CASE 2326: Application of DAVID FASKEN for permission to drill directionally, Roosevelt County.

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mall Exhibits, Etc.

SEFORE THE OIL COMBERVATION CONCISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL COMPENSATION CONCESSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE No. 2326 Order No. 2-2018

APPLICATION OF DAVID PASKEN FOR PRIMISSION TO DRILL DIRECTIONALLY, ROCKEVELY COUNTY, MEN MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 28, 1961, at Santa Fe, New Mexico, before Elvis A. Uts, Examiner dely appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 7th day of July, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Uts, and being fully advised in the premises,

FIRDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, David Fasken, is the owner and operator of the W/2 of Section 27, Township 8 South, Range 37 Bast, MRPM, Reservelt County, New Mexico.
- (3) That the surface location of the applicant's King-Davis Well No. 2 is 1980 feet from the North line and 1980 feet from the West line of said Section 27, to which well the 8/2 NM/4 of said Section 27 is dedicated.
- (4) That due to the improper completion of said well in the Allison-Pennsylvanian Pcol, the applicant seeks permission to sidetruck and recomplete said Well No. 2 in such a manner as to locate the bottom of the hole in said pool 300 feet West of said surface location.
- (5) That the evidence presented at the hearing of this case indicates that the proposed bottom hole location of the well is necessitated due to improper completion practices, rather than

-2-CASE No. 2326 Order No. R-2018

due to lack of productive capability at the point of original completion.

- (6) That approval of the subject application will meither cause waste nor impair correlative rights.
- (7) That a directional survey should be taken and the results thereof submitted to the Commission upon completion of the subject well as a producer.

IT IS THE PROPERTY COMMENSOR

- (1) That the applicant, David Fashen, is hereby authorized to sidetrack and recomplete his King-Davis Well No. 2 at a surface location 1980 feet from the North line and 1980 feet from the West line of Section 27, Township & South, Range 37 Bast, Reservelt County, New Mexico, im such a memor as to locate the bottom of the hole in the Allison-Pennsylvanian Pool 300 feet West of said surface location.
- (2) That a directional survey shall be taken and the results thereof submitted to the Commission upon completion of the subject well as a producer.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem macessary.

DOME at Santa Pe, New Mexico, on the day and year hereinabove designated.

> STATE OF NEW MEXICO OIL COMSERVATION COMMISSION

REWIN L. MICHEM, Chairman

Chualke

E. S. WALKER, Momber

A. L. PORTER, Jr., Mouber & Secretary

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OPYERNOR EDMIN L. MECHEM CHANMAN

Ante of Note Wexter Oil Conservation Commission

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STATE SECLOSIST
A. L. PORTER, JR.
SECRETARY - MARCTOR

July 7, 1961

Mr. Clas	CEDCO.	Hinkle
Bervey,	Dow 4	Hinkle
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Roswell,	, Bow	Nexico

Re:	Case No. 2326	L
	Order No. R-201	
	Applicant:	
	David Fasken	•

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.

Secretary-Director

Carbon copy of order also sent to:

Hobbs OCC
Artesia OCC
Aztec OCC
OTHER

Case 7376 Leand 6-28-6 In Shant land & asken's request to directionally drill the King-Harin Rev. 6-29-61 # 2, 27 - 85-37 E, Roosenell Co.. Z. She surface location is 1870 NAW lines of said section. The bottom, at the Alleion-Penn pour is to be Docated 1280/N, 1650/Whine Forestian 3. a directional survey shall be whomitted to the Commission on completion of these well. the Hell shall receive a normal alleion Penn accourable. 5. This skowld he allowed because the producing over was contained by matter improper gome practice. Thurst

WHITAKER & BROOKS LAWYERS 608 FIRST NATIONAL BANK BLDG. MIDLAND, TÉXAS.

ED. M. WHITAKER RICHARD S. BROOKS TELEPHONE MU 2-5265

June 16, 1961

Mr. A. L. Porter, Jr.
Secretary and Director
New Mexico Oil Conservation Commission
P.O.Box 791
Santa Fe, New Mexico

Dear Mr. Porter:

Referring to application of David Fasken to the New Mexico Oil Conservation Commission for hearing and permit to directionally drill Fasken-King-Davis Federal No. 2 Well, 1980 ft. from North and West lines of Section 27, T-8-S, R-37-E, N.M.P.M., Roosevelt County, New Mexico in the Allison (formerly Bluit Bough "C" Pennsylvanian Field), we supply herewith Waivers of the following offset operators: Skelly Oil Company, Sam Boren, Carper Drilling Company, Texaco, Inc., Sunray Mid-Continent Oil Company, Carl B. King and Roger H. Davis. A copy of said application has been furnished to The Ohio Oil Company with request for Waiver and a follow up letter in the same behalf with notice of date of hearing has been furnished to said company. Form 9-33la has been furnished to the United States Geological Survey at Hobbs, New Mexico in accordance with Exhibit 3 to said application and has been filed and approved by U.S.G.S. May 31, 1961.

In further support of our said application we hand you herewith the originals of the above listed waivers and a photocopy of said Form 9-33la showing such filing and approval by the United States Geological Survey.

We wish to advise that Mr. Howard C. Bratton of Hervey, Dow and Hinkle, Roswell, New Mexico has been retained to represent our client, David Fasken, at the forthcoming hearing in the above mentioned matter.

Yours truly,

WHITAKER & BROOKS

Richard & Brooks

Richard S. Brooks

RSB:avi

cc: Mr. R. F. Montgomery cc: Mr. Howard C. Bratton

Skelly Oil Company May 30, 1961

Mr. A. L. Porter, Jr.
Secretary and Director
New Mexico Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter

The undersigned acknowledges receipt of Application of David Fasken for Hearing and Permit to Sidetrack and Directionally Redrill David Fasken-King-Davis Federal No. 2 well in the Bluit Bough "C" Pennsylvanian Field at a location 1980 ft. from North and West lines of Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico so as to deflect said well to the West and recomplete same at a depth of 9,500 ft. in the Bough "C" formation at a bottom hole location 1980 ft. from North line and 1680 ft. from West line of said Section 27.

The undersigned hereby waives issuance and service of notice to and upon him (it) in reference to said application and enters his (its) appearance in reference to said application.

Yours truly,

SKELLY OIL COMPANY

6/15/

1-asker KOF-#2

Sam Boren Dallas, Texas May 30, 1961

Mr. A. L. Porter, Jr. Secretary and Disector New Mexico Oil Conservation Commission P.O. Box 871 Santa Fu, New Mexico

Bung Mr. Portor:

The undersigned acknowledges receipt of Application of Devid Packen for Hearing and Permit to Sidetrack and Directionally Redrill David Facken-King-Davis Federal No. 2 well in the Bluit Bough "C" Pannsylvanian Field at a location 1980 ft. from North and West lines of Section 27, T-8-8, R-37-E, HMPM, Reservelt County, New Mexico so as to deflect said well to the West and section hale location 1980 ft. from North line and 1680 ft. from West line of said Section 27.

The undersigned hereby waives issuance and service of notice to and upon him (it) in reference to said application and enters his (its) appearance in subsence to said application.

Yours truly,

Sam Boren

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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 ealculated 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 Pennsylvanium) 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 fill up of cement as actually obtained and free point of casing as actually determined in salvage operations. Operator them proposes to drill sidetracked hole by means of such whipstock and from the point of whipstock setting so as to deviate hole on the interval of the 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 the 4 of said Section 27. It is calculated that such revised bottom hole position is be estable the area affected by unsuccessful treatments but 360 feet from ie neurost boundary of the quarter quarter section within which the well is ed and well within the boundary lines of the lease.

Open recompletion of said well as above described Operator property to perm ell string casing in accordance with the original casing and continuing transparent herdinabove stated.

Respectfully submitted.

david fasken

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

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.

Intermedate 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 coment containing 45 gallous 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	9973 to 9500	427	

Oil string casing was perforated for production in the interval 9, 467 feet to 9, 499 with 4 shots per feet.

Various acid and fracture treatments were carried out as detailed in the accompanying capy of application to New Mexico Oll Conservation Commission for permit to sidetrack hole which is here referred to and incorporated hispain for all purposes. Production tests were conducted by flowing, swalking and pumping at various intervals between the several treatments with progressively deteriorating results. Based upon cores taken from Fashen King-Bovis Federal Ma. 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 porceity and permeability in the Bough "C" section of the Pennsylvanian fermation in

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Fashin KDF#2

Carper Drilling Co., Inc. May 30, 1961

Mr. A. L. Poster, Jr. Secretary and Bisocter Nov. Manho CM Conservation Commission P.G. Bug St I Seate Po, Nov. Menico

Dear Mr. Porter:

The undereigned acknowledges receipt of Application effected Fashenfor Hearing and Persons to Sidetrack and Directionally Redritt Bavid FashenRing-Bavis Federal Me. 2 well in the Birth Bough "C" Pennsylvanian Field at
a location 1900 ft. from North and West times of Scatten 27, T-8-6, R-37-E,
MAPPA, Recover County, New Marico so as to delivet each well to the West
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a bottom hole toostion 1900 ft. from North Line and 1600 ft. from West line
at soil Parising 27.

The endereigned hereby values increases and service of notice to and upon him (it) in reference to said application and enters his (its) appearance in redocutes to said application.

Yeurs truly,

CARPER DRILLING CO., INC.

Marshall Rawley, Viss-Pros.

TEXACO

PETROLECM PRODUCTS

DOMESTIC PRODUCING DEPARTMENT MINGARD BEVINGS



P. O. POX 2109 MIDLAND, TEXAS

THE STEE

June 5, 1961

Mr. A. L. Porter, Jr.
Secretary and Director
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

TEXACO Inc., having offset acreage, has been notified of the application of David Fasken for a permit to sidetrack and directionally redrill his King-Davis Federal No. 2 well in the Bluitt-Pennsylvanian Pool which is presently located 1980' from north and west lines of Section 27, T-8-S, R-37-E, Rocsevelt County, New Mexico so as to complete the bottom of the hole 300 feet west of the surface location.

TEXACO Inc., as an offset operator, has no objections to this application provided that the allowable assigned to the well reflects the decrease in productive acreage that exists at this location.

Very truly yours,

R. M. Bischoff Assistant to

Division Manager

JERjr.-MM

Sunray Mid-Continent Oil Co. May 30, 1961

Freder Strain

Mr. A. L. Porter, Jr.
Secretary and Director
New Mexico Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

The undersigned acknowledges receipt of Application of David Fasken for Hearing and Permit to Sidetrack and Directionally Redrill David Fasken-King-Davis Federal No. 2 well in the Bluit Bough "C" Pennsylvanian Field at a location 1980 ft. from North and West lines of Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico so as to deflect said well to the West and recomplete same at a depth of 9,500 ft. in the Bough "C" formation at a bottom hole location 1980 ft. from North line and 1680 ft. from West line of said Section 27.

The undersigned hereby waives issuance and service of notice to and upon him (it) in reference to said application and enters his (its) appearance in reference to said application.

Yours truly,

Sunray Mid-Continent Oil Co.

By VV Smit

Carl B. King Dallas, Texas May 30, 1961

Mr. A. L. Perter, Jr. Secretary and Director New Mexico Oil Conservation Commission P. G. Box 871 Santa Fe, New Mexico

Dear Mr. Porter

The undersigned acknowledges societ of Application of David Fashen for Hearing and Pormis to Stdetrack and Directionally Rodrill Bavid Fashen-Ring-David Federal No. 2 well in the Bluit Bough "C" Pennsylvation Flots at a location 1900 ft. from North and West lines of Section 27, T-8-1, Flots at a location 1900 ft. from North and West in the Bough "C" in the Bough "C" in the West and recompilate same at a depth of 9,500 ft. in the Bough "C" formation at a bottom hole tecation 1900 ft. from North line and 1600 ft. from West thee of said Section 27.

The undersigned hereby waives issuance and service of notice to and upon him (ii) in reference to said application and enters his (its) appearance in reference to said application.

Yours truly,

Carl B. King

Foster Y M-#?

Roger H. Davis Dallas, Texas May 30, 1961

Mr. A. L. Portor, Jr. Secretary and Director New Mexico Off Conservation Commission P.O. New 871 Seats Fo. New Mexico

Boar Mr. Porter

The undersigned achaevingue societ of Application of Bavid Feshen for Hearing and Fermit to Midetrack and Disectionally Redwitt Bavid Feshen-Sing-Bavid Federal H., 2 well in the Binit Bough "C" Fennsylvanian Field at a heatien 1900 ft. from North and West lines of Section 27, T-8-8, R-W-R, MhPM, Recovett Gounty, New Mexico so as to definet said well in the West and sectionists onme at a depth of 9,500 ft. in the Bough "C" Securities at a bottom hole location 1900 ft. from North Hae and 1450 ft. from West time of said Souther 27.

The undereigned hereby valves iscusses and service of actice to and upon him (b) in sedectors to said application and exters his (bis) appearance in self-pages to said application.

Yours truly.

Moger H. Davis

0 00 2326

WHITAKER & BROOKS
LAWYERS
608 FIRST NATIONAL BANK BLDG
MIDLAND, TEXAS

ED, M. WHITAKER RICHARD S, BROOKS TELEPHONE MU 2-5285

May 29, 1961

Mr. A. L. Porter, Jr.
Secretary and Director,
New Mexico Oil Conservation Commission
P.O. Box 791
Santa Fe, New Mexico

Dear Mr. Porter:

Enclosed herewith in triplicate you will find Application on behalf of David Fasken for hearing and for permit to sidetrack and recomplete David Fasken-King-Davis Well No. 2, located 1980 ft. from North line and 1980 ft. from West Line of Section 27, T-8-S, R-37-E NMPM, Roosevelt County, New Mexico in the Bluit Bough "C" Pennsylvanian Field so as to move the bottom of hole to a location 1980 ft. from North line and 1680 ft. from West line of said Section 27. As indicated in the accompanying Petition, such permit is requested to allow the operator to recomplete the well outside of the calculated area of contamination affected by unsuccessful stimulation treatments but more than a minimum permissible distance from the outside boundary of the quarter quarter section within which the well is located.

We should appreciate your causing this matter to be set down for hearing at such time and place as may be suitable to the convenience of the Commission and before an examiner or before the Commission according to the desires of the Commission. Subject to such desires and convenience, we suggest that the matter be set down before an examiner at Hobbs, New Mexico at the earliest practicable date.

Kindly issue such notices as you deem necessary, in which connection we direct your attention to the list of interested parties known to the operator contained in the petition and to the ownership plat accompanying the petition as Exhibit #1. We suggest that you forward notices to us in order that we may attend to service thereof. We are seeking waivers from the offset operators which we trust will be acceptable in lieu of service in those instances in which they are obtained.

A copy of this letter and of the accompanying petition are being sent to

Labin 6 15 W

Mr. A. L. Porter, Jr., Page 2, May 29, 1961

the Hobbs Office of the Commission for the information of the Supervisor and Proration Manager. Yours truly,

WHITAKER & BROOKS

Rilard Brooks Richard S. Brooks

RSB:avi cc: Mr. R.F. Montgomery Supervisor and Proration Manager New Mexico Oil Conservation Commission P.O.Box 2045 Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

Gas Well Plat

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WHITAKER & BROOKS

608 FIRST NATIONAL BANK BLDG.

MIDLAND, TEXAS

ED. M. WHITAKER RICHARD B. BROOKS

June 22, 1961

Mr. A. L. Porter, Jr. Secretary and Director New Mexico Oil Conservation Commission P.O. Box 791 Santa Fe, New Mexico

Dear Mr. Porter:

Referring to Case No. 2326 David Fasken Application to Directionally Drill King-Davis Federal No. 2, Section 27, T-8-S, R-37-E, Roosevelt County, you will find enclosed herewith Waiver of The Ohio Oil Company which we should appreciate your associating with the file in this matter.

Yours truly,

WHITAKER & BROOKS

Riber Mole

Richard S. Brooks

 $RSB:a^{V_i}$ cc: Mr. Howard C. Bratton

The Ohio Oil Company P.O.Box 552 Midland, Texas June 16, 1961

Mr. A. L. Porter, Jr.
Secretary and Director
New Mexico Oil Conservation Commission
P.O.Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

The undersigned acknowledges receipt of Application of David Fasken for Hearing and Permit to Sidetrack and Directionally Redrill David Fasken-King-Davis Federal No. 2 well in the Bluit Bough IC" Pennsylvanian Field at a location 1980 ft. From North and West lines of Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico so as to deflect said well to the West and recomplete same at a depth of 9,500 ft. in the Bough "C" formation at a bottom hole location 1980 ft. from North line and 1680 ft. from West line of said Section 27.

The undersigned hereby waives issuance and service of notice to and upon him (it) in reference to said application and enters his (its) appearance in reference to said application.

Yours truly,

THE OHIO OIL COMPANY

By Cus mile

docket no. 2326

IN THE MATTER OF

I

DAVID FASKEN,

I

OPERATOR

I

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:

l.

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.

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 six degrees (12°) ** attained within 300 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 ⁰	2220
10	2600
3/4°	2800
3/4 ⁰	3475
l-1/2°	4230
3/4°	5133
10	5375
1/20	5990

Deviation	Depth
1-1/4°	6150
1-1/2°	6460
1-1/40	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 before the Commission, as the Commission'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

Richard S. Brooks

Attorneys for Applicant

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BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico

June 29, 1961

EXAMINER HEARING

Case 2326

TRANSCRIPT OF HEARING

BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico June 29, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of David Fasken for permission to drill directionally, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks permission to sidetrack and recomplete the David Fasken-King-Davis Well No. 2, located 1980 feet from the North line and 1980 feet from the West line of Section 27, Townthip 8 South, Range 37 East, Roose-velt County, New Mexico, in such a manner as to locate the bottom of the hole in the Bough "C" formation of the Bluitt-Pennsylvanian Pool 300 feet West of said surface location.

Case 2326

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The Hearing will come to order. The first case on the docket will be Case Number 2326.

MR. HINKLE: Clarence Hinkle, Roswell, representing David Fasken. We have one witness, Mr. Charles Joy.

(Witness sworn.)

MR. HINKLE: We have five Exhibits. We have distributed those to the Commission.



ALBUQUERQUE, NEW MEXICO

CHARLES C. JOY

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. HINKLE:

- State your name, please. Q
- Charles C. Joy.
- By whom are you employed? Q
- David Fasken. A
- In what capacity? Q
- Petroleum Engineer. A
- Where do you reside? Q
- Midland, Texas. A
- Have you ever testified before the 011 Conservation Q

Commission?

- No, sir. A
- Where did you graduate? Q
- University of Alabama. A
- With what degree? Q
- Petroleum Engineer. A
- In what year? Q
- Have you practiced your profession since your graduation? A
- Yes, sir; the Atlantic Refining Company, six and a half Q

years.

ij

When did you leave Atlantic?

- A In the Summer of 1960.
- Q Where were you stationed with Atlantic?
- A Midland, Texas.

Q

- Q What were the duties in your area?
- A I was Area Reservoir Engineer when I left.
- Q When did you go with David Fasken?
- A In August of 1960.
- Q Has your work covered our operations in New Mexico?
- A Yes, sir. I handle all petroleum engineering problems pertaining to David Fasken's properties in New Mexico.
- Q Are you familiar with the development in the Allison-Pennsylvania Pool?
 - A Yes, I am.
- Q Are you familiar with the application which has been filed in this case by David Fasken for permission to drill directionally?
 - A Yes, I am.
- Q Please refer to the Exhibit which has been identified as David Fasken's Number 1 and explain to the Commission what this is.
- A This plat indicates Federal acreage leased by David Fasken and consists of the west half of Section 27. Also, it shows locations of wells Number 2, 3 and 4 drilled by David Fasken. In addition, the plat shows ownership of offset leases and the



relative location of the King-Davis Federal lease with respect to the Allison-Pennsylvania Pool.

- Does it show also all of the offset owners?
- Yes, sir; except there is one in question. A
- Who are the offset owners there?
- Sam Boren, Texaco, Inc., Sun Ray Midcontinent 011 Company, Carl B. King, Roger H. Davis and the Ohio Oil Company.
- Do you know whether or not copies of the application in Q this case have been sent to all of the offset owners?
- Waivers have been obtained and filed with the Oil Con-A servation Commission.
 - Q Did you send them copies of the application?
 - A Yes, sir.
 - You have obtained waivers from all of them? Q
- Yes, except the Ohio Oil Company. It is my understand-A ing that Ohio will not oppose our application. The U.S.G.S. has approved the proposed workover and copies of the U.S.G.S. form 9331-A have been filed with the Oil Conservation Commission.
- Now, I believe you stated that the west half of Section 27 in the David Fasken lease is Federal acreage, is that right?
 - A Yes, sir.
- Q. Are you familiar with the manner in which the King-Davis Number 2 was drilled?
 - A Yes, sir, I am.
 - That well is located in the northwest quarter, southwest



of the northwest quarter of Section 27?

- Yes, sir. A
- Q Can you give us a rundown on how the well was drilled, the depth?
 - Yes, sir. A
 - And the casing program and so forth?

The well was originally drilled to a depth of 9500 feet February 6, 1961. A full string of five and a half inch casing was set at 9500 feet and cemented with three hundred sacks. The casing was perforated from 9467 feet to 9490 feet in the Bough "C" formation.

The well was acidized with five hundred gallons of mud ac.14, breakdown pressure 6000 PSIG, average injection rate three BrM at 2700 PSIG, and in five minutes went on vacuum. Opened well up after four hours shut in and it flowed twenty-six barrels of oil in twelve cours and died. The well was then retreated with 2500 gallons of regular acid. Average injection rate four BPM at 4000 PSIG. Well want on vacuum after twenty minutes. Shut well in overnight. The well was then opened up and it would not flow. Started swabbing and recovered forty-five barrels of acid water in twenty-four hours. Well was shut in for twenty-four hours. Started swabbing after shut in period, and recovered twenty barrels of fluid cut 50% water. Fluid level was at 8500 feet.

Fracture treated with 40,000 gallons of Penetrol, 15%



jelled acid, and 75 barrels of oil. Acid treated down two and three-eights inch tubing. Average injection rate 3.2 BPM at an average pressure of 7000 PSIG. Maximum pressure 8300 PSIG. Final pressure 6,000 PSIG.

Final treatment was used as a last resort or as an experimental treatment. This consisted of 150,000 gallons of salt water. Average injection rate twelve BPM at 6400 PSIG. Maximum pressure 6800 PSIG. One hour shut in pressure 5500 PSIG. Well would not flow and was placed on pump. Production average from three to five barrels oil per day.

How did you treat the salt water, did you do it through the casing?

No. We ran a three-inch tubing and fracture treated it down the three-inch tubing due to the fact our casing wasn't heavy enough.

Have you formed any opinion as to why these various treatments did not properly react, particularly with reference to the salt water?

Yes, I have analyzed both of them. Our treatment was ineffective because the acid was spent before reaching out into the formation. This was due to the slow rate of injection caused by having to treat down the 2-3/8 inch tuling and the Western Company was in agreement with our conclusions on this.

Why did you have to use the 2-3/8 inch tubing? Q

We used the 2-3/8 tubing because we did not use heavy



enough casing, and it is our opinion the salt water was detrimental to reservoir as the sample log indicates the formation consists of lime with porosity impaired by secondary deposition containing anhydrite and bentonitic shale. When it swells, consequently the reservoir permeability has been impaired, which restricts the flow of oil into the well bore.

Mr. Joy, please refer to your Exhibit Number 2 and explain to the Commission what it is and what it shows.

Exhibit No. 2: This is a structure map contoured on top of the Bough "C" formation. The red line depicts a vertical cross-section we have prepared. It shows the No. 2 well with respect to the offset wells and our Green No. 1 well approximately two and a half miles east.

- When was this Green well in Section 30 completed, approx-Q imately?
 - A Recently.
 - And your No. 2 well in Section 27?
- It was completed sometime in May -- June, the latter part, I believe -- May 25th.
 - Does this contour map show any closures structurally? Q
 - No, sir; it does not.
 - Q Does the contour show intervals?
 - A Yes, sir.
- Refer to your Exhibit No. 3 which is the cross-section as indicated by Exhibit No. 2 and explain to the Commission what



it is and what it shows.

A Exhibit No. 3: This Exhibit is a vertical cross-section starting with the top of the Wolfcamp formation and continuing through the bottom of the Bough "C" formation. It is based on interpretation of the mechanical logs from the Ohio King-Davis Federal No. 2 and 3 wells, and David Fasken King-Davis Federal No. 2 well and Green No. 1 well. As you can see, the pay is uniform in both the vertical and the east-west horizontal directions.

- Q Is there any difficulty in picking the top of the Bough "C" formation?
 - A No, sir.
 - Q They correlate very well?
 - A Yes.
 - Q Including the formation in the No. 2 well?
 - A Yes.
 - Q And the Green well is approximately two miles from it?
 - A Yes, sir.
- Q Are there any other comments you'd like to make with respect to this cross-section?
 - A No, sir.
- Q It does show that the formation is practically level, uniform, about the same thickness throughout this whole interval?
 - A Yes, sir.
- Q Is there any reason to believe from the log of these wells that the formation encountered in the Bough "C" and David



Fasken well is any different from the other producing wells in the area?

- A No, sir.
- What are the characteristics of the Bough "C" formation? Q
- Well, we believe the formation is uniform throughout in its strategraphic structure in both permeability and porosity.
 - What is it, limestone and anhydrate?
 - Α That's right.
 - Is it intermixed, interbedded with any shale? Q
 - Yes, sir, it is.
- That's a general characteristic throughout the entire area?
 - Yes.
- Now, refer to Exhibit No. 4 and explain to the Commis-Q sion what this shows.
 - The shaded area on this map --
- Does it show the King-Davis Federal lease, the west Q half of 27?
- Yes. With respect to our King-Davis Federal No. 3 and 4 wells to the west.
 - Q All right; go ahead.
- This map shows the estimated horizontal area contaminated by the salt water treatment. The radius of this area is estimated to be two hundred forty feet. This damaged area was calculated from equations derived by Dr. Crawford with Western



Company. Also, the bottom of the new hole with respect to the bottom of the present hole is shown. The bottom of the new hole will be three hundred feet directly west of the present bottom hole. Surveys will be taken when drilling to control deflection and direction. The final directional survey will be filed with the Commission.

- Q Can you explain briefly to the Commission how you propose to directionally drill this well to the proposed location of three hundred feet west of the Federal acreage?
 - A Do I have plat No. 5?
 - Q Refer to plat No. 5 in your explanation.
- A This is a vertical cross-section of the intended new hole. We anticipate attaining twelve degree deflection withint four hundred eighty feet below side track point. The reason for obtaining the twelve degrees within the four hundred and eighty feet from the side track point is to get our deflection before going through the Arbo reef which would cause us to lose both deflection and direction.

Now, we will keep running continuous surveys while dualing this hole in order to keep this line at about three hundred feet west of the present hole.

- Q Who is going to do this?
- A Homeco.
- Q Did they prepare Exhibit 5?
- A Yes, sir.



Q You might also explain to the Commission just how you intend to handle this as far as present casing is concerned.

A We anticipate going in and squeezing off the perforations in the bottom of the well, then cut casing at 6800 and pull five and a half inch casing. We will then set a plug at 6800 feet which will be continued 300 feet on up the hole to 6500 feet. We then hope to set a whipstock on top of the cement at 6500 feet and will project cut with a 6-1/4 inch bit to a distance of 50 feet. We'll then go back in and remount with a 5/8 inch bit and continue the drilling and controlling the direction and deflection by use of stabilizers and reamers.

Q I believe I understood you to say you made a directional survey upon completion and filed a copy of it with the Oil Conservation Commission?

- A Yes, sir.
- Q Is Homeco Company a specialist in directional drilling?
- A Yes, sir, they are.
- Q Do you anticipate any particular difficulty in redrilling directionally this well and locating it 300 feet west of the present location?

A No, sir. That is the reason we are going twelve degrees within the first 480 feet.

Q By so drilling, and relocating this well 300 feet west of the present location, you would be out of the contaminated area?



A Yes, sir. That is our contention after working out the calculations that Dr. Crawford has derived. We anticipate we will be out of the contaminated area.

Q I assume that you could drill this well directionally and relocate it in any direction from the present location?

A Yes, sir, we could. We could go east. We could place it within 330 feet of the east line and get more uniform drainags. We anticipated going westward. The 80 acre lease runs from east to west and we stepped out two and a half miles directly east and brought in a producer with a potential of 309 barrels a day.

MR. HINKLE: We would like to offer -- first, were all Exhibits, 1 through 5, prepared by you or under your direction?

A Yes, sir, under my direction.

MR. HINKLE: We would offer Exhibits 1 through 5 into evidence.

MR. UTZ: Without objection, Exhibits 1 through 5 will be entered into the record of this case.

Did you say your unit runs east and west?

THE WITNESS: Yes, sir, that's the way we started to develop the lease. If you look back on the plat, we have the No. 3 well assigned to the north half of the southwest quarter and we also drilled the No. 4 hole that was in the south half of the southwest quarter.

MR. UTZ: The dedication to this well will be in the south half of the northwest quarter of Section 27?



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THE WITNESS: Yes, Bir.

MR. UTZ: You own the entire west half of 27?

THE WITNESS: Yes, sir.

MR. UTZ: Are there any other questions of the witness?

MR. MORRIS: Yes.

EXAMINATION

Mr. Toy, as I understand it, the surface location of BY MR. MORRIS: the well is exactly in the center of the quarter section, and under the rules and approval you would have one hundred fifty foot tolerance from the center of that quarter section?

So, with respect to where the bottom of the hole is, Yes, sir. with reference to the surface location, you are actually going to be a hundred and fifty feet farther west of an orthodox location?

Now, at the end of your testimony you stated that certain Yes, sir. wells had been potentialled at a given rate. I missed that testi-

That was for Green No. 1 well which was an approximate mony. two and a half mile step out directly east of the King-Davis Federal No. 2 well.

That's the No. 1 well shown on the cross-section? Q

Has there been any development between that well and Yes, sir. A



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the subject well today along that cross-section?

Not to my knowledge. There have been no holes drilled on that.

Is there any indication that your No. 2 well, the sub-Q ject well today, is on the edge of the pool?

No, sir, there is not. The Ohio well in Section 21 is further down than the No. 2. The Green is also lower slightly --15 feet lower -- on structure than the King-Davis No. 2,

Is there any development to the north of your No. 2 well in this pool?

No, sir; not to my knowledge.

MR. MORRIS: That's all. Thank you.

MR. UTZ: Are there any other questions of the witness?

REDIRECT EXAMINATION

BY MR. HINKLE:

Referring to Exhibit 4, you show proposed location on your lease covering the west half of 27 there in the northwest of the northwest. Do you propose to drill that well?

Α Yes, sir.

In other words, you do believe --

According to the general manager, we will drill No. 1 well.

MR. HINKLE: That's all.

MR. UTZ: Are there any other questions of the witness? The witness may be excused.



(Witness excused.)

MR. UTZ: Are there any other statements in this case? MR. HINKLE: I have something I'd like to offer for the In the case file of this case we have copies of waivers from the offset operators including the Skelly Oil Company and certain individuals, being Sam Boren, Carper Drilling Company, Inc., Sun Ray Midcontinent Oil Company, Carl B. King, Roger H. Davis and the Ohio Oil Company. Texaco, Inc. has also submitted a waiver with the proviso that allowables assigned to the well reflect the decrease in productive acreage that exists at this location. Otherwise, they have no objection to the granting of the application.

I might state that this application does not mention allowable at all. It goes under the assumption that the entire south half of the northwest quarter is productive. Of course, the testimony now shows that outside of this contaminated area two hundred and forty feet radius from the present well they believe to be productive. If there is any trouble in allowables, it seems to me it would have to be on the application filed by Texaco or somebody else's to decrease the allowables because that is not involved here. All we are asking for is an order to permit directional drilling and recompletion of the well three hundred feet from the present location.

> MR. UTZ: Are there any other statements in this case? The case will be taken under advisement.



CERTIFICATE

STATE OF NEW MEXICO) ss COUNTY OF BERNALILLO)

I, THOMAS F. HORNE, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

NOTARY PUBLIC

My commission expires:

May 4, 1965

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 23 > 6 heard by me on the proceedings in the Examiner hearing of Case No. 23 > 6

New Mexico Oil Conservation Commission

