



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



GARY E. JOHNSON  
GOVERNOR

JENNIFER A. SALISBURY  
CABINET SECRETARY

1000 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-6178 FAX: (505) 334-6170

April 25, 1995

**EXPIRATION NOTICE ON PERMIT TO DRILL**

Amoco Production Co  
P O Box 800  
Denver Co 80201

RE Logan Gas Com #1 F-33-32N-10w

Gentlemen:

The permit to drill the referenced well has expired. Should you wish to drill this well in the future, you will have to submit a new application.

Sincerely,

Frank T. Chavez  
District Supervisor

FTC\dj

xc: Well File  
Santa Fe

**ABANDONED LOCATION**

Submit to Appropriate  
District Office  
State Lease - 6 copies  
Fee Lease - 5 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-101  
Revised 1-1-89

OIL CONSERVATION DIVISION

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

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

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

API NO. (assigned by OCD on New Wells)

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Logan Gas Com

8. Well No.

#1

9. Pool name or Wildcat

Pict. Cliffs/Basin Dakota 71599

1a. Type of Work:

DRILL ☒

RE-ENTER ☐

DEEPEN ☐

PLUG BACK ☐

b. Type of Well:

OIL

WELL ☐

GAS

WELL ☒

OTHER

SINGLE

ZONE ☐

MULTIPLE

ZONE ☒

2. Name of Operator

Amoco Production Company 778

Attention:

Julie L. Acevedo

3. Address of Operator

P.O. Box 800 Denver Colorado 80201

4. Well Location

Unit Letter F : 1470 Feet From The North Line and 1460 Feet From The West Line

Section 33 Township 32N Range 10W NMPM San Juan County

10. Proposed Depth

7590'

11. Formation

Pict. Cliffs/Basin Dakota

12. Rotary or C.T.

Rotary

13. Elevations (Show whether DF, RT, GR, etc.)

6009'

14. Kind & Status Plug. Bond

15. Drilling Contractor

Aztec

16. Approx. Date Work will start

1/10/94

17. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13-3/8"	61#	400'	625 cf CI B W/2%	Cement to surface
12-1/4"	9-5/8"	36#	3069'	2118 cf CI B	Cement to surface
8-3/4"	7"	23#	7130'	1038 cf CL B (	Cement to surface
6 1/4"	4 1/2"	11.6# N-80	6930'-7590' Liner	113 cf CL G	

This Approval  
Expires 12-29-94  
And Will Not Be  
Extended

~~CONFIDENTIAL~~

RECEIVED  
DEC 17 1993  
OIL CON. DIV  
DIST. 2

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

SIGNATURE

*Julie L. Acevedo*

TITLE

Sr. Staff Assistant

DATE

12-16-1993

TYPE OR PRINT NAME

Julie L. Acevedo

TELEPHONE NO. (303) 830-6003

(This space for State Use)

APPROVED BY

*Francis Busch*

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. #3

DATE

12-29-93  
DEC 29 1993

CONDITIONS OF APPROVAL, IF ANY:

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

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

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

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

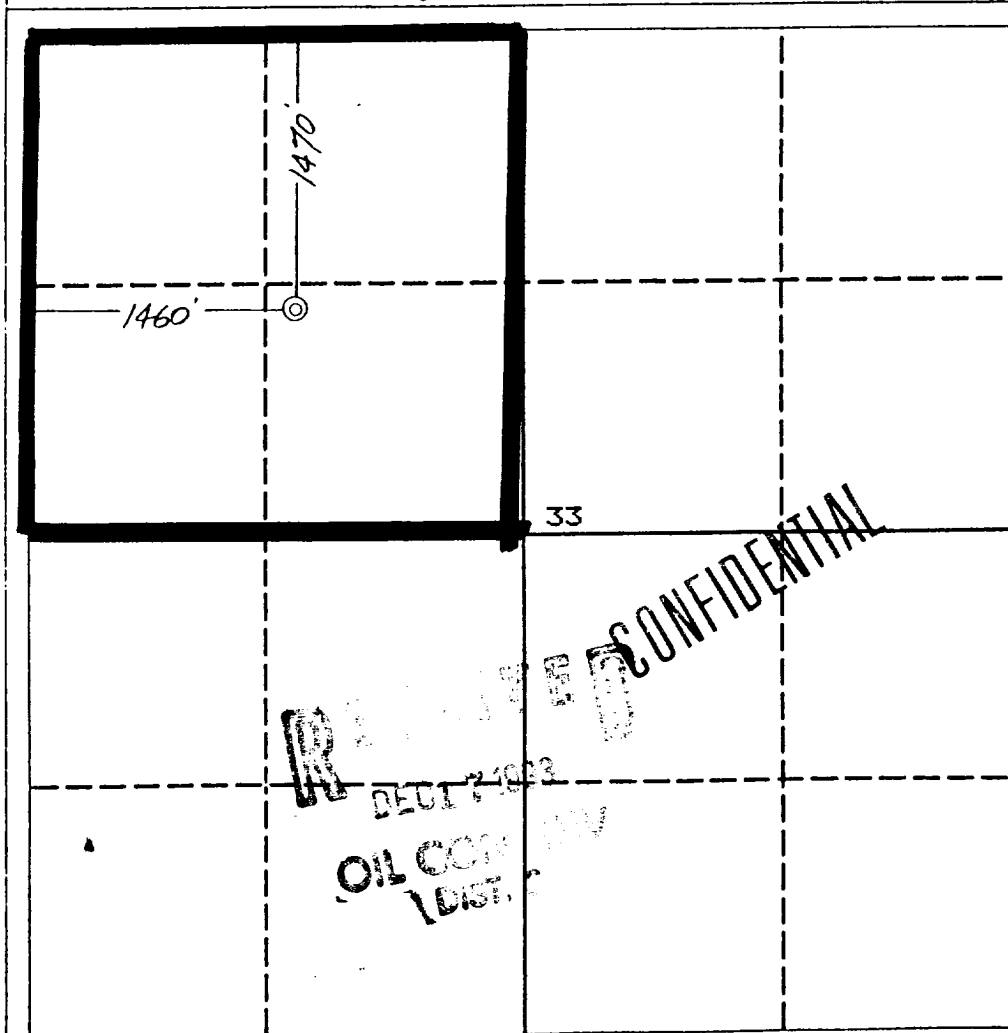
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator <b>AMOCO PRODUCTION COMPANY</b>		Lease <b>Logan Gas Com</b>		Well No. <b>#1</b>
Unit Letter <b>F</b>	Section <b>33</b>	Township <b>32 NORTH</b>	Range <b>10 WEST</b>	County <b>SAN JUAN</b>
Actual Footage Location of Well: <b>1470</b> feet from the <b>NORTH</b> line and <b>1460</b> feet from the <b>WEST</b> line				
Ground level Elev. <b>6009</b>	Producing Formation <b>Pictured Cliffs</b>	Pool <b>Pictured Cliffs</b>	Dedicated Acreage: <b>NW/4 160</b> 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 communization, unitization, force-pooling, etc.?  
☒ Yes ☐ No If answer is "yes" type of consolidation Com  
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 communization, 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 Julie L. Acevedo  
Printed Name **Julie L. Acevedo**  
Position **Sr. Staff Assistant**  
Company **Amoco Production Company**  
Date **12/16/93**

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  
**November 7, 1993**

Signature & Seal of Professional Surveyor  
**GARY D. VANN**  
**NEW MEXICO**  
**REGISTERED PROFESSIONAL LAND SURVEYOR**  
**7016**  
Gary  
Certification  
**7016**

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

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

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Santa Fe, New Mexico 87504-2088

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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 <b>AMOCO PRODUCTION COMPANY</b>			Lease <b>Logan Gas Com</b>		Well No. <b>#1</b>
Unit Letter <b>F</b>	Section <b>33</b>	Township <b>32 NORTH</b>	Range <b>10 WEST</b>	NMPM	County <b>SAN JUAN</b>
Actual Footage Location of Well: <b>1470</b> feet from the <b>NORTH</b> line and <b>1460</b> feet from the <b>WEST</b> line					
Ground level Elev. <b>6009</b>	Producing Formation <b>Basin Dakota</b>		Pool <b>Basin Dakota</b>	Dedicated Acreage: <b>1/2 320</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

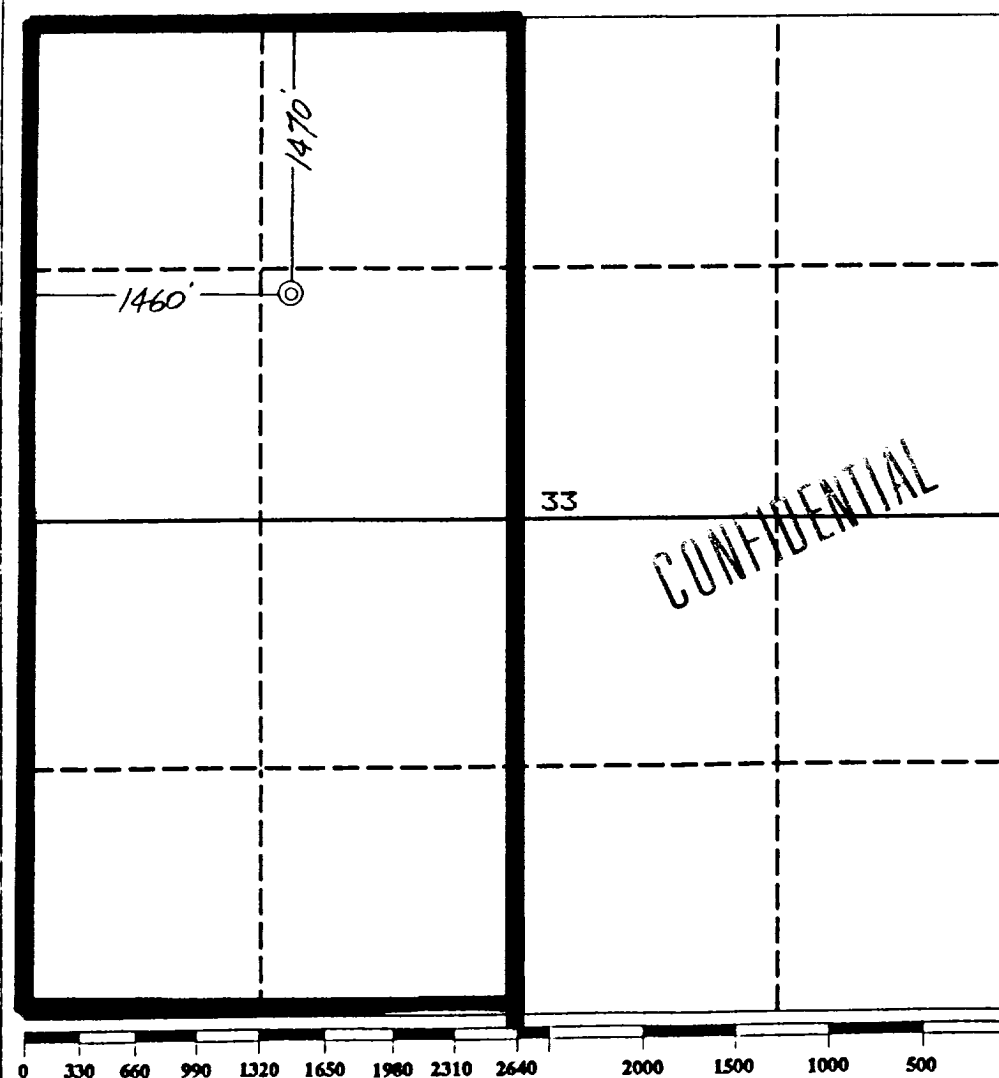
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the 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.

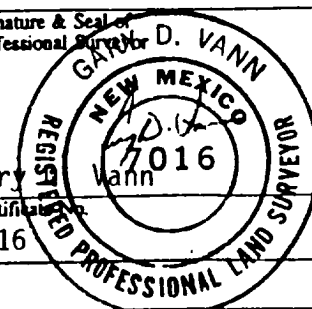
Signature  
*Julie L. Acevedo*  
Printed Name  
**Julie L. Acevedo**  
Position  
**Sr. Staff Assistant**  
Company  
**Amoco Production Company**  
Date  
**12/16/93**

### 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  
**November 7, 1993**

Signature & Seal of  
Professional Surveyor  
**GARY D. VANN**  
7016  
Gary  
Certification  
7016



PRELIMINARY COPY

AMOCO PRODUCTION COMPANY  
DRILLING AND COMPLETION PROGRAM

File: C:\20005f46.wk3

Revision Date: 12/07/93

Lease:  
County: San Juan, New Mexico  
Formerly Reference Well #20005Well No.  
Location: 1470' FNL x 1460' FWL, Sec. 33, T32N, R10W

Field: Basin Dakota

OBJECTIVE: Evaluate and develop Pictured Cliff, Mesa Verde and Dakota reserves.

METHOD OF DRILLING			APPROXIMATE DEPTHS OF GEOLOGICAL MARKER		
TYPE OF TOOLS	DEPTH OF DRILLING		6,009 Est. GL Elev.		6,025 Est. KB Elev.
Rotary	0 - TD		Marker	Depth (ft)	SS Elev. (ft)
<b>LOG PROGRAM</b>			Kirtland	2,009	4,016
Type	Depth Interval		Fruitland *	2,383	3,642
HRI-DIL-CAL-NGT-GR	SFC to TD	Mud Hole	Pictured Cliffs *	2,811	3,214
FDC-CNL	SFC to TD	Mud Hole	Lewis Shale *	2,919	3,106
MICROLOG	TD + 1000'	Mud Hole	Cliff House *	4,645	1,380
MRI	*ICP to Top Fruitland (6' tool)		Menefee	4,725	1,300
Epithermal Neutron/ Spectral Density/Temp Log	PCP - ICP	Air Hole	Point Lookout *	5,075	950
DIL-Cal-GR	PCP - ICP	Air Hole	Mancos Shale	5,475	550
REMARKS:			Greenhorn	7,130	(1,105)
Magnetic Resonance Image (MRI), pulls at 3'/min.			Dakota #	7,260	(1,235)
(409) 836 - 2955 (Numar, Brenham District).			TOTAL DEPTH:	7,590	(1,565)
			# Probable completion interval	* Possible pay.	
			OJO ALAMO IS NOT RECOGNIZABLE.		
<b>SPECIAL TESTS</b>			<b>DRILL CUTTING SAMPLES</b>		<b>DRILLING TIME</b>
TYPE	DEPTH INTERVAL, ETC		FREQUENCY	DEPTH	FREQUENCY DEPTH
None			10'	PCP - TD	Geolograph 0 - TD
Remarks:			Remarks:		
			Mudlogging Program:		
			Full two man mudlogging services for PCP to TD.		
<b>MUD PROGRAM:</b>					
Approx Interval	Type Mud	Weight, #/gal	Vis, sec/qt	W/L, cc's/30 min	
0 - SCP	SPUD	8.5 - 9.0	Sufficient to clean hole and maintain hole conditions for logs.		
SCP - ICP	LSND	8.8 - 11.0			
ICP - PCP	AIR	-			
PCP - TD	LSND	9.5 - 10			
REMARKS:					

\* Use minimum mud weight to control formation pressures.

\*\* Water may be encountered in Cliff House, Offset Point Lookout production, may have possible lost circulation.

\*\*\* Possible high porosity &amp; permeability in lower Dakota, exercise good well control procedures.

**CASING PROGRAM:**

Casing String	Estimated Depth (ft)	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor				
Surface (SCP)	400	13-3/8"	17-1/2"	1,2
Intermediate (ICP)	3,069	9-5/8"	12-1/4"	1,2,3
Protective (PCP)	7,130	7"	8-3/4"	2,4
Production (TD)	7,590	4-1/2"	6-1/4"	2,5

## Remarks:

1. Circulate cement to surface.
2. Southern Rockies Drilling Team to design cement programs.
3. Casing set 150' into Lewis Shale.
4. Casing set at top of Greenhorn, or at discretion of Amoco Geologist.
5. Casing set 50' into Morrison.

**GENERAL REMARKS:**

Southern Rockies Dakota Engineer to design completion program.

**CONFIDENTIAL**

Form 46 Reviewed by:

Logging program reviewed by:

PREPARED BY:

APPROVED:

APPROVED:

F. Seidel/A. Logan

For Production Dept

For Exploration Dept

Form 46 7-84bw

Formerly Reference Well #20005

Amoco proposes to drill the well to further develop the Dakota reservoir.

The well will be drilled to the surface casing point using native mud.

The well will then be drilled to the intermediate casing point with a non-dispersed mud system.

The protective hole will be drilled with air to 20' above the top of the Dakota where protective casing will be set.

The production hole will be drilled with a non-dispersed mud system to TD.

Surface Casing:

Quantity (ft)	Size (in)	Wt. (ppf)	Description	Cement program
400	13.375	61	J-55, ST&C	625 cf Class B, 2% CaCl <sub>2</sub> + 0.25 #/sx Flocele. 1.18 cf/sx, 15.6 ppg

Hole size 17.5", 125% excess, circulate cement to surface.

Intermediate Casing:

Quantity (ft)	Size (in)	Wt. (ppf)	Description	Cement program
3069	9.625	36	J-55, LT&C	* 2 stage

\* 1st Stg Tail: 542 cf Class B, 0.4% CFR-3, 0.4% Halad 344, 5 #/sx Gilsonite,  
+ 0.25 #/sx Flocele.  
1.29 cf/sx, 15.11 ppg.

Top of Fruitland Coal 2383 ft  
Stage tool depth 2283 ft, 100' above top of Fruitland Coal.

\* 2nd Stg Lead: 1444 cf Class B, 65:35:6, 7#/sx salt, 0.375 #/sx Flocele, 5% Calseal,  
2% Microbond.  
1.8 cf/sx, 13.0 ppg.

\* 2nd Stg Tail: 129 cf Class B, 0.4% CFR-3, 0.4% Halad 344, 5 #/sx Gilsonite,  
+ 0.25 #/sx Flocele.  
1.29 cf/sx, 15.6 ppg.

Hole size 12.25", 120% excess, circulate cement to surface.

Protective Casing:

Quantity (ft)	Size (in)	Wt. (ppf)	Description	Cement program
7130	7	23	J-55, LT&C	* 2 stage

\* 1st Stg Tail: 718 cf Class B, 50/50 poz, 2% gel, 0.4% Halad 413, 0.1% SCR 100,  
5 #/sx Gilsonite, 5% Microbond HT, 0.4% VersaSet, 0.25 #/sx Flocele.  
1.35 cf/sx, 13.4 ppg.

Top Picture Cliffs 2811 ft Est TCMT 2711  
Top of Mesa Verde 4645 ft  
Stage tool depth 4145 ft, 500' above top of Mesa Verde.

\* 2nd Stg Tail: 318 cf Class B, 50/50 poz, 2% gel, 0.4% Halad 413,  
5 #/sx Gilsonite, 5% Microbond HT, 0.4% VersaSet, 0.25 #/sx Flocele.  
1.35 cf/sx, 13.4 ppg.

Hole size 8.75", 60% excess, circulate cement to surface.

Production Liner:

Quantity (ft)	Size (in)	Wt. (ppf)	Description	Cement program
660	4.5	11.6	N-80, LT&C	* single stage

\* 1st Stg Tail: 113 cf Class G, 35% SSA 1, 1.0% CFR 3, 0.5% Halad 24,  
0.25 #/sx Flocele.  
1.56 cf/sx, 15.6 ppg.

Estimated Total Depth 7590 ft  
Estimated Top of Liner 6930 ft 200' overlap into intermediate casing.

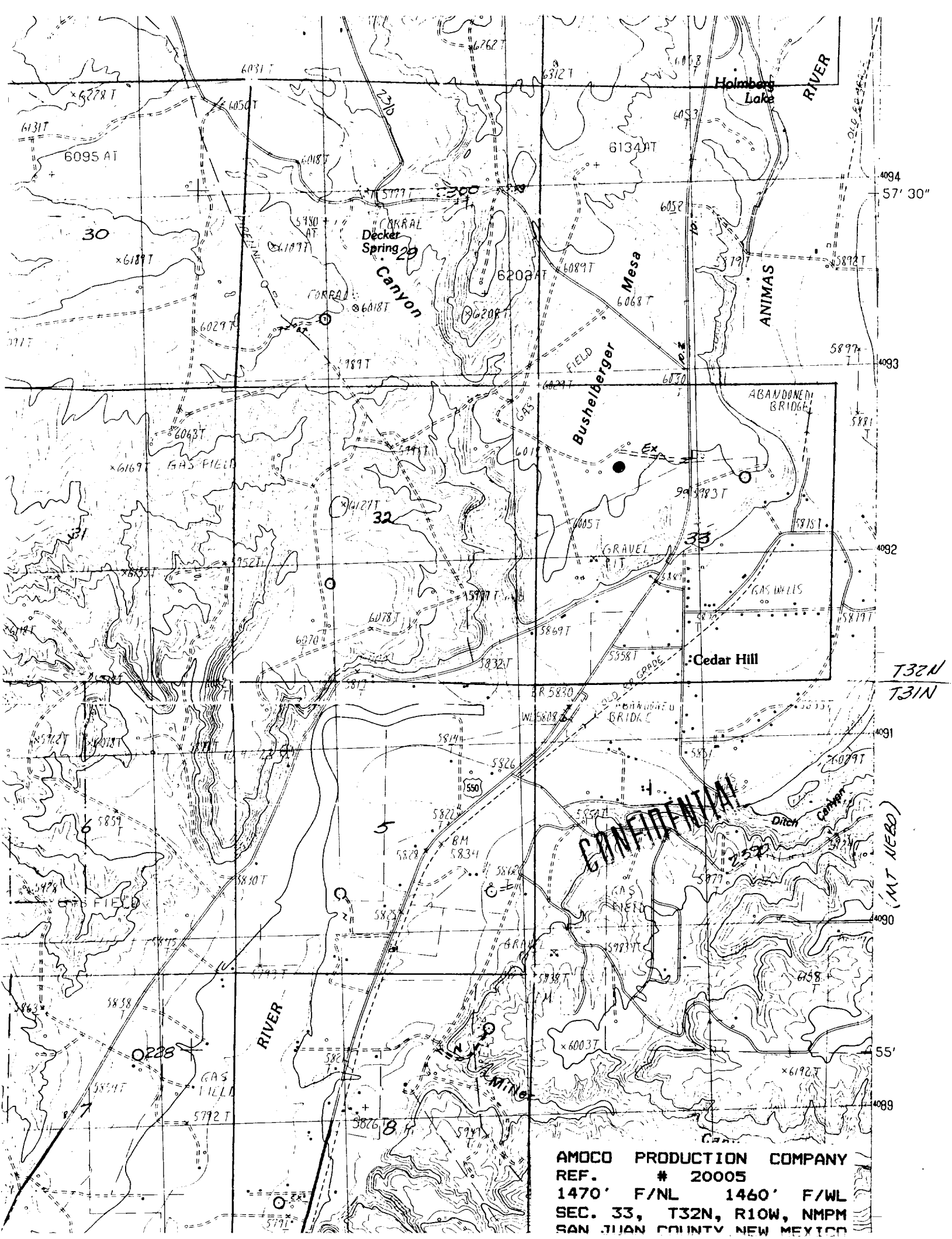
Hole size 6.25", 60% excess, tie cement back.

BY: FRANK SEIDEL/BARRY PEISER 12/07/93

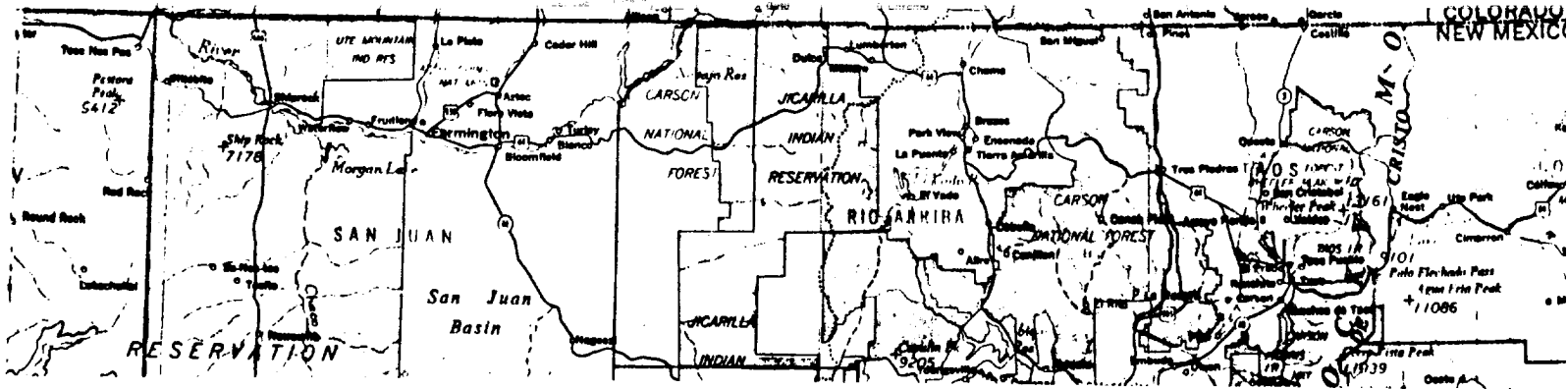
= input depths from form 46 in shaded areas to calculate cement volumes.

H:\GROUP\SRBU\NMEXDK\CMTFORM.WK3

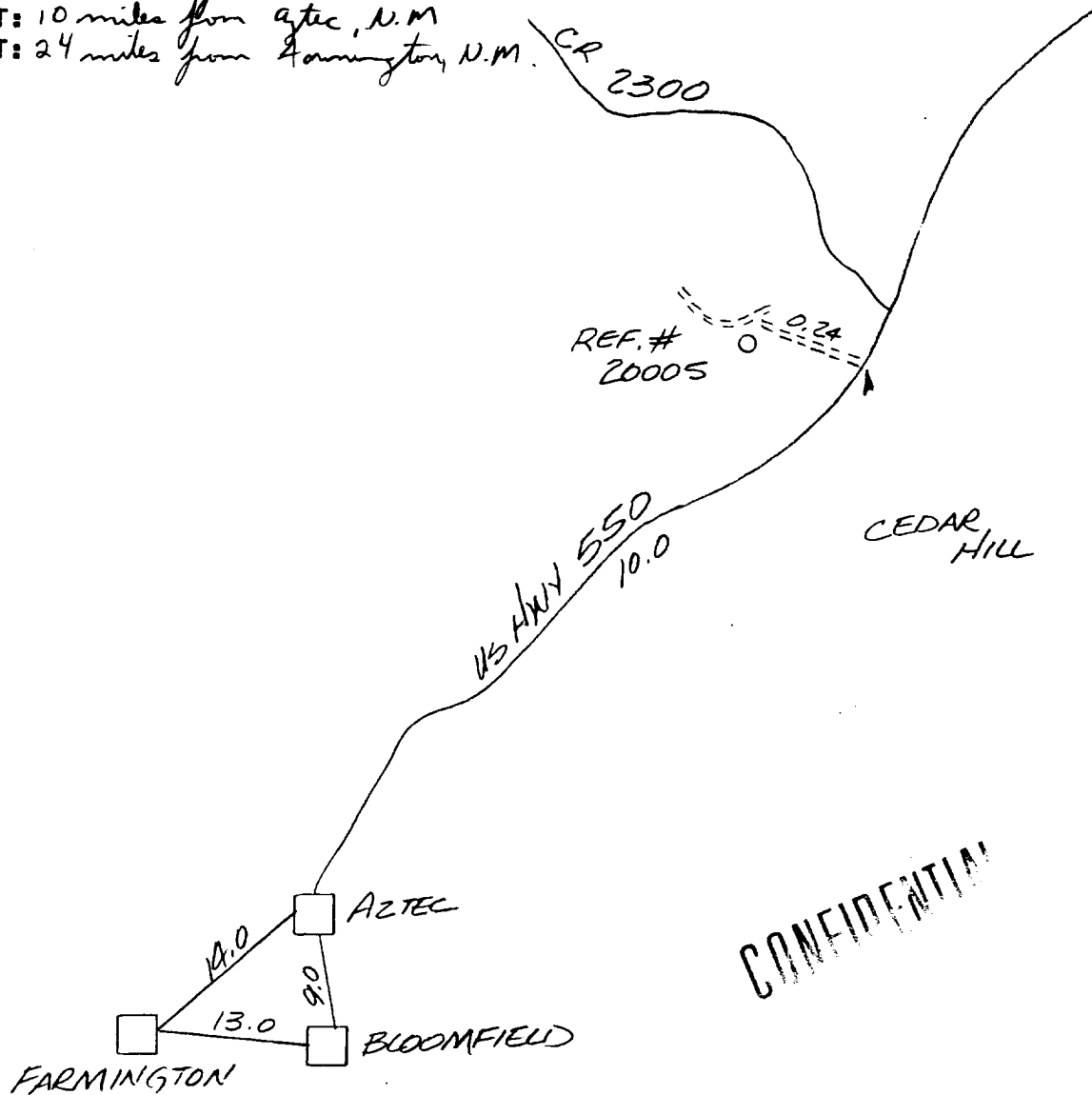
CONFIDENTIAL



AMOCO PRODUCTION COMPANY  
REF. # 20005  
1470' F/NL 1460' F/WL  
SEC. 33, T32N, R10W, NMPM  
SAN JUAN COUNTY NEW MEXICO



REF. # 20005  
 1470' F/NL 1460' F/WL  
 SEC. 33, T32N, R10W, NMPM  
 RAIL POINT: 133 miles from Montrose, Co.  
 MUD POINT: 10 miles from Aztec, N.M.  
 CEMENT POINT: 24 miles from Farmington, N.M.



CONFIDENTIAL



30-045-29049

12-17-93

F. Loc. 1470/N; 1460/W

Elev. 6009

Spd.

Comp.

TD

PB

Casing S. @ W Sx. Int. @ W Sx. Pr. @ W Sx. T. @ T Gas  
Csg. Perf. Prod. Stim.

TRANS

BO/D Grav. 1st Del. Gas  
MCF/D After Hrs. SICP PSI After Days GOR 1st Del. Oil

TOPS	NITD X	Well Log	TEST DATA						
Ojo Alamo	C-103	Plat X	Schd.	PC	Q	PW	PD	D	Ref.No.
Kirtland	C-104	Electric Log							
Fruitland		C-122							
Pictured Cliffs	Ditr	Dfa							
Chacra	Datr	Dac							
Cliff House	160								
Menefee									
Point Lookout									
Mancos									
Gallup									
Greenhorn									
Dakota									
Entrada									

Acres 160

Blanco PC Co. SJ S 33 T 32N R 10W U F Oper. Amoco Production Co. Lse. Logan Gas Com No. 1

30-045-29049

12-17-93

F. Loc. 1470/N; 1460/W

Elev. 6009

Spd.

Comp.

TD

PB

Casing S. @ W Sx. Int. @ W Sx. Pr. @ W Sx. T. @ T Gas  
Csg. Perf. Prod. Stim.

TRANS

BO/D Grav. 1st Del. Gas  
MCF/D After Hrs. SICP PSI After Days GOR 1st Del. Oil

TOPS	NITD X	Well Log	TEST DATA						
Ojo Alamo	C-103	Plat X	Schd.	PC	Q	PW	PD	D	Ref.No.
Kirtland	C-104	Electric Log							
Fruitland		C-122							
Pictured Cliffs	Ditr	Dfa							
Chacra	Datr	Dac							
Cliff House	320								
Menefee									
Point Lookout									
Mancos									
Gallup									
Greenhorn									
Dakota									
Entrada									

Acres

W  
X/320

Brain DK Co. SJ S 33 T 32N R 10W U F Oper. Amoco Production Co. Lse. Logan Gas Com No. 1