

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

Water Disposal ☐

SINGLE
ZONE ☐

MULTIPLE
ZONE ☒

2. NAME OF OPERATOR

Amoco Production Company Atten. J.L. Hampton

3. ADDRESS OF OPERATOR

P.O. Box 800, Denver, CO 80201

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

At surface

955' FNL, 1600' FWL, NE/NW

At proposed prod. zone

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

17 miles- Aztec, NM

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.

5932' GR

16. NO. OF ACRES IN LEASE

N/A 480

19. PROPOSED DEPTH

3600' TD

17. NO. OF ACRES ASSIGNED
TO THIS WELL

N/A

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4.

22. APPROX. DATE WORK WILL START*

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

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT*
26"	20"	94#	250'	500sx- cement to surface
17½"	13 3/8"	54.5, 61, 68#	3150'	1700sx- cement to surface
12¼"	9 5/8"	36#, 40#	5300'	1400sx- cement to surface
8½"	7"	23#, 26#	8600'	700sx- cement to surface

See attached summary for detailed mud and casing program "Drilling and
Completion Program".

Notice of staking was submitted 9/14/90.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and 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 J.L. Hampton/UB TITLE SA Staff Admin. Supv. DATE 9/26/90
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

need gas meter @
SWD #403

NMOCD

*See Instructions On Reverse Side

RECEIVED

OCT 25 1990

OIL CON. DIV.

DIST. 3

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal 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.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

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 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

ITEM 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR Part 3160.

PRINCIPAL PURPOSE: The information is to be used to process and evaluate your application for permit to drill, deepen, or plug back an oil or gas well.

ROUTINE USES: (1) The analysis of the applicant's proposal to discover and extract the Federal or Indian resources encountered. (2) The review of procedures and equipment and the projected impact on the land involved. (3) The evaluation of the effects of proposed operation on surface and subsurface water and other environmental impacts. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions, as well as routine regulatory responsibility.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if the lessee elects to initiate drilling operations on an oil and gas lease.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq) requires us to inform you that:

This information is being collected to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases.

This information will be used to analyze and approve applications.

Response to this request is mandatory only if the lessee elects to initiate drilling operations on an oil and gas lease.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

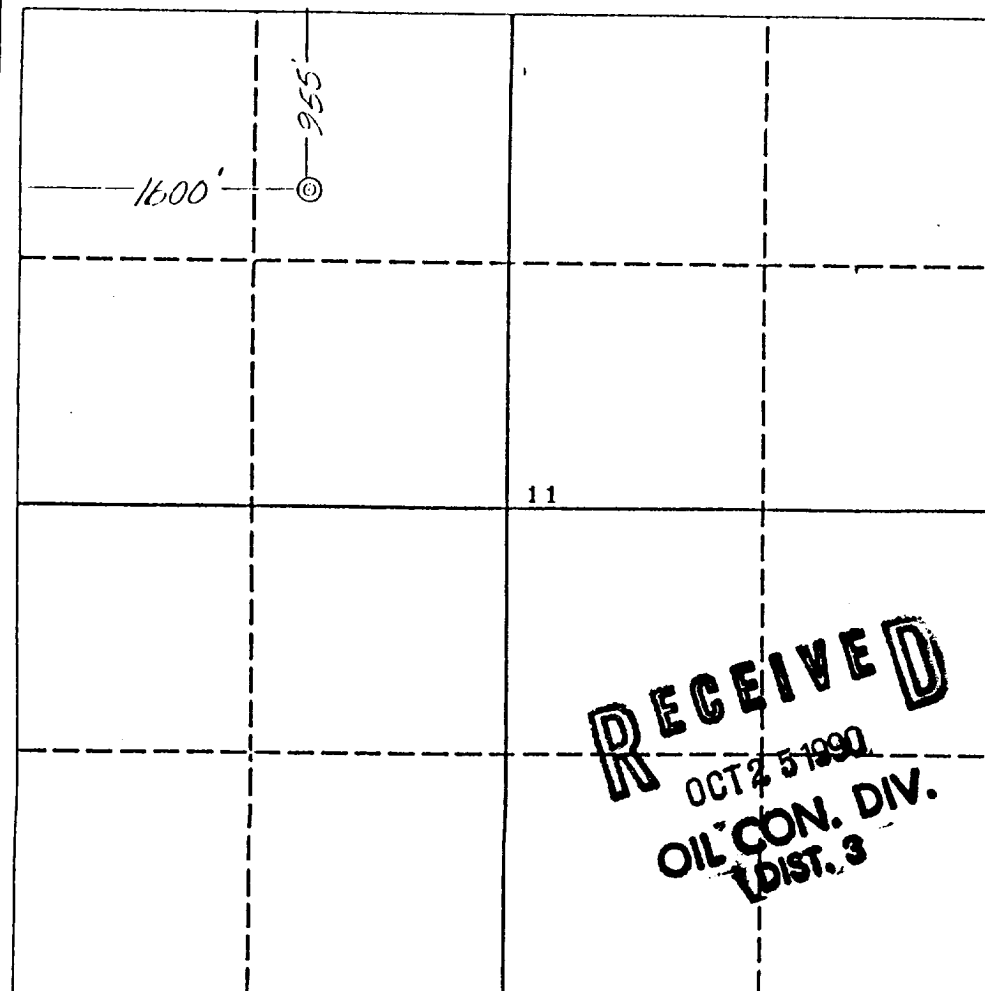
All Distances must be from the outer boundaries of the section

Operator AMOCO PRODUCTION COMPANY			Lease FLORANCE SWD		Well No. # 2
Unit Letter C	Section 11	Township 30 NORTH	Range 9 WEST	County SAN JUAN	

Actual Footage Location of Well:

955 feet from the NORTH line and		1600 feet from the WEST line	
Ground level Elev. 5932	Producing Formation Morrison/Bluff/Entrada	Injecting Undesignated	Dedicated Acreage: N/A Acres

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
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 interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature **J. L. Hampton**
Printed Name **J. L. Hampton**
Position **Staff Admin. Supv.**
Company **Amoco Prod. Co.**
Date **9/13/90**

SURVEYOR CERTIFICATION

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 **July 25, 1990**
Signature & Seal of Professional Surveyor **D. VANN**
Garvin
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

AMOCO PRODUCTION COMPANY DRILLING AND COMPLETION PROGRAM

Lease & Well # Florance SWD #2 Date: 2/24/90
 Field Basin Fruitland Coal Gas City/St San Juan/NM FLAC NO. _____
 Surf. Loc. 955 FNL 1600 FWL Sec. 11-T30N, R9W BHLOC same Operation Center San Juan

CRITICAL WELL X NON-CRITICAL WELL _____

ORIGINAL X REVISION # _____

SPECIAL SURVEYS

TYPE DEPTH INTERVAL
 DIL/SP/GR 500-TD
 CNL/FDC/GR/Cal 500-TD
 Microlog 500-TD
 REMARKS SP and Microlog will not be run in evacuated hole, run SNP instead of CNL in evacuated hole.

SPECIAL TESTS

Injectivity and Step rate

REMARKS Run injectivity and step rate tests on Morrison, Bluff, and Entrada Formations.

APPROXIMATE DEPTHS OF GEOLOGICAL MARKERS

ESTIMATED ELEVATION 5952 KB (Assumes 20' KB)

MARKER	TVD ELEV.	MEAS. DEPTH
Ojo Alamo		
Fruitland #		
Pictured Cliffs		
Lewis Shale		
Mesaverde		
Mancos		
Gallup		
Dakota		
Morrison		
Entrada		

TOTAL DEPTH -2648 8600

*POSSIBLE PAY #PROBABLE COMPLETION INTERVAL

DRILL CUTTING SAMPLES	DEPTH	DRILLING TIME
FREQUENCY	INTERVAL	DEPTH
10'	Thru coals	FREQUENCY INTERVAL
REMARKS Per state regulations		Geolograph BSC-TD

MUD PROGRAM

Approximate Interval	Type Mud	Weight #/Gal.	Viscosity Sec. API	W.I. CC/30M	Other Specifications
0-500'	spud				
500-3000'	LSND	8.9-11.0			
3000-7000'	Gas				
7000-TD	LSND	8.6-8.9			

Sufficient to maintain hole stability.
 Maintain gas rates to clean hole
 Sufficient to maintain hole stability

Remarks:

CASING PROGRAM (Normally, tubular goods allocation letter specifies casing sizes to be used. Hole sizes will be governed by Contract)

CASING STRING CONDUCTOR	EST. DEPTH	CASING SIZE	HOLE SIZE	SX CEMENT	TYPE CEMENT	COMMENTS
SURFACE	250	20	26	Circ	**	Set in competent rock.
INTERMEDIATE	3000	13 3/8	17 1/2	Circ	**	2 stage DV @ approx. 1600'
PROTECTIVE	5400	9 5/8	12 1/4	Circ	**	ECP inside 13 3/8 Shoe
INJECTION-STRING	8600	7	8 1/2	**	**	

Remarks: ** Operation Center Drilling Engineer to design.

WELLHEAD: 13 5/8" 3000 X 11" 3000 X 7 1/16" 5000

COMPLETION PROGRAM: Southern Division Coal Degas Group to design

GENERAL REMARKS:

Prepared by: B. S. Bell, H. TerBest J. L. Spittler, G. E. Gray

Original signed by:

Approvals: _____

PRODUCTION DEPARTMENT

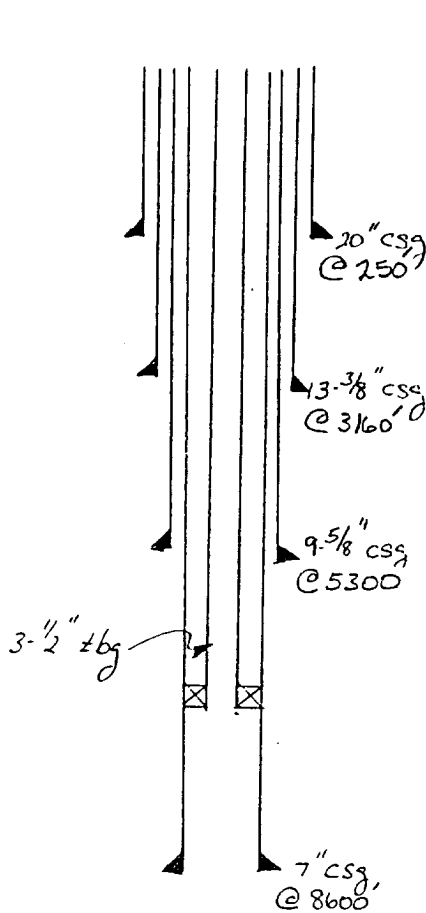
DATE

EXPLORATION DEPARTMENT

DATE

INJECTION WELL DATA SHEET

Operator Amoco Production Company Lease Fluorine SWD
 Well No. 2 Footage Location 955' FNL X 1600' FWL Section 11 Township 30N Range 9W
San Juan County, New Mexico
 Schematic Tabular Data



Surface Casing

Size 20 " Cemented with 500 sx.
 TOC surface feet determined by circulation
 Hole size 26 "

Intermediate Casing

Size 13-3/8 " Cemented with 1700 sx.
 TOC surface feet determined by circulation
 Hole size 17-1/2 "

Intermediate Casing Long String

Size 9-5/8 " Cemented with 1400 sx.
 TOC 2800 feet determined by bond log
 Hole size 12-1/4 "
 Total depth 5300

Injection interval
 (will perforate selected intervals)

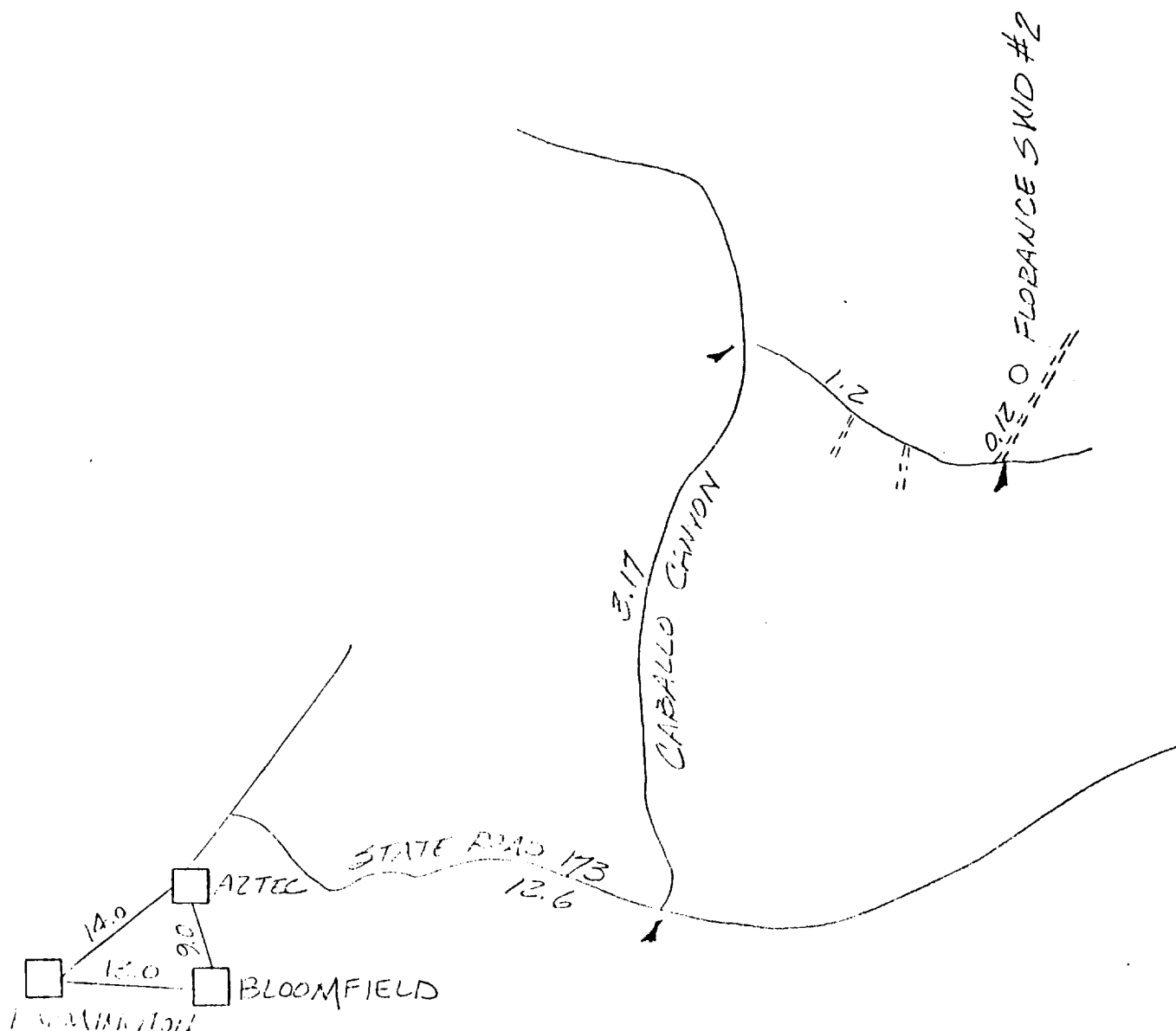
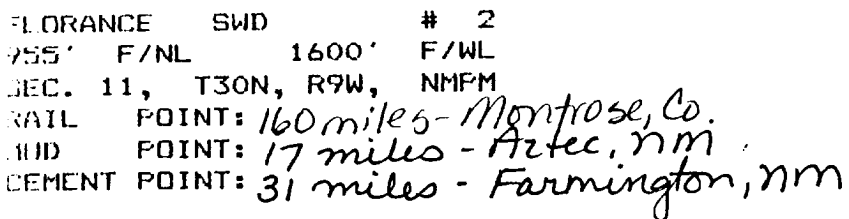
7500 feet to 8400 feet
~~Long String~~
~~liner~~

Size 7 " Cemented with 700 sx.
 TOC 5000 feet determined by bond log
 Hole size 8-1/2 "
 Total depth 8600

Tubing size 3-1/2 " lined with plastic set in a
Baker Inverted Lok-Set packer at 7450 (approx.) feet
 (brand and model) (material)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Morrison, Bluff, and Entrada
- Name of Field or Pool (if applicable) NA
- Is this a new well drilled for injection? ☒ Yes ☐ No
 If no, for what purpose was the well originally drilled?
- Has the well ever been perforated in any other zone(s)? List all such intervals and give plugging detail (sacks or cement or bridge plug(s) used). No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2552'- Fruitland, 2850'- Pictured Cliffs, 4602'- Mesaverde, 7236'- Dakota



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 100M-1133
Expires September 30, 1965

Lease Designation and Serial No.
N-013685 SF-078336

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other Water Disposal

2. Name of Operator
Amoco Production Company ATTN: J.L. Hampton

3. Address and Telephone No.
P. O. Box 800 Denver, Colorado 80201

4. Location of Well (Range, Sec., T., R., M., or Survey Description)
955 1600 11 30
645' FNL, 1040' FWL Sec. 2, T1N-R9W NE/NW

7. If Lease or Co. Agreement Designation

8. Well Name and No.
Florence
9. API Well No.
SWD 2

10. Field and Pool, or Exploratory Area
Wildcat/Morrison Bluff

11. County or Parish, State
San Juan, New Mexico

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☒ Altering Casing	☐ Conversion to Injection
	☐ Other	

Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.

13. 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.)

Casing and Cementing Design:
20" - Run 250', 94ppf H-40, STC casing. Cement with 500 sacks/575 FT³, Class G W/2% CaCL₂ mixed to 15.8ppg.
13 3/8" - Run 3160', 54.5, 61, 68ppf K-55 STC casing. Cement with/DV @ approx. 1900ft.
Stage 1- Lead- 400 sacks/630ft³ 65%/35%pozz/6% gel & 2% CaCL₂, tail with 800 sacks/920ft³ Class G.
Stage 2- Lead- 800 sacks/1270ft³ 65%G/35%pozz/6%gel/2%CaCL₂, tail with 150 sacks/170ft³ Class G.
9 5/8" - Run 5575', 36, 40ppf K-55 LTC casing. Cement with/DV @ approx. 2600ft.
Stage 1- Lead- 700 sacks/980ft³ 50% Class G/50%pozz/2%gel, tail with 100 sacks 115ft³ Class G.
Stage 2- Lead- 500 sacks/795ft³ 65% Class G/35%pozz/6%gel/2%CaCL₂, tail with 100 sacks 115ft³ Class G.
7" - Run 8620', 23, 26 ppf K-55 LTC casing. Cement with/DV @ 5675ft.
Stage 1- 350 sacks/400ft³ Class G.
Stage 2- Lead 100 sacks/159ft³ 65%G/35%pozz/6% gel, tail with 50 sacks/57ft³ Class G.
Note: Casing grades are minimum designs that may be increased due to availability.
We are still evaluating the gas drilling economics on our E.E. Elliott Salt Water disposal therefore we may drill the interval from 3000'-7000' on air or foam instead of gas.

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

Sr. Staff

Signed J. L. Hampton

Title Admin. Supervisor

Date 10-16-90

(This space for Federal or State office use)

Approved by
Conditions of approval, if any:

Title

Date