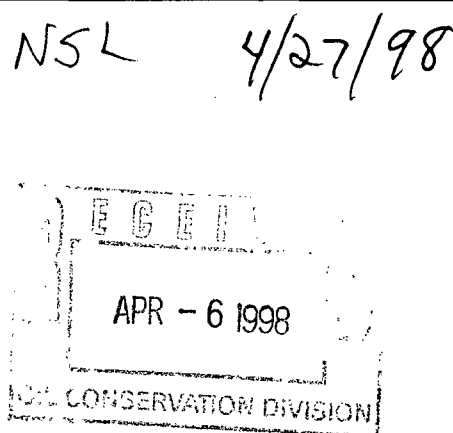




ARCO Permian
600 North Marienfeld
Midland TX 79701-4373
Post Office Box 1610
Midland TX 79702-1610
Telephone 915 688 5570

Elizabeth A. Casbeer
Regulatory/Compliance Analyst



March 31, 1998

ARCO.1

Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Gentlemen:

Under the provisions of NMOCD Rule 104.F.(3), ARCO Permian requests administrative approval for an unorthodox location for its Washington "33" State #12, a new well in the Artesia (Queen-Grayburg-San Andres) Field, due to topography and geological conditions. The location for this proposed well is 2432'FNL and 2270'FEL of Section 33, T17S, R28E, Eddy County, New Mexico.

The following exhibits are submitted to support our request for administrative approval:

1. A C-102 plat showing the subject 40-acre spacing unit with the unorthodox location.
2. A topographic map from John West Engineering.
3. A sketch plat showing topographical obstructions around the location.
4. A Structure map.
5. A gross isopach map of the San Andres porosity interval.
6. A type log for the Washington lease.
7. A geologic and engineering discussion of the necessity for an unorthodox location.
8. A plat showing adjoining and diagonal spacing units.

All adjoining and diagonal spacing units are ARCO owned.

Should you have any questions, please do not hesitate to call me at 915-688-5570 or Dave Pearcy at 915-688-5355. Thank you for your assistance in this matter.

Sincerely,

Elizabeth A. Casbeer
Regulatory/Compliance Analyst

EAC:lc

cc: NMOCD, Artesia, New Mexico

Enclosures

**OFFSET OPERATORS
WASHINGTON "33" STATE #12**

**ARCO Permian
P. O. Box 1610
Midland, Texas 79702**

**Geological and Engineering Attachment
Washington "33" State #12**

As shown on the engineer's sketch plat, ARCO attempted to obtain an orthodox location for this well at 2310'FN & EL, but was prevented access by several buried pipelines. We have shifted the location south a minimal distance (2432'FNL, 2270'FEL) to allow adequate and safe setback for the small United rig we will use.

ARCO will require 2 strategically-spaced wellspots in each 40-acre tract to recover reserves in the San Andres dolomite, and later in the Yates-Seven Rivers and Queen-Grayburg "sands". An orthodox location has been spotted in the NE corner of Unit G to test the San Andres and Yeso, but we need this unorthodox location in the SW corner of Unit G to fully exploit the Queen-Grayburg-San Andres main pay. Any well on the north side of the pipelines would be too close to #11 to effectively drain the in-place oil, and would leave undrained a significant portion of our reserves. Directional drilling of these wells is untenable, since this would add approximately \$100,000 to the cost, and would not be economically justified with 50-85 MBO per well reserves.

Since this unorthodox location is completely surrounded by other ARCO tracts in the same lease, there will be no impact on any other party.

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator name and Address ARCO PERMIAN P.O. BOX 1610 MIDLAND, TX 79702		² OGRID Number 000990
		³ API Number 30-0
⁴ Property Code	⁵ Property Name WASHINGTON "33" STATE	⁶ Well No. 12

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
G	33	17S	28E		2432	NORTH	2270	EAST	EDDY

⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County

⁹ Proposed Pool 1

ARTESIA (Q-G-SA)

¹⁰ Proposed Pool 2

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3666'
¹⁶ Multiple NO	¹⁷ Proposed Depth 3100	¹⁸ Formation SAN ANDRES	¹⁹ Contractor	²⁰ Spud Date 5/98

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4	8-5/8	24#	500'	450	CIRC. TO SURF.
7-7/8	5-1/2	15.5#	3100	1200	CIRC. TO SURF.

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

DRILL SURFACE HOLE W/FRESH WATER TO 500'. SET & CEMENT 8-5/8" CASING.
DRILL 7-7/8" HOLE TO 2000; W/SATURATED BRINE. DRILL 3100' TD W/ SACT GEL
USING PRE-HYDRATED FW GEL SWEEPS, FL +/- 15CC. LOG WELL, RUN & CEMENT
5-1/2" CASING. COMPLETE AND TEST SAN ANDRES FORMATION.

SUBJECT WELL PLANNED AS A 3100' STRAIGHT HOLE.
3000 PSI BOPE WILL BE USED FORM 500' TO TD.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name: ELIZABETH A. CASBEER

Title: 3/31/98

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		ARTESIA (Q-G-SA)
Property Code	Property Name	Well Number
	WASHINGTON 33 STATE	12
OGRID No.	Operator Name	Elevation
000990	ARCO PERMIAN	3666'

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	33	17 S	28 E		2432	NORTH	2270	EAST	EDDY

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidation Code		Order No.					

				10
	06	04	02	
07		09	011	130
08			014	
		2270'		
021				
022				

OPERATOR CERTIFICATION

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

Elizabeth N. Casbeer
Signature

ELIZABETH CASBEER
Printed Name

REG / COMP. ANALYST
Title

3/31/98
Date

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 belief.

FEBRUARY 25, 1998

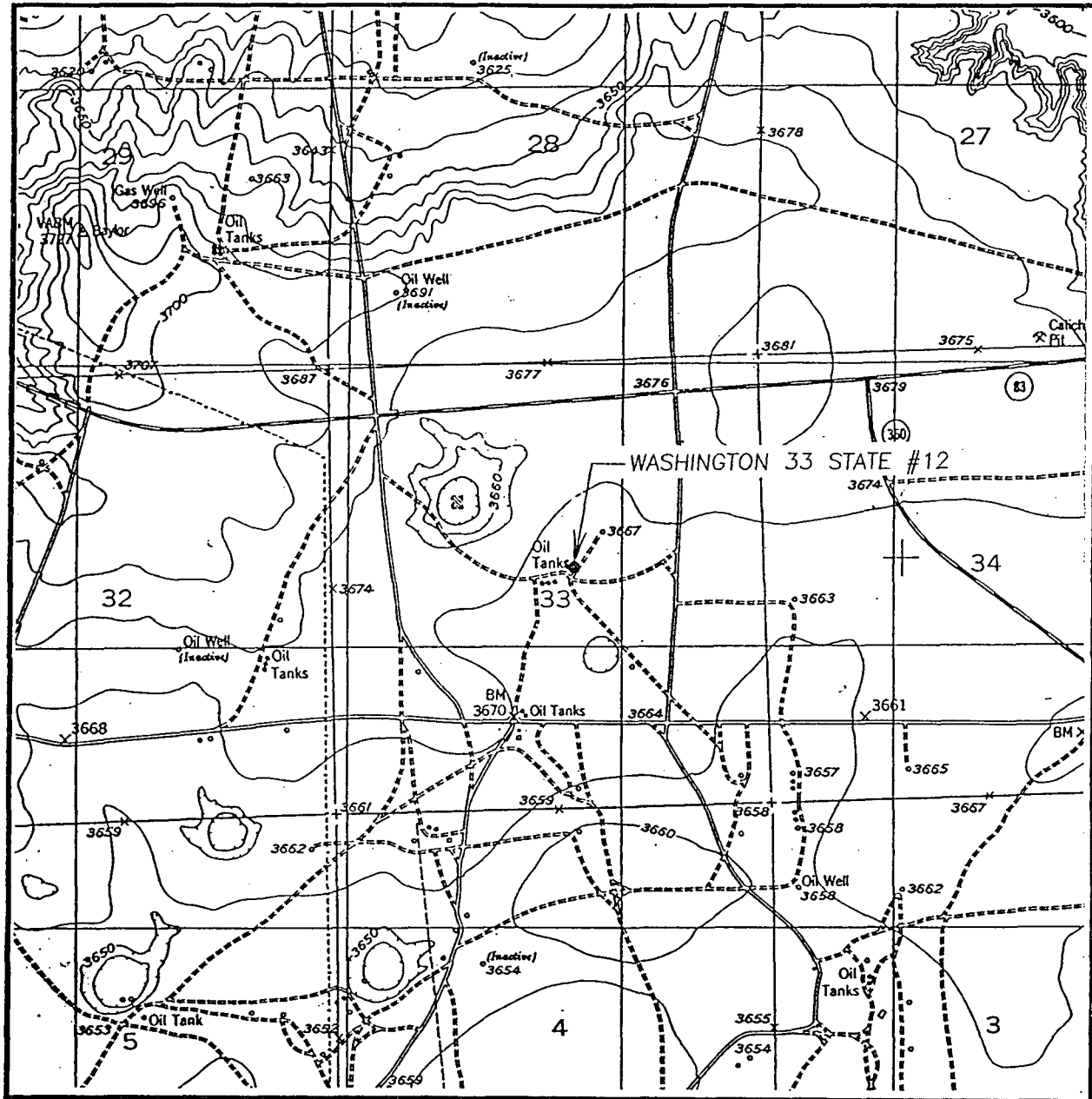
Date Surveyed CDG

Ronald J. Gibson
Signature & Seal of Professional Surveyor

RONALD J. GIBSON
NEW MEXICO
3239
98-11-0355

Certificate No. RONALD J. GIBSON 3239
GARY E. LUSBY 12641

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL - 10'

SEC. 33 TWP. 17-S RGE. 28-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 2432' FNL & 2270' FEL

ELEVATION 3666'

OPERATOR ARCO PERMIAN

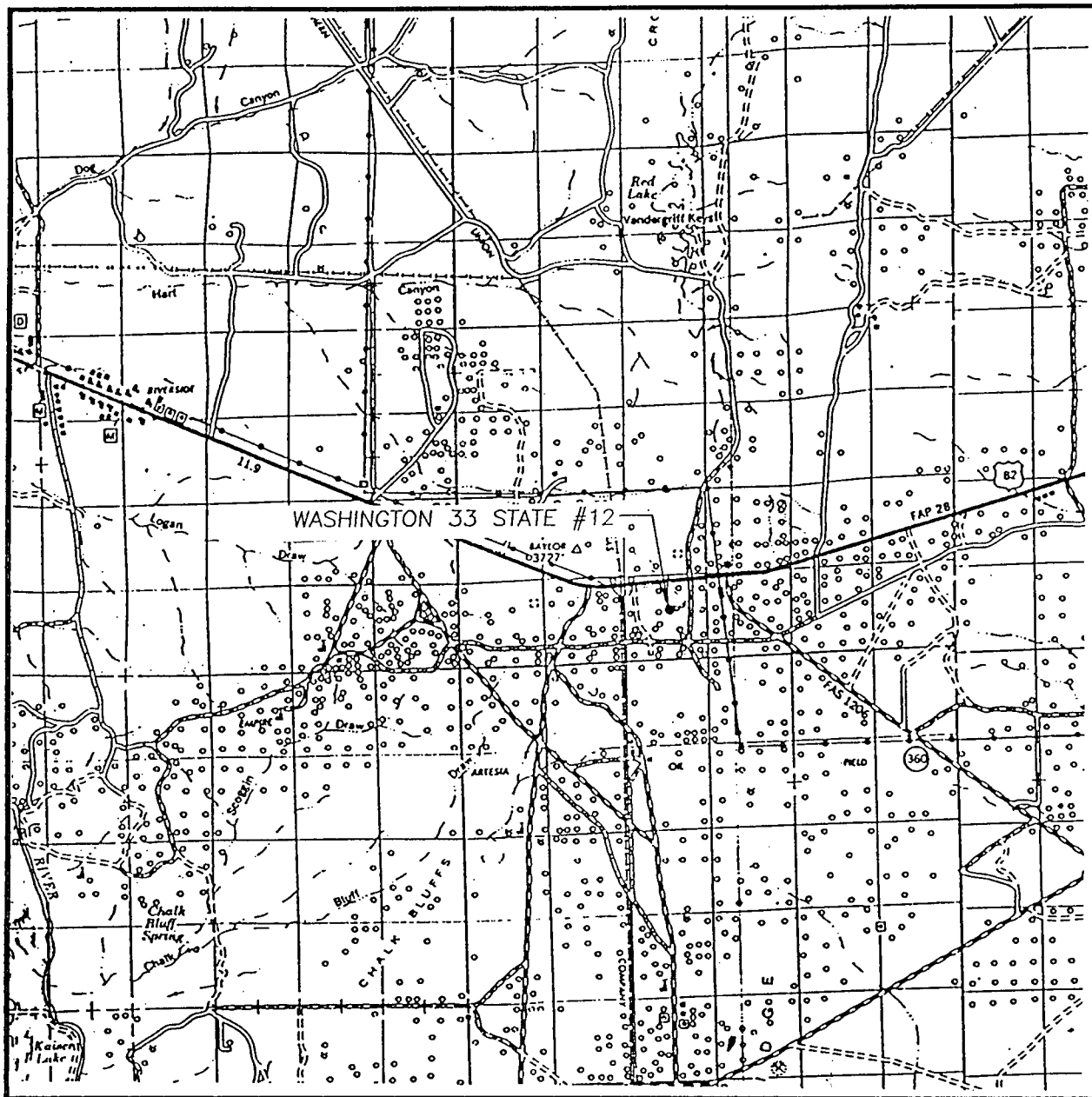
LEASE WASHINGTON 33 STATE

U.S.G.S. TOPOGRAPHIC MAP

RED LAKE, NM

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117

FLORON



SEC. 33 TWP. 17-S RGE. 28-E
SURVEY _____ N.M.P.M. _____
COUNTY _____ EDDY _____
DESCRIPTION 2432' FNL & 2270' FEL
ELEVATION _____ 3666'
OPERATOR ARCO PERMIAN
LEASE WASHINGTON 33 STATE

**JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117**

ARCO Permian

General Purpose Worksheet

Subject	Ideal Washington # 12		Page No.	or
File			By	Date
				3/5/98

↑
N

Old Lense Rd

BURIED Pipe Line

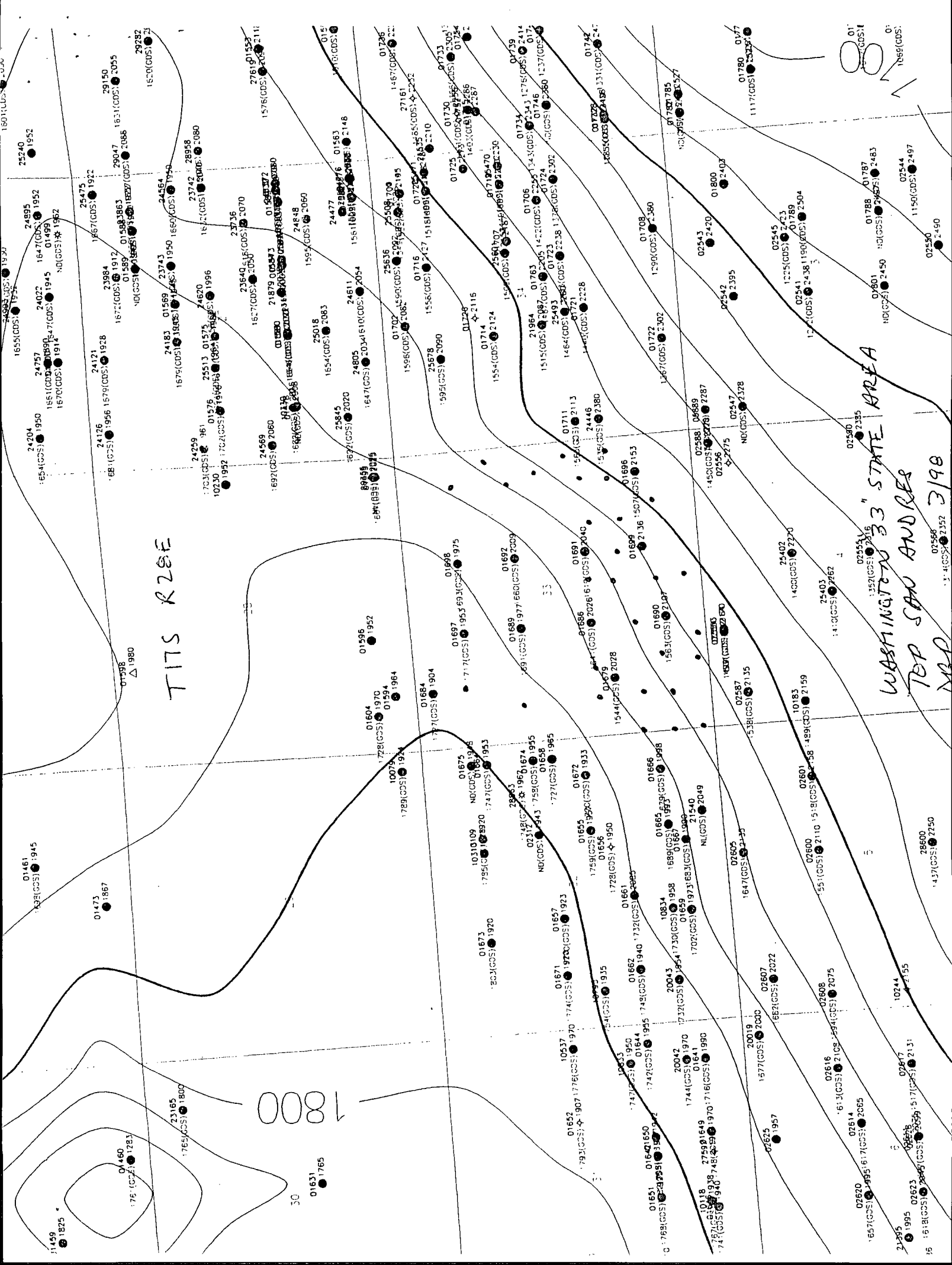
BURIED Pipe Line

ORIGINAL
2310 FNL
2310 FEL

± 150' (actual 122')

ORIGINAL FELL ON BURIED Pipe Line;
STAKED ± 150' South ALT 'A'

ALT 'A', after 40' eastern shift
(2432 FNL
2270 FEL)



TITS R28E

WASHINGTON 33 STATE AREA

TOP SAN ANDRES

MD

3/98

07586 07552

1437(GDS) 2250

28500

10744 10715

02617 02615

1657(GDS) 2055 5.7(GDS) 2131

02616 02614

1657(GDS) 2055 5.7(GDS) 2131

02616 02614

1657(GDS) 2055 5.7(GDS) 2131

02616 02614

1657(GDS) 2055 5.7(GDS) 2131

02616 02614

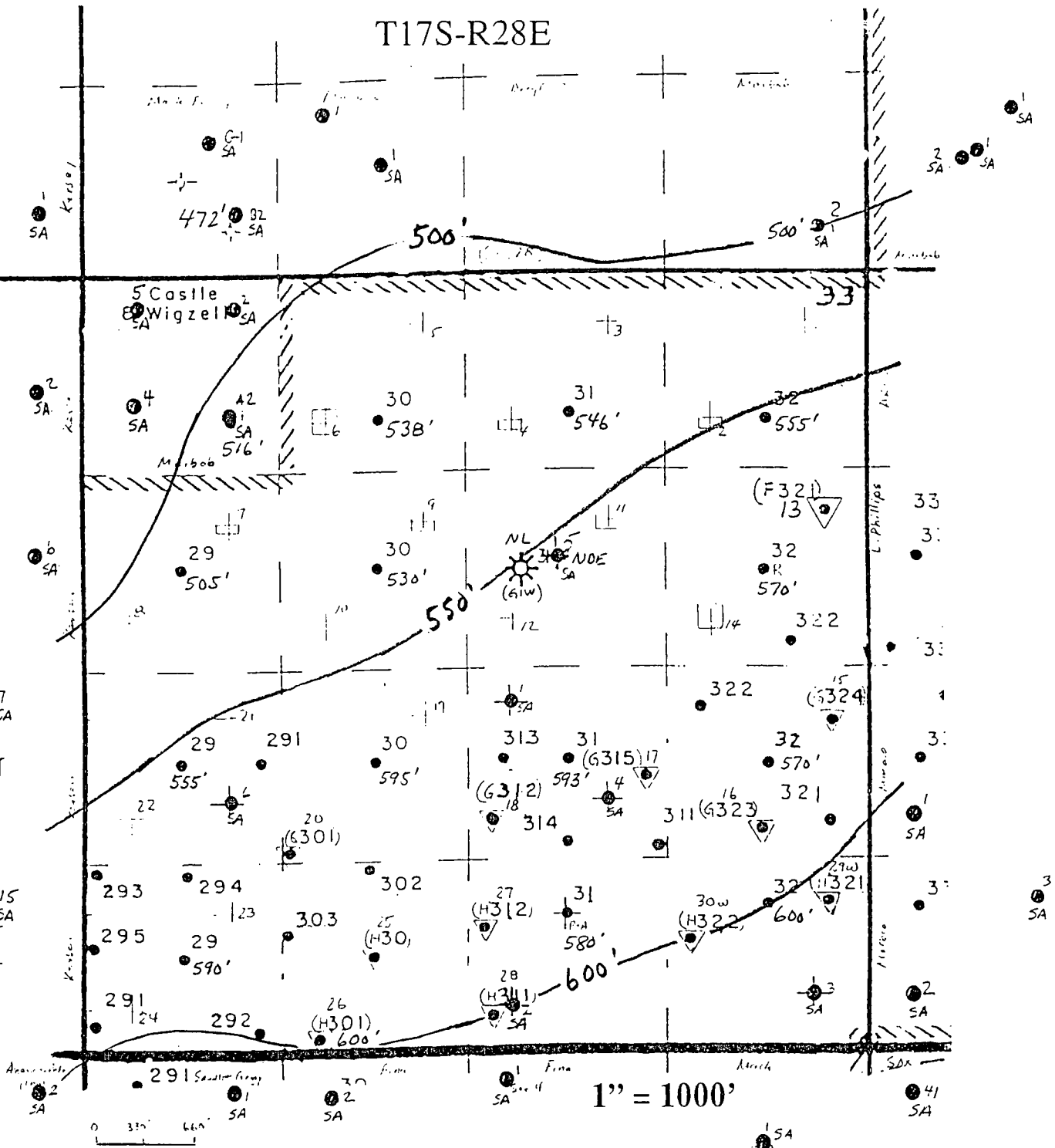
T17S-R28E

E

F

G

H



ARCO Permian
GROSS PAY, SAN ANDRES DOLO.
Washington 33 Lease
Sec. 33 T17S-R28E
Eddy Co. NM
Abo And San Andres Well Locations
DBP 3/98



San Andres recomplete Candidates



San Andres Locations



Primary Yeso Locations



Recomplete alternate in Yeso



Possible / contingent Yeso TD



Relevant San Andres wells
Showing well #

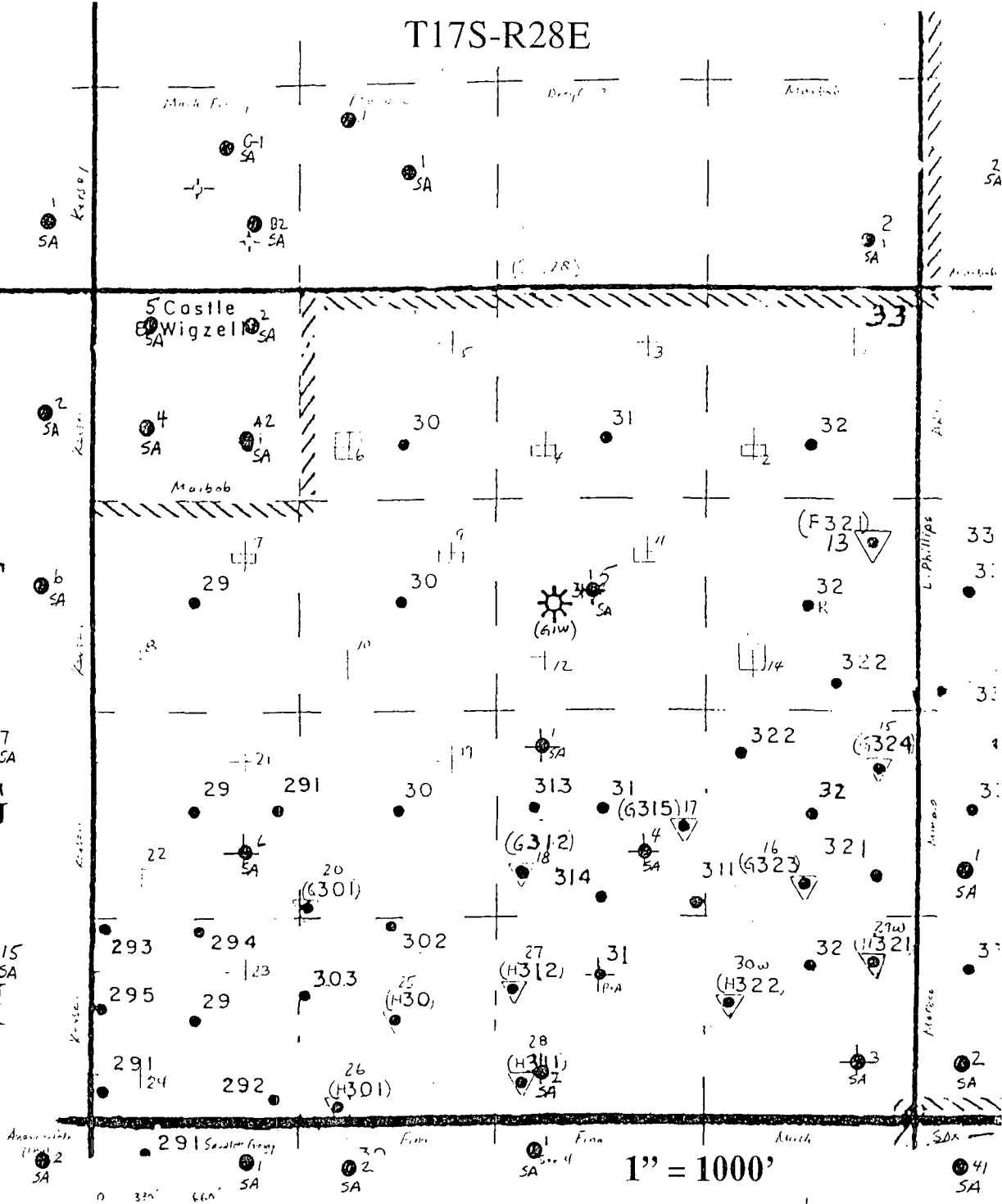
T17S-R28E

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ARCO Permian

Washington 33 Lease
Sec. 33 T17S-R28E
Eddy Co. NM

Abo And San Andres Well Locations



San Andres recomplete Candidates



San Andres Locations



Primary Yeso Locations



Recomplete alternate in Yeso



Possible / contingent Yeso TD



Relevant San Andres wells
Showing well #

1003030030

F-30

3001501689

PANGEO ATLAS CORP	
Gamma Ray Neutron Laterolog Survey	
WELL NO.	COMPANY SINCLAIR OIL & GAS COMPANY
	WELL M. YATES B. ARC # 5
	FIELD EMPIRE ABO
	COUNTY EDDY STATE NEW MEXICO
LOCATION:	1980' FN & W LINE
	Other Services NONE
SEC 33	TWP 17S RGE 28-E

