job# 60003379 LAGUNA GRANDE FED UN. A. - 0003 08/23/90
Procedure by JLC

FIELD: South Carlsbad

OBJECTIVE: Add pay and stimulate Atoka pay

****

PROCEDURE:

1. Before initiating workover, check the pressures on the tubing and all casing annuli. Report annular pressures found to the Exxon supervisor and discuss appropriate and safe blow down procedures. Attempt to bleed annulus pressures to zero. For annular pressures that will not bleed to zero, first review with the field superintendent, then inform subsurface engineer. Document all annular

pressure activity or morning report.

Also, test backside of tubing to 500 psi for at least 15 minutes. If backside does not test, notify office before proceeding with workover.

2. Nipple up Class II lubricator/ wireline BOP assembly (5,000 psi WP rating) and test per company guidelines. RIH with sinker bar on slickline to PBTD of 12,600' to check for fill. Rig down slickline.

3. If fill above 12,200' was encountered with sinker bar, rig up 1.5" coiled-tubing unit (CTU) to clean out to 12,220' (use clean 2% KCl water). After cleaning well out, use CTU and nitrogen to kick well off.

4. Rig up perforators with full class II lubricator as above and test per company guidelines. With well flowing as wide open as possible, perforate 16 shots in the Atoka from 12,174 - 12,189 (1 spf) per attached perforation sheet and annotated log. (Use a gun gamma ray tool to get on depth)

Perforate:

Service Company* ____
Gun Type* RHSC RETRIEVABLE HOLLOW STEEL CARRIER
Gun Size 2.125 (inches)
Correlation log type Schlumberger Perf Depth Control dated 1-1-81
Zero pnt RKB elev. = 3040' (27' above G.L.)
Press Diff ____ (psi) when shot underbalanced
Phasing 0
Location 230' FSL; 1980' FEL; Sec 29; T23S; R29E
Corrected collars 12021, 12062, 12099, 12143, 12185, 12229
Correlation Tie in point Hot gamma at 12023, 12040, 12050, 12118,
Correlation Tie in point Hot gamma at 12131, 12192, 12206

top of Interval	Bottom of Interval	Spacing	Shots per ft	Total
12174	12189	1	1	16

(if spacing = 5 and shots/ft = 2, then every 5 ft shoot 2 holes)

Use MAGNETIC DECENTRALIZER.

Rig down wireline.

4. Put well on test. Depending on results of test, the followingstim job may be necessary. Contact office before proceeding with the acid job.

ACID STIMULATION:

5. MIRU Dowell & nipple up 10,000 psi tree saver.

6. Pump the following acid treatment per procedure below.

Stimulate:
Service Co* DOWEL DOWELL-SCHLUM
Type Fluid* HCL 15 15% HYDROCLORIC ACID
Total job Vol _____ (Gals)
Total Acid Vol 3000 (Gals)
Max Rate ____ (BPM)
Max press _____ (PSI)
Type Diverter* BALL PERFORATION BALL SEALERS
Upper Depth 12104 (ft)
Lower Depth 12189 (ft)
temp Pkr Depth _____ (ft)
Flush Vol 50 (bbls)
Add 500 scf/bbl of nitrogen to flush.

Additives:

Function*		amt	Brand name
INHI	ACID INHIBITOR	2 GPT	A250
CLAY	CLAY STABILIZER	4 GPT	TFA-380A
FECO		3 GPT	U-42
N2		350 scf/b	Nitrogen gas

Energize acid with 350 scf/bbl N2 gas. Energize flush w/ 500 scf/bbl.

Diversion: 60 ball sealers (S.G. 1.1)

Displace with 50 bbl 2% KCl energized with 500 scf/bbl nitrogen.

Total N2 required for the job: 80,000+ scf (including cool-down gas).

PROCEDURE:

a) Spot all equipment as far as possible from the well.

b) Rig up 10,000 psi tree saver and treating line.

c) Install a 10,000 psi frac valve in the treating line and one on the discharge line.

d) Stake and test all treating lines and tree-saver to 7,000 psi with nitrogen.

e) Install a safety valve on the casing/tubing annulus, set at 1,500 psi.

f) Maintain 500 psi on the backside while pumping.

g) Pump above acic formula and break down the perforations. Pump acid at approximately 1-2 BPM without exceeding 7,000 psi surface treatirg pressure (slow rate if pressures approach limit).

h) Drop a total of 60 1.1 SG ball sealers evenly in slugs of 12 during pumping of the acid (one slug after each 12 bbl).

i) Displace with flush described above.

j) Rig down Dowell.

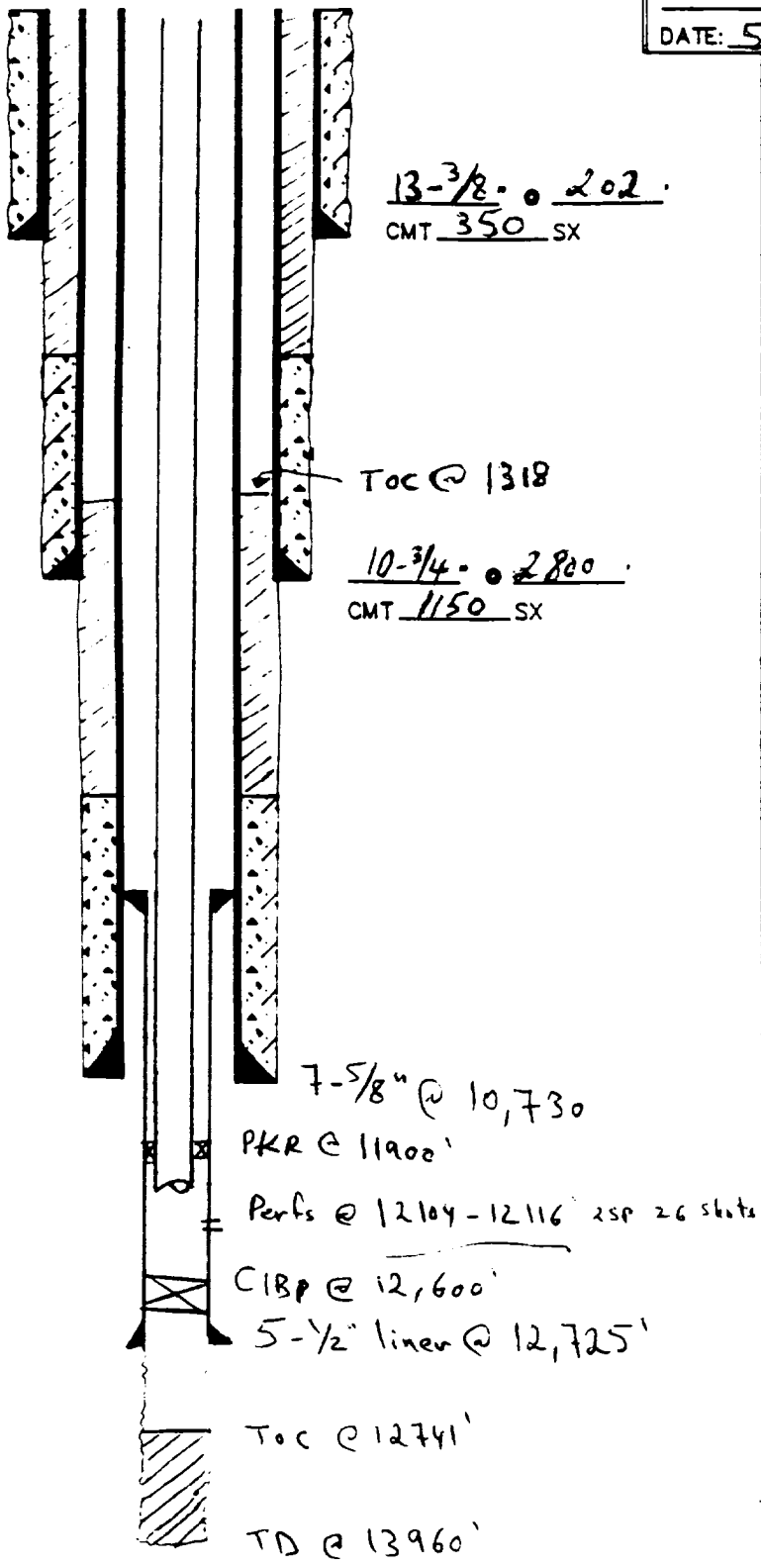
7. Flow back and kick well off. If well will not kick off, tie back into tree saver with nitrogen pumps and bullhead half a tubing volume of pure nitrogen back into the well.

8. Test the well until further notice. Check pH of returned load water (low pH may indicate insufficient treatment of newly perfed Atoka lime).

WELLBORE SKETCH AND WELL HISTORY

ELEV.: KB _____', _____' ABOVE _____

LEASE & WELL NAME: LAGUNA GRANDE #3
FIELD: SOUTH CARLSBAD COUNTY: EDDY ST.
LOCATION: 2310' FSL & 1980' FEL
SEC 29, T23S, R29E
DATE: 5/23/80 BY: aaa REV.: _____ BY: _____



TD: 13960' PBD: 12,600'

CASING RECORD

SURFACE CASING

O.D.	WT/FT	GRADE	SET
13-3/8	40	K-55	2
10-3/4	40.5&51	K-55	28

PRODUCTION CASING

7 5/8"	29-33#	S-95	10
5 1/2	20.8	P-110	Top
			Bot

TUBING

NO. JTS.	O.D.	THD.	TYPE	WT.	GDE.
386	2 7/8	8rd	EUE	6.5	L-80

WELL HISTORY:

1/81 D&C Perforated well ~~thru~~ 12104-12116' 2 SPF
Total 26 shots
Well flowed 940 MCF, TP 5

9/84 Acidized well w/ 1800 Gals 15
420 MCF, 3100 PSI FTP, 600 PSI back press.

Schlumberger

PERFORATING DEPTH CONTROL

COUNTY EDDY
FIELD or LOCATION LAGUNA GRANDE M
WELL LAGUND GRANDE #3
COMPANY EXXON CO. USA

COMPANY EXXON COMPANY U.S.A.

WELL LAGUNA GRANDE #3

FIELD LAGUNA GRANDE MORROW

COUNTY EDDY STATE NEW MEXICO

Location
2310' FSL & 1980' FEL,
Sec. 29 Twp. 23-S Rge. 29-E

Other Services:
JUNK BASKET
BRIDGE PLUG
PACKER

Permanent Datum: G.L. ; Elev.: 3013
Log Measured From K.B., 27 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 3040
D.F.
G.L. 3013

Date	1-1-81		
Run No.	ONE		
Type Log	GAMMA RAY-COLLARS		
Depth — Driller	12725		
Depth — Logger			
Bottom logged interval	12664		
Top logged interval	10000		
Type fluid in hole	WATER		
Salinity, PPM Cl.			
Density			
Level	FULL		
Max. rec. temp., deg F.	174		
Operating rig time	2 HRS.		
Recorded By	MARLEY		
Witnessed By	SEARCY		

BORE-HOLE RECORD

Bit Size	From	To

CASING RECORD

Size	Wgt.	From	To
7 5/8		SURF	10730
5 1/2	20.8	SURF	TD

Perforate:

Service Company* _____
Gun Type* RHSC RETRIEVABLE HOLLOW STEEL CARRIER
Gun Size 2.125 (inches)
Correlation log type Schlumberger Perf Depth Control dated 1-1-81
Zero pnt RKB elev. = 3040' (27' above G.L.)
Press Diff _____ (psi) when shot underbalanced
Phasing 0
Location 2310' FSL; 1980' FEL; Sec 29; T23S; R29E
Corrected collars 12021, 12062, 12099, 12143, 12185, 12229
Correlation Tie in point Hot gamma at 12023, 12040, 12050, 12118,
Correlation Tie in point Hot gamma at 12131, 12192, 12206

top of Interval	Bottom of Interval	Spacing	Shots per ft	Total
12174	12189	1	1	16

(if spacing = 5 and shots/ft = 2, then every 5 ft shoot 2 holes)

m 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

dsf

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED BY
SEP 24 1984
O. C. D.
ARTESIA, OFFICE

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 Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other

2. NAME OF OPERATOR
EXXON CORPORATION ✓

3. ADDRESS OF OPERATOR
BOX 1600 MIDLAND TEXAS 79702

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 2310' FSL AND 1980' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
NM-19848

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
LAGUNA GRANDE UNIT (FEDERAL)

9. WELL NO.
3

10. FIELD OR WILDCAT NAME
LAGUNA SALADO-ATOKA GAS

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SEC 29, T-23S, R-29E

12. COUNTY OR PARISH
EDDY

13. STATE
NEW MEXICO

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
3013 GR

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☒
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other)			

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

1. ACIDIZE PERFS 12104-12116' W/1800 GAL 15%, PUMP 43 bbls ACID + 38 bbls 3% KCL, TP 8100, 7½ bbls ACID IN FORMATION.
2. TESTED WELL 4-DAYS - FINAL TEST: 420 MCF ON 11/64 CK. FLOWING TUBING PRESSURE 3100#, 600# BACK PRESSURE

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE SR ADMIN DATE _____

ACCEPTED FOR RECORD

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY: SEP 27 1984

GWQ

NEW MEXICO

Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

6/SF

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED BY
JUL 06 1984
O. C. D.
ARTESIA, OFFICE

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 Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other

2. NAME OF OPERATOR
EXXON CORPORATION

3. ADDRESS OF OPERATOR
BOX 1600, MIDLAND, TEXAS 79702

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 2310' FSL AND 1980' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
NM-19848

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
LAGUNA GRANDE UNIT (FEDERAL)

9. WELL NO.
3

10. FIELD OR WILDCAT NAME
LAGUNA SALADA-ATOKA GAS

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SEC 29 T-23S, R-29E

12. COUNTY OR PARISH
EDDY

13. STATE
NEW MEXICO

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
3013 GR

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
~~SHOOT OR~~ ACIDIZE	☒		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other)			

RECEIVED BY
JUL 11 1984
O. C. D.
ARTESIA, OFFICE

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

1. TREAT W/1800 GAL OF 50/50 MIXTURE INHIBITED 15% NEHCL AND METHANOL.
2. CHECK ANNULUS PRESSURE PRIOR TO PUMPING TO ENSURE NO LEAKS OCCUR
3. SWAB TO RECOVER LOAD AND KICK WELL OFF.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED D. A. Lowe TITLE SR ADMIN. DATE 6-28-84

(This space for Federal or State office use)

APPROVED BY R Pitzsche TITLE P.E. DATE 7/10/84
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side