

**NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION**

Form C-107
5-1-61

Operator Mesa Petroleum Co.		County Rio Arriba	Date May 22, 1981
Address 1660 Lincoln St., #2800, Denver, CO 80264		Lease Federal	Well No. 11E
Location of Well P	Unit 23	Township 26N	Range 6W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES ☒ NO ☐
2. If answer is yes, identify one such instance: Order No. _____; Operator Lease, and Well No.: _____

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Mesaverde		Dakota
b. Top and Bottom of Pay Section (Perforations)	4922' - 4944'		6934' - 7234'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
☒	☐	a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
☒	☐	b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
☒	☐	c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
☐	☒	*d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

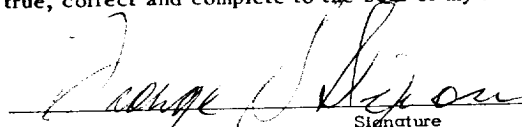
*4d logs sent prior to filing of this application Caulkins Oil Co., 2100 Colorado State

Bank Bldg., 1600 Broadway, Denver, Colorado 80202

E1 Paso Companies, #1 Denver Place, Suite 1500, 999-18th Street, Denver, Colorado 80202

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES ☒ NO ☐. If answer is yes, give date of such notification 5/22/81.

CERTIFICATE: I, the undersigned, state that I am the Div. Production Supervisor of the Mesa Petroleum Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.


Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



OFFSET WELLS

Federal #11E
Rio Arriba County, New Mexico

<u>OPERATOR</u>	<u>WELL NAME</u>	<u>LEGAL DESCRIPTION</u>
Mesa Petroleum Co.	#12 Pubco Federal	23-26-6 NENW
Mesa Petroleum Co.	#11 Pubco Federal	23-26-6 NWNĒ
Caulkins Oil Company	#346 Breech D	22-26-6 NENE
Caulkins Oil Company	#387 Breech D	22-26-6 SWSE
Caulkins Oil Company	PC-343 Breech D	22-26-6 NWNE
Caulkins Oil Company	#1 Sanchez	24-26-6 NWNW
El Paso Natural Gas	#8 Vaughn	26-26-6 NENE
El Paso Natural Gas	#26 Vaughn	26-26-6 SWNW

Federal 11E
Sec. 23 - T26N - R6W
Rio Arriba Co., N. M.

a = #12 Pubco Federal
b = #11 Pubco Federal
c = #346 Breech D
d = #387 Breech D
e = PC-343 Breech D
f = #1 Sanchez
g = #8 Vaughn
h = #26 Vaughn

15	14	13
e ☀ c ☀ 22 d ☀	a ☀ b ☀ 23 ☀	f ☀ 24
27	h ☀ g ☀ 26	25

T 26

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

SF079296, SF079295

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Federal

9. WELL NO.

11E

10. FIELD AND POOL, OR WILDCAT

Blanco Mesaverde

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

Sec. 23-T26N-R6W

12. COUNTY OR
PARISH

Rio Arriba

13. STATE

NM

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

Mesa Petroleum Co.

3. ADDRESS OF OPERATOR

1660 Lincoln Street, #2800, Denver, CO 80264

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

At surface 1190 FSL - 1190 FEL

At top prod. interval reported below same

At total depth same

14. PERMIT NO.

DATE ISSUED

1/4/80

15. DATE SPUDDED 10/31/80 16. DATE T.D. REACHED 11/14/80 17. DATE COMPL. (Ready to prod.) 5/19/81 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6370 GR 19. ELEV. CASINGHEAD 6370 GR

20. TOTAL DEPTH, MD & TVD 7293' 21. PLUG, BACK T.D., MD & TVD 7251' 22. IF MULTIPLE COMPL., HOW MANY* 2 zones 23. INTERVALS DRILLED BY → 0-7293 | -0-

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

4922' - 5044' Mesaverde

25. WAS DIRECTIONAL
SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

IES, GR-CBL, Density Neutron

27. WAS WELL CURED

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"	24#	330	12 1/4"	225 sxs Class "B"	-0-
5 1/2"	15.5# & 17#	7293'	7 7/8"	755 sxs 50/50 poz, 150 sxs Light	-0-

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 1/16"	6880'	6494'
					1 1/2"	4870'	

31. PERFORATION RECORD (Interval, size and number)

4922', 26', 28', 37', 46', 81', 5015', 40',
42' and 44'
10 holes, .40" diameter

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
4922' - 5044'	2500 gals. 15% HCL, 70,000 gals. X-link gel, 65,000 #'s 20/40 sd. w/400 SCF/bbl N ₂

33.*

PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (<i>Flowing, gas lift, pumping—size and type of pump</i>)				WELL STATUS (<i>Producing or shut-in</i>)	
N/A		Flowing				Shut in	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
5/19/81	3	.750	→	-0-	1653	-0-	N/A
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
100 psig	0	→	-0-	1653	-0-	N/A	

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

Vented for test purposes only

TEST WITNESSED BY

J.L. Archer

35. LIST OF ATTACHMENTS

C-104 w/deviation record, C-107 and C-122

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

SIGNED

TITLE

Div. Production Supervisor

DATE

5/22/81

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

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 33, 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 33.

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.

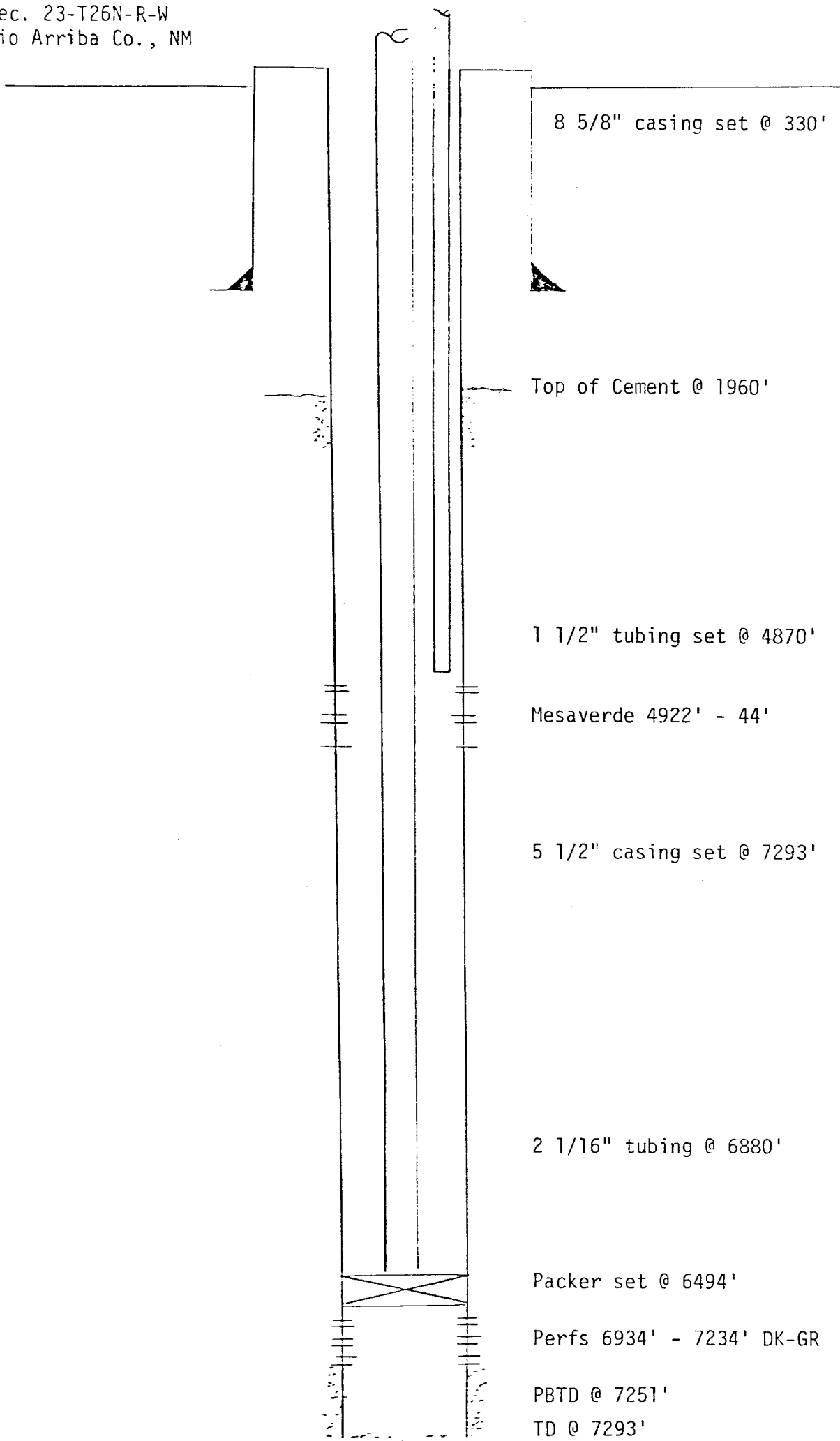
Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in Item 22, and in Item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in Item 33. Submit a separate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

Item 29: "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:				38. GEOLOGIC MARKERS		
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				NAME	TOP	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.		MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	2155'					
Kirtland	2235'					
Fruitland	2535'					
Pict. Cliffs	2685'					
Cliffhouse	4335'					
Menefee	4391'					
Pt. Lookout	4918'					
Mancos	5105'					
Greenhorn	6845'					
Graneros	6899'					
Dakota	7061'					

Federal 11C
Sec. 23-T26N-R-W
Rio Arriba Co., NM



NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Operator Mesa Petroleum Co.		County Rio Arriba		Date May 22, 1981
Address 1660 Lincoln St., #2800, Denver, CO 80264		Lease Federal		Well No. 11E
Location of Well	Unit P	Section 23	Township 26N	Range 6W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES XX NO _____
2. If answer is yes, identify one such instance: Order No. _____; Operator Lease, and Well No.: _____

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Mesaverde		Dakota
b. Top and Bottom of Pay Section (Perforations)	4922' - 4944'		6934' - 7234'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)
- | | | |
|-------------------------------------|-------------------------------------|---|
| Yes | No | |
| ☒ | ☐ | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| ☒ | ☐ | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease. |
| ☒ | ☐ | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.* |
| ☐ | ☒ | *d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.) |

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

*4d logs sent prior to filing of this application Caulkins Oil Co., 2100 Colorado State Bank Bldg., 1600 Broadway, Denver, Colorado 80202

E1 Paso Companies, #1 Denver Place, Suite 1500, 999-18th Street, Denver, Colorado 80202

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification 5/22/81.

CERTIFICATE: I, the undersigned, state that I am the Div. Production Supervisor of the Mesa Petroleum Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.


Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the pools in the lease, then separate application for approval of the same should be filed simultaneously with this application.



OFFSET WELLS

Federal #11E
Rio Arriba County, New Mexico

<u>OPERATOR</u>	<u>WELL NAME</u>	<u>LEGAL DESCRIPTION</u>
Mesa Petroleum Co.	#12 Pubco Federal	23-26-6 NENW
Mesa Petroleum Co.	#11 Pubco Federal	23-26-6 NWNE
Caulkins Oil Company	#346 Breech D	22-26-6 NENE
Caulkins Oil Company	#387 Breech D	22-26-6 SWSE
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Federal 11E
 Sec. 23 - T26N - R6W
 Rio Arriba Co., N. M.

a = #12 Pubco Federal
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15	14	13
e  c  22 d 	a  b  23 	f  24
27	h  g  26	25

T 26

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____						5. LEASE DESIGNATION AND SERIAL NO. SF079296, SF079295									
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____						6. IF INDIAN, ALLOTTEE OR TRIBE NAME 									
2. NAME OF OPERATOR Mesa Petroleum Co.						7. UNIT AGREEMENT NAME 									
3. ADDRESS OF OPERATOR 1660 Lincoln Street, #2800, Denver, CO 80264						8. FARM OR LEASE NAME Federal									
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1190 FSL - 1190 FEL At top prod. interval reported below same At total depth same						9. WELL NO. 11E									
14. PERMIT NO. _____ DATE ISSUED 1/4/80						10. FIELD AND POOL, OR WILDCAT Blanco Mesaverde									
15. DATE SPUDDED 10/31/80 16. DATE T.D. REACHED 11/14/80 17. DATE COMPL. (Ready to prod.) 5/19/81 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6370 GR 19. ELEV. CASINGHEAD 6370 GR						11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 23-T26N-R6W									
20. TOTAL DEPTH, MD & TVD 7293' 21. PLUG, BACK T.D., MD & TVD 7251' 22. IF MULTIPLE COMPL., HOW MANY* 2 zones 23. INTERVALS DRILLED BY → ROTARY TOOLS 0-7293 CABLE TOOLS -0-						12. COUNTY OR PARISH Rio Arriba 13. STATE NM									
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 4922' - 5044' Mesaverde						25. WAS DIRECTIONAL SURVEY MADE No									
26. TYPE ELECTRIC AND OTHER LOGS RUN IES, GR-CBL, Density Neutron						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"		24#		330		12 1/4"		225 sxs Class "B"		-0-					
5 1/2"		15.5# & 17#		7293'		7 7/8"		755 sxs 50/50 poz, 150 sxs Light		-0-					
29. LINER RECORD								30. TUBING RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		SIZE		DEPTH SET (MD)		PACKER SET (MD)	
										2 1/16"		6880'		6494'	
										1 1/2"		4870'			
31. PERFORATION RECORD (Interval, size and number) 4922', 26', 28', 37', 46', 81', 5015', 40', 42' and 44' 10 holes, .40" diameter								32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.							
								DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED					
								4922' - 5044'		2500 gals. 15% HCL, 70,000 gals. X-link gel, 65,000 #'s 20/40 sd. w/400 SCF/bbl N ₂					
33.* PRODUCTION															
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)						WELL STATUS (Producing or shut-in)							
N/A		Flowing						Shut in							
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD		OIL—BBL.		GAS—MCF.		WATER—BBL.		GAS-OIL RATIO	
5/19/81		3		.750		→		-0-		1653		-0-		N/A	
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.		GAS—MCF.		WATER—BBL.		OIL GRAVITY-API (CORR.)			
100 psig		0		→		-0-		1653		-0-		N/A			
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented for test purposes only										TEST WITNESSED BY J.L. Archer					
35. LIST OF ATTACHMENTS C-104 w/deviation record, C-107 and C-122															
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records															
SIGNED		TITLE						Div. Production Supervisor		DATE		5/22/81			

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

INSTRUCTIONS

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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) and 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.

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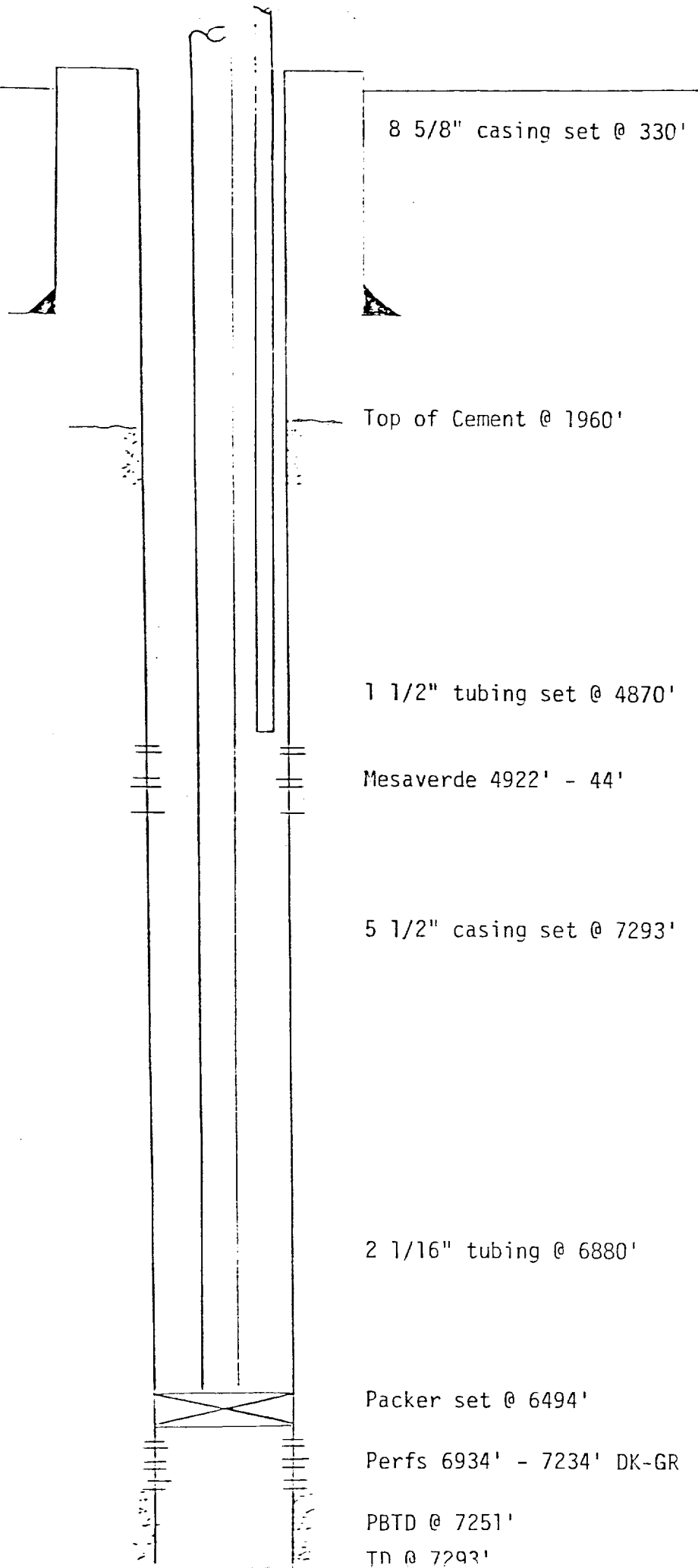
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	2155'					
Kirtland	2235'					
Fruitland	2535'					
Pict. Cliffs	2685'					
Cliffhouse	4335'					
Menefee	4391'					
Pt. Lookout	4918'					
Mancos	5105'					
Greenhorn	6845'					
Graneros	6899'					
Dakota	7061'					

Sec. 23-T26N-R-W
Rio Arriba Co., NM



NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 5-19-81	
Company MESA PETROLEUM CO.				Connection EL PASO NATURAL GAS CO.		
Pool BLANCO MESAVERDE				Formation MV		Unit D
Completion Date 4-28-81		Total Depth 7253.		Plug Back TD 7250.		Elevation 6370.
Csg. Size 5.500		Wt. 15.5	d 4.950	Set At 7250.	Perforations: From 4920. To 5044.	
Trq. Size 1.990		Wt. 2.8	d 1.610	Set At 4870.	Perforations: From 0. To 0.	
Type Well - Single - Fractured - G.C. or G.O. Multiple FLOWING				Packer Set At 6486.		County SAN JUAN
Producing Thru TUBING		Reservoir Temp. °F 180.0 4982.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 12.2
L 4982.		H 4982.	G _g 0.673	% CO ₂ 0.	% N ₂ 0.	% H ₂ S 0.
			Prover 0.	Meter Run 0.		Taps 0.

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1280.	66.			168.0
1.	1.61 X 0.750			100.	0.	68.	100.	68.	0.	0.	3.0
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	11.22	0.	112.2	0.9924	1.2190	1.0114	1541.
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	0.17	528.	1.38	0.978	A.P.I. Gravity of Liquid Hydrocarbons	0.673
2.					Specific Gravity Separator Gas	0.673
3.					Specific Gravity Flowing Fluid	0.673
4.					Critical Pressure	669. P.S.I.A.
5.					Critical Temperature	381. °R

NO.	P _i ²	P _w	P _w ²	P _e ² - P _w ²
1.	13.	386.	149.	1517.
2.				
3.				
4.				
5.				

(1) $\frac{P_e^2}{P_e^2 - P_w^2} = 1.0004$

AOF = Q $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1653.$

(2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.0779$

Absolute Open Flow	1653 Mcfd @ 15.025	Angle of Slope	52.1	Slope, n	0.750
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Remarks:

Approved By Commission:	Conducted By: J. L. Archer	Calculated By: Garrett-AOF Program	Checked By: <i>[Signature]</i>
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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Operator Mesa Petroleum Co.		County Rio Arriba		Date May 22, 1981
Address 1660 Lincoln St., #2800, Denver, CO 80264		Lease Federal		Well No. 11E
Location of Well	Unit P	Section 23	Township 26N	Range 6W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES XX NO _____
2. If answer is yes, identify one such instance: Order No. _____; Operator Lease, and Well No.: _____

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Mesaverde		Dakota
b. Top and Bottom of Pay Section (Perforations)	4922' - 4944'		6934' - 7234'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)
- | Yes | No | |
|-------------------------------------|-------------------------------------|---|
| ☒ | ☐ | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| ☒ | ☐ | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease. |
| ☒ | ☐ | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.* |
| ☐ | ☒ | *d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.) |

5. List all offset operators to the lease on which this well is located together with their correct mailing address.
- *4d logs sent prior to filing of this application Caulkins Oil Co., 2100 Colorado State Bank Bldg., 1600 Broadway, Denver, Colorado 80202
- E1 Paso Companies, #1 Denver Place, Suite 1500, 999-18th Street, Denver, Colorado 80202

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification 5/22/81.

CERTIFICATE: I, the undersigned, state that I am the Div. Production Supervisor of the Mesa Petroleum Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

[Signature]
Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



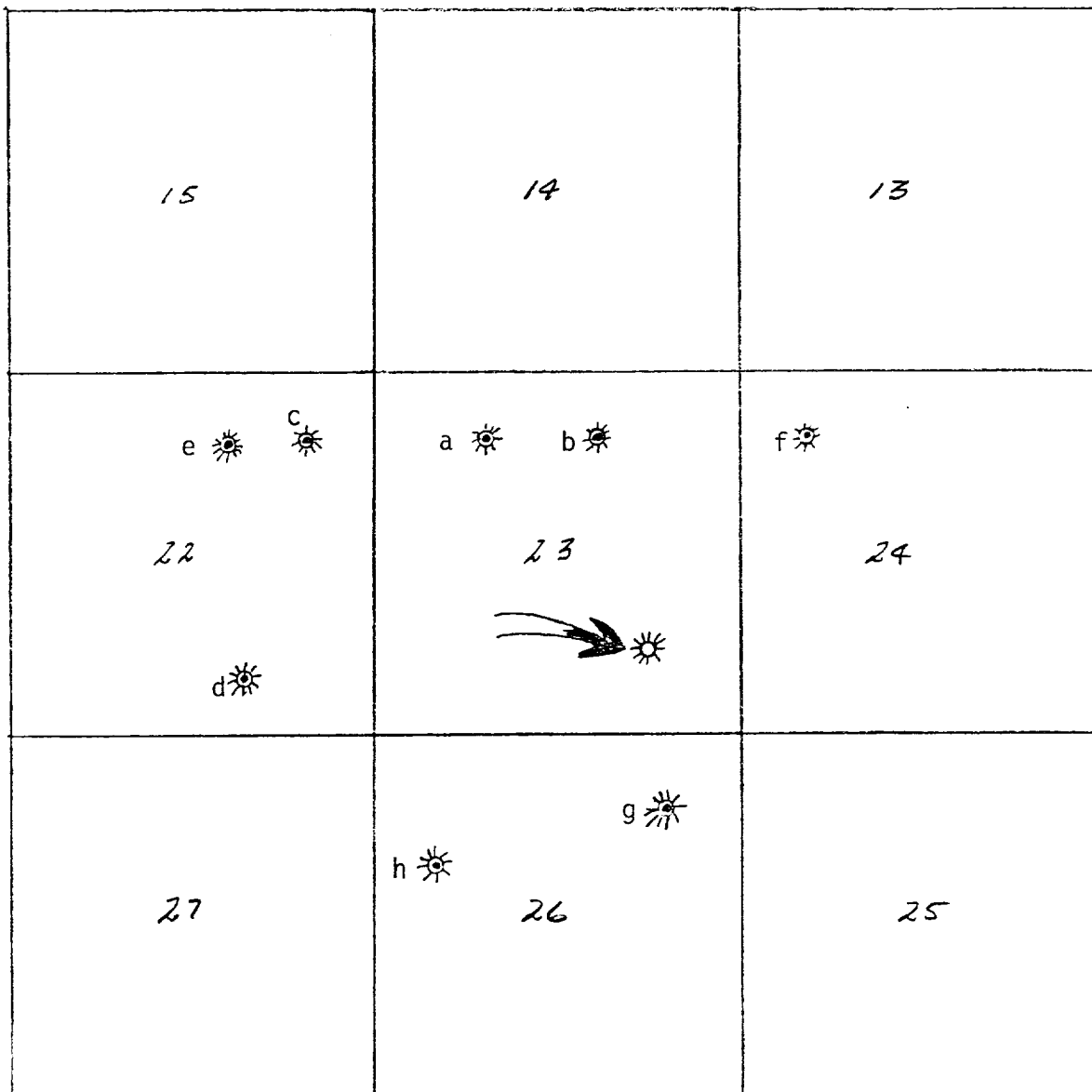
OFFSET WELLS

Federal #11E
Rio Arriba County, New Mexico

<u>OPERATOR</u>	<u>WELL NAME</u>	<u>LEGAL DESCRIPTION</u>
Mesa Petroleum Co.	#12 Pubco Federal	23-26-6 NENW
Mesa Petroleum Co.	#11 Pubco Federal	23-26-6 NWN
Caulkins Oil Company	#346 Breech D	22-26-6 NENE
Caulkins Oil Company	#387 Breech D	22-26-6 SWSE
Caulkins Oil Company	PC-343 Breech D	22-26-6 NWN
Caulkins Oil Company	#1 Sanchez	24-26-6 NWNW
El Paso Natural Gas	#8 Vaughn	26-26-6 NENE
El Paso Natural Gas	#26 Vaughn	26-26-6 SWNW

Federal 11E
Sec. 23 - T26N - R6W
Rio Arriba Co., N. M.

a = #12 Pubco Federal
b = #11 Pubco Federal
c = #346 Breech D
d = #387 Breech D
e = PC-343 Breech D
f = #1 Sanchez
g = #8 Vaughn
h = #26 Vaughn



T 26

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____		5. LEASE DESIGNATION AND SERIAL NO. SF079296, SF079295	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. CESVR. ☐ Other _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Mesa Petroleum Co.		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR 1660 Lincoln Street, #2800, Denver, CO 80264		8. FARM OR LEASE NAME Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1190 FSL - 1190 FEL At top prod. interval reported below same At total depth same		9. WELL NO. 11E	
14. PERMIT NO.		DATE ISSUED 1/4/80	
15. DATE SPUDDED 10/31/80		16. DATE T.D. REACHED 11/14/80	
17. DATE COMPL. (Ready to prod.) 5/19/81		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6370 GR	
19. ELEV. CASINGHEAD 6370 GR		10. FIELD AND POOL, OR WILDCAT Blanco Mesaverde	
20. TOTAL DEPTH, MD & TVD 7293'		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 23-T26N-R6W	
21. PLUG, BACK T.D., MD & TVD 7251'		12. COUNTY OR PARISH Rio Arriba	
22. IF MULTIPLE COMPL., HOW MANY* 2 zones		13. STATE NM	
23. INTERVALS DRILLED BY →		10. FIELD AND POOL, OR WILDCAT Blanco Mesaverde	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 4922' - 5044' Mesaverde		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 23-T26N-R6W	
25. CASING RECORD (Report all strings set in well)		12. COUNTY OR PARISH Rio Arriba	
26. TYPE ELECTRIC AND OTHER LOGS RUN IES, GR-CBL, Density Neutron		13. STATE NM	
27. WAS WELL CORED No		14. PERMIT NO.	
28. WAS DIRECTIONAL SURVEY MADE No		DATE ISSUED 1/4/80	
29. LINER RECORD		15. DATE SPUDDED 10/31/80	
30. TUBING RECORD		16. DATE T.D. REACHED 11/14/80	
31. PERFORATION RECORD (Interval, size and number) 4922', 26', 28', 37', 46', 81', 5015', 40', 42' and 44' 10 holes, .40" diameter		17. DATE COMPL. (Ready to prod.) 5/19/81	
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6370 GR	
33. PRODUCTION		19. ELEV. CASINGHEAD 6370 GR	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented for test purposes only		20. TOTAL DEPTH, MD & TVD 7293'	
35. LIST OF ATTACHMENTS C-104 w/deviation record, C-107 and C-122		21. PLUG, BACK T.D., MD & TVD 7251'	
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records		22. IF MULTIPLE COMPL., HOW MANY* 2 zones	
SIGNED <u>[Signature]</u> TITLE <u>Div. Production Supervisor</u> DATE <u>5/22/81</u>		23. INTERVALS DRILLED BY →	

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

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 33, 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 29: "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.)

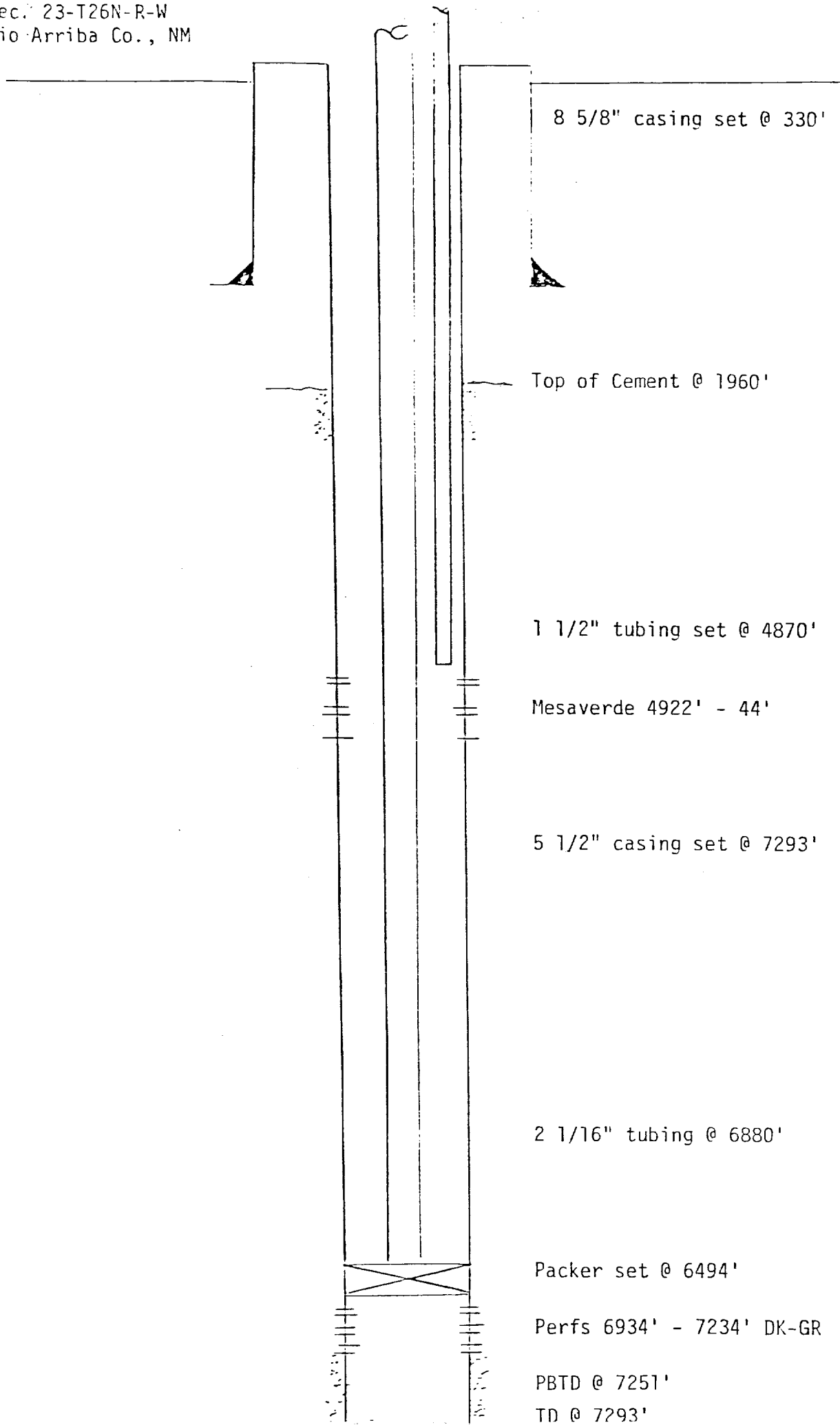
37. SUMMARY OF POROUS ZONES:

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	2155'					
Kirtland	2235'					
Fruitland	2535'					
Pict. Cliffs	2685'					
Cliffhouse	4335'					
Menefee	4391'					
Pt. Lookout	4918'					
Mancos	5105'					
Greenhorn	6845'					
Graneros	6899'					
Dakota	7061'					

38.

Sec. 23-T26N-R-W
Rio Arriba Co., NM



NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 5-19-81	
Company MESA PETROLEUM CO.				Connection EL PASO NATURAL GAS CO.		
Pool BLANCO MESAVERDE				Formation MV		Unit D
Completion Date 4-28-81		Total Depth 7253.		Plug Back TD 7250.		Elevation 6370.
Csg. Size 5.500		Wt. 15.5	d 4.950	Set At 7250.	Perforations: From 4920. To 5044.	
Trg. Size 1.990		Wt. 2.8	d 1.610	Set At 4870.	Perforations: From 0. To 0.	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple FLOWING				Packer Set At 6486.		County SAN JUAN
Producing Thru TUBING		Reservoir Temp. °F 180.0 4982.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 12.2
L 4982.		H 4982.	G _g 0.673	% CO ₂ 0.	% N ₂ 0.	% H ₂ S 0.
					Prover 0.	Meter Run 0.
						Taps

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1280.	66.			168.0
1.	1.61 X 0.750			100.	0.	68.	100.	68.	0.	0.	3.0
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	11.22	0.	112.2	0.9924	1.2190	1.0114	1541.
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.17	528.	1.38	0.978	0.	0.	0.673	0.673	669.	381.
2.										
3.										
4.										
5.										

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1	13.	386.	149.	1517.
2.				
3.				
4.				
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0084$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1653.$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0729$

Absolute Open Flow	1450	Mcfd @ 15.025	Angle of Slope °	52.1	Slope, n	0.750
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Remarks:

Approved By Commission:	Conducted By: J. L. Archer	Calculated By: Garrett-AOF Program	Checked By: <i>[Signature]</i>
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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Operator Mesa Petroleum Co.		County Rio Arriba	Date May 22, 1981
Address 1660 Lincoln St., #2800, Denver, CO 80264		Lease Federal	Well No. 11E
Location of Well Unit P	Section 23	Township 26N	Range 6W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES XX NO _____
2. If answer is yes, identify one such instance: Order No. _____; Operator Lease, and Well No.: _____

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Mesaverde		Dakota
b. Top and Bottom of Pay Section (Perforations)	4922' - 4944'		6934' - 7234'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)
- | Yes | No | |
|-------------------------------------|-------------------------------------|---|
| ☒ | ☐ | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| ☒ | ☐ | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease. |
| ☒ | ☐ | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.* |
| ☐ | ☒ | *d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.) |

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

*4d logs sent prior to filing of this application Caulkins Oil Co., 2100 Colorado State Bank Bldg., 1600 Broadway, Denver, Colorado 80202

EI Paso Companies, #1 Denver Place, Suite 1500, 999-18th Street, Denver, Colorado 80202

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification 5/22/81.

CERTIFICATE: I, the undersigned, state that I am the Div. Production Supervisor of the Mesa Petroleum Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

[Signature]
Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the pools, a separate application for approval of the same should be filed simultaneously with this application.



OFFSET WELLS

Federal #11E
Rio Arriba County, New Mexico

<u>OPERATOR</u>	<u>WELL NAME</u>	<u>LEGAL DESCRIPTION</u>
Mesa Petroleum Co.	#12 Pubco Federal	23-26-6 NENW
Mesa Petroleum Co.	#11 Pubco Federal	23-26-6 NWN
Caulkins Oil Company	#346 Breech D	22-26-6 NENE
Caulkins Oil Company	#387 Breech D	22-26-6 SWSE
Caulkins Oil Company	PC-343 Breech D	22-26-6 NWN
Caulkins Oil Company	#1 Sanchez	24-26-6 NWNW
El Paso Natural Gas	#8 Vaughn	26-26-6 NENE
El Paso Natural Gas	#26 Vaughn	26-26-6 SWNW

Federal 11E
 Sec. 23 - T26N - R6W
 Rio Arriba Co., N. M.

a = #12 Pubco Federal
 b = #11 Pubco Federal
 c = #346 Breech D
 d = #387 Breech D
 e = PC-343 Breech D
 f = #1 Sanchez
 g = #8 Vaughn
 h = #26 Vaughn

15	14	13
e ☀ c ☀ 22 d ☀	a ☀ b ☀ 23 	f ☀ 24
27	h ☀ 26 g ☀	25

T 26

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

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						5. LEASE DESIGNATION AND SERIAL NO.	
Mesa Petroleum Co.						SF079296, SF079295	
3. ADDRESS OF OPERATOR						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
1660 Lincoln Street, #2800, Denver, CO 80264							
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*						7. UNIT AGREEMENT NAME	
At surface 1190 FSL - 1190 FEL							
At top prod. interval reported below same						8. FARM OR LEASE NAME	
At total depth same						Federal	
14. PERMIT NO.						9. WELL NO.	
DATE ISSUED 1/4/80						11E	
15. DATE SPUDDED						10. FIELD AND POOL, OR WILDCAT	
10/31/80						Blanco Mesaverde	
16. DATE T.D. REACHED						11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA	
11/14/80						Sec. 23-T26N-R6W	
17. DATE COMPL. (Ready to prod.)						12. COUNTY OR PARISH	
5/19/81						Rio Arriba	
18. ELEVATIONS (DF, REB, RT, GR, ETC.)*						13. STATE	
6370 GR						NM	
19. ELEV. CASINGHEAD							
6370 GR							
20. TOTAL DEPTH, MD & TVD		21. PLUG. BACK T.D., MD & TVD		22. IF MULTIPLE COMPL., HOW MANY*		23. INTERVALS DRILLED BY	
7293'		7251'		2 zones		ROTARY TOOLS 0-7293	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*						CABLE TOOLS -0-	
4922' - 5044' Mesaverde						25. WAS DIRECTIONAL SURVEY MADE	
						No	
26. TYPE ELECTRIC AND OTHER LOGS RUN						27. WAS WELL CURED	
IES, GR-CBL, Density Neutron						No	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE	
8 5/8"		24#		330		12 1/4"	
5 1/2"		15.5# & 17#		7293'		7 7/8"	
						CEMENTING RECORD	
						225 sxs Class "B"	
						755 sxs 50/50 poz,	
						150 sxs Light	
						AMOUNT PULLED	
						-0-	
						-0-	
29. LINER RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*	
						SCREEN (MD)	
						30. TUBING RECORD	
						SIZE	
						DEPTH SET (MD)	
						PACKER SET (MD)	
						2 1/16"	
						6880'	
						6494'	
						1 1/2"	
						4870'	
31. PERFORATION RECORD (Interval, size and number)							
4922', 26', 28', 37', 46', 81', 5015', 40', 42' and 44'							
10 holes, .40" diameter							
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.							
DEPTH INTERVAL (MD)				AMOUNT AND KIND OF MATERIAL USED			
4922' - 5044'				2500 gals. 15% HCL, 70,000 gals. X-link gel, 65,000 #'s 20/40 sd. w/400 SCF/bbl N ₂			
33.* PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
N/A		Flowing				Shut in	
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD	
5/19/81		3		.750		OIL—BBL. -0-	
						GAS—MCF. 1653	
						WATER—BBL. -0-	
						GAS-OIL RATIO N/A	
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL. -0-	
100 psig		0				GAS—MCF. 1653	
						WATER—BBL. -0-	
						OIL GRAVITY-API (CORR.) N/A	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)						TEST WITNESSED BY	
Vented for test purposes only						J.L. Archer	
35. LIST OF ATTACHMENTS							
C-104 w/deviation record, C-107 and C-122							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							
SIGNED		TITLE				DATE	
[Signature]		Div. Production Supervisor				5/22/81	

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

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 33, below regarding separate reports for separate completions.

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

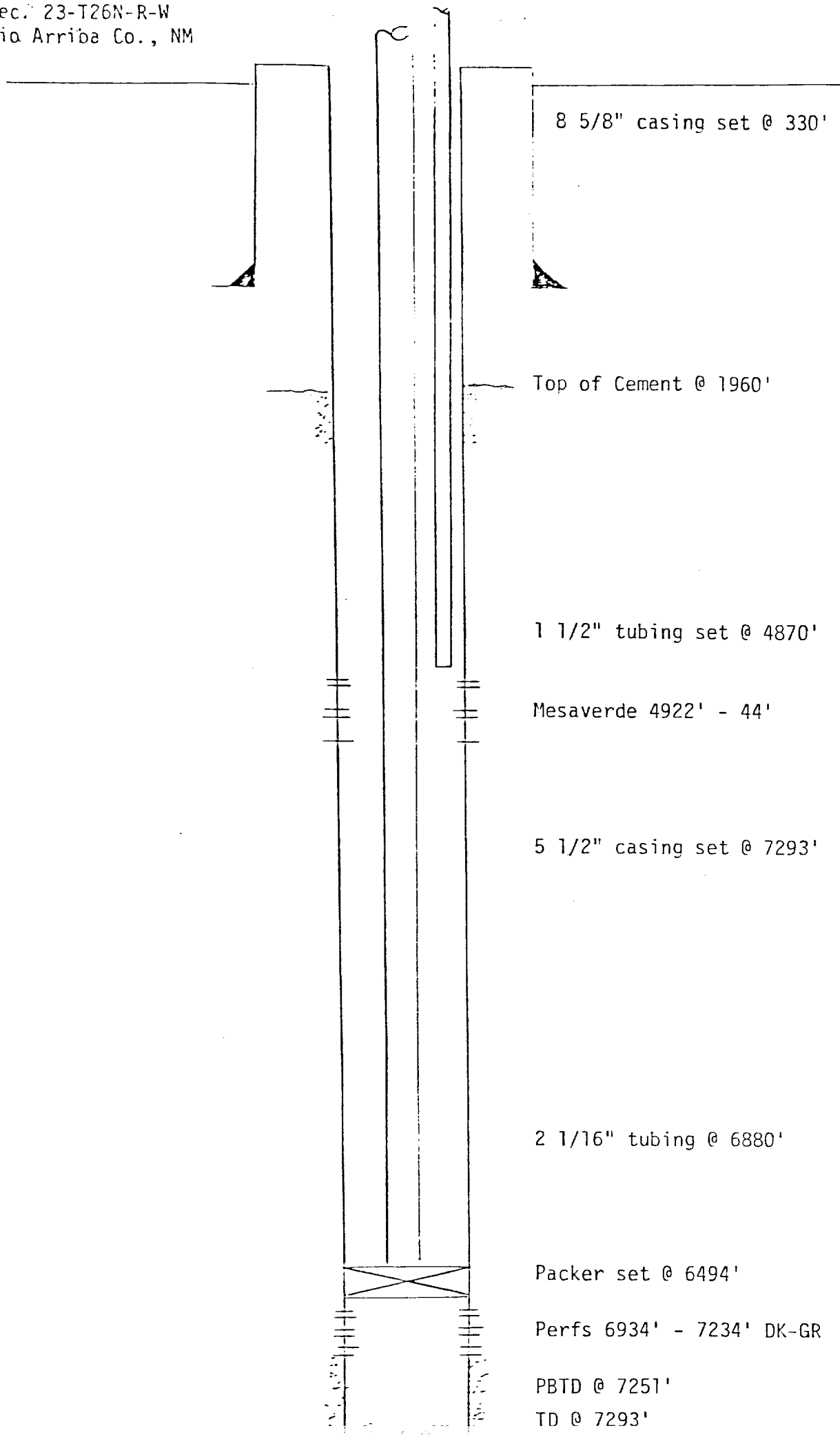
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for Items 22 and 24 above.)

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, CURSION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	2155'					
Kirtland	2235'					
Fruitland	2535'					
Pict. Cliffs	2685'					
Cliffhouse	4335'					
Menefee	4391'					
Pt. Lookout	4918'					
Mancos	5105'					
Greenhorn	6845'					
Graneros	6899'					
Dakota	7061'					

Sec. 23-T26N-R-W
Rio Arriba Co., NM



NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-19-81	
Company MESA PETROLEUM CO.			Connection EL PASO NATURAL GAS CO.		
Pool BLANCO MESAVERDE			Formation MV		Unit D
Completion Date 4-28-81		Total Depth 7253.		Plug Back TD 7250.	
Elevation 6370.		Farm or Lease Name FEDERAL			
Csg. Size 5.500	Wt. 15.5	Set At 4.950	Set At 7250.	Perforations: From 4920. To 5044.	
Well No. 11E					
Tng. Size 1.990	Wt. 2.8	Set At 1.610	Set At 4870.	Perforations: From 0. To 0.	
Unit 23-T26N-R6W					
Type Well - Single - Fractured - G.C. or G.O. Multiple FLOWING				Packer Set At 6486.	
Producing Thru TUBING		Reservoir Temp. °F 180.0 4982.		Mean Annual Temp. °F 60.0	
Baro. Press. - P _a 12.2		State NEW MEXICO			
L 4982.	H 4982.	G _g 0.673	% CO ₂ 0.	% N ₂ 0.	% H ₂ S 0.
Prover 0.	Meter Run 0.	Taps			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1280.	66.			165.0
1.	1.61 X 0.750			100.	0.	68.	100.	68.	0.	0.	3.0
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	11.22	0.	112.2	0.9924	1.2190	1.0114	1541.
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Ucl/bbl.
1	0.17	528.	1.38	0.978	0.673	0.
2.						
3.						
4.						
5.						

NO.	P _r	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1	13.	386.	149.	1517.	1.0084	1.0779
2.						
3.						
4.						
5.						

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$ 1653.

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$ 1653.

Absolute Open Flow	1450	Mcfd @ 15.025	Angle of Slope @	52.1	Slope, n @	0.750
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Remarks:

Approved By Commission:	Conducted By: J. L. Archer	Calculated By: Garrett-AOF Program	Checked By: <i>[Signature]</i>
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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Operator Mesa Petroleum Co.		County Rio Arriba		Date May 22, 1981
Address 1660 Lincoln St., #2800, Denver, CO 80264		Lease Federal		Well No. 11E
Location of Well	Unit P	Section 23	Township 26N	Range 6W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES XX NO _____
2. If answer is yes, identify one such instance: Order No. _____; Operator Lease, and Well No.: _____

The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Mesaverde		Dakota
b. Top and Bottom of Pay Section (Perforations)	4922' - 4944'		6934' - 7234'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
☒	☐	a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
☒	☐	b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
☒	☐	c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
☐	☒	*d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

*4d logs sent prior to filing of this application Caulkins Oil Co., 2100 Colorado State Bank Bldg., 1600 Broadway, Denver, Colorado 80202

El Paso Companies, #1 Denver Place, Suite 1500, 999-18th Street, Denver, Colorado 80202

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification 5/22/81.

CERTIFICATE: I, the undersigned, state that I am the Div. Production Supervisor of the Mesa Petroleum Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.


Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard perforation unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



OFFSET WELLS

Federal #11E
Rio Arriba County, New Mexico

<u>OPERATOR</u>	<u>WELL NAME</u>	<u>LEGAL DESCRIPTION</u>
Mesa Petroleum Co.	#12 Pubco Federal	23-26-6 NENW
Mesa Petroleum Co.	#11 Pubco Federal	23-26-6 NWNE
Caulkins Oil Company	#346 Breech D	22-26-6 NENE
Caulkins Oil Company	#387 Breech D	22-26-6 SWSE
Caulkins Oil Company	PC-343 Breech D	22-26-6 NWNE
Caulkins Oil Company	#1 Sanchez	24-26-6 NWNW
El Paso Natural Gas	#8 Vaughn	26-26-6 NENE
El Paso Natural Gas	#26 Vaughn	26-26-6 SWNW

Federal 11E
 Sec. 23 - T26N - R6W
 Rio Arriba Co., N. M.

a = #12 Pubco Federal
 b = #11 Pubco Federal
 c = #346 Breech D
 d = #387 Breech D
 e = PC-343 Breech D
 f = #1 Sanchez
 g = #8 Vaughn
 h = #26 Vaughn

15	14	13
e  c  22 d 	a  b  23 	f  24
27	h  g  26	25

T 26

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other: _____						5. LEASE DESIGNATION AND SERIAL NO. SF079296, SF079295									
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other: _____						6. IF INDIAN, ALLOTTEE OR TRIBE NAME									
2. NAME OF OPERATOR Mesa Petroleum Co.						7. UNIT AGREEMENT NAME									
3. ADDRESS OF OPERATOR 1660 Lincoln Street, #2800, Denver, CO 80264						8. FARM OR LEASE NAME Federal									
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1190 FSL - 1190 FEL At top prod. interval reported below same At total depth same						9. WELL NO. 11E									
14. PERMIT NO. _____ DATE ISSUED 1/4/80						10. FIELD AND POOL, OR WILDCAT Blanco Mesaverde									
15. DATE SPUDDED 10/31/80 16. DATE T.D. REACHED 11/14/80 17. DATE COMPL. (Ready to prod.) 5/19/81 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6370 GR 19. ELEV. CASINGHEAD 6370 GR						11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 23-T26N-R6W									
20. TOTAL DEPTH, MD & TVD 7293' 21. PLUG, BACK T.D., MD & TVD 7251' 22. IF MULTIPLE COMPL., HOW MANY* 2 zones 23. INTERVALS DRILLED BY → 0-7293 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 4922' - 5044' Mesaverde 25. WAS DIRECTIONAL SURVEY MADE No						12. COUNTY OR PARISH Rio Arriba									
26. TYPE ELECTRIC AND OTHER LOGS RUN IES, GR-CBL, Density Neutron						13. STATE NM									
27. WAS WELL CURED 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"		24#		330		12 1/4"		225 sxs Class "B"		-0-					
5 1/2"		15.5# & 17#		7293'		7 7/8"		755 sxs 50/50 poz, 150 sxs Light		-0-					
29. LINER RECORD						30. TUBING RECORD									
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		SIZE		DEPTH SET (MD)		PACKER SET (MD)	
										2 1/16"		6880'		6494'	
										1 1/2"		4870'			
31. PERFORATION RECORD (Interval, size and number) 4922', 26', 28', 37', 46', 81', 5015', 40', 42' and 44' 10 holes, .40" diameter						32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) 4922' - 5044' AMOUNT AND KIND OF MATERIAL USED 2500 gals. 15% HCL, 70,000 gals. X-link gel, 65,000 #'s 20/40 sd. w/400 SCF/bbl N ₂									
33.* PRODUCTION															
DATE FIRST PRODUCTION N/A		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing				WELL STATUS (Producing or shut-in) Shut in									
DATE OF TEST 5/19/81		HOURS TESTED 3		CHOKE SIZE .750		PROD'N. FOR TEST PERIOD →		OIL—BBL. -0-		GAS—MCF. 1653		WATER—BBL. -0-		GAS-OIL RATIO N/A	
FLOW. TUBING PRESS. 100 psig		CASING PRESSURE 0		CALCULATED 24-HOUR RATE →		OIL—BBL. -0-		GAS—MCF. 1653		WATER—BBL. -0-		OIL GRAVITY-API (COBR.) N/A			
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented for test purposes only						TEST WITNESSED BY J.L. Archer									
35. LIST OF ATTACHMENTS C-104 w/deviation record, C-107 and C-122															
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records															
SIGNED <u>[Signature]</u> TITLE Div. Production Supervisor						DATE 5/22/81									

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

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 33, 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 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

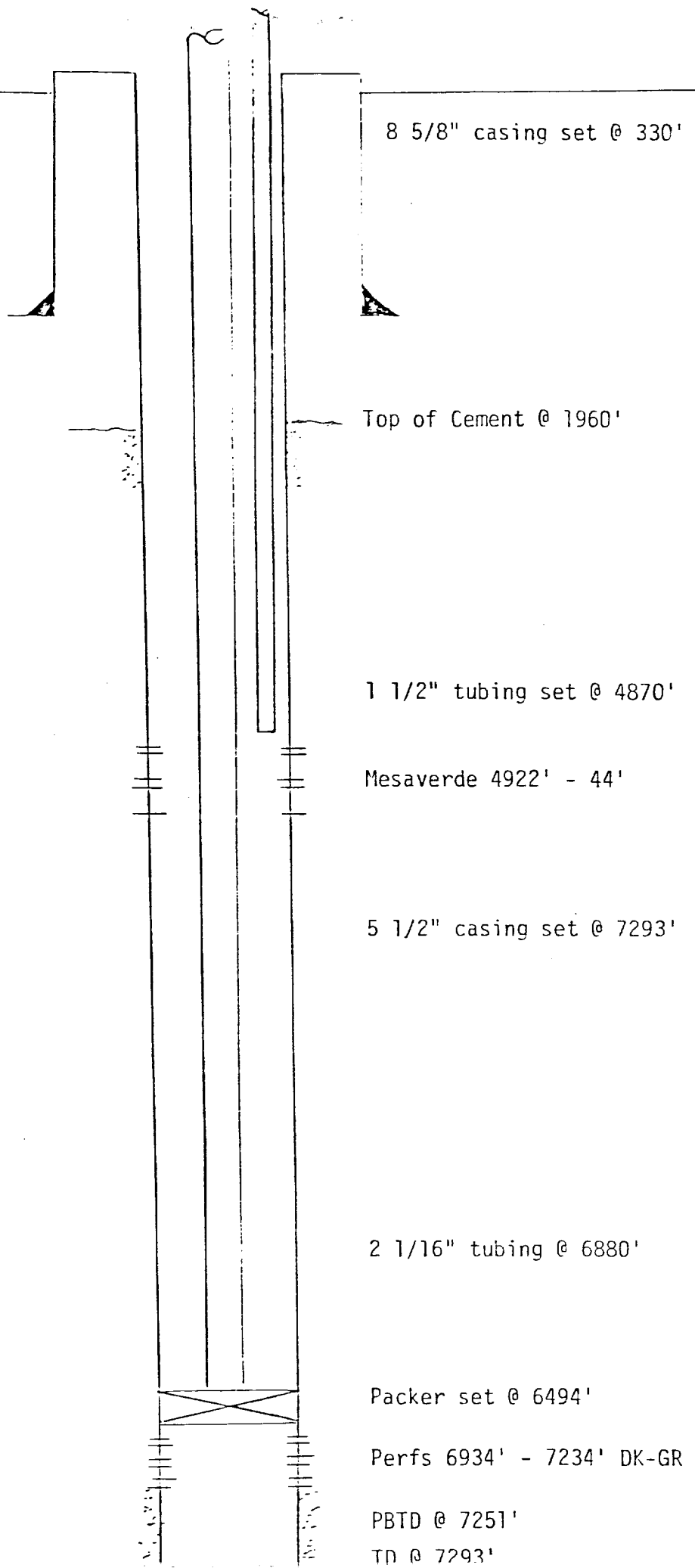
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	2155'					
Kirtland	2235'					
Fruitland	2535'					
Pict. Cliffs	2685'					
Cliffhouse	4335'					
Menefee	4391'					
Pt. Lookout	4918'					
Mancos	5105'					
Greenhorn	6845'					
Graneros	6899'					
Dakota	7061'					

Sec. 23-T26N-R-W
Rio Arriba Co., NM



NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 5-19-81	
Company MESA PETROLEUM CO.			Connection EL PASO NATURAL GAS CO.			
Pool BLANCO MESAVERDE			Formation MV		Unit D	
Completion Date 4-28-81		Total Depth 7253.		Plug Back TD 7250.		Elevation 6370.
Form or Lease Name FEDERAL						Well No. 11E
Csg. Size 5.500	Wt. 15.5	d 4.950	Set At 7250.	Perforations: From 4920. To 5044.		
Inq. Size 1.990	Wt. 2.8	d 1.610	Set At 4870.	Perforations: From 0. To 0.		Unit Sec. Twp. Rye. 23-T26N-R6W
Type Well - Single - Frodenhead - G.C. or G.O. Multiple FLOWING				Packer Set At 6486.		County SAN JUAN
Producing Thru TUBING		Reservoir Temp. °F 180.0 4982.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 12.2
State NEW MEXICO						
L 4982.	H 4982.	Gg 0.673	% CO ₂ 0.	% N ₂ 0.	% H ₂ S 0.	Prover 0.
Meter Run 0.						Taps 0.

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1280.	66.			168.0
1.	1.61 X 0.750			100.	0.	68.	100.	68.	0.	0.	3.0
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	11.22	0.	112.2	0.9924	1.2190	1.0114	1541.
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcfd/bbl.
1	0.17	528.	1.38	0.978	A.P.I. Gravity of Liquid Hydrocarbons	0.673
2.					Specific Gravity Separator Gas	XXXXXXX
3.					Specific Gravity Flowing Fluid	XXXXX
4.					Critical Pressure	669. P.S.I.A.
5.					Critical Temperature	381. R

NO.	P _i ²	P _w ²	P _r ²	P _c ² - P _w ²
1	13.	386.	149.	1517.
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0084$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0729$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1653.$

Gas Liquid Hydrocarbon Ratio 0. Mcfd/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 0. Deg.

Specific Gravity Separator Gas 0.673 XXXXXXXXX

Specific Gravity Flowing Fluid XXXXX 0.673

Critical Pressure 669. P.S.I.A. 669. P.S.I.A.

Critical Temperature 381. R 381. R

Absolute Open Flow	1450	Mcfd @ 15.025	Angle of Slope e	52.1	Slope, n	0.750
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Remarks:

Approved By Commission:	Conducted By: J. L. Archer	Calculated By: Garrett-AOF Program	Checked By: <i>[Signature]</i>
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