

OIL CONSERVATION DIVISION

P. O. Box 2088
SANTA FE, NEW MEXICO
87501

ADMINISTRATIVE ORDER

NFL 17

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

INFILL DRILLING FINDINGS 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-A

I.

Operator ARCO Oil and Gas Co. Well Name and No. Johns "B" DE Well No. 13
Location: Unit J Sec. 24 Twp. 17S Rng. 32E Cty. Lea

II.

THE DIVISION FINDS:

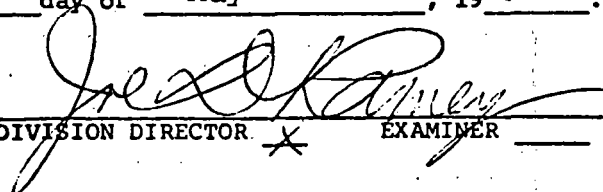
- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill 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.
- (2) That by Order No. R-6013-A, dated February 8, 1980, 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) That the well for which a finding is sought is to be completed in the Maljamar Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a 40 -acre proration unit comprising the NW/4 SE/4 of Sec. 24, Twp. 17S, Rng. 32E, is currently dedicated to the Johns "B" DE Well No. 10 located in Unit J of said section.
- (5) That this proration unit is ~~XX~~ standard () nonstandard; if nonstandard, said unit was previously approved by Order No. _____.
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 11.4 M MCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013-A have been complied with, and that 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.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

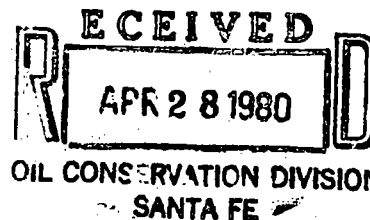
(1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

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

DONE at Santa Fe, New Mexico, on this 27th day of May, 19 80.


DIVISION DIRECTOR X EXAMINER _____

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0201
Jerry L. Tweed
District Engineer



April 16, 1980

Mr. Joe R. Ramey
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Johns "B" DE #13
Infill Location
Maljamar Pool
Lea County, New Mexico

Gentlemen:

ARCO Oil & Gas Company requests an administrative finding that the subject well is needed to effectively and efficiently drain the reservoir for the purposes of requesting gas pricing relating to Section 103 of the Natural Gas Policy Act of 1978. The infill well, the Johns "B" DE #13, is located 1360' FSL & 2465' FEL of Section 24, T17S, R32E, Lea County, New Mexico. The Johns "B" DE #10, the first well on the proration unit, was drilled in 1959, but was converted to a water injection well in March, 1966. Therefore, we feel that an infill well is necessary to efficiently and effectively drain the reservoir.

All offset wells to the Johns "B" DE #13 are either plugged and abandoned or are injection wells. It is because of this that ARCO feels a portion of the reservoir will not be drained without the drilling of subject well. This well should drain approximately 30 MBO that would not otherwise be produced.

Attached is the required information and your prompt attention is appreciated.

Very truly yours,

J. L. Tweed

TDM:ad

ARCO Oil and Gas Company
JOHNS "B" DE #13

Rule 5. Attached

Rule 6. Maljamar Pool - 40 acre spacing

Rule 7. Approval of non-standard location:
Administrative Order NSL-1083

Rule 8. a) Johns "B" DE #10
1980' FSL and 1980' FEL
Sec. 24, T17S, R32E
Lea County, New Mexico

b) Spud Date: 01/17/59

c) Completion Date: 02/01/59

d) No Mechanical Problems - Converted to water
injection well 03/06/66

e) No Current Production - WIW

a) Johns "B" DE #13
2465' FEL and 1360' FSL
Sec. 24, T17S, R32E
Lea County, New Mexico

b) Spud Date: 12/17/79

c) Completion Date: 03/23/80

d) Production casing collapsed @ 4114'. Swedged out
csg. Ran in hole w/cement retainer and cemented
csg in place. Csg collapsed above cmt retainer
4063-75'. Swedged out csg and squeezed. Had
several csg leaks at various intervals. Perforated,
squeezed, and tested each interval that leaked until
all leaks were repaired except for 1/8" water flow at
approximately 4085'. Perforated San Andres formation.

e) Current Production = 23 BO, 2 BW, 9 MCFG (03/28/80)

g) The existing well on the proration unit, the Johns "B"
DE #10, was converted to water injection on 03/06/66.
As a result, it has pushed oil to the area of the infill
well, and oil is trapped in the area by the two advancing
flood fronts. Without this infill well, the trapped oil
could not be produced.

Rule 9. a) Attached

b) The volume of oil to be recovered is calculated to be approximately 30 MB0. This volume was arrived at through volumetric calculations using known reservoir parameters and recovery factors. Reserves were also found by planimetering the unswept portion of the reservoir and making calculations from net pay maps.

ARCO OIL AND GAS COMPANY
JOHNS "B" DE NO. 13

The attached log cross section is geological evidence that the reservoir is continuous throughout this area. As such, waterflood oil and gas is pushed by the water injection to the producing wells. The attached flood front map shows the calculated water fronts in the reservoir. As can be seen, there is an area between the two offsetting water injectors (Johns "A" DE No. 2 and Johns "B" DE No. 10) where oil and gas will be trapped by the advancing water fronts. Portions of this oil and gas will not be recovered by any other well in the reservoir. The Johns "B" DE No. 13 is therefore necessary to effectively and efficiently drain the area of the reservoir between the two offsetting injection wells.

MALMAR
UNIT #13

M. H. BAXTER
STATE 13 #5

CONTINENTAL

ER

1

2

A.R.Co.

"B"
Johns



11



7

1



9



24



3



6

1

UNIT #79

A

6

A.R.Co.

"A"
Johns



3



4

1

PENNZOIL

PHILLIPS
B STATE #13

T

17

6

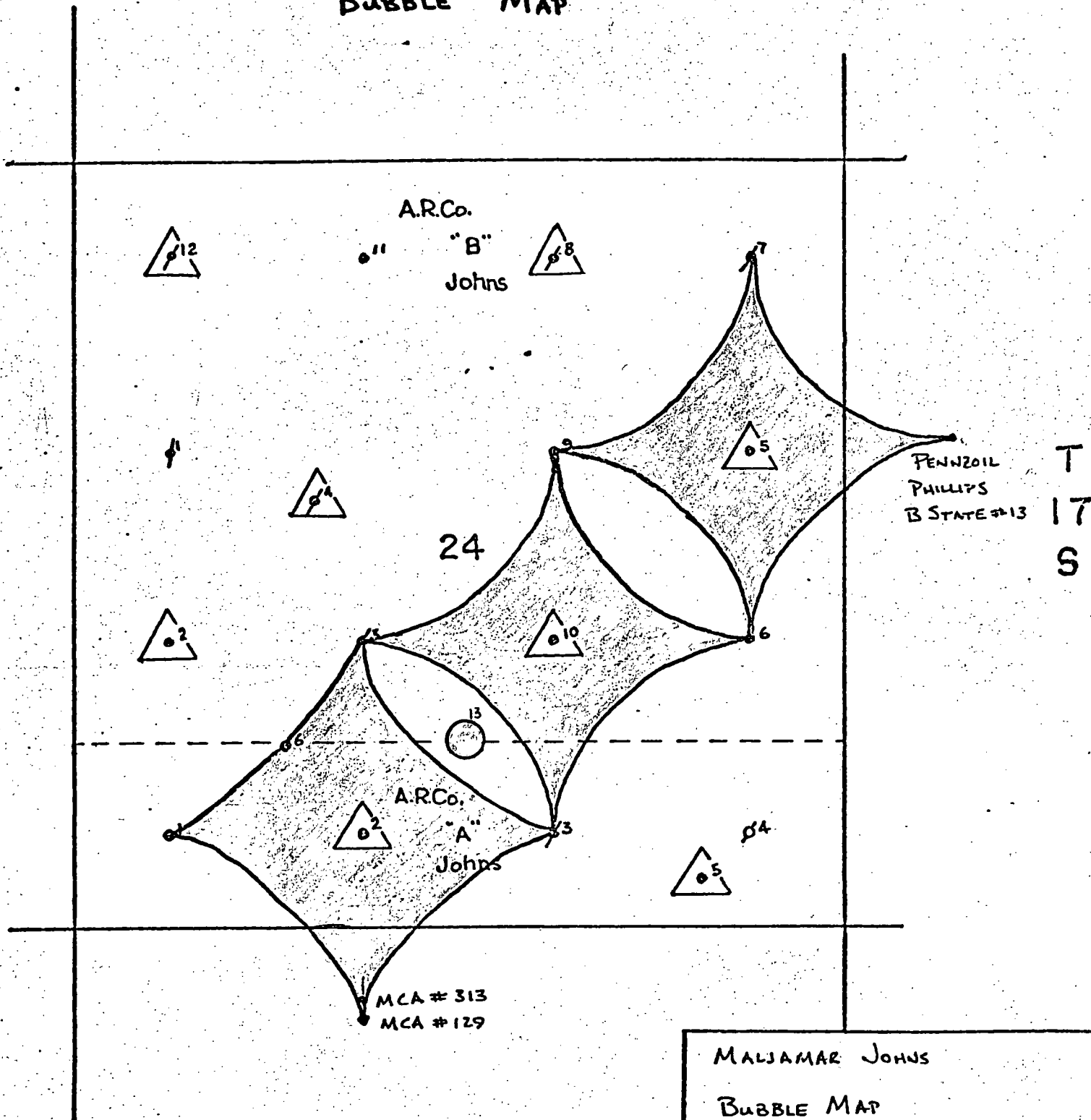
PHILLIPS
LEA MEX #1

MCA #313

MCA #129

MCA #132

BUBBLE MAP



MALJAMAR JOHNS

BUBBLE MAP



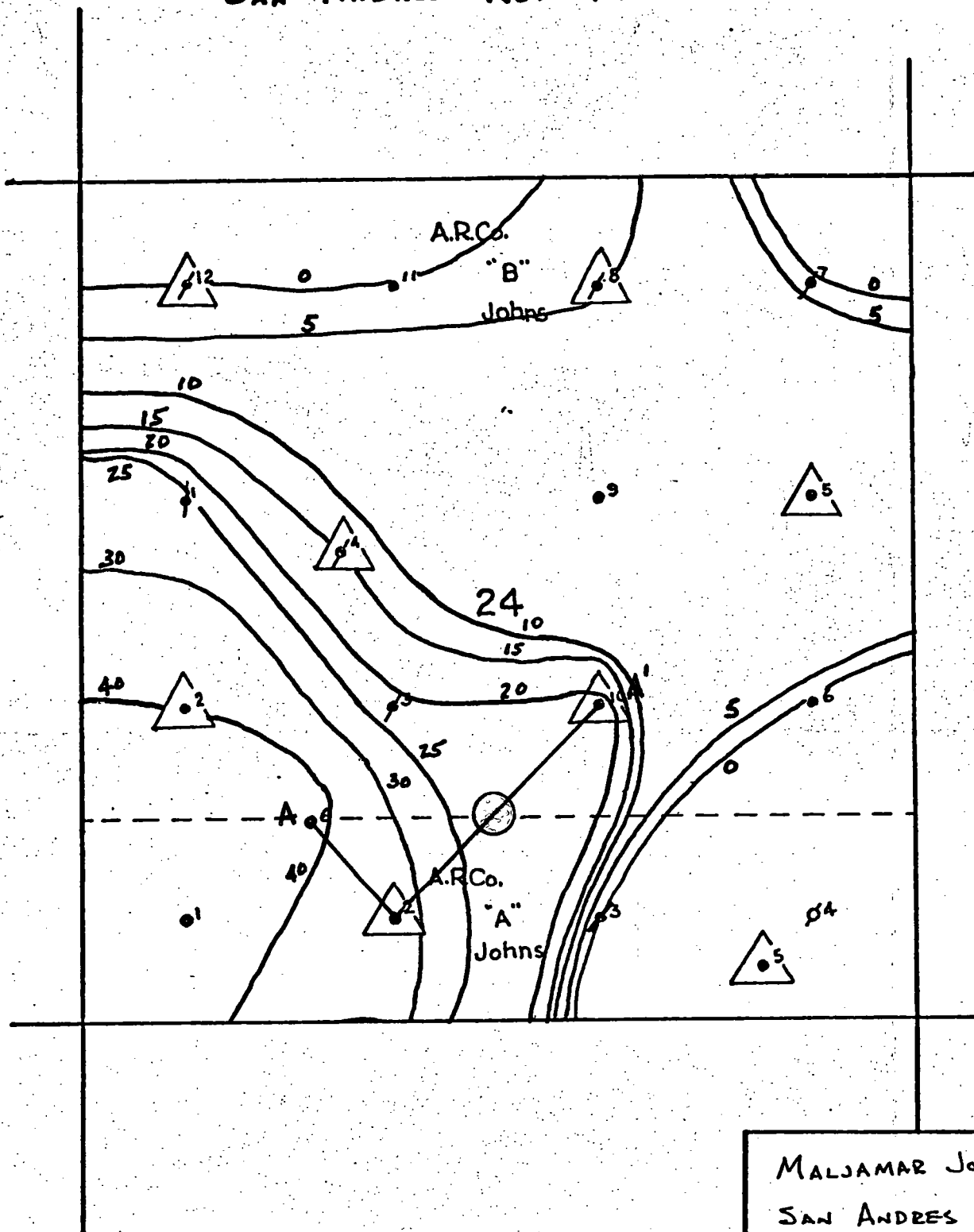
PROPOSED LOCATION



FLOOD REGION

Sinclair
State 774 No. 1

SAN ANDRES NET PAY MAP



T
17
S

MALJAMAR JOHNS
SAN ANDRES NET PAY MAP

PROPOSED LOCATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒GAS
WELL ☐

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR ARCO Oil & Gas Company

Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR

P.O. Box 1710, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

2465' FEL & 1360' FSL (Unit Ltr J)

At proposed prod. zone

As above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

3/4 mi So. of Maljamar Hwy 33, So. East 2-1/4 mi.

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

940' NE

16. NO. OF ACRES IN LEASE

480

19. PROPOSED DEPTH

4300'

17. NO. OF ACRES ASSIGNED

40

20. ROTARY OR CABLE TOOLS

Rotary

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

4050' Estimated

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	8- 5/8" OD	24# K-55	400'	325 sx Circ.
7- 7/8"	4- 1/2" OD	9.5# K-55	4300'	500 sx Estimate TOCO 2050'

Propose to drill an infill development well to the Grayburg San Andres to recover undrained areas within the Sinclair Maljamar Johns Waterflood Project.

Blowout Preventer Program attached.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

IN ABOVE SPACE 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. Give blowout preventer program, if any.

24.

SIGNED

TITLE Dist. Drlg. Supt.

DATE

9-20-79

(This space for Federal or State office use)

PERMIT NO.

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

APPROVED
AS AMENDED

NOV 06 1979

ACTING DISTRICT ENGINEER

*See Instructions On Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-10355.5.

5. LEASE DESIGNATION AND SERIAL NO.

LC-059152-h

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME Sinclair
Maljamar Johns DE Waterflo

8. FARM OR LEASE NAME Proje

Johns "B" DE

9. WELL NO.

13

10. FIELD AND POOL, OR WILDCAT

Maljamar Grbg SA

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

24-17S-32E

12. COUNTY OR PARISH
Lea

13. STATE
N.M.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other

1. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. ESVR. ☐ Other

2. NAME OF OPERATOR ARCO Oil and Gas Company
Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR

Box 1710, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 2465' FEL & 1360' FSL (Unit letter J)

At top prod. interval reported below

At total depth as above

14. PERMIT NO.

DATE ISSUED

15. DATE STUDDED

12/17/79

16. DATE T.D. REACHED

1/1/80

17. DATE COMPL. (Ready to prod.)

3/23/80

18. ELEVATIONS (DF, REP, RT, GR, ETC.)*

4052.8' GR

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

4300'

21. PLUG BACK T.D., MD & TVD

4289'

22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY

ROTARY TOOLS

CABLE TOOLS

0-4300'

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

4167-4191' Grayburg San Andres

4267-4275' Grayburg San Andres

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

GR-CNL, CBL

27. WAS WELL CORED

No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8" OD	32# K-55	409'	11"	175 sx	
4 1/2" OD	11.60# 9.5#	4300'	7-7/8"	2073 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8" OD	4021'	None

31. PERFORATION RECORD (Interval, size and number)

4167, 73, 76, 77, 78, 79, 88, 89, 90, 91'
(10 .42" holes).

4267, 70, 72, 75' (4 .38" holes)

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
2110' Sqzd w/1500 sx Lite, 15# salt/sk, 200 sx Cl C w/3% CaCl.	
1555' Sqzd w/1500 sx Lite, 15# salt/sk, 4% gel 200 sx Cl C cmt w/3% CaCl	

33. PRODUCTION (cont'd on attached page #2)

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)					WELL STATUS (Producing or shut-in)	
1/27/80		Flow					Producing	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO	
3/28/80	24	48/64"	—————→	23	9	2	391:1	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)		
50#	35#	—————→	23	9	2	36.2°		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold

TEST WITNESSED BY

M. L. Moore, Jr.

35. LIST OF ATTACHMENTS

Logs as listed in Item 26 above & Inclination Record

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

TITLE Dist. Dir. Supt.

DATE

4/3/80

4

Gener

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

38. GEOLOGIC MARKERS

38. GEOLOGIC MARKERS

U.S. GOVERNMENT PRINTING OFFICE: 1959-O-683926

**MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-1-55

All distances must be from the outer boundaries of the Section

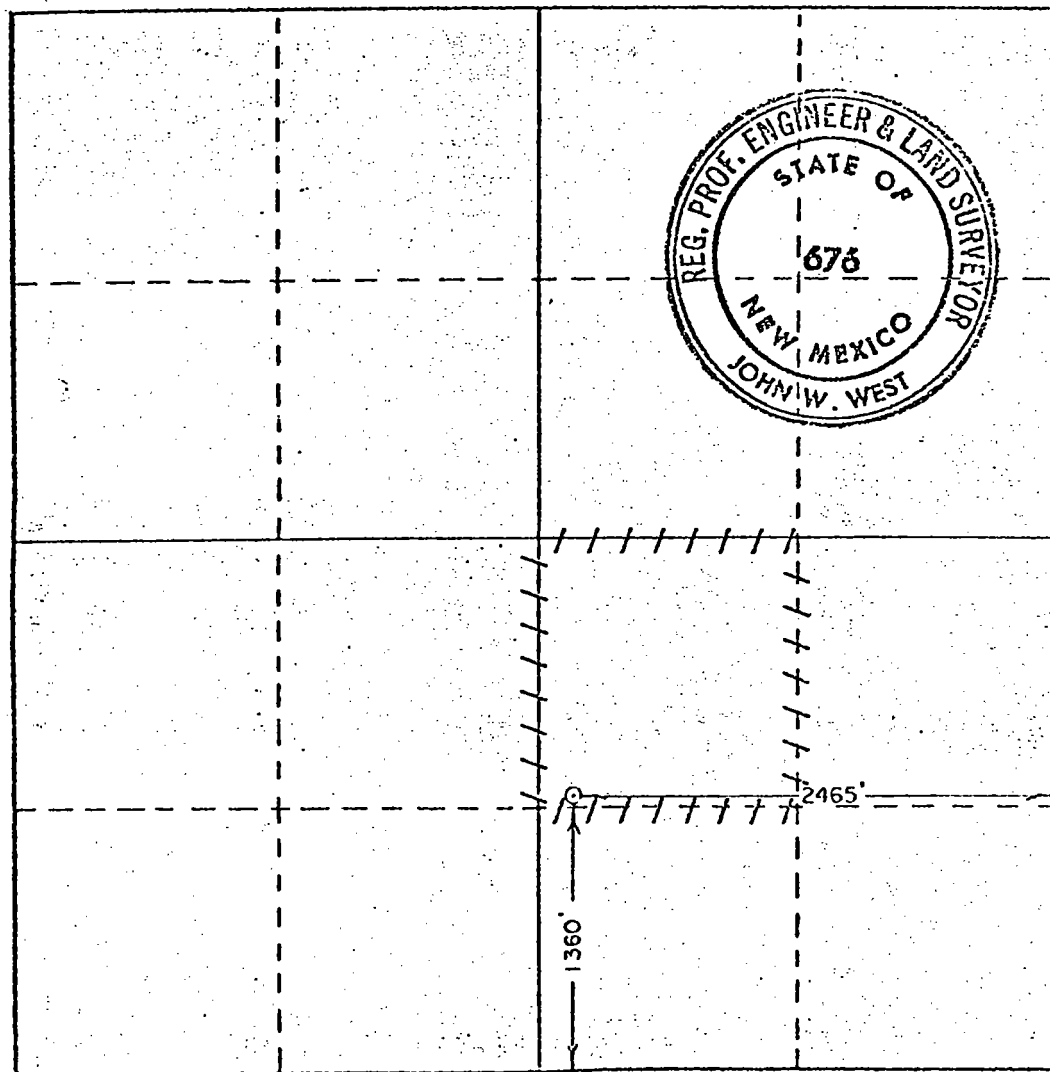
Operator Division of Atlantic Richfield Co. Arco Oil & Gas Co.			Lease Johns B DE		Well No. 13
Unit Letter J	Section 24	Township 17 South	Range 32 East	County Lea	
Actual Footage Location of Well: 1360 feet from the South line and 2465 feet from the East line					
Ground Level Elev. 4052.8	Producing Formation Grbg San Andres	Pool Maljamar	Dedicated Acreage: 40 Acres		

1. Outline the acreage dedicated to the subject well by 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, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use 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.



CERTIFICATION

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

Name John W. West
 Position Dist. Drlg. Supt.

ARCO Oil and Gas Company
 Division of Atlantic Richfield Company

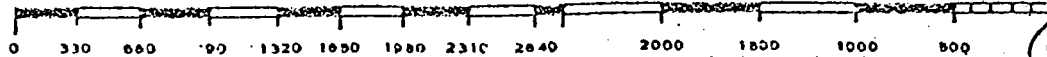
Date 9/20/79

I hereby certify that the well location shown on this plat was plotted from field 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.

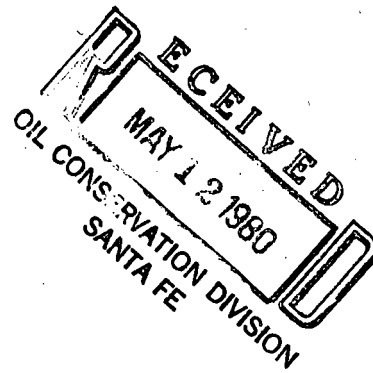
Date Surveyed Sept. 6, 1979

Registered Professional Engineer and/or Land Surveyor

John W. West
 Certificate No. John W. West **676**
Ronald J. Eidson **3239**



ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100



May 6, 1980

Mr. R. L. Stamets
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Application for NGPA Infill Well
Findings Under Provisions of Order
No. R-6013-A, Johns "B" DE Well
No. 13, Unit 0, Sec. 24, T-17-S,
R-32-E, Maljamar Pool, Lea County

Dear Mr. Stamets:

Here is the additional information you requested for
the subject application for infill findings. Please
let us know if we can be of further help.

Very truly yours,

J. L. Tweed
District Engineer

JWJ:jaf

Attachment

JOHNS "B" #13

Geologic and Reserve Data

¹ Connate Water Saturation (Scw)	.35
Residual Oil Saturation (Sor)	.35
² Porosity (ϕ)	.087
² Height (h)	31'
³ Area (A)	17 acres
Oil Formation Volume Factor (FVF)	1.1 $\frac{RVB}{STB}$
Recovery Factor	.30

Calculations

$$\text{Original Oil In Place (OOIP)} = \frac{7758 \times \phi \times h \times A \times (1 - Scw - Sor)}{FVF}$$

$$OOIP = \frac{7758 (.087) (31) (17) (1 - .35 - .35)}{1.1} = 97,008 \text{ STB}$$

$$\begin{aligned} \text{Recoverable Reserves} &= OOIP \times \text{Recover Factor} \\ &= 97,008 \text{ STB} \times .30 = 29,102 \text{ STB} \end{aligned}$$

¹ Connate Water Saturation, Residual Oil Saturation, Oil Formation Volume Factor, and Recovery Water Factor taken from previous studies on the field.

² Taken from Log of Johns "B" DE #13.

³ Calculated from maps of unswept portions of the reservoir.

Solution Gas Reserves

$$\text{Gas Reserves} = \text{Oil Reserves} \times \text{Completion GOR}$$

$$\text{Gas Reserves} = (29,102 \text{ STB}) \left(\frac{9 \text{ MCFG}}{23 \text{ BO}} \right) = 11.4 \text{ MMCF}$$

Gas-Oil Ratio expected to stay constant throughout the life of the well due to pressure maintenance from offset water injection.

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100



May 5, 1980

Re: Application for NGPA Infill Well
Findings Under Provisions of Order
No. R-6013-A, Johns "B" DE Well
No. 13, Unit 0, Section 24, T-17-S,
R-32-E, Maljamar Pool, Lea County

ARCO Oil and Gas Company has 100% working interest in
all offset proration units to the subject well and is
operator of said acreage.

Signed

J. W. Johnston
Area Engineer

JWJ:jaf

4100

JOHN'S "B" DE #13

CNL

← CORRECTED COLLARS →
4200

SPICE

↓ ↑

FR GR

FR GR

TD

TENSION

RATIO

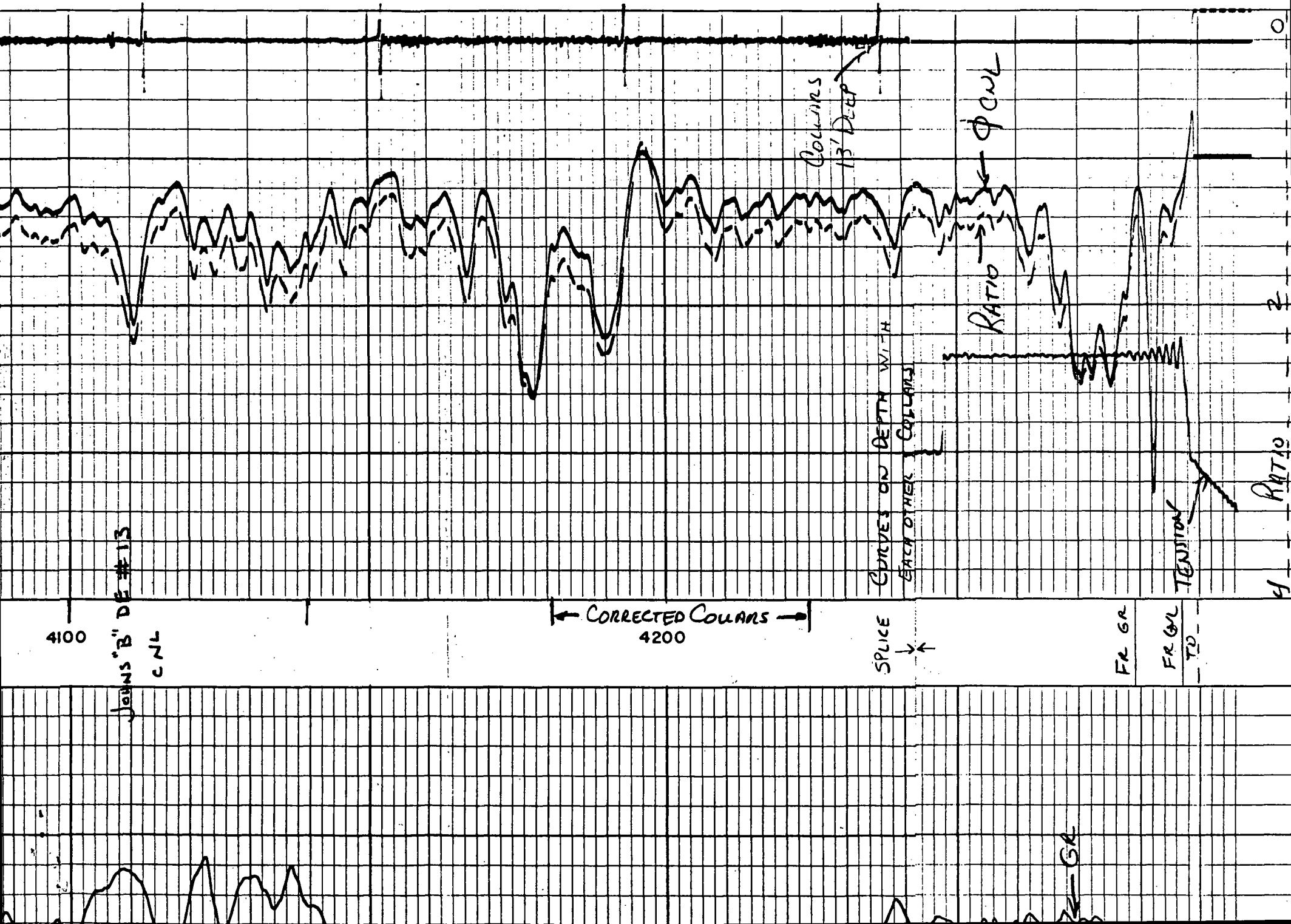
CURVES ON DEPTH WITH
EACH OTHER COLLARS

RATIO

φ_{CNL}

COLLARS

13' DEEP





STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

April 30, 1980

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

ARCO Oil and Gas Company
P. O. Box 1610
Midland, Texas 79702

Re: Application for NGPA Infill Well
Findings Under Provisions of
Order No. R-6013-A, Johns "B" DE
Well No. 13, Unit 0, Sec. 24, T-17-S,
R-32-E, Maljamar Pool, Lea County

We may not process the subject application for infill findings until the required information, forms, or plats checked on the reverse side of this letter are submitted.

Sincerely,

R. L. STAMETS
Technical Support Chief

RLS/dr

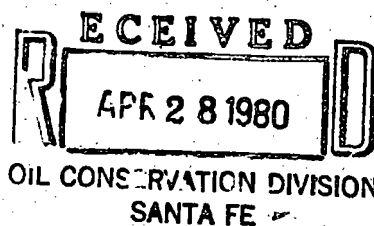
- ☐ A copy of Form C-101 must be submitted.
- ☐ A copy of Form C-102 must be submitted.
- ☐ The pool name must be shown.
- ☐ The standard spacing unit size for the pool must be shown.
- ☐ Give the Division Order No. which granted the non-standard proration unit.
- ☐ Please state whether or not the well has been spudded and give the spud date, if any.
- ☐ Information relative to other wells on the proration unit is incomplete. _____

☒ The geologic and reservoir data is incomplete or insufficient.
The factors used in calculating the reserves were not
shown (pressure, porosity, pay thickness, saturations,
productive acreage, etc.). Please show these factors and
the calculations. _____

☒ Other:
There should be a statement that ARCO is the operator of
all offset acreage. _____

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0201

Jerry L. Tweed
District Engineer



April 16, 1980

Mr. Joe R. Ramey
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Johns "B" DE #13
Infill Location
Maljamar Pool
Lea County, New Mexico

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Attached is the required information and your prompt attention is appreciated.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. L. Tweed".

J. L. Tweed

TDM:ad

ARCO Oil and Gas Company
JOHNS "B" DE #13

- Rule 5. Attached
- Rule 6. Maljamar Pool - 40 acre spacing
- Rule 7. Approval of non-standard location:
Administrative Order NSL-1083
- Rule 8. a) Johns "B" DE #10
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could not be produced.

Rule 9. a) Attached

- b) The volume of oil to be recovered is calculated to be approximately 30 MBO. This volume was arrived at through volumetric calculations using known reservoir parameters and recovery factors. Reserves were also found by planimetering the unswept portion of the reservoir and making calculations from net pay maps.

ARCO OIL AND GAS COMPANY
JOHNS "B" DE NO. 13

The attached log cross section is geological evidence that the reservoir is continuous throughout this area. As such, waterflood oil and gas is pushed by the water injection to the producing wells. The attached flood front map shows the calculated water fronts in the reservoir. As can be seen, there is an area between the two offsetting water injectors (Johns "A" DE No. 2 and Johns "B" DE No. 10) where oil and gas will be trapped by the advancing water fronts. Portions of this oil and gas will not be recovered by any other well in the reservoir. The Johns "B" DE No. 13 is therefore necessary to effectively and efficiently drain the area of the reservoir between the two offsetting injection wells.

MALMAR
UNIT #13

M. H. BAXTER
STATE 13 #5

A.R.Co.

"B"
Johns

PENNZOIL
PHILLIPS
B STATE #13

17
S

24

PHILLIPS
LEA MEX #1

MCA #313
MCA #129

MCA #132

MENTAL

UNIT #79

0



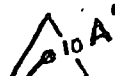
01



09



05



06

A

06

A.R.Co.

"A"
Johns

03

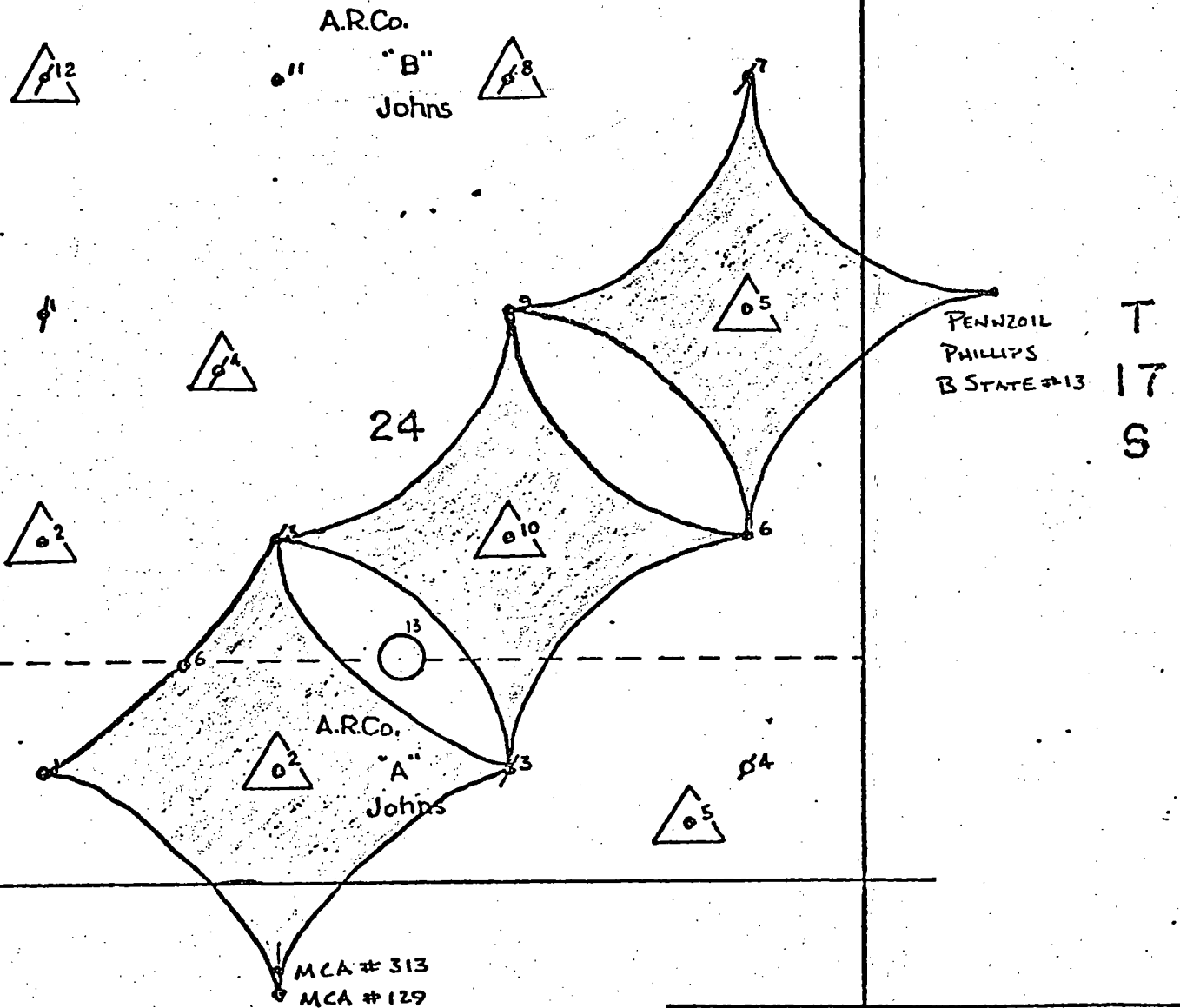
04



01



BUBBLE MAP



MALJAMAR JOHNS

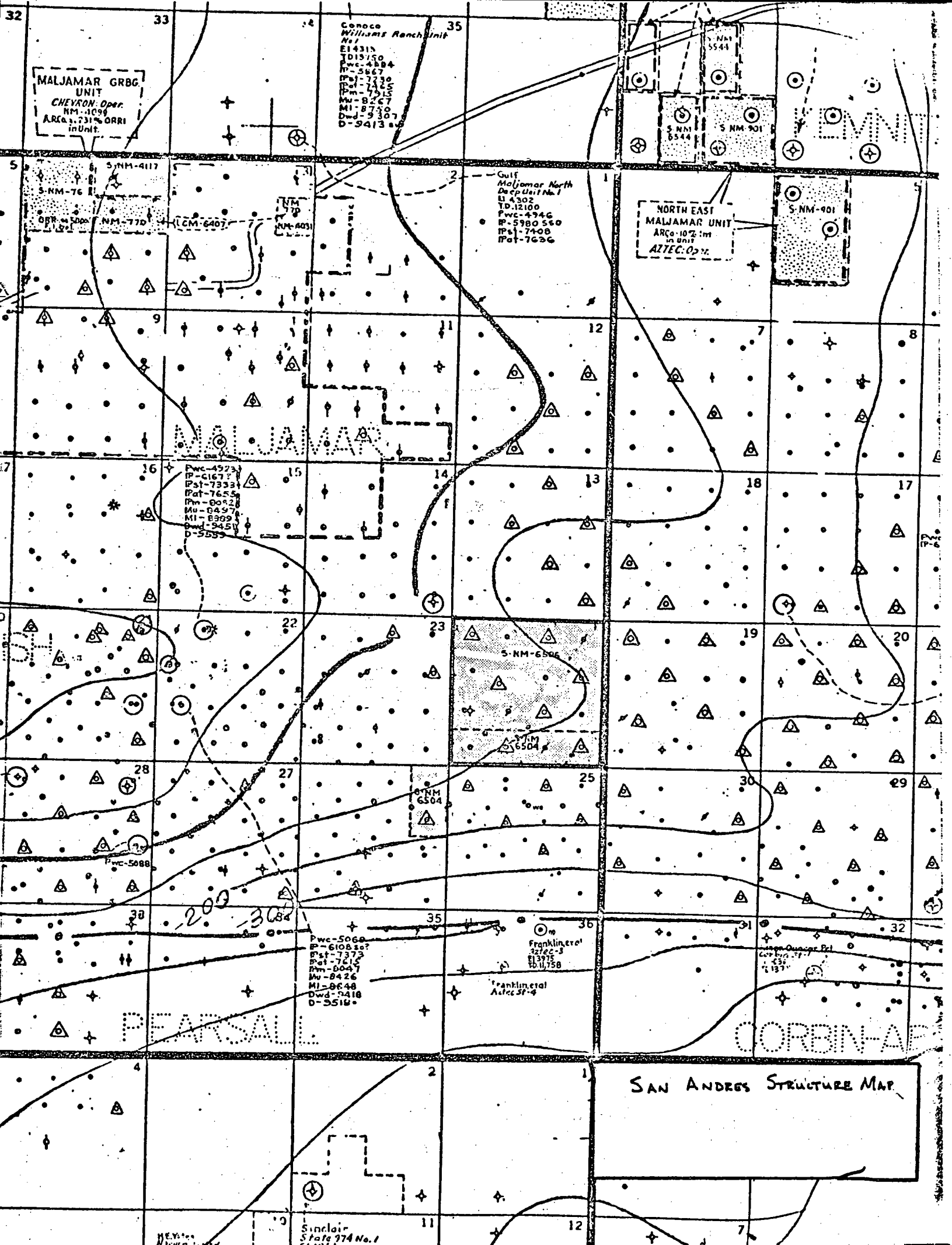
BUBBLE MAP



PROPOSED LOCATION



FLOOD REGION



Hand-drawn map of Maljamar Jo, San Andres, showing topographic contours, spot elevations, and locations of A.R.Co. 'A' and 'B' Johns. The map includes a grid and a title box in the bottom right corner.

Topographic Features:

- Contours:** 10, 15, 20, 25, 30, 40.
- Spot Elevations:** 12, 11, 8, 7, 5, 10, 15, 20, 25, 30, 40, 24, 15, 20, 25, 30, 40, 5, 0, 6, 4, 5.
- Locations:** A.R.Co. "B" Johns, A.R.Co. "A" Johns.
- Other Features:** A dashed line, a circle, and several triangles with numbers inside (e.g., 12, 8, 5, 10, 2, 4, 5).

Title Box:

MALJAMAR JO
SAN ANDRES

T
17
S

SAN ANDRES NGT PAY MAP

PROPOSED LOCATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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"/>				5. LEASE DESIGNATION AND SERIAL NO. LC 059152 - B	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>				6. IF INDIAN, ALLOTTEE OR TRIBE NAME Sinclair Maljamar Johns DE	
2. NAME OF OPERATOR ARCO Oil & Gas Company Division of Atlantic Richfield Company				7. UNIT AGREEMENT NAME Waterflood Project	
3. ADDRESS OF OPERATOR P.O. Box 1710, Hobbs, New Mexico 88240				8. FARM OR LEASE NAME Johns "B" DE	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 2465' FEL & 1360' FSL (Unit Ltr J) At proposed prod. zone As above				9. WELL NO. 13	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 3/4 mi So. of Maljamar Hwy 33, So. East 2-1/4 mi.				10. FIELD AND POOL, OR WILDCAT Maljamar Grbg SA	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)		16. NO. OF ACRES IN LEASE 480		17. NO. OF ACRES ASSIGNED TO THIS WELL 40	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 940' NE		19. PROPOSED DEPTH 4300'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4050' Estimated				22. APPROX. DATE WORK WILL START* Upon Approval	
23. PROPOSED CASING AND CEMENTING PROGRAM					
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT	
11"	8- 5/8" OD	24# K-55	400'	325 sx Circ.	
7- 7/8"	4-1/2" OD	9.5# K-55	4300'	500 sx Estimate TOCO 2050'	

Propose to drill an infill development well to the Grayburg San Andres to recover undrained areas within the Sinclair Maljamar Johns Waterflood Project.

Blowout Preventer Program attached.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

IN ABOVE SPACE 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. Give blowout preventer program, if any.

24. SIGNED <u>[Signature]</u> TITLE <u>Dist. Drlg. Supt.</u>		DATE <u>9-20-79</u>	
(This space for Federal or State office use)			
PERMIT NO. _____		TITLE _____	
APPROVED BY _____		DATE _____	
CONDITIONS OF APPROVAL, IF ANY:			

APPROVED
AS AMENDED
NOV 06 1979
AR Hall
ACTING DISTRICT ENGINEER

*See Instructions On Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved,
Budget Bureau No. 42-10555.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> Other _____				6. LEASE DESIGNATION AND SERIAL NO. LC-059152-b	
2. NAME OF OPERATOR ARCO Oil and Gas Company Division of Atlantic Richfield Company				7. UNIT AGREEMENT NAME Sinclair	
3. ADDRESS OF OPERATOR Box 1710, Hobbs, New Mexico 88240				8. IF INDIAN, ALLOTTEE OR TRIBE NAME Maljamar Johns DE Waterflood	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 2465' FEL & 1360' FSL (Unit letter J) At top prod. interval reported below At total depth as above				9. FARM OR LEASE NAME Johns "B" DE	
14. PERMIT NO. _____ DATE ISSUED _____				10. FIELD AND POOL, OR WILDCAT Maljamar Grbg SA	
15. DATE STUDDERED 12/17/79				11. SEC. T. R. M. OR BLOCK AND SURVEY OR AREA 24-17S-32E	
16. DATE T.D. REACHED 1/1/80				12. COUNTY OR PARISH Lea	
17. DATE COMPL. (Ready to prod.) 3/23/80				13. STATE N.M.	
18. ELEVATIONS (DF, REF, ET, GR, ETC.)* 4052.8' GR				19. ELEV. CASINGHEAD	
20. TOTAL DEPTH, MD & TVD 4300'		21. PLUG, BACK T.D., MD & TVD 4289'		22. IF MULTIPLE COMPL., HOW MANY*	
23. INTERVALS DRILLED BY → 0-4300'				24. ROTARY TOOLS CABLE TOOLS	
25. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 4167-4191' Grayburg San Andres 4267-4275' Grayburg San Andres				26. WAS DIRECTIONAL SURVEY MADE No	
27. TYPE ELECTRIC AND OTHER LOGS RUN GR-CNL, CBI.				28. WAS WELL CORED No	
29. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8" OD	32# K-55	409'	11"	175 SX	
4 1/2" OD	11.60# 9.5#	4300'	7-7/8"	2073 SX	
30. LINER RECORD					
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	
31. TUBING RECORD					
SIZE	DEPTH SET (MD)	PACKER SET (MD)			
2-3/8" OD	4021'	None			
32. PERFORATION RECORD (Interval, size and number)					
4167, 73, 76, 77, 78, 79, 88, 89, 90, 91' (10 .42" holes).					
4267, 70, 72, 75' (4 .38" holes)					
33. ACID, SHOT, FRACTURE, CEMENT SQUEEZER, ETC.					
DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED					
2110' Sqzd w/1500 sx Lite, 15# salt/sk, 200 sx Cl C w/3% CaCl.					
1555' Sqzd w/1500 sx Lite, 15# salt/sk, 4% gel 200 sx Cl C cmt w/3% CaCl					
34. PRODUCTION (cont'd on attached page #2)					
DATE FIRST PRODUCTION 1/27/80		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flow		WELL STATUS (Producing or shut-in) Producing	
DATE OF TEST 3/28/80	HOURS TESTED 24	CHOKE SIZE 48/64"	PROP'D. FOR TEST PERIOD →	OIL—BBL. 23	GAS—MCF. 9
WATER—BBL. 2	GAS-OIL RATIO 391:1				
FLOW, TURNO PRESS. 50#	CASING PRESSURE 35#	CALCULATED 24-HOUR RATE →	OIL—BBL. 23	GAS—MCF. 9	WATER—BBL. 2
OIL GRAVITY-API (CORR.) 36.2°					
35. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Sold					
36. LIST OF ATTACHMENTS Logs as listed in Item 26 above & Inclination Record					
37. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records					
SIGNED [Signature]		TITLE Dist. Drlg. Supt.		DATE 4/3/80	

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 32, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 27: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for Items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

35.

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
				Rustler	1073'	
				Top Salt	1210'	
				Base Salt	2252'	
				Grbg	3570'	
				San Andres	4010'	

**MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-124
Effective 1-1-55

All distances must be from the outer boundaries of the Section

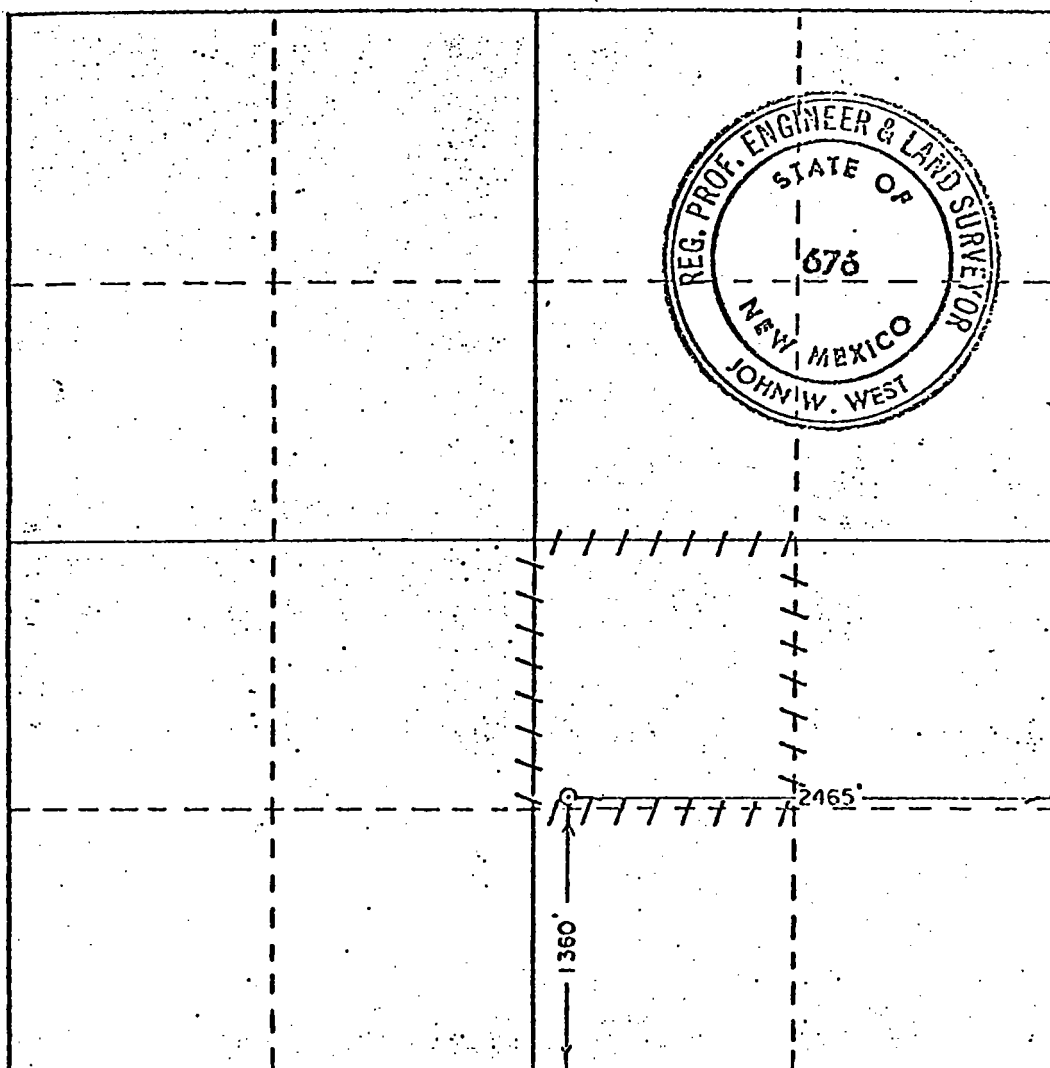
Operator Division of Atlantic Richfield Co. Arco Oil & Gas Co.			Lease Johns B DE		Well No. 13
Unit Letter J	Section 24	Township 17 South	Range 32 East	County Lea	
Actual Footage Location of Well: 1360 feet from the South line and 2465 feet from the East line					
Ground Level Elev. 4052.8	Producing Formation Grb San Andres		Pool Maljamar	Dedicated Acreage 40 Acres	

1. Outline the acreage dedicated to the subject well by 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, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use 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.



CERTIFICATION

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

Name _____

Position _____

Dist. Dir. Supt.

ARCO Oil and Gas Company
Division of Atlantic Richfield Company

Date

9/20/79

I hereby certify that the well location shown on this plat was plotted from field 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.

Date Surveyed

Sept. 6, 1979

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. **John W. West 676**

Ronald J. Eidson 3239

