DOCKET NO. 2326

IN THE MATTER OF		NEW MEXICO
DAVID FASKEN,		OIL CONSERVATION
OPERATOR		COMMISSION

APPLICATION FOR HEARING AND PERMIT TO DIRECTIONALLY DRILL

TO THE NEW MEXICO OIL CONSDERVATION COMMISSION:

Comes now David Fasken, whose business address is 608 First National Bank Building, Midland, Texas, and presents this his application for hearing and for permit to reenter, plug back and directionally drill David Fasken King-Davis Federal No. 2 Well in the Bluitt Bough "C" Pennsylvanian Field, 1980 feet from North line and 1980 feet from West line of Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico, and in support of such application would respectfully show the following:

1.

Subject to the convenience of the Commission and only by way of expression of Operator's preference, Operator requests a hearing before an examiner of the Commission at Hobbs, New Mexico, at the earliest practicable date. Attached hereto marked Exhibit 1 for identification and here referred to and incorporated herein for all purposes will be found a cut from ownership and development map of Roosevelt County, New Mexico, prepared by Midland Map Company, Midland, Texas, and posted as to lease and fee changes to May 19, 1961 and as to well information to May 24, 1961 showing the lease in question and in addition including all of Township 8 South, Range 37 East, and other lands. The names and addresses of interested parties known to applicant and ascertained from said Exhibit 1 are as follows:

Skelly Oil Company, Skelly Building, P. O. Box 1650, Tulsa, Oklahoma,

United States Geological Survey, United States Department of the Interior, 205 North Linam, Hobbs, New Mexico,

Sam Boren, 25-1/2 Highland Park Village, Dallas, Texas,

Carper Drilling Company, 200 Carper Building, Artesia, New Mexico,

Texaco, Inc., 707 Midland Savings and Loan Building, P. O. Box 3109, Midland, Texas,

Sunray-Mid Continent Oil Company, 1101 Wilco Building, Midland, Texas,

Carl B. King, c/o John Thomas, King, Warren & Dye, 501 Midland National Bank Building, P. O. Box 1505, Midland, Texas,

Roger H. Davis, Individually and as Partner in and Trustee for Davis Brothers, c/o John Thomas, King, Warren & Dye, 501 Midland National Bank Building, P. O. Box 1505, Midland, Texas,

The Ohio Oil Company, 9th Floor, Midland National Bank Building, P. O. Box 552, Midland, Texas.

Operator proposes to seek waivers from each of the above mentioned offset owners and operators and to deliver to each copies of this application.

2.

The name and general description of the common source of supply affected by the order sought is the Bough "C" section of the Pennsylvanian horizon in the Bluitt Field in Roosevelt County, New Mexico. In such connection reference is again made to Exhibit 1 being a land and development map of the area to be affected.

3.

The general nature of the order sought is an order permitting and authorizing David Fasken to reenter and recomplete the No. 2 Well on the David Fasken King-Davis Federal Lease consisting of the West Half (W/2) of Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico, in said Bluitt Bough "C" Pennsylvanian Field by withdrawing oil string casing therefrom above the free point believed to be at or about 6,800 feet from the surface, plugging said well so as to isolate the Bough "C" formation and also at and above the depth to which casing is recovered, side tracking the well by means of whipstock and redrilling same directionally in a predetermined direction and at a predetermined rate of deviation so as to recomplete same 300 feet West of the original bottom of hole in the Bough "C" formation.

4.

David Fasken proposes to reenter said David Fasken King-Davis Federal No. 2 Well situated 1980 feet from North and West lines of Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico, in the Bluitt Bouch "C" Pennsylvanian Field and set cement plug to isolate the Bough "C" formation, cut off 5-1/2 inch oil string above free point believed to be at or about 6, 800 feet from the surface, set 300 sacks cement plug above cut off casing, set whipstock in such cement plug and reenter and redrill such well from such sidetracked point (whipstock) with a deviation of approximately twelve degrees (12°) attained within 480 feet below the sidetrack point. Operator then proposes to redrill such deviated well to total depth of approximately 9, 500 feet in the Bough "C" formation in such manner as to bottom the hole 300 feet West of the surface location; that is, at a location 1980 feet from North line and 1680 feet from West line of said Section 27. Attached hereto marked Exhibit 2 for purposes of identification and here referred to and incorporated herein for all purposes is a cross section graph prepared by Houston Oil Field Material Company illustrating the vertical section of the proposed directionally drilled recompleted well.

Attached hereto marked Exhibit 3 for purposes of identification and here referred to and incorporated herein for all purposes is United States Geological Survey Form 9-331a together with its accompanying New Mexico Oil Conservation Commission Form C-128 (surveyor's plat) giving general description of the well location and casing program and stating generally that the well is intended to be directionally drilled in the manner stated hereinabove.

The desired order is sought in order to enable the Operator to overcome geological and mechanical difficulties encountered in the original drilling of said well. Said well was originally drilled to a depth of 9, 500 feet in the Bough "C" formation where 5-1/2 inch oil string casing was set and cemented with 200 sacks of 50-50 posmix and 50 sacks with 45 gallons of Latex. Casing was run

and cemented February 3, 1961. Casing was perforated in the interval 9,467 feet to 9,490 feet opposite the Bough "C" section of the Pennsylvanian formation with 4 shots per foot. The following treatment procedures were carried out: Acidized with 500 gallons of mud acid, breakdown pressure 6,000#, injection rate 3 bpm at 2,700# and on vacuum 5 mins. after being shutin; acidized with 2,500 gallons regular acid, maximum pressure 6,500#, injection rate 4 bpm at 4,000#, 10 min. shutin pressure 2,000#, on vacuum 20 mins. after being shutin; fracturized well with 40,000 gallons Penetrol (15% gelled acid) and 75 barrels of oil, maximum pressure 8,300#, average treating pressure 7,000#, final treating pressure 6,000#, average injection rate 3.2 bpm, shutin pressure after one hour 5,500#; and fracturized well with 150,000 gallons salt water, maximum pressure 6,800#, average injection rate 10 bpm, final treating pressure 6,400#, final injection rate 12 bpm.

After each of the above described treatments the well was produced by flowing, swabbing and pumping but with progressively deteriorating results following each treatment. After early acid treatments it appeared that the well would make approximately 50 bbls. per day but latest production has been 3 to 5 barrels of oil per day with intermittent periods of shutin for fluid buildup.

Based upon sample examination and electrical logs it was believed at the time this well was drilled into the Bough "C" formation where completion was attempted as above described that such formation consisted of lime with porosity impaired by anhydrite secondary deposition which was expected to be susceptible of fracture treatment. Based upon performance under fracture treatment and upon a core taken from David Fasken King-Davis Federal No. 4, 660 feet from South line and 1980 feet from West line of Section 27, T-8-S, R-37-E, it has subsequently been concluded that the Bough "C" formation in the No. 2 well probably consists of lime with porosity impaired by

both anhydrite and bentonitic shale. It is, accordingly, now believed that the loss of production resulting from fracture treatments above described is due to swelling of bentonitic shale in the porous spaces.

The calculated circumferential space affected by the treatments above described, assuming regular circular migration, affects a circular area around the well bore having a radius of 240 feet. The Operator, accordingly, proposes to sidetrack the well in a Westerly direction towards known productive areas a distance of 300 feet from the surface location and a distance of 360 from the Western boundary of the regular quarter quarter section in which same is situated, the Southeast Quarter of the Northwest Quarter (SE/4 of NW/4) of said Section 27. Attached hereto marked Exhibit 4 for purposes of identification and here referred to and incorporated herein for all purposes will be found a horizontal projection of such sidetracked hole showing the surface location of wellhead, the surrounding calculated area of contamination resulting from unsuccessful fracture treatments and the calculated position of sidetracked bottom of hole.

The following is a table of the deviation from vertical measurements taken during the drilling of this well by the totco method from commencement to the depth of 6, 800 feet, to-wit:

Deviation	Depth
1/4°	200
3/4°	2220
1°	2600
3/4°	2800
3/4°	3475
1-1/2°	4230
3/4°	5133
1°	5375
1/2°	5990

Deviation	Depth
1-1/4°	6150
1-1/2°	6460
1-1/4°	6870

WHEREFORE, PREMISES CONSIDERED, your Petitioner David Fasken respectfully requests that a hearing be scheduled by the New Mexico Oil Conservation Commission at a time and place suitable to the convenience of the Commission and before an examiner or before the Commission, as the Commision's convenience may dictate, subject, however, to the preferences hereinabove expressed for hearing before an examiner at Hobbs, New Mexico, at the earliest practicable date, and that upon final consideration hereof your Petitioner be authorized to plug back said well, salvage casing therefrom, reenter and sidetrack same with whipstock and directionally redrill same from 6800 feet to the Bough "C" formation at approximately 9, 500 feet so as to recomplete the hole in said formation at a bottom hole position 300 feet West of the original surface location.

Respectfully submitted.

WHITAKER & BROOKS
608 First National Bank Building
Midland, Texas

By Richard S. Brooks
Richard S. Brooks

Attorneys for Applicant

David Fasken-King-Davis Federal Lease

Exhibit #1 to Application for Permit to Sidetrack Hole

Ownership and Development Plat

R-37-E

David Fasken-King-Davis Federal Lease

Exhibit #1 to Application for Permit to Sidetrack Hole

Ownership and Development Plat

R-37-E

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
AP EXHIBIT NO. 1
CASE NO. 2326

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office Santa Fe

Lease No. NM 02218

Unit

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		Notice of intention to redrill	
		(sidetrack well 300 ft. West	X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

May 29, 1961

Well No. 2 is located 1980 ft. from {N / ~~S~~} line and 1980 ft. from {~~E~~ / W} line of sec. 27

SE/4 NW/4 Sec. 27 (¼ Sec. and Sec. No.) | 8-S (Twp.) | 37-E (Range) | NMPM (Meridian)

Bluit (Field) | Roosevelt (County or Subdivision) | New Mexico (State or Territory)

See Surveyor's Plat (Form C-128) attached

The elevation of the derrick floor above sea level is 4015 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

See detailed statement of proposed work attached.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company DAVID FASKEN

Address 608 First National Bank Bldg.

Midland, Texas

Telephone MU 2-5285

DAVID FASKEN

By Richard S. Brooks

Title Attorney

GPO 862040

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-128
Revised 5/1/57

WELL LOCATION AND ACREAGE DEDICATION PLAT

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

SECTION A

Operator	Lease	Well No.
DAVID FASKEN	KING-DAVIS FEDERAL	2

Unit Letter	Section	Township	Range	County
F	27	8 South	37 East	Roosevelt

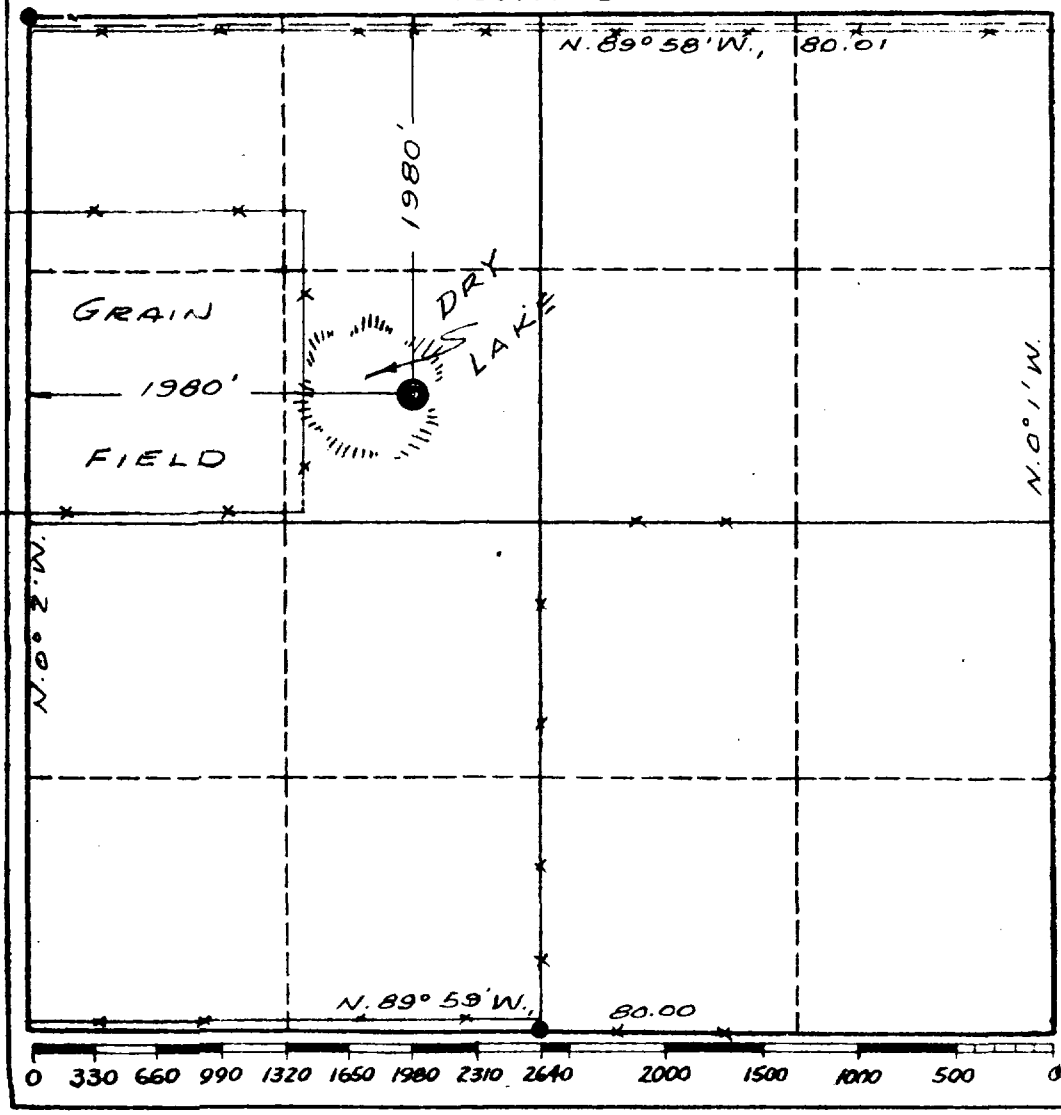
Actual Footage Location of Well:
1980 feet from the North line and 1980 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4001	Bough "C"	Bluit Field	80 Acres

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES X NO _____. *("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)*
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES _____ NO _____. If answer is "yes," Type of Consolidation _____
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

SECTION B



CERTIFICATION

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

DAVID FASKEN
Name
By Richard S. Brooks
Position Richard S. Brooks Attorney
Company DAVID FASKEN
Date May 29, 1961

I hereby certify that the well location shown on the plat in *SECTION B* 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
October 5 and 6, 1960
Registered Professional Engineer and/or Land Surveyor
John W. Thurman
Certificate No.
1559

Fasken King-Davis Federal Well No. 2 (the subject well) were impaired by secondary deposition of bentonitic shale and that treatments resulted in further impairment of porosity and permeability on account of swelling of shale. The calculated area theoretically affected by such treatments, assuming uniform distribution of injected fluid, is presumed to be a circle about the well bore having a radius of 240 feet.

The operator, accordingly, proposes to set 40 sack cement plug at 9490 to 9390 (top of Pennsylvanian) to cut off casing at the free point at or about 6, 800 feet from the surface and set 300 sack cement plug at the top of cutoff casing. The operator then proposes to set whipstock at the top of such 300 sack cement plug at a datum of approximately 6, 500 feet from the surface, to be determined according to fillup of cement as actually obtained and free point of casing as actually determined in salvage operations. Operator then proposes to drill sidetracked hole by means of such whipstock and from the point of whipstock setting so as to deviate hole ~~6~~ 12° in the interval of ~~300~~ 400 feet below sidetrack point and thence to directionally drill hole so as to bottom same at 9, 500 feet from the surface and at a location 300 feet West of surface position; that is, at a location 1980 feet from North line and 1680 feet from West line of said Section 27 and 360 feet from West line of the SE/4 of the NE/4 of said Section 27. It is calculated that such revised bottom hole position will be outside the area affected by unsuccessful treatments but 360 feet from the nearest boundary of the quarter quarter section within which the well is located and well within the boundary lines of the lease. RHB

Upon recompletion of said well as above described Operator proposes to rerun oil string casing in accordance with the original casing and cementing program hereinabove stated.

Respectfully submitted.

DAVID FASKEN

By Richard S Brooks
Richard S. Brooks, Attorney
608 First National Bank Building
Midland, Texas

FASKEN KING-DAVIS FEDERAL NO. 2

STATEMENT ACCOMPANYING NOTICE OF INTENTION TO REDRILL (SIDETRACK) WELL 300 FEET WEST

This well was drilled to the Bough "C" member of the Pennsylvanian section at a depth of 9, 500 feet from the surface with casing program as heretofore reported as follows:

Surface casing, 13-3/8 inch set at 400 feet with 300 sacks of 50-50 posmix with 4% gel and 100 sacks of neat cement. Cement circulated back to surface. Cement setting time 36 hours, initial shutin pressure 1800 p. s. i. g. and 30 min. shutin 1800 p. s. i. g.

Intermeidate casing, 8-5/8 inch set at 4, 400 feet with 1, 650 sacks of 50-50 posmix containing 6% gel and 200 sacks of neat cement. Cement circulated. Cement setting time 36 hours. Initial shutin pressure 1800 p. s. i. g. and 30 min. shutin 1800 p. s. i. g.

Oil string casing, 5-1/2 inch set at 9, 500 feet with 200 sacks of 50-50 posmix and 50 sacks of neat cement containing 45 gallons Latex. Initial shutin pressure 1800 p. s. i. g. and 24 hours shutin pressure 1800 p. s. i. g. Top of cement per temperature survey and calculated free point 6, 800 feet from the surface.

Weights and grades of oil string casing are as follows:

Size	Weight and Grade	Depth	Footage
5-1/2	17# J-55 LT&C	0 to 1470	1470
5-1/2	15. 5# J-55	1470 to 7172	5702
5-1/2	17# J-55	7172 to 9073	1901
5-1/2	17# N-80	9073 to 9500	427

Oil string casing was perforated for production in the interval 9, 467 feet to 9, 490 with 4 shots per foot.

Various acid and fracture treatments were carried out as detailed in the accompanying copy of application to New Mexico Oil Conservation Commission for permit to sidetrack hole which is here referred to and incorporated herein for all purposes. Production tests were conducted by flowing, swabbing and pumping at various intervals between the several treatments with progressively deteriorating results. Based upon cores taken from Fasken King-Davis Federal No. 4 Well on the same lease located 1980 feet from West line and 660 feet from South line of Section 27, T-8-S, R-37-E, it has been concluded that porosity and permeability in the Bough "C" section of the Pennsylvanian formation in