

TENNECO OIL CO.
Catclaw Draw Unit #12, Morrow
S24, T-21-S, R-25-E, Eddy

PROSP

KAISER-FRANCIS OIL COMPANY

EL PASO COUNTY

EL PASO COUNTY ALBANY 74111 1965

Company Name
City, State, Zip
Phone Number

August 1, 1984

#8336

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

Re: Application for classification
as Hardship Gas Well
Pure Gold "A" Federal No. 1
Section 21-23S-31E
Eddy County, New Mexico

Dear Mr. Ramey,

Enclosed is our application for Hardship Gas Well classification for the subject well. All the information submitted with this application is true and correct to the best of my knowledge.

One copy has been submitted to the District office in Artesia, and notice of the application by copy of this letter has been sent to the purchaser, El Paso Natural Gas Company, and the offset operators listed below.

Yours very truly,

KAISER-FRANCIS OIL COMPANY

James W. Johnston

James W. Johnston
PE 39962 Texas

JWJ:ljb

cc: Offset Operators
El Paso Exploration
Santa Fe Energy
Yates Petroleum

BEFORE ENGINEER QUINTANA	
OIL CONSERVATION DIVISION	
KAISER-FRANCIS	FEDERAL NO. <u>A</u>
CASE NO.	<u>8336</u>

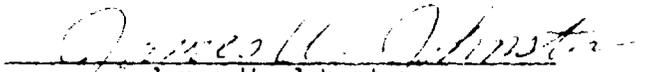
OATH STATEMENT

STATE OF OKLAHOMA)

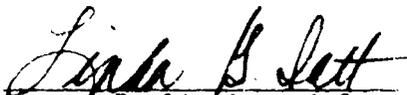
TULSA COUNTY)

JAMES W. JOHNSTON, of lawful age, being first duly sworn upon oath, deposes and states:

That he is Reservoir Engineer of Kaiser-Francis Oil Company, the above-named applicant; that he has read the above foregoing petition and knows the contents thereof; and that all statements and allegations contained therein are true and correct to the best of his knowledge and belief. Additionally, I certify that one copy of this application has been submitted to the appropriate Division District Office (Artesia) and that notice of this application has been given to the gas purchaser and all offset operators.


James W. Johnston

SUBSCRIBED AND SWORN to before me this 1st day of August, 1984.


Notary Public in and for
Tulsa County, Oklahoma

My Commission Expires:

August 22, 1985

August 1, 1984

Company Building
630 S. Yale Ave.
Tulsa, Oklahoma 74117

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

Re: Application for classification
as Hardship Gas Well
Pure Gold "A" Federal No. 1
Section 21-23S-31E
Eddy County, New Mexico

Dear Mr. Ramey,

Kaiser-Francis Oil Company respectfully requests administrative approval of the attached application for classification as Hardship Gas Well for the Pure Gold "A" Federal No. 1 well in the Sand Dunes West (Morrow) Gas Field in Eddy County, New Mexico. Kaiser-Francis operates the subject well and owns a 25% working interest in the unit.

The well produces gas from the Morrow Sands from 14,414 ft. to 14,663 ft. In May, 1983, the well began producing substantial quantities of water from an apparent well bore leak which has significantly reduced the ability of the well to flow. If the well is shut-in for more than a day, two to four days of swabbing are required to restore production. Current reservoir pressure is estimated to be about one-third of original pressure and the well has produced about two-thirds of the estimated ultimate recovery. As reservoir energy is reduced further, more extensive swabbing will be required to restore production. Also as reservoir pressure declines, the risk of damage due to water invasion is increased. This is compounded by the fact that the water appears to be foreign to the Morrow and could cause damage from scaling or clay swelling. The well is too deep to run small diameter tubing or unload with artificial lift devices. If the well dies due to high line pressure, production can be restored by blowing the water to the pit if the shut-in period is less than a day. This seems to be the most sensible and economic means of restoring and maintaining production. A workover to repair the well would be expensive and risk damaging or squeezing off the gas production altogether. Current swabbing costs are \$2,000 to \$3,000 per incident. With the increased operating costs for swabbing, it is estimated that 90 MMCF of gas reserves will be lost because the economic limit will be reached earlier if the well is not granted hardship classification. If the well is lost entirely as a result of water loading and damage due to extended shut-in, 450 MMCF of remaining reserves will be lost. Present performance indicates a

Mr. Joe D. Ramey
August 1, 1984
Page #2

a minimum sustainable flow rate of 300 to 350 MCFD, allowing for fluctuations in line pressure. The following discussion and attachments are offered as justification for the hardship classification.

The Pure Gold "A" Federal No. 1 is located in the Sand Dunes West (Morrow) field as shown on Exhibit No. 1, a plat of the area showing offset wells. It was completed from the Morrow Sands in January, 1981 from 14,414 feet to 14,633 feet in depth. The original reservoir pressure was 6750 psi and the CAOF was 2397 MCFD. The well is completed through perforations and 2 7/8 inch tubing. A well bore diagram is included as Exhibit No. 2. Exhibit No. 3 is a plot of monthly gas production and Exhibit No. 4 is a monthly tabulation of production data. Production began in February, 1981 and the well was capable of producing about 750 MCFD with a 1000 psi flowing tubing pressure. When it began to produce substantial quantities of water in May, 1983, production capacity dropped to 600 MCFD while water production was 30 bwpd. At the request of El Paso Natural Gas Company, the gas purchaser, the well was shut-in in early June, 1983. EPNG asked that the well be returned to production on June 9, 1983 but it had loaded up with water and would not flow. After extensive swabbing efforts, production was resumed on June 12, 1983. Swabbing costs for that effort totaled \$3,651. The well was shut-in again in January and February, 1984 for a total of 13 days. During this period, two days of swabbing was required to resume production at a cost of \$1,528. The well was down for seven days in May and 18 days in June, 1984. A total of six days of swabbing in two incidents was required at a total cost of \$4,979. Total swabbing costs to date due to shut-in is \$10,158.

Since May, 1983, water production has averaged between 6 and 10 bwpd. When allowed to produce, deliverability is close to the decline trend established in the early life of the well. Flowing tubing pressure has dropped to 700-750 psi, however, reflecting the additional 250 to 300 psi draw down required to unload the water production. Exhibit No. 5 is a graphical material balance for the well. The first two pressures were taken in 1981 and indicate an ultimate recovery of about 1.4 BCF. The last two points are bottom hole pressures calculated from surface readings and show the effect of the water loading up the tubing. Cumulative production is 930 MMCF and the estimated current reservoir pressure is 2230 psi, about one-third of the original pressure. As pressure declines further, the risk of permanently "drowning" the reservoir from long term shut-in periods is increased. At least, more extensive swabbing will be required in the future to restore production. A water analysis taken in May, 1983 showed 105,000 ppm chlorides. This is about twice the value expected from Morrow zone water and may indicate a leak from another zone. The Morrow is sensitive to foreign waters and there is risk of damage due to clay swelling or scale.

Exhibit No. 6 is a table showing daily performance for the month of May, 1984. The well was down twice for less than a day. Production was restored by blowing the water to a pit on both occasions. When shut-in for three days in early May, three days of swabbing were required to return the well to production. The rate and pressure data from this table suggest that minimum flow rate to maintain production would be 300 to 350 MCFD.

Mr. Joe D. Ramey
August 1, 1984
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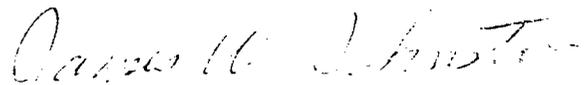
Since the well is 14,000 feet deep, small diameter tubing or artificial lift would not be mechanically feasible. We have considered working the well over to reduce the water production. However, the well would have to be pulled and the leak isolated and squeeze cemented. Based on our experience this type of workover is expensive and has high risk of failure. There is also the added risk of damaging the Morrow producing zones with cement from the squeeze job.

Since production can be restored by unloading to a pit if the shut-in period is limited, this seems to be the most sensible and economic method at this time to maintain deliverability. If the well is allowed to produce and unload the water, the risk of permanent water blockage is low and the opportunity to maximize gas recovery is greatly improved. If an extended shut-in period permanently damages the well, approximately 450 MMCF of remaining reserves will be lost. If the well is not permanently damaged but must be swabbed monthly due to shut-in, the increased operating costs raise the economic limit to the extent that 90 MMCF of reserves will not be recovered.

In view of the above, it is our opinion that underground waste will occur if the subject well is shut-in for extended periods of time or curtailed below its ability to produce.

Yours very truly,

KAISER-FRANCIS OIL COMPANY



James W. Johnston
PE 39962 Texas

JWJ:ljb

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator Kaiser-Francis Oil Company Contact Party M. W. Moore
Address P. O. Box 21468, Tulsa, Ok. 74121-1468 Phone No. 918/494-0000
Lease Pure Gold Well No. 1 UT "A" Sec. 21 TWP 23S RGE 31E
Pool Name Sand Dunes West (Morrow) Minimum Rate Requested 350 MCFD
Transporter Name El Paso Ng. Company Purchaser (if different) (Same)

Are you seeking emergency "hardship" classification for this well? X yes no

Applicant must provide the following information to support his contention that the subject well qualifies as a hardship gas well.

- 1) Provide a statement of the problem that leads the applicant to believe that "underground waste" will occur if the subject well is shut-in or is curtailed below its ability to produce. (The definition of underground waste is shown on the reverse side of this form)
- 2) Document that you as applicant have done all you reasonably and economically can do to eliminate or prevent the problem(s) leading to this application.
 - a) Well history. Explain fully all attempts made to rectify the problem. If no attempts have been made, explain reasons for failure to do so.
 - b) Mechanical condition of the well (provide wellbore sketch). Explain fully mechanical attempts to rectify the problem, including but not limited to:
 - i) the use of "smallbore" tubing; ii) other de-watering devices, such as plunger lift, rod pumping units, etc.
- 3) Present historical data which demonstrates conditions that can lead to waste. Such data should include:
 - a) Permanent loss of productivity after shut-in periods (i.e., formation damage).
 - b) Frequency of swabbing required after the well is shut-in or curtailed.
 - c) Length of time swabbing is required to return well to production after being shut-in.
 - d) Actual cost figures showing inability to continue operations without special relief
- 4) If failure to obtain a hardship gas well classification would result in premature abandonment, calculate the quantity of gas reserves which would be lost
- 5) Show the minimum sustainable producing rate of the subject well. This rate can be determined by:
 - a) Minimum flow or "log off" test; and/or
 - b) Documentation of well production history (producing rates and pressures, as well as gas/water ratio, both before and after shut-in periods due to the well dying, and other appropriate production data).
- 6) Attach a plat and/or map showing the proration unit dedicated to the well and the ownership of all offsetting acreage.
- 7) Submit any other appropriate data which will support the need for a hardship classification.
- 8) If the well is in a prorated pool, please show its current under- or over-produced status.
- 9) Attach a signed statement certifying that all information submitted with this application is true and correct to the best of your knowledge; that one copy of the application has been submitted to the appropriate Division district office (give the name) and that notice of the application has been given to the transporter/purchaser and all offset operators.

GENERAL INFORMATION APPLICABLE TO HARDSHIP GAS WELL CLASSIFICATION

1) Definition of Underground Waste.

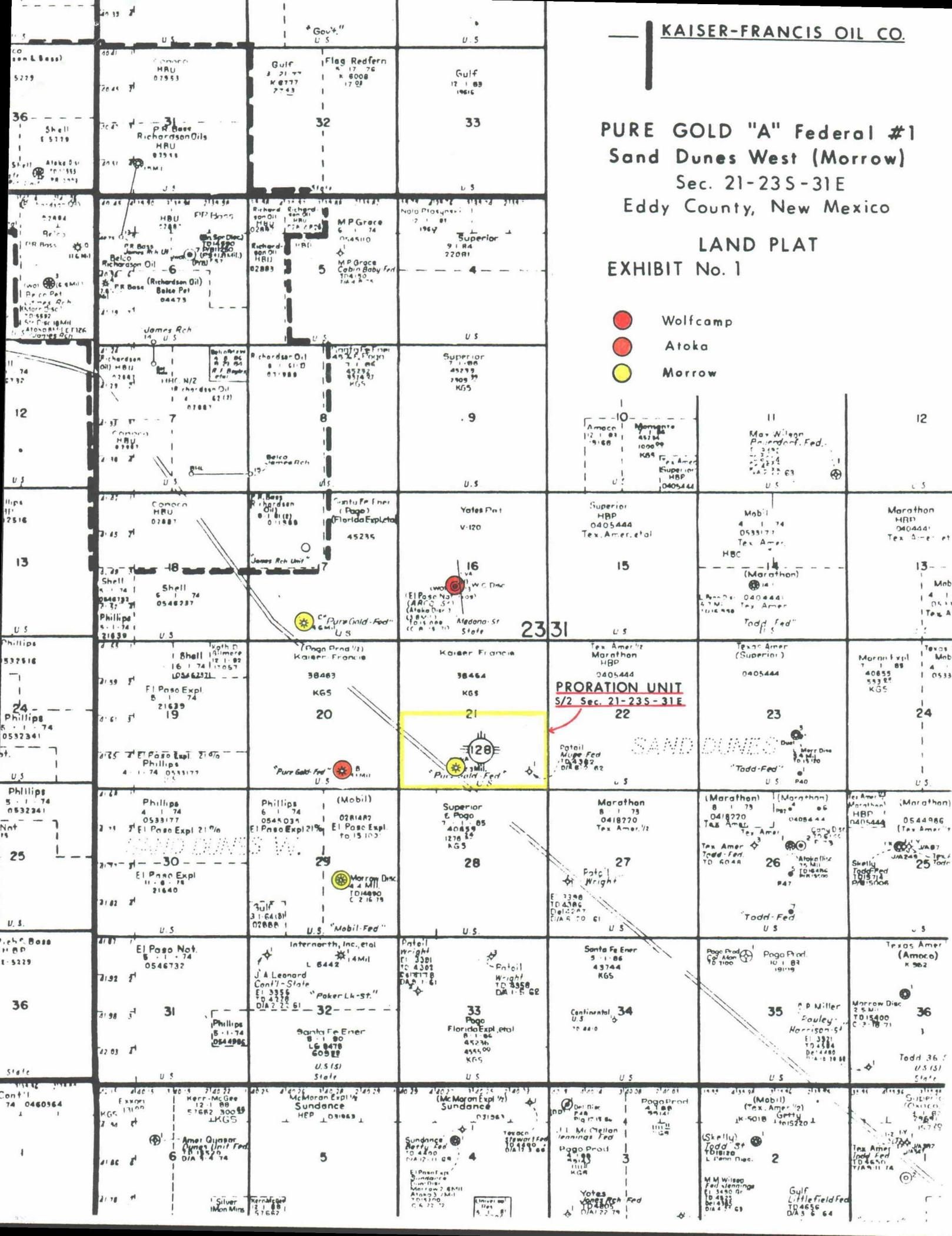
"Underground Waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating, or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas."

- 2) The only acceptable basis for obtaining a "hardship" classification is prevention of waste with the burden of proof solely on the applicant. The applicant must not only prove waste will occur without the "hardship" classification, but also that he has acted in a responsible and prudent manner to minimize or eliminate the problem prior to requesting this special consideration. If the subject well is classified as a "hardship" well, it will be permitted to produce at a specified minimum sustainable rate without being subject to shut-in by the purchaser due to low demand. The Division can rescind approval at any time without notice and require the operator to show cause why the classification should not be permanently rescinded if abuse of this special classification becomes apparent.
- 3) The minimum rate will be the minimum sustainable rate at which the well will flow. If data from historical production is insufficient to support this rate (in the opinion of the Director), or if an offset operator or purchaser objects to the requested rate, a minimum flow ("log off") test may be required. The operator may, if he desires, conduct the minimum flow test, and submit this information with his application.
- 4) If a minimum flow test is to be run, either at the operator's option or at the request of the Division, the offset operators, any protesting party, the purchaser and OCD will be notified of the date of the test and given the opportunity to witness, if they so desire.
- 5) Any interested party may review the data submitted at either the Santa Fe office or the appropriate OCD District Office.
- 6) The Director can approve uncontested applications administratively if, in his opinion, sufficient justification is furnished. Notice shall be given of intent to approve by attaching such notice to the regular examiner's hearing docket. Within 20 days following the date of such hearing, the affected parties will be permitted to file an objection. If no objection has been filed, the application may be approved.
- 7) Should a protest be filed in writing, the applicant will be permitted to either withdraw the application, or request it to be set for hearing.
- 8) An emergency approval, on a temporary basis for a period not to exceed 90 days, may be granted by the District Supervisor, pending filing of formal application and final action of the OCD Director. This temporary approval may be granted only if the District Supervisor is convinced waste will occur without immediate relief. If granted, the District Supervisor will notify the purchaser.
- 9) After a well receives a "hardship" classification, it will be retained for a period of one year unless rescinded sooner by the Division. The applicant will be required to certify annually that conditions have not changed substantially in order to continue to retain this classification.
- 10) Nothing here withstanding, the Division may, on its own motion, require any and all operators to show cause why approval(s) should not be rescinded if abuse is suspected or market conditions substantially change in the State of New Mexico.
- 11) A well classified as a "hardship well" will continue to accumulate over and under production (prorated pools). Should allowables exceed the hardship allowable assigned, the well will be permitted to produce at the higher rate, if capable of doing so, and would be treated as any other non-hardship well. Any cumulative overproduction accrued either before or after being classified "hardship" must, however, be balanced before the well can be allowed to produce at the higher rate.

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-23S-31E
Eddy County, New Mexico

LAND PLAT
EXHIBIT No. 1

- Wolfcamp
- Atoka
- Morrow



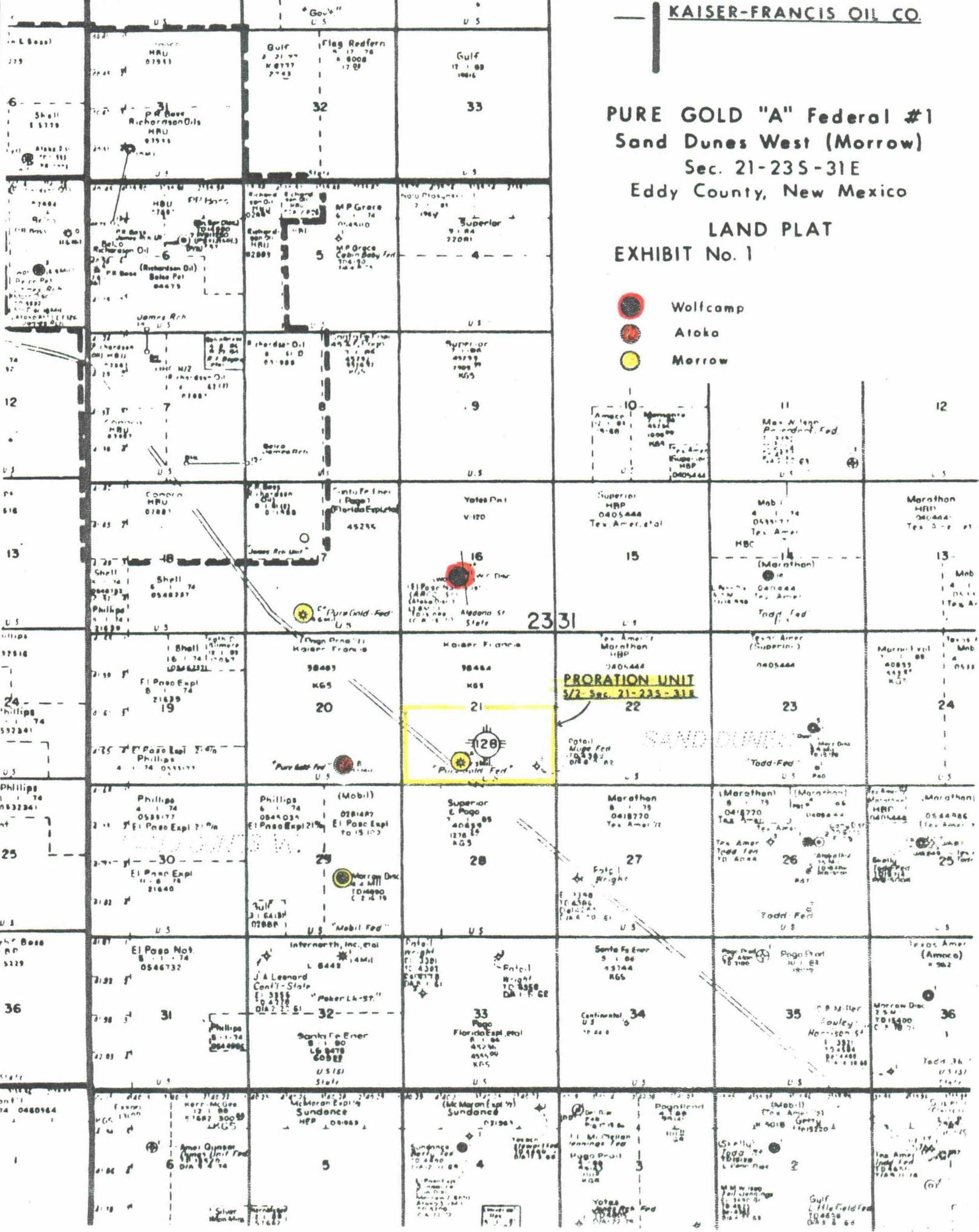
PRORATION UNIT
S/2 Sec. 21-23S-31E

SAND DUNES

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-23S-31E
Eddy County, New Mexico

LAND PLAT
EXHIBIT No. 1

-  Wolfcamp
-  Atoka
-  Morrow



PRORATION UNIT
1/2 Sec. 21-23S-31E

SAND DUNES

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KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" NO. 1
SEC 21-23S-31E
EDDY COUNTY, NEW MEXICO

PRODUCTION DATA

YEAR	MONTH	MCF	FTP (PSI)	SHUT-IN DAYS	SWABBING COSTS \$	WATER PRODUCED
1981		369,584				
1982	January	33,421	975	-	\$ -	-
	February	29,372	925	-	-	-
	March	31,765	875	-	-	-
	April	29,596	860	-	-	-
	May	28,680	860	2	-	-
	June	16,959	1,000	10	-	-
	July	20,607	1,000	8	-	-
	August	22,862	875	3	-	-
	September	23,811	925	-	-	-
	October	23,217	850	-	-	-
	November	20,189	850	-	-	-
	December	14,489	950	12	-	-
	Total	294,968				
1983	January	8,990	950	23	-	-
	February	14,438	950	1	-	150
	March	19,281	950	-	-	-
	April	19,532	1,000	-	-	150
	May	20,374	800	-	-	900
	June	10,444	700	15	-	150
	July	10,260	700	14	3,651	130
	August	20,002	700	-	-	150
	September	19,388	800	-	-	150
	October	18,738	750	-	-	150
	November	15,275	750	-	-	300
	December	17,731	750	-	-	140
	Total	194,453			\$ 3,651	

YEAR	MONTH	MCF	FTP (PSI)	SHUT-IN DAYS	SWABBING COSTS \$	WATER PRODUCED
1984	January	8,872	800	9	-	100
	February	11,084	750	4	1,528	287
	March	16,573	750	-	-	420
	April	14,962	710	-	-	150
	May	10,722	750	7	2,150	100
	June	4,730	750	18	2,829	-
	July	70	725	30	1,320	100
	August	3,365 (E)	725	21	3,000 (E)	NA
	September	1,542 (E)	700	11	5,200 (E)	
		TOTAL	71,920			\$16,027
GRAND TOTAL						<u>19,678</u>

NOTE:

- (1) (E) estimated from guage reports
- (2) September data through 9-16-84

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 SEC. 21-23S-31E
 EDDY COUNTY, NEW MEXICO

MONTHLY AVERAGE DELIVERABILITY

<u>YEAR</u>	<u>MONTH</u>	<u>DAYS PRODUCED</u>	<u>AVERAGE DELIVERABILITY (MCFD)</u>	<u>FTP (PSI)</u>
1983	August - December	153	596	750
1984	January	22	403	800
	February	25	443	750
	March	31	535	750
	April	30	498	710
	May	24	446	750
	June	12	394	750
	July	1	70	725
	August	10	337	725
	September	5	308	700

KAISER-FRANCIS OIL COMPANY
 PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 SEC 21-23S-31E
 EDDY COUNTY, NEW MEXICO

DAILY WELL HISTORY

MAY, 1984

<u>DAY</u>	<u>MCF</u>	<u>FTP (Psi)</u>	<u>REMARKS</u>
1	442	750	
2	388	750	
3	264	750	
4	258	750	
5	192	750	Well died
6	0		
7	0		
8	0		Swabbing
9	0		Swabbing
10	198	660	Swabbing-well started flowing
11	434	750	
12	462	750	
13	0		Highline pressure surge killed well, blew water to pit
14	527	750	
15	523	750	
16	511	750	
17	426	750	
18	365	750	
19	638	750	
20	465	750	
21	479	750	
22	467	750	
23	379	750	
24	358	750	
25	0		Highline pressure surge killed well, blew water to pit
26	252	750	
27	672	750	
28	554	750	
29	479	750	
30	383	750	
31	362	750	

Note: Gas rates are from uncorrected guage report

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FEDERAL NO. 1

SAND DUNES WEST (MORROW)

Sec. 21-23S-31E

EDDY COUNTY, NEW MEXICO

DAILY WELL HISTORY

JUNE, 1984

<u>DAY</u>	<u>MCF</u>	<u>FTP (Psi)</u>	<u>REMARKS</u>
1	306	750	
2	252	750	
3	132	750	
4	132	750	High line pressure killed well
5	0		Well SI at pipeline request
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		Swabbing
13	0		Swabbing
14	0		Unloading water to pit
15	0		Unloading water to pit
16	0		Unloading water to pit
17	362	750	
18	340	750	
19	308	750	
20	308	750	
21	304	750	
22	243	750	
23	224	750	
24	0		Well loading up - blew water to pit
25	461	750	
26	421	750	
27	0		Well SI at pipeline request
28	0		
29	0		
30	0		

Note: Gas rates are from uncorrected gauge report

26" HOLE

20" 94# K-55 STC set @ 583' w/625 sx circ.

KAISER-FRANCIS OIL CO.

PURE GOLD "A" Federal #1
 Sand Dunes West (Morrow)
 Sec. 21-23S-31E
 Eddy County, New Mexico

WELLBORE DIAGRAM
 EXHIBIT No. 2

17 1/2" HOLE

13 3/8" 54.5#, 61.5#, 68#, & 72# STC K-55 set @ 4206' w/2850 sx circ.

TOC (9 5/8") 7850'

Top of 7 5/8" liner set @ 11868' sqzd w/400 sx

12 1/4" HOLE

9 5/8" 43.5 , 47# S-95 + N-80 LTC set @ 12399' w/1450 sx

Top of 5" liner set @ 13702'
TOC-TOL

7 5/8" 39# P-110 HSFJ & TS set @ 14161' w/215 sx

Water at 14,228

Packer set @ 14,228³³⁸ w/2 7/8" 65# N-80 AB/mod Tubing to surface

Perforations 14,414 to 14,633

PBTD 14,924'
TD 14,967'

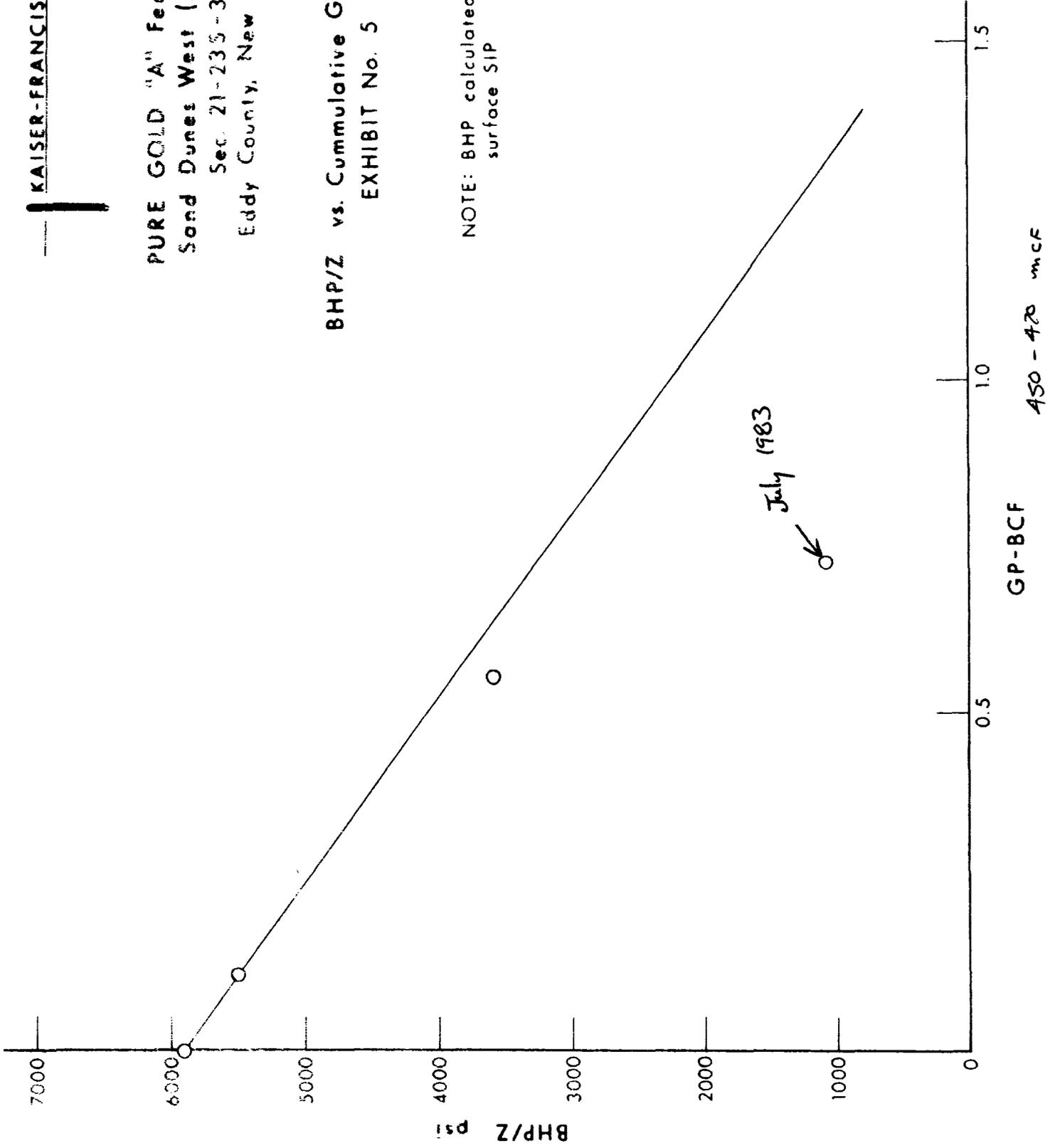
5" 18# N-80 HSFJ set @ 14967' w/200 sx

KAISER-FRANCIS OIL CO.

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-23S-31E
Eddy County, New Mexico

BHP/Z vs. Cumulative Gas Production
EXHIBIT No. 5

NOTE: BHP calculated from
surface SIP



KAISER-FRANCIS OIL COMPANY

PURF. COLD "A" NO. 1

SEC 21-23S-31E

EDDY COUNTY, NEW MEXICO

PRODUCTION DATA

<u>YEAR</u>	<u>MONTH</u>	<u>MCF</u>	<u>FTP (PSI)</u>	<u>SHUT-IN DAYS</u>	<u>SWABBING COSTS \$</u>	<u>WATER PRODUCED</u>
1981		369,584				
1982	January	33,421	975	-	\$ -	-
	February	29,372	925	-	-	-
	March	31,765	875	-	-	-
	April	29,596	860	-	-	-
	May	28,680	860	2	-	-
	June	16,959	1,000	10	-	-
	July	20,607	1,000	8	-	-
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	November	20,189	850	-	-	-
	December	14,489	950	12	-	-
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	November	15,275	750	-	-	300
	December	17,731	750	-	-	140
	Total	194,453			\$ 3,651	

<u>YEAR</u>	<u>MONTH</u>	<u>MCF</u>	<u>FTP (PSI)</u>	<u>SHUT-IN DAYS</u>	<u>SWABBING COSTS \$</u>	<u>WATER PRODUCED</u>
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	February	11,084	750	4	1,528	100
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	July	70	725	30	1,320	-
	August	3,365 (E)	725	21	3,000 (E)	100
	September	1,542 (E)	700	11	5,200 (E)	NA
	TOTAL	71,920			\$16,027	
GRAND TOTAL		<u>930,925</u>			<u>19,678</u>	

NOTE:

- (1) (E) estimated from guage reports
- (2) September data through 9-16-84

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 SEC. 21-23S-31E
 EDDY COUNTY, NEW MEXICO

MONTHLY AVERAGE DELIVERABILITY

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	April	30	498	710
	May	24	446	750
	June	12	394	750
	July	1	70	725
	August	10	337	725
	September	5	308	700

*Shut in
most of
the month*

KAISER-FRANCIS OIL COMPANY
 PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 SEC 21-23S-31E
 EDDY COUNTY, NEW MEXICO

DAILY WELL HISTORY

MAY, 1984

<u>DAY</u>	<u>MCF</u>	<u>FTP (Psi)</u>	<u>REMARKS</u>
1	442	750	
2	388	750	
3	264	750	
4	258	750	
5	192	750	Well died
6	0		
7	0		
8	0		Swabbing
9	0		Swabbing
10	198	660	Swabbing-well started flowing
11	434	750	
12	462	750	
13	0		Highline pressure surge killed well, blew water to pit
14	527	750	
15	523	750	
16	511	750	
17	426	750	
18	365	750	
19	638	750	
20	465	750	
21	479	750	
22	467	750	
23	379	750	
24	358	750	
25	0		Highline pressure surge killed well, blew water to pit
26	252	750	
27	672	750	
28	554	750	
29	479	750	
30	383	750	
31	362	750	

Note: Gas rates are from uncorrected guage report

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 Sec. 21-23S-31E
 EDDY COUNTY, NEW MEXICO

DAILY WELL HISTORY

JUNE, 1984

<u>DAY</u>	<u>MCF</u>	<u>FTP (Psi)</u>	<u>REMARKS</u>
1	306	750	
2	252	750	
3	132	750	
4	132	750	High line pressure killed well
5	0		Well SI at pipeline request
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		Swabbing
13	0		Swabbing
14	0		Unloading water to pit
15	0		Unloading water to pit
16	0		Unloading water to pit
17	362	750	
18	340	750	
19	308	750	
20	308	750	
21	304	750	
22	243	750	
23	224	750	
24	0		Well loading up - blew water to pit
25	461	750	
26	421	750	
27	0		Well SI at pipeline request
28	0		
29	0		
30	0		

Note: Gas rates are from uncorrected guage report

26" HOLE

20" 94# K-55 STC set @ 583' w/625 sx circ.

KAISER-FRANCIS OIL CO.

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-23S-31E
Eddy County, New Mexico

WELLBORE DIAGRAM
EXHIBIT No. 2

17 1/2" HOLE

13 3/8" 54.5#, 61.5#, 68#, & 72# STC K-55 set @ 4206' w/2850 sx circ.

TOC (9 5/8") 7850'

Top of 7 5/8" liner set @ 11868' sqzd w/400 sx

12 1/4" HOLE

9 5/8" 43.5 , 47# S-95 + N-80 LTC set @ 12399' w/1450 sx

Top of 5" liner set @ 13702'
TOC-TOL

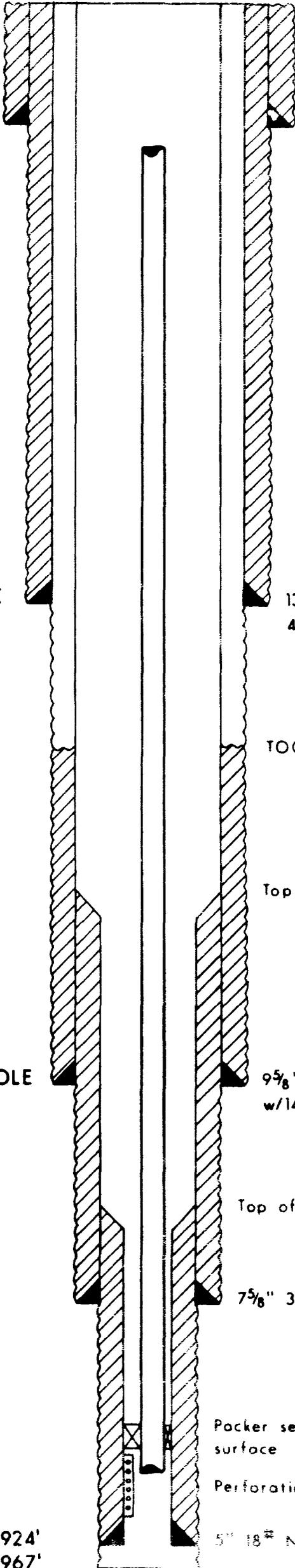
7 5/8" 39# P-110 HSFJ & TS set @ 14161' w/215 sx

Packer set @ 14~~428~~³³⁸ w/27 1/8" 6.5# N-80 AB/mod Tubing to surface

Perforations 14,414 to 14,633

PBTD 14,924'
TD 14,967'

5" 18# N-80 HSFJ set @ 14967' w/200 sx



Dockets Nos. 40-84 and 41-84 are tentatively set for October 17 and October 31, 1984. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 3, 1984

8 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Michael E. Stogner or Gilbert P. Quintana, Alternate Examiners:

CASE 8353: Application of Pogo Producing Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location 660 feet from the South and East lines of Section 14, Township 24 South, Range 28 East, Malaga Atoka and Malaga Morrow Fields, the S/2 of said Section 14 to be dedicated to the well.

CASE 8336: (Continued from September 5, 1984, Examiner Hearing)

Application of Kaiser-Francis Oil Company for HARDSHIP GAS WELL CLASSIFICATION, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its Pure Gold "A" Federal Well No. 1 located in Unit A of Section 21, Township 23 South, Range 31 East, West Sand Dunes-Morrow Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.

CASE 8348: (Continued and Readvertised)

Application of Yates Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location 660 feet from the North line and 1100 feet from the West line of Section 27, Township 16 South, Range 37 East, Casey-Strawn Pool, the N/2 NW/4 of said Section 27 to be dedicated to the well.

CASE 8354: Application of Yates Petroleum Corporation for a unit agreement, Santa Fe County, New Mexico. Applicant, in the above-styled cause, seeks approval for the La Mesa Unit comprising 80,000 acres, more or less, of State, Federal and Fee lands in Townships 15, 16, 17 and 18 North, Ranges 8 and 9 East.

CASE 8355: Application of Yates Petroleum Corporation for a unit agreement, Chaves and Otero Counties, New Mexico. Applicant, in the above-styled cause, seeks approval of the One Three Unit comprising 176,800 acres, more or less, of State, Federal and Fee lands in Townships 16, 17, 18 and 19 South, Ranges 13, 14, 15, 16, and 17 East.

CASE 8356: Application of Yates Petroleum Corporation for a unit agreement, Santa Fe and Sandoval Counties, New Mexico. Applicant, in the above-styled cause, seeks approval of the Caja Del Rio Grande Unit comprising 122,600 acres, more or less, of State, Federal and Fee lands in Townships 15, 16, 17, 18 and 19 North, Ranges 6, 7, and 8 East.

CASE 8357: Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the top of the Wolfcamp through the base of the Morrow formation underlying the S/2 of Section 2, Township 20 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8303: (Continued from September 19, 1984, Examiner Hearing)

Application of Yates Petroleum Corporation for an exception to Rules 2(B) and 5(A) of Division Order R-1670-I, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 2(B) of Division Order R-1670-I to permit applicant to complete its well at an unorthodox oil well location 1650 feet from the North line and 2310 feet from the East line of Section 20, Township 8 South, Range 38 East, Bluit-San Andres Associated Pool. Applicant also seeks an exception to Rule 5(A) of Division Order R-1670-I for approval of a non-standard 80-acre oil proration unit comprising the SW/4 NE/4 and NW/4 SE/4 of said Section 20 to be dedicated to the well.

CASE 8348: (Continued from September 19, 1984, Examiner Hearing)

Application of Yates Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location 950 feet from the North line and 1500 feet from the West line of Section 27, Township 16 South, Range 37 East, Casey-Strawn Pool, the N/2 NW/4 of said Section 27 to be dedicated to the well.

CASE 8358: (This Case will be dismissed)

Application of Harvey E. Yates Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Morrow formation underlying the S/2 of Section 24, Township 16 South, Range 27 East, to be dedicated to a gas well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8226: (Continued from September 19, 1984, Examiner Hearing)

Application of Doyle Hartman for HARDSHIP GAS WELL CLASSIFICATION, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its South Empire State Com Well No. 1 located in Unit M of Section 24, Township 17 South, Range 28 East, South Empire-Morrow Gas Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.

CASE 8359: Application of Doyle Hartman for the reinstatement of cancelled underproduction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order to reinstate the cancelled underproduction assigned to the existing 320-acre non-standard gas proration unit comprised of the S/2 of Section 17, Township 24 South, Range 37 East, Jalmat Gas Pool, and dedicated to its Late Thomas Wells Nos. 1, 2, and 3 located in Units M, L, and J, respectively, of said Section 17.

CASE 8360: Application of Doyle Hartman for the reinstatement of cancelled underproduction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order to reinstate the cancelled underproduction assigned to the existing 80-acre non-standard gas proration unit comprised of the E/2 SW/4 of Section 36, Township 23 South, Range 36 East, Jalmat Gas Pool, and dedicated to its Maralo State Well No. 1 located in the SE/4 SW/4 of said Section 36.

CASE 8361: Application of Doyle Hartman for the reinstatement of cancelled underproduction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order to reinstate the cancelled underproduction assigned to the existing 80-acre non-standard gas proration unit comprised of the SE/4 NW/4 and SW/4 NE/4 of Section 36, Township 24 South, Range 36 East, Jalmat Gas Pool, and dedicated to its Custer State Well No. 1 located in the SW/4 NE/4 of Section 36.

CASE 8362: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 16, Township 18 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8363: Application of Southland Royalty Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 24, Township 24 South, Range 33 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8345: (Continued from September 19, 1984, Examiner Hearing)

Application of Texaco, Inc. for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard proration unit comprising the S/2 S/2 of Section 12, Township 20 South, Range 37 East, Skaggs Abo Gas Pool.

CASE 8364: Application of Santa Fe Energy Co. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location 660 feet from the North line and 990 feet from the West line of Section 26, Township 22 South, Range 27 East, the N/2 of said Section 26 to be dedicated to the well.CASE 8365: Application of Sohio Petroleum Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the N.E. Salado Draw (Deep) Unit comprising 2,560.36 acres, more or less, of State, Federal and Fee lands in Townships 25 and 26 South, Ranges 33 and 34 East.CASE 8366: Application of Phillips Petroleum Company for compulsory pooling and an unorthodox well location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Pennsylvanian formation underlying the N/2 of Section 12, Township 6 South, Range 33 East, to be dedicated to a well to be drilled at an unorthodox location 2310 feet from the North line and 1650 feet from the West line of Section 12, Township 6 South, Range 33 East. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.CASE 8367: Application of Hondo Oil & Gas Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 22, Township 18 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.CASE 8368: Application of Hamon Oil Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to 12,000 feet underlying the N/2 of Section 25, Township 23 South, Range 26 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.CASE 8369: Application of Mewbourne Oil Company to vacate and void Division Order No. R-7591, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to vacate and void Division Order No. R-7591, dated July 20, 1984, pooling all mineral interests in the Upper Pennsylvanian formation underlying the SW/4 NE/4 of Section 5, Township 20 South, Range 25 East.CASE 8370: Application of Southern Union Exploration Company for temporary special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of temporary special pool rules for the Northeast Vacuum-Wolfcamp Pool located in the NE/4 of Section 32, Township 16 South, Range 35 East, including a provision for 80-acre oil well spacing.CASE 8217: (Continued from September 5, 1984, Examiner Hearing)

Application of Curtis J. Little for HARDSHIP GAS WELL CLASSIFICATION, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its Federal Com Well No. 2E located in Unit N of Section 11, Township 28 North, Range 13 West, Basin-Dakota Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.

CASE 8337: (Continued from September 19, 1984, Examiner Hearing)

Application of Schalk Development Co. for HARDSHIP GAS WELL CLASSIFICATION, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its Schalk 62 Well No. 1 located in Unit P of Section 33, Township 32 North, Range 5 West, Basin-Dakota Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.

Docket Nos. 36-84 and 37-84 are tentatively set for September 19 and October 3, 1984. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 5, 1984

8 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Gilbert P. Quintana, Examiner, or Richard L. Stamets or Michael E. Stogner, Alternate Examiners:

CASE 8290: (Continued from August 15, 1984, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Jack L. Cayias, J. R. Abraham and all other interested parties to appear and show cause why the Charles M. Well No. 1 located 1850 feet from the South line and 790 feet from the West line of Section 1, Township 25 North, Range 3 West, Rio Arriba County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 8319: Application of Amerind Oil Co. for compulsory pooling, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 NW/4 of Section 28, Township 16 South, Range 37 East, Northeast Lovington-Pennsylvanian Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8320: Application of Amerind Oil Co. for compulsory pooling, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the S/2 NW/4 of Section 28, Township 16 South, Range 37 East, Northeast Lovington-Pennsylvanian Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8321: Application of Exxon Corporation for an unorthodox oil well location, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location 2500 feet from the North line and 1350 feet from the East line of Section 18, Township 23 South, Range 33 East, Cruz-Delaware Field, the SW/4 NE/4 of said Section 18 to be dedicated to the well.

CASE 8322: Application of Exxon Corporation for an unorthodox oil well location, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location 1350 feet from the South line and 2500 feet from the West line of Section 18, Township 23 South, Range 33 East, Cruz-Delaware Field, the NE/4 SW/4 of said Section 18 to be dedicated to the well.

CASE 8217: (Continued from August 15, 1984, Examiner Hearing)

Application of Curtis J. Little for HARDSHIP GAS WELL CLASSIFICATION, San Juan County, New Mexico.

Applicant, in the above-styled cause, seeks a determination that its Federal Com Well No. 2E located in Unit N of Section 11, Township 28 North, Range 13 West, Basin-Dakota Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.

CASE 8249: (Continued and Readvertised)

Application of Yates Petroleum Corporation for salt water disposal, Eddy County, New Mexico.

Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Morrow formation through the perforated interval from 8,901 feet to 9,062 feet in its Dayton Townsite Well No. 1 located in Section 21, Township 18 South, Range 26 East. In the absence of objection, this application will be approved based upon the prior record.

CASE 8304: (Continued and Readvertised)

Application of Yates Petroleum Corporation for a non-standard proration unit or in the alternative, compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard 120-acre proration unit comprising the NE/4 NE/4 and S/2 NE/4 of Section 36, Township 20 South, Range 27 East, Bone Spring formation, or in the alternative, applicant seeks an order pooling all mineral interests from the surface through the Bone Spring formation underlying the NE/4 of said Section 36. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 8323:

Application of Blanco Engineering, Inc. for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Atoka Penn formation in the perforated interval from 9,094 feet to 9,116 feet in its Pan American Flint Gas Com Well No. 1 located in Section 22, Township 18 South, Range 26 East.

CASE 8324:

Application of Yates Petroleum Corporation for a Carbon Dioxide Injection Pilot Project and unorthodox locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a carbon dioxide injection pilot project by the injection of carbon dioxide and water into the Grayburg formation in two wells proposed to be drilled in the West Loco Hills Unit at unorthodox locations as follows:

- (a) West Loco Hills Unit G4S Tract 13-12, located 1980 feet from the North line and 10 feet from the East line; and
- (b) West Loco Hills Unit G4S Tract 6-5, located 1475 feet from the South line and 10 feet from the East line

both in Section 12, Township 18 South, Range 29 East.

CASE 8308: (Continued from August 22, 1984, Examiner Hearing)

Application of Dugan Production Corp. for amendment of Division Order R-7258, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order R-7258 to revise only the oil allocation factor to reflect 90% of the commingled oil stream being allocated to the Mancos zone and 10% of the commingled oil stream allocated to the Dakota zone.

CASE 8309: (Continued from August 22, 1984, Examiner Hearing)

Application of Dugan Production Corp. for amendment of Division Order R-7367, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order R-7367 to revise only the oil allocation factor to reflect 92% of the commingled oil stream being allocated to the Mancos zone and 8% of the commingled oil stream allocated to the Dakota zone.

CASE 8310: (Continued from August 22, 1984, Examiner Hearing)

Application of Dugan Production Corp. for amendment of Division Order R-7365, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order R-7365 to revise only the oil allocation factor to reflect 97% of the commingled oil stream being allocated to the Mancos zone and 3% of the commingled oil stream allocated to the Dakota zone.

CASE 8325: Application of Marbob Energy Corporation for two unorthodox locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of two unorthodox locations one well which is to be located 1350 feet from the North line and 330 feet from the East line and another to be located 100 feet from the North line and 330 feet from the East line of Section 22, Township 17 South, Range 29 East, Grayburg Jackson Seven Rivers-Queen-Grayburg-San Andres Pool, the SE/4 NE/4 and the NE/4 NE/4, respectively, or said Section 22 are to be dedicated to the wells.

CASE 8326: Application of Marbob Energy Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox well location 1170 feet from the South line and 2310 feet from the East line of Section 22, Township 17 South, Range 28 East, Red Lake Queen-Grayburg-San Andres Pool.

- CASE 8327: Application of Marbob Energy Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox well location 1295 feet from the South line and 1650 feet from the East line of Section 22, Township 17 South, Range 28 East, Rec Lake Queen-Grayburg-San Andres Pool.
- CASE 8328: Application of Dinero Operating Company for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox well location 660 feet from the South and East lines of Section 16, Township 22 South, Range 28 East, the S/2 of said Section 16 to be dedicated to the well.
- CASE 8329: Application of Kimbark Oil & Gas Company for an unorthodox location and a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard proration spacing and proration unit comprising the SE/4 of Section 27, Township 12 South, Range 37 East, South Gladiola Mississippian Pool, for a well to be drilled at an unorthodox location 2000 feet from the South line and 1980 feet from the East line of said Section 27.
- CASE 8330: Application of Chama Petroleum Company for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox well location 1980 feet from the North line and 660 feet from the East line of Section 5, Township 19 South, Range 26 East, to test the Pennsylvanian and Wolfcamp formations, the N2/ of said Section 5 to be dedicated to the well.
- CASE 8226: (Continued from August 8, 1984, Examiner Hearing)
- Application of Doyle Hartman for HARDSHIP GAS WELL CLASSIFICATION, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its South Empire State Com Well No. 1 located in Unit M of Section 24, Township 17 South, Range 28 East, South Empire-Morrow Gas Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.
- CASE 8331: Application of Amoco Production Company for an extension of the Gavilan-Mancos Oil Pool, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the Gavilan-Mancos Oil Pool to include Sections 10, 11, 12, 13, 14, 23 and 24 in Township 24 North, Range 2 West.
- CASE 8332: Application of Tenneco Oil Exploration and Production for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the perforated interval from 4956 feet to 4970 feet in its Jennings Federal Well No. 1 located in Unit C of Section 14, Township 24 South, Range 32 East.
- CASE 8333: Application of Sun Exploration and Production Co. for amendment to Division Order R-7313-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order R-7313-A to include the Seven Rivers formation in its salt water disposal authorization for its Jennings "B" Federal Well No. 2 located in Section 15, Township 19 South, Range 32 East.
- CASE 8334: Application of Sun Exploration and Production Company for an unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox well location 2561 feet from the South line and 1610 feet from the East line of Section 27, Township 9 South, Range 36 East, the SE/4 of said Section 27 to be dedicated to the well.
- CASE 8335: Application of Hilliard Oil Company for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location 1980 feet from the South line and 460 feet from the West line of Section 26, Township 15 South, Range 30 East, Cedar Point-Strawn Gas Pool, the W/2 SW/4 of said Section 26 to be dedicated to the well.
- CASE 8336: Application of Kaiser-Francis Oil Company for HARDSHIP GAS WELL CLASSIFICATION, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its Pure Gold "A" Federal Well No. 1 located in Unit A of Section 21, Township 23 South, Range 31 East, West Sand Dunes-Morrow Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.
- CASE 8337: Application of Schalk Development Co. for HARDSHIP GAS WELL CLASSIFICATION, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a determination that its Schalk 62 Well No. 1 located in Unit P of Section 33, Township 32 North, Range 5 West, Basin-Dakota Pool, is a hardship gas well which should be granted priority access to pipeline takes in order to avoid waste.

CASE 8338: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending certain pools in Lea, Chaves and Roosevelt Counties, New Mexico:

- (a) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Northeast Vacuum-Wolfcamp Pool. The discovery well is the Southern Union Exploration Company Kathy Folk Well No. 1 located in Unit H of Section 32, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 32: NE/4

- (b) EXTEND the Northwest Austin-Mississippian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 35 EAST, NMPM
Section 26: N/2

- (c) EXTEND the Baum-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 33 EAST, NMPM
Section 33: SW/4

- (d) EXTEND the Caprock-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 31 EAST, NMPM
Section 3: N/2

- (e) EXTEND the Casey Strawn Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 27: N/2

- (f) EXTEND the Double X Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 32 EAST, NMPM
Section 27: SW/4

- (g) EXTEND the East Grama Ridge-Strawn Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMPM
Section 1: E/2 and NW/4
Section 2: N/2

- (h) EXTEND the North Lusk-Bone Spring Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 32: SE/4

- (i) EXTEND the Oil Center Glorieta Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
Section 2: SW/4 and Lots 11, 12, 13, and 14

- (j) EXTEND the South Peterson-Pennsylvanian Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 36: SW/4

- (k) EXTEND the Pitchfork Ranch-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM

Section 31: E/2

- (l) EXTEND the South Pitchfork Ranch-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 34 EAST, NMPM

Section 8: S/2

Section 16: NW/4 and E/2

- (m) EXTEND the Quail Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM

Section 29: SW/4

- (n) EXTEND the Scharb-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 35 EAST, NMPM

Section 9: SE/4

- (o) EXTEND the Siete-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM

Section 19: NE/4

Section 20: NW/4

- (p) EXTEND the Tubb Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM

Section 20: SE/4

Section 21: W/2

CASE 8339: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending certain pools in Eddy County, New Mexico:

- (a) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Bone Spring production and designated as the Benson-Bone Spring Pool. The discovery well is Great Western Drilling Company, Mabel Hale Federal No. 2 located in Unit C of Section 11, Township 19 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM

Section 11: NW/4

- (b) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Bone Spring production and designated as the N. E. Fenton-Bone Spring Pool. The discovery well is Ammex Production, Inc., Big Eddy Well No. 103 located in Unit N of Section 10, Township 21 South, Range 28 East, NMPM. Said pool would comprise:
- TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
- Section 10: SW/4
- (c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Four Mile Draw-Atoka Gas Pool. The discovery well is Robert Enfield, Walters Well No. 1 located in Unit B of Section 7, Township 19 South, Range 27 East. Said pool would comprise:
- TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM
- Section 7: N/2
- (d) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the East Indian Draw-Delaware Pool. The discovery well is Perry R. Bass, Bass 10 Federal Well No. 1 located in Unit J of Section 10, Township 22 South, Range 29 East, NMPM. Said pool would comprise:
- TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
- Section 10: SE/4
- (e) EXTEND the Antelope Sink-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 19 SOUTH, RANGE 23 EAST, NMPM
- Section 13: S/2
- (f) EXTEND the West Atoka-Upper Penn Gas Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 18 SOUTH, RANGE 25 EAST, NMPM
- Section 14: W/2
- (g) EXTEND the Northeast Avalon-Atoka Gas Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
- Section 25: E/2
- (h) EXTEND the East Avalon-Bone Spring Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM
Section 28: NE/4
- TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 1: Lots 1, 2, 7-16, and S/2
- (i) EXTEND the Avalon-Delaware Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
- Section 25: SE/4
Section 36: NE/4

- (j) EXTEND The Brushy-Draw Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 29 EAST, NMPM

Section 23: W/2

- (k) EXTEND the Carlsbad-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM

Section 18: A11

Section 19: N/2

- (l) EXTEND the South Carlsbad-Strawn Gas Pool in Eddy county, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM

Section 28: A11

Section 29: S/2

- (m) EXTEND the Cemetery Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM

Section 34: S/2

Section 35: S/2

- (n) EXTEND the Fenton-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM

Section 16: N/2

- (o) EXTEND the Happy Valley-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 26 EAST, NMPM

Section 19: S/2

Section 30: N/2

- (p) EXTEND the Hay Hollow-Bone Spring Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 27 EAST, NMPM

Section 13: SW/4

- (q) EXTEND the High Lonesome-Queen Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 29 EAST, NMPM

Section 10: SE/4

- (r) EXTEND the West Indian-Flats Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM

Section 28: W/2

- (s) EXTEND the Shugart-Yates-Seven Rivers-Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM

Section 35: SE/4 and S/2 NE/4

- (t) EXTEND the Square Lake-Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 31 EAST, NMPM

Section 21: NE/4

- (u) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM

Section 23: N/2

Docket No. 35-84

DOCKET: COMMISSION HEARING - WEDNESDAY - SEPTEMBER 12, 1984

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 8340: Application of Tenneco Oil Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Catclaw Draw Field of Southeast New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe Office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CASE 8104: (Continued from May 15, 1984, Commission Hearing)

Application of Tenneco Oil Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools of Northwest New Mexico and the Catclaw Draw Field of Southeast New Mexico as provided in Section 62-7-5, NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CASE 8103: (Continued from May 15, 1984, Commission Hearing)

Application of DEPCO, Inc. for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco Mesaverde Pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order No. R-5436 will be granted.

CASE 8107: (Continued from May 15, 1984, Commission Hearing)

Application of Energy Reserves Group for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.



CASE 8108: (Continued from May 15, 1984, Commission Hearing)

Application of Southern Union Exploration Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CASE 8110: (Continued from May 15, 1984, Commission Hearing)

Application of Union Texas Petroleum Corporation for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CASE 8132: (Continued from July 17, 1984, Commission Hearing)

Application of Amoco Production Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of the wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted. The Commission will consider applications for exemption for those wells which were not considered at the hearing of this case heard on July 17, 1984.

CASE 8109: (Continued from July 17, 1984, Commission Hearing)

Application of Amoco Production Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CASE 8111: (Continued from July 17, 1984, Commission Hearing)

Application of Southland Royalty Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools of Northwest New Mexico as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted. The Commission will consider applications for exemption for those wells which were not considered at the hearing of this case heard on July 17, 1984.

CASE 8265: (Continued from July 17, 1984, Commission Hearing)

Application of Southland Royalty Company for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota and Blanco-Mesaverde Pools as provided in Section 62-7-5 NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted. The Commission will consider applications for exemption for those wells which were not considered at the hearing of this case heard on July 17, 1984.

CASE 8134: (Continued from July 17, 1984, Commission Hearing)

Application of Ladd Petroleum Corp. for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota Pool of Northwest New Mexico as provided in Section 62-7-5, NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted. The Commission will consider applications for exemption for those wells which were not considered at the hearing of this case heard on July 17, 1984.

CASE 8135: (Continued from July 17, 1984, Commission Hearing)

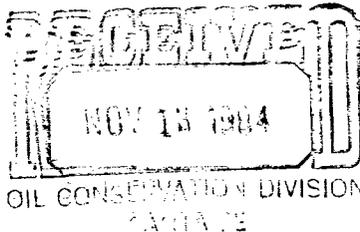
Application of Verly F. Moore for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Pictured Cliffs formation of Northwest New Mexico as provided in Section 62-7-5, NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CASE 8267: (Continued from July 17, 1984 Commission Hearing)

Application of Caulkins Oil Co. for exemption from the New Mexico Natural Gas Pricing Act (NMPA). Applicant, in the above-styled cause, seeks the exemption from the NMPA of certain infill wells in the Basin-Dakota, Blanco-Mesaverde and Pictured Cliffs Pools as provided in Section 62-7-5, NMSA, 1978. To be considered will be the granting of these exemptions from the date of the filing of the application. A list of wells for which exemptions are being sought may be obtained by contacting the Oil Conservation Division's Santa Fe office. In the absence of objection, any such application for exemption which meets the criteria set forth in OCD Order R-5436 will be granted.

CAMPBELL & BLACK, P.A.
LAWYERS

JACK M. CAMPBELL
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
J. SCOTT HALL
PETER N. IVES
RUTH S. MUSGRAVE
LOURDES A. MARTINEZ



JEFFERSON PLACE
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POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87501
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

November 9, 1984

NOTE: An order was written in early
November. But was not
signed and released until Dec. 6, 1984

Case # 8336

Mr. L. A. Clements
Supervisor and Oil & Gas Inspector
Oil Conservation Division
District II
Post Office Drawer DD
Artesia, New Mexico 88210

I don't know the reason for the holdup!
JPP
Z

Re: Pure Gold "A" Federal No. 1 Well - Section 21,
T23S, R31E, N.M.P.M., Eddy County, New Mexico.

Dear Mr. Clements:

As you will recall, I contacted you on October 31, 1984 to advise that following a three-day shut-in of the above-referenced well, Kaiser-Francis Oil Company had been unable to return it to production. Although in the past, swabbing was not usually required after a shut-in of this duration, the well had to be swabbed from October 29 through November 7, when it finally came back on. It has been flowing for the last two days but has not stabilized and we are concerned that any further shut-in will result in the permanent loss of the well. The well is currently producing 10 to 15 barrels of water per day.

Kaiser-Francis sought a temporary hardship classification on August 1, 1984, and the application came on for hearing on October 3, 1984. To date no hardship classification has been granted. I am therefore enclosing an additional copy of the application filed on August 1. This application was revised to include data through September 16 at the time of the hearing before Examiner Quintana. Final data for September shows that the well was down fifteen (15) days and produced 4,452 Mcf or 297 Mcf per day, with an average flowing pressure of 600 pounds. Data from gauge reports for October show that the well was down sixteen (16) days, the well produced 3,831 Mcf or 255 Mcf per day at 600 pounds flowing tubing pressure. These figures are about half what we would expect from the well without reservoir damage. A compressor has been installed on the well.

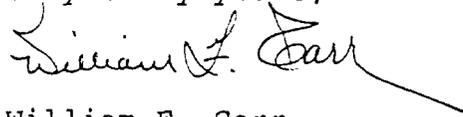
L. A. Clements
November 9, 1984
Page Two

Kaiser-Francis Oil Company therefore requests a temporary hardship classification for the Gold "A" Federal No. 1 well due to the recent sharp decrease in deliverability, the problems returning the well to production after the short shut-in in late October, and the present water production and otherwise unstable condition of the well.

If you have questions concerning this request, do not hesitate to call me or Mr. James W. Johnston at Kaiser-Francis Oil Company in Tulsa (telephone number 918 494-0000).

Your attention to this request is appreciated.

Very truly yours,

A handwritten signature in cursive script that reads "William F. Carr". The signature is written in dark ink and extends to the right with a long, thin tail.

William F. Carr

WFC/cv
enclosures

cc: Mr. R. L. Stamets
Mr. Gilbert Quintana
Mr. James W. Johnston

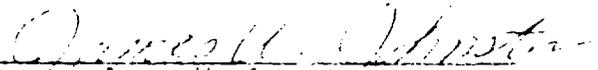
OATH STATEMENT

STATE OF OKLAHOMA)

TULSA COUNTY)

JAMES W. JOHNSTON, of lawful age, being first duly sworn upon oath, deposes and states:

That he is Reservoir Engineer of Kaiser-Francis Oil Company, the above-named applicant; that he has read the above foregoing petition and knows the contents thereof; and that all statements and allegations contained therein are true and correct to the best of his knowledge and belief. Additionally, I certify that one copy of this application has been submitted to the appropriate Division District Office (Artesia) and that notice of this application has been given to the gas purchaser and all offset operators.


James W. Johnston

SUBSCRIBED AND SWORN to before me this 1st day of August, 1984.


Notary Public in and for
Tulsa County, Oklahoma

My Commission Expires:

August 22, 1985

August 1, 1984

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

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

Re: Application for classification
as Hardship Gas Well
Pure Gold "A" Federal No. 1
Section 21-23S-31E
Eddy County, New Mexico

Dear Mr. Ramey,

Kaiser-Francis Oil Company respectfully requests administrative approval of the attached application for classification as Hardship Gas Well for the Pure Gold "A" Federal No. 1 well in the Sand Dunes West (Morrow) Gas Field in Eddy County, New Mexico. Kaiser-Francis operates the subject well and owns a 25% working interest in the unit.

The well produces gas from the Morrow Sands from 14,414 ft. to 14,663 ft. In May, 1983, the well began producing substantial quantities of water from an apparent well bore leak which has significantly reduced the ability of the well to flow. If the well is shut-in for more than a day, two to four days of swabbing are required to restore production. Current reservoir pressure is estimated to be about one-third of original pressure and the well has produced about two-thirds of the estimated ultimate recovery. As reservoir energy is reduced further, more extensive swabbing will be required to restore production. Also as reservoir pressure declines, the risk of damage due to water invasion is increased. This is compounded by the fact that the water appears to be foreign to the Morrow and could cause damage from scaling or clay swelling. The well is too deep to run small diameter tubing or unload with artificial lift devices. If the well dies due to high line pressure, production can be restored by blowing the water to the pit if the shut-in period is less than a day. This seems to be the most sensible and economic means of restoring and maintaining production. A workover to repair the well would be expensive and risk damaging or squeezing off the gas production altogether. Current swabbing costs are \$2,000 to \$3,000 per incident. With the increased operating costs for swabbing, it is estimated that 90 MMCF of gas reserves will be lost because the economic limit will be reached earlier if the well is not granted hardship classification. If the well is lost entirely as a result of water loading and damage due to extended shut-in, 450 MMCF of remaining reserves will be lost. Present performance indicates a

Mr. Joe D. Ramey
August 1, 1984
Page #2

a minimum sustainable flow rate of 300 to 350 MCFD, allowing for fluctuations in line pressure. The following discussion and attachments are offered as justification for the hardship classification.

The Pure Gold "A" Federal No. 1 is located in the Sand Dunes West (Morrow) field as shown on Exhibit No. 1, a plat of the area showing offset wells. It was completed from the Morrow Sands in January, 1981 from 14,414 feet to 14,633 feet in depth. The original reservoir pressure was 6750 psi and the CAOF was 2397 MCFD. The well is completed through perforations and 2 7/8 inch tubing. A well bore diagram is included as Exhibit No. 2. Exhibit No. 3 is a plot of monthly gas production and Exhibit No. 4 is a monthly tabulation of production data. Production began in February, 1981 and the well was capable of producing about 750 MCFD with a 1000 psi flowing tubing pressure. When it began to produce substantial quantities of water in May, 1983, production capacity dropped to 600 MCFD while water production was 30 bwpd. At the request of El Paso Natural Gas Company, the gas purchaser, the well was shut-in in early June, 1983. EPNG asked that the well be returned to production on June 9, 1983 but it had loaded up with water and would not flow. After extensive swabbing efforts, production was resumed on June 12, 1983. Swabbing costs for that effort totaled \$3,651. The well was shut-in again in January and February, 1984 for a total of 13 days. During this period, two days of swabbing was required to resume production at a cost of \$1,528. The well was down for seven days in May and 18 days in June, 1984. A total of six days of swabbing in two incidents was required at a total cost of \$4,979. Total swabbing costs to date due to shut-in is \$10,158.

Since May, 1983, water production has averaged between 6 and 10 bwpd. When allowed to produce, deliverability is close to the decline trend established in the early life of the well. Flowing tubing pressure has dropped to 700-750 psi, however, reflecting the additional 250 to 300 psi draw down required to unload the water production. Exhibit No. 5 is a graphical material balance for the well. The first two pressures were taken in 1981 and indicate an ultimate recovery of about 1.4 BCF. The last two points are bottom hole pressures calculated from surface readings and show the effect of the water loading up the tubing. Cumulative production is 930 MMCF and the estimated current reservoir pressure is 2230 psi, about one-third of the original pressure. As pressure declines further, the risk of permanently "drowning" the reservoir from long term shut-in periods is increased. At least, more extensive swabbing will be required in the future to restore production. A water analysis taken in May, 1983 showed 105,000 ppm chlorides. This is about twice the value expected from Morrow zone water and may indicate a leak from another zone. The Morrow is sensitive to foreign waters and there is risk of damage due to clay swelling or scale.

Exhibit No. 6 is a table showing daily performance for the month of May, 1984. The well was down twice for less than a day. Production was restored by blowing the water to a pit on both occasions. When shut-in for three days in early May, three days of swabbing were required to return the well to production. The rate and pressure data from this table suggest that minimum flow rate to maintain production would be 300 to 350 MCFD.

Mr. Joe D. Ramey
August 1, 1984
Page #3

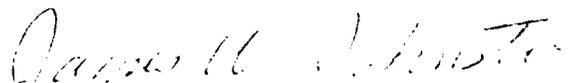
Since the well is 14,000 feet deep, small diameter tubing or artificial lift would not be mechanically feasible. We have considered working the well over to reduce the water production. However, the well would have to be pulled and the leak isolated and squeeze cemented. Based on our experience this type of workover is expensive and has high risk of failure. There is also the added risk of damaging the Morrow producing zones with cement from the squeeze job.

Since production can be restored by unloading to a pit if the shut-in period is limited, this seems to be the most sensible and economic method at this time to maintain deliverability. If the well is allowed to produce and unload the water, the risk of permanent water blockage is low and the opportunity to maximize gas recovery is greatly improved. If an extended shut-in period permanently damages the well, approximately 450 MMCF of remaining reserves will be lost. If the well is not permanently damaged but must be swabbed monthly due to shut-in, the increased operating costs raise the economic limit to the extent that 90 MMCF of reserves will not be recovered.

In view of the above, it is our opinion that underground waste will occur if the subject well is shut-in for extended periods of time or curtailed below its ability to produce.

Yours very truly,

KAISER-FRANCIS OIL COMPANY



James W. Johnston
PE 39962 Texas

JWJ:ljb

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator Kaiser-Francis Oil Company Contact Party M. W. Moore
Address P. O. Box 21468, Tulsa, Ok. 74121-1468 Phone No. 918/494-0000
Lease Pure Gold Well No. 1 UT "A" Sec. 21 TWP 23S RGE 31E
Pool Name Sand Dunes West (Morrow) Minimum Rate Requested 350 MCFD
Transporter Name El Paso Ng. Company Purchaser (if different) (Same)

Are you seeking emergency "hardship" classification for this well? X yes no

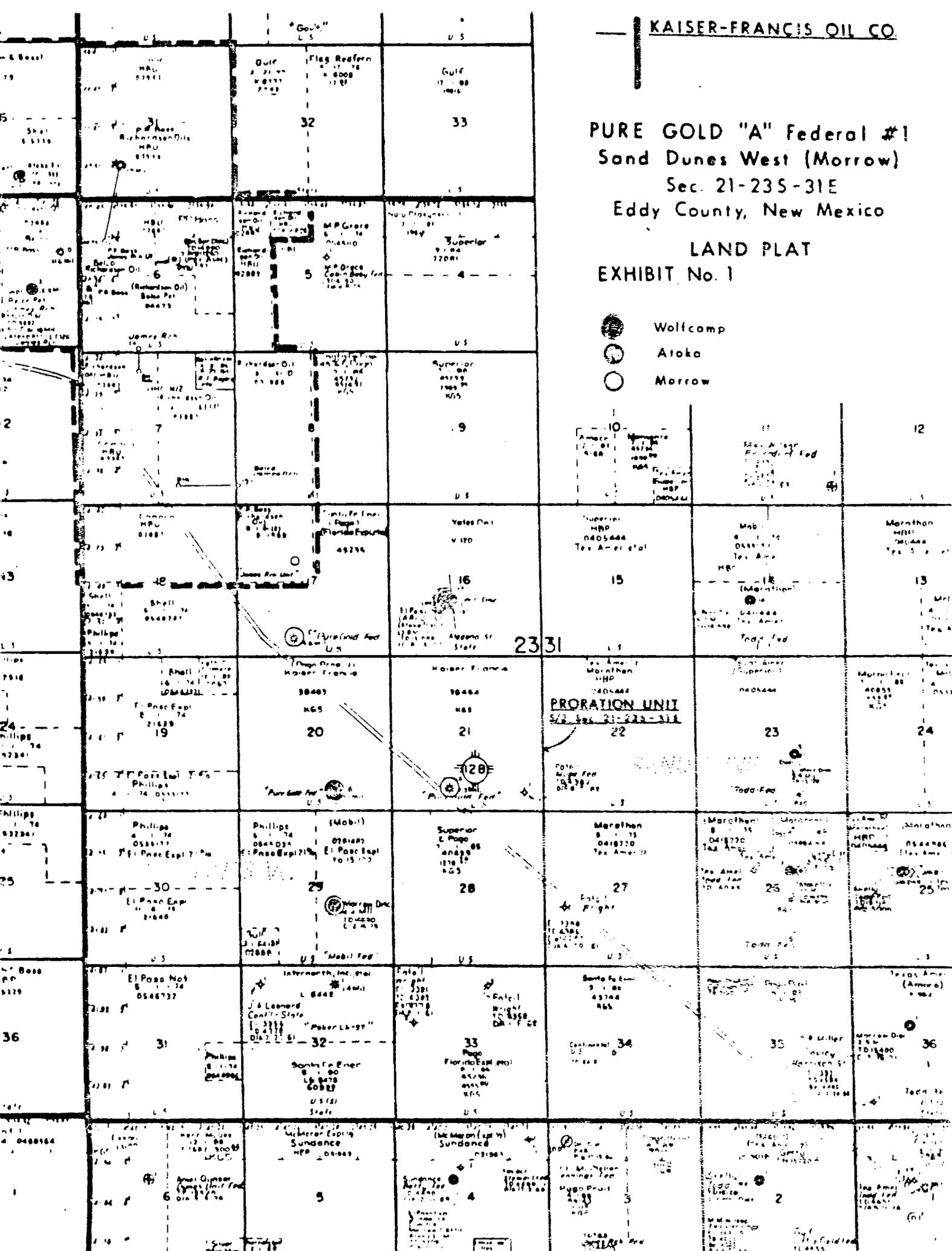
Applicant must provide the following information to support his contention that the subject well qualifies as a hardship gas well.

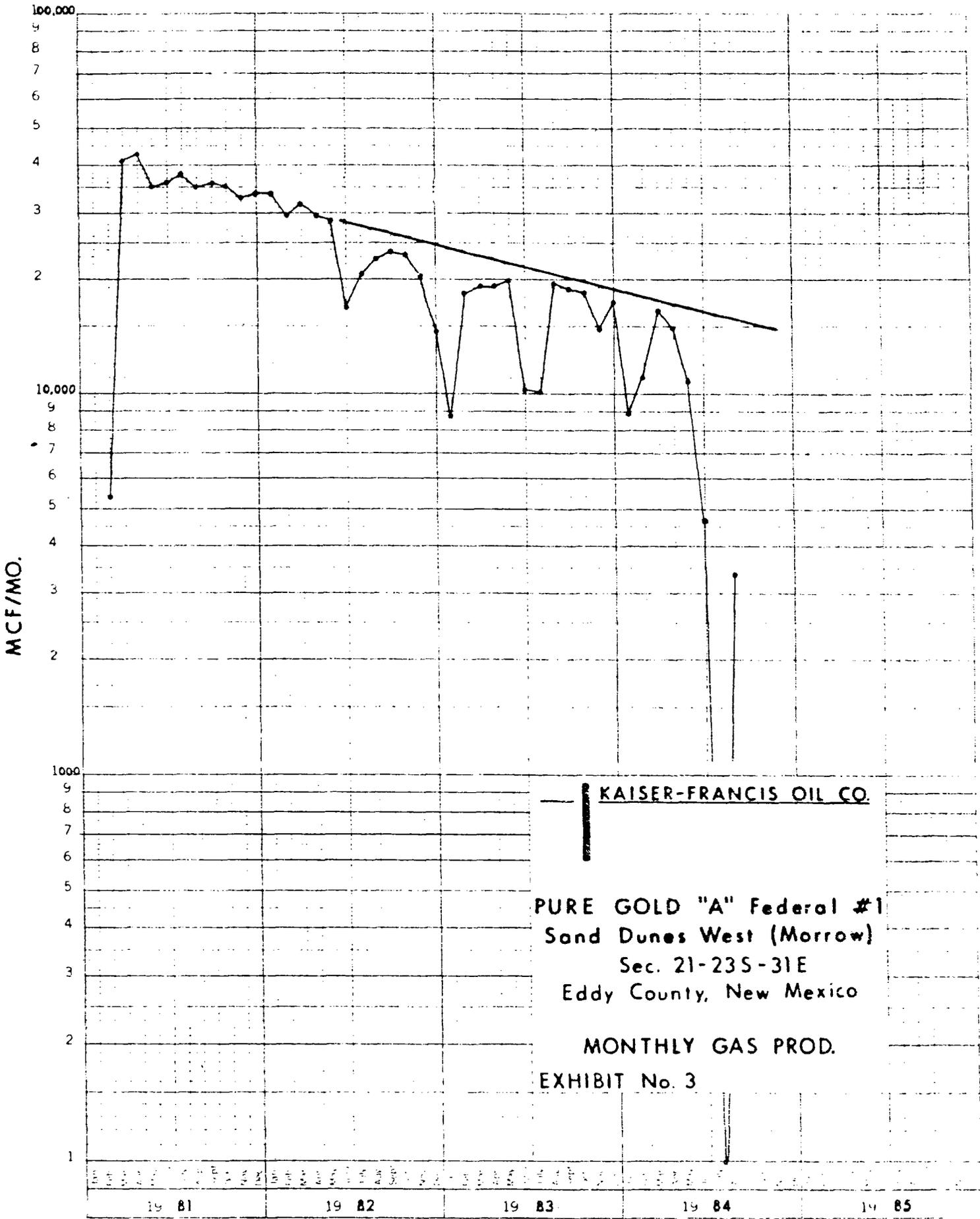
- 1) Provide a statement of the problem that leads the applicant to believe that "underground waste" will occur if the subject well is shut-in or is curtailed below its ability to produce. (The definition of underground waste is shown on the reverse side of this form)
- 2) Document that you as applicant have done all you reasonably and economically can do to eliminate or prevent the problem(s) leading to this application.
 - a) Well history. Explain fully all attempts made to rectify the problem. If no attempts have been made, explain reasons for failure to do so.
 - b) Mechanical condition of the well (provide wellbore sketch). Explain fully mechanical attempts to rectify the problem, including but not limited to:
 - i) the use of "smallbore" tubing; ii) other de-watering devices, such as plunger lift, rod pumping units, etc.
- 3) Present historical data which demonstrates conditions that can lead to waste. Such data should include:
 - a) Permanent loss of productivity after shut-in periods (i.e., formation damage).
 - b) Frequency of swabbing required after the well is shut-in or curtailed.
 - c) Length of time swabbing is required to return well to production after being shut-in.
 - d) Actual cost figures showing inability to continue operations without special relief
- 4) If failure to obtain a hardship gas well classification would result in premature abandonment, calculate the quantity of gas reserves which would be lost
- 5) Show the minimum sustainable producing rate of the subject well. This rate can be determined by:
 - a) Minimum flow or "log off" test; and/or
 - b) Documentation of well production history (producing rates and pressures, as well as gas/water ratio, both before and after shut-in periods due to the well dying, and other appropriate production data).
- 6) Attach a plat and/or map showing the proration unit dedicated to the well and the ownership of all offsetting acreage.
- 7) Submit any other appropriate data which will support the need for a hardship classification.
- 8) If the well is in a prorated pool, please show its current under- or over-produced status.
- 9) Attach a signed statement certifying that all information submitted with this application is true and correct to the best of your knowledge; that one copy of the application has been submitted to the appropriate Division district office (give the name) and that notice of the application has been given to the transporter/purchaser and all offset operators.

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-235-31E
Eddy County, New Mexico

LAND PLAT
EXHIBIT No. 1

-  Wolfcamp
-  Atoka
-  Morrow





KAISER-FRANCIS OIL CO.

PURE GOLD "A" Federal #1
 Sand Dunes West (Morrow)
 Sec. 21-23S-31E
 Eddy County, New Mexico

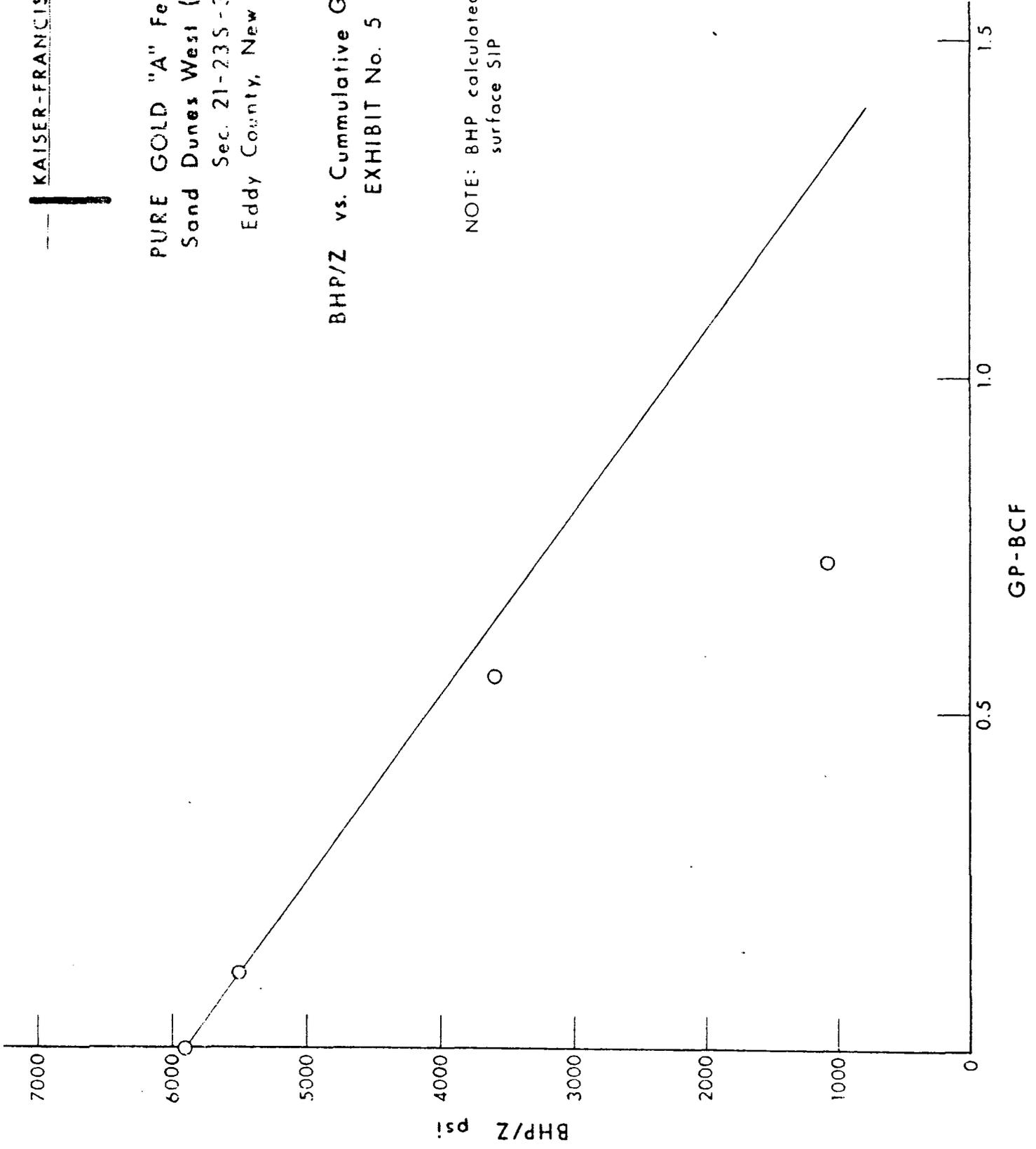
MONTHLY GAS PROD.
 EXHIBIT No. 3

KAISER-FRANCIS OIL CO

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-23S-31E
Eddy County, New Mexico

BHP/Z vs. Cumulative Gas Production
EXHIBIT No. 5

NOTE: BHP calculated from
surface SIP

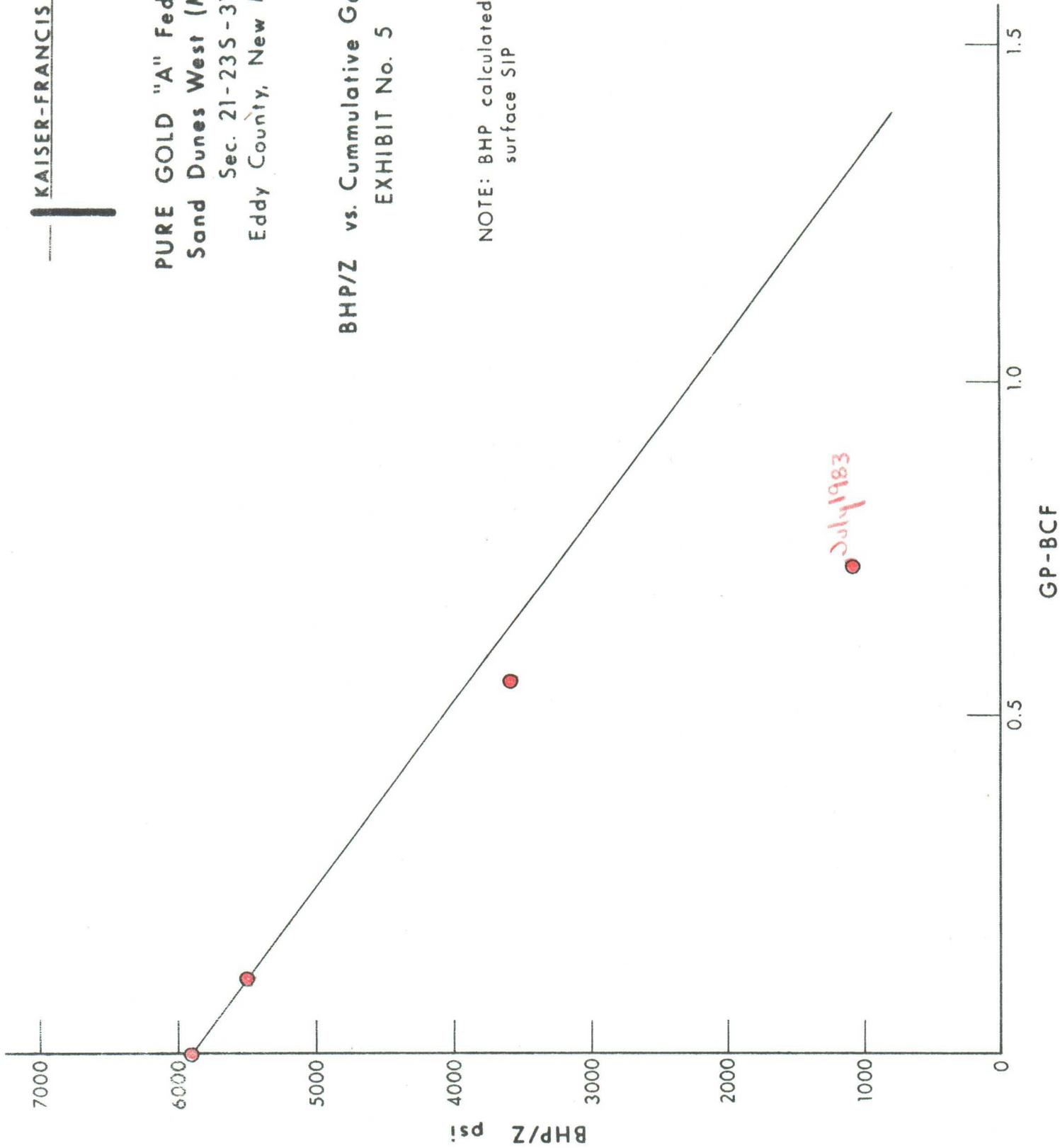


KAISER-FRANCIS OIL CO.

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
Sec. 21-23S-31E
Eddy County, New Mexico

BHP/Z vs. Cumulative Gas Production
EXHIBIT No. 5

NOTE: BHP calculated from
surface SIP



KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" NO. 1

SEC 21-23S-31E

EDDY COUNTY, NEW MEXICO

PRODUCTION DATA

YEAR	MONTH	MCF	FTP (PSI)	SHUT-IN DAYS	SWABBING COSTS \$	WATER PRODUCED
1981		369,584				
1982	January	33,421	975	-	\$ -	-
	February	29,372	925	-	-	-
	March	31,765	875	-	-	-
	April	29,596	860	-	-	-
	May	28,680	860	2	-	-
	June	16,959	1,000	10	-	-
	July	20,607	1,000	8	-	-
	August	22,862	875	3	-	-
	September	23,811	925	-	-	-
	October	23,217	850	-	-	-
	November	20,189	850	-	-	-
	December	14,489	950	12	-	-
	Total	294,968				
1983	January	8,990	950	23	-	-
	February	14,438	950	1	-	150
	March	19,281	950	-	-	-
	April	19,532	1,000	-	-	150
	May	20,374	800	-	-	900
	June	10,444	700	15	-	150
	July	10,260	700	14	3,651	130
	August	20,002	700	-	-	150
	September	19,388	800	-	-	150
	October	18,738	750	-	-	150
	November	15,275	750	-	-	300
	December	17,731	750	-	-	140
	Total	194,453			\$ 3,651	

YEAR	MONTH	MCF	FTP (PSI)	SHUT-IN DAYS	SWABBING COSTS \$	WATER PRODUCED
1984	January	8,872	800	9	-	-
	February	11,084	750	4	1,528	100
	March	16,573	750	-	-	287
	April	14,962	710	-	-	420
	May	10,722	750	7	2,150	150
	June	4,730	750	18	2,829	100
	July	70	725	30	1,320	-
	August	3,365(E)	725	21	3,000(E)	100
	September	1,542(E)	700	11	5,200(E)	NA
	TOTAL	71,920			\$16,027	
GRAND TOTAL		<u>930,925</u>			<u>19,678</u>	

NOTE:

- (1) (E) estimated from guage reports
- (2) September data through 9-16-84

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 SEC. 21-23S-31E
 EDDY COUNTY, NEW MEXICO

MONTHLY AVERAGE DELIVERABILITY

<u>YEAR</u>	<u>MONTH</u>	<u>DAYS PRODUCED</u>	<u>AVERAGE DELIVERABILITY (MCFD)</u>	<u>FTP (PSI)</u>
1983	August - December	153	596	750
1984	January	22	403	800
	February	25	443	750
	March	31	535	750
	April	30	498	710
	May	24	446	750
	June	12	394	750
	July	1	70	725
	August	10	337	725
	September	5	308	700

KAISER-FRANCIS OIL COMPANY
 PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 SEC 21-23S-31E
 EDDY COUNTY, NEW MEXICO

DAILY WELL HISTORY

MAY, 1984

<u>DAY</u>	<u>MCF</u>	<u>FTP (Psi)</u>	<u>REMARKS</u>
1	442	750	
2	388	750	
3	264	750	
4	258	750	
5	192	750	Well died
6	0		
7	0		
8	0		Swabbing
9	0		Swabbing
10	198	660	Swabbing-well started flowing
11	434	750	
12	462	750	
13	0		Highline pressure surge killed well, blew water to pit
14	527	750	
15	523	750	
16	511	750	
17	426	750	
18	365	750	
19	638	750	
20	465	750	
21	479	750	
22	467	750	
23	379	750	
24	358	750	
25	0		Highline pressure surge killed well, blew water to pit
26	252	750	
27	672	750	
28	554	750	
29	479	750	
30	383	750	
31	362	750	

Note: Gas rates are from uncorrected guage report

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FEDERAL NO. 1
 SAND DUNES WEST (MORROW)
 Sec. 21-23S-31E
 EDDY COUNTY, NEW MEXICO

DAILY WELL HISTORY

JUNE, 1984

<u>DAY</u>	<u>MCF</u>	<u>FTP (Psi)</u>	<u>REMARKS</u>
1	306	750	
2	252	750	
3	132	750	
4	132	750	High line pressure killed well
5	0		Well SI at pipeline request
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		Swabbing
13	0		Swabbing
14	0		Unloading water to pit
15	0		Unloading water to pit
16	0		Unloading water to pit
17	362	750	
18	340	750	
19	308	750	
20	308	750	
21	304	750	
22	243	750	
23	224	750	
24	0		Well loading up - blew water to pit
25	461	750	
26	421	750	
27	0		Well SI at pipeline request
28	0		
29	0		
30	0		

Note: Gas rates are from uncorrected guage report

26" HOLE

20" 94# K-55 STC set @ 583' w/625 sx circ.

KAISER-FRANCIS OIL CO.

PURE GOLD "A" Federal #1
Sand Dunes West (Morrow)
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WELLBORE DIAGRAM
EXHIBIT No. 2

17 1/2" HOLE

13 3/8" 54.5#, 61.5#, 68#, & 72# STC K-55 set @ 4206' w/2850 sx circ.

TOC (9 5/8") 7850'

Top of 7 5/8" liner set @ 11868' sqzd w/400 sx

12 1/4" HOLE

9 5/8" 43.5 , 47# 5-95 + N-80 LTC set @ 12399' w/1450 sx

Top of 5" liner set @ 13702'
TOC-TOL

7 5/8" 39# P-110 HSFJ & TS set @ 14161' w/215 sx

Packer set @ 14~~400~~³³⁸ w/2 7/8" 6.5# N-80 AB/mod Tubing to surface

Perforations 14,414 to 14,633

PBTD 14,924'
TD 14,967'

5" 18# N-80 HSFJ set @ 14967' w/200 sx

