Form 3160-4
(November 1983)
(formerly 9-330)

N. M. OIL CONS. COMMISSION
P. O. BOX 1980
HOBBS, NEW MEXICO 88240

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

RECEIVED
OCT 22 AM '90

5. LEASE DESIGNATION AND SERIAL NO.: NM 0448921 - A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: MEXICO FEDERAL "P"

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: ARENA ROJA Penn / Wildcat Dev.

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec 21-T26S-R35E

12. COUNTY OR PARISH: LEA

13. STATE: New Mexico

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

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

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☒ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR: FALCON ENGINEERING COMPANY, INC.

3. ADDRESS OF OPERATOR: 401 W. Sheridan Suite 200W Oklahoma City, OK 73102

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1980' FNL & 1980' FWL Sec. 21 - T26S - R35E
At top prod. interval reported below: NA (Rework old well)
At total depth: NA (Rework old well)

14. PERMIT NO. | DATE ISSUED

15. DATE SPUDDED: rework 9-5-89 | 16. DATE T.D. REACHED | 17. DATE COMPL. (*Ready to prod.*) | 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*: 3179' RKB | 19. ELEV. CASINGHEAD: 3153' GR

20. TOTAL DEPTH, MD & TVD: 12,926 | 21. PLUG, BACK T.D., MD & TVD | 22. IF MULTIPLE COMPL., HOW MANY* | 23. INTERVALS DRILLED BY: → | ROTARY TOOLS: X | CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
15,564-616', Atoka TVD NA
19,214-398' Devonian TVD NA

25. WAS DIRECTIONAL SURVEY MADE: Unknown

26. TYPE ELECTRIC AND OTHER LOGS RUN: GR, IES, Sonic, Dens, Neutron, Dipmeter

27. WAS WELL CORED: Unknown

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
30"		33.5'	36"	5 yds redi-mix	
20"		803.0'	26"	1700 sx	
13 3/8"		5320.0'	17½"	6700 sx	
10 3/4"		13,315.0'	12¼	3400 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
7 5/8"	12,488'	18,605'	1200 sx	
5"	17,913	19,531'	295 sx	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	15,140'	15,140'
2 7/8	15,140-17,873'	

31. PERFORATION RECORD (*Interval, size and number*)

Atoka: 15,564-569, 0.31" 6
15,572-594, 0.31" 23 Total
15,598-606, 0.31" 9 47
15,608-616, 0.31" 9
Devonian: 19,214-225, 0.31" 12 Total
~~19,382-398, 0.31" 17~~ 29

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
15,564-616'	See schedule attached
19,214-398'	See schedule attached

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
*March 26, 1990	Flowing	Shut-in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
*3-26-90	24	6/64		0	1,375	2	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
3400	0		0	1,375	2	50.2

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
*Sold during test period 3-26-90-8-7-90 to Centran Corp.

TEST WITNESSED BY: Reliable/WT Testing

35. LIST OF ATTACHMENTS
Mechanical schematic , Commingle Order.

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

SIGNED John R Bannon TITLE Chairman CEO DATE 10/18/90

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

SUPPLEMENT FOR NO. 32 FORM NO. 3160-4

MEXICO "P" FEDERAL NO. 1
SECTION 21-T26S-R35E
LEA COUNTY, NEW MEXICO

ATOKA:

10,000 GALS NE ACID CONTAINING 2 GALS HAI, 50 GALS MUSOL A, 2 GALS CLASTA, 10 GALS FE-1A, 2 GALS SUPER FLO II, 2 GALS PN-88, 2 GALS SGA-8, 5 GALS HC-2 PLUS NITROGEN.

DEVONIAN:

3,000 GALS NEFE BREAKDOWN ACID, PLUS NITROGEN.

20,000 GALS VERSAGEL, FOLLOWED BY 12,500 GALS MOD 202 ACID PLUS NITROGEN.

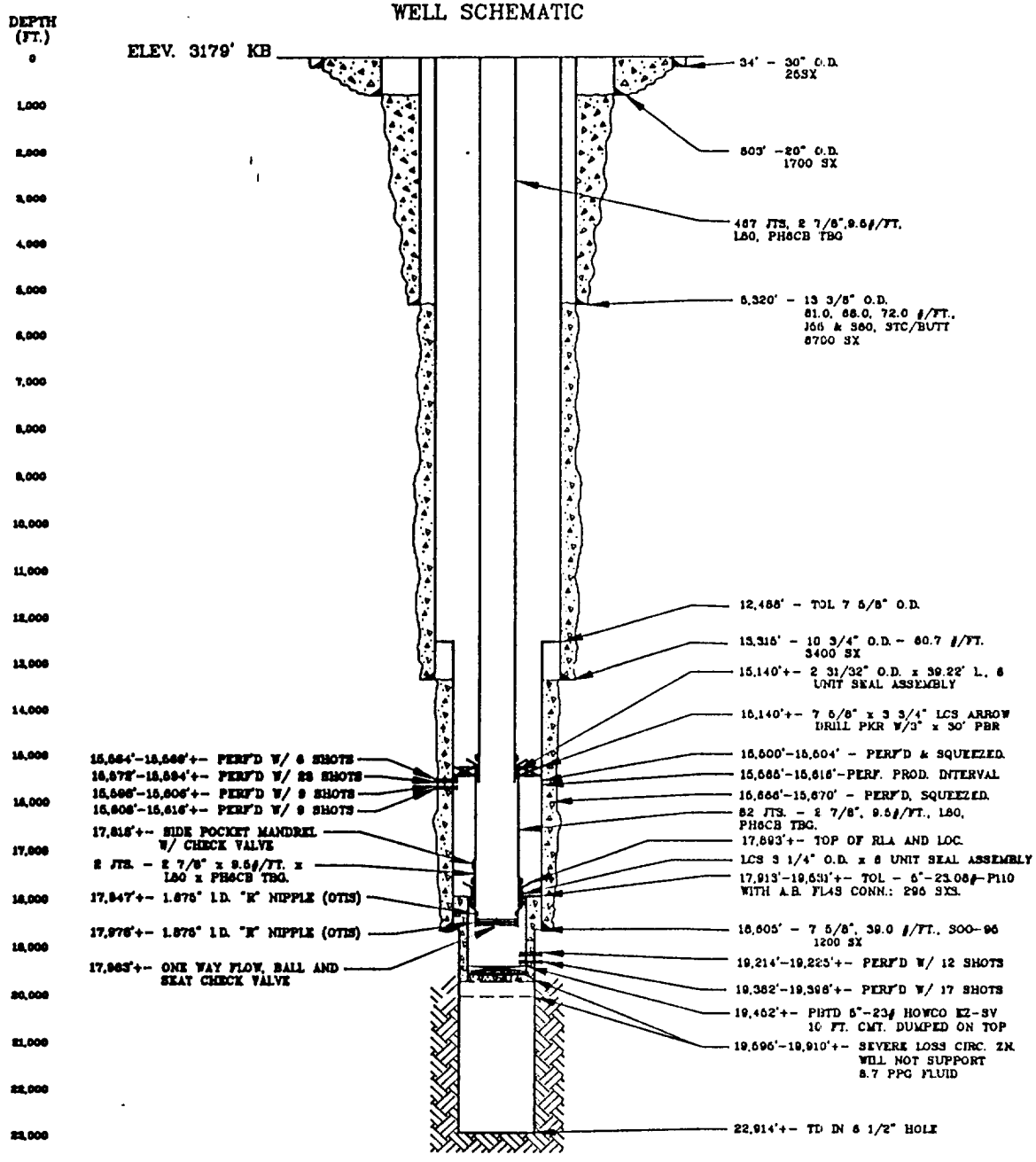
6,200 GALS MOD 202 ACID PLUS NITROGEN.

8,000 GALS MOD 202 SWIC ACID PLUS NITROGEN.

FALCON ENGINEERING COMPANY

MEX "P" FEDERAL NO. 1

WELL SCHEMATIC



5-1-90

Geological Data

FORMATION	MEAS. DEPTH	TVD
Delaware Lime	5,304'	Same
Delaware Sand	5,335'	"
Cherry Canyon	6,310'	"
Brushy Canyon	7,920'	"
Bone Spring Lime	9,440'	"
1st Bone Spring Sand	10,450'	"
Wolfcamp	12,011'	"
Strawn	14,602'	"
Atoka	15,222'	"
Atoka Pay	15,555'	"
Morrow	15,806'	"
Barnett Shale	16,870'	"
Mississippian Lime	18,477'	"
Woodford Shale	18,875'	"
Siluro-Devonian	19,169'	"
Fusselman	20,440'	"
Montoya	20,845'	"
Simpson	21,286'	"
Joins-Ellenburger	22,206'	"
Ellenburger	22,256'	"
Granite	22,863'	"
Total Depth, Logger	22,914'	"

Effective Pay (Gas)

FORMATION	INTERVAL	CHARACTER	THICKNESS	HOW DETERMINED
Atoka	15,555-615'	Oolitic Lm.	60'	Schl. Sonic-GR
Siluro-Devonian	19,214-225'	Dolomite	11'	"
Siluro-Devonian	19,382-398'	"	16'	"

SEE ATTACHED

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):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH

Cores (Conventional)

Core #1: 15,630-667' C&R 37' 1m. The entire 37' of core exhibited high angle fractures. Only top 6' of core, 15,630-636', was porous, with only the top 3', 15,630-633', having possible reservoir capabilities. Whole core analysis was run from 15,630-639', 15,644', 15,648', 15,653', 15,660', 15,665'. Analysis by Core Lab.

Drill Stem Tests (Open Hole)

DST #1: 10,454-10,520' (Bone Spring) Ran 4000' WB. Rec. 2000' SGCWB with sli. trace cond. + 2000'WB. HH 4697-4674'. IFP 1700#, ISIP/60" 2066# FFP 1700#, FSIP/60" 1999#.

DST #2: 11,774-11,833' (Bone Spring) 4000' WB. Rec. 4000' GCWB + 150' Cond.(49 grav. @ 68°) HHP 5598-5587#. IFP 1803-1815#, ISIP 5086#/60" FFP 1815-1849#, FSIP 4538#/60".

DST #3: 13,670-13,699' (Wolfcamp) 10,000' WB. Rec. 3000' WB + 5000' VSGCWB + 2000' SGCWB. HH 9199-9199#. IFP/90" 4473-4523#. ISIP/60" 8764#, IFP/120" 4555-4588#, FSIP/120" 8474#.

DST #4: 13,770-13,825' (Wolfcamp) 10,000' WB. Rec. 9500' WB + 500' VSGCWB + 30' GCM. HH 11,226#, #1 IFP/60" 4686-4719#, ISIP/60" 11,193#. #2 IFP/45" 4719-4735#, FSIP/90" 11,210#.

Drill Stem Tests (Cont'd.)

DST #5: 15,540-15,630' (Atoka) 12,000' WB. Op 1 hr. w/good blow; SI 1 hr. Op 6-1/4 Hrs. w/good blow; WBTS/2 hrs., GTS/3 hrs. Max. gas rate @ 900 MCFGPD w/15 bbls. of WB/hr. Did not allow to unload all of the WB. Rev. out 3164' GCWB + 100' GCM. 1st flow IFP = 5623#, FFP = 5579#, ISIP/60" = 11,191#. 2nd flow IFP = 5666#, FFP = 3116#, FSIP/60" = 10,806#.

DST #6: 16,226-16,266' (40') Morrow, 12,000' WB. Op 1 hr., SI 1 hr. Op 2 hrs., SI 2 hrs. Rec. 12,000' WB + 30' DM. 1st flow IFP = 5297#, FFP = 5340#, ISIP/60" = 5901#. 2nd flow IFP = 5340#, FFP = 5470#, FSIP/120" = 5987#.

DST #7: 16,800-16,880' (80') Morrow, 15,000' WB. Op 30 min., good blow, closed 30 min. Op 1 hr. w/good blow dec. to weak blow. Closed 90 min. Rev. out 11,250' WB + 3750' GCWB + 90' GCM. 1st flow IFP = 7017#, FFP = 7017#, ISIP/30" = 12,418#. 2nd flow IFP = 7017#, FFP = 7060#, FSIP/90" = 12,334#.

DST #8: 22,185-22,914' Packer failure

DST #9: 22,118-22,914' 1/4" bot. chk.; 3/8" top chk.; 12,000' WC. Opened tool for 3 hr. flow period. Had weak blow throughout flow. No gas or water to surface. Shut-in tool for 3 hrs. Rec. 1116' gas vapors in DP + 10,700' SGCWC + 1300' GCWC + 1395' salt water w/ Sulphur odor. (176,000 PPM/Cl of salt water; 3000 PPM/Cl of WC) IHP = 10,103#; FHH = 10,028#. IFP = 5476#, FFP = 5561#. FSIP/ 3 hrs. = 7459#.

DST #10: 20,381-20,850' 3/8" bot. chk.; 3/8" top chk.; 12,000' WC. Opened tool for 2-1/2 hrs. flow period. Had weak blow of air, increased to fair and remained fair throughout flow period. Blow gauged 66 psi @ 2 hrs., decreased to 60 psi at end of flow. No gas or water to surface. Shut-in tool for 2-1/2 hrs. Rec. 8000' WC + 4000' VSGCWC + 4000' VSGC sulfur water + 4080' of sulfur water. IHP = 8942#, FHP = 8943#, IFP = 6115#, FFP = 8986#, FSIP/2-1/2 hrs. = 9029#.

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 9922
Order No. R-9182

APPLICATION OF HEAFITZ ENERGY MANAGEMENT INC. FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 30th day of May, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Heafitz Energy Management Inc., seeks approval to commingle gas production from the Arena Roja-Pennsylvanian Gas Pool and Wildcat Silluro-Devonian Pool within the wellbore of the Falcon Engineering Company Inc. Mexico "P" Federal Well No. 1 located 1980 feet from the North and West lines (Unit F) of Section 21, Township 26 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) The subject well was originally drilled in 1968, was completed in the Arena Roja-Pennsylvanian Gas Pool in January, 1969, and has produced from said pool to the present time.

(4) The applicant has recently perforated and tested the Silluro-Devonian formation within the subject well and has encountered commercial gas production from said formation.

(5) Testimony by the applicant indicates that the remaining gas reserves within the Arena Roja-Pennsylvanian Gas Pool do not economically justify the installation of dual production and separation equipment.

(6) The proposed downhole mechanical configuration, according to evidence presented, is such that cross flow between the Atoka and Silluro-Devonian formations should not occur within the subject well thereby assuring that waste or formation damage is precluded.

(7) The subject well is located within the applicant's Tres Amigos Unit Area, approved by Division Order No. R-9021 on October 19, 1989.

(8) No other offset operator or interest owner appeared at the hearing in opposition to the application.

(9) Approval of the proposed downhole commingling will result in the recovery of additional gas reserves from the Arena Roja-Pennsylvanian Gas Pool, thereby preventing waste, and will not violate correlative rights.

(10) The applicant should consult with the supervisor of the Hobbs district office of the Division in order to determine an allocation formula for the allocation of production to each zone in the subject well.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Heafitz Energy Management Inc, is hereby authorized to commingle the Arena Roja-Pennsylvanian Gas Pool and Wildcat Silluro-Devonian Gas Pool production within the wellbore of its Falcon Engineering Company Inc. Mexico "P" Federal Well No. 1 located 1980 feet from the North and West lines (Unit F) of Section 21, Township 26 South, Range 35 East, NMPM, Lea County, New Mexico.

(2) The applicant shall consult with the supervis of the Hobbs district office of the Division in order to dete ine an allocation formula for the allocation of production to each zone in the subject well.

(3) 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 the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L