

HINKLE, COX, EATON, COFFIELD & HINKLE

ATTORNEYS AT LAW

700 UNITED BANK PLAZA

POST OFFICE BOX 10

ROSWELL, NEW MEXICO 88202

(505) 622-6510

FAX (505) 623-9332

CLARENCE E. HINKLE, 1904-1985
W. E. BONDURANT, JR. 1913-1973
ROY C. SNODGRASS, JR. 1914-1987

OF COUNSEL
D. M. CALHOUN*
MACK EASLEY*
JOE W. WOOD
RICHARD S. MORRIS

WASHINGTON, D.C.
SPECIAL COUNSEL
ALAN J. STATMAN*

2800 CLAYDESTA CENTER
6 DESTA DRIVE
POST OFFICE BOX 3580
MIDLAND, TEXAS 79702
(915) 683-4691
FAX (915) 683-6518

1700 TEAM BANK BUILDING
POST OFFICE BOX 9238
AMARILLO, TEXAS 79105
(806) 372-5569
FAX (806) 372-9761

218 MONTEZUMA
POST OFFICE BOX 2068
SANTA FE, NEW MEXICO 87504
(505) 982-4554
FAX (505) 982-8623

500 MARQUETTE N.W., SUITE 800
POST OFFICE BOX 2043
ALBUQUERQUE, NEW MEXICO 87103
(505) 768-1500
FAX (505) 768-1529

LEWIS C. COX
PAUL W. EATON
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANOR
ERIC D. LANPHERE
C. D. MARTIN
ROBERT P. NININ, JR.
MARSHALL S. MARTIN
SWEN M. LOPEZ
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NANCY S. BUSACK
JEFFREY L. FORNACIARI
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JAMES BRUCE
JERRY F. SHACKELFORD*
JEFFREY W. HELLBERG*
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JOHN C. CHAMBERS*
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STANLEY K. KOTOVSKY, JR.
H. R. THOMAS
ELLEN S. CASEY
MARGARET CARTER JUDEWIG

S. BARRY PASNER
STEPHEN M. CRAMPTON
MARTIN MEYERS
GREGORY S. WHEELER
ANDREW J. CLOUTER
JAMES A. GILLESPIE
GARY W. JARSON
STEPHANIE LANDRY
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MOLLY MCINTOSH*
MARCIA B. LINDOLN
SCOTT A. SHUART*
DARREN L. BROOKS
CHRISTINE E. LALE
PAUL S. NASON
DARLA M. SILVA

*NOT LICENSED IN NEW MEXICO

December 21, 1993

Mr. Jim Morrow
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504

Re: Case No. 10887 (Application of Kaiser-Francis Oil Co.)

Dear Mr. Morrow:

The above application requested approval of ten directional wells in the oil-potash area. Pogo Producing Company is an interest owner in all ten wells. Pogo requests that the order in this case initially approve only the Pure Gold "A" Fed. Well Nos. 9 and 10 (bottomhole locations in Units D and C, respectively, of Section 21). Pogo further requests the Division to withhold making a decision with respect to the remaining eight wells pending an examination of the results of the first and/or second directional well(s) to make sure that the directional wells are in the interest of conservation of natural resources and are reasonable measures to prevent the waste of oil and gas.

In support of this request, Pogo states: The Pure Gold "A" Fed. Well Nos. 9 and 10 are subject to potential drainage and reasonable efforts should be taken to allow Kaiser-Francis and the non-operating parties the reasonable opportunity to prevent oil and gas underlying their lease from migrating to an adjacent owner's wellbore. Although Pogo has expressed its general concerns on directional drilling within the oil-potash area, and knows that other operators have not experienced anticipated economic returns through directional drilling, it believes that Kaiser-Francis should be given the opportunity to drill these two wells on a directional basis to protect against drainage and allow it to evaluate its directional drilling program.

With respect to the remaining eight locations, where drainage is not occurring or where drainage is insignificant, it is not appropriate at this time to drill these wells on a directional basis without evaluating the results gleaned from the drilling of the first two wells. Since drainage is not an issue, and there are significant issues regarding the potential for waste, not only with respect to each location applied for but throughout the oil-potash area, Pogo suggests that a limited order is appropriate at this time.

None of the additional eight locations are subject to a direct offset well, and are therefore not experiencing the potential for substantial drainage. Directional wells cause waste due to higher well costs and higher operating costs. Also, the operator will plug and abandon a well at the point when operating costs equal the value of net production to the working interest owners. If operating costs are greater in a directional well, the directional well will be plugged and abandoned before a vertical well at the same location.

Pogo submits that the issue of waste concerns not only this application, but the tremendous oil resources that will remain in place throughout the oil-potash area as a result of any precedent established by Kaiser-Francis' applications for directional wells. The Bureau of Land Management prefers that all oil and gas wells drilled within the oil-potash area, in areas identified as containing measured ore reserves, be drilled through utilization of directional drilling technology. The BLM's preference is regardless of the distance to active mining operations, the quantity and quality of potash resources in a particular area, existing well control, or the likelihood that potash mining will ever occur in the areas of proposed oil and gas operations. Should the Division grant the application of Kaiser-Francis, the BLM will use this as an example of how oil and gas operations should be conducted within the oil-potash area without determining and addressing concurrent development issues that are presently pending before the Interior Board of Land Appeals.

In light of these considerations, it is not an undue burden upon Kaiser-Francis to drill its first and/or second wells on a directional basis and then evaluate its drilling program, the economics, and overall expectations of this prospect with the non-operating interest owners before embarking on and continuing the drilling of directional wells at the other eight locations.

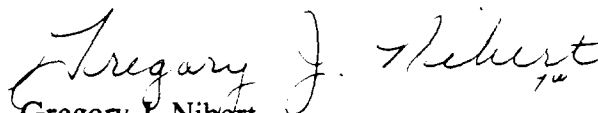
This proposal by Pogo will protect correlative rights and allow Kaiser-Francis to protect its locations from drainage, and at the same time provide a mechanism to evaluate the program and determine if waste of oil and gas is caused by the directional drilling program. Pogo believes that in the next 2-3 months the Interior Board of Land Appeals will issue an order that will give further direction and insight regarding the numerous appeals

Mr. Jim Morrow
December 21, 1993
Page 3

involving vertical well APDs on federal lands within the oil-potash area, and thus Kaiser-Francis will not be adversely affected by Pogo's proposal.

Very truly yours,

HINKLE, COX, EATON, COFFIELD & HENSLEY


Gregory J. Nibert

GJN/jw

cc: Mr. W. Thomas Kellahin
Mr. Ernest Carroll
Mr. James Bruce

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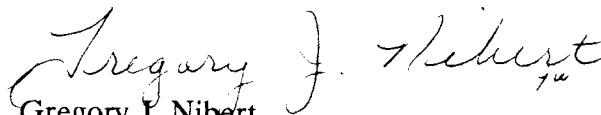
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cc: Mr. W. Thomas Kellahin
Mr. Ernest Carroll
Mr. James Bruce

KAISER-FRANCIS OIL COMPANY
APPLICATION FOR DIRECTIONAL DRILLING PERMITS

PURE GOLD WELL LOCATIONS

Well: Pure Gold A-7
Surface: 1950' FSL x 200' FEL (Unit I) Sec 20
BHL: 2043' FNL x 456' FWL (Unit E) Sec 21

Well: Pure Gold A-8
Surface: 10' FSL x 1935' FWL (Unit N) Sec 16
BHL: 1947' FNL x 1789' FWL (Unit F) Sec 21

Well: Pure Gold A-9
Surface: 10' FSL x 280' FWL (Unit M) Sec 16
BHL: 480' FNL x 480' FWL (Unit K) Sec 21

Well: Pure Gold A-10
Surface: 10' FSL x 1800' FWL (Unit N) Sec 16
BHL: 480' FNL x 1500' FWL (Unit C) Sec 21

Well: Pure Gold A-13
Surface: 10' FSL x 2025' FEL (Unit O) Sec 16
BHL: 2012' FNL x 2176' FEL (Unit G) Sec 21

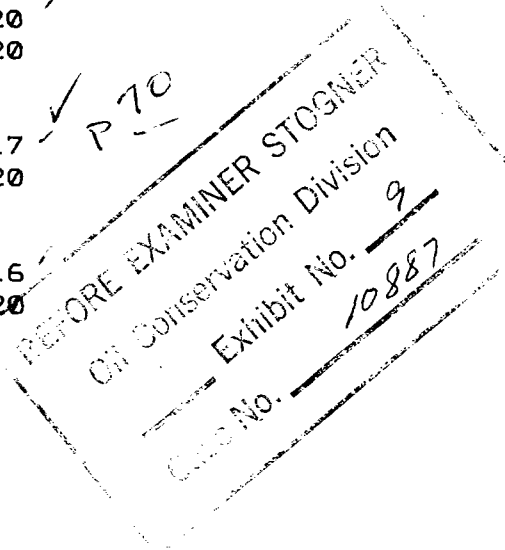
Well: Pure Gold A-14
Surface: 10' FSL x 2160' FEL (Unit O) Sec 16
BHL: 480' FNL x 2160' FEL (Unit B) Sec 21

Well: Pure Gold B-7
Surface: 2100' FSL x 1600' FEL (Unit J) Sec 20
BHL: 1988' FNL x 1834' FEL (Unit G) Sec 20

Well: Pure Gold B-8
Surface: 1950' FSL x 335' FEL (Unit I) Sec 20
BHL: 1957' FNL x 505' FEL (Unit H) Sec 20

Well: Pure Gold B-9
Surface: 10' FSL x 1960' FEL (Unit O) Sec 17
BHL: 480' FNL x 1800' FEL (Unit B) Sec 20

Well: Pure Gold B-10
Surface: 10' FSL x 145' FWL (Unit M) Sec 16
BHL: 480' FNL x 480' FEL (Unit A) Sec 20



APPLICATION FOR DIRECTIONAL DRILLING PERMITS

T23S, R31E Eddy County, NM

Sec 17

Sec 16

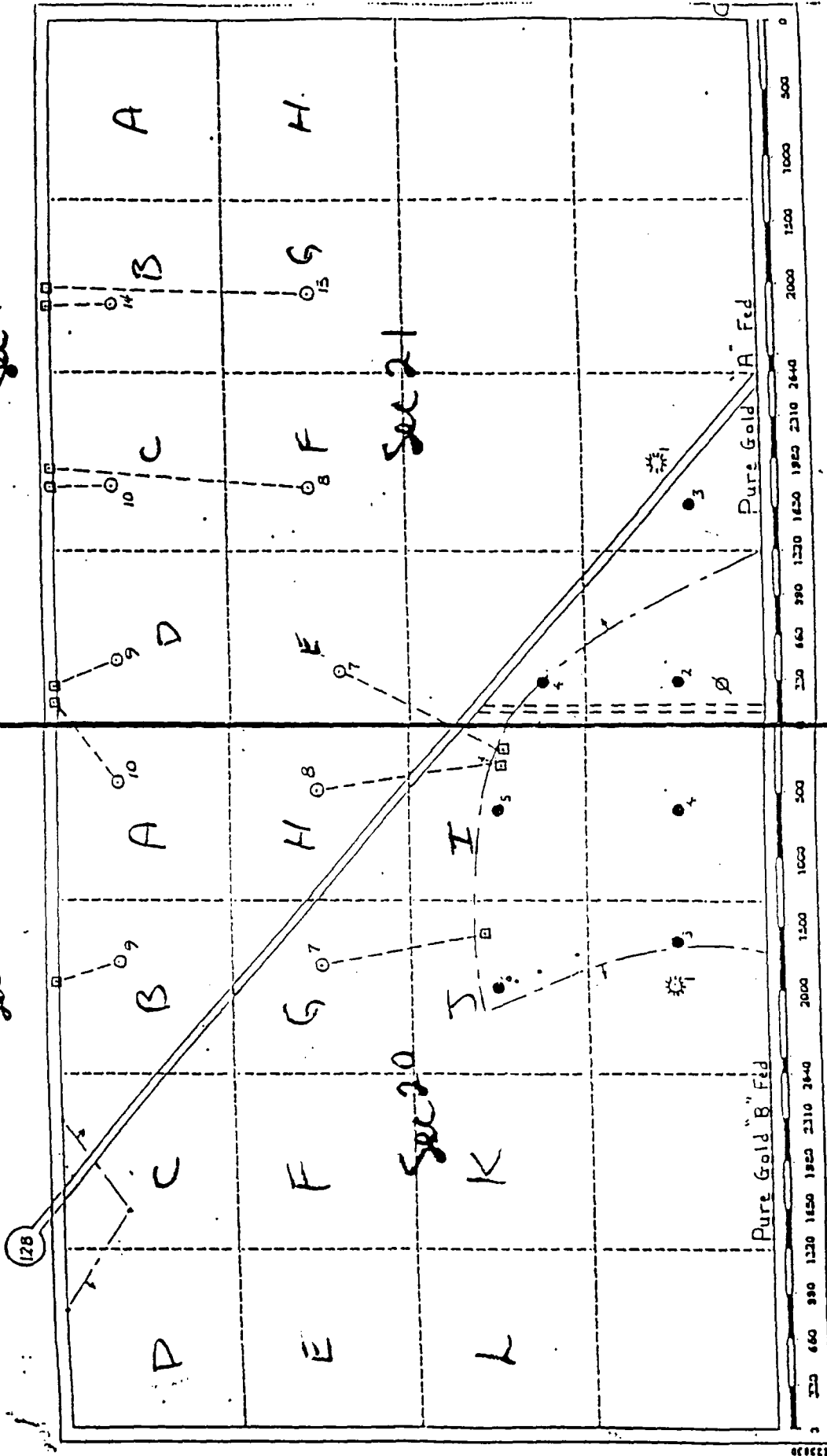


EXHIBIT B TO APPLICATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Kaiser-Francis Oil Company

3. ADDRESS AND TELEPHONE NO.

P.O. Box 21468, Tulsa, Oklahoma 74121-1468

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

1950' FSL & 200' FEL Sec 20

At proposed prod. zone

2046' FNL & 456' FWL Sec 21

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 miles East from Loving

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drilg. unit line, if any)

456'

456'

13. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

1540'

16. NO. OF ACRES IN LEASE

640

19. PROPOSED DEPTH

8100' TVD

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3348'

22. APPROX. DATE WORK WILL START*

5. LEASE DESIGNATION AND SERIAL NO.

NM38464

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

Pure Gold A Federal

9. API WELL NO.

7

10. FIELD AND POOL, OR WILDCAT

West Sand Dunes

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

Sec 21, T23S, R31E

12. COUNTY OR PARISH

Eddy

13. STATE

NM

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDHO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED

Milton Conner

TITLE

Operations Engineer

DATE

10-29-93

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

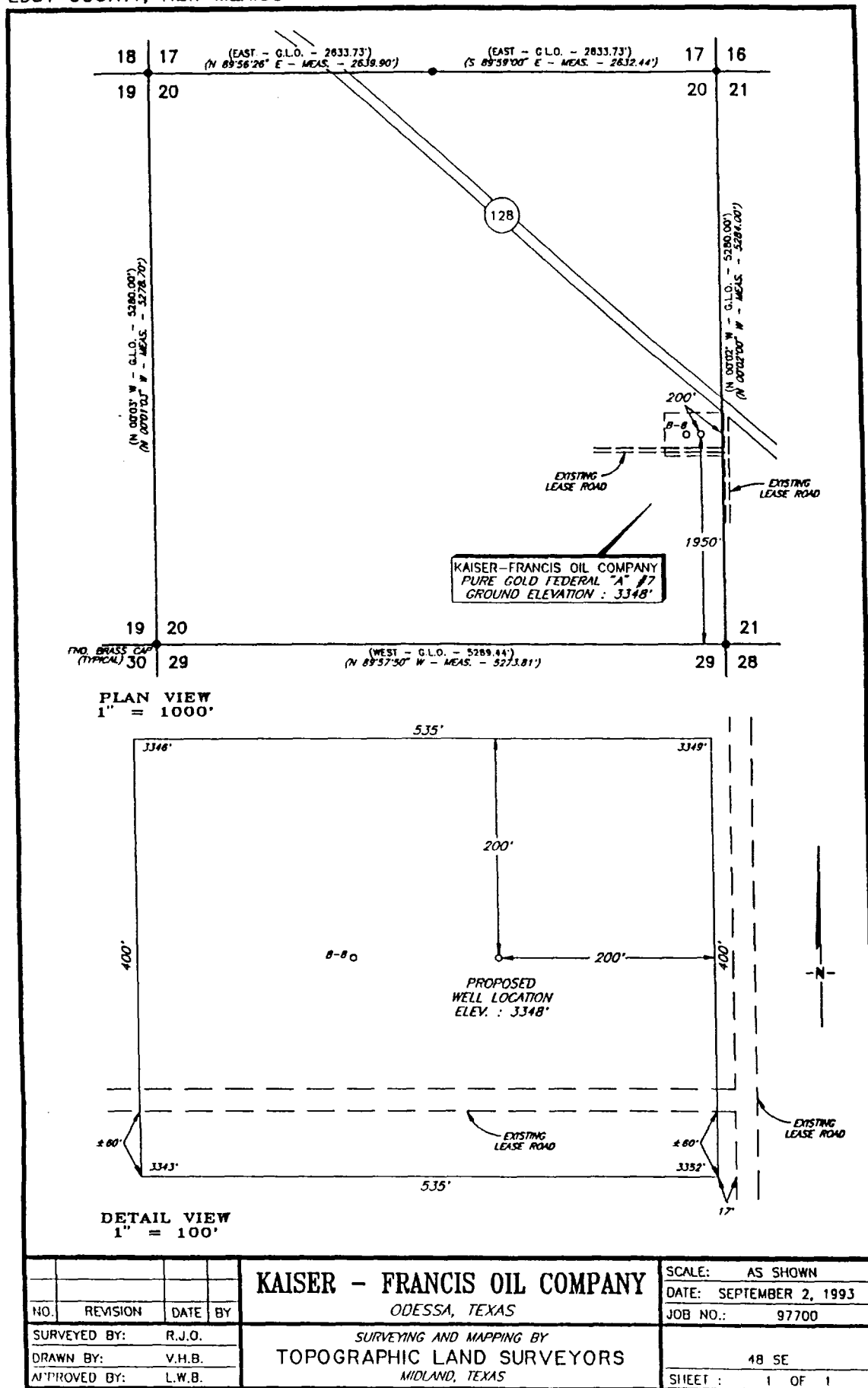
TITLE

DATE

*See Instructions On Reverse Side

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 20, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

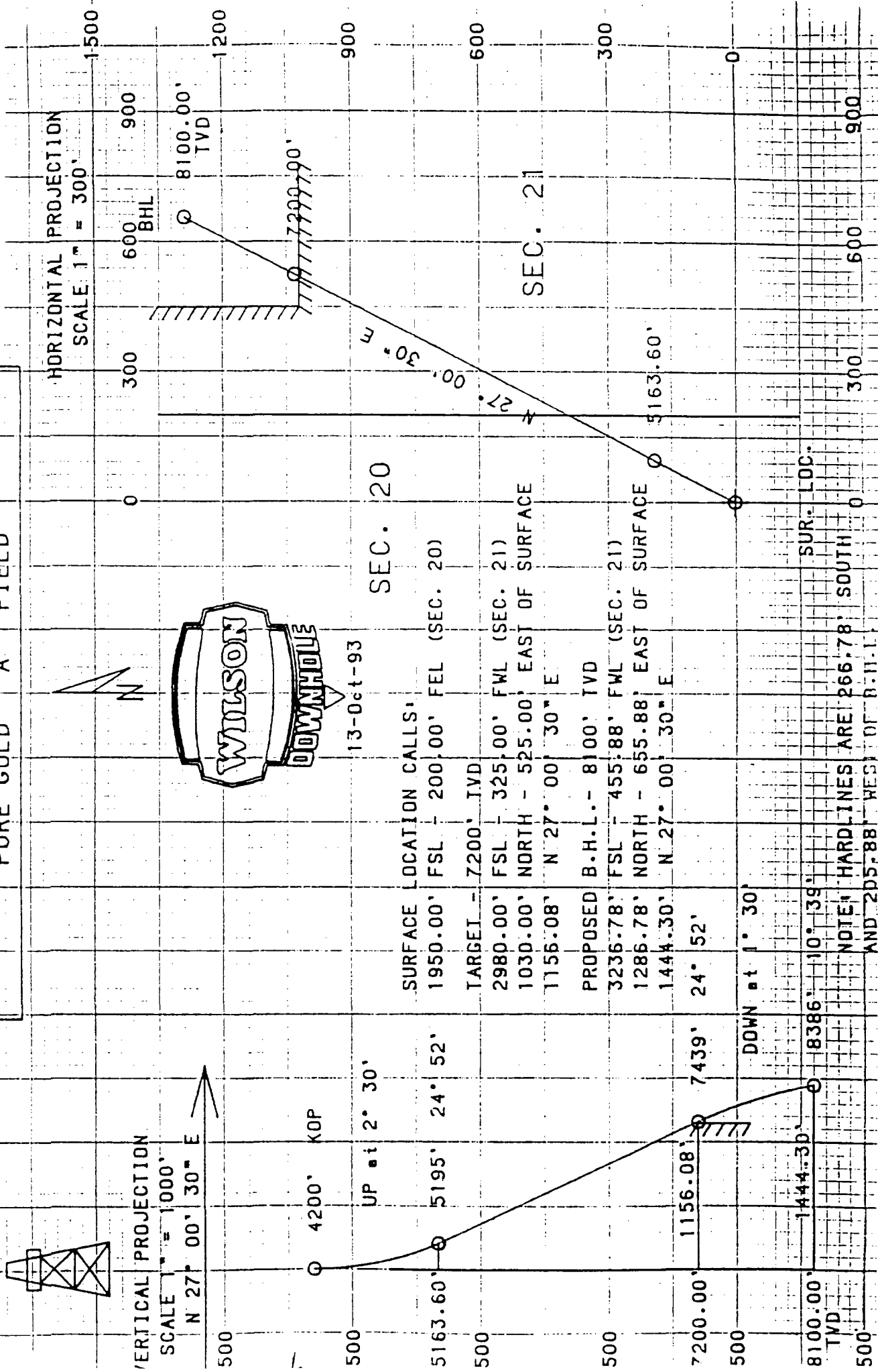
Exhibit E
Kaiser-Francis Oil Co.
Pure Gold "A" Fed. #7
Eddy County, NM



KAISER-FRANCIS OIL COMPANY

PROPOSED WELL NO. A-7
SECTION 21, T 23 S-R 31 E,
EDDY COUNTY, NEW MEXICO
PURE GOLD "A" FIELD

Exhibit A1
Kaiser-Francis Oil Co.
Pure Gold "A" Fed. #7
Eddy County, NM



APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal No. 7
Surface Location: 1950' FSL & 200' FEL Sec 20
Bottomhole Location: 2138' FNL & 411' FWL Sec 21
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H₂S are expected.
10. Anticipated starting date: As soon as possible.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM38464	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Kaiser-Francis Oil Company			7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. P.O. Box 21468, Tulsa, Oklahoma 74121-1468			8. FARM OR LEASE NAME, WELL NO. Pure Gold A Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 10' FSL & 1935' FWL Sec 16 At proposed prod. zone 1947' FNL & 1789' FWL Sec 21			9. API WELL NO. 8	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 17 miles East from Loving			10. FIELD AND POOL, OR WILDCAT West Sand Dunes	
16. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1789' 469'			11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA Sec 21, T23S, R31E	
18. PROPOSED DEPTH 8100' TVD			12. COUNTY OR PARISH Eddy	
20. ROTARY OR CABLE TOOLS Rotary			13. STATE NM	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3360'			22. APPROX. DATE WORK WILL START*	

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. Milton C. Goff TITLE Operations Engineer DATE 10-29-93
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

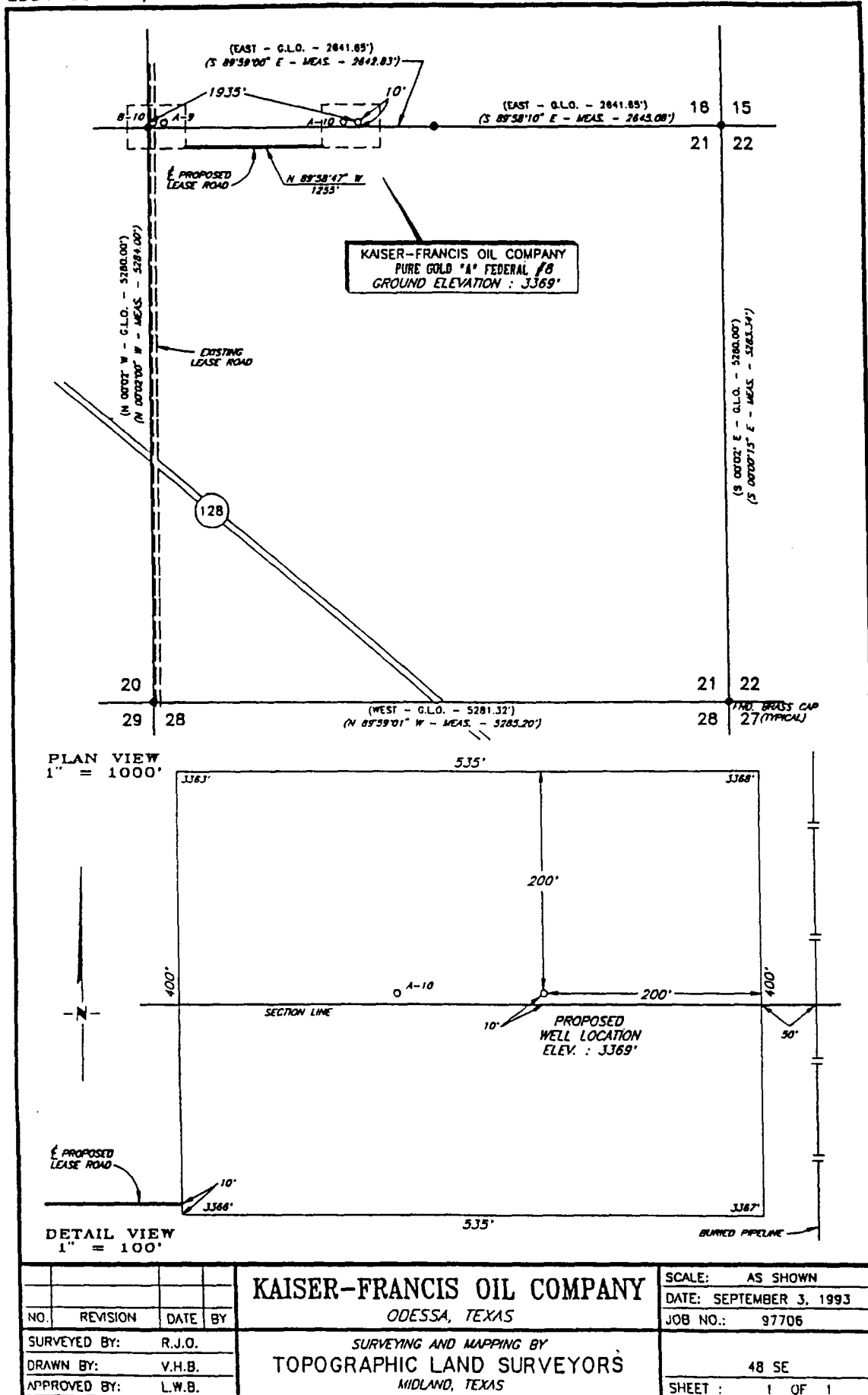
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

12

*See Instructions On Reverse Side

Harper Francis Hill Co.
Pure Gold "A" Fed. #8
Eddy County, NM



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

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

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD FEDERAL 'A'		Well No. 7
Unit Letter I	Section 20	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well					
1950 feet from the SOUTH line and		200 feet from the EAST line			
Ground Level Elev. 3348'	Producing Formation Delaware		Pool West Sand Dunes	40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

Bottomhole Location: 2046' FNL & 456' FWL, Sec 21
The acreage dedicated to this well is the SW/4 NW/4
Sec 21, T23S, R31E



OPERATOR CERTIFICATION

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

Signature
Milton Griffin
Printed Name
Milton Griffin
Position
Operations Engineer
Company
Kaiser-Francis Oil Co.
Date
October 29, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
SEPTEMBER 2, 1993
Signature and Seal of Professional Surveyor
Larry W. Busby
Certificate No.
LARRY W. BUSBY R.P.S. #11398

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal #7
Eddy County, New Mexico

SUMMARY

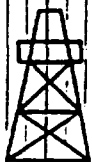
Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + 20 steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2-1/2 degrees per 100 feet of hole in the proper direction until a maximum angle of 24 degrees 52 minutes is obtained plus or minus to 5195' M.D. POOH for angle holding assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point collar roller reamer + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 24 degrees and 52 minutes to the TVD depth of 7200'. POOH for angle dropping assembly.

8. Go in hole with 7-7/8" bit + 6-1/4" non-magnetic drill collar + 3 point roller reamer + (20) 6-1/4" steel drill collars. Drill the hole dropping at 1-1/2 degrees per 100' deviation to plugs or minus 7200' TVD. At this point you will continue to drill to a TVD depth of 8100'.
9. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
10. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

KAISER-FRANCIS OIL COMPANY
 PURE GOLD "A" FIELD
 SECTION 21 T23S R31E
 WELL NO. A-8
 EDDY COUNTY, NEW MEXICO

Exhibit A1
 Kaiser-Francis Oil Co.
 Pure Gold "A" Fed. #8
 Eddy County, NM

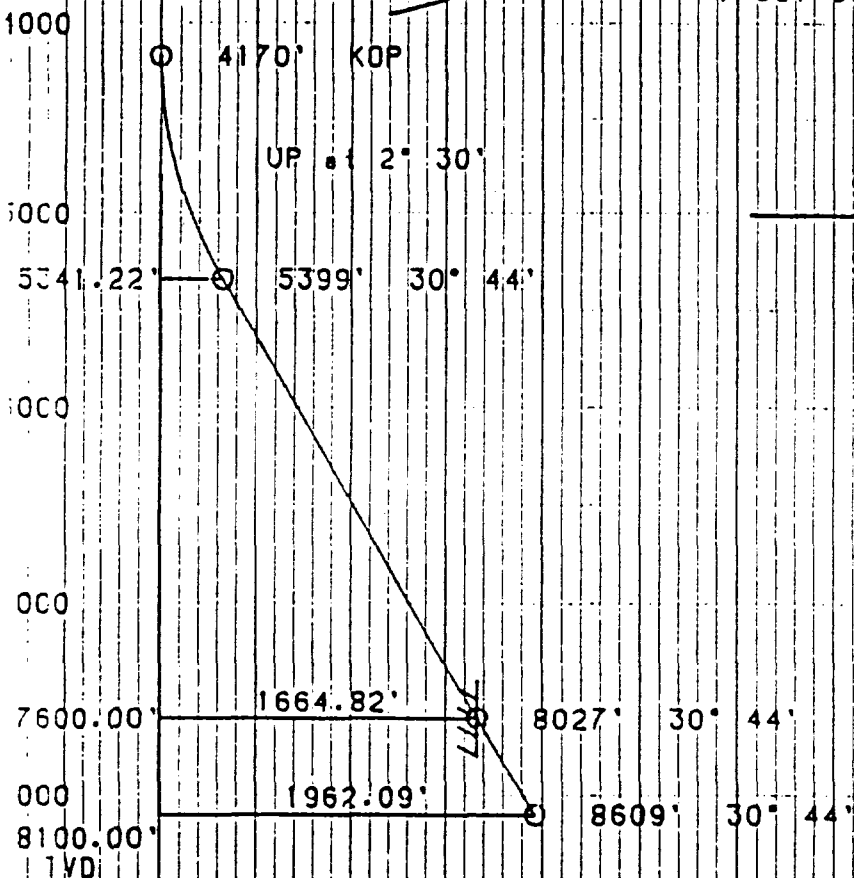


1-Jul-93

VERTICAL PROJECTION

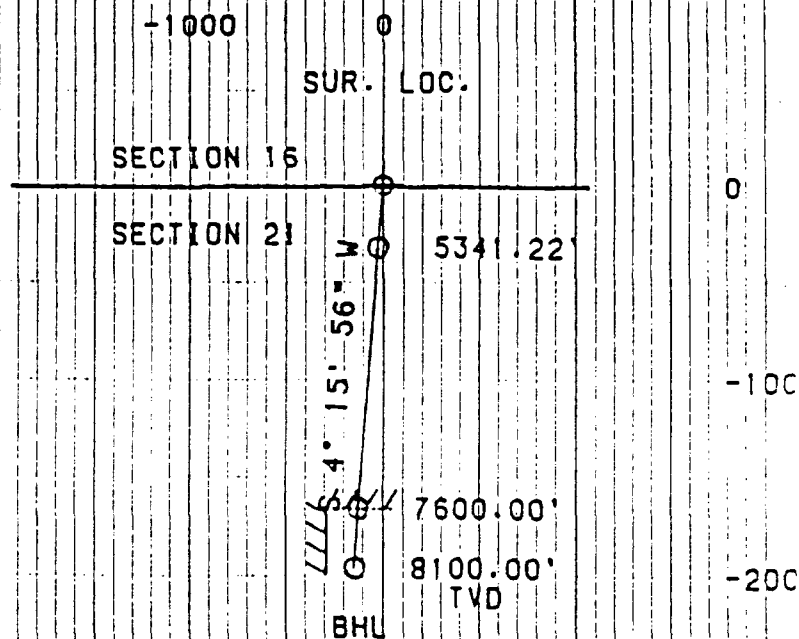
SCALE 1" = 1000'

S. 4° 15' 56" W



HORIZONTAL PROJECTION

SCALE 1" = 1000'



SURFACE LOCATION CALLS:

10.00' FSL - 1935.00' FWL SECTION 16

PROPOSED B.H.L. - 8100.00' TVD

1956.65' S - 145.94' W OF SURFACE

1946.65' FNL - 1789.06' FWL OF SECTION 21

1962.09' S 04° 15' 56" W

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

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

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

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

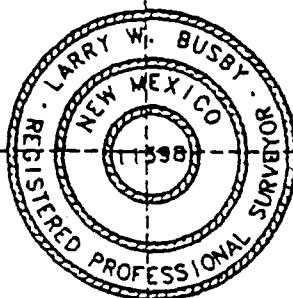
WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD "A" FEDERAL		Well No. 8
Unit Letter N	Section 16	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well					
10 feet from the SOUTH line and		1935 feet from the WEST line			
Ground Level Elev. 3369'	Producing Formation Delaware		Pool West Sand Dunes	40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

Bottomhole Location: 1947' FNL & 1789' FWL Sec 21
The acreage is dedicated to this lease is the
SE/4 NW/4 Sec 21, T23S, R31E



OPERATOR CERTIFICATION

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

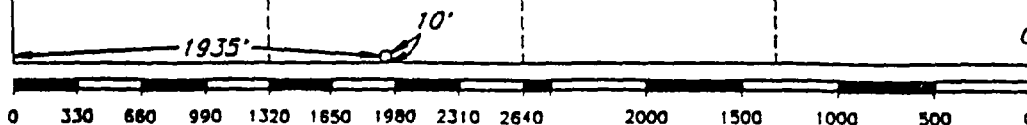
Signature *Milton Griffin*
Printed Name **Milton Griffin**
Position **Operations Engineer**
Company **Kaiser-Francis Oil Co.**
Date **October 29, 1993**

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed **SEPTEMBER 3, 1993**
Signature and Seal of Professional Surveyor

Certificate No.
LARRY W. BUSBY R.P.S. #11398



APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal No. 8
Surface Location: 10' FSL & 1935' FWL Sec 16
Bottomhole Location: 1947' FNL & 1789' FWL Sec 21
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H₂S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal #8
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2-1/2 degrees per 100 feet of hole in the proper direction until a maximum angle of 30 degrees 44 minutes is obtained plus or minus to 5399' M.D. POOH for packed hole assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point collar roller reamer + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 30 degrees 44 minutes deviation into the Bone Springs plus or minus 7600' TVD and continue to drill to TD with the same deviation to plus or minus 8100' TVD.

8. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
9. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1A. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		6. LEASE DESIGNATION AND SERIAL NO. NM38464
B. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR Kaiser-Francis Oil Company		7. UNIT AGREEMENT NAME
3. ADDRESS AND TELEPHONE NO. P.O. Box 21468, Tulsa, Oklahoma 74121-1468		8. FARM OR LEASE NAME WELL NO. Pure Gold A Federal
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 10' FSL & 280' FWL Sec 16 At proposed prod. zone 480' FNL & 480' FWL Sec 21		9. API WELL NO. 9
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 17 miles East from Loving		10. FIELD AND POOL, OR WILDCAT West Sand Dunes
16. NO. OF ACRES IN LEASE 480'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 21, T23S, R31E
17. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drg. unit line, if any.) 480'		12. COUNTY OR PARISH Eddy
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1120'		13. STATE NM
19. PROPOSED DEPTH 8100' TVD		17. NO. OF ACRES ASSIGNED TO THIS WELL 40
20. ROTARY OR CABLE TOOLS Rotary		22. APPROX. DATE WORK WILL START*
21. ELEVATIONS (Show whether DF, RT, CR, etc.) 3354'		

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt v/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt v/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD v/stage collar at 6200' and cmt 1st stage v/580 sx & 2nd stage v/790 sx.
8. RDHO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

34. Wilton Coffey TITLE Operations Engineer DATE 10/12/93
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

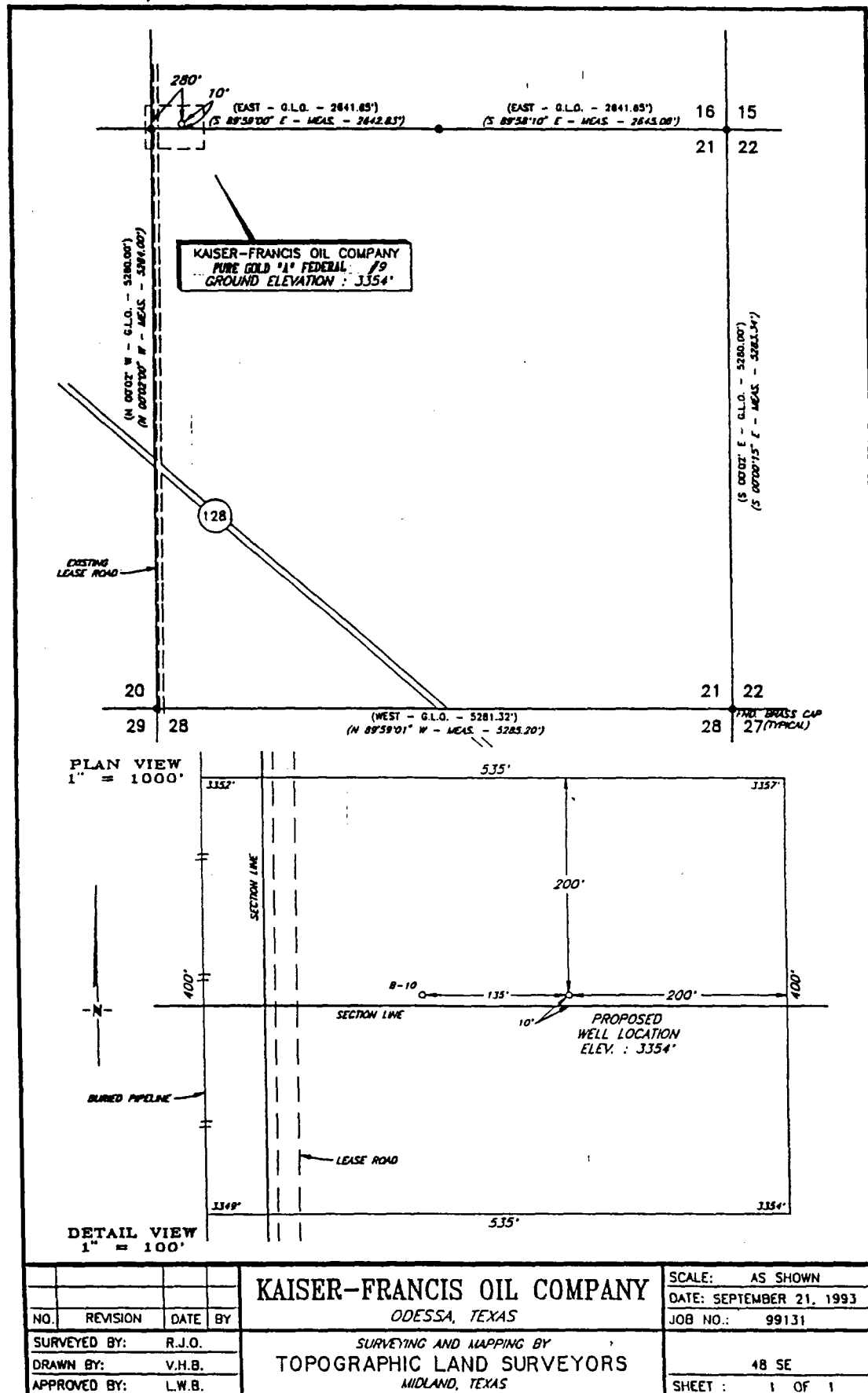
APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 16 & 21, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Exhibit E
Kaiser-Francis Oil Co.
Pure Gold "A" Fed. #9
Eddy County, NM





KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FIELD
SECTION 21 T23S R31E

WELL NO. AF-9

EDDY COUNTY, NEW MEXICO

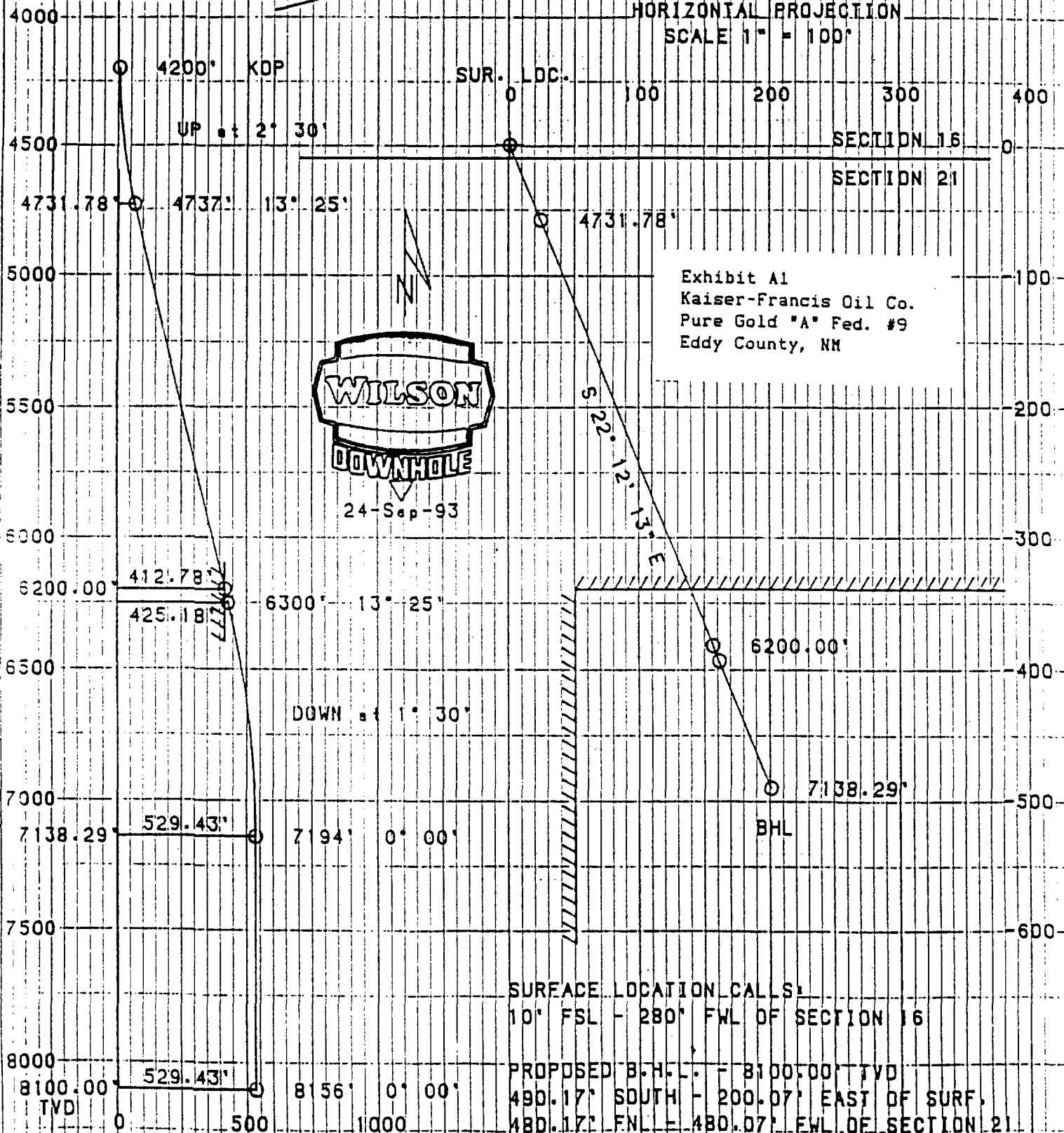
VERTICAL PROJECTION

SCALE 1" = 500'

S 22° 12' 13" E

HORIZONTAL PROJECTION

SCALE 1" = 100'



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

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

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

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT
All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD "A" FEDERAL		Well No. 9
Unit Letter M	Section 16	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well 10 feet from the SOUTH line and 280 feet from the WEST line					
Ground Level Elev. 3354'	Producing Formation		Pool	Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

OPERATOR CERTIFICATION

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

Signature *Milton R. Griffin*
Printed Name **Milton R. Griffin**
Position **Operations Engineer**
Company **Kaiser-Francis Oil Co.**
Date **October 12, 1993**

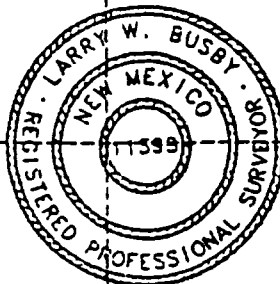
SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed **SEPTEMBER 21, 1993**
Signature and Seal of Professional Surveyor

Certificate No.
LARRY W. BUSBY R.P.S. #11398
JOB #9917 **V.H.B.**

Bottomhole Location: 480' FNL & 480' FWL Sec 21
The acreage dedicated to this well is the NW/4
NW/4 Sec 21, T23S, R31E.



280'
10'

125830
0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal No. 9
Surface Location: 10' FSL & 280' FWL Sec 16
Bottomhole Location: 480' FNL & 480' FWL Sec 21
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal #9
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + 20 steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2-1/2 degrees per 100 feet of hole in the proper direction until a maximum angle of 13 degrees 25 minutes is obtained plus or minus to 4737' M.D. POOH for angle holding assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point collar roller reamer + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 10 degrees and 48 minutes to the TVD depth of 6200'. POOH for angle dropping assembly.

8. Go in hole with 7-7/8" bit + 6-1/4" non-magnetic drill collar + 3 point roller reamer + (20) 6-1/4" steel drill collars. Drill the hole dropping at 1-1/2 degrees per 100' deviation into the Bone Spring plus or minus 7138.29' TVD. At this point you will be vertical and you will continue to drill to a TVD of 8100'.
9. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
10. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1A. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM38464	
B. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Kaiser-Francis Oil Company			7. UNIT ACQUISITION NAME	
3. ADDRESS AND TELEPHONE NO. P.O. Box 21468, Tulsa, Oklahoma 74121-1468			8. FARM OR LEASE NAME, WELL NO. Pure Gold A Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface Surface: 10' FSL & 1800' FWL Sec 16 At proposed prod. zone Bottomhole: 480' FNL & 1800' FWL Sec 21			9. API WELL NO. 10	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 17 miles East from Loving			10. FIELD AND POOL, OR WILDCAT West Sand Dunes	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 480' BHL (Also to nearest drig. unit line, if any) 480' BHL			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 21, T23S, R31E	
16. NO. OF ACRES IN LEASE 640			12. COUNTY OR PARISH Eddy	
17. NO. OF ACRES ASSIGNED TO THIS WELL 40			13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1800'			14. ROTARY OR CABLE TOOLS Rotary	
19. PROPOSED DEPTH 8100' TVD			22. APPROX. DATE WORK WILL START*	
20. ELEVATIONS (Show whether DF, RT, GR, etc.) 3367' GL				

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks circulated
11	8-5/8	32#	4070	1000 sacks circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200 into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700', run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD, & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

34. Wilton Cariffin TITLE Operations Engineer DATE 10-8-93
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

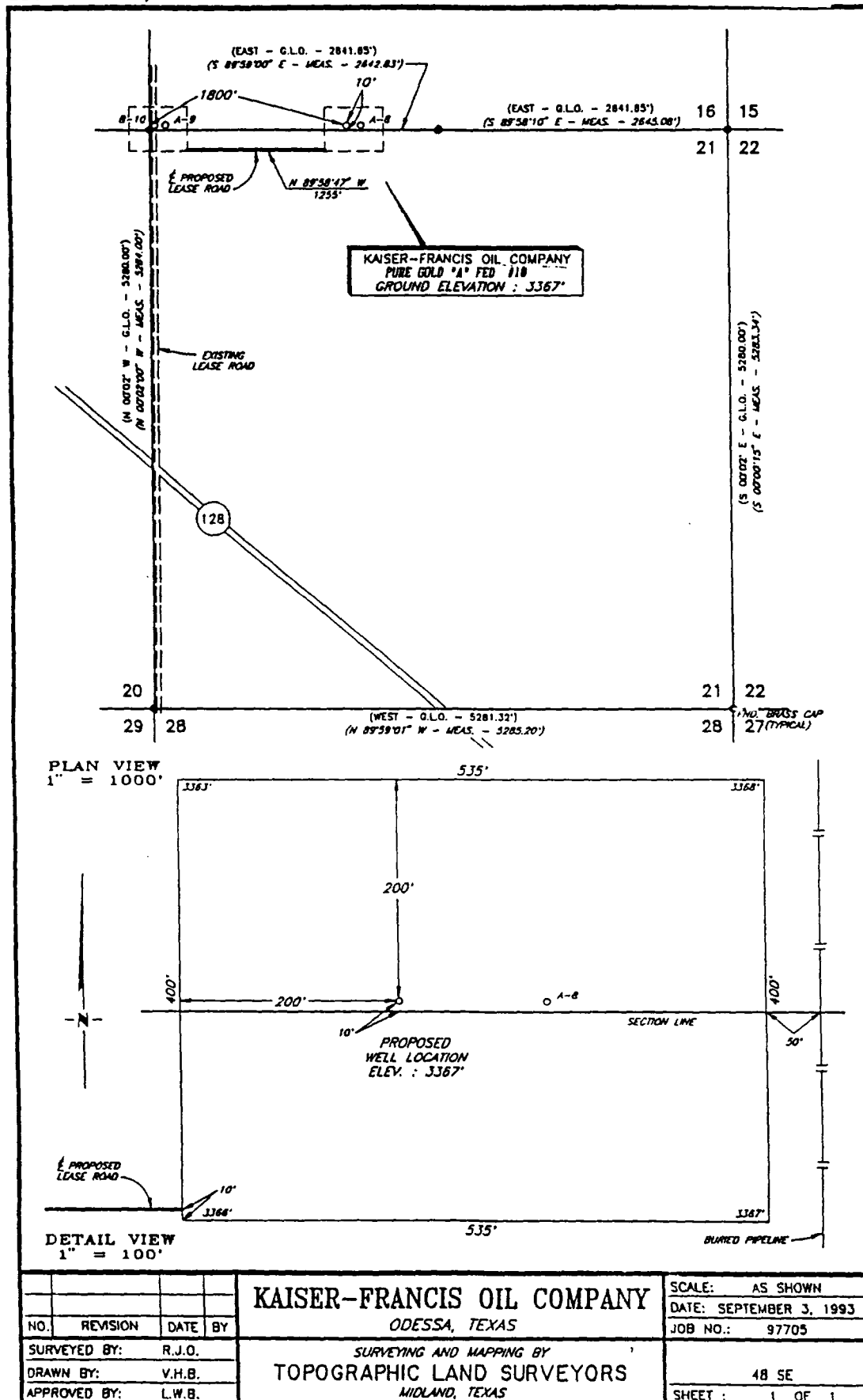
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 16 & 21, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Exhibit E
Kaiser-Francis Oil Company
Pure Gold "A" Fed #10
Eddy County, New Mexico



VERTICAL PROJECTION

SCALE 1" = 500'

DUE SOUTH

KAISER-FRANCIS OIL COMPANY

PURE GOLD "A" FIELD
SECTION 21 T23S R31E

WELL NO. 1A-10

EDDY COUNTY, NEW MEXICO

Exhibit A1

Kaiser-Francis Oil Company

Pure Gold "A" Fed #10

Eddy County, New Mexico



1-JUL-93

HORIZONTAL PROJECTION

SCALE 1" = 500'

SUR. LOC.

SECTION 16

SECTION 21

SOUTH

BHL

DOWN at 11° 30'

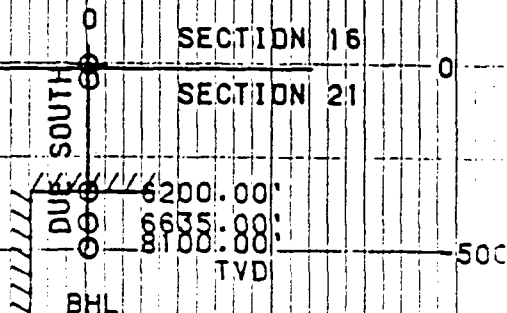
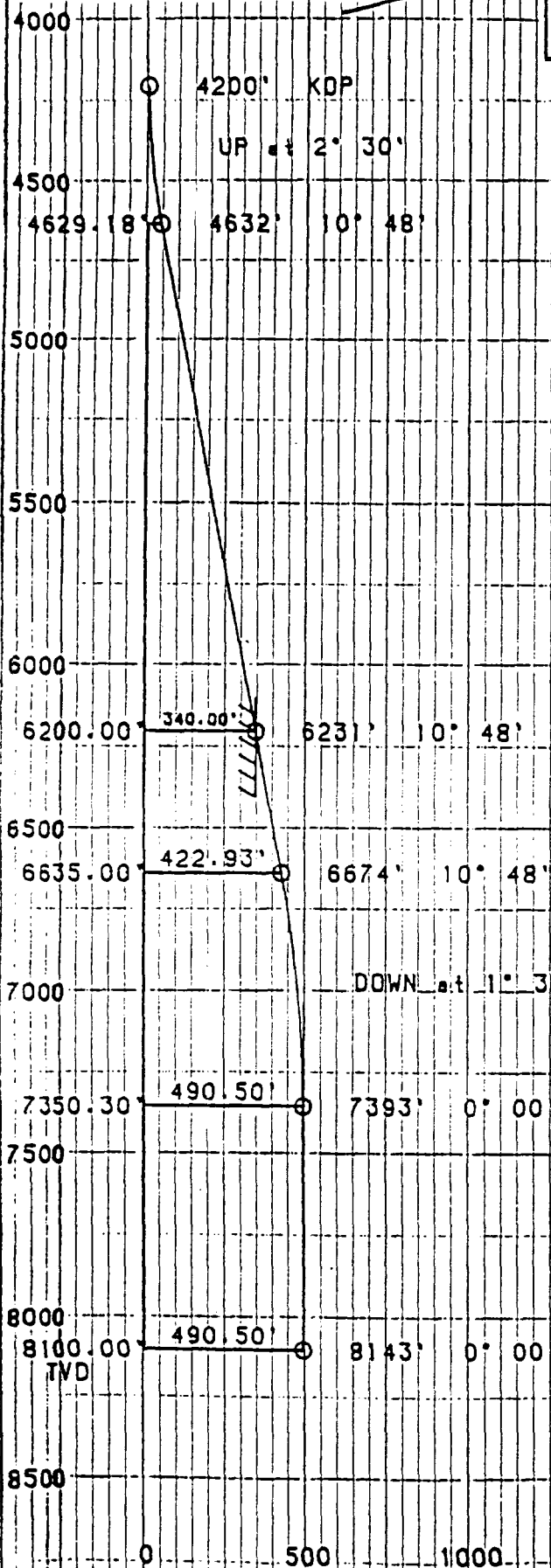
SURFACE LOCATION CALLS:

10.00' FSL - 1800.00' FWL OF SECTION 16

PROPOSED B.R.L. - 8100.00' TVD

480.50' FNL - 1800.00' FWL SECTION 21

480.50' DUE SOUTH



DISTRICT I

P. O. Box 1980
Hobbs, NM 88240

DISTRICT II

P. O. Drawer DD
Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd
Aztec, NM 87410

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY		Lease PURE GOLD "A" FED		Well No. 10
Unit Letter N	Section 16	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY
Actual Footage Location of Well				
10 feet from the SOUTH line and		1800 feet from the WEST line		
Ground Level Elev. 3367'	Producing Formation Delaware	Pool West Sand Dunes	40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

OPERATOR CERTIFICATION

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

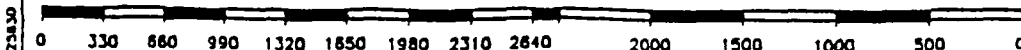
Signature <i>Milton Griffin</i>
Printed Name Milton Griffin
Position Operations Engineer
Company Kaiser-Francis Oil Co.
Date October 8, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed SEPTEMBER 3, 1993
Signature and Seal of Professional Surveyor <i>Larry W. Busby</i>
Certificate No. LARRY W. BUSBY R.P.S. #11398

Bottomhole Location is 480' FNL & 1800' FWL Sec 21
This acreage dedicated is NE/4 NW/4 Sec 21, T23S, R31E



APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal No. 10
Surface Location: 10' FSL & 1800' FWL Sec 16
Bottomhole Location: 480' FNL & 1800' FWL Sec 21
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal #10
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + 20 steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2-1/2 degrees per 100 feet of hole in the proper direction until a maximum angle of 10 degrees 48 minutes is obtained plus or minus to 6231' M.D. POOH for angle holding assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point collar roller reamer + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 10 degrees and 48 minutes to the TVD depth of 6674'. POOH for angle dropping assembly.

8. Go in hole with 7-7/8" bit + 6-1/4" non-magnetic drill collar + 3 point roller reamer + (20) 6-1/4" steel drill collars. Drill the hole dropping at 1-1/2 degrees per 100' deviation into the Bone Spring plus or minus 7350.30' TVD. At this point you will be vertical and you will continue to drill to a TVD of 8100'.
9. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
10. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

RINGOLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Kaiser-Francis Oil Company

3. ADDRESS AND TELEPHONE NO.

P.O. Box 21468, Tulsa, Oklahoma 74121-1468

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

10' FSL & 2025' FEL Sec 16

At proposed prod. zone

2012' FNL & 2176' FEL Sec 21

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 miles East from Loving

10. DISTANCE FROM PROPOSED*

2012'

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED

TO THIS WELL

40

13. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

692'

15. PROPOSED DEPTH

8200' TVD

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

22. APPROX. DATE WORK WILL START*

Eddy

NM

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8200' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg & TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMD rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface location and measured and true vertical depths. Give blowout preventer program, if any.

24.

SUBMITTED

Milton Cariffan

TITLE

Operations Engineer

DATE

10-29-93

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

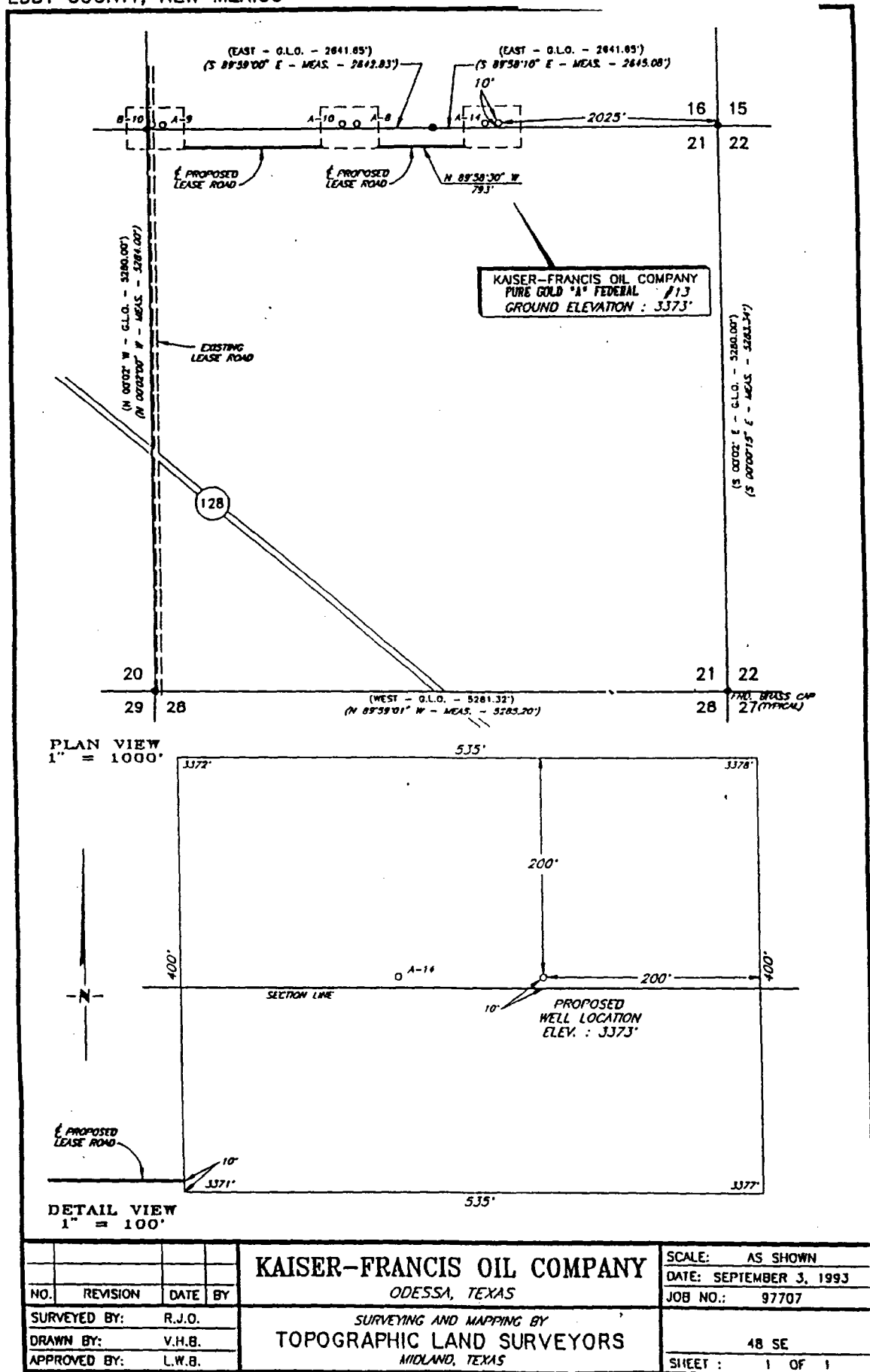
TITLE

DATE

*See Instructions On Reverse Side 36

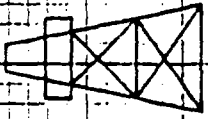
PLAN SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 16 & 21, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Kaiser-Francis Oil Co.
Pure Gold "A" Fed. #13
Eddy County, NM



Kaiser-Francis Oil Co.
Pure Gold "A" Fed. #13
Eddy County, NM

KAISER-FRANCIS OIL COMPANY
PROPOSED WELL NO. A-13
SECTION 21, T 23 S, R 31 E,
EDDY COUNTY, NEW MEXICO
PURE GOLD "A" FIELD



VERTICAL PROJECTION

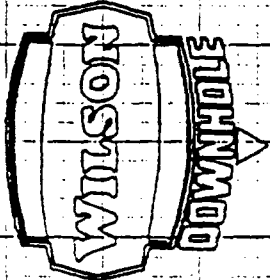
SCALE 1" = 1000'

S 4° 15' 56" W

4000 5000 5383.24' 5000 5443' 31° 05' 5000 5500 5600 5700 7000 7600.00' 8032' 31° 05' 8000.00' 8200.00' 8732' 31° 05' 8000.00' 8200.00' 8732' 31° 05' 8000.00' 8200.00' 8732' 31° 05'

KOP

UP 2° 30'



13-04-93

SURFACE LOCATION CALLS:

10.00' FSL - 2025.00' FEL (SEC. 16)

TARGET - 7600' TVD

1650.81' ENL - 2148.87' FEL (SEC. 21)

1660.81' SOUTH - 123.87' WEST OF SURFACE

1665.43' S 4° 15' 56" W

PROPOSED B.H.L. - 8200' TVD

2011.52' FHL - 2175.78' FEL (SEC. 21)

2021.52' SOUTH - 150.78' WEST OF SURFACE

2027.13' S 4° 15' 56" W

1665.43'

8032'

777

2027.13'

8000.00'

8200.00'

8732'

31° 05'

HORIZONTAL PROJECTION

SCALE 1" = 500'

SUR. LOC.

500

-500

-1000

-1500

-2000

-2500

-3000

-3500

-4000

-4500

-5000

-5500

-6000

-6500

-7000

-7500

-8000

-8500

-9000

-9500

-10000

-10500

-11000

-11500

-12000

-12500

-13000

-13500

-14000

-14500

-15000

N

0

-500

-1000

-1500

-2000

-2500

-3000

-3500

-4000

-4500

-5000

-5500

-6000

-6500

-7000

-7500

-8000

-8500

-9000

-9500

-10000

-10500

-11000

-11500

-12000

-12500

-13000

-13500

5000

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal No. 13
Surface Location: 10' FSL & 2025' FEL Sec 16
Bottomhole Location: 1951' FNL & 2171' FEL Sec 21
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8200'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H₂S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal #13
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2-1/2 degrees per 100 feet of hole in the proper direction until a maximum angle of 31 degrees 05 minutes is obtained plus or minus to 5443' M.D. POOH for packed hole assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point collar roller reamer + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 31 degrees and 05 minutes deviation plus or minus 7600' TVD and continue to drill to TD with the same deviation to plus or minus 8200' TVD.

8. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
9. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM38464	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Kaiser-Francis Oil Company			7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. P.O. Box 21468, Tulsa, Oklahoma 74121-1468			8. FARM OR LEASE NAME, WELL NO. Pure Gold A Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface: Surface: 10' FSL & 2160' FEL Sec 16 At proposed prod. zone: Bottomhole: 480' FNL & 2160' FEL Sec 21			9. AN WELL NO. 14	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 17 miles East from Loving			10. FIELD AND POOL, OR WILDCAT West Sand Dunes	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 480' BHL (Also to nearest drig. unit line, if any): 480' BHL			11. SEC., T., R., M., OR SLM. AND SURVEY OR AREA Sec 21, T23S, R31E	
16. NO. OF ACRES IN LEASE 640			12. COUNTY OR PARISH Eddy	
17. NO. OF ACRES ASSIGNED TO THIS WELL 40			13. STATE NM	
18. PROPOSED DEPTH 8100 TVD			14. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3372' GL			22. APPROX. DATE WORK WILL START*	

23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks circulated
11	8-5/8	32#	4070	1000 sacks circulated
7-7/8	5-1/2	17#	8100 TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700', run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg & TD w/stage collar at 6200' and cmt 1st stage w/850 sx & 2nd stage w/790 sx.
8. RDMO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED William C. Griffin TITLE Operations Engineer DATE 10-8-93
(This space for Federal or State office use)

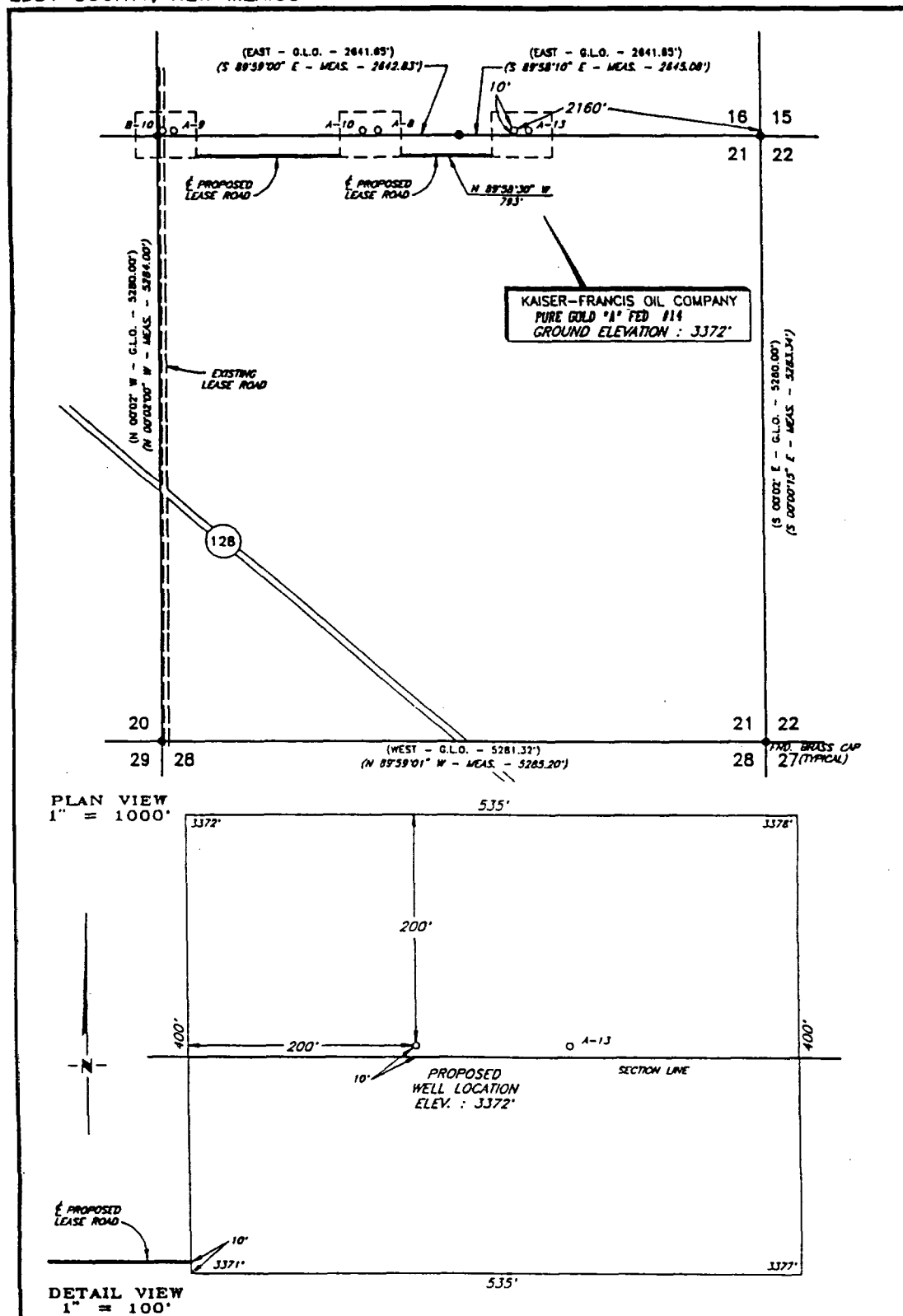
PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 16 & 21, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Exhibit E
Kaiser-Francis Oil Company
Pure Gold "A" Fed #14
Eddy County, New Mexico



NO.	REVISION	DATE	BY

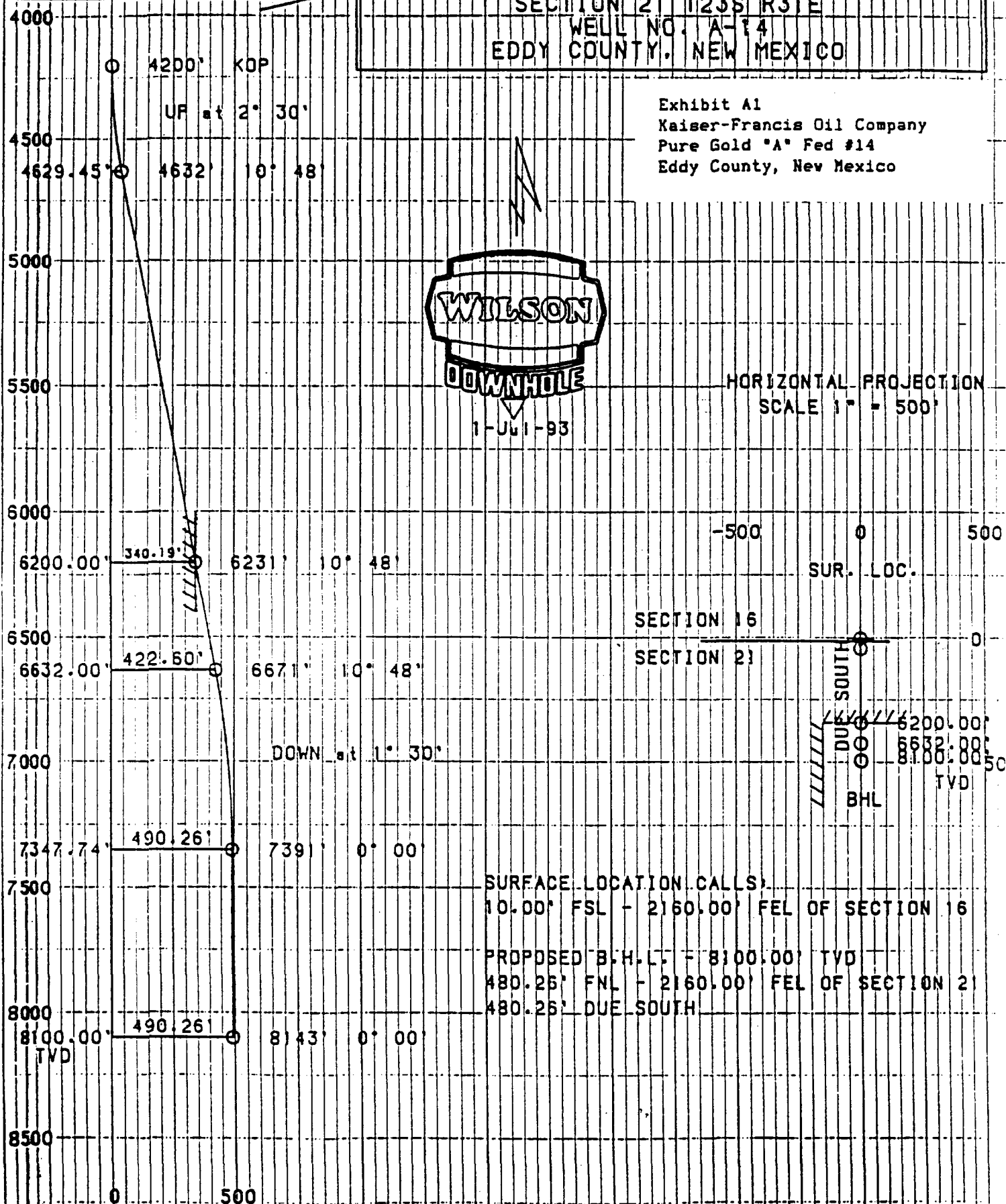
KAISER-FRANCIS OIL COMPANY
ODESSA, TEXAS

SURVEYING AND MAPPING BY
TOPOGRAPHIC LAND SURVEYORS
MIDLAND, TEXAS

SCALE:	AS SHOWN
DATE:	SEPTEMBER 3, 1993
JOB NO.:	97708
	48 SE
SHEET :	1 OF 1

KAISER-FRANCIS OIL COMPANY
PURE GOLD "A" FIELD
SECTION 21 T23S R3E
WELL NO. A-14
EDDY COUNTY, NEW MEXICO

HORIZONTAL PROJECTION
SCALE 1" = 500'



DISTRICT I

P. O. Box 1980
Hobbs, NM 88240

DISTRICT II

P. O. Drawer DD
Artesia, NM 88210

OIL CONSERVATION DIVISION

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

DISTRICT III

1000 Rio Brazos Rd
Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD "A" FED		Well No. 14
Unit Letter 0	Section 16	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well 10 feet from the SOUTH line and 2160 feet from the EAST line					
Ground Level Elev. 3372'	Producing Formation Delaware		Pool West Sand Dunes		40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

OPERATOR CERTIFICATION

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

Signature
Milton Griffin
Printed Name
Milton Griffin
Position
Operations Engineer
Company
Kaiser-Francis Oil Co.
Date
October 8, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
SEPTEMBER 3, 1993
Signature and Seal of
Professional Surveyor

Certificate No.
LARRY W. BUSBY R.P.S. #11398
108 #97708 **VHR**

Bottomhole Location is 480' FNL & 2160' FSL Sec 21
This acreage dedicated to the subject well is the NW/4
NE/4 Sec 21, T23S, R31E



10' 2160'

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal No. 14
Surface Location: 10' FSL & 2160' FEL Sec 16
Bottomhole Location: 480' FNL & 2160' FEL Sec 21
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "A" Federal #14
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + 20 steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2-1/2 degrees per 100 feet of hole in the proper direction until a maximum angle of 10 degrees 48 minutes is obtained plus or minus to 6231' M.D. POOH for angle holding assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point collar roller reamer + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 10 degrees and 48 minutes to the TVD depth of 6632'. POOH for angle dropping assembly.

8. Go in hole with 7-7/8" bit + 6-1/4" non-magnetic drill collar + 3 point roller reamer + (20) 6-1/4" steel drill collars. Drill the hole dropping at 1-1/2 degrees per 100' deviation into the Bone Spring plus or minus 7347.74' TVD. At this point you will be vertical and you will continue to drill to a TVD of 8100'.
9. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
10. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1A. TYPE OF WORK

DRILL ☒

DEEPEN ☐

B. TYPE OF WELL

OIL
WELL ☒

GAR
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Kaiser-Francis Oil Company

3. ADDRESS AND TELEPHONE NO.

P.O. Box 21468, Tulsa, OK 74121-1468

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

2100' FSL & 1600' FEL

At proposed prod. zone

1988' FNL & 1834' FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 miles East from Loving

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

1834'

514'

15. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

1340'

16. NO. OF ACRES IN LEASE

640

19. PROPOSED DEPTH

8100' TVD

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3341'

22. APPROX. DATE WORK WILL START*

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Milton Coffey

TITLE Operations Engineer

DATE 11-2-93

(This space for Federal or State office use)

PERMIT NO. _____

APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____

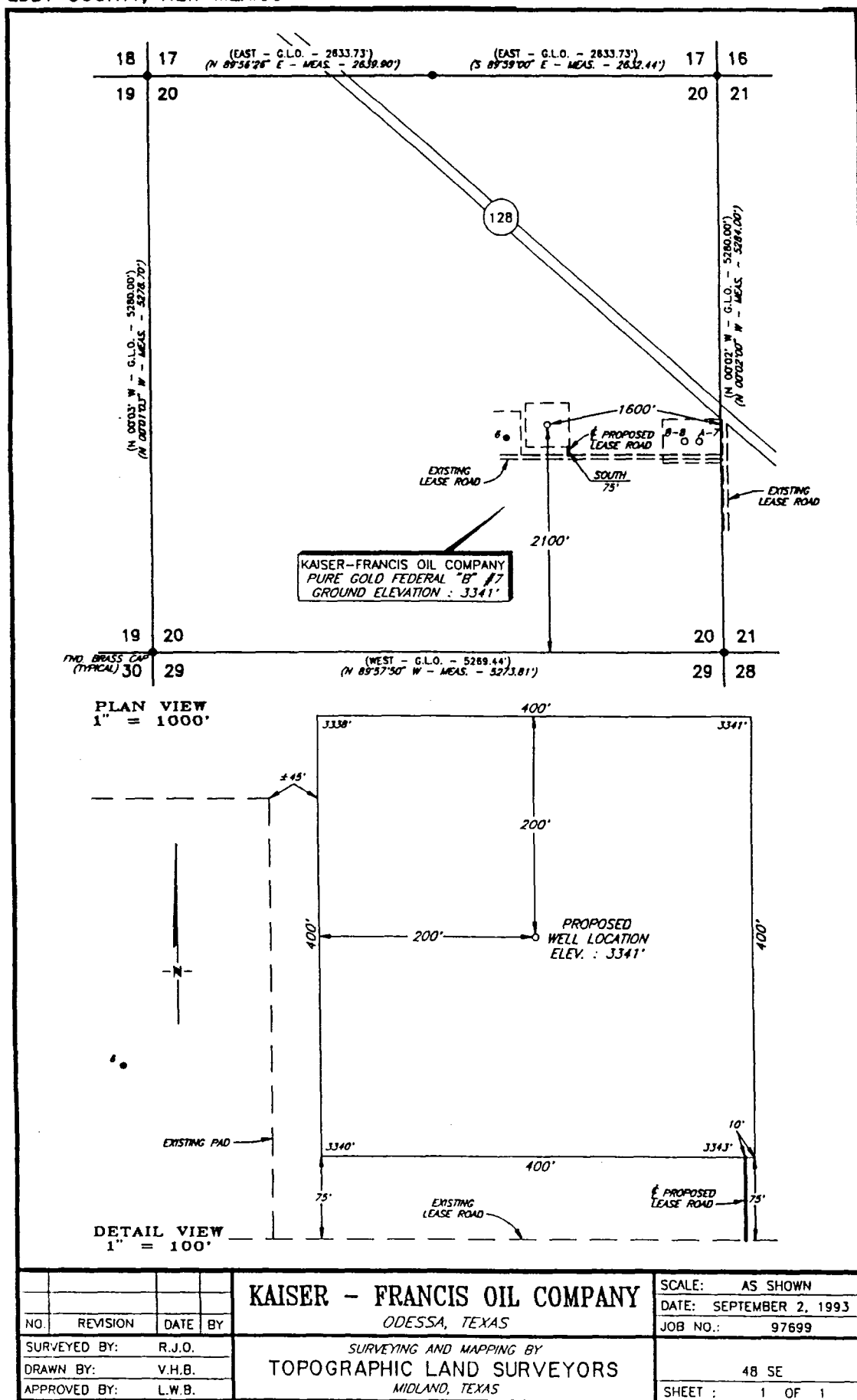
TITLE _____

DATE _____

*See Instructions On Reverse Side 52

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 20, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Exhibit L
Kaiser-Francis Oil Co.
Pure Gold "B" Fed. #7
Eddy County, NM



Kaiser-Francis Oil Co.
Pure Gold "B" Fed. #7
Eddy County, NM

KAISER-FRANCIS OIL COMPANY

PURE GOLD "B" FIELD

SECTION 20, T 23 S-R 31 E,

PROPOSED WELL NO. B-7

EDDY COUNTY, NEW MEXICO

HORIZONTAL PROJECTION

SCALE 1" = 300'

VERTICAL PROJECTION

SCALE 1" = 1000'

N 11° 05' 37" W

500

500

500

500

500

500

500

500

500

500

500

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500

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500

500

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500

500

500

500

500

500

500

500

500

4150' KOP

UP at 2° 00'

5098.62' 5117' 19° 20'

5880.00' 1039.42' 7768' 19° 20'

3100.00' 1214.89' 8298' 19° 20'

TVD

500

N



20-JUL-93

NOTE:

HARDLINES ARE 150' SOUTH
AND 150' EAST OF TARGET.

SURFACE LOCATION CALLS:

2100.00' FSL - 1600.00' FEL

TARGET - 7600' TVD

3120.00' FSL - 1800.00' FEL

1020.00' NORTH - 200.00' WEST OF SURFACE

1039.42' N 11° 05' 37" W

PROPOSED B.H.L. - 8100' TVD

3292.19' FSL - 1833.76' FEL

1192.19' NORTH - 233.76' WEST OF SURFACE

1214.89' N 11° 05' 37" W

BHL

8100.00'

TVD

7600.00'

900

600

300

0

300

600

900

1200

1500

1800

2100

2400

2700

3000

3300

3600

3900

4200

4500

4800

5100

5400

5700

6000

6300

6600

6900

7200

7500

7800

8100

8400

8700

9000

9300

9600

9900

10200

10500

10800

11100

11400

11700

12000

12300

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12900

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43200

43500

43800

44100

44400

44700

45000

45300

45600

45900

46200

46500

46800

47100

47400

47700

48000

48300

48600

48900

49200

49500

49800

50100

50400

50700

51000

51300

51600

51900

52200

52500

52800

53100

53400

53700

54000

54300

54600

54900

55200

55500

55800

56100

56400

56700

57000

57300

57600

57900

58200

58500

58800

59100

59400

59700

60000

60300

60600

60900

61200

61500

61800

62100

62400

62700

63000

63300

63600

6

DISTRICT I

P. O. Box 1980
Hobbs, NM 88240

DISTRICT II

P. O. Drawer DD
Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd
Aztec, NM 87410

OIL CONSERVATION DIVISION

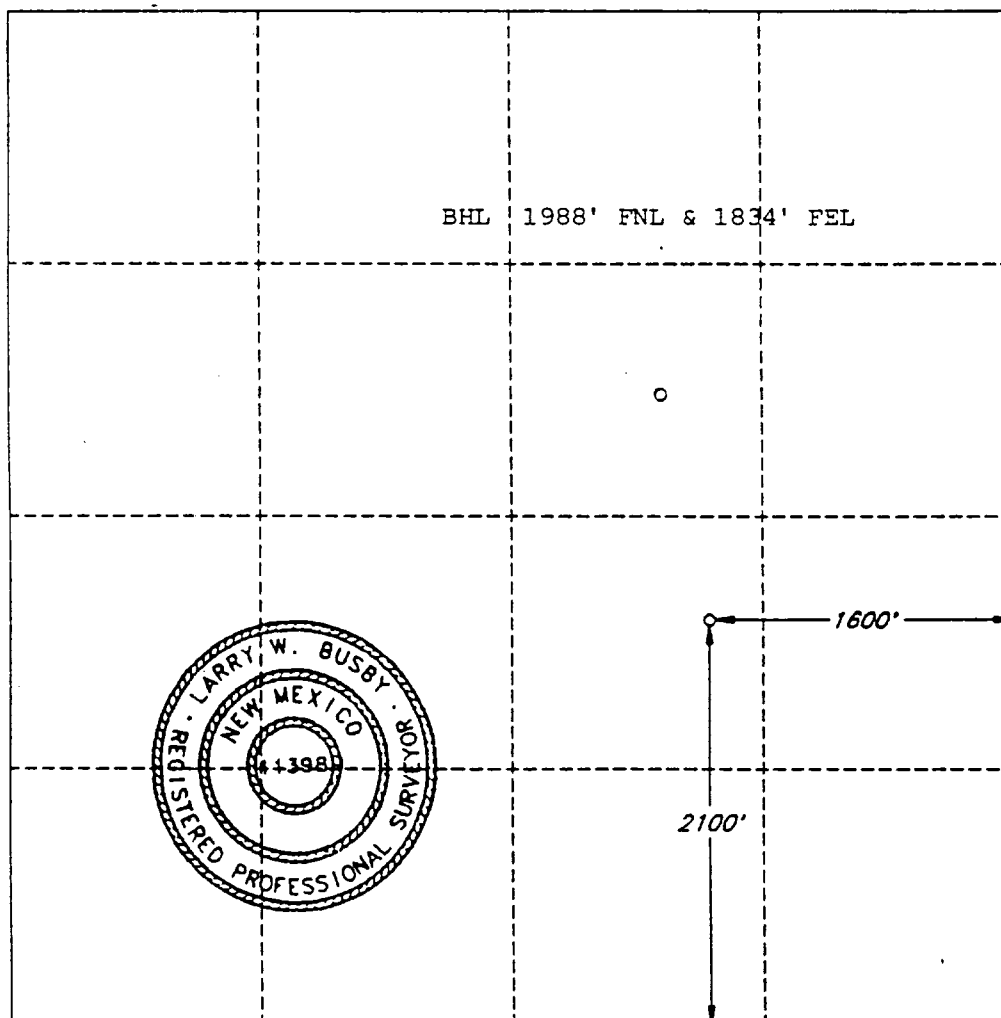
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD FEDERAL 'B'		Well No. 7
Unit Letter J	Section 20	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well					
2100 feet from the SOUTH line and		1600 feet from the EAST line			
Ground Level Elev. 3341'	Producing Formation Delaware	Pool West Sand Dunes	40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.



OPERATOR CERTIFICATION

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

Signature
Milton Griffin
Printed Name
Milton Griffin
Position
Operations Engineer
Company
Kaiser-Francis Oil Co.
Date
November 2, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
SEPTEMBER 2, 1993
Signature and Seal of Professional Surveyor
Larry W. Busby
Certificate No.
LARRY W. BUSBY R.P.S. #11398
JOB #97699 / 48 SE V.H.B.

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal No. #7
Surface Location: 2100' FSL & 1600' FEL
Bottomhole Location: 1988' FNL & 1834' FEL
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal #7
Eddy County, New Mexico

SUMMARY

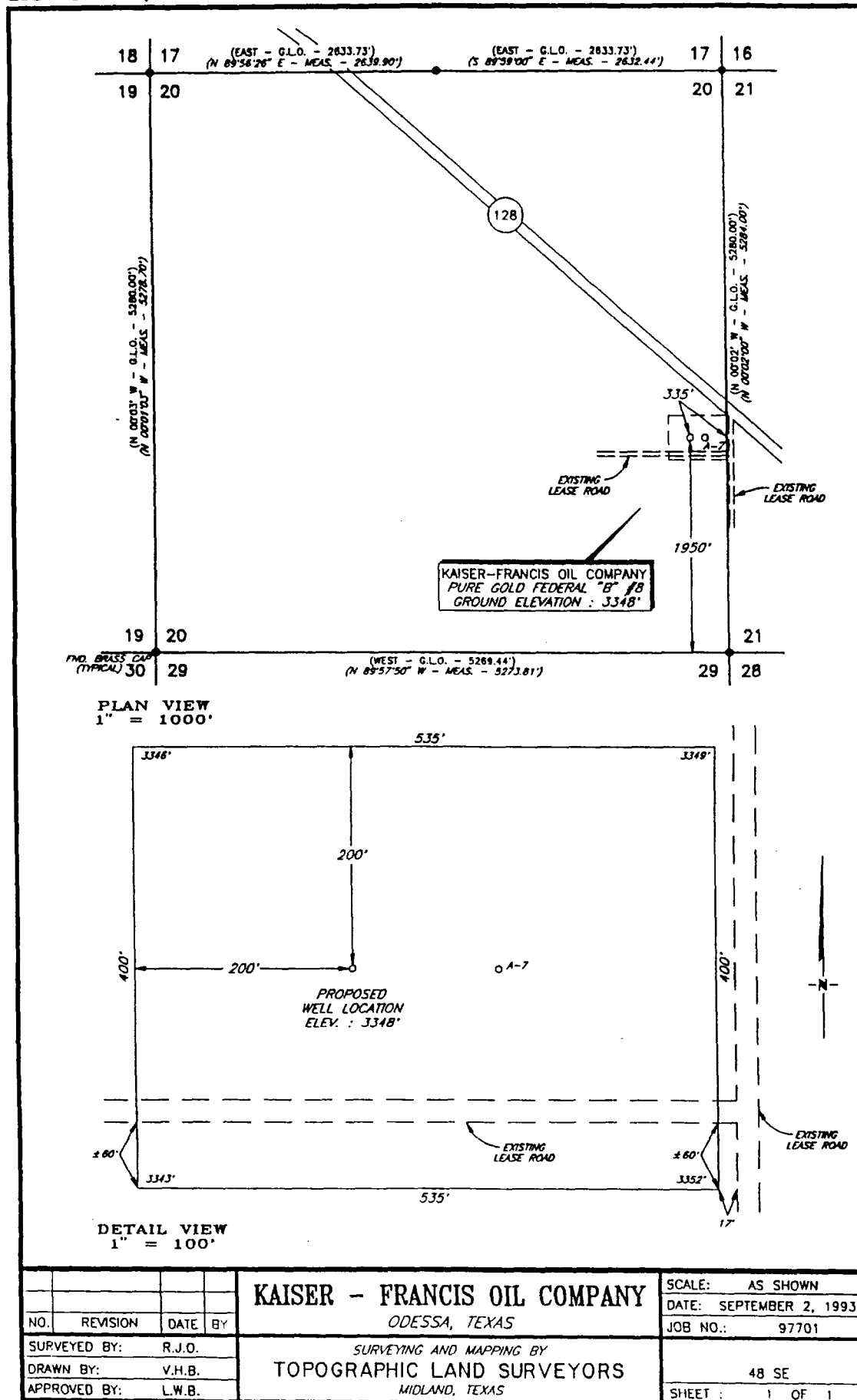
Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4150' and survey with non-magnetic instrument at 4150'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2 degrees per 100 feet of hole in the proper direction until a maximum angle of 19 degrees 20 minutes is obtained plus or minus to 5117' M.D. POOH for packed hole assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point roller reamer + 6-1/4" non-magnetic drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 19 degrees 20 minutes deviation plus or minus 7600' TVD and continue to drill to TD with the same deviation to plus or minus 8100' TVD.

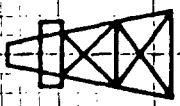
8. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
9. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

PLAN SHOWING PROPOSED
 WELL LOCATION AND LEASE ROAD IN
 SECTION 20, T-23-S, R-31-E, N.M.P.M.
 EDDY COUNTY, NEW MEXICO

Kaiser-Francis Oil Co.
 Pure Gold "B" Fed. #8
 Eddy County, NM

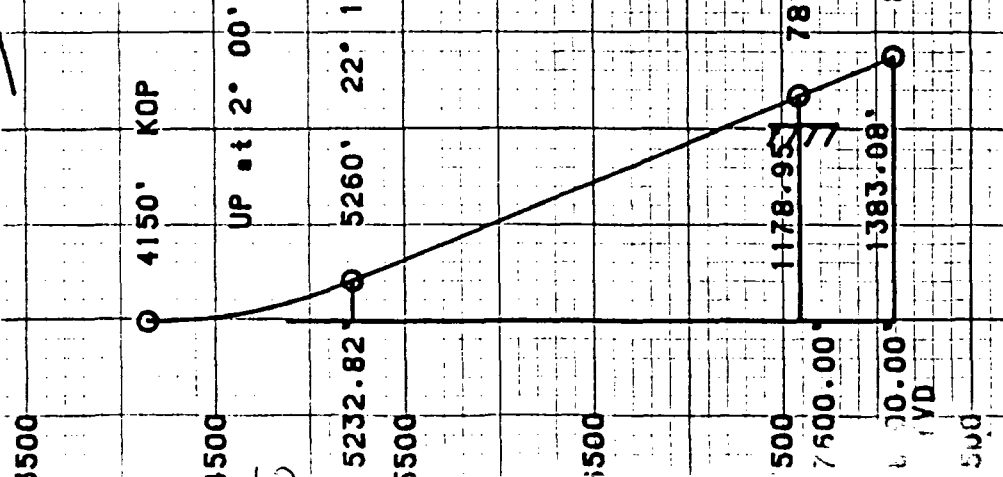


KAISER-FRANCIS OIL COMPANY
PURE GOLD "B" FIELD
SECTION 20, T 23 S-R 31 E.
PROPOSED WELL NO. B-8
EDDY COUNTY, NEW MEXICO



VERTICAL PROJECTION

SCALE 1" = 1000'
N 7° 03' 53" W



SURFACE LOCATION CALLS:

3330.00' FNL - 335.00' FEL (SEC. 20)

TARGET - 7600' TVD

2160.00' FNL - 480.00' FEL (SEC. 20)

1170.00' NORTH - 145.00' WEST OF SURFACE

1178.95' N 07° 03' 53" W

PROPOSED B.H.L. - 8100' TVD

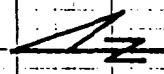
1957.42' FNL - 505.11' FEL

1372.58' NORTH - 170.11' WEST OF SURFACE

1383.08' N 07° 03' 53" W

NOTE:

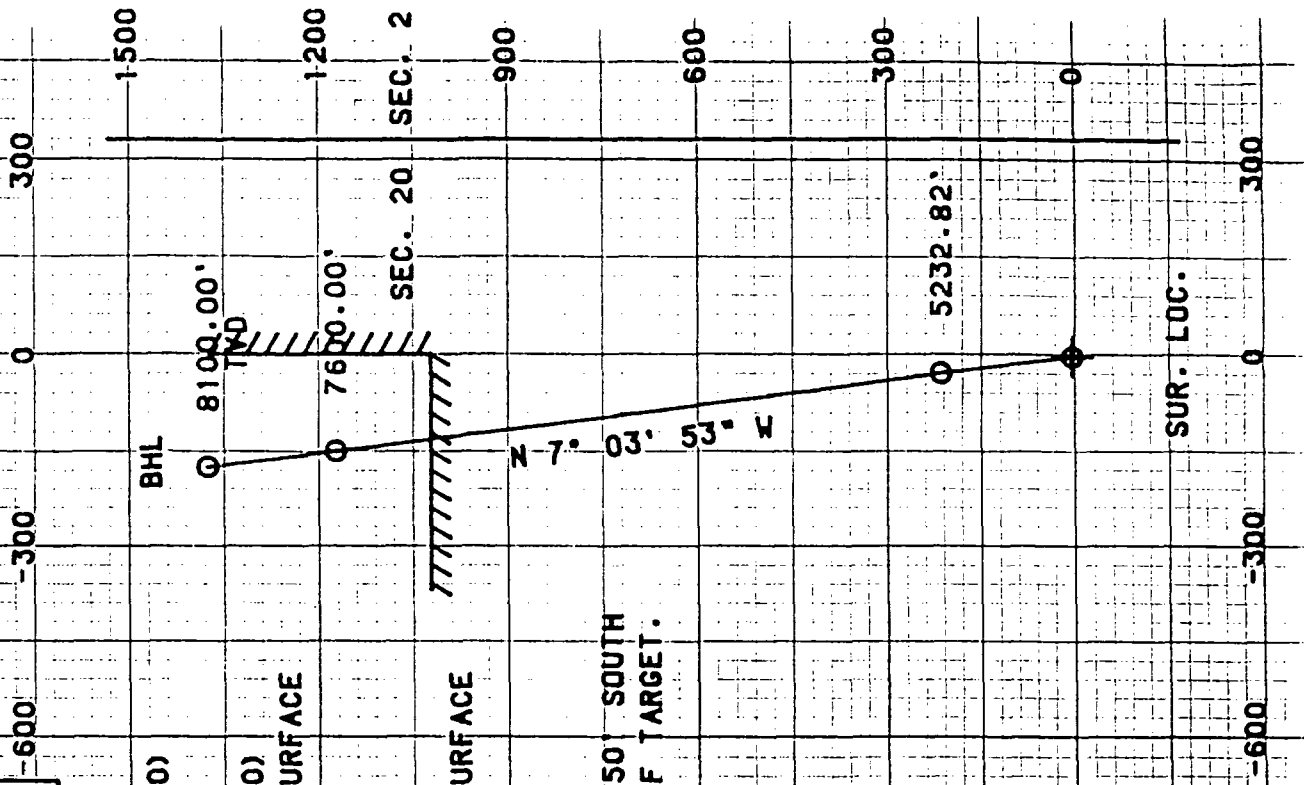
HARDLINES ARE 150' SOUTH
AND 150' EAST OF TARGET.



20-JUL-93

HORIZONTAL PROJECTION

SCALE 1" = 300'



BHL

8100.00'

TVD

7600.00'

SEC. 20 SEC. 2

900

600

300

0

SUR. LOC.

-300

-600

-900

-1200

-1500

-1800

-2100

-2400

-2700

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM38463	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Kaiser-Francis Oil Company			7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. P.O. Box 21468, Tulsa, OK 74121-1468			8. FARM OR LEASE NAME, WELL NO. Pure Gold B Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1950' FSL & 335' FEL At proposed prod. zone 1957' FNL & 505' FEL			9. API WELL NO. 8	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 17 miles East from Loving			10. FIELD AND POOL, OR WILDCAT West Sand Dunes	
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 505'			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 20, T23S, R31E	
15. NO. OF ACRES IN LEASE 640			12. COUNTY OR PARISH Eddy	
16. PROPOSED DEPTH 8100' TVD			13. STATE NM	
17. NO. OF ACRES ASSIGNED TO THIS WELL 40			22. APPROX. DATE WORK WILL START*	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1350'			21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3348'	

23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED Milton C. [Signature] TITLE Operations Engineer DATE 11-2-93
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side 60

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

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

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

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

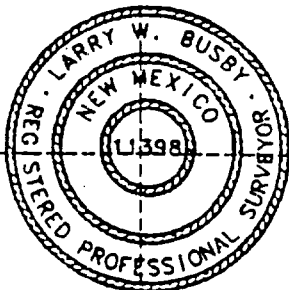
WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD FEDERAL 'B'		Well No. 8
Unit Letter I	Section 20	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well					
1950 feet from the		SOUTH	line and	335 feet from the	EAST line
Ground Level Elev. 3348'	Producing Formation Delaware		Pool West Sand Dunes	40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

BHL 1950' FNL & 505' FEL



OPERATOR CERTIFICATION

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

Signature
Milton Griffin
Printed Name
Milton Griffin
Position
Operations Engineer
Company
Kaiser-Francis Oil Co.
Date
November 2, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
SEPTEMBER 2, 1993
Signature and Seal of Professional Surveyor
Larry W. Busby
Certificate No.
LARRY W. BUSBY R.P.S. #11398
JOB #97701 / 48 SE V.H.B.

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal No. #8
Surface Location: 1950' FSL & 335' FEL
Bottomhole Location: 1957' FNL & 505' FEL
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal #8
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4150' and survey with non-magnetic instrument at 4150'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2 degrees per 100 feet of hole in the proper direction until a maximum angle of 22 degrees 12 minutes is obtained plus or minus of 5260' M.D. POOH for packed hole assembly.
7. Go in hole with 7-7/8" bit + 6 point roller reamer + short drill collar + 3 point roller reamer + 6-1/4" non-magnetic drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole maintaining 22 degrees 12 minutes deviation plus or minus 7600' TVD and continue to drill to TD with the same deviation to plus or minus 8100' TVD.

8. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
9. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

GAR
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Kaiser-Francis Oil Company

3. ADDRESS AND TELEPHONE NO.

P.O. Box 21468, Tulsa, OK 74121-1468

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

10' FSL & 1960' FEL

At proposed prod. zone

667' FNL & 1800' FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 miles East from Loving

10. DISTANCE FROM PROPOSED*

667'

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED

40

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drg. unit line, if any)

667'

15. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

160'

19. PROPOSED DEPTH

8100' TVD

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3337'

22. APPROX. DATE WORK WILL START*

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMD rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout prevention program, if any.

24.

SIGNED Milton D. Jeffers TITLE Operations Engineer DATE 12-6-93

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

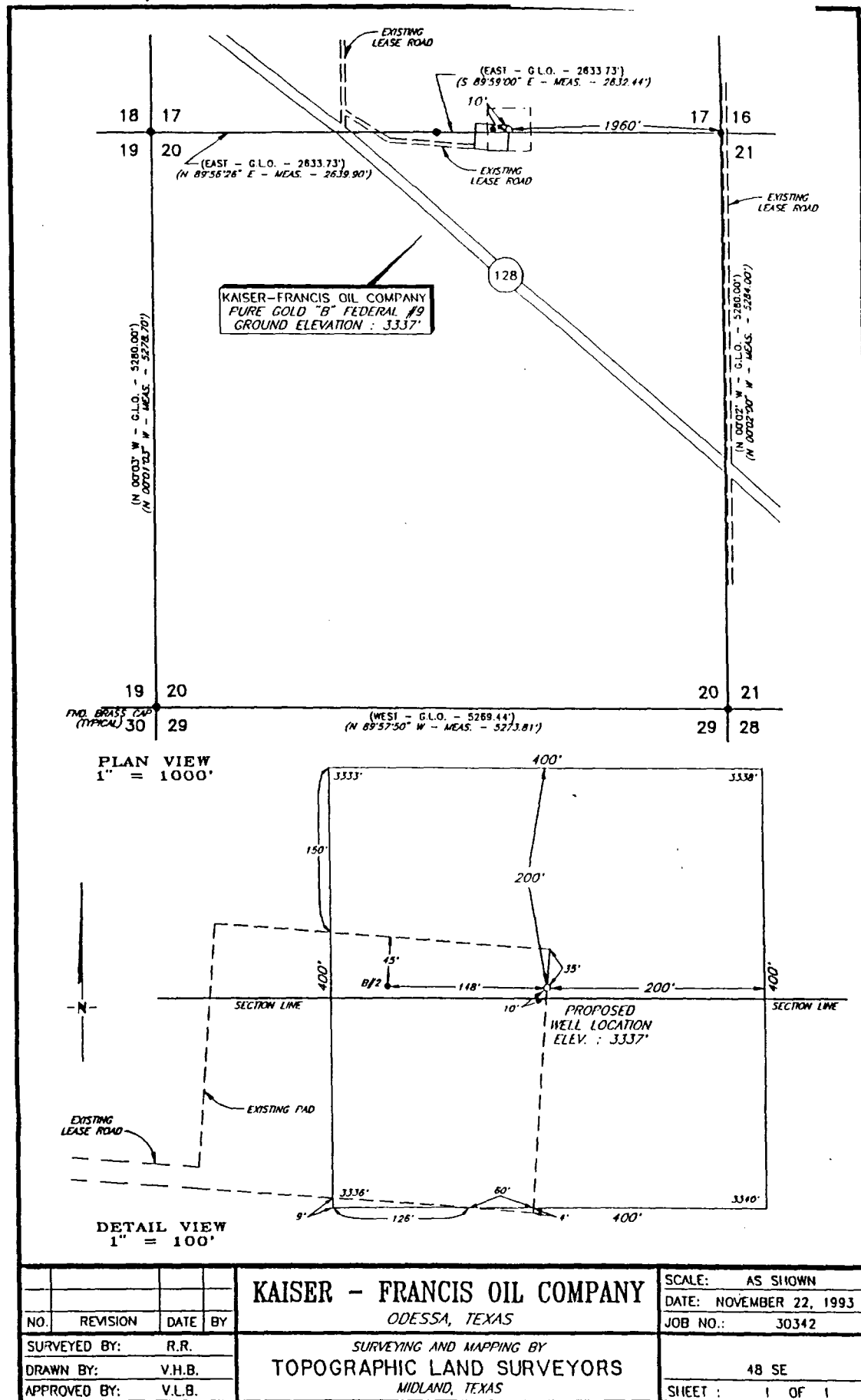
*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

126

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 17 & 20, T-23-S, R-31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

LAND 111 E.
Kaiser-Francis Oil Co.
Pure Gold "B" Fed. #9
Eddy County, NM



Kaiser-Francis Oil Co.
Pure Gold "B" Fed. #9
Eddy County, NM



VERTICAL PROJECTION

SCALE 1" = 564'

S 12° 29' 38" E

KAISER-FRANCIS OIL COMPANY

PURE GOLD "B" FIELD
SECTION 20, T 23 S-R 31 E,
PROPOSED WELL NO. B-9
EDDY COUNTY, NEW MEXICO

HORIZONTAL PROJECTION

SCALE 1" = 169'

4000

4250' KOP

-150 SUR. LOC. 150

SEC. 17

UP at 2° 00'

SEC. 20

SURFACE LOCATION CALLS:

10' FSL - 1950.00' FEL (SEC. 17)

5144.17' 18° 11' 19" 1960

TARGET - 6200' TVD

480.00' FNL - 1800.00' FEL (SEC. 20)

490.00' SOUTH 12 29' 38" EAST

PROPOSED B.H.L. - 8100' TVD

666.95' FNL - 1800.00' FEL (SEC. 20)

693.37' S 12 29' 38" E OF SUR. LOCATION

4500

5000

5144.17'

5159' 18° 11' 19"

5500

6000

6200.00'

490.00'

502.54'

6311' 18° 11' 19"

6500

NOTE:

HARDLINES ARE 150' NORTH
AND 150' EAST OF TARGET.

DOWN at 1° 30'

7000

7430.40'

693.37'

7523' 0° 00'

7500

8000

8100.00'

693.37'

8193' 0° 00'

TVD

0

500

1000

0

0

5144.17'

-150

S 12° 29' 38" E

-300

6200.00'

450

600

7430.40'

BHL

-150

0

150

-750



15-JUL-93

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

OIL CONSERVATION DIVISION

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

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

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD 'B' FEDERAL		Well No. 9
Unit Letter 0	Section 17	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well					
10		feet from the	SOUTH	line and	1960
				feet from the	EAST
				line	
Ground Level Elev. 3337'		Producing Formation Delaware		Pool W. Sand Dunes	Acreage 40

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

Bottomhole Locations: 667' FNL & 1800' FEL

The acreage dedicated to this well is the
NW/4 NE/4 Sec 20, T23S, R31E

OPERATOR CERTIFICATION

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

Signature
Milton Griffin
Printed Name
Milton Griffin

Position
Operations Engineer

Company
Kaiser-Francis Oil Co.

Date
December 6, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
NOVEMBER 22, 1993

Signature and Seal of
Professional Surveyor
V. L. Bezner

Certificate No.
V. L. BEZNER 320

0 330 660 990 1320 1650 1980 2310 2640

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal No. #9
Surface Location: 10' FSL & 1960' FEL
Bottomhole Location: 667' FNL & 1800' FEL
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal #9
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4250' and survey with non-magnetic instrument at 4250'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + 20 steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2 degrees per 100 feet of hole in the proper direction until a maximum angle of 18 degrees 11 minutes is obtained plus or minus to 6311' M.D. POOH for angle dropping assembly.
7. Go in hole with 7-7/8" bit + 6-1/4" non-mag drill collar + 3 point roller reamer + 6-1/4" steel drill collar + 3 point roller reamer + (20) 6-1/4" drill collars. Drill hole dropping at 1.5 degrees per 100' to the TVD depth of 7430.40' at this point you will be vertical and will continue to drill to a TVD depth of 8100'.

8. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
9. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Kaiser-Francis Oil Company

3. ADDRESS AND TELEPHONE NO.

P.O. Box 21468, Tulsa, OK 74121-1468

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

Surface: 10' FSL & 145' FWL Sec 16

At proposed prod. zone

Bottomhole: 480' FNL & 480' FEL Sec 20

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 miles East from Loving

16. DISTANCE FROM PROPOSED*

480'

18. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

15. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

1450'

19. PROPOSED DEPTH

8100' TVD

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, CR, etc.)

3352'

22. APPROX. DATE WORK WILL START*

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	700	700 sacks Circulated
11	8-5/8	32#	4070	1000 sacks Circulated
7-7/8	5-1/2	17#	8100' TVD	1370 sacks tie back @ least 200' into 8-5/8"

Stage tool @ 6200'

1. MIRU Rotary.
2. Drill 17-1/2" hole to 700' run & set 13-3/8" surface csg & cmt w/700 sx.
3. Install 3000# BOP & test to 600#.
4. Drill 11" hole to 4070', run & set 8-5/8" intermediate csg & cmt w/1000 sx.
5. Test csg to 1000#.
6. Drill 7-7/8" hole to 8100' TVD & run electric logs.
7. If hydrocarbons are indicated, run & set 5-1/2" csg @ TD w/stage collar at 6200' and cmt 1st stage w/580 sx & 2nd stage w/790 sx.
8. RDMO rotary, install wellhead, run cement bond log, perforate and stimulate for production.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Milton Casper

TITLE

Operations Engineer

DATE

10/12/93

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

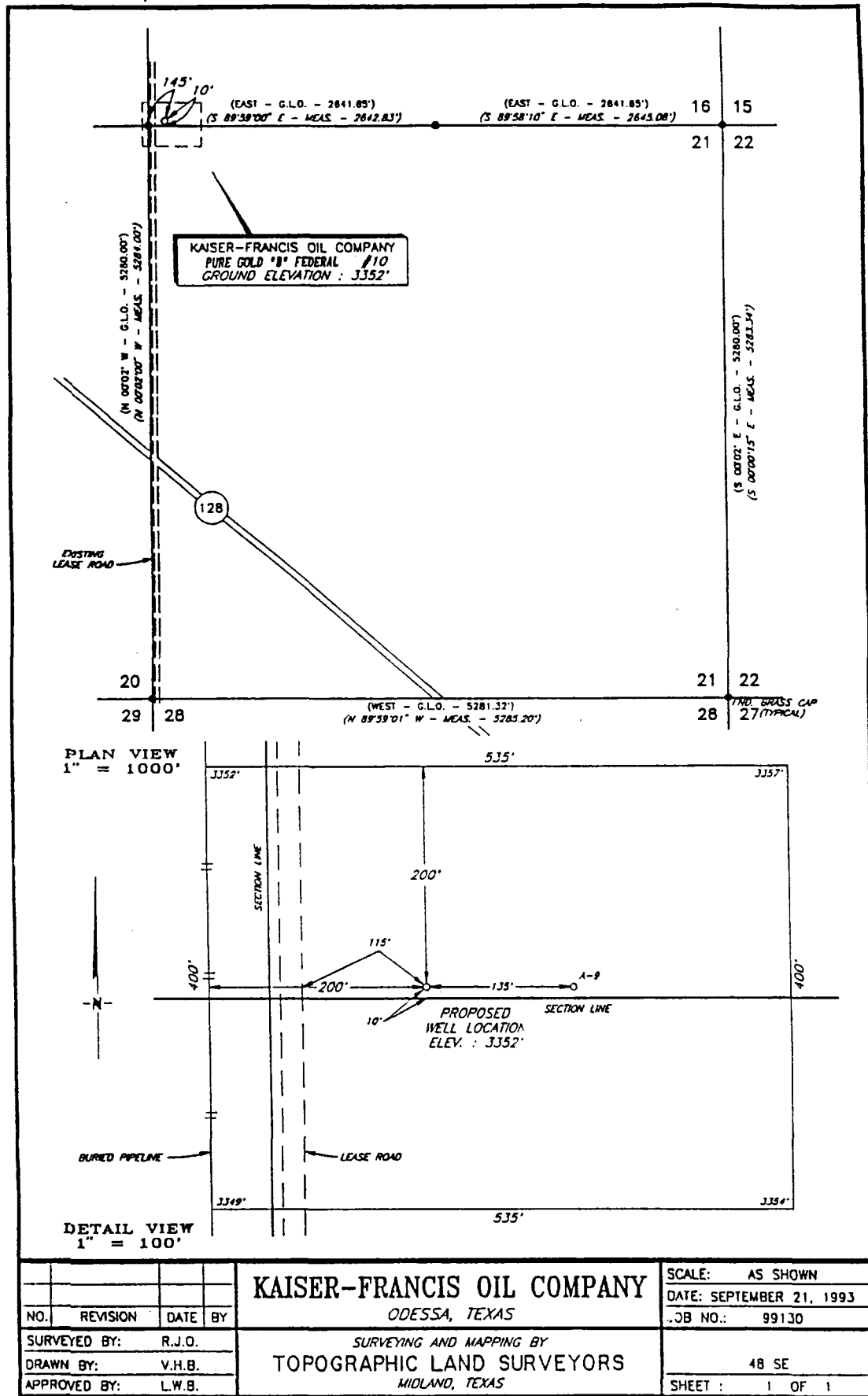
APPROVED BY

TITLE

DATE

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.





KAISER-FRANCIS OIL COMPANY

PURE GOLD "B" FIELD
SECTION 20, T 23 S-R 31 E,
PROPOSED WELL NO. B-10
EDDY COUNTY, NEW MEXICO

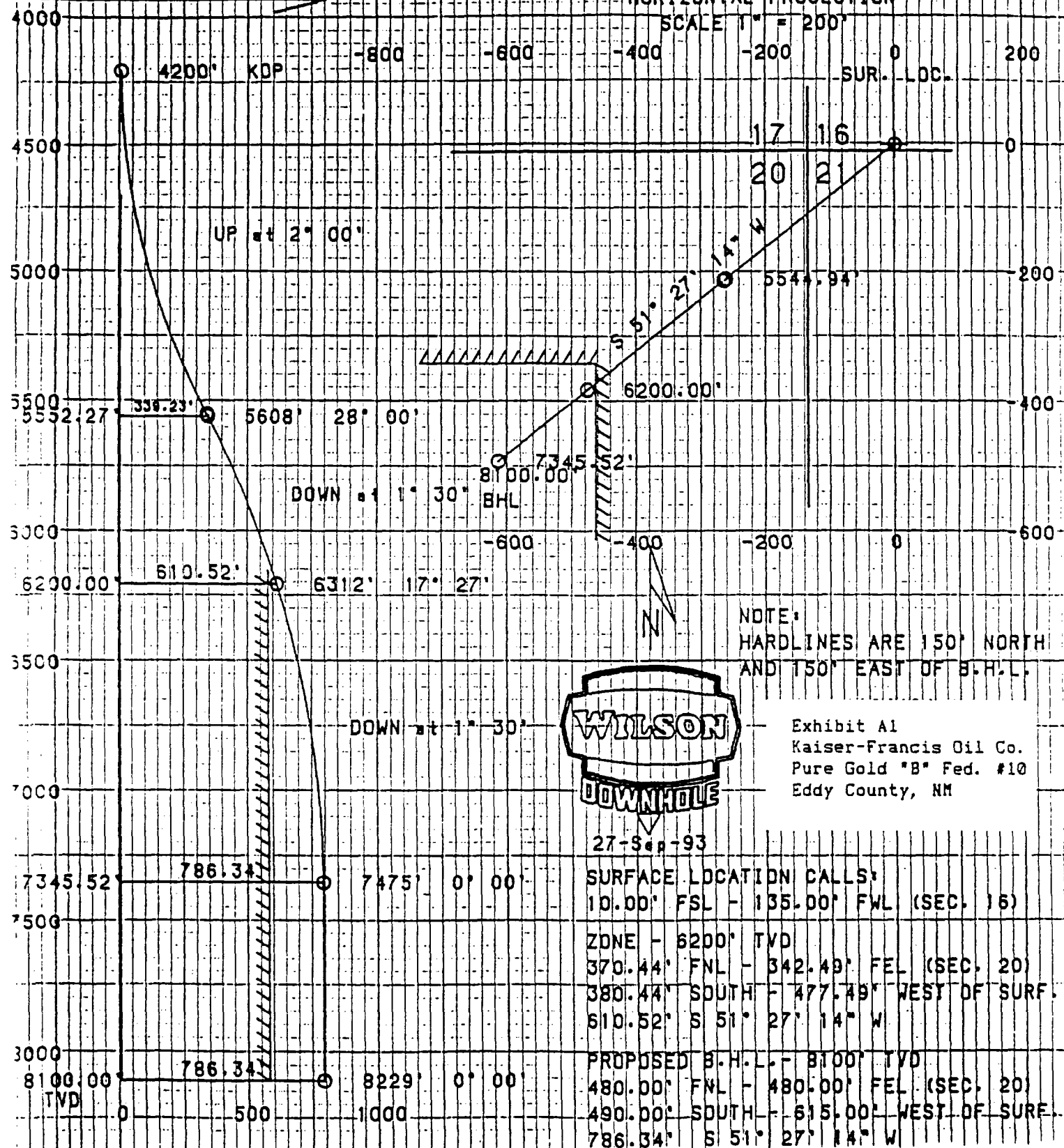
VERTICAL PROJECTION

SCALE 1" = 500'

S 51° 27' 14" W

HORIZONTAL PROJECTION

SCALE 1" = 200'



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

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

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

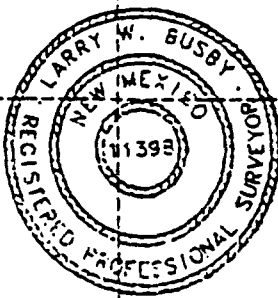
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT
All distances must be from the outer boundaries of the section.

Operator KAISER - FRANCIS OIL COMPANY			Lease PURE GOLD "B" FEDERAL		Well No. 10
Unit Letter M	Section 16	Township 23 SOUTH	Range 31 EAST, N.M.P.M.	County EDDY	
Actual Footage Location of Well 10 feet from the SOUTH line and 145 feet from the WEST line					
Ground Level Elev. 3352'	Producing Formation		Pool		Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all the owners been consolidated by communitization, unitization, forced-pooling, etc.?
☐ Yes ☐ No If answer is "yes", type of consolidation _____
If the answer is "no", list the owners and tract descriptions which have actually been consolidated. (Use the reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the division.

Bottomhole Location: 480' FNL & 480' FEL Sec 20	
The acreage dedicated to this well is the NE/4 NE/4 Sec 20, T23S, R31E.	



145'
10'

OPERATOR CERTIFICATION

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

Signature *Milton Griffin*
Printed Name
Milton Griffin
Position
Operations Engineer
Company
Kaiser-Francis Oil Co.
Date
October 12, 1993

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
SEPTEMBER 21, 1993
Signature and Seal of Professional Surveyor

Certificate No.
LARRY W. BUSBY R.P.S. #11398
JOB #99130 / 48 SE V.H.B.

APPLICATION FOR PERMIT TO DRILL
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal No. 10
Surface Location: 10' FSL & 145' FWL Sec 16
Bottomhole Location: 480' FNL & 480' FEL Sec 20
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Kaiser-Francis Oil Company submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. The geologic surface formation is Quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	4150'
Bone Springs	8000'
TD	8100'
3. We do not anticipate encountering water, and oil and gas formations are as follows:

Delaware

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Exhibit B.
6. Mud Program: See Exhibit C.
7. Auxiliary equipment: Blowout preventer.
8. Testing, Logging, and Coring Programs: No DST's are anticipated. Approximately 25 rotary drilled sidewall wireline cores will be taken in various Delaware zones between 5900' to 7900'. Electric logs will consist of a Compensated Neutron/Litho Density w/Gamma Ray and Caliper and a Dual Laterolog. A Mudlogging unit will be used from 4150' to TD.
9. No abnormal pressures, no abnormal temperatures and no H2S are expected.
10. Anticipated starting date: As soon as possible.

EXHIBIT A
KAISER-FRANCIS OIL COMPANY
Pure Gold "B" Federal #10
Eddy County, New Mexico

SUMMARY

Drilling, Casing and Cementing Program

1. Drill 17-1/2" hole to 700' and run 13-3/8", 48#, H40 casing. Use guide shoe on bottom joint with a float insert 1 joint above the guide shoe. Run 1 centralizer per joint on bottom 3 joints. Cement with 500 sx Class "C" + 2% CaCl + 1/4 pps Cello Flake lead cement followed by 200 sx Class "C" + 2% CaCl. Drop top plug and displace cement with mud.
2. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 600 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 600 psi for 30 minutes.
3. Drill 11" hole to 4070' and run a 8-5/8", 32#, J55 casing. Use guide shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and 5 other centralizers. Cement with 800 sx Class C Lite (35:65:6) + 9.5 pps salt + 1/4 pps Celloflake lead cement followed by 200 sx Class C + 1% KCl + 5 pps salt. A Fluid Caliper will be run to determine the exact volume of cement required to circulate cement to the surface.
4. Nipple up and install BOP's. Cement shall be allowed to stand 12 hours under pressure. After 24 hours test casing to 1000 psi for 30 minutes and drill out cement. After drilling the plug and below the casing seat, test again to 1000 psi for 30 minutes.
5. Go in hole with 7-7/8" bit + 6-1/4" x 30' non-magnetic drill collar + (18) 6-1/4" steel drill collar. Drill 7-7/8" hole to KOP of 4200' and survey with non-magnetic instrument at 4200'. POOH for angle building assembly.
6. Go in hole with 7-7/8" bit + 6-1/2" slow-speed motor + 1-1/2" bent sub + 6-1/4" x 30' non-magnetic drill collar + 20 steel drill collars. Orient tool face properly, deflect well bore toward proper direction. Start angle building run. Drill with this assembly building approximately 2 degrees per 100 feet of hole in the proper direction until a maximum angle of 28 degrees is obtained plus or minus to 5608' M.D. POOH for angle dropping assembly.
7. Go in hole with 7-7/8" bit + 6-1/4" non-magnetic drill collar + 3 point roller reamer + (20) 6-1/4" steel drill collars. Drill the hole dropping at 1-1/2 degrees per 100' deviation into the Bone Spring plus or minus 7345.52' TVD. At this point you will be vertical and you will continue to drill to a TVD of 8100'.

8. Run 5-1/2", 17#, K55 casing with a stage tool at approximately 6200'. Use a float shoe on bottom and a float collar 1 joint above the shoe. Use 1 centralizer per joint on bottom 5 joints and as required across potential productive intervals. Cement the first stage with 580 sx Class H + additives, and cement the second stage with 690 sx Class C Lite (35:65:6) lead cement followed with 100 sx Class C neat. The exact volume to bring the cement top to 4000' will be determined after logging the well.
9. Perforations and stimulation treatments will be determined after running electric logs and setting the 5-1/2" casing.

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

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 10887

APPLICATION OF KAISER-FRANCIS OIL COMPANY
FOR DIRECTIONAL DRILLING,
EDDY COUNTY, NEW MEXICO.

PRE-HEARING STATEMENT

This pre-hearing statement is submitted by KAISER-FRANCIS OIL COMPANY as required by the Oil Conservation Division.

APPEARANCE OF PARTIES

APPLICANT

Kaiser-Francis Oil Company
P. O. Box 21468
Tulsa, Oklahoma 74121-1468
Attn: James T. Wakefield
(918) 494-0000

ATTORNEY

W. Thomas Kellahin
KELLAHIN AND KELLAHIN
P.O. Box 2265
Santa Fe, NM 87504
(505) 982-4285

OPPONENT

Santa Fe Energy Operating
Partners, L.P.

ATTORNEY

James Bruce, Esq.

STATEMENT OF CASE

APPLICANT:

Kaiser-Francis Oil Company is an operator of ten proposed oil wells to be directionally drilled Delaware oil wells to be located in Sections 20 and 21 of T23S, R31E which are subject to the rules for both the Los Medanos and West Sand Dunes Pools, Eddy County, New Mexico.

Kaiser-Francis' proposed wells are all located in the Oil-Potash Area as defined by Division Order R-111-P. Sections 20 and 21 are federal tracts administered by the BLM for which Kaiser-Francis holds valid oil & gas leases.

Kaiser-Francis proposes to use surface location which are within areas presumed to be barren of measurable potash reserves and to drill directionally to bottom hole locations which are overlain by areas which the 1984 Secretary of Interior's Potash Resources Map indicates contain substantial portions of measurable potash reserves.

In each case, the well's bottom hole location will be a standard well location.

In each instance, the BLM will preclude the drilling of a vertical well.

In each instance, directionally drilling is the only practical means available to Kaiser-Francis to access the Delaware pools and to obtain its share of recoverable hydrocarbons.

While Santa Fe Energy has filed an objection, Santa Fe Energy IS:

- (1) NOT an interest owner in any of the wells;
- (2) NOT being encroached towards or upon;
- (3) NOT paying for the costs of any of these wells;

Pre-Hearing Statement
Case No. 10887
Page 3

PROPOSED EVIDENCE

APPLICANT

WITNESSES	EST. TIME	EXHIBITS
James T. Wakefield (PE)	40-50 min.	production plat well location plat potash map APD's approval ltrs. waiver-notice vertical-horizontal well plans
Alan Benson (geologist)	20-30 Min.	isopach cross sections

PROCEDURAL MATTERS

Kaiser-Francis Oil Company is opposed to Santa Fe Operating Partners, L.P. request for a continuance of this case to the January 6, 1994 examiner's docket.

KELLAHIN AND KELLAHIN

By: 

W. Thomas Kellahin

P.O. Box 2265

Santa Fe, New Mexico 87504

(505) 982-4285

BEFORE THE
OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

APPLICATION OF KAISER-FRANCIS OIL COMPANY
FOR DIRECTIONAL DRILLING,
EDDY COUNTY, NEW MEXICO.

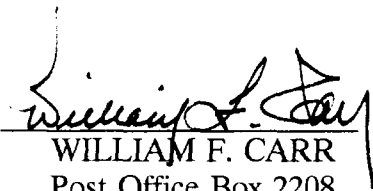
No. 10887

ENTRY OF APPEARANCE

COMES NOW CAMPBELL, CARR, BERGE & SHERIDAN, P.A., and hereby
enters its appearance in the above referenced case on behalf of Yates Petroleum
Corporation.

Respectfully submitted,

CAMPBELL, CARR, BERGE
& SHERIDAN, P.A.,

By: 
WILLIAM F. CARR

Post Office Box 2208

Santa Fe, New Mexico 87504

Telephone: (505) 988-4421

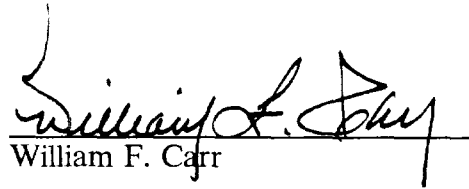
DEC 16

ATTORNEYS FOR YATES
PETROLEUM CORPORATION

CERTIFICATE OF MAILING

I hereby certify that on this 15th day of December, 1993, I have caused to be hand-delivered a copy of our Entry of Appearance in the above-captioned case to:

W. Thomas Kellahin, Esq.
Kellahin & Kellahin
117 North Guadalupe Street
Santa Fe, New Mexico 87504-2068


William F. Carr

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF KAISER-FRANCIS
OIL COMPANY FOR DIRECTIONAL
DRILLING, EDDY COUNTY,
NEW MEXICO

NO. 10887

ENTRY OF APPEARANCE

Pogo Producing Company hereby enters its appearance in the
above case.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY



James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

Attorneys for Pogo Producing Company

DEC 17

CERTIFICATE OF SERVICE

I hereby that the foregoing **Entry of Appearance** was sent by
facsimile transmission this 14th day of December, 1993, to:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504



James Bruce

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

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

DEC 1

APPLICATION OF KAISER-FRANCIS
OIL COMPANY FOR DIRECTIONAL
DRILLING, EDDY COUNTY,
NEW MEXICO

NO. 10887

PRE-HEARING STATEMENT

This pre-hearing statement is submitted by Santa Fe Energy Operating Partners, L.P. as required by the Oil Conservation Division

APPEARANCES OF PARTIES

APPLICANT

Kaiser-Francis Oil Company

ATTORNEY

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285

OPPOSITION OR OTHER PARTY

Santa Fe Energy Operating
Partners, L.P.
550 West Texas, Suite 1330
Midland, Texas 79701
(915) 687-3551
Attn: Curtis D. Smith

ATTORNEY

James Bruce, Esq.
HINKLE, COX, EATON, COFFIELD
& HENSLEY
Post Office Box 2068
Santa Fe, New Mexico 87504
(505) 982-4554

STATEMENT OF CASE

APPLICANT

OPPOSITION OR OTHER PARTY

Applicant seeks to directionally drill certain wells located in the oil-potash area. Santa Fe Energy opposes directional drilling as unnecessary in this area. Further, directional drilling causes economic waste by increasing well costs, and will leave hydrocarbons in the ground which would be recovered by vertical wells, thus causing underground waste. In addition, there are correlative rights issues arising from uphole unorthodox well locations.

PROPOSED EVIDENCE

APPLICANT

WITNESSES

EST. TIME

EXHIBITS

OPPOSITION

WITNESSES

EST. TIME

EXHIBITS

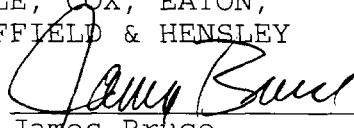
- | | | | |
|----|------------------------------|------------|------------------------------------|
| 1. | Curtis Smith
(Landman) | 5 minutes | (a) Land plat |
| 2. | Darryl Roberts
(Engineer) | 15 minutes | (a) AFE's
(b) economic analyses |

PROCEDURAL MATTERS

Pre-hearing Statement
NMOCD Case No. 10887
Page

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By:



James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

Attorneys for Santa Fe Energy
Operating Partners, L.P.

CERTIFICATE OF SERVICE

I hereby that the foregoing **Pre-Hearing Statement** was hand
delivered this 10th day of December, 1993, to:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504


James Bruce

DEC 1 1993

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF KAISER-FRANCIS
OIL COMPANY FOR DIRECTIONAL
DRILLING, EDDY COUNTY,
NEW MEXICO

NO. 10887

MOTION FOR CONTINUANCE

Santa Fe Energy Operating Partners, L.P. hereby moves for a continuance, and in support thereof states that it needs additional time to prepare for hearing.

Counsel for Kaiser-Francis Oil Company was previously contacted regarding this request, but as yet has not consented, nor objected, thereto.

WHEREFORE, Santa Fe Energy Operating Partners, L.P. requests this matter be continued to the January 6, 1994 Examiner hearing.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY



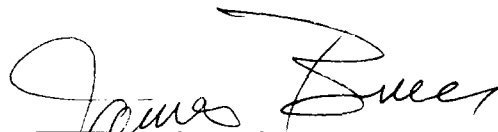
James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

Attorneys for Santa Fe Energy
Operating Partners, L.P.

CERTIFICATE OF SERVICE

I hereby that the foregoing **Motion for Continuance** was hand delivered this 10th day of December, 1993, to:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504


James Bruce

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF KAISER-FRANCIS
OIL COMPANY FOR DIRECTIONAL
DRILLING, EDDY COUNTY,
NEW MEXICO

JLL

NO. 10887

ENTRY OF APPEARANCE

Santa Fe Energy Operating Partners, L.P. hereby enters its
appearance in the above case.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY



James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

Attorneys for Santa Fe Energy
Operating Partners, L.P.

CERTIFICATE OF SERVICE

I hereby that the foregoing **Entry of Appearance** was sent by
facsimile transmission this 9th day of December, 1993, to:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504



James Bruce

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF KAISER-FRANCIS
OIL COMPANY FOR DIRECTIONAL
DRILLING, EDDY COUNTY,
NEW MEXICO

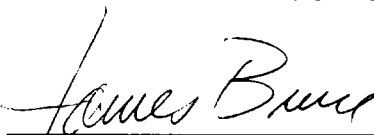
NO. 10887

ENTRY OF APPEARANCE

Santa Fe Energy Operating Partners, L.P. hereby enters its
appearance in the above case.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY



James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

Attorneys for Santa Fe Energy
Operating Partners, L.P.

CERTIFICATE OF SERVICE

I hereby that the foregoing **Entry of Appearance** was sent by
facsimile transmission this 9th day of December, 1993, to:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504


James Bruce



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



Case 10887
Case File

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

MEMORANDUM

TO: Floyd Prando - Director, Oil and Gas Division, State Land Office

FROM: Michael E. Stogner, Chief Hearing Officer/Engineer *MS*

SUBJECT: Application by Kaiser-Francis Oil Company for directional drilling to be heard at the December 16, 1993 Examiner Hearing.

DATE: November 24, 1993

I am send you a copy of an application filed by Kaiser-Francis Oil Company to develop federal minerals underlying the NW/4 of Section 20 and the W/2 NE/4 and NW/4 of Section 21, Township 23 South, Range 31 East, NMPM, Undesignated West Sand Dunes-Delaware and/or Los Medranos-Delaware Pools, Eddy County, New Mexico. They intend to directionally drill into the ten 40-acre tracts comprising this area. Six of the surface locations are in Section 16 to the North, which is state trust land.

I know that Mr. Bruce Stockton's policy towards this situation differed greatly from Mr. Ray Graham's. At this time I am seeking the State Land Office's current policy toward allowing federal minerals to be developed off state trust lands.

I also do not know if a "Unit Agreement" currently exists in this area.

Your assistance in this matter would be greatly appreciated. Please contact me at 827-5811 and I will be glad to discuss this issue with you and your staff further.

MES/amg

Enclosure



RAY B. POWELL
COMMISSIONER

State of New Mexico
OFFICE OF THE
Commissioner of Public Lands
Santa Fe

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

September 7, 1993

Mr. W. Thomas Kellahin
Kellahin & Kellahin
P.O. Box 2265
Santa Fe, New Mexico 87504-2265

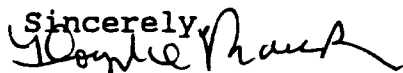
Re: Kaiser-Francis Oil Company's
Application for Business Lease

Dear Tom:

The Commissioner of Public Lands has agreed to issue a Special Use Agreement (SUA) for the surface use of State land in the S/2S/2 of Section 16, Township 23 South, Range 31 East NMPM, Eddy County for the purpose of Kaiser-Francis building a two-well drilling and production site for production from a federal oil and gas lease within Section 20 and 21, T23S, R31E, NMPM. The terms and conditions of the SUA are as follows:

- a. The fee for this SUA will be \$12,000 per well;
- b. Well drilling reserve pits will not be located on State land;
- c. A permit from the Commercial Division of the State Land Office must be obtained, and any permits required for the fresh water right-of-way lines to the site. No use of fresh water from State land is granted with this agreement;
- d. Reclamation of the site must be in accordance with Oil Conservation Division and State Land Office policy, rules and regulations in force at the time of site abandonment. Environmental damage at the site or due to activities at the site will be remediated upon discovery.
- e. Neither this SUA can be assigned, nor a sub-operator designated without prior written approval of the Commissioner.

If you would like to discuss any of the above conditions, please contact me.

Sincerely,

Floyd O. Prando, Director
Oil, Gas & Minerals Division
(505) 827-5744

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*

*NEW MEXICO BOARD OF LEGAL SPECIALIZATION
RECOGNIZED SPECIALIST IN THE AREA OF
NATURAL RESOURCES-OIL AND GAS LAW

TELEPHONE (505) 982-4285

TELEFAX (505) 982-2047

JASON KELLAHIN (RETIRED 1991)

November 23, 1993

HAND DELIVERED

Mr. William J. LeMay
Oil Conservation Division
State Land Office Building
310 Old Santa Fe Trail, 2nd Floor
Santa Fe, New Mexico 87501

Re: Application of Kaiser-Francis Oil Company
for authority to directionally drill ten wells
at various unorthodox surface locations to
various standard bottom hole locations,
Eddy County, New Mexico

Dear Mr. LeMay:

On behalf of Kaiser-Francis Oil Company, please find enclosed our referenced application which we request be set for hearing on the next available Examiner's docket now scheduled for December 16, 1993.

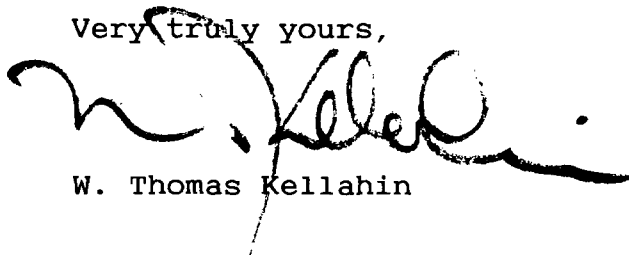
By copy of this letter and application, sent certified mail, we are notifying all interested parties of their right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application and that failure to appear at the hearing may preclude them from any involvement in this case at a later date.

Mr. William J. LeMay
November 23, 1993
Page Two

Pursuant to the Division's Memorandum 2-90, all parties are hereby informed that if they appear in this case, then they are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, December 10, 1993, with a copy delivered to the undersigned.

Also enclosed is our proposed advertisement of this case for the NMOCD docket.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', with a large, stylized flourish extending from the end of the signature.

W. Thomas Kellahin

WTK/mg
Enclosure

cc: Kaiser-Francis Oil Company and
By Certified Mail - Return Receipt
All Interested Parties

suggested OCD notice for publication:

CASE _____: Application of Kaiser-Francis Oil Company for authority to directionally drill ten wells at various unorthodox surface locations to various standard bottom hole locations, Eddy County, New Mexico. Applicant seeks exceptions to Division General Rule 111 and Rule 104(F) for approval to directionally drill each of the following wells commencing at unorthodox surface locations and terminating within a 50 foot radius of a standard bottomhole location and each dedicated to a standard 40-acre spacing and proration unit for production from the West Sand Dunes-Delaware and/or Los Medanos-Delaware Oil Pool in Township 23 South, Range 31 East, NMPM as follows:

Well: Pure Gold A-7
Surface: 1950' FSL x 200' FEL (Unit I) Sec 20
BHL: 2043' FNL x 456' FWL (Unit E) Sec 21

Well: Pure Gold A-8
Surface: 10' FSL x 1935' FWL (Unit N) Sec 16
BHL: 1947' FNL x 1789' FWL (Unit F) Sec 21

Well: Pure Gold A-9
Surface: 10' FSL x 280' FWL (Unit M) Sec 16
BHL: 480' FNL x 480' FWL (Unit K) Sec 21

Well: Pure Gold A-10
Surface: 10' FSL x 1800' FWL (Unit N) Sec 16
BHL: 480' FNL x 1800' FWL (Unit C) Sec 21

Well: Pure Gold A-13
Surface: 10' FSL x 2025' FEL (Unit O) Sec 16
BHL: 2012' FNL x 2176' FEL (Unit G) Sec 21

Well: Pure Gold A-14
Surface: 10' FSL x 2160' FEL (Unit O) Sec 16
BHL: 480' FNL x 2160' FEL (Unit B) Sec 21

Well: Pure Gold B-7
Surface: 2100' FSL x 1600' FEL (Unit J) Sec 20
BHL: 1988' FNL x 1834' FEL (Unit G) Sec 20

Well: Pure Gold B-8
Surface: 1950' FSL x 335' FEL (Unit I) Sec 20
BHL: 1957' FNL x 505' FEL (Unit H) Sec 20

Well: Pure Gold B-9
Surface: 10' FSL x 1960' FEL (Unit O) Sec 17
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Well: Pure Gold B-10
Surface: 10' FSL x 145' FWL (Unit M) Sec 16
BHL: 480' FNL x 480' FEL (Unit A) Sec 20

Said wells are located within approximately 1 mile of
mile marker 15 on State Highway 128, New Mexico.

2

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

IN THE MATTER OF THE APPLICATION
OF KAISER-FRANCIS OIL COMPANY FOR
DIRECTIONAL DRILLING AND UNORTHODOX
WELL SURFACE LOCATIONS,
EDDY COUNTY, NEW MEXICO

CASE NO.: _____

A P P L I C A T I O N

Comes now KAISER-FRANCIS OIL COMPANY by its attorneys, Kellahin and Kellahin, and applies to the New Mexico Oil Conservation Division for approval of ten unorthodox surface locations and authority to directionally drilling each said well to a standard bottom hole location, Eddy County, New Mexico. Applicant seeks exceptions to Division General Rule 111 and Rule 104(F) for approval to directionally drill each of the following wells commencing at unorthodox surface locations and terminating within a 50 feet radius of a standard bottomhole location and each dedicated to a standard 40-acre spacing and proration unit for production from the West Sand Dune-Delaware and/or Los Medanos-Delaware Oil Pool in Township 23 South, Range 31 East, NMPM and in support states:

(1) Kaiser-Francis Oil Company is the proposed operator for and a working interest owner in ten proposed wells to be directionally drilled commencing at unorthodox surface locations in Sections 16, 17, 20, and 21 and drilled to standard bottom hole locations in Sections 20 and 21, all in T23S, R31E, NMPM, Eddy County, New Mexico as identified at Exhibit "A"

(2) Kaiser-Francis Oil Company's proposed wells will each be drilled to test for Delaware oil production within one-mile of either the Los Medanos-Delaware Pool (Order R-9483, issued April 1, 1993) or the West Sand Dunes-Delaware Pool (Order R-9709, issued September 1, 1992).

(3) Sections, 16, 17, 20 and 21 of T23S, R31E, are located within the current boundaries of the Oil-Potash Area as defined by Division Order R-111-P.

(4) Sections 17, 20, and 21 are federal tracts administered by the Bureau of Land Management. Section 16 is a State of New Mexico tract administered by the Commissioner of Public Lands for the State of New Mexico.

(5) A substantial portion of Section 20 and 21 is underlain by Delaware sands productive of hydrocarbons.

(6) The 1984 Secretary of Interior's Potash Resources Map indicates a substantial portion of both section 20 and 21 contain measurable potash reserves.

(7) At the request of Kaiser-Francis Oil Company, the BLM has delineated areas barren of commercial potash in the SE/4 of Section 20 and the SW/4 of Section 21 and along the southern edge of Section 17.

(8) The BLM has requested Kaiser-Francis Oil Company to explore the feasibility of utilizing the "barren areas" from which to locate wells to be drilled vertically to a point below Marker Bed No. 126 and then to drill directionally to an acceptable bottom hole target in the Delaware formation.

(9) The State of New Mexico has delineated surface locations along the southern edge of Section 16 and will issue a Business Lease to Kaiser-Francis for the purpose of directionally drilling certain of these wells.

(10) In order to test the feasibility of this directional drilling program, Kaiser-Francis Oil Company proposes to drill each well commencing a unorthodox surface location and drilling directionally to penetrate the Delaware Formation at a standard subsurface location for production from either the Los Medanos-Delaware Pool or the West And Dunes-Delaware Pool. See Exhibit "B"

(11) The subject wells are classified as "deep wells" pursuant to Division Order R-111-P because the potential productive zone in the Delaware formation is below 5,000 feet.

(12) In each instance, the surface location for the wellbore is located more than one-half mile from any verified potash Life of Mine Reserves ("LMR") and therefore is not within any "buffer" area its LMR.

(13) Division Statewide Rule 104 applies to both the Los Medanos-Delaware Pool and the West Sand Dunes-Delaware Pool and requires that wells be no closer than 330 feet to the nearest side boundary of the 40-acre spacing and proration unit.

(14) Kaiser-Francis Oil Company requests exceptions to Division Statewide Rule 104(F) concerning those wells identified on Exhibit "A" with unorthodox surface locations.

(15) Kaiser-Francis Oil Company also requests exceptions to Division Statewide Rule 111 concerning intention deviation and the size of the radius for the bottom hole target and hereby request a 50 foot radius for the bottom hole target.

(16) The necessity of directional drilling from the proposed surface location is based upon the assumed presence of measurable potash reserves and the restrictions imposed by the U. S. Bureau of Land Management, which is the surface/mineral agency for Sections 20 and 21.

(17) Approval of this application will afford the applicant the opportunity to produce its just and equitable share of the hydrocarbons in the affected pool and to protect its spacing units from drainage thereby protecting correlative rights and potentially recover hydrocarbons that might otherwise not be recovered thereby preventing waste.

WHEREFORE, Kaiser-Francis Oil Company. requests that this application be set for hearing and that after notice and hearing as provided for by Division rules, the application be granted as requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', written over a horizontal line.

W. Thomas Kellahin
KELLAHIN AND KELLAHIN
P. O. Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285
ATTORNEYS FOR APPLICANT

EXHIBIT "A" TO APPLCIATION

Well: Pure Gold A-7
Surface: 1950' FSL x 200' FEL (Unit I) Sec 20
BHL: 2043' FNL x 456' FWL (Unit E) Sec 21

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BHL: 1947' FNL x 1789' FWL (Unit F) Sec 21

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Surface: 10' FSL x 280' FWL (Unit M) Sec 16
BHL: 480' FNL x 480' FWL (Unit K) Sec 21

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BHL: 480' FNL x 1800' FWL (Unit C) Sec 21

Well: Pure Gold A-13
Surface: 10' FSL x 2025' FEL (Unit O) Sec 16
BHL: 2012' FNL x 2176' FEL (Unit G) Sec 21

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Surface: 10' FSL x 2160' FEL (Unit O) Sec 16
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Surface: 2100' FSL x 1600' FEL (Unit J) Sec 20
BHL: 1988' FNL x 1834' FEL (Unit G) Sec 20

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Well: Pure Gold B-10
Surface: 10' FSL x 145' FWL (Unit M) Sec 16
BHL: 480' FNL x 480' FEL (Unit A) Sec 20

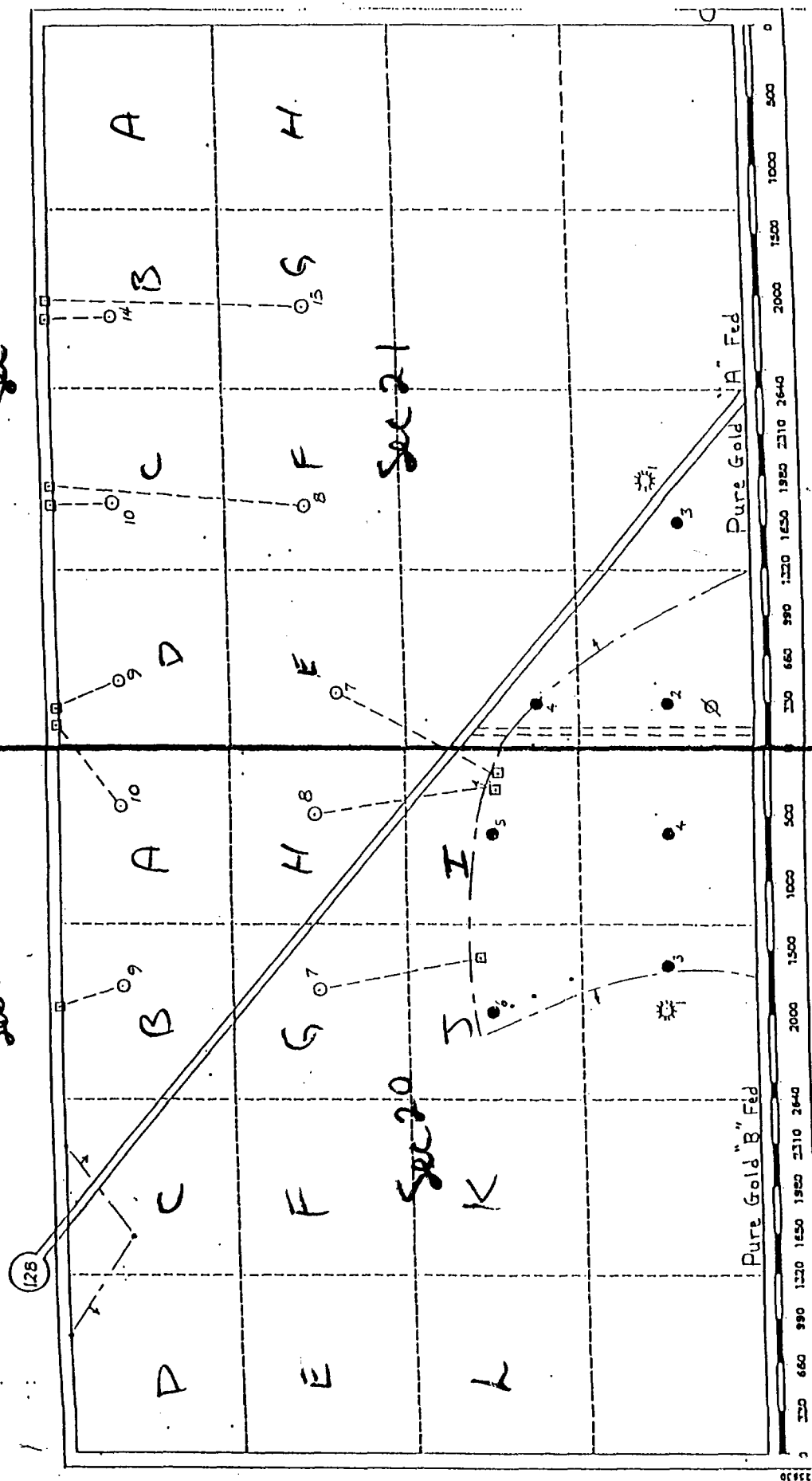
Said wells are located within approximately 1 mile of mile marker 15 on State Highway 128, New Mexico.

APPLICATION FOR DIRECTIONAL DRILLING PERMITS

T23S, R31E Eddy County, NM

Sec 17

Sec 16



KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*

*NEW MEXICO BOARD OF LEGAL SPECIALIZATION
RECOGNIZED SPECIALIST IN THE AREA OF
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285

TELEFAX (505) 982-2047

November 23, 1993

HAND DELIVERED

Mr. William J. LeMay
Oil Conservation Division
State Land Office Building
310 Old Santa Fe Trail, 2nd Floor
Santa Fe, New Mexico 87501

Re: Application of Kaiser-Francis Oil Company
for authority to directionally drill ten wells
at various unorthodox surface locations to
various standard bottom hole locations,
Eddy County, New Mexico

Dear Mr. LeMay:

On behalf of Kaiser-Francis Oil Company, please find enclosed our referenced application which we request be set for hearing on the next available Examiner's docket now scheduled for December 16, 1993.


By copy of this letter and application, sent certified mail, we are notifying all interested parties of their right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application and that failure to appear at the hearing may preclude them from any involvement in this case at a later date.

Mr. William J. LeMay
November 23, 1993
Page Two

Pursuant to the Division's Memorandum 2-90, all parties are hereby informed that if they appear in this case, then they are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, December 10, 1993, with a copy delivered to the undersigned.

Also enclosed is our proposed advertisement of this case for the NMOCD docket.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', with a large, stylized flourish extending from the end of the signature.

W. Thomas Kellahin

WTK/mg
Enclosure

cc: Kaiser-Francis Oil Company and
By Certified Mail - Return Receipt
All Interested Parties

suggested OCD notice for publication:

CASE : Application of Kaiser-Francis Oil Company for authority to directionally drill ten wells at various unorthodox surface locations to various standard bottom hole locations, Eddy County, New Mexico. Applicant seeks exceptions to Division General Rule 111 and Rule 104(F) for approval to directionally drill each of the following wells commencing at unorthodox surface locations and terminating within a 50 foot radius of a standard bottomhole location and each dedicated to a standard 40-acre spacing and proration unit for production from the West Sand Dunes-Delaware and/or Los Medanos-Delaware Oil Pool in Township 23 South, Range 31 East, NMPM as follows:

Well: Pure Gold A-7
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BHL: 2043' FNL x 456' FWL (Unit E) Sec 21

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Said wells are located within approximately 1 mile of
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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF KAISER-FRANCIS OIL COMPANY FOR
DIRECTIONAL DRILLING AND UNORTHODOX
WELL SURFACE LOCATIONS,
EDDY COUNTY, NEW MEXICO

CASE NO.: _____

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WHEREFORE, Kaiser-Francis Oil Company. requests that this application be set for hearing and that after notice and hearing as provided for by Division rules, the application be granted as requested.

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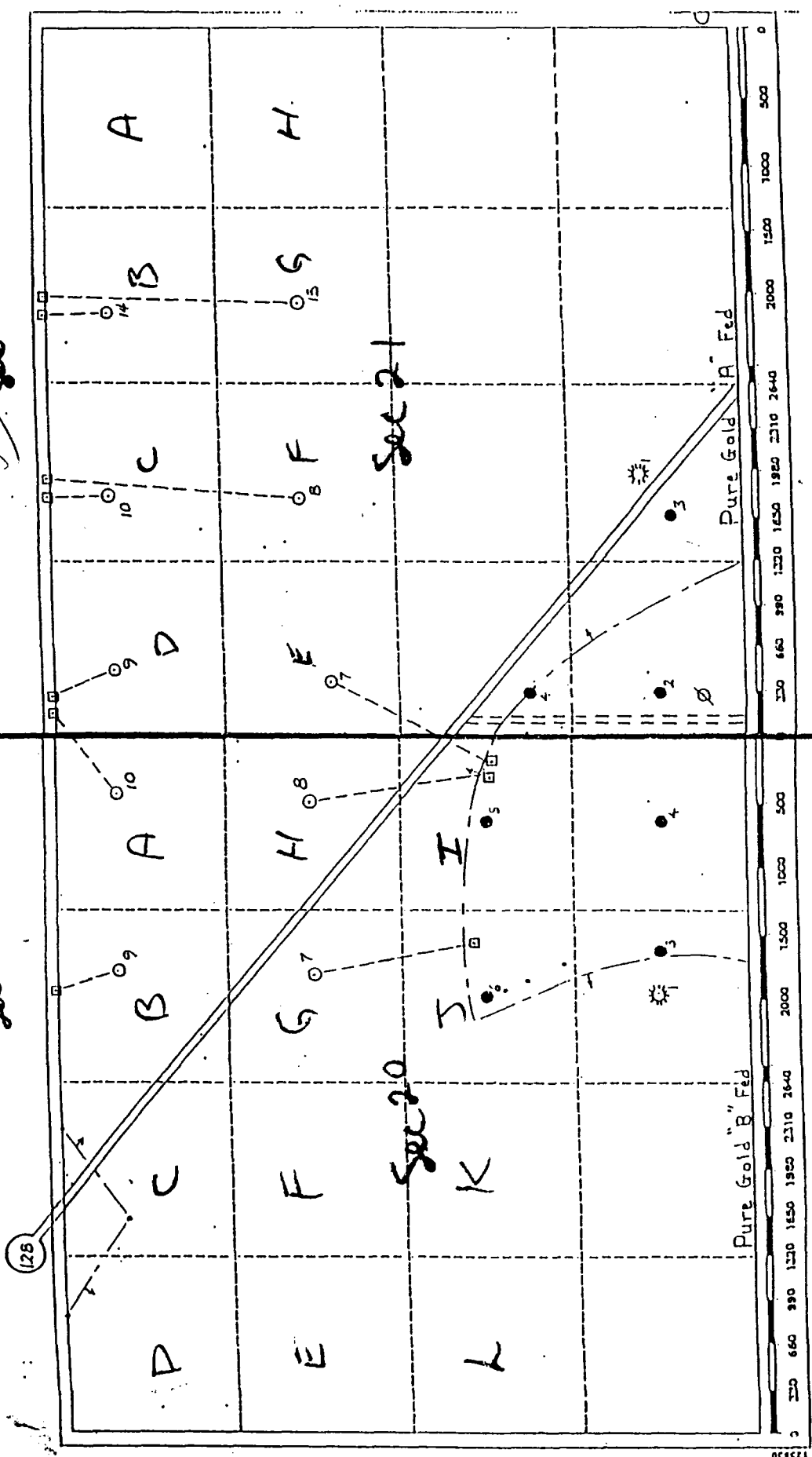
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APPLICATION FOR DIRECTIONAL DRILLING PERMITS
 T23S, R31E, Eddy County, NM
 sec 16

sec 17

sec 21

sec 20



--- 4 --- Potash
 • Potash reference point
 ○ Bottomhole Location
 □ Surface Location

11-23-93

Mike -

The statement I
remembered concerning drilling
islands is in exhibit B
of the order - see
attached.

AM

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPT.
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 9316
Order No. R-111-P

APPLICATION OF THE OIL CONSERVATION
DIVISION UPON ITS OWN MOTION TO
REVISE ORDER R-111, AS AMENDED, PERTAINING
TO THE POTASH AREAS OF EDDY AND LEA
COUNTIES, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on
February 18, 1988, at Santa Fe, New Mexico, before the Oil
Conservation Commission of New Mexico, hereinafter referred to
as the "Commission."

NOW, on this 21st day of April, 1988, the Commission,
a quorum being present, having considered the testimony
presented and the exhibits received at said hearing, and being
fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the
subject matter thereof.

(2) Order R-111-A was entered July 14, 1955, and since
that time no amendments have been entered, except amendments
to Exhibit "A" attached thereto, despite significant advances
in drilling technology and practices.

(3) Operation under Order R-111-A has become virtually
unworkable because of 1) the lack of tolerance on the part of
both oil/gas and potash industries in regarding the activities
of the other industry in areas where leasehold interests are
overlapping and 2) confusion recording the boundaries of the
known Potash Leasing Area (KPLA) established by the U.S.
Bureau of Land Management (BLM) and the R-111-A area as
amended by Orders R-111-B through O.

(4) The then Director of the Oil Conservation Division (OCD) by memorandum dated March 21, 1986 convened a study committee of volunteer representatives from the oil and potash industries and other interested parties.

(5) The committee met May 29, September 25-26, and November 13-14 (field trip) in 1986 and on March 19, 1987.

(6) By committee agreement a work committee was formed from the larger committee consisting of three members and one alternate from each industry and this work committee was chaired by the OCD Chief Petroleum Engineer and charged with the responsibility to develop proposed amendments to Order R-111-A. It met on April 30, May 1, July 23-24 and November 23, 1987.

(7) Each meeting of the work committee was held in the presence of representatives of both BLM and OCD; and at its final meeting November 23, 1987 an agreement was reached and signed by the committee members present, which agreement is attached hereto as Exhibit "B", for the purpose of providing background information and acknowledging the consensus reached by representatives of the Oil and Gas and Potash industries relating to the multiple use of resources in the potash area.

(8) Exhibit "B" is regarded by the Commission as a report of both the work committee and the full study committee since a draft copy of a nearly identical agreement was furnished to each member of the study committee for comment, and comments received thereon were addressed at the final meeting.

(9) The agreement represents a compromise by both industries, the potash operators relinquishing lower grade marginal or uneconomic ore deposits in order to more fully protect their higher grade ore deposits; and the oil/gas operators receiving such lands containing sub-economic ore deposits as prospective drill-sites.

(10) The Oil and Gas Act, 70-2-3 F NMSA 1978, declares as waste "drilling or producing operations for oil or gas within any area containing commercial deposits of potash where such operations would have the effect unduly to reduce the total quantity of such commercial deposits of potash which may reasonably be recovered -- or where such operations would interfere unduly with the orderly commercial development of such potash deposits".

(11) The Oil and Gas Act in 70-2-12 B(17) empowers the Division "to regulate and, where necessary, prohibit drilling

or producing operations for oil and gas" in areas which would cause waste as described in 70-2-3 F.

(12) The report of the work committee presents a reasonable process for determining where wells for oil and gas would cause waste of potash and the pertinent portions of said report should be contained in the order as a reasonable process for prohibiting oil and gas drilling in such areas in the absence of substantial evidence that waste of potash as described by the statute would not result.

(13) Release of methane into potash mine workings would endanger the lives of miners and would render further mining activities uneconomic because of the additional, and more expensive safety requirements which would be imposed by the Mine Safety and Health Administration (MSHA) of the U.S. Department of Labor.

(14) Salt and potash deposits are essentially non-porous and impermeable but are inter-bedded with clay seams which, in an undisturbed state are porous but of extremely low permeability.

(15) Primary mining activity creates minor localized disturbance but secondary mining causes subsidence of the overburden the effects of which tend to expand beyond the mined out area a distance approximately equal to the depth of the mined area.

(16) During the drilling of wells for oil and gas, measures should be taken to protect the salt-protection casing from internal pressures greater than the designed burst resistance plus a safety factor so as to prevent any possible entry of methane into the salt and potash interval.

(17) A proposed revision of Order R-111-A was presented at the hearing and comments were received thereon both orally at the hearing and in writing subsequent to the hearing, the record being held open for two weeks subsequent to the hearing, as announced by the Chairman.

(18) Testimony and comments both in support and in opposition to the proposed revision of the order were received at the hearing and subsequent thereto, some pointing out that the number of oil or gas wells which could be drilled under the terms of the committee report would be reduced but no comments addressed the possible waste of potash as a result of additional drilling.

(19) One member of the work committee from the potash industry testified the proposed revision of Order R-111-A failed to prohibit drilling in the commercial ore areas and was therefore contrary to the work committee report and the Oil and Gas Act.

(20) The Commission cannot abdicate its discretion to consider applications to drill as exceptions to its rules and orders but in the interest of preventing waste of potash should deny any application to drill in commercial potash areas as recommended in the work committee report, unless a clear demonstration is made that commercial potash will not be wasted unduly as a result of the drilling of the well.

(21) Confusion can be reduced and efficiencies can be obtained by making the area covered by Order R-111 coterminous with the KPLA as determined by the BLM, and the area should be expanded and contracted by the regular pool nomenclature procedure rather than by separate hearings and further revisions of Order R-111.

(22) Expansion of the R-111 area to coincide with the KPLA will bring under the purview of this order areas where potash is either absent or non-commercial and such areas should be granted less stringent casing, cementing and plugging requirements, at the discretion of the OCD district supervisor.

(23) The proposed revision of Order R-111-A will permit the drilling of wells for oil or gas in areas previously not available for such drilling and will prevent waste of potash, and further, will serve to reduce confusion and uncertainty in the conduct of operations by both the potash and oil/gas industries, all to the benefit of the state and its citizens.

IT IS THEREFORE ORDERED THAT:

This order shall be known as The Rules and Regulations Governing the Exploration and Development of Oil and Gas in Certain Areas Herein Defined, Which Are Known To Contain Potash Reserves.

A. OBJECTIVE

The objective of these Rules and Regulations is to prevent waste, protect correlative rights, assure maximum conservation of the oil, gas and potash resources of New Mexico, and permit the economic recovery of oil, gas and potash minerals in the area hereinafter defined.

KPLA -
Known Potash
Leasing Area
coterminous
= contiguous

B. THE POTASH AREA

(1) The Potash Area, as described in Exhibit A attached hereto and made a part hereof, represents the area in various parts of which potash mining operations are now in progress, or in which core tests indicate commercial potash reserves. Such area is coterminous with the Known Potash Leasing Area (KPLA) as determined by the U.S. Bureau of Land Management (BLM).

(2) The Potash Area, as described in Exhibit "A" may be revised by the Division after due notice and hearing at the regular pool nomenclature hearings, to reflect changes made by BLM in its KPLA.

C. DRILLING IN THE POTASH AREA

(1) All drilling of oil and gas wells in the Potash Area shall be subject to these Rules and Regulations.

(2) No wells shall be drilled for oil or gas at a location which, in the opinion of the Division or its duly authorized representative, would result in undue waste of potash deposits or constitute a hazard to or interfere unduly with mining of potash deposits.

No mining operations shall be conducted in the Potash Area that would, in the opinion of the Division or its duly authorized representative, constitute a hazard to oil or gas production, or that would unreasonably interfere with the orderly development and production from any oil or gas pool.

(3) Upon discovery of oil or gas in the Potash Area, the Oil Conservation Division may promulgate pool rules for the affected area after due notice and hearing in order to address conditions not fully covered by these rules and the general rules.

D & F are being plugged
(4) The Division's District Supervisor may waive the requirements of Sections D and F which are more rigorous than the general rules upon satisfactory showing that a location is outside the Life of Mine Reserves (LMR) and surrounding buffer zone as defined hereinbelow and that no commercial potash resources will be unduly diminished.

(5) All encounters with flammable gas, including hydrogen sulfide, during drilling operations shall be reported immediately to the appropriate OCD District office followed by a written report of same.

D. DRILLING AND CASING PROGRAM

(1) For the purpose of the regulations and the drilling of wells for oil and gas, shallow and deep zones are defined as follows:

(a) The shallow zone shall include all formations above the base of the Delaware Mountain Group or, above a depth of 5,000 feet, whichever is lesser.

(b) The deep zone shall include all formations below the base of the Delaware Mountain Group or, below a depth of 5,000 feet, whichever is lesser.

(c) For the purpose of identification, the base of the Delaware Mountain Group is hereby identified as the geophysical log marker found at a depth of 7485 feet in the Richardson and Bass No. 1 Rodke well in Section 27, Township 20 South, Range 31 East, NMPM, Eddy County, New Mexico.

(2) Surface Casing String:

(a) A surface casing string of new or used oil field casing in good condition shall be set in the "Red Bed" section of the basal Rustler formation immediately above the salt section, or in the anhydrite at the top of the salt section, as determined necessary by the regulatory representative approving the drilling operations, and the cement shall be circulated to the surface.

(b) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

(c) Casing and water-shut-off tests shall be made both before and after drilling the plug and below the casing seat as follows:

(i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of six hundred (600) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures shall be applied.

(ii) If cable tools are used, the mud shall be bailed from the hole, and if th.

hole does not remain dry for a period of one hour, corrective measures shall be applied.

(d) The above requirements for the surface casing string shall be applicable to both the shallow and deep zones.

(3) Salt Protection String:

(a) A salt protection string of new or used oil field casing in good condition shall be set not less than one hundred (100) feet nor more than six hundred (600) feet below the base of the salt section; provided that such string shall not be set below the top of the highest known oil or gas zone. With prior approval of the OCD District Supervisor the wellbore may be deviated from the vertical after completely penetrating Marker Bed No. 126 (USGS) but that section of the casing set in the deviated portion of the wellbore shall be centralized at each joint.

(b) The salt protection string shall be cemented, as follows:

(i) For wells drilled to the shallow zone, the string may be cemented with a nominal volume of cement for testing purposes only. If the exploratory test well is completed as a productive well, the string shall be re-cemented with sufficient cement to fill the annular space back of the pipe from the top of the first cementing to the surface or to the bottom of the cellar, or may be cut and pulled if the production string is cemented to the surface as provided in sub-section D (5)(a)(i) below.

(ii) For wells drilled to the deep zone, the string must be cemented with sufficient cement to fill the annular space back of the pipe from the casing seat to the surface or to the bottom of the cellar.

(c) If the cement fails to reach the surface or the bottom of the cellar, where required, the top of the cement shall be located by a temperature, gamma ray or other survey and additional cementing shall be done until the cement is brought to the point required.

Marker Bed
126?

(d) The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and with suitable proportions but not less than 1% of calcium chloride by weight of cement.

(e) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

(f) Casing tests shall be made both before and after drilling the plug and below the casing seat, as follows:

(i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of one thousand (1000) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures shall be applied.

(ii) If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

(g) The Division, or its duly authorized representative, may require the use of centralizers on the salt protection string when in their judgment the use of such centralizers would offer further protection to the salt section.

(h) Before drilling the plug a drilling spool installed below the bottom blowout preventer or the wellhead casing outlet shall be equipped with a rupture disc or other automatic pressure-relief device set at 80% of the API-rated burst pressure of new casing or 60% of the API-rated burst pressure of used casing. The disc or relief device should be connected to the rig choke manifold system so that any flow can be controlled away from the rig. The disc or relief device shall remain installed as long as drilling activities continue in the well until the intermediate or production casing is run and cemented.

(i) The above requirements for the salt protection string shall be applicable to both the shallow and deep zones except for sub-section D (3) (b) (i) and (ii) above.

(4) Intermediate String:

(a) In drilling wells to the deep zone for oil or gas, the operator shall have the option of running an intermediate string of pipe, unless the Division requires an intermediate string be run.

(b) Cementing procedures and casing tests for the intermediate string shall be the same as provided under sub-sections D (3) (c), (e) and (f) for the salt protection string.

(5) Production String:

(a) A production string shall be set on top or through the oil or gas pay zone and shall be cemented as follows:

(i) For wells drilled to the shallow zone the production string shall be cemented to the surface if the salt protection string was cemented only with a nominal volume for testing purposes, in which case the salt protection string can be cut and pulled before the production string is cemented; provided, that if the salt protection string was cemented to the surface, the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone.

(ii) For wells drilled to the deep zone, the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone; provided, that if no intermediate string shall have been run and cemented to the surface, the production string shall be cemented to the surface.

(b) Cementing procedures and casing tests for the production string shall be the same as provided under sub-section D (3) (c), (e) and (f) for the salt protection string; however if high pressure oil or gas production is discovered in an area, the Division may promulgate the necessary rules to prevent the charging of the salt section.

E. DRILLING FLUID FOR SALT SECTION

The fluid used while drilling the salt section shall consist of water, to which has been added sufficient salts of a character common to the zone penetrated to completely saturate the mixture. Other admixtures may be added to the fluid by the operator in overcoming any specific problem. This requirement is specifically intended to prevent enlarged drill holes.

F. PLUGGING AND ABANDONMENT OF WELLS

(1) All wells heretofore and hereafter drilled within the Potash Area shall be plugged in a manner and in accordance with the general rules or field rules established by the Division that will provide a solid cement plug through the salt section and any water-bearing horizon and prevent liquids or gases from entering the hole above or below the salt section.

(2) The fluid used to mix the cement shall be saturated with the salts common to the salt section penetrated and with suitable proportions but not more than three (3) percent of calcium chloride by weight of cement being considered the desired mixture whenever possible.

G. DESIGNATION OF DRILLABLE LOCATION FOR WELLS

(a) Within ninety (90) days following effective date of this Order and annually thereafter by January 31 if revised, each potash lessee, without regard to whether the lease covers State or Federal lands, shall file with the District Manager, BLM, and the State Land Office (SLO), a designation of the potash deposits considered by the potash lessee to be its life-of-mine reserves ("LMR"). For purposes of this Agreement, "life-of-mine reserves" means those potash deposits within the Potash Area reasonably believed by the potash lessee to contain potash ore in sufficient thickness and grade to be mineable using current day mining methods, equipment and technology. Information used by the potash lessee in identifying its LMR shall be filed with the BLM and SLO but will be considered privileged and confidential "trade secrets and commercial . . . information" within the meaning of 43 C.F.R. §2.13(c)(4) (1986), Section 19-1-2.1 NMSA 1978, and not subject to public disclosure.

(b) Authorized officers of the BLM and SLO shall review the information submitted by each potash lessee

in support of its LMR designation on their respective lands and verify upon request, that the data used by the potash lessee in establishing the boundaries of its LMR is consistent with data available to the BLM and SLO. Any disputes between the BLM and potash lessee concerning the boundary of a designated LMR shall be resolved in accordance with the Department of Interior's Hearings and Appeals Procedures, 43 C.F.R. Part 4 (1986).

(c) A potash lessee may amend its designated LMR by filing a revised designation with the BLM and SLO accompanied by the information referred to in Section A above. Such amendments must be filed by January 31 next following the date the additional data becomes available.

(d) Authorized officers of the BLM and SLO shall commit the designated LMR of each potash lessee to a map(s) of suitable scale and thereafter revise the map(s) as necessary to reflect the latest amendments to any designated LMRs. These maps shall be considered privileged and confidential and exempt from disclosure under 43 C.F.R. Part 2 and §19-1-2.1 NMSA 1978, and will be used only for the purposes set forth in this Order.

(e) The foregoing procedure can be modified by policy changes within the BLM and State Land Office.

(2) Before commencing drilling operations for oil or gas on any lands within the Potash Area, the well operator shall prepare a map or plat showing the location of the proposed well, said map or plat to accompany each copy of the Notice of Intention to Drill. In addition to the number of copies required by the Division, the well operator shall send one copy by registered mail to each potash operator holding potash leases within a radius of one mile of the proposed well, as reflected by the plats submitted under paragraph 1 (2). The well operator shall furnish proof of the fact that said potash operators were notified by registered mail of his intent by attaching return receipt to the copies of the Notice of Intention to Drill and plats furnished the Division.

(3) Drilling applications on federal lands will be processed for approval by BLM. Applications on state or patented lands will be processed by the Division and, in the case of state lands, in collaboration with the SLO. The Division will first ascertain from the BLM or SLO that the location is not within the LMR area. Active mine workings and mined-out areas shall also be treated as LMR. Any application to drill in the LMR area, including buffer zones, may be approved only by mutual agreement of lessor and lessees of

both potash and oil and gas interests. Applications to drill outside the LMR will be approved as indicated below; provided there is no protest from potash lessee within 20 days of his receipt of a copy of the notice:

- (a) a shallow well shall be drilled no closer to the LMR than one-fourth (1/4) mile or 110% of the depth of the ore, whichever is greater.
- (b) A deep well shall be drilled no closer than one-half (1/2) mile from the LMR.

H. INSPECTION OF DRILLING AND MINING OPERATIONS

A representative of any potash lessee within a radius of one mile from the well location may be present during drilling, cementing, casing, and plugging of any oil or gas wells to observe conformance with these regulations. Likewise, a representative of the oil and gas lessee may inspect mine workings on his lease to observe conformance with these regulations.

I. FILING OF WELL SURVEYS, MINE SURVEYS AND POTASH DEVELOPMENT PLANS

(1) Directional Surveys:

The Division may require an operator to file a certified directional survey from the surface to a point below the lowest known potash-bearing horizon on any well drilled within the Potash Area.

(2) Mine Surveys:

Within 30 days after the adoption of this order and thereafter on or before January 31st of each year, each potash operator shall furnish the Division two copies of a plat of a survey of the location of his leaseholdings and all of his open mine workings, which plat shall be available for public inspection and on a scale acceptable to the Division.

J. APPLICABILITY OF STATEWIDE RULES AND REGULATIONS

All general statewide rules and regulations of the Oil Conservation Division governing the development, operation, and production of oil and gas in the State of New

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Case No. 9316
Order No. R-111-P

Mexico not inconsistent or in conflict herewith, are hereby adopted and made applicable to the areas described herein.

IT IS FURTHER ORDERED THAT:

(1) Order R-111 and amendments through R-111-O are hereby rescinded.

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

Done at Santa Fe, New Mexico on the day and year hereinabove designated.

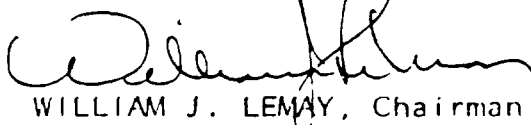
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



WILLIAM R. HUMPHRIES, Member



ERLING A. BROSTUEN, Member



WILLIAM J. LEMAY, Chairman
and Secretary

EXHIBIT "A"
CASE 9316
ORDER R-111-P

CONSOLIDATED LAND DESCRIPTION OF THE KNOWN POTASH
LEASING AREA, AS OF FEBRUARY 3, 1988

EDDY COUNTY, NEW MEXICO

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM

Section 10: SE/4 SE/4
Section 11: S/2 SW/4
Section 13: W/2 SW/4 and SE/4 SW/4
Section 14: W/2 NE/4, NW/4 and S/2
Section 15: E/2 NE/4, SE/4 SW/4 and SE/4
Section 22: N/2, N/2 SW/4, SE/4 SW/4 and SE/4
Section 23: All
Section 24: N/2 NW/4, SW/4 NW/4 and NW/4 SW/4
Section 26: NE/4, N/2 NW/4 and SE/4 NW/4
Section 27: N/2 NE/4 and NE/4 NW/4

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM

Section 11: SE/4 SE/4
Section 12: SE/4 NE/4 and S/2
Section 13: All
Section 14: NE/4, SE/4 NW/4 and S/2
Section 15: SE/4 SE/4
Section 22: NE/4, E/2 W/2 and SE/4
Section 23: All
Section 24: All
Section 25: NW/4 NW/4
Section 26: N/2 NE/4 and NW/4
Section 27: NE/4 and E/2 NW/4

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM

Section 2: SW/4
Section 3: W/2 SW/4, SE/4 SW/4, S/2 SE/4 and
NE/4 SE/4
Section 4: Lots 3 and 4, SW/4 NE/4, S/2 NW/4
and S/2
Section 5: Lots 1, 2, and 3, S/2 NE/4,
S/2 NW/4 and S/2
Section 6: S/2 SE/4 and NE/4 SE/4
Sections 7 to 10 inclusive
Section 11: S/2 NE/4, NW/4 NW/4 and S/2
Section 12: NE/4, S/2 NW/4 and S/2
Section 13: NE/4, W/2, N/2 SE/4 and SW/4 SE/4
Sections 14 to 18 inclusive
Section 19: Lots 1, 2, and 3, NE/4, E/2 NW/4,
NE/4 SW/4, E/2 SE/4 and
NW/4 SE/4
Sections 20 to 23 inclusive
Section 24: NW/4, NW/4 SW/4 and S/2 SW/4

Section 25: NW/4 NW/4
Section 26: NE/4 NE/4, W/2 NE/4, W/2, W/2 SE/4
and SE/4 SE/4
Section 27: All
Section 28: All
Section 29: E/2, E/2 NW/4 and NW/4 NW/4
Section 32: E/2 and SE/4 SW/4
Section 33 to 35 inclusive
Section 36: NW/4 NW/4, S/2 NW/4 and S/2

TOWNSHIP 19 SOUTH, RANGE 31 EAST, NMPM

Section 7: Lots 1, 2, and 3 and E/2 NW/4
Section 18: Lots 1, 2, and 3 and SW/4 NE/4,
E/2 NW/4 and NE/4 SW/4
Section 31: Lot 4
Section 34: SE/4 SE/4
Section 35: S/2 SW/4 and SW/4 SE/4
Section 36: S/2 SE/4

LEA COUNTY, NEW MEXICO

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM

Section 31: Lot 4
Section 33: Lots 1 to 4 inclusive and N/2 S/2
Section 34: Lots 1 to 4 inclusive and N/2 S/2
Section 35: Lots 1 to 4 inclusive and N/2 S/2
Section 36: Lots 1 to 4 inclusive, SE/4 NE/4,
NW/4 SW/4 and NE/4 SE/4

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM

Section 22: SE/4 NE/4, E/2 SW/4 and SE/4
Section 23: S/2 NW/4, SW/4, W/2 SE/4 and
SE/4 SE/4
Section 25: SW/4 NW/4, W/2 SW/4 and SE/4 SW/4
Section 26: All
Section 27: All
Section 28: S/2 SE/4 and NE/4 SE/4
Section 30: Lots 2 to 4 inclusive, S/2 NE/4,
SE/4 NW/4, E/2 SW/4 and SE/4
Section 31: All
Section 32: NE/4, S/2 NW/4 and S/2
Sections 33 to 35 inclusive
Section 36: W/2 NE/4, SE/4 NE/4, NW/4 and S/2

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM

Section 31: Lots 3 and 4

EDDY COUNTY, NEW MEXICO

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM

Section 1: SE/4 NE/4 and E/2 SE/4
Section 13: SW/4 NW/4, W/2 SW/4 and SE/4 SW/4
Section 14: NW/4 NE/4, S/2 NE/4, NW/4 and S/2
Section 15: E/2 E/2, SE/4 SW/4 and W/2 SE/4
Section 22: E/2 and E/2 NW/4
Section 23: All
Section 24: SW/4 NE/4, W/2, W/2 SE/4 and
SE/4 SE/4
Section 25: N/2, SW/4, W/2 SE/4 and NE/4 SE/4
Section 26: All
Section 27: E/2
Section 34: NE/4
Section 35: N/2
Section 36: W/2 NE/4 and NW/4

TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 4 inclusive
Section 5: Lots 1 to 3 inclusive, S/2 N/2
and S/2
Section 6: Lots 5, 6, and 7, S/2 NE/4, E/2 SW/4
and SE/4
Section 7: Lots 1 and 2, E/2 and E/2 NW/4
Sections 8 to 17 inclusive
Section 18: E/2
Section 19: E/2 and SE/4 SW/4
Sections 20 to 29 inclusive
Section 30: Lots 1 to 3 inclusive, E/2 and
E/2 W/2
Section 31: NE/4 and E/2 SE/4
Sections 32 to 36 inclusive

TOWNSHIP 20 SOUTH, RANGE 31 EAST, NMPM

Section 1: Lots 1 to 3 inclusive, S/2 N/2
and S/2
Section 2: All
Section 3: Lots 1 and 2, S/2 NE/4 and SE/4
Section 6: Lots 4 to 7 inclusive, SE/4 NW/4,
E/2 SW/4, W/2 SE/4 and
SE/4 SE/4
Section 7: All
Section 8: S/2 N/2 and S/2
Section 9: S/2 NW/4, SW/4, W/2 SE/4 and
SE/4 SE/4
Section 10: E/2 and SW/4
Sections 11 to 36 inclusive

LEA COUNTY, NEW MEXICO

TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM

Sections 1 to 4 inclusive

Section 5: S/2 SE/4

Section 6: Lots 4 to 7 inclusive, SE/4 NW/4,
E/2 SW/4 and SW/4 SE/4

Sections 7 to 36 inclusive

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM

Sections 1 to 36 inclusive

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM

Section 6: Lots 3 to 7 inclusive, SE/4 NW/4,
E/2 SW/4, W/2 SE/4 and
SE/4 SE/4

Section 7: All

Section 8: SW/4, S/2 NW/4, W/2 SE/4 and
SE/4 SE/4

Section 16: W/2 NW/4, SE/4 NW/4, SW/4 and
S/2 SE/4

Sections 17 to 21 inclusive

Section 22: N/2 NW/4, SW/4 NW/4, SW/4, W/2 SE/4,
and SE/4 SE/4

Section 26: SW/4, W/2 SE/4 and SE/4 SE/4

Sections 27 to 35 inclusive

Section 36: SW/4 NW/4 and W/2 SW/4

EDDY COUNTY, NEW MEXICO

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM

Sections 1 to 3 inclusive

Section 4: Lots 1 through 16, NE/4 SW/4 and
SE/4

Section 5: Lot 1

Section 10: N/2 NE/4, SE/4 NE/4 and SE/4 SE/4

Sections 11 to 14 inclusive

Section 15: E/2 NE/4 and NE/4 SE/4

Section 23: N/2 NE/4

Section 24: E/2, N/2 NW/4 and SE/4 NW/4

Section 25: NE/4 NE/4 and S/2 SE/4

Section 35: Lots 2 to 4 inclusive, S/2 NE/4,
NE/4 SW/4 and N/2 SE/4

Section 36: Lots 1 to 4 inclusive, NE/4,
E/2 NW/4 and N/2 S/2

TOWNSHIP 21 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 36 inclusive

TOWNSHIP 21 SOUTH, RANGE 31 EAST, NMPM
Sections 1 to 36 inclusive

LEA COUNTY, NEW MEXICO

TOWNSHIP 21 SOUTH, RANGE 32 EAST, NMPM
Sections 1 to 27 inclusive

Section 28: N/2 and N/2 S/2
Sections 29 to 31 inclusive
Section 32: NW/4 NE/4, NW/4 and NW/4 SW/4
Section 34: N/2 NE/4
Section 35: N/2 N/2
Section 36: E/2, N/2 NW/4, SE/4 NW/4 and
NE/4 SW/4

TOWNSHIP 21 SOUTH, RANGE 33 EAST, NMPM

Section 1: Lots 2 to 7 inclusive, Lots 10 to
14 inclusive, N/2 SW/4 and
SW/4 SW/4

Sections 2 to 11 inclusive
Section 12: NW/4 NW/4 and SW/4 SW/4
Section 13: N/2 NW/4, S/2 N/2 and S/2
Sections 14 to 24 inclusive
Section 25: N/2, SW/4 and W/2 SE/4
Sections 26 to 30 inclusive
Section 31: Lots 1 to 4 inclusive, NE/4,
E/2 W/2, N/2 SE/4 and
SW/4 SE/4
Section 32: N/2 and NW/4 SW/4
Section 33: N/2
Section 34: NE/4, N/2 NW/4 and E/2 SE/4
Section 35: All
Section 36: W/2 NE/4, NW/4 and S/2

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM

Section 17: W/2
Section 18: All
Section 19: Lots 1 to 4 inclusive, NE/4,
E/2 W/2, N/2 SE/4 and
SW/4 SE/4
Section 20: NW/4 NW/4
Section 30: Lots 1 and 2 and NE/4 NW/4
Section 31: Lots 3 and 4

EDDY COUNTY, NEW MEXICO

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 36: E/2 E/2

TOWNSHIP 22 SOUTH, RANGE 29 EAST, NMPM

Sections 1 and 2 inclusive

Section 3: SE/4 SW/4 and SE/4

Section 9: S/2 NE/4 and S/2

Sections 10 to 16 inclusive

Section 17: S/2 SE/4

Section 19: SE/4 NE/4 and E/2 SE/4

Sections 20 to 28 inclusive

Section 29: N/2 N/2, S/2 NE/4 and SE/4

Section 30: NE/4 NE/4

Section 31: Lots 1 to 4 inclusive, S/2 NE/4,
E/2 W/2 and SE/4

Sections 32 to 36 inclusive

TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 36 inclusive

TOWNSHIP 22 SOUTH, RANGE 31 EAST, NMPM

Sections 1 to 11 inclusive

Section 12: NW/4 NE/4, NW/4 and NW/4 SW/4

Section 13: S/2 NW/4 and SW/4

Sections 14 to 23 inclusive

Section 24: W/2

Section 25: NW/4

Section 26: NE/4 and N/2 NW/4

Sections 27 to 34 inclusive

LEA COUNTY, NEW MEXICO

TOWNSHIP 22 SOUTH, RANGE 32 EAST, NMPM

Section 1: Lot 1

Section 6: Lots 2 to 7 inclusive and SE/4 NW/4

TOWNSHIP 22 SOUTH, RANGE 33 EAST, NMPM

Section 1: Lots 1 to 4 inclusive, S/2 N/2 and
N/2 S/2

Section 2: All

Section 3: Lot 1, SE/4 NE/4 and SE/4

Section 6: Lot 4

Section 10: NE/4

Section 11: NW/4 NE/4 and NW/4

TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMPM

Section 6: Lots 4 to 6 inclusive

EDDY COUNTY, NEW MEXICO

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM

Section 1: Lot 1

TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMPM

Sections 1 to 5 inclusive

Section 6: Lots 1 to 6 inclusive, S/2 NE/4,
SE/4 NW/4, E/2 SW/4 and SE/4

Section 7: NE/4 and NE/4 NW/4

Section 8: N/2, N/2 SW/4, SE/4 SW/4 and SE/4

Sections 9 to 16 inclusive

Section 17: NE/4 and E/2 SE/4

Sections 21 to 23 inclusive

Section 24: N/2, SW/4 and N/2 SE/4

Section 25: W/2 NW/4 and NW/4 SW/4

Section 26: All

Section 27: All

Section 28: N/2, N/2 SW/4, SE/4 SW/4 and SE/4

Section 33: N/2 NE/4 and NE/4 NW/4

Section 34: NE/4, E/2 NW/4, NW/4 NW/4,
NE/4 SW/4 and SE/4

Section 35: All

Section 36: W/2 NE/4, NW/4 and N/2 SW/4

TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 18 inclusive

Section 19: N/2, N/2 SW/4, SE/4 SW/4 and SE/4

Section 20: All

Section 21: All

Section 22: N/2, S/2 SW/4, N/2 S/2 and SE/4 SE/4

Sections 23 to 25 inclusive

Section 26: E/2, SE/4 NW/4 and SW/4

Section 27: N/2 NW/4, SW/4 NW/4, SE/4 SW/4,
S/2 SE/4 and NE/4 SE/4

Section 28: N/2 and SW/4

Section 29: N/2 and SE/4

Section 30: N/2 NE/4

Section 32: N/2 NE/4

Section 33: SE/4 NE/4, N/2 NW/4, NE/4 SE/4
and S/2 SE/4

Sections 34 to 36 inclusive

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM

Section 2: Lot 4, SW/4 NW/4 and W/2 SE/4

Sections 3 to 7 inclusive

Section 8: NE/4 NE/4, W/2 NE/4 and W/2

Section 9: N/2 N/2

Section 10: NW/4 NW/4 and SE/4 SE/4

Section 11: S/2 NE/4, S/2 SW/4 and SE/4

Section 12: SW/4 NW/4 and SW/4
Section 13: SW/4 NE/4, W/2 and W/2 SE/4
Section 14: All
Section 15: E/2, SE/4 NW/4 and SW/4
Section 16: SW/4 and S/2 SE/4
Section 17: NW/4 and S/2
Sections 18 to 23 inclusive
Section 24: W/2 NE/4 and W/2
Section 25: W/2 NE/4, NW/4, N/2 SW/4 and
NW/4 SE/4
Sections 26 to 34 inclusive
Section 35: N/2 NW/4 and SW/4 NW/4

TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM

Section 2: Lots 2 to 4 inclusive
Section 3: Lot 1

TOWNSHIP 24 SOUTH, RANGE 30 EAST, NMPM

Section 1: Lots 1 to 4 inclusive, S/2 N/2,
SW/4 and NW/4 SE/4

Section 2: All
Section 3: All
Section 4: Lots 1 and 2, S/2 NE/4, SE/4 NW/4,
SW/4 SW/4, E/2 SW/4 and SE/4
Section 9: N/2, N/2 SW/4, SE/4 SW/4 and SE/4
Section 10: All
Section 11: All
Section 12: W/2 NW/4 and NW/4 SW/4
Section 14: W/2 NE/4 and NW/4
Section 15: NE/4 and N/2 NW/4

TOWNSHIP 24 SOUTH, RANGE 31 EAST, NMPM

Section 3: Lots 2 to 4 inclusive, SW/4 NE/4,
S/2 NW/4, SW/4 and W/2 SE/4

Section 4: All
Section 5: Lots 1 to 4 inclusive, S/2 N/2,
N/2 S/2 and SE/4 SE/4
Section 6: Lots 1 to 6 inclusive, S/2 NE/4,
SE/4 NW/4, NE/4 SW/4 and
N/2 SE/4
Section 9: E/2 and NW/4
Section 10: W/2 NE/4 and W/2
Section 35: Lots 1 to 4 inclusive, S/2 N/2 and
N/2 S/2
Section 36: Lots 1 and 2, SW/4 NW/4 and N/2 SW/4

TOWNSHIP 25 SOUTH, RANGE 31 EAST, NMPM

Section 1: Lots 3 and 4 and S/2 NW/4
Section 2: Lots 1 to 4 inclusive and S/2 N/2

STATEMENT OF AGREEMENT BETWEEN
THE POTASH INDUSTRY AND OIL AND
GAS INDUSTRY ON CONCURRENT
OPERATIONS IN THE POTASH AREA
IN EDDY AND LEA COUNTIES, NEW MEXICO

Introduction

This Statement of Agreement sets forth the joint agreement of the Potash Industry and Oil and Gas Industry on important issues concerning the concurrent development of potash and oil and gas reserves in Eddy and Lea Counties, New Mexico. It represents the efforts of numerous representatives from each Industry over many months and is intended to resolve many of the disputes that have arisen as a result of concurrent oil and gas drilling activities in the vicinity of underground potash mining.

The parties recognize that this Agreement will not resolve all disputes or disagreements that may arise and that regulatory intervention may still be necessary in some instances. By entering into this Agreement, however, each industry recognizes the right of the other to develop its mineral resources in a safe and economical manner and acknowledges that concurrent development of multiple mineral resources places certain limits on each industry. Each also agrees that these limits can be better defined through good faith discussions among industry representatives familiar with industry technology and practices than repeated and prolonged litigation or administrative proceedings.

EXHIBIT "B"
CASE NO. 9316
ORDER NO. R-111-P

In attempting to accomplish this, each Industry has made concessions on issues considered critical to it in a good faith effort to obtain concessions from the other. For this reason, both Industries agree that the terms of this Statement of Agreement are subject to the following conditions:

1. Upon approval by representatives of each Industry, the terms of the Agreement will be submitted to and must be adopted without substantial change by the New Mexico Oil Conservation Commission ("OCC") in lieu of the current Order R-111A, as amended;
2. The terms of the Agreement will be submitted to and must be adopted without substantial change by the U. S. Department of Interior, Bureau of Land Management ("BLM") in lieu of Section III (E) of the Secretary of the Interior's Order of October 21, 1986 [51 Fed. Reg. 39425];
3. Each Industry will use its best efforts to secure approval of the terms of the Agreement from the OCC and BLM; and
4. In the event the terms in the Agreement are not adopted without substantial change by both the OCC and the BLM, this Statement of Agreement will become null and void and will not be referred to by any Industry representative on the Study Committee in any future proceeding before the OCC or BLM.

- It is the intention of the parties to this Agreement that:

(1) certain areas of potash deposits, called "life-of-mine-reserves" or "LMR's," be permanently protected from oil and gas drilling activities; and (2) to make available for oil and gas drilling activities, certain areas within the Potash Area. The area of potash deposits protected will be determined in accordance with this Agreement but, generally speaking, will encompass the yellow, orange and a major portion of the blue

areas shown on the BLM Potash Resources Map as it existed on October 1, 1984. Areas in the Potash Area that will be available for oil and gas drilling activities will be those areas outside the designated LMR's which, generally speaking, will be the red, green, grey and a minor portion of the blue areas shown on the BLM Potash Resources Map as it existed on October 1, 1984, less areas designated as buffer zones by this Agreement.

I. The Potash Area

A. The Area covered by this Agreement shall be known as the "Potash Area".

B. The "Potash Area" includes those tracts of land in Southeastern New Mexico, from the surface downward, which are designated as a "potash area" by the Secretary of the Department of Interior in Section V of the Order dated October 21, 1986 and published in the Federal Register on October 28, 1986 [51 Fed. Reg. 39426]. It shall also include any subsequent revisions to such designations. The terms "potash" and "commercial deposits of potash" shall have the same meaning as assigned by the U. S. Department of Interior.

C. It is the intent of the parties to this Agreement that the "Potash Area" designated by the State of New Mexico be identical to that designated by the U. S. Department of Interior. Accordingly, if the "potash area" designated in the Secretarial Order of October 21, 1986 [51 Fed. Reg. 39425] is revised, the OCC, on its own motion after notice and hearing as

provided by applicable laws and regulations, will adopt the same revision.

II. Designation of Mine Reserves

A. Within ninety (90) days following adoption of this Agreement by the OCC and BLM and annually thereafter by January 31 if revised, each potash lessee, without regard to whether the lease covers State or Federal lands, shall file with the District Manager, BLM, a designation of the potash deposits considered by the potash lessee to be its life-of-mine reserves ("LMR"). For purposes of this Agreement, "life-of-mine reserves" means those potash deposits within the Potash Area reasonably believed by the potash lessee to contain potash ore in sufficient thickness and grade to be mineable using current day mining methods, equipment and technology. Information used by the potash lessee in identifying its LMR shall be filed with the BLM but will be considered privileged and confidential "trade secrets and commercial . . . information" within the meaning of 43 C.F.R. §2.13(c)(4) (1986) and not subject to public disclosure.

B. An authorized officer of the BLM shall review the information submitted by each potash lessee in support of its LMR designation and verify, upon request, that the data used by the potash lessee in establishing the boundaries of its LMR is consistent with data available to the BLM. Any disputes between the BLM and potash lessee concerning the boundary of a designated LMR shall be resolved in accordance with the

Department of Interior's Hearings and Appeals Procedures, 43 C.F.R. Part 4 (1986).

C. A potash lessee may amend its designated LMR by filing a revised designation with the BLM accompanied by the information referred to in Section A above. Such amendments must be filed by January 31 next following the date the additional data becomes available.

D. An authorized officer of the BLM shall commit the designated LMR of each potash lessee to a map(s) of suitable scale and thereafter revise the map(s) as necessary to reflect the latest amendments to any designated LMRs. These maps shall be considered privileged and confidential and exempt from disclosure under 43 C.F.R. Part 2 and will be used only for the purposes set forth in this Agreement.

III. Drilling in the Potash Area

A. All oil and gas wells drilled in the Potash Area after approval of this Agreement by the OCC and BLM, including those currently pending before the OCC and/or BLM, shall be subject to the terms of this Agreement.

B. It is the policy of the OCC and BLM to approve or deny applications for permits to drill (APD's) in the Potash Area in accordance with the following:

1. LMR and Buffer Zone. No oil or gas well shall be allowed from a surface location: (a) within the LMR of any potash lessee; (b) within one-fourth (1/4) mile, or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of the LMR of any potash lessee; or (c) where the well casing will pass within one-fourth (1/4) mile, or a distance equal to

the depth of the ore plus ten percent (10%), whichever is greater, of the LMR of any potash lessee.

2. Outside Buffer Zone But Within One-Half (1/2) mile of LMR. An APD for an oil or gas well at a location more than one-fourth (1/4) mile, or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, but less than one-half (1/2) mile from the LMR of any potash lessee may be approved only if: (a) the bottom hole location does not extend below the base of the Delaware Mountain Group, and (b) the well is drilled in accordance with the cementing and casing requirements set forth in Section V.
3. More Than One-Half Mile But Less Than One Mile From LMR. An APD for an oil or gas well at a location more than one-half (1/2) mile but less than one mile from the LMR of any potash lessee may be approved regardless of the depth of the bottom hole location provided: (a) wells with bottom hole locations below the base of the Delaware Mountain Group are drilled in accordance with the cementing and casing requirements set forth in Section V of this Agreement, and (b) wells to bottom hole locations above the base of the Delaware Mountain Group may be drilled without regard to the requirements in Section V of this Agreement but must be drilled in accordance with then current Industry safety standards.
4. More Than One Mile From LMR. An APD for an oil or gas well at a location more than one mile from the LMR of any potash lessee may be approved regardless of the depth of the bottom hole location and without regard to the requirements of Section V of this Agreement.
5. Open Mine Workings. No oil or gas well shall be allowed from any location where the well casing will pass within one-fourth (1/4) mile or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of any open mine workings.
6. Abandoned Mine Workings. No oil or gas well shall be allowed from any location where the well casing will pass through or within one-fourth (1/4) of a mile or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of any abandoned mine workings that are connected to an existing mine by an opening or barrier of one-hundred (100) feet or less unless the APD is accompanied by the sealing and safety plan and certification described in Paragraph C below.

7. An APD for a directionally drilled oil or gas well to a bottom hole location underlying the LMR of any potash lessee may be approved subject to the limitations and requirements set forth in Paragraphs 1 - 6 above. Directionally drilled holes shall be drilled vertically until they have completely penetrated Marker Bed No. 126 (U.S.G.S.) of the Salado Formation at which time they may be deviated.

C. An oil and gas operator desiring to drill a well to a bottom hole location that does not extend below the base of the Delaware Mountain Group from a surface location where the well casing will pass through or within one-fourth (1/4) of a mile or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of abandoned mine workings that are connected to an existing mine by any opening or a barrier of one-hundred (100) feet or less shall prepare and submit to all affected potash lessees a plan and program for sealing off the area to be penetrated from other mine workings. Approval of any such plan shall be in the sole discretion of the affected potash lessees. Any approved plan shall be attached by the oil and gas operator to the APD for filing with the OCC, and/or BLM. The oil and gas operator shall also complete a certification in the form prescribed by the OCC and/or BLM that the drilling of such well will not create a safety hazard to affected potash lessees.

D. It is the belief of both parties that the provisions of this Agreement eliminate the need for drilling islands and three-year mining plans and, therefore, both agree that no drilling islands will be established in the Potash Area and the filing of three-year mining plans will be eliminated.

IV. Location of Wells and Notice to Potash Lessee

A. The BLM, upon request, will advise oil and gas lessees of the surface locations where wells will be allowed to develop the leases. Oil or gas leases covering areas designated a LMR by a potash lessee will be unitized to the extent possible with other areas where drilling is allowed.

B. An oil or gas operator desiring to drill an oil or gas well in the Potash Area or within one (1) mile of a potash lease shall prepare and file an APD with the OCC and/or BLM along with a map or plat showing the location of the proposed well. One copy of the APD and map or plat shall be served by registered mail, return receipt requested, on all potash leaseholders within one (1) mile of the proposed well location. However, if the APD is for an oil or gas well that will penetrate abandoned mine workings, all potash leaseholders in the Potash Area shall be notified. Proof of such service shall be attached to the APD and filed with the OCC and/or BLM. Within twenty (20) days of service of an APD and required documents, any potash leaseholder within one (1) mile of the proposed well location (or any affected potash lessee if the proposed well will penetrate abandoned mine workings) may file an objection with the OCC to the proposed well. If the objections cannot be resolved by agreement of the parties, the matter shall be referred for hearing before the OCC.

C. The failure of a potash leaseholder to object to a well location or its agreement to the drilling locations

referred to in this Agreement shall not constitute a release of liability. Oil and gas leaseholders and those persons and/or entities involved in the development of the lease shall be responsible as provided by law for any damages caused by them to any person by the release of gases or liquids into the strata or atmosphere as a result of drilling activities.

V. Drilling and Casing Program

[Same as current R-111-A]

VI. Drilling Fluid for Salt Section

[Same as current R-111-A]

VII. Plugging and Abandonment of Wells

[Same as current R-111-A]

VIII. Filing of Well Surveys

The OCC may require an oil and gas operator to file a certified directional survey from the surface to a point below the lowest known potash bearing horizon on all wells drilled in the Potash Area. All encounters with flammable gases, including H₂S, shall be reported by the operator to the OCC.

IX. Additional Safety Requirements and Emergency Action

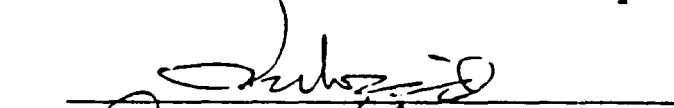
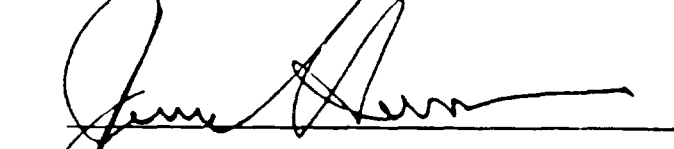
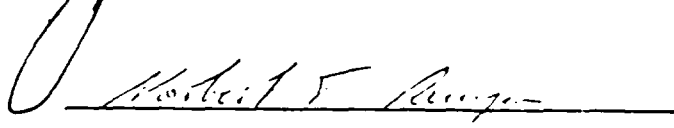
A. All oil and gas drilling activities within the Potash Area shall be performed using appropriate technology, equipment, and procedures to reduce the hazards of such activities to underground mines and miners and be conducted in accordance with the prudent operator standard.

B. Only the minimum number of wells necessary to develop an oil or gas lease will be allowed within the Potash Area.

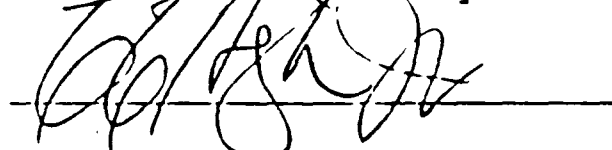
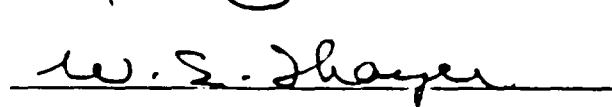
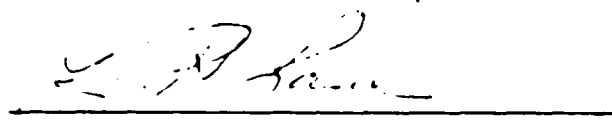

C. In the event the increased oil and gas drilling activities allowed by this Agreement result in a safety hazard or if data developed in the course of such increased activities make it reasonably appear that such activities are or will become a hazard to underground miners or mining activities, the BLM and/or OCC will, upon request, initiate proceedings in accordance with NMSA 70-2-23 and/or other applicable laws and regulations to review such data and take whatever emergency steps are found necessary to eliminate such hazard. Potash lessees may, in addition, initiate actions for injunctive relief under NMSA 70-2-29. The taking or failure to take such action by the OCC or any potash lessee shall not relieve the oil and gas lessee from liability for any damages caused by its oil and gas activities.

AGREED TO AND APPROVED THIS 23rd DAY OF November, 1987, BY THE FOLLOWING REPRESENTATIVES OF EACH INDUSTRY, COMPRISING THE POTASH-OIL AREA SPECIAL RULES STUDY COMMITTEE:

For the Oil and Gas Industry:

For the Potash Industry:

1727L-7

CASE 8286: Application of Mesa Grande Resources, Inc. for creation of a new oil pool and special pool rules, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for oil production to be designated as the Gavilan Graennorn-Graneros-Dakota Oil Pool in Townships 24 and 25 North, Range 2 West, and the promulgation of special pool rules including a provision for 160-acre spacing.

CASE 8287: Application of Bass Enterprises Production Co. for the amendment of Division Order No. R-111-A, Eddy and Lea Counties, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order No. R-111-A, as amended, by the inclusion of an Article whereby the Director of the Oil Conservation Division shall have the authority to grant approval, without notice and hearing, for the directional drilling of wells from orthodox and unorthodox surface locations outside the Potash-Oil Area to orthodox and unorthodox bottomhole locations beneath the Potash-Oil Area provided that the Salado formation is not penetrated therein.

CASE 8288: Application of Bass Enterprises Production Co. for the approval of drilling islands and special rules for Potash-Oil Area, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of 18 specified drilling islands for the drilling of shallow and deep wells (above or below the base of the Strawn formation) and for special rules to be applied therein including approval of vertical and directional drilling; orthodox and unorthodox surface and bottomhole locations; and special drilling, casing and cementing requirements all within or in the vicinity of the Potash-Oil Area as defined in Division Order R-111-A, as amended.

Docket No. 29-84

DOCKET: COMMISSION HEARING - FRIDAY - AUGUST 3, 1984

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

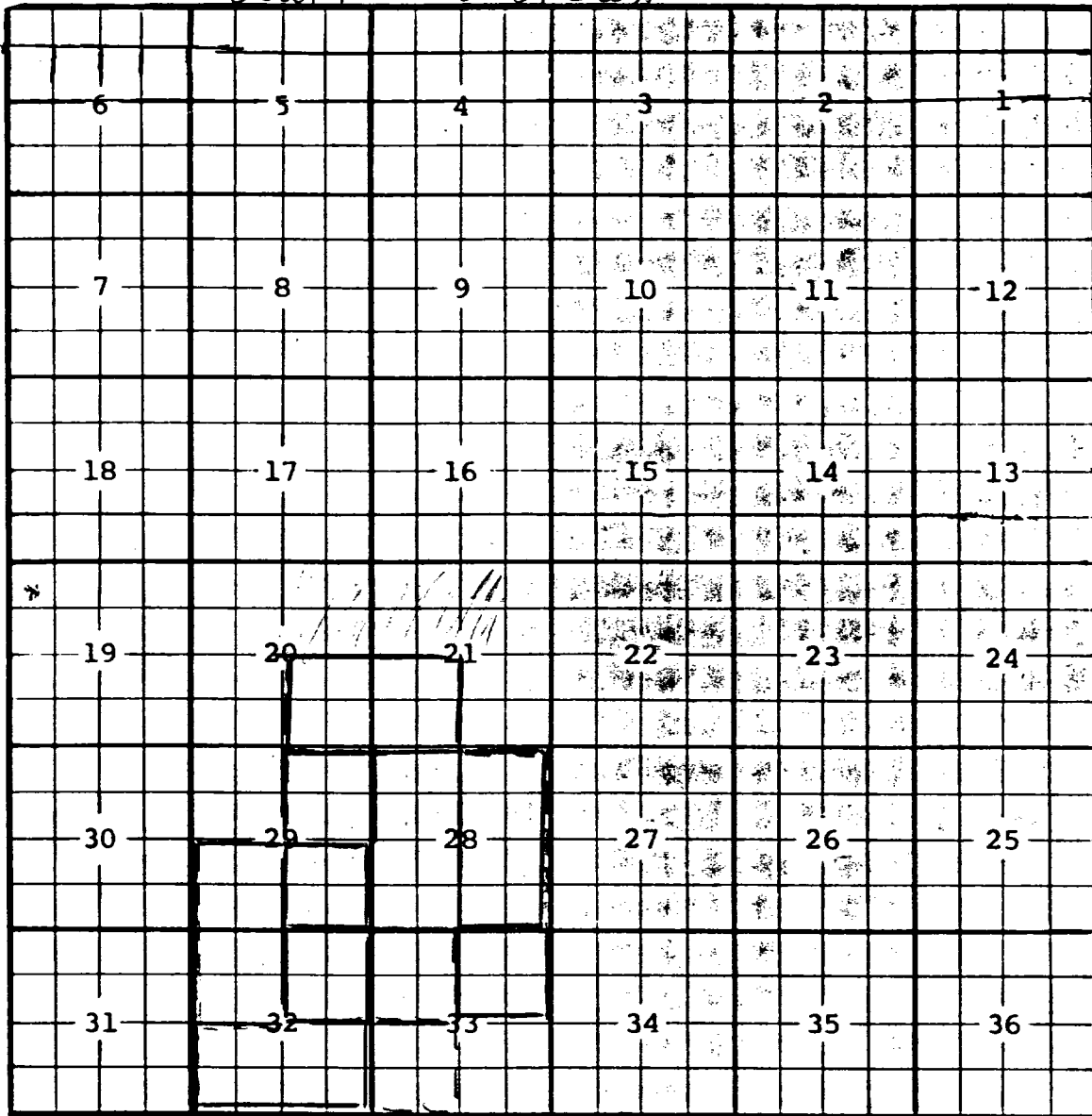
CASE 8289: In the matter of Case 8289 being called by the Oil Conservation Division on its own motion pursuant to the provisions of Division Order No. R-6446-B which approved the Bravo Dome Carbon Dioxide Gas Unit Agreement in Harding, Union, and Quay Counties, New Mexico, to permit Amoco Production Company, the operator of said unit, to review operations and demonstrate to the Commission that its operations within the unit are resulting in the prevention of waste and the protection of correlative rights on a continuing basis.

CASE 8259: (Continued from July 11, 1984, Examiner Hearing)

Application of Robert N. Enfield for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location 1,200 feet from the South line and 330 feet from the East line of Section 18, Township 21 South, Range 23 East, Indian Basin-Upper Pennsylvanian Gas Pool, all of said Section 18 to be dedicated to the well.

County Eddy Pool West Sand Dunes Delaware

TOWNSHIP 23 South Range 31 East NMPM



Description: SE/4 Sec. 29 (R-9709, 8-25-92)

Ext: NE/4 Sec. 32 (R-9771, 11-19-92) Ext: W/2 Sec. 28 (R-9837, 1-22-93)

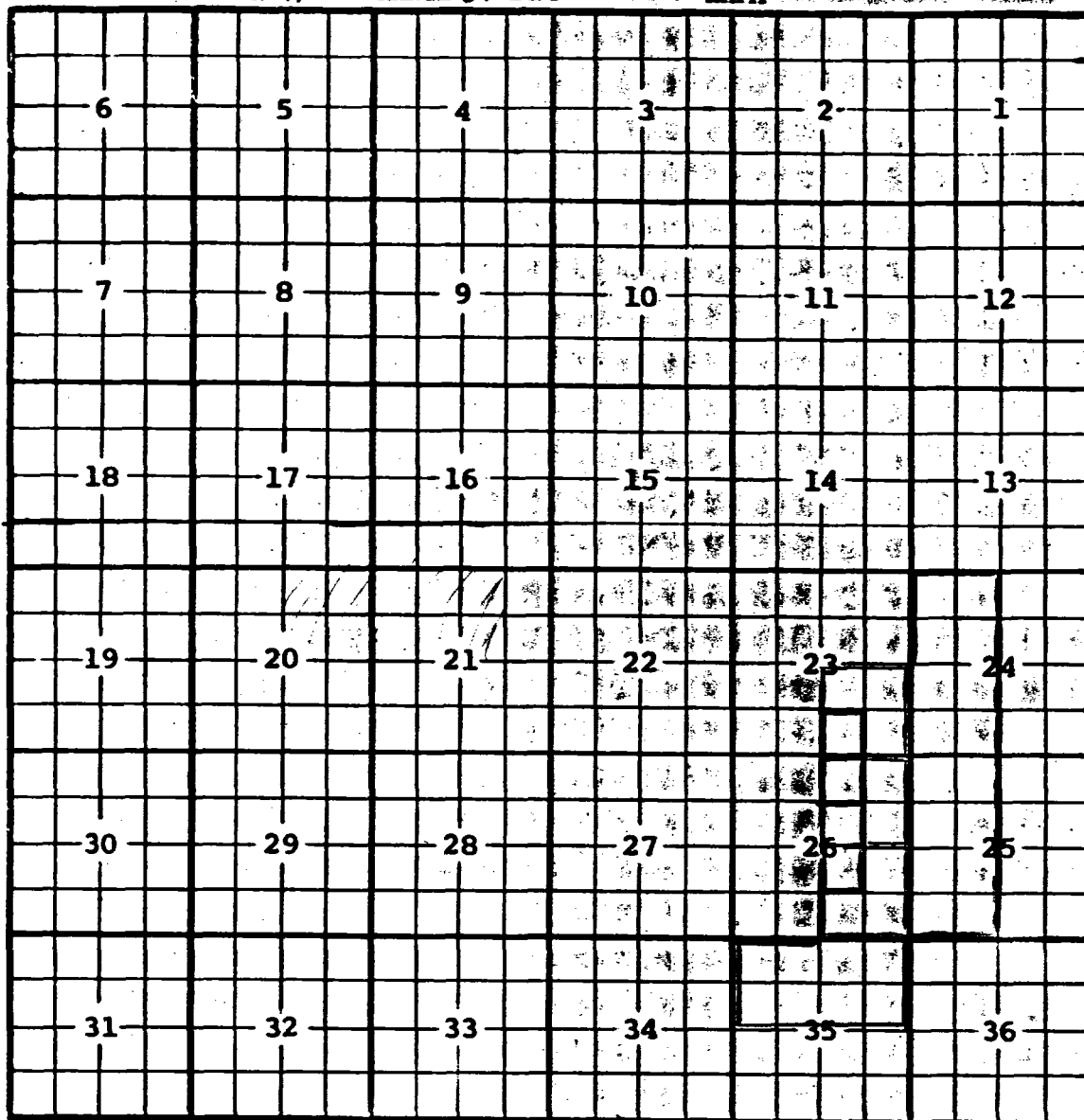
Ext: S/2 Sec. 32 (R-9844, 2-8-93) Ext: NE/4 and SW/4 Sec. 29, NW/4 Sec. 32

CA-9884, 4-26-93 Ext: SE/4 Sec. 20, SW/4 Sec. 21, E/2 Sec. 28, NW/4 Sec. 23 (R-9938, 8-17-93)

Ext: NE/4 Sec. 33 (R-9963, 9-20-93)

COUNTY EddyPOOL Sand Dunes - Cherry CanyonTOWNSHIP 23 SouthRANGE 31 East

NMPM



Description: $\frac{SW}{4} \frac{NE}{4}$ Sec 26 (R-3948, 5-1-70)

Ext: $\frac{NW}{4} \frac{NE}{4}$ Sec 26 (R-4377, 9-1-72) - $\frac{SW}{4} \frac{SE}{4}$ Sec 23 (R-4540, 6-1-73)

Ext: $\frac{NW}{4} \frac{SE}{4}$ Sec 26 (R-4782, 6-1-74) Ext: $\frac{E}{2} \frac{NE}{4}$ Sec 26 (R-4937, 2-1-75)

Ext: $\frac{NE}{4} \frac{SE}{4}$ & $\frac{S}{2} \frac{SE}{4}$ Sec 26 (R-5063, 7-1-75)

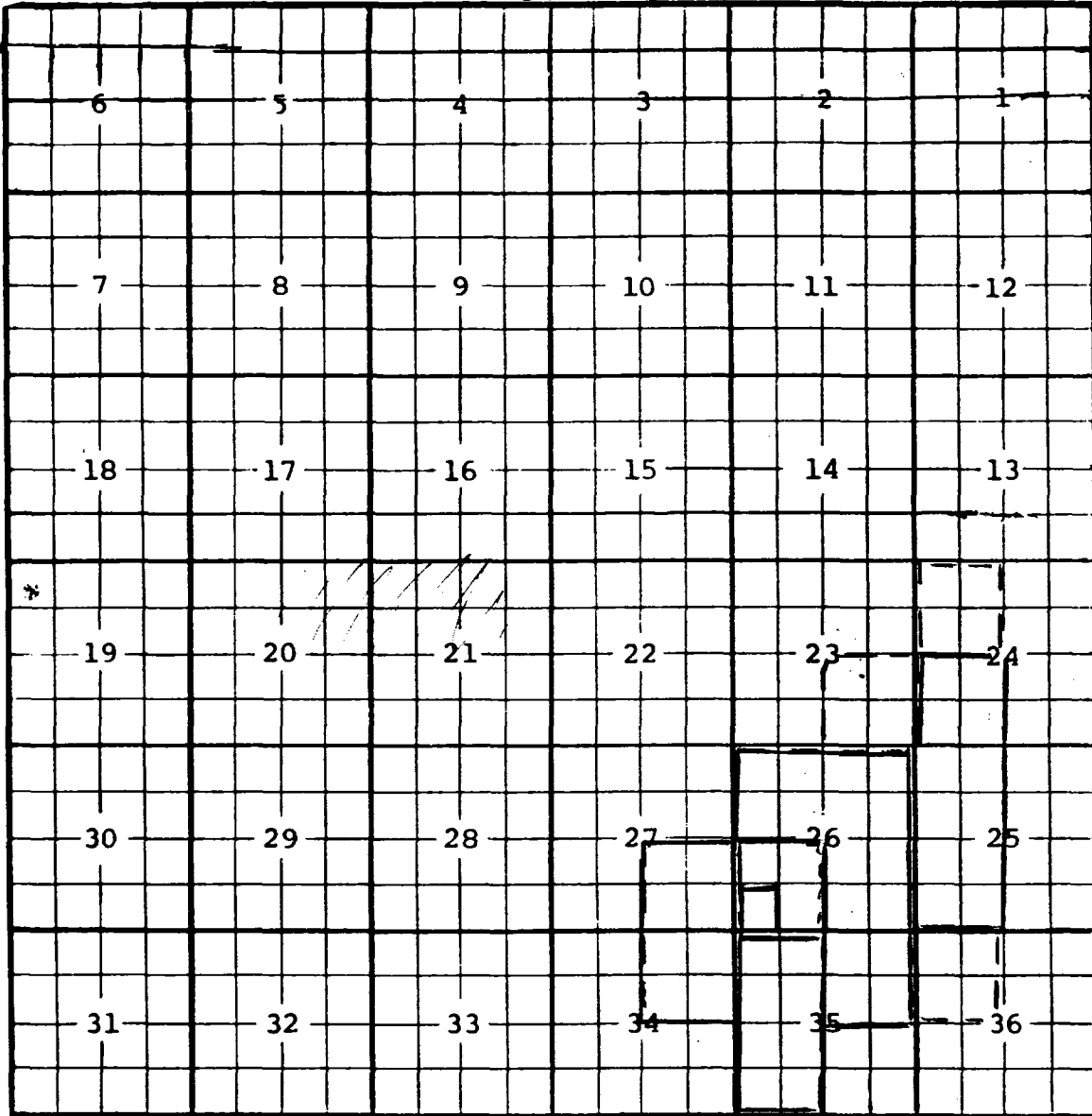
Ext: $\frac{E}{2} \frac{SE}{4}$ & $\frac{NW}{4} \frac{SE}{4}$ Sec 23 (R-5838, 11-1-78)

Ext: $\frac{W}{2}$ Sec. 24, $\frac{W}{2}$ Sec. 25 (R-8065, 10-31-85)

Ext: $\frac{N}{2}$ Sec. 35 (A-8229, 5-19-86)

County Eddy Pool Ingle Wells- Delaware

TOWNSHIP 23 South Range 31 East NMPM



Ext: ^W/2 Sec. 35(R-9578, 9-10-91) Ext: ^{SW}/4 ^{SW}/4 Sec. 26(R-9837, 1-27-93)

Ext. $\frac{N}{2} \frac{SW}{4}$ and $\frac{SE}{4} \frac{SW}{4}$ Sec. 26 (R-9844, 2-8-93)

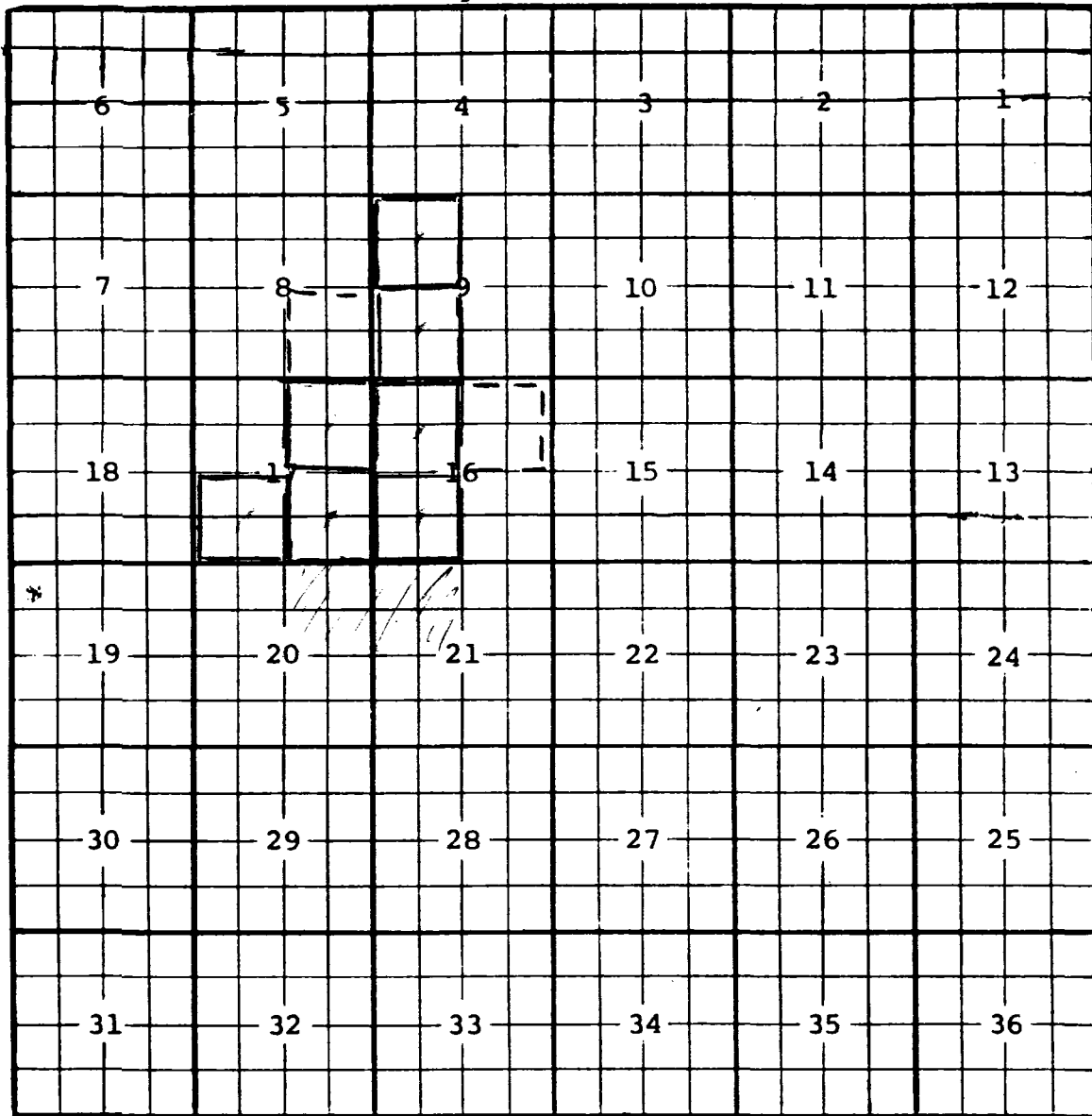
Ext: 5E/4 Sec. 27, NE/4 Sec. 34 (R-9884, 4-26-95)

Expt: ^{N/2} and ^{SE/4} Sec. 26, ^{NE/4} Sec. 35 (R-9938, 8-17-93)

Ext: ^{SW}4 Sec. 24, ^W2 Sec. 25 (R-9963, 9-20-93)

County EDDYPool LOS MEDANOS - DELAWARETOWNSHIP 23 SOUTHRange 31 EAST

NMPM

DESC: SW/4 SEC 16 (R-9473, 4-1-91)Ext: NW/4 Sec. 16 (A-9545, 7-1-91) Ext: NE/4 Sec. 17 (A-9844, 2-8-93)Ext: SW/4 Sec. 9 (A-9884, 4-26-93) Ext: SE/4 Sec. 17 (R-9938, 8-17-93)Ext: SW/4 Sec. 17 (R-9963, 9-20-93) Ext: NW/4 Sec. 9 (R-9981, 10Ext: NW/4 Sec. 9 (R-9981, 10-1-93)

MAR 2 1991

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF KAISER-FRANCIS OIL
COMPANY FOR DIRECTIONAL DRILLING,
EDDY COUNTY, NEW MEXICO.

CASE NO. 10887 (de novo)
ORDER NO. R-10048

RESPONSE TO MOTION TO DISMISS

Santa Fe Energy Operating Partners, L.P. ("Santa Fe"), for its response to the Motion to Dismiss filed by Kaiser-Francis Oil Company ("Kaiser"), states:

I. FACTS.

Kaiser filed Case No. 10887 seeking Division approval for ten directional wells with bottomhole locations in Sections 20 and 21, Township 23 South, Range 31 East, N.M.P.M. The mineral rights in Sections 20 and 21 are owned by the United States. The target zone of all ten wells is the Brushy Canyon formation of the Delaware Mountain Group. Santa Fe is an offset operator in Section 17, adjacent to the North boundary line of Section 20.¹

The proposed wells are in the oil-potash area of Southeast New Mexico. Kaiser met with the Bureau of Land Management ("BLM") during 1993 to discuss well locations in Sections 20 and 21, and was verbally informed by the BLM that directional wells were required. **Transcript² at 16-17, 26-27.** Kaiser never filed written APD's with the BLM requesting vertical hole approvals, nor did Kaiser appeal the BLM's directional well requests through the Interior Board of Land Appeals ("IBLA").

¹ One of Kaiser's proposed wells (the Pure Gold "B" Fed. No. 9) has a surface location on Santa Fe's lease in Section 17.

² References are to page numbers of the transcript of proceedings before the Hearing Examiner on December 16, 1993.

Other operators have experienced the same BLM demands for directional wells in the oil-potash area, but through persistence have swayed the BLM to change its mind and allow vertical holes in some instances. In other cases, operators have appealed the BLM's vertical hole denials through the IBLA. **Transcript at 105-106.**

Kaiser testified at hearing that:

- (a) Directional wells cost substantially more than vertical wells. **Transcript at 66.**
- (b) Lifting costs for directional wells are generally higher than lifting costs for vertical wells. **Transcript at 67.** As a result, the economic limit is higher for a directional well than for a vertical well. **Transcript at 64.**
- (c) Kaiser is aware of no economic directional Delaware wells drilled in New Mexico. **Transcript at 71.**
- (d) Certain of Kaiser's wells will be unorthodox in the Bell and/or Cherry Canyon formations.

Order No. R-10048 was issued by the Division on January 12, 1994, approving Kaiser's application for hearing de novo on January 26, 1994. Kaiser filed its motion to dismiss on February 21, 1994.

II. ARGUMENT.

Santa Fe's position is simple: Drilling directional wells causes physical and economic waste and should not be allowed unless Kaiser exhausts its remedies within the BLM and IBLA seeking vertical well approval. To do otherwise will adversely affect all

operators in the oil-potash area by encouraging the BLM to require directional wells even when unnecessary, causing waste.

A. Waste.

The Commission and the Division are charged with preventing physical (underground) and economic waste. **N.M. Stat. Ann. § 70-2-11 (1987 Repl.).** The testimony before the Division is undisputed that directional wells cost more than vertical wells, and will leave reserves in the ground due to higher economic limits, thus causing waste. The Commission has authority to review any decision which may cause waste, and thus should hear testimony in this matter.

While Santa Fe owns no interest in Kaiser's proposed wells, it owns significant interests throughout Southeast New Mexico, including in the oil-potash area. Any policy by the Division or Commission to routinely approve directional wells, without requiring Kaiser or any other operator to fully address vertical well approval before the BLM and the IBLA, will adversely affect the profitability of future operations by Santa Fe (and other operators) in New Mexico. **Transcript at 107-109.** Thus, Santa Fe is a party of record adversely affected by Order No. R-10048, and should be allowed to present testimony before the Commission on these issues.

B. Correlative Rights.

As noted above, some of Kaiser's wells will have unorthodox locations in the Bell and/or Cherry Canyon formations. One or two of the proposed wells are unorthodox with respect to

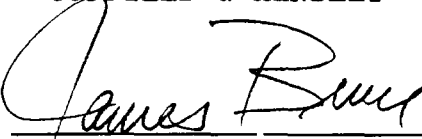
Santa Fe. Kaiser testified at the hearing that it will seek Division approval before producing from unorthodox locations in the Bell and/or Cherry Canyon formations. Transcript at 25-26, 76. Nonetheless, once a well is drilled approval for uphole unorthodox locations has been routinely granted by the Division, which may be detrimental to Santa Fe. While this is not of immediate concern, it is a factor the Commission should consider with respect to its policy in approving directional wells in the oil-potash area.

III. CONCLUSION.

Due to the policy and waste issues involved in directional drilling requests in the oil-potash area, Santa Fe requests that Kaiser's motion be denied, and that it be allowed to present evidence before the Commission on its de novo request.

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By:


James Bruce
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
(505) 982-4554

Attorneys for Santa Fe Energy
Operating Partners, L.P.


CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **Response to Motion to Dismiss** was mailed this 2nd day of March, 1994, to:

W. Thomas Kellahin *
117 N. Guadalupe
Santa Fe, New Mexico 87501

Ernest Carroll
Post Office Drawer 239
Artesia, New Mexico 88211

* Denotes Hand Delivery



James Bruce

APPLICATION OF KAISER-FRANCIS OIL
COMPANY FOR DIRECTIONAL DRILLING,
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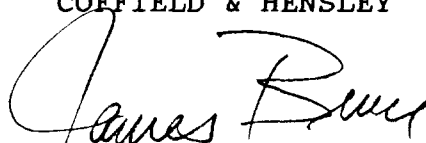
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III. CONCLUSION.

Due to the policy and waste issues involved in directional drilling requests in the oil-potash area, Santa Fe requests that Kaiser's motion be denied, and that it be allowed to present evidence before the Commission on its de novo request.

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By:



James Bruce
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Santa Fe, New Mexico 87504-2068
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Attorneys for Santa Fe Energy
Operating Partners, L.P.


CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **Response to Motion to Dismiss** was mailed this 2nd day of March, 1994, to:

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117 N. Guadalupe
Santa Fe, New Mexico 87501

Ernest Carroll
Post Office Drawer 239
Artesia, New Mexico 88211

*** Denotes Hand Delivery**



James Bruce

~~NOV~~ 2 1994

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF KAISER-FRANCIS OIL
COMPANY FOR DIRECTIONAL DRILLING,
EDDY COUNTY, NEW MEXICO.

CASE NO. 10887 (de novo)
ORDER NO. R-10048

RESPONSE TO MOTION TO DISMISS

Santa Fe Energy Operating Partners, L.P. ("Santa Fe"), for its response to the Motion to Dismiss filed by Kaiser-Francis Oil Company ("Kaiser"), states:

I. FACTS.

Kaiser filed Case No. 10887 seeking Division approval for ten directional wells with bottomhole locations in Sections 20 and 21, Township 23 South, Range 31 East, N.M.P.M. The mineral rights in Sections 20 and 21 are owned by the United States. The target zone of all ten wells is the Brushy Canyon formation of the Delaware Mountain Group. Santa Fe is an offset operator in Section 17, adjacent to the North boundary line of Section 20.¹

The proposed wells are in the oil-potash area of Southeast New Mexico. Kaiser met with the Bureau of Land Management ("BLM") during 1993 to discuss well locations in Sections 20 and 21, and was verbally informed by the BLM that directional wells were required. **Transcript² at 16-17, 26-27.** Kaiser never filed written APD's with the BLM requesting vertical hole approvals, nor did Kaiser appeal the BLM's directional well requests through the Interior Board of Land Appeals ("IBLA").

¹ One of Kaiser's proposed wells (the Pure Gold "B" Fed. No. 9) has a surface location on Santa Fe's lease in Section 17.

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Other operators have experienced the same BLM demands for directional wells in the oil-potash area, but through persistence have swayed the BLM to change its mind and allow vertical holes in some instances. In other cases, operators have appealed the BLM's vertical hole denials through the IBLA. **Transcript at 105-106.**

Kaiser testified at hearing that:

- (a) Directional wells cost substantially more than vertical wells. **Transcript at 66.**
- (b) Lifting costs for directional wells are generally higher than lifting costs for vertical wells. **Transcript at 67.** As a result, the economic limit is higher for a directional well than for a vertical well. **Transcript at 64.**
- (c) Kaiser is aware of no economic directional Delaware wells drilled in New Mexico. **Transcript at 71.**
- (d) Certain of Kaiser's wells will be unorthodox in the Bell and/or Cherry Canyon formations.

Order No. R-10048 was issued by the Division on January 12, 1994, approving Kaiser's application for hearing de novo on January 26, 1994. Kaiser filed its motion to dismiss on February 21, 1994.

II. ARGUMENT.

Santa Fe's position is simple: Drilling directional wells causes physical and economic waste and should not be allowed unless Kaiser exhausts its remedies within the BLM and IBLA seeking vertical well approval. To do otherwise will adversely affect all

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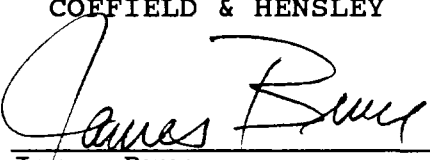
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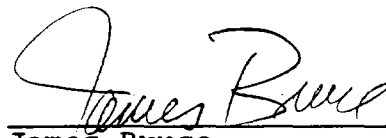
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