	26	17	30E	10-2-65	P		24	0		75	NIL	NIL

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

*E.A. Riley*  
**E.A. RILEY** (Signature)  
**SUPERINTENDENT SECONDARY RECOVERY DIV.** (Title)  
**OCTOBER 12, 1965** (Date)

EXHIBIT "B"

GRAYBURG-JACKSON UNIT ( R 2323)

OCTOBER 11, 1965

7A-2	13-1	13-4	13-5	13-8
508 -8"	510' - 8"	510' - 8"	495' - 8"	515' - 8"
50 SXS. CMT.	50 SXS. CMT.	50 SXS. CMT.	50 SXS. CMT.	50 SXS. CMT.
3030' - 7"	3070' - 7"	3090' <del>4 1/2</del>	3100' - 7"	3150' <del>4 1/2</del>
100 SXS. CMT.	100 SXS. CMT.	100 SXS. CMT.	100 SXS. CMT.	100 SXS. CMT.

EXHIBIT "C"

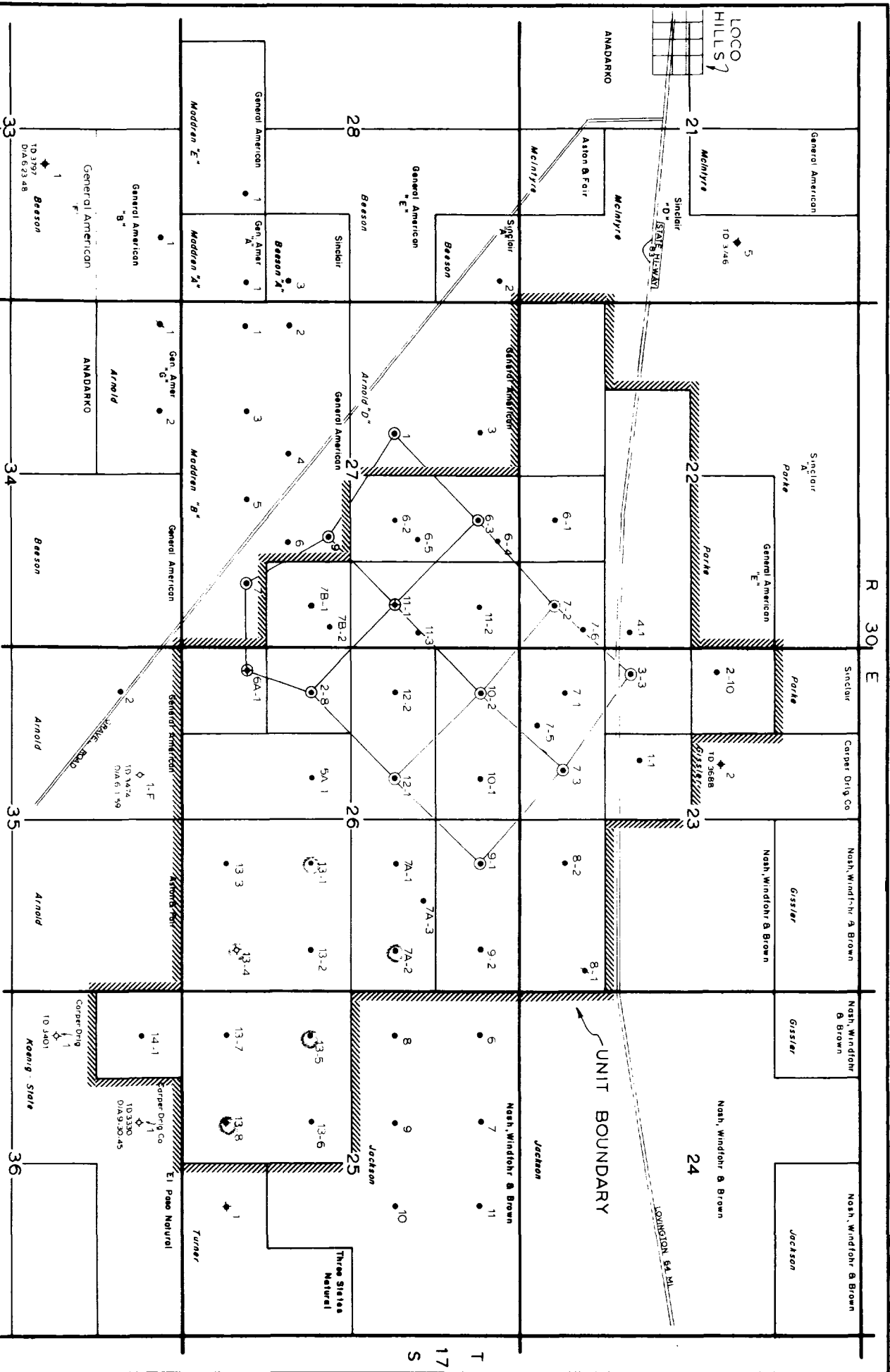




INJECTION WELL DATA  
GRAYBURG-JACKSON UNIT (R 2323 )

	Well 7A-2	Well 13-1	Well 13-4	Well 13-5	Well 13-8
	Surface Casing				
Size	8"	8"	8"	8"	8"
Length	508'	510'	510'	495'	515'
Sacks of Cement	50	50	50	50	50
	Tubing				
Size	2"	2"	2"	2"	2"
Length	3010'	3050'	3070'	3080'	3130'
Packer Depth	3010'	3050'	3070'	3080'	3130'
	Production Casing				
Size	7"	7"	4 1/2"	7"	4 1/2"
Length	3030'	3070'	3090'	3100'	3150'
Sacks of Cement	100	100	100	100	100

EXHIBIT "C"



LEGEND-ONLY PREMIER SAND WELLS PLOTTED

ANADARKO PRODUCTION COMPANY

EXHIBIT "F"

GRAYBURG JACKSON UNIT (R-2323)

OPERATOR  
FLOOD NO. 42  
EDDY CO. NEW MEXICO

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

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NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	X

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICOFORT WORTH, TEXAS  
(Place)OCTOBER 12, 1965  
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the ANADARKO PRODUCTION COMPANY  
OPERATED GRAYBURG-JACKSON UNIT ( R 2323 ) Well No. 13-4 in P  
(Company or Operator) (Unit)  
SE 1/4 SE 1/4 of Sec. 26 T. 17S R. 30E NMPM., GRAYBURG-JACKSON Pool  
(40-acre Subdivision)  
EDDY County.

FULL DETAILS OF PROPOSED PLAN OF WORK  
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

RE-ENTER THIS PLUGGED AND ABANDONED WELL AND CLEANOUT TO T.D. OF APPROXIMATELY 3250'.  
SET 4 1/2" CASING TO T. D. AND CEMENT TO SURFACE, PERFORATE CASING OPPOSITE PREMIER ZONE  
OF GRAYBURG AND COMPLETE AS A WATER INJECTION WELL UNDER COMMISSION ORDER No. R 2323).

Approved....., 19.....  
Except as follows:Approved  
OIL CONSERVATION COMMISSION

By.....

Title.....

ANADARKO PRODUCTION COMPANY  
Company or OperatorBy *E. A. Riley*  
E. A. RILEY  
Position..... SUPERINTENDENT SECONDARY RECOVERY DIV.  
Send Communications regarding well to:

P.O. Box 9317, FORT WORTH, TEXAS

Name.....  
Address.....

EXHIBIT "E" (Well 13-4)

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

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NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	X

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

FORT WORTH, TEXAS

OCTOBER 12, 1965

(Place)

(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the ANADARKO PRODUCTION COMPANYOPERATED GRAYBURG-JACKSON UNIT (R 2323)

(Company or Operator)

Well No. 13-8 in N

(Unit)

SESW1/4 of Sec. 25T. 17SR. 30E

NMPM,

GRAYBURG-JACKSON

Pool

(40-acre Subdivision)

County.

FULL DETAILS OF PROPOSED PLAN OF WORK  
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

RE-ENTER THIS PLUGGED AND ABANDONED WELL AND CLEANOUT TO T.D. OF APPROXIMATELY 3370'. SET 4 1/2" CASING TO T.D. AND PERFORATE OPPOSITE THE PREMIER ZONE OF THE GRAYBURG- AND COMPLETE AS A WATER INJECTION WELL UNDER COMMISSION ORDER NO. (R 2323)

Approved....., 19.....  
Except as follows:Approved  
OIL CONSERVATION COMMISSION

By.....

Title.....

ANADARKO PRODUCTION COMPANY

(Company or Operator)

By.....

E. A. RILEY

Position.....

SUPERINTENDENT, SURVEILLANCE &amp; INSPECTION DIV.

Name..... ANADARKO PRODUCTION CO.

Address..... P.O. Box 9317, Fort Worth, Texas

EXHIBIT "E" (Well 13-8)

INJECTION WELL DATA

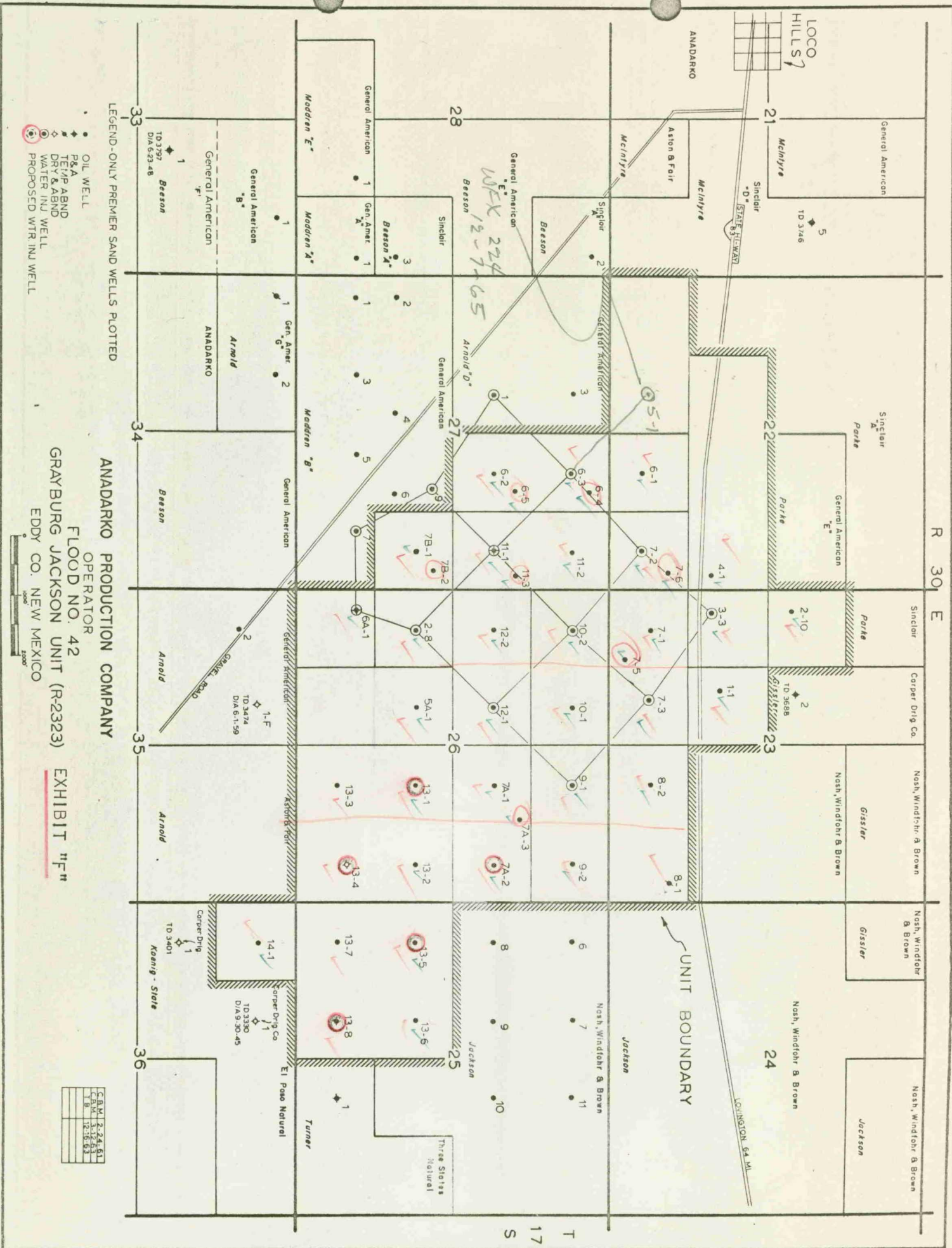
LEASE NAME & NO. WELL NUMBER		7A-2	13-1	13-4	13-5	13-8	
SURFACE CASING	SIZE	8"	8"	8"	8"	8"	
	LENGTH	508'	510'	510'	495'	515'	
	SACKS & TYPE CEMENT	50	50	50	50	50	
PRODUCTION CASING	SIZE	7"	7"	7"	7"	7"	
	LENGTH	3030'	3070'	3090'	3100'	3150'	
	SACKS & TYPE CEMENT	100	100	100	100	100	
TUBING	LENGTH	3010'	3050'	3070'	3080'	3130'	
	PACKER DEPTH	3010'	3050'	3070'	3080'	3130'	
INJECTION	DEPTH	3220'	3220'	3225'	3225'	3330'	
	THRU CASING	TUBING	TUBING	TUBING	TUBING	TUBING	

## GRAYBURG-JACKSON UNIT ( R 2323)

OCTOBER 11, 1965

7A-2	13-1	13-4	13-5	13-8
508 -8"	510' - 8"	510' - 8"	495' - 8"	515- - 8"
50 SXS. CMT.	50 SXS. CMT.	50 SXS. CMT.	50 SXS. CMT.	50 SXS. CMT.
3030' - 7"	3070' - 7"	3090' - 7"	3100' - 7"	3150' -7"
100 SXS. CMT.	100 SXS. CMT.	100 SXS. CMT.	100 SXS. CMT.	100 SXS. CMT.

EXHIBIT "C"



BEFORE EXAMINER UTZ  
 U.S. CONSERVATION COMMISSION  
 Appl. EXHIBIT NO. F  
 CASE NO. 3330

Max. Allowance  
 $35 \times 42 = 1470$   
 $7 \times 14 = 98$   
 $1470 + 98 = 1568$

21  
 21  
 126  
 1470



[illegible]