



Amoco Production Company

Post Office Box 68
Hobbs, New Mexico 88240

L. R. Smith
District Manager

August 1, 1984

File: LRS-1649-WF

Re: Application to Wellbore Commingle
State "HR" Well No. 1
Bone Springs and Wolfcamp Oil Pools
Lea County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Approval is hereby requested to downhole commingle the State "HR" No. 1 in accordance with NMOC Rule 303-C.

This well is located 330' FNL x 1980' FWL, Section 36, T-18-S, R-34-E, Lea County, New Mexico. Originally, the well was PxA'd after reaching TD on 12-27-79. It was reentered 11-6-80 and completed in the Airstrip Wolfcamp. The Wolfcamp was temporarily abandoned in 1-84, and the well was completed in the Airstrip Upper Bone Springs. The well is currently on artificial lift and is producing from the Bone Springs. Attached is an ownership map showing the subject well and offset operator.

In support of our request, we submit the following facts:

1. The latest 24 hour productivity tests are as follows:

	Date	BOPD	BWPD	MCFD	Perforations
Bone Springs	7-84	16	2	22	9,049'-9,312'
Wolfcamp	*12-83	10	0	23	10,612'-10,812'

* Production based on monthly well test. Most recent C-116 (attached) is dated 10-83.

2. Neither zone produces more water than the combined oil limit as determined in Rule 303, Paragraph C, Section 1-a(1) and a(3).

3. An analysis was run on the offset State "FU" No. 1 Upper Bone Springs and on the State "HR" No. 1 Wolfcamp waters when application was made to downhole commingle the State "FU" No. 1 well. The results of the water analysis found the two waters were compatible. Since the State "FU" No. 1 has been downhole commingled in the Upper Bone Springs and Wolfcamp for five months with no apparent compatibility problems, we do not foresee any problems occurring in the subject well.
4. Both zones will be artificially lifted. The estimated bottomhole pressures are as follows:

Upper Bone Springs:

(9,044' - 9,312')

Sonologged: 6/84 = 251'

Pump: Set at 9330'

May, 1984 Production: 20 BOPD x 5 BWPD x 26 MCFD
89% oil x 11% water

Casing Pressure: 172 psi

Oil Gravity: 38.5° API

$$\begin{array}{rcl} & 141.5 & \\ \text{SG} = \frac{131.5 + 38.5}{141.5} & = .832 \text{ SG} \times .433 \text{ psi/ft} & = .360 \text{ psi/ft} \\ 251' \times .89 & = 223' \text{ oil} \times .360 \text{ psi/ft} & = 80.3 \text{ psi} \\ 251' \times .20 & = 28' \text{ water} \times .433 \text{ psi/ft} & = 12.1 \text{ psi} \\ (9330' - 251') \times .01 & \text{ psi/ft gas} & = 90.8 \text{ psi} \\ \text{Casing pressure} & & = 172.0 \text{ psi} \\ & & \underline{\underline{355.2 \text{ psi}}} \end{array}$$

Wolfcamp

(10,622' - 10,812')

Sonologged: 12/13/83 = 1,147' (one month prior to shut-in)

Pump: Set at 10,815'

December, 1983 Production: 10 BOPD x 0 BWPD x 23 MCFD
100% oil

Casing Pressure: 52 psi

Oil Gravity: 39°

$$\begin{array}{rcl} & 141.5 & \\ \text{SG} = \frac{131.5 + 39}{141.5} & = .830 \text{ SG} \times .433 \text{ psi/ft} & = .359 \text{ psi/ft} \\ 1,147' \text{ oil} \times .359 & \text{ psi/ft} & = 411.8 \text{ psi} \\ (10,815' - 1,147') \times .01 & \text{ psi/ft gas} & = 96.7 \text{ psi} \\ \text{Casing Pressure} & & = 52.0 \text{ psi} \\ & & \underline{\underline{560.5 \text{ psi}}} \end{array}$$

Conclusion: Upper Bone Springs BHP = 355.2 psi
Wolfcamp BHP = 560.5 psi

The lower pressured zone is not less than 50% of the higher pressured zone.

RECEIVED

AUG - 7 1984

O.C.P.
HOBBS OFFICE

5. The commercial value of the commingled production will be approximately the same as the total value of the segregated production. Production data from the two zones are as follows:

	<u>State "HR" No. 1</u>		
	Bone Springs	Wolfcamp	Commingled
Daily Production	16	10	26
Gravity	38.7°	38.3°	38.5°
Value/BBL	29.96	29.95	29.96
Total Value	<u>479.36</u>	<u>299.50</u>	<u>778.86</u>

6. Recommended oil and gas allotments are as follows:

	Wolfcamp	Bone Springs
Oil	38%	62%
Gas	51%	49%

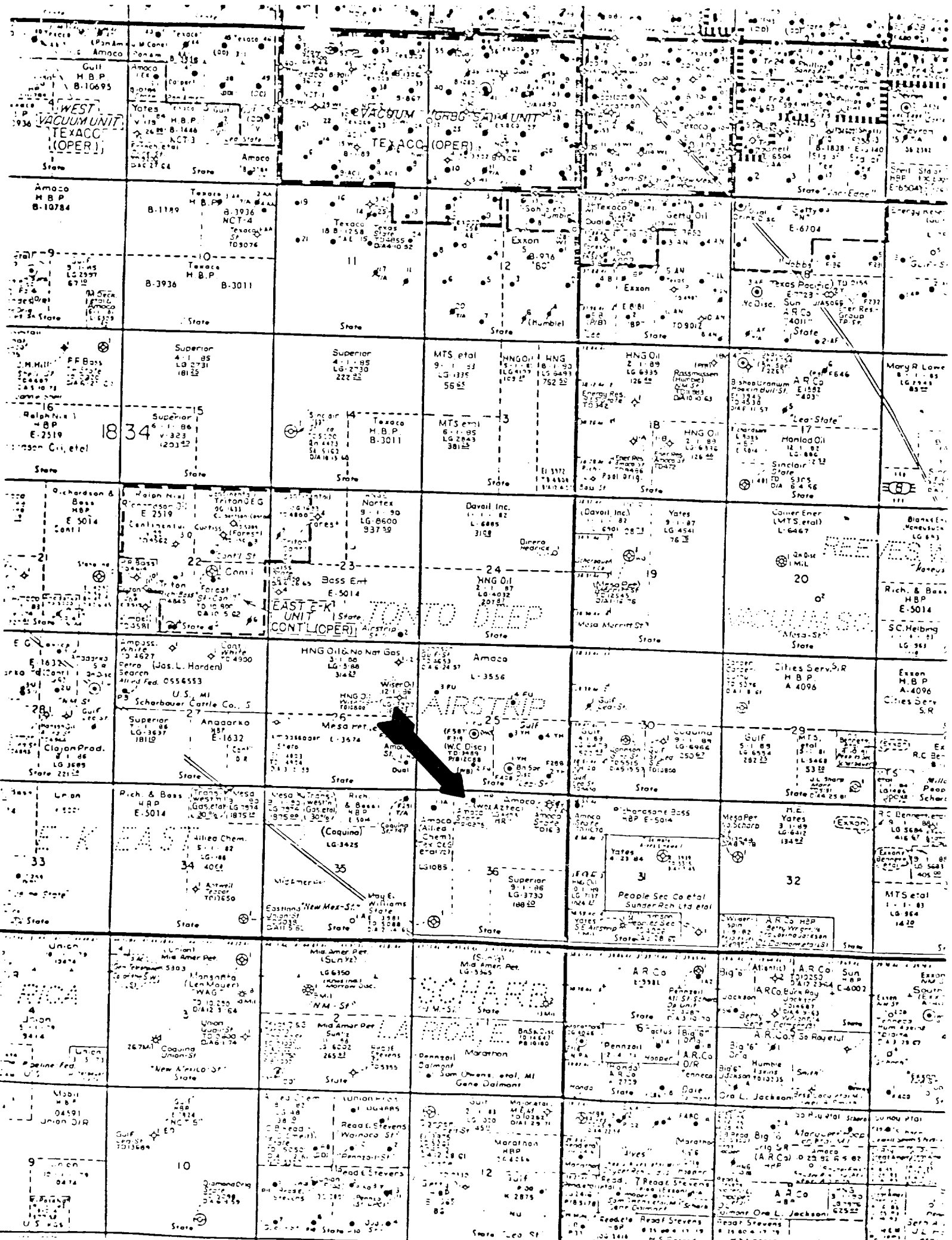
If additional information is required, contact Gary Clark at (505) 393-1781.

Original Signed By
L.R. Smith

GCC/kih
APERMI-LL

Attachments

cc: State of New Mexico
Energy and Minerals Dept.
Oil Conservation Division
P. O. Box 1980
Hobbs, NM 88240



GAS-OIL RATIO TESTS

Operator		County		Lea									
Amoco Production Company		Airstrip Wolfcamp											
P. O. Box 68, Hobbs, New Mexico 88240		TYPE OF TEST - (X)		SCHEDULED ☒ SPECIAL ☐									
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW. ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.
		U	S	T						R	WATER BBLs.	GRAV. OIL	
State FU	4	K	25	18	.34	Shut-in							
State HQ	1	P	26	18	34	Shut-in							
State HR	1	C	36	18	34	10-19-83	P	15	24	0	9	28.4	3111
State IA	1	D	36	18	34	10-6-83	P	1	24	0	.5	.1	--

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

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

Bonita Cole
(Signature)

Administrative Analyst

(Title)
11-4-83

GAS-OIL RATIO TESTS

City/State		County		Lea	
AMOCO PRODUCTION COMPANY		Pool		Airstrip Bone Springs	
Address		P. O. Box 68, Hobbs, New Mexico 88240		TYPE OF TEST - (X)	
LEASE NAME		WELL NO.		DATE OF TEST	
STATE "HR"		1		7-21-84	
LOCATION		U		S	
36		18S		34E	
CHOKES		SIZE		PRESS.	
101		24		16	
DAILY ALLOWABLE		LENGTH OF TEST HOURS		PROD. DURING TEST	
101		24		WATER BLS.	
101		24		GRAV. OIL BLS.	
101		24		OIL BLS.	
101		24		GAS M.C.F.	
101		24		GAS - OIL RATIO CU.FT/BSL	
101		24		1375	

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.
Gas volume must be reported in MCF measured at a pressure base of 15,015 psia and a temperature of 60° F. Specific gravity base will be 0.60.
Report casing pressure in lieu of tubing pressure for any well producing through casing.
Well original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 321 and appropriate pool rules.

[Signature]
(Signature)
Assist. Admin. Analyst

(Title)
7-30-84

INDUSTRY PRODUCTION DATA RATE-TIME PLOTS

OIL

WELL: STATE HR

000001

FIELD: AIRSTRIP WOLF CAMP AND BONES PRINGS WC

OPERATOR: AMOCO PRODUCTION CO

STATE: NM 30 COUNTY: LEA

FIRST PROD

LAST PROD 83 12

REQUESTOR: EDIE FOR SPERRY

LOCATION: HOBBS

API NO: 300250000000

GENID: 4WO14653

008000224 RESERVOIR: WC

COMP DATE 80 12

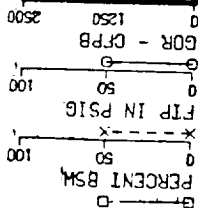
025 TOT. OIL CUM:

22,783

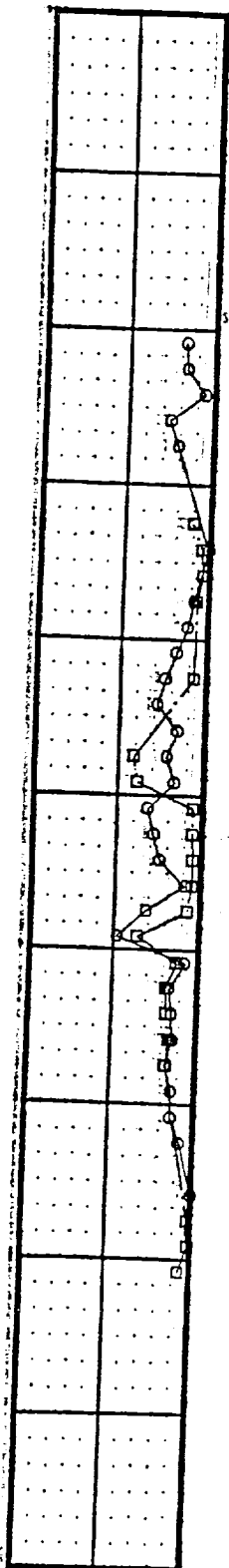
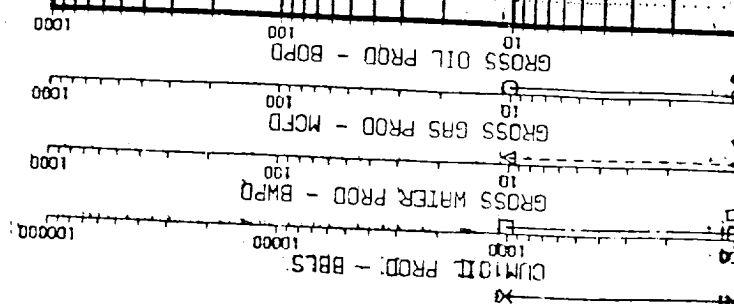
TOT. GAS CUM:

6135

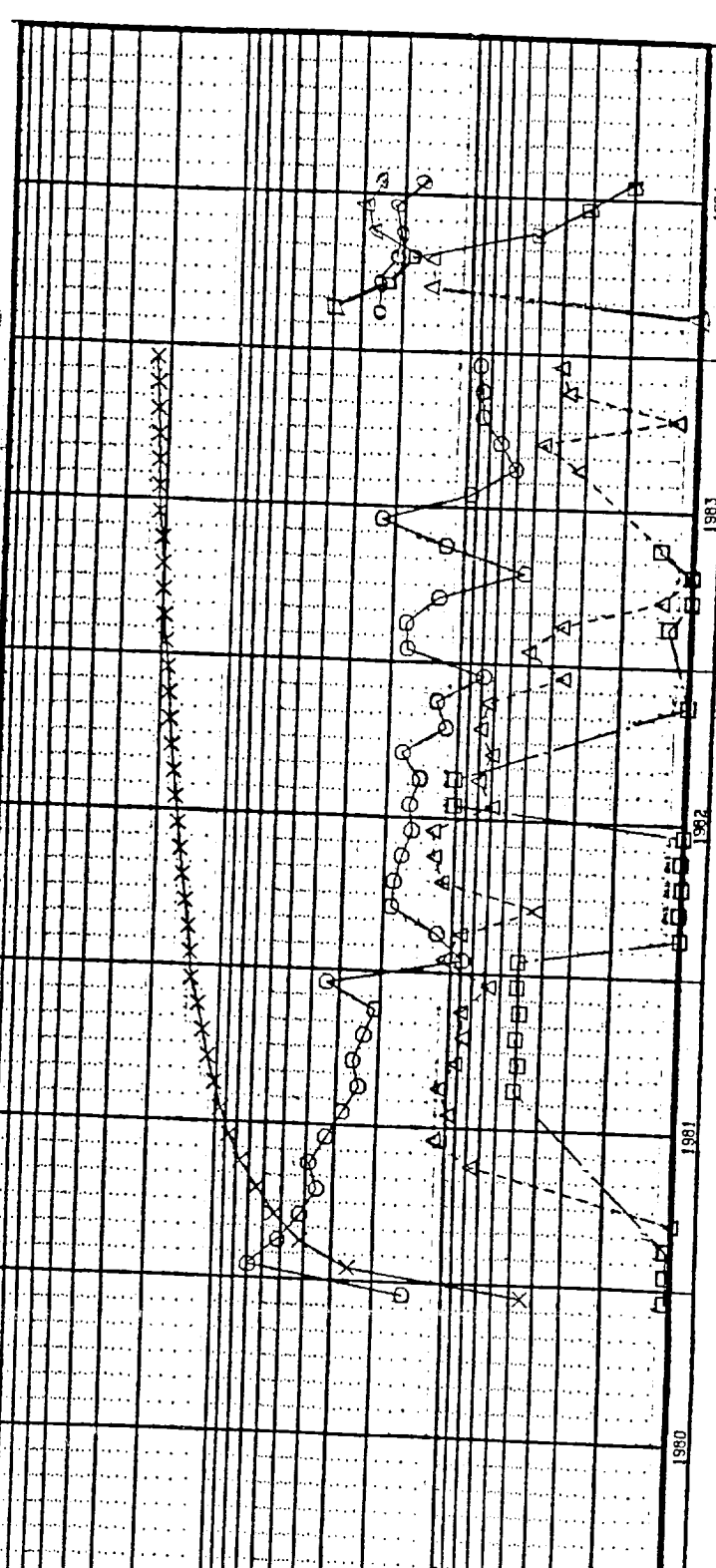
PERFS:



MAJOR PRODUCT



Oil
Gas
Water
Gels
Solids
Sparings



1984-06-28

TIME

REPORT NUMBER 321

P 267 164 440
RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

SENT TO		Gulf Oil Exploration
STREET AND NO.		1923 N. Dal Paso Box 670
P.O., STATE AND ZIP CODE		Hobbs, NM 88240
POSTAGE		\$.20
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	.75 ⁰⁰
	SPECIAL DELIVERY	0
	RESTRICTED DELIVERY	0
	OPTIONAL SERVICES	
	RETURN RECEIPT SERVICE	.60
	SHOW TO WHOM DATE AND ADDRESS OF DELIVERY	0
	SHOW TO WHOM DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	0
TOTAL POSTAGE AND FEES		\$ 1.55
POSTMARK ON DATE		

PS Form 3800, Apr. 1976

