

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

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

CONFIDENTIAL

API NO. (assigned by OCD on New Wells)

30-045-29018 ✓

5. Indicate Type of Lease

STATE ☒

FEE ☐

6. State Oil & Gas Lease No.

E-7123-5

7. Lease Name or Unit Agreement Name

State Gas Com. ~~1047~~

8. Well No.

13506
40 (W/340/320)

9. Pool name or Wildcat

23498-28
Mesaverde/Basin Dakota 71599

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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 1778

Attention:

Julie L. Acevedo

3. Address of Operator

P.O. Box 800 Denver Colorado 80201

4. Well Location

Unit Letter F : 1980 Feet From The North Line and 2505 Feet From The West Line

Section 16 Township 30N Range 11W NMPM San Juan County

10. Proposed Depth

7460' TD

11. Formation

Basin Dakota

12. Rotary or C.T.

Rotary

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

5692' GL

14. Kind & Status Plug. Bond

15. Drilling Contractor

Aztec

16. Approx. Date Work will start

12/22/93

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# J-55	400'	625cf CL B	Cement to Surface
12 1/4"	9 5/8"	36# J-55	2945	2029cf CL B	Cement to Surface
8 3/4"	7"	23# J-55	6956'	1032cf CL B	Cement to Surface
6 1/4"	4 1/2"	11.6# N-80	6756'-7460' Liner	122cf CL G	

CONFIDENTIAL

This Approval

Expires 11-19-94

And Will Not Be

Extended

RECEIVED

NOV 18 1993

OIL CON. DIV.

DIST. 3

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 11-16-1993

TYPE OR PRINT NAME Julie L. Acevedo TELEPHONE NO. _____

(This space for State Use)

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE NOV 19 1993

CONDITIONS OF APPROVAL, IF ANY:

0404 For 1151

Submit to Appropriate
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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

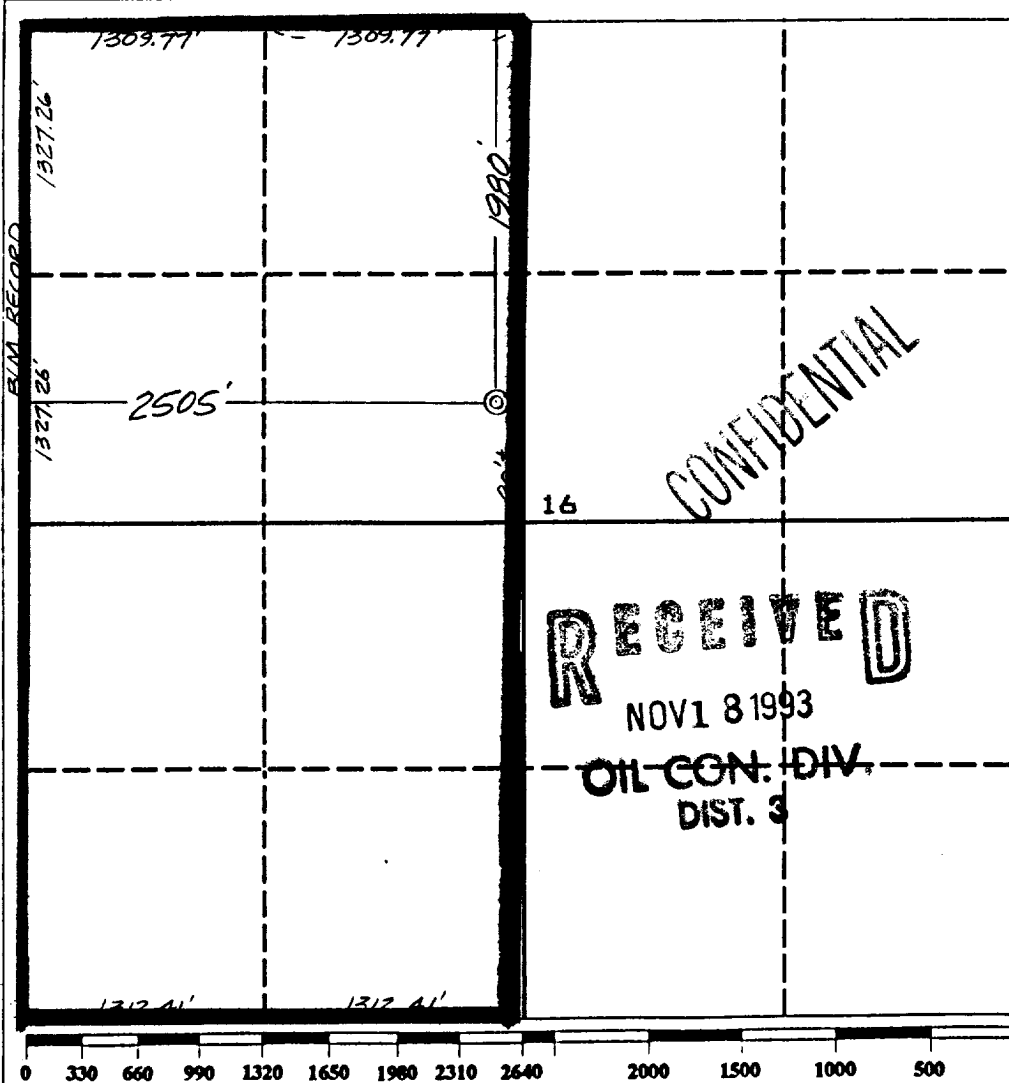
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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 AMOCO PRODUCTION COMPANY			Lease State Gas Com ACT		Well No. #40
Unit Letter F	Section 16	Township 30 NORTH	Range 11 WEST	County SAN JUAN	
Actual Footage Location of Well: 1980 feet from the NORTH line and 2505 feet from the WEST line					
Ground level Elev. 5692	Producing Formation Basin Dakota		Pool Basin Dakota		Dedicated Acreage: W/2 320 Acres
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.</p> <p>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).</p> <p>3. 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.? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation <u>Com</u></p> <p>If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)</p> <p>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.</p>					



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 **11/16/93**

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 3, 1993**

Signature & Seal of Professional Surveyor
GARY D. VANN
7016
Gary Vann
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

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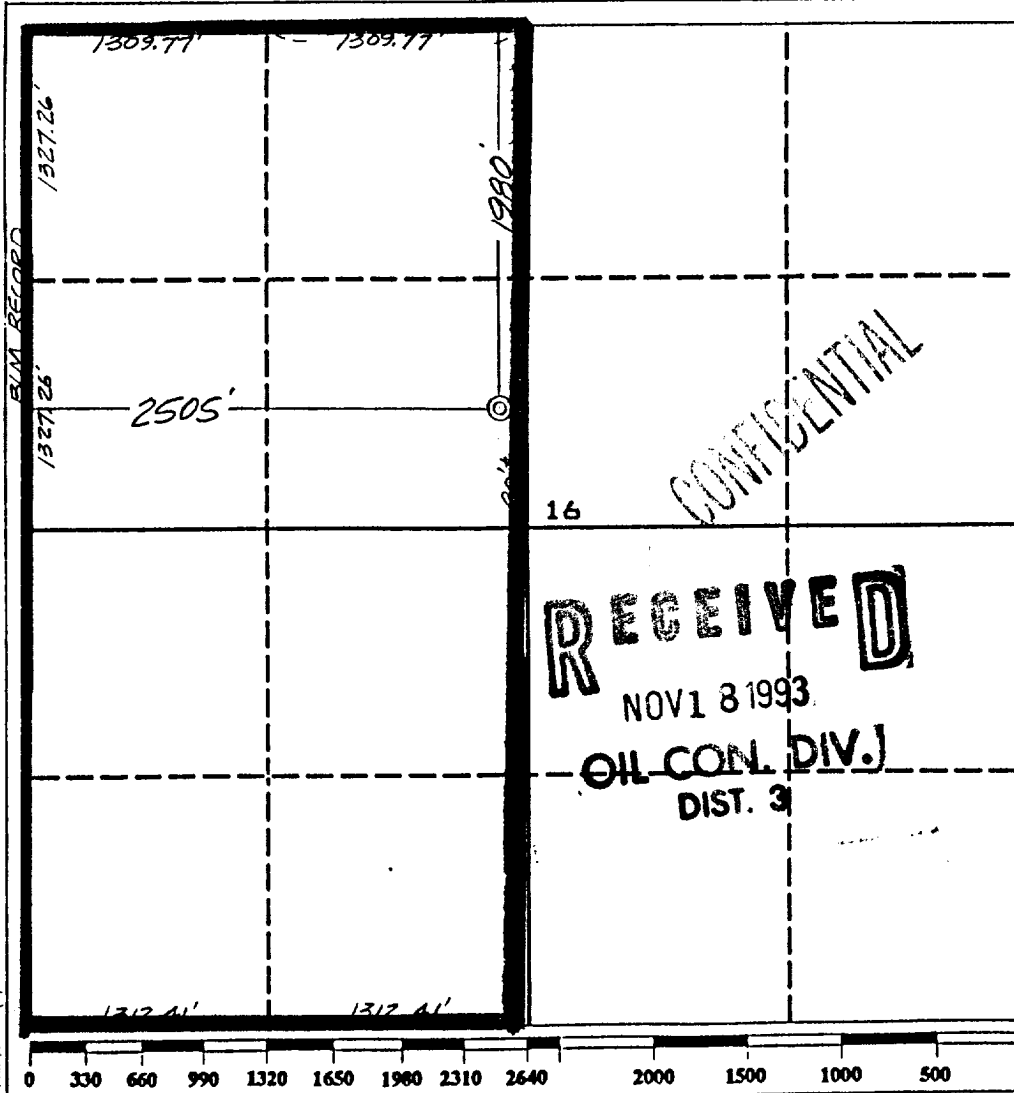
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator AMOCO PRODUCTION COMPANY			Lease State Gas Com ABT		Well No. #40
Unit Letter F	Section 16	Township 30 NORTH	Range 11 WEST	County SAN JUAN	
Actual Footage Location of Well: 1980 feet from the NORTH line and 2505 feet from the WEST line					
Ground level Elev. 5692	Producing Formation Mesaverde	Pool BLANCO Mesaverde		Dedicated Acreage: W/2 320 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 *Julie L. Acevedo*
Printed Name **Julie L. Acevedo**
Position **Sr. Staff Assistant**
Company **Amoco Production Company**
Date **11/16/93**

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 3, 1993**

Signature & Seal of Professional Surveyor

GARY D. VANN
7016
REGISTERED PROFESSIONAL LAND SURVEYOR
NEW MEXICO

PRELIMINARY COPY

AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAMFile: H:\group\srbu\nmexdk\dak547f46.wk3
Revision Date: 11/16/93Lease: State Gas Com / DK /
County: San Juan, New Mexico
Formerly Reference Well #10089Well No. 40
Location: 1980' FNL x 2505' FWL, Sec. 16, T30N, R11W
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		6,244 Est. GL Elev.		6,260 Est. KB Elev.	
	Rotary		Marker	Depth (ft)	SS Elev. (ft)	
LOG PROGRAM			Ojo Alamo (Base)	1,423	4,837	
Type	Depth Interval		Fruitland	2,395	3,865	
HRI – DIL – CAL – NGT – GR	SFC to TD	Mud Hole	Pictured Cliffs *	2,645	3,615	
FDC – CNL	SFC to TD	Mud Hole	Lewis Shale	2,795	3,465	
MICROLOG	TD + 1000'	Mud Hole	Cliff House *	4,210	2,050	
MRI	*ICP to Top Fruitland (6" tool)		Menefee	4,435	1,825	
	**TD to PCP (4.5" tool)		Point Lookout *	4,960	1,300	
Epithermal Neutron/			Mancos Shale	5,290	970	
Spectral Density/Temp Log	PCP – ICP	Air Hole	Greenhorn	6,956	(696)	
DIL – Cal – GR	PCP – ICP	Air Hole	Dakota #	7,070	(810)	
REMARKS:			TOTAL DEPTH:	7,460	(1,200)	

Magnetic Resonance Image (MRI), pulls at 3'/min.
(409) 836 - 2955 (Numar, Brenham District).# Probable completion interval * Possible pay.
OJO ALAMO IS POSSIBLE USEABLE WATER.

SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE	DEPTH INTERVAL, ETC	FREQUENCY	DEPTH	FREQUENCY	DEPTH
		10'	PCP – TD	Geolograph	0 – TD
Remarks:					
Mudlogging Program:					
Full two man mudlogging services for PCP to TD.					

MUD PROGRAM:

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.

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)	2,945	9-5/8"	12-1/4"	1,2,3
Protective (PCP)	6,956	7"	8-3/4"	2,4
Production (TD)	7,460	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.

Form 46 Reviewed by:

Logging program reviewed by:

PREPARED BY:

APPROVED:

F. Seidel/A. Logan

For Production Dept

APPROVED:

For Exploration Dept

Formerly Reference Well #10089

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 ₂ + 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
2945	9.625	36	J-55, LT&C	* 2 stage

* 1st Stg Tail: 448 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 2395 ft
Stage tool depth 2295 ft, 100' above top of Fruitland Coal.

* 2nd Stg Lead: 1452 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
6956	7	23	J-55, LT&C	* 2 stage

* 1st Stg Tail: 781 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 2645 ft Est TCMT 2545
Top of Mesa Verde 4210 ft
Stage tool depth 3710 ft, 500' above top of Mesa Verde.

* 2nd Stg Tail: 251 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
704	4.5	11.6	N-80, LT&C	* single stage

* 1st Stg Tail: 122 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 7460 ft
Estimated Top of Liner 6756 ft 200' overlap into intermediate casing.

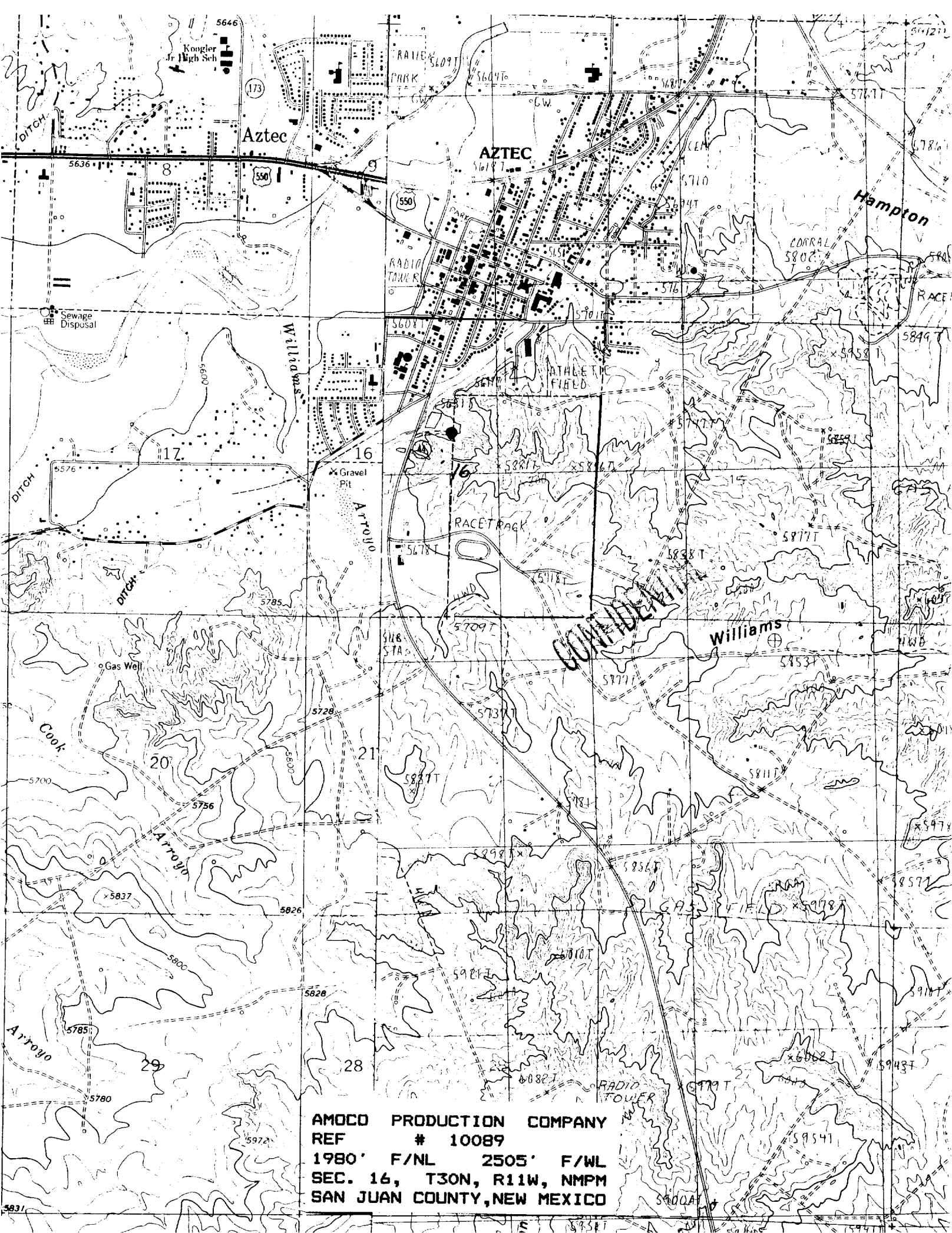
Hole size 6.25", 60% excess, tie cement back.

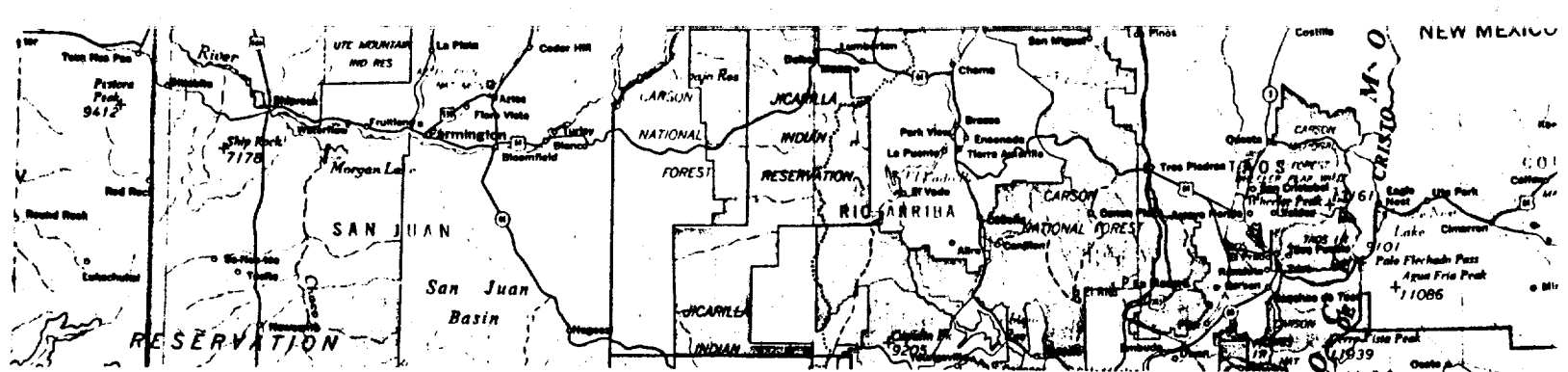
BY: FRANK SEIDEL/BARRY PEISER 11/16/93

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

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COMPLETED





REF # 10089
 1980' F/NL 2505' F/WL
 SEC. 16, T30N, R11W, NMPM
 RAIL POINT: 144 miles from Montrose, Co.
 MUD POINT: .89 mile from Aztec, N.M.
 CEMENT POINT: 15 miles from Farmington, N.M.

