CASE 3740: Application of DAVID FASKEN FOR LEASE COMMINGLING, EDDY COUNTY, NEW MEXICO.

Case No.

3750

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 3740
Order No. R-3395

APPLICATION OF DAVID FASKEN
FOR LEASE COMMINGLING, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 20, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 25th day of March, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(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 operator of the Ross-Federal Well No. 1, the Shell-Federal Well No. 1, and the Skelly-Federal Well No. 1, located in Sections 4, 5, and 9, respectively, Township 21 South, Range 24 East, NMPM, North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico.

(3) That the applicant proposes to pipe the wet gas stream from each of the aforesaid wells to a central point located in Unit B of said Section 5, there to separately meter and then commingle said wet gas stream prior to separation and dehydration.

(4) That the applicant proposes to commingle, subsequent to separation, the condensate from the subject wells in a single stock tank located in said Unit B.

(5) That the applicant proposes to allocate the gas production to each well on the percentage each well's wet gas stream bears to the total combined dry gas sales and to allocate the condensate to each well on the percentage each well's wet gas stream bears to the total wet gas volume.

(6) That the condensate production from each of the subject wells is inconsiderable and if separately stored will be subject to relatively high rates of vaporization.

(7) That storage of the condensate production from the three wells in a common storage tank located in the aforesaid Unit S should minimize loss due to vaporization and allow the condensate to be stored in a more advantageous location for hauling purposes.

(8) That wet stream metering and commingling of the streams prior to separation and dehydration and allocation of production to the three wells on the basis proposed by the applicant and described in Finding No. 5 would not adequately protect correlative rights of the various owners of interest in the subject wells.

(9) That in order to prevent waste and protect correlative rights, the applicant should be authorized to commingle the condensate production from the subject wells in a common stock tank located in the aforesaid Unit S and to commingle the gas production from the subject wells subsequent to separation and metering by means of 3-phase metering separators upstream from the applicant's proposed gas meters.

IT IS THEREFORE ORDERED:

(1) That the application of David Vanken to meter the wet gas stream from the Rose-Federal Well No. 1, the Shell-Federal Well No. 1, and the Skelly-Federal Well No. 1, located in Sections 4, 5, and 9, respectively, Township 21 South, Range 24 East, NMPM, North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico, prior to separation and dehydration, and to allocate production to each well on the percentage of each well's wet gas stream to the total combined gas volume is hereby denied.

(2) That the applicant is hereby authorized to commingle in a common stock tank located in Unit S of the aforesaid Section

5 the condensate production from the aforesaid three wells and to commingle the gas production from the aforesaid three wells; provided however, that the condensate production from each of the aforesaid wells shall be separately measured, prior to commingling, by means of 3-phase metering separators located upstream from the applicant's gas meters; and provided further, that the gas production from each of the subject wells is separately metered subsequent to separation and prior to commingling.

(3) That 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

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

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

esr/

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

March 25, 1968

Mr. James E. Sperling
Modrall, Seymour, Sperling, Roehl & Harris
Attorneys at Law
Post Office Box 466
Albuquerque, New Mexico

Re: Case No. 3740
Order No. R-3395
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

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC
Other

PHONE MUtual 3-1893

HENRY ENGINEERING
Petroleum Engineers
807 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79704

March 22, 1968

New Mexico Oil Conservation Commission
State Land Office Building
P. O. Box 2308
Santa Fe, New Mexico 87501

Attention: Mr. D. S. Nutter
Chief Engineer

Re: Docket No. 9-68
Case 3740

Gentlemen:

Enclosed are lists of the names of all working interests, other than David Fasken, operator, overriding royalty interests, and royalty interests in the Ross-Federal No. 1, Section 4, Shell-Federal No. 1, Section 5, and Skelly-Federal No. 1, Section 9, all in T-21-S, R-24-E, Eddy County, New Mexico. All of these interest owners were notified on or before February 2, 1968, of the operator's application to commingle by copy of the application with attachments that were sent to your office.

On behalf of our client, David Fasken, we feel the procedure of allocating gas and liquid hydrocarbon production outlined in the application and presented in testimony at the hearing is fair and equitable. The response from the other working interests, royalty interests, and overriding royalty interests supports this contention.

If the Commission should choose to issue a temporary order as set forth in Case 3740, the operator, David Fasken, will run periodic G.P.M. tests to support the validity of the proposed allocation. Copies of these tests will be submitted to you for evaluation.

Yours truly,

HENRY ENGINEERING

Robert H. Angevine

RHA:eh
Encl.

ROSS-FEDERAL

Section 4, T-21-S, R-24-E
Eddy Co., New Mexico

Kathryn B. Richardson & E. R. Richardson
2929 Montevista N. E.
Albuquerque, N. M.

Anna J. Stark
4503 E. Tuxedo Blvd.
Bartlesville, Oklahoma

George D. Riggs & Edith Riggs
603 W. Riverside
Carlsbad, N. M.

Neil H. Wills
P. O. Drawer W
Carlsbad, N. M.

Monsanto Co.
1300 Main
Houston, Texas 77000
Attn.: Mr. Fair Colvin

USGS

Blanco Company (Emmett D. White)
P. O. Box 1150
Roswell, N. M.

G. C. Weaver
1005 North Shore Drive
Carlsbad, N. M.

Marion V. Harris & L. C. Harris
P. O. Box 1714
Roswell, N. M.

Wilma Elliott Donahue
P. O. Box 1372
El Paso, Texas

Shell Oil Co.
P. O. Box 1509
Midland, Texas 79701

SHELL-FEDERAL

Section 5, T-21-S, R-24-E
Eddy Co., New Mexico

The Blanco Company (Emmett D. White)
P. O. Box 1150
Roswell, New Mexico

Wilma Elliott Donahue
P. O. Box 1372
El Paso, Texas

Marion V. Harris & L. C. Harris
P. O. Box 1714
Roswell, N. M.

Anna J. Stark
4503 East Tuxedo Blvd.
Bartlesville, Oklahoma

Harold Scherz & Clara Lloyd Scherz
12 Hull Circle
Austin, Texas 78746

Neil Wills
P. O. Drawer W
Carlsbad, N. M.

William R. Hendley & A. Jane Hendley
716 Bank of New Mexico Building
Albuquerque, New Mexico

&

R. Hugo Cotter & Jane H. Cotter

Monsanto Co.
1300 Main
Houston, Texas 77000
Attn.: Mr. Fair Colvin

Shell Oil Co.
P. O. Box 1509
Midland, Texas 79701

U.S.G.S.

SKELLY-FEDERAL

Section 9, T-21-S, R-24-E
Eddy Co., New Mexico

George D. Riggs & Edith Riggs
P. O. Box 116
Carlsbad, N. M. 88220

Anna J. Stark
4503 East Tuxedo Blvd.
Bartlesville, Oklahoma

Neil H. Wills
P. O. Drawer W
Carlsbad, N. M.

Al & Ruth Panzera
5948 Diamond Oaks Drive, South
Fort Worth, Texas 76117

Charles C. Langdon
P. O. Box 9317
Fort Worth, Texas

Marathon Oil Company
P. O. Box 552
Midland, Texas 79701
Attn.: Mr. Charles L. Southard

Shell Oil Co.
P. O. Box 1509
Midland, Texas 79701

U.S.G.S.

Kathryn B. Richardson & E. R. Richardson
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Albuquerque, N. M.

Blanche V. White
P. O. Drawer 1150
Roswell, New Mexico

L. C. Harris
P. O. Box 1714
Roswell, N. M.

Laurese L. & Roelof van de Wijngaard
2630 Highland Road, Apt. 243
Dallas, Texas 75228

G. C. Weaver & Phyllis C. Weaver
1005 North Shore Drive
Carlsbad, N. M.

Monsanto Company
1300 Main
Houston, Texas 77000
Attn.: Mr. Fair Colvin

Skelly Oil Co.
P. O. Box 993
Midland, Texas 79701
Attn.: Mr. V. E. Bartlett

CASE 3737: Application of Southland Royalty Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its O. D. McCoy Well No. 2 at an unorthodox oil well location 800 feet from the South line and 2120 feet from the East line of Section 28, Township 9 South, Range 33 East, Flying "M" San Andres Pool, Lea County, New Mexico.

CASE 3738: Application of Pan American Petroleum Corporation for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres and Yeso formations in the interval 2190 feet to 3450 feet in its State "CF" SWD Well No. 1 located in Unit I of Section 13, Township 11 South, Range 26 East, Chisum-Devonian Pool, Chaves County, New Mexico.

CASE 3739: Application of New Mexico Salt Water Disposal Company, Inc., for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the interval from approximately 13,128 feet to 13,207 feet in its Trainer-Springs Well No. 1, located in Unit H of Section 11, Township 11 South, Range 34 East, Sand Springs-Devonian Pool, Lea County, New Mexico.

CASE 3740: Application of David Fasken for lease commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to meter the wet gas stream from his Ross-Federal Well No. 1, the Shell-Federal Well No. 1, and the Skelly-Federal Well No. 1, located in Sections 4, 5, and 9 respectively, Township 21 South, Range 24 East, North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico, prior to separation and dehydration, allocating condensate production to each well on the percentage of each well's wet gas stream to the total combined wet gas volume.

DOCKET NO. 9-68

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 20, 1968

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 3724: (Continued from the February 28, 1968, Examiner Hearing)

Application of El Paso Natural Gas Company for a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its San Juan 27-4 Unit Well No. 30 (GD) located in Unit N of Section 32, Township 27 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the Gallup formation and the Basin-Dakota Pool through tubing and the casing-tubing annulus, respectively, by means of a cross-over.

CASE 3733: (Continued from the February 28, 1968, Examiner Hearing)

Application of Daryl Davis to re-enter a well, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter the State "A" Well No. 1 located 1980 feet from the South and West lines of Section 1, Township 4 South, Range 26 East, Chaves County, New Mexico, and attempt to complete said well as a producer from the San Andres formation.

CASE 3578: (Reopened)

Application of Texas Pacific Oil Company for an amendment to Order No. R-3264, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3264 to permit the re-dedication of acreage to its State "A" A/c-2 Wells Nos. 40 and 38, located in Units A and K, respectively, of Section 9, Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico. Applicant proposes to dedicate a 320-acre non-standard unit comprising the N/2 of said Section 9 to Well No. 40 and to dedicate a 160-acre non-standard unit comprising the SW/4 of said Section 9 to Well No. 38. It is further proposed that said Order No. R-3264 be amended to require that the effective date of the proration units authorized therein be contingent upon new plats being filed.

CASE 3736: Application of American Trading & Production Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its New Mexico State 26 Well No. 1 located in Unit J of Section 26, Township 20 South, Range 35 East, Lea County, New Mexico, in such a manner as to produce gas from an undesignated Wolfcamp gas pool and oil from an undesignated Devonian oil pool through parallel strings of tubing.

PHONE MUTUAL 3-1893

HENRY ENGINEERING
Petroleum Engineers
807 FIRST NATIONAL BANK BUILDING
MIDLAND, TEXAS 79701

February 2, 1968

NSL-3740

New Mexico Oil Conservation Commission
State Land Office Building
P. O. Box 2308
Santa Fe, New Mexico 87501

'68 FEB 5 AM 8 07

Attention: Mr. D. S. Nutter
Chief Engineer

Re: David Fasken
Ross-Federal, Shell-Federal,
Skelly-Federal Units, Sections
4, 5, 6, T-21-S, R-24-E, Eddy
County, New Mexico. Federal
Lease Serial Nos: NM 084402,
NM 0207950, NM 0486483, NM 010567
and NM 0230377-B.

Gentlemen:

On behalf of our client, David Fasken, we are submitting for administrative approval our proposed central gathering, metering, separation, dehydration, and storage facility for his wells in North Indian Hills Morrow Gas Field. In effect we are asking for approval of Rule 309-B, Lease Commingling; Rule 309-C, Off-Lease Storage; and such other rule that applies to commingling of gas streams.

It is proposed to pipe the wet gas streams (refer to lease and well plat) from "A" (Ross-Federal No. 1), "B" (Shell-Federal No. 1), and "C" (Skelly-Federal No. 1) to a central point "D" near the Shell-Federal No. 1, Section 5, T-21-S, R-24-E. At "D" the wet gas streams will be metered separately, then they will be combined for separation of the liquid hydrocarbons and dehydration. The dry gas stream will be metered prior to Natural Gas Pipeline Company of America's sales meter. Monthly gas production for each well will be allocated on the basis of each wells wet gas stream meter reading to the combined sales through the Natural Gas Pipeline Company of America's meter.

The liquid hydrocarbons will be collected in a vapor tight storage tank. With only one storage facility in place of three, the losses due to vaporization can be minimized. The condensate will be allocated to each well on the percentage of each well's wet gas stream to the total combined wet gas volume. The wet streams will only carry 2 to 3 barrels of condensate per M.M.C.F. of gas based upon our well tests.

DOCKET MAILED
Date 3-7-68

The design of this system was based, in part, on conserving fuel gas by utilizing only one dehydrator in place of three, minimizing vaporization losses of the liquid hydrocarbons by using only one storage facility, and negotiating a better price for the condensate by locating the storage tank within three hundred feet of a black-top highway.

All working interests, royalty interests, and over-riding royalty interests in these gas units have been notified by certified mail of the proposed surface hook-up and production allocation procedure.

The U.S.G.S. has approved of this central facility subject to further approval by you. A copy of Mr. Anderson's letter is enclosed.

We would appreciate your favorable consideration of this proposal and your letter of approval addressed to David Fasken, 608 First National Bank Bldg., Midland, Texas 79701.

Yours very truly,

HENRY ENGINEERING

Robert H. Angevine

Robert H. Angevine

RHA:eh
Enclosures: Lease and Well Plat
Schematic of Central Facility
U.S.G.S. Letter

cc: Mr. Richard S. Brooks
Mr. James B. Henry
U. S. G. S.

ROSS-FEDERAL

Kathryn B. Richardson & E. R. ~~Richdson~~ Richardson
2929 Montevista N. E.
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Blanco Company, (Emmett D. White)
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716 Bank of New Mexico Building
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Bartlesville, Oklahoma

Harold Scherz & Clara Lloyd Scherz
12 Hull Circle
Austin, Texas 78746

Neil Wills
P. O. Drawer W
Carlsbad, N. M.

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WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

R. W. McFALL
:(38)•

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

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1968 MAR [illegible] AM [illegible]

LA036 MSA205 SSM125

NS MDA064 PD=WUX TDMD PWS MIDLAND TEX 20 1030A CST=
NEW MEXICO OIL CONSERVATION COMMISSION, ATTN D S NUTTER=
SANTA FE NMEX=

IN RE CASE NO. 3740, DOCKET OF MARCH 20 1968, SHELL OIL COMPANY SUPPORTS THE REQUEST OF DAVID FASKEN THAT CENTRAL GATHERING METERING SEPARATION DEHYDRATION AND STORAGE FACILITIES FOR HIS ROSS FEDERAL, SHELL FEDERAL AND SKELLY FEDERAL UNITS IN THE NORTH INDIAN HILLS MORROW GAS FIELD BE PERMITTED. SHELL OWNS INTEREST IN TWO OF THE UNITS=

J E R SHEELER DIVISION PRODUCTION MANAGER SHELL OIL CO=

3740 20 1968=

WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

SYMBOLS
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LA 108 KB502

1968 MAR 19 PM 4 [illegible]

K TUA517 DL PDB=FAX TULSA OKLA 19 1120A CST=
NEW MEXICO OIL CONSERVATION COMM=
STATE LAND OFFICE BLDG SANTA FE NMEX=

ATTN: MR. DANIEL S. NUTTER=
RE: CASE NO. 3740=
SKELLY OIL COMPANY AS INTERESTED PARTY HAS NO OBJECTION TO APPLICATION OF DAVID FASKEN TO METER WET GAS FROM CERTAIN WELLS IN NORTH INDIAN HILLS-MORROW POOL, PRIOR TO SEPARATION AND DEHYDRATION, ALLOCATING CONDENSATE PRODUCTION TO EACH WELL ON PERCENTAGE OF EACH WELL'S WET GAS STREAM TO TOTAL COMBINED WET GAS VOLUME=
SKELLY OIL CO GEORGE W SELINGER=

WU1201(R2-65) THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING=3740=

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 20, 1968
EXAMINER HEARING

IN THE MATTER OF:

Application of David Fasken for lease commingling, Eddy County, New Mexico.

Case 3740

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Next case will be Case 3740.

MR. HATCH: Case 3740. Application of David Fasken for lease commingling, Eddy County, New Mexico.

MR. SPERLING: Mr. Examiner, J.E. Sperling of Modrall, Seymour, Sperling, Roehl & Harris, Albuquerque, appearing for the Applicant. We have one witness.

(Witness sworn)

ROBERT H. ANGEVINE

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

DIRECT EXAMINATION

BY MR. SPERLING:

Q Would you state your name, please, sir?

A Robert H. Angevine.

Q Where do you live and by whom are you employed?

A Midland, Texas and I am employed by Henry Engineering.

Q Have you on any previous occasion testified before the Commission so that your qualifications are a matter of record?

A No, sir.

Q Would you then briefly give us the benefit of your educational and experience background in your profession?

A I was graduated from the University of Texas with

a Bachelor of Science Degree in Petroleum Engineering in 1950. I worked for both majors and independents and for the past four and a hàlf years have been an independent consultant with Henry Engineering. And I am a Registered Professional Engineer in Texas.

MR. SPERLING: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, they are.

Q What is the connection of Henry Engineering with the Applicant, David Fasken?

A Strictly on a consulting basis.

Q And this association has extended over some period of time or are you employed only in connection with this particular project?

A We have beeen associated with Mr. Fasken for four years.

Q Are you familiar with the area which is the subject of the application?

A Yes, sir.

(Whereupon, Applicant's Exhibit 1 marked for identification)

Q Would you please refer to what's been marked as Applicant's Exhibit 1 and tell us what information is

contained on that exhibit and what it is designed to show?

A David Fasken is the owner of leases in Section 4 known as the Ross-Federal No. 1 Gas Well from the Morrow horizon and in Section 5 the Shell Federal No. 1 also a Morrow gas completion and in Section 9 the Skelly-Federal No. 1 which is a Morrow gas completion. These are all shut-in gas wells awaiting connection to a natural gas pipeline and as our application on Mr. Fasken's behalf states, we are proposing to move wet gas from the Ross-Federal which is A on Exhibit 1 to a point D and also raw gas from B which is the Shell-Federal No. 1 to D and wet gas from C the Skelly-Federal down to D for commingling of the wet gas -- metering of the wet gas streams first, commingling for separation of the condensate and dehydrating and then the sale of the dry gas to Natural Gas Pipeline.

Q What facility will be constructed or located at Point D as shown on Exhibit 1?

A There will be meters, three meters, to meter the gas separately from the Ross-Federal, the Shell-Federal and the Skelly-Federal. Then the gas streams will be commingled to go through a separator and there the condensate will go into one stock tank which will be vapor tight and then the stream will go to the dehydrator to take out the

vapor and then on to Natural Gas Pipe through their sales meter.

Q Will you please tell us for the record, Mr. Angevine, the reasons for or the consideration which prompted the filing of the application to handle the gas production from these three wells in the manner which you have described?

A Well, first of all the gas contract with Natural Gas Pipeline says that they will take gas at a point D or in the vicinity of the Shell-Federal and it is up to our client, David Fasken, to move the gas to that point for measurement into their line. Secondly, C or the Skelly-Federal in Section 9 is up on top of the Seven Rivers Hills about 400 feet higher than these other locations. It's rather remote and we intended there to bring this gas down to the point D which is on the blacktop highway within 200 feet and there set our tank for collection of the liquid hydrocarbons. I think by putting it at that point, we can probably negotiate a better selling price for the condensate, maybe as much as fifteen cents a barrel more than if we have to route a truck up on top of the hill.
At Point A the Ross-Federal is not quite so remote as the Skelly-Federal, but it would be on a gypsum oil field road

about two miles back in to collect the condensate if we set separate facilities at that point. This gas is quite dry, from our tests, from a trace to four barrels per million cubic feet of gas and if we need -- well we need to take every precaution that we can to put it in a vapor tight tank to reduce the weathering as much as possible.

We intend to deliver approximately a million cubic feet a day or a total of three million cubic feet which would be about, well three barrels per million, nine barrels per day. On the basis of this small amount of condensate the weathering losses at three different places, we would be hard pressed to have a truck load of oil every three months and we know that there will be considerable weathering. I'm not really prepared to put a firm figure on it, but I did a little research on the recoveries in three other areas.

(Whereupon, Applicant's Exhibit 2 marked for identification)

Q Before we get on to that, let's identify Exhibit No. 2 which I understand to be a schematic diagram of the facility which you have already described to be located at Point D on Exhibit 1, is my assumption correct?

A That is correct. In the lower lefthand corner of the page would be our three wet or raw gas meters and there the stream would go to the separator, stock tank for

the condensate through the glycol dehydrator and our client, David Fasken, desired a meter ahead of Natural Gas Pipeline just a check meter is all. That basically would be the set up at this central location.

Q Now, do I understand that in the event the application does not receive favorable consideration that it would be necessary to duplicate essentially the same facilities at each of the wells to handle the gas and liquid product?

A That is correct. We would be required to set a separator, stock tank and glycol dehydrator at each location.

Q What does this represent by way of dollar investment?

A Approximately $7,500, for the three vessels and the hooking of them at the individual well site.

Q $7.500 each or total?

A Per well, right, or $15,000 total for the Ross-Federal No. 1 and the Skelly-Federal No. 1.

Q You mentioned that you had made a comparison of the liquid content which appears to be present in the three wells that you have mentioned with other comparable areas, that is, the production from other comparable areas, is that correct?

A That is right.

Q And I believe you have for illustration purposes a map which shows the relative location of these areas upon which you made comparison?

A I will just hold this. At this point here, there's one well on the Dagger-Draw Field completed in the Morrow.

MR. NUTTER: That's approximately in Section 6 of Township what?

A Township 20, 25 East.

MR. NUTTER: Dagger-Draw then is in Section 6 of 20, 25?

A Yes, sir. And Cemetery-Morrow Gas Field is a two-well field, Phillips Petroleum Company operates a well in Section 16 of 20, 25 and Mobil Oil Company operates a well in Section 17. And then the area that we are discussing, the North Indian Hills-Morrow Gas Field, in Sections 4, 5, and 9 of 21,24 and then off to the southeast there are eight wells in the Indian Basin-Morrow Gas Field; that overlaps from various sections in Township 21, 23 east over into 21, 24 East.

(Whereupon, Applicant's Exhibit 4 marked for identification)

Q Is your comparision reflected on Exhibit 4 as marked for identificatior?

A Yes, sir, it is.

Q Would you explain what those figures mean as they appear on that exhibit?

A I have gone back over the past two years, '66 and 1967 and in the Indian Basin-Morrow Gas Field we have the history on eight wells and in 1966 those eight wells recovered 3.36 barrels per million cubic feet of gas, and in 1967 the same eight wells recovered 2.25 barrels per MMCF. Now, this gas, this condensate, rather is going to the Marathon plant and is not out in individual lease storage and I believe that's the reason we see these recoveries at two and better than three barrels per million. The two-year history on the righthand side of the page for the Dagger Draw-Morrow Gas Field is a one-well field and in 1966 the average was 1.19 barrels per MMCF; in 1967, 1.08 barrels per MMCF. The history on the Cemetery-Morrow Gas Field is not conclusive. The two wells have only been on production since last September, but I am not going to say that we will double our recoveries as you might draw from this analysis here, by commingling these three streams at one location, but I do think we will recover substantially more condensate by eliminating two stock tanks and just having one that we can maintain on vapor tight conditions.

Q This is at least controlling to the extent possible, vaporization at lease locations, the condensate?

A Yes, sir.

(Whereupon, Applicant's Exhibit 3 marked for identification)

Q Now, please refer to what's been marked as Exhibit 3, which appears to be correspondence addressed to Mr. Fasken from the USGS in Roswell and I assume from the content of the letter that an explanation was made of the substance of this application to that agency for their comment?

A Yes, sir, we talked with the office, the people in the office at Artesia and then submitted basically the same information that we put in this application and they, in turn, routed it to their Roswell office and Mr. John Anderson wrote this and basically it says that they approve of this commingling subject to approval by this Commission.

Q I understand also from your application, the statement contained in the application, that all working interest operators in the area as well as overriding royalty interest owners and other interest owners were advised of the substance of the application?

A Yes, sir, they have been. They were advised by certified letter, the receipts of which I have here.

Q What response, if any, have you had to those letters?

A We have had no objections. We have received approximately 20 to 25 per cent acknowledgement other than - this is a a hundred per cent acknowledgement that they received our letter. The ones that we have received letters from have, in fact. said, in effect, "This is all right with us." They had no objections. We have had no objections from the major oil companies who have interest in these leases either overriding royalty interests or working interests, such as Shell Marathon and Skelly and Monsanto.

MR. NUTTER: When were those people notified by certified mail, Mr. Angevine?

A February 2, 1968, that's when our letters went out.

Q Do I understand that the basic land owner royalty interest is that of the United States as to all of these leases?

A Yes, sir.

Q Would you review once again, I think you have before, but at least for my benefit, exactly how you plan to measure and account for the liquid production from the respective wells and at what point?

A Yes, sir. First of all, I would like to illustrate

how we were going to prorate the gas production first, if I could. We are going to measure it through individual raw gas meters, the streams from each well, from the Ross-Federal, Shell-Federal, and Skelly-Federal and then the combined stream will be measured by Natural Gas Pipeline's sales meter or purchase meter and the proportion that each well's wet stream is to the total gas through Natural Gas Pipeline will be its share of the total for that month; in other words, we will prorate the dry gas back to each individual well on the basis of its wet gas meter's percentage of the total, so this will give us a percentage factor for prorating the dry gas and we will use that same percentage figure to prorate the combined stock tank liquids saved and, or sold for that particular month. Now, there is one other way we can go through this commingling project, would be to run GPM tests on the raw gas monthly or quarterly to prorate the condensate. I don't know that it would be anymore accurate but this could be done very easily.

Q Well, do I understand from your testimony, that it's your opinion that there actually will be -- or the effect will be to conserve the condensate production from the three wells as a result of the handling thereof in the method that you propose?

A Yes, sir. I think we are talking about in the range of maybe an additional half to three quarters of a barrel per million, that we can sell, not just produce into the stock tank, but will have available for sale by going through just one handling facility.

Q And the result of that conservation is the prevention of waste I would assume, is that the logical conclusion?

A That's the logical conclusion, plus I believe we can negotiate about fifteen cents more per barrel. We aren't talking about a lot of money, and admittedly, this wouldn't be feasible if we were talking about gas with 50 to 75 barrels per million, but here with a relatively dry gas stream I think it would be very beneficial to everyone.

Q You also mentioned factors which indicate a saving in investment which should come under the heading of prevention of economic waste, is that correct?

A That is correct. These wells have been shut in -- well, the first well, the Ross-Federal, for three years and the Shell-Federal for a year and a half and the last well, the Skelly-Federal going on six months. All we have at this moment is our initial absolute open flow potential calculations on a cleanup of the well. They look

like pretty fair Morrow wells, although in going through the Morrow history down in the Indian Basin Gas Field there are some that aren't prolific producers. They won't sell a million a day, they just won't deliver that much. I hope we don't have that situation here, I say "we," our client, but he almost had a dry hole on the Skelly-Federal. It was through a frack job only that he was able to make a producer there, a potential producer.

Q In your opinion, will the liquid content of this gas increase or decrease with production, based upon your studies that you made of other Morrow gas areas?

A You mean as the reservoir is drawn down through the years?

Q Yes, sir.

A It will decrease through the years, yes, sir.

Q So you could not assume that the liquid content that you expect to handle initially would increase but rather would decrease with a production history?

A That is correct assumption.

MR. SPERLING: I would like to offer Exhibits 1 through 4.

MR. NUTTER: Applicant's Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 4 were offered and admitted in evidence.)

MR. SPERLING: That's all I have.

MR. NUTTER: Are there any questions of Mr. Angevine?

CROSS EXAMINATION

BY MR. UTZ:

Q Have you run any GPM tests on these wells at all yet?

A No, we haven't. All we have is what we've collected through the separator on tests and then from gas sample analysis and let's see, that was calculated back to barrels per million, which would be the same on the Ross-Federal, this was calculated from a gas sample it was 4.6 barrels per million. On the Shell-Federal two barrels per MMCF and on the Skelly-Federal, they gave it a trace calculation. The gravity of the condensate on the Ross-Federal was 60; on the Shell-Federal 51.5; and we did not have any on the Skelly-Federal.

Q It was 50 on the Ross?

A Sixty, sixty on the Ross-Federal and 51.5 on the Shell-Federal and I understand from Monsanto's well in Dagger-Draw it is about 52.

Q In charging back your liquids on the basis of these

tests here we have 2, 4.6, and just a trace. If you charge them back on the basis of your wet gas stream then the distribution of actual produced liquids to the well might be an error, might it not?

A This is quite possible and actually, what you would draw from this calculated GPM, but we all know that on a short test cleaning up a well initially I have never found that you could sink your teeth into these initial figures too well. Therefore, I think that our prorating on either a percentage factor or running GPM tests to tell whether we are delivering the same amount would help. It certainly wouldn't hurt and we probably would if our client would agree to it, run GPM tests for a period of three to six months on our own to make sure. This could be a continuing thing, every month or every quarter just to verify it or to actually split it out on the basis of those GPM tests.

Q Isn't that the most usual way of charging back, well, say gasoline plant liquids to the wells?

A Yes, sir, casinghead gas.

Q And you would be agreeable to doing it this way?

A We would be agreeable to that, yes, sir.

Q You are an Engineer, I believe, aren't you?

A Yes, sir.

Q In your opinion, what is the inaccuracies in metering wet stream versus dry stream?

A Oh, I don't know that I've got a real good figure for you. I think we are talking about a gas here that's not as wet as most of our casinghead gas, in other words we've got casinghead gas streams that are two, three, four, up to eight and nine gallons per thousand and according to these tests here, once we get on stream and see how they are behaving I don't believe we are going to have anything over one or two gallons per thousand, and we are buying and selling casinghead gas through these same type orifice meters all the time; that's been accepted everywhere in the industry.

Q In other words, you consider this gas to be dry enough that there wouldn't be too much inaccuracy in the meter volumes?

A I don't believe so and also if our GPM from the three streams are not too different, then whatever error we have in the wet stream, will be continuous, in other words, it will be in relationship to -- so that when we split out the dry gas stream back to each well then it cancels out in effect.

Q You brought in the Indian Basin figures into this case. Now, is this 3.36 and 2.25 barrels per million, is that total liquids or is that in addition to separated liquids at the wellhead; in other words, is that wellhead liquids plus gasoline plant liquids or is it just gasoline plant liquids?

A I believe this is just wellhead liquids because it's on the proration schedule and if it is gasoline plant liquids, I believe that would be on some other report, so this has got to be wellhead liquids.

Q In other words, this is liquids that's separated by the separators at the wellhead?

A They are separating it at the wellhead and I'm not clear how it gets to the plant. I know that there's not separate tankage at the wells.

MR. NUTTER: I know how that's done and I was going to go into this myself on some questions. What they do there, they have metering dump separators at the wellheads and they separate the gas from the water and the liquid and they meter the liquids, both distillate and the water, then they recombine the stream and pass it into the gasoline plant recombined and these figures are undoubtedly based on those metering separators out at the well.

A Yes, but it's not out in the tank to weather. It's moving right straight on through the plant. These figures are quite impressive, in other words, doubling the recovery at the Marathon plant and those Indian Basin-Morrow Gas Field wells as opposed to separate lease storage. Of course, it's not feasible at Dagger-Draw to take it into the plant.

Q (By Mr. Utz) In other words, the tests and information you have on the GPM of these three wells here are comparable to the Indian Basin?

A Yes, sir.

Q Do you anticipate any line problems or flow problems in your line due to these liquids in the line?

A I don't anticipate any other than normal operation. We have indirect heaters set at each well and as long as we keep this well stream above 65 degrees we should not have hydrates forming in the lines. From the Skelly-Federal No. 1 Well, we'll have to drop the line over the cliff and that line will be insulated; other places it will be buried and it will be buried -- it's fairly easy digging in that country down off the hills, it will be buried 24 to 36 inches deep.

Q Now, the royalty interests in this, straight royalty

interests, I believe you said are all Federal, did you not?

A I believe that is a correct statement.

Q How about overriding royalty?

A There are a bunch of those.

Q They are not the same on each well, I think that's all I need to know.

A There are some that are common, but there are also others that are just in any one well, I do not have -- well I do have one copy of each. I can leave them both. That's a list of individual overriding royalty interests in the Shell-Federal and the Skelly-Federal and in the Ross-Federal.

MR. SPERLING: Would these be of assistance, Mr. Utz? I think they are just identified by well.

MR. NUTTER: I think we should have those because the application stated that the interest owners had been notified, but it did not list the other parties, and I think we should have a listing of those parties on the record.

A Since this would not be complete, and it won't be complete by the major companies, at least, I know that, would it be in order to make a complete list for each well and submit it at a later date?

MR. NUTTER: We would appreciate receiving that.

A Along with a copy of the letter that went out.

MR. SPERLING: Can we leave these and then supplement --

A That's a Ross. I have a Skelly and here's a Shell.

MR. SPERLING: Would one copy of each be sufficient?

MR. UTZ: Sure, that's fine.

MR. SPERLING: And you say there are others to be added?

A There will be others, I know that Skelly Oil Company is one and I think Marathon.

MR. SPERLING: Oh, this is the result of the farm-out arrangement, whatever it is, whereby Fasken acquired operating rights from the various working interest owners. I see.

A These are the royalty interests, the individuals that were a party to those farmouts.

Q (By Mr. Utz) In comparision to metering dry streams at each individual well to the method you propose here, the effect on the royalty owners would be in proportion to the inaccuracies of the wet stream metering, is that right?

A That is our thinking on it, yes, sir.

Q If you run GPM's on each well and charged that back in accordance with that then there should be no

discrepancies as far as the liquids are concerned?

A It should be as accurate as any measurement we have in the field today on gas streams.

MR. UTZ: I think that's all.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Angevine, I want to ask you, are you acquainted with the method by which the gas is metered and recombined in the Indian Basin?

A Well, just barely, I mean, after you had mentioned it I do recall someone else telling me that that was what was happening out there on those wells.

Q Are you aware that the Commission after examining this procedure, did give approval for that type of measurement and the combining of the streams down at the plant?

A Yes, sir, I was aware of that.

Q Are you aware of the installation that Shell Oil Company has in the Antelope Ridge Pool in the field in Lea County?

A No, I'm not.

Q Where wells of different ownership are being metered and the liquids combined at a central point which features a glycol dehydrator?

A No, I'm not.

Q The Commission has approved that installation also. Now, you mentioned that it would cost you $7,500.00 to make this complete installation at each of these wells. In the event that some system were required by the Commission to meter the -- to separate the gas at the well and measure the gas and the liquids and then recombine the stream and pass it into a central point, where there would be a separator, a stock tank, a dehydrator and then a gas meter. how much would that type of installation cost Mr. Fasken? He would have a metering separator at each one.

A He would have a metering separator and we could do without the dehydrator, I don't believe we would have to dehydrate it at each well.

Q I think you would need a dehydrator at the central plant probably.

A I am going to say that a metering separator that would handle the volume we are talking about. fifteen hundred to 1,750 dollars per well.

Q No tank would be necessary except at the central point one combined tank would be used.

A Yes.

Q And then you would also have the feature of the commingling that you described in which all the liquids are being held in one vapor tight tank and you would have that saving there?

A Yes.

Q Now, these 4.6 barrels per million and 2 barrels and trace barrels per million of liquids that you had on the original tests, does this include the water?

A No, that is strictly hydrocarbon.

Q How much water are the wells making?

A Nothing more than just what little cleanup, and the only place we had water for cleanup was on the Skelly-Federal, which was fracked.

Q Now you are acquainted that the Morrow Formation in the Indian Basin produces considerable water from some of the wells?

A Yes, sir I am, and we did not see that water on these wells during our flow test for cleanup.

Q The characteristics of the wells could conceivably change once the wells go on production?

A That is correct, it surely can.

Q You are familiar, Mr. Angevine, with the situation that sometimes occurs in flow lines when water is produced

in which you will have pockets of water form in low spots on the pipeline and restrict the flow of the gas through the line?

A Yes, this I did not go into. The system has been designed with inch and a half pipe rather than two inch, not for the difference in the cost of the pipe, but to move the gas from the well down to the central point as rapidly as possible. One inch would be better yet, but it just wasn't feasible so that we wouldn't lose any more heat than necessary and thought we would have a little more velocity to perhaps move the water.

Q And keep liquids from blocking the line?

A That's right.

Q It's my understanding that a portion of this, at least, is under construction at this time. How far along is the thing, do you know?

A The lines are in and the equipment illustrated on the schematic is on location, I don't believe it is all tied in yet. The meters have not been set. The separator, the one stock tank and the dehydrator are on the location, but I do not believe that they have been connected yet. The two lines from the Ross-Federal and the Skelly-Federal are in the ground.

Q Now, of the three items here on your schematic diagram, the separator, stock tank and dehydrator, what is the cost of those three items?

A The stock tank $1,200, that's complete with walkway and stairway. the separator, this is not a metering separator, and it was one that we moved in, it's a good used one, about $1,000 on it, I think is what we transferred it at. The glycol dehydrator is new, it's a National Tank, I believe was on the order of $4,800.

Q It is the most expensive of the three items in the installation.

A Yes, sir, it is.

Q And Mr. Fasken will have four meters there, one for each of the wells and one combined meter upstream from the Pipeline's meter?

A That is correct.

Q What is the cost of a meter and run?

A The meter and the run will be on the order of $500.00.

Q Is there any difference in the meter that you use for a wet stream and the meter you use for a dry stream?

A No, sir, these meters are identical. They are Ellis type meters. We had originally planned on using

Rutz-Connorville Rotary type meter but delivery on them is just out of this world, I mean, it's six or eight months and there a meter would cost about $1,200 apiece.

Q Now, you mentioned that the first well here had been shut in now for about three years?

A Three years.

Q Has a contract already been signed with Natural Gas Pipeline?

A Yes, sir, it has.

Q When do you expect to start sales?

A Just as soon as they have their line in and they've got it staked, I doubt that they will have it in by April the 1st, but Pasken is ready, I mean we have the certificate of convenience and necessity so it's just a matter of Natural Gas Pipe --

Q How far away is their pipeline?

A They've got about 10,000 feet to lay.

Q Approximately two miles.

A Oh, it won't take them a week once they get in there.

Q Has FPC approval been given to the sale?

A Beg your pardon.

Q Has FPC approval been given to the sale?

A Yes, sir.

MR. NUTTER: Are there any other questions of Mr. Angevine?

FURTHER CROSS EXAMINATION

BY MR. UTZ:

Q I meant to inquire about potentials on these wells. Have you run any potentials?

A Yes, the calculated open flow potential on the Ross-Federal was 19,000 MCF and on the Shell-Federal 4250 MCF and on the Skelly-Federal 18,000 MCF.

MR. NUTTER: After almost not having a well he got one with eighteen million.

A That's right.

Q (By Mr. Utz) These are four point tests?

A These are four point tests. They were conducted by Tefftéller out of Midland.

MR. UTZ That's all I have.

MR. NUTTER: If there are no further questions of the witness he may be excused.

(Witness excused)

MR. NUTTER: Do you have anything further, Mr. Sperling?

MR. SPERLING: No.

MR. NUTTER Does anyone have anything they wish

to offer in Case 3740?

MR. HATCH: Perhaps I had better read these two telegrams into the record, one from Shell Oil Company addressed to the Commission dated March 20, 1968. "Re: Case No. 3740. Shell Oil Company supports the request of David Fasken that a central gathering and metering separation, dehydration and storage facilities for his Ross-Federal, Shell-Federal and Skelly-Federal units in the North Indian Hills-Morrow Gas Field be permitted. Shell owns interest in two of the units." And a telegram from Skelly Oil Company addressed to the Commission dated March 19, 1968. "Re: Case 3740. Skelly Oil Company as interested party has no objection to application of David Fasken to meter wet gas from certain wells in the North Indian Hills-Morrow Pool prior to separation and dehydration, allocating condensate production to each well on a percentage of each well's wet gas stream to total combined wet gas volume."

MR. NUTTER: Thank you, Mr. Hatch; if there's nothing further in Case 3740 we'll take the case under advisement and the hearing is adjourned.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, KAY EMBREE, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 29th day of March, 1968.

Kay Embree
NOTARY PUBLIC

My Commission Expires:

November 19, 1971

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3740 heard by me on 3/20, 1968.

Examiner
New Mexico Oil Conservation Commission

BHP • SU • PI • OD • GWT • BTS • GOR • FL • TS
TEFTELLER, INC.
reservoir engineering data
MIDLAND, TEXAS / FARMINGTON, NEW MEXICO
Associated with Dennis Owens Co.
P. O. Box 5247
Midland, Texas 79702

Case 3140

June 10, 1965

David Fasken
608 First National Bank Bldg.
Midland, Texas

Attention: Mr. James B. Henry

Subject: Open Flow Potential Measurement
Ross Federal No. 1
Wildcat Well
Eddy County, New Mexico
Our File No. 3-1583-OFP

Gentlemen:

Attached hereto are the results of a open flow potential measurement which was made on the above captioned well May 22, 1965.

The data presented are in tabular and graphical form. Form C-122 is prepared and furnished with the report.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please feel free to call us at anytime.

Respectfully submitted,

TEFTELLER, INC.

Farrest Teftellér

FT:cc

Attachments

TEXTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : ROSS FEDERAL NO. 1 Page 1 of 4

Field : WILDCAT WELL File 3-1583-OFP

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

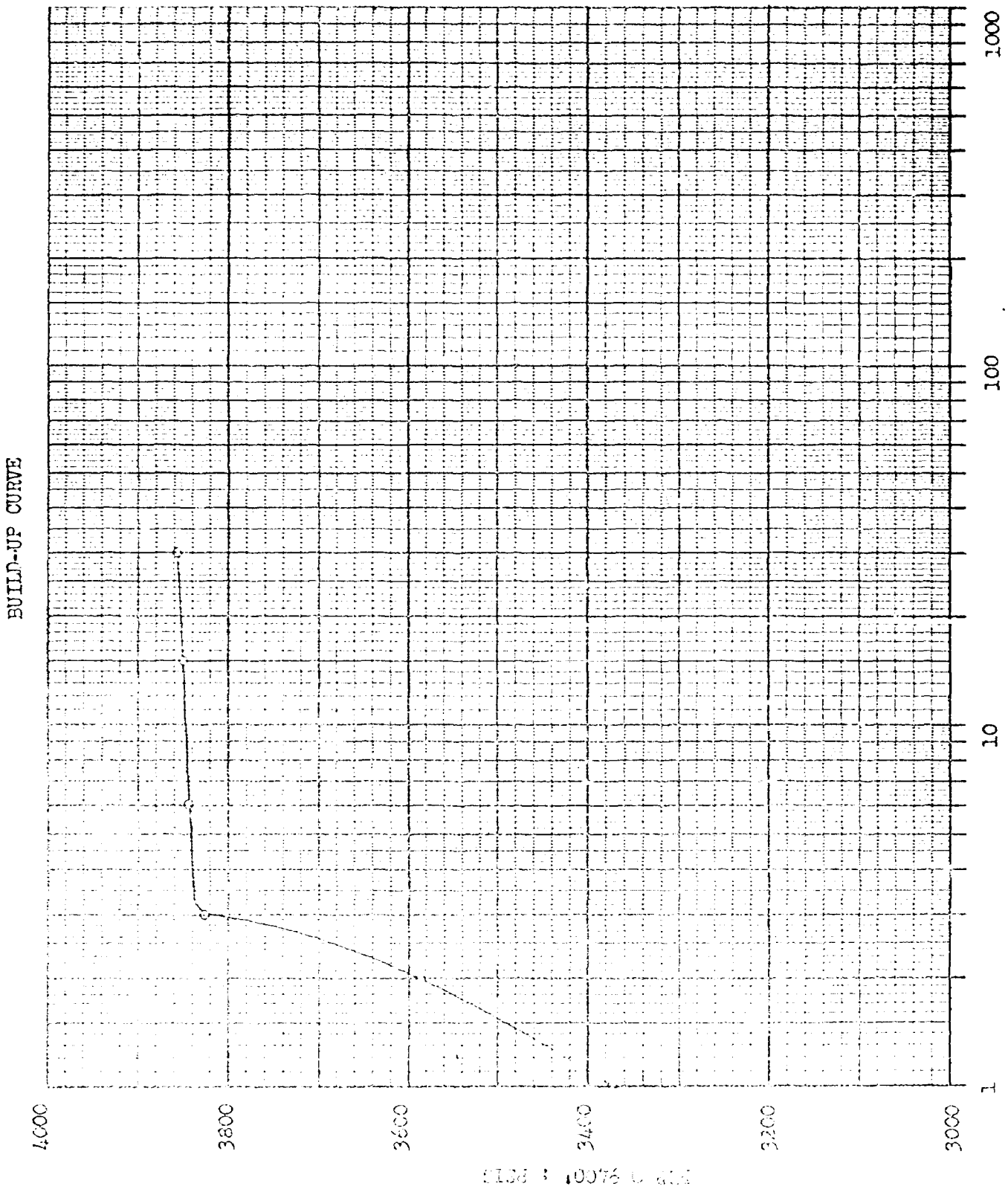
1965 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Daily Rate Gas MCF/D	Wellhead DWT Pressure Tubing	BHP @ 9400' Psig	BHP @ 9486' Psig
5-22	On location shut in	08:00	13	00				
"	Inst. @ 9400'	10:00	15	00		3092	3861	3868
"	Opened	12:00	17	00		3092	3861	3868
"	Shut in to repair separator	12:10	0	10			3728	3735
"	Opened 13/64" ck	12:20	0	10			3861	3868
"	"	12:35	0	15		2788	3561	3568
"	"	12:50	0	30		2770	3551	3558
"	"	13:00	0	40				
"	"	13:05	0	45	3098.5	2740	3527	3534
"	"	13:20	1	00		2727	3510	3517
"	"	13:35	1	15		2733	3514	3521
"	"	13:50	1	30		2743	3517	3524
"	"	14:05	1	45		2749	3520	3527
"	"	14:20	2	00		2750	3520	3527
"	Shut in	14:35	2	15		2749	3520	3527
"	"	14:42	0	07		3117	3351	3858
"	"	14:50	0	15		3113	3858	3865
"	Opened 14/64" ck	15:00	0	25		3112	3858	3865
"	"	15:15	0	15		2630	3418	3425
"	"	15:30	0	30		2623	3408	3415
"	"	15:45	0	45	4495.8	2625	3408	3415
"	Opened 17/64" ck	15:45	0	00				
"	"	16:00	0	15		2404	3227	3234
"	"	16:15	0	30		2414	3231	3238
"	Opened 23/64" ck	16:30	0	45	6057.4	2414	3231	3238
"	"	16:45	0	15		2092	2972	2979
"	"	17:00	0	30		2025	2907	2914
"	Opened 24/64" ck	17:15	0	45	7987.8	2029	2917	2924
"	"	17:30	0	15		1975	2866	2873
"	"	17:45	0	30		1965	2842	2849
"	"	18:00	0	45		1964	2839	2846
"	"	18:15	1	00	8132.0	1968	2839	2846
"	Shut in	18:16	0	00				
"	"	18:16	0	01			3374	3381
"	"	18:17	0	02			3585	3592
"	"	18:18	0	03			3824	3831
"	"	18:21	0	06			3844	3851
"	"	18:30	0	15			3851	3858
"	"	18:45	0	30			3858	3865

EFTELLER, INC.
reservoir engineering data
MIDLAND, TEXAS

File 3-1583-CFP

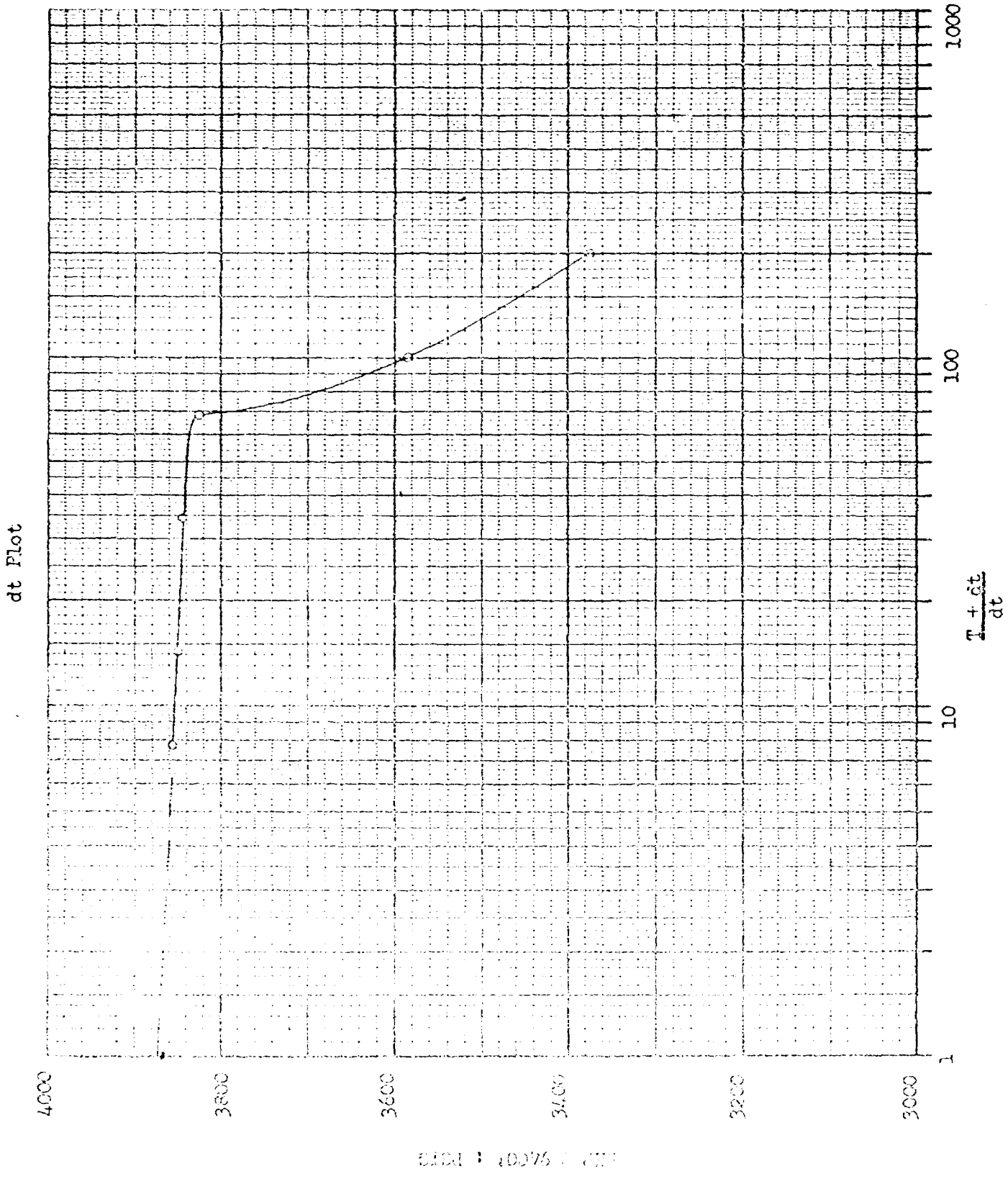
Company DAVID FASKEN
Well ROSS FEDERAL NO. 1
Field WILDCAT

Formation MORROW
County EDDY
State NEW MEXICO



LEFTELLER, INC.
formerly Engineering Unit
MIDLAND, TEXAS

Company DAVID FASKEN
Well ROSS FEDERAL NO. 1
Field WILDCAT
Formation MORROW
County EDDY
State NEW MEXICO



HEFTELLER, INC.

MIDLAND, TEXAS

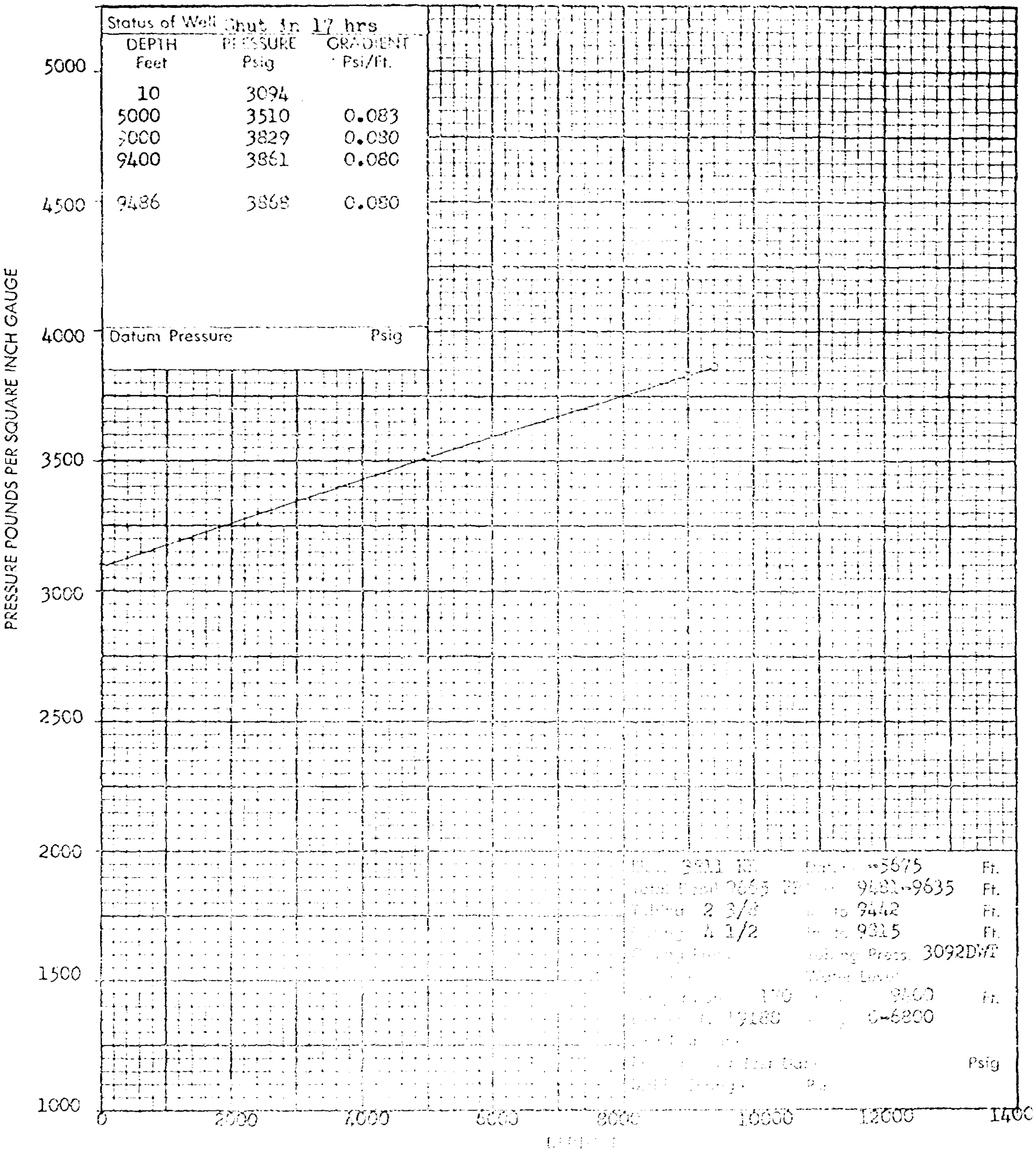
Page 4 of 4

File 3-1583-OFP

Company DAVID FASKIN Lease ROSS FEDERAL Well No. 1

Field WILDCAT County EDDY State NEW MEXICO

Formation MORROW Test Date MAY 22, 1965



Status of Well Shut in 17 hrs

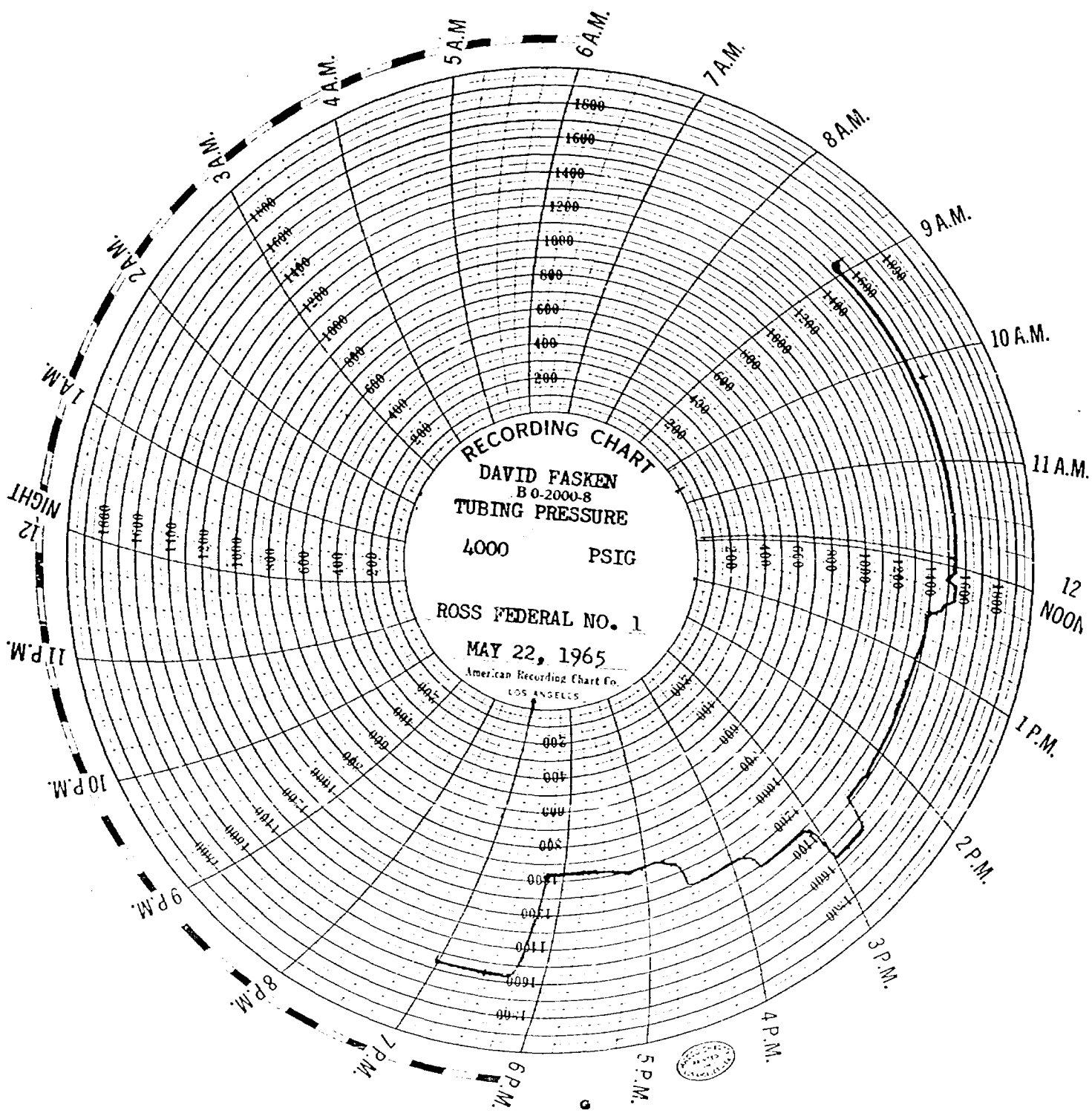
DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
10	3094	
5000	3510	0.083
9000	3829	0.080
9400	3861	0.080
9486	3868	0.080

Datum Pressure Psig

EFTELLER, INC.
reservoir engineering data
Associated with Dennis Owens Co.

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO

P. O. Box 5247
Midland, Texas 79702



Serving the Permian Basin & Rocky Mountain Area

Case 3740

GENERAL DATA

NORTH INDIAN HILLS MORROW GAS FIELD

EDDY COUNTY, NEW MEXICO

Discovery Well----------David Fasken Ross-Federal No. 1

Discovery Date----------May 21, 1965

Depth To Pay Zone----------9480

No. Producing Wells----------1

Average Open Flow Potential----------19,000 MCF/ Day

Water Saturation Net Pay----------19%

Est. Permeability Net Pay----------200 Md

Average Porosity Net Pay Sand----------12%

Gas-Condensate Ratio----------200,000 SCF/bbl.

Gravity of Gas----------0.61

Original Bottom Hole Pressure----------3881 PSIA

Location Of Field----------Sec. 4, T-21-S, R-24-E, NMPM

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File RFL 3317

Company David Fasken Formation Morrow

Well Ross-Federal No. 1 County Eddy

Field Wildcat State New Mexico

HYDROCARBON ANALYSIS OF Wellhead GAS SAMPLE

COMPONENT	MOL PER CENT	G P M
Hydrogen Sulfide		
Carbon Dioxide	0.77	
Nitrogen	0.33	
Methane	93.57	
Ethane	3.32	
Propane	1.19	0.327
iso-Butane	0.09	0.029
n-Butane	0.16	0.050
iso-Pentane	0.05	0.018
n-Pentane	0.05	0.018
Hexanes	0.03	0.012
Heptanes plus	0.44	0.202
	100.00	0.656

Calculated gas gravity = 0.610

Calculated gross heating value = 1072 BTU per cubic foot of dry gas at 14.7 psia and 60° F.

Collected at 3110 psig and 80° F.

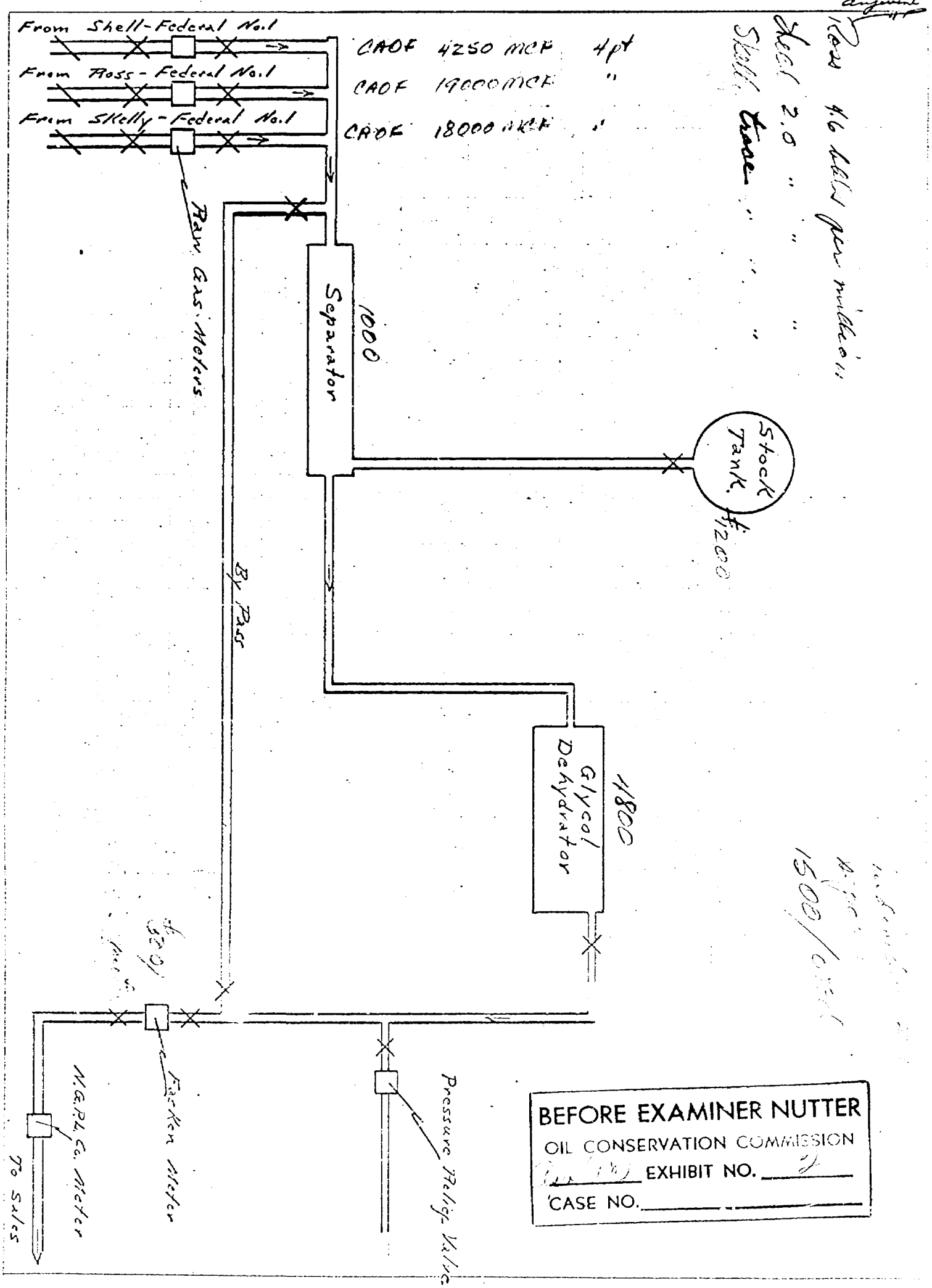
HENRY ENGINEERING

SUBJECT: Central Separation and Dehydration

FILE: North Indian Hills Gas Facility

DATE: 1 - 11 - 68

ENGINEERING MEMORANDUM



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO.

IN REPLY REFER TO:

Henry

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Drawer 1857
Roswell, New Mexico 88201

January 29, 1968

Mr. David Fasken
608 First National Bank Building
Midland, Texas 79701

Dear Sir:

Your letter of January 12, 1968, requests approval to commingle dry gas and associated liquids produced from the following communitization agreements:

CA NO.	Formation	Description	Acres
SW-247	Morrow	All Sec. 4-21S-24E	924.80
SW-381	Morrow	All Sec. 5-21S-24E	926.46
SW-421	Morrow	All Sec. 9-21S-24E	640.00

For royalty purposes, commingled dry gas and commingled liquid hydrocarbons will be sold from common facilities to be located in sec. 5, T. 21 S., R. 24 E. Wet gas volume will be measured from each communitized area. Allocation of dry gas and condensate to each communitized area will be based on the proportion that each measured wet gas volume bears to the total measured wet gas volume. The Lessee's Monthly Report of Operations (form 9-329) and the Lessee's Monthly Report of Sales and Royalty (form 9-361) must show all computations used in ths calculation of lease sales.

The method of commingling is hereby approved subject to further approval by the New Mexico Oil Conservation Commission.

You are requested to notify the District Engineer, U. S. Geological Survey, Post Office Drawer U, Artesia, New Mexico 88210, when the installation is completed and operative so that an inspection can be made.

Sincerely yours,

JOHN A. ANDERSON
Regional Oil and Gas Supervisor

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 7

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Applic EXHIBIT NO. 21
CASE NO. 3740

COMPARISON of LIQUID HYDROCARBON RECOVERY

		INDIAN BASIN MORROW GAS FIELD				CEMETARY MORROW GAS FIELD				DAGGER DRAW MORROW GAS FIELD			
YEAR	MONTH	NO. WELLS	CONDENSATE BBLS.	GAS M.C.F.	BBLS./ M.M.C.F.	NO. WELLS	CONDENSATE BBLS.	GAS M.C.F.	BBLS. / M.M.C.F.	NO. WELLS	CONDENSATE BBLS.	GAS M.C.F.	BBLS./ M.M.C.F.
1966	January	8	216	64318		1	-0-	-0-		1	-0-	-0-	
	February	8	522	151087		1	-0-	-0-		1	29	23937	
	March	8	943	258288		1	-0-	-0-		1	66	53665	
	April	8	642	212163		1	-0-	-0-		1	68	54738	
	May	8	473	233144		1	-0-	-0-		1	36	28759	
	June	8	229	149923		1	-0-	-0-		1	35	30532	
	July	8	160	86123		1	-0-	-0-		1	9	1409	
	August	8	367	127580		1	-0-	-0-		1	42	34079	
	September	8	441	133050		1	-0-	-0-		1	26	30365	
	October	8	784	153359		1	-0-	-0-		1	38	33219	
	November	8	1105	186539		1	-0-	-0-		1	37	34504	
	December	8	503	145225		1	-0-	-0-		1	37	31189	
	TOTAL		6385	1900799	3.36		-0-	-0-			423	356396	1.19
1967	January	8	188	121813		1	-0-	-0-		1	36	32503	
	February	8	812	171336		1	-0-	-0-		1	28	26795	
	March	8	1194	214915		1	-0-	-0-		1	41	34402	
	April	8	187	134553		1	-0-	-0-		1	40	33096	
	May	8	233	210421		1	-0-	-0-		1	41	33780	
	June	8	145	173863		1	-0-	-0-		1	38	32462	
	July	8	343	135352		1	-0-	-0-		1	36	30917	
	August	8	149	150294		1	-0-	-0-		1	5	30362	
	September	8	176	137452		2	-0-	2539		1	38	33561	
	October	8	182	165373		2	20	16880		1	41	35653	
	November	8	371	165493		2	10	33949		1	39	34288	
	December	8	323	135408		2	10	39904		1	34	28787	
	TOTAL		4303	1916273	2.25		40	93272	0.43		417	386606	1.08

Hondo-Fed.
TD 900

Castle & Wigzell
No. Nat'l. Fed.
TD 2616
U S

Daya Abo

Phillips | Daya Abo
State

Whiting & Grant
Howell
TD 916
D. Fasken
Yates Pet.
J. E. Howell, etal

6 | David Fasken | Shell | 5 | 4 David Fasken

Marion V. Harris | Shell

Shell | Marion V. Harris

N. H. Wills
Wills
TD 3940

B Shell — Morrow Gas | David Fasken, Riggs, Riggs TD 128 | A Morrow Gas

D

Shell

U S | Ross-Fed.

7 | Shell | 8 Shell | David Fasken | 9 Shell

Marathon | Al Panzera

T 21 S

Marathon | Corinne Grace
Ressler, etal
E. Riggs
TD 1456
U S

C Morrow Gas
Skelly-Fed.
U S

18 | 17 | 16

Union
State
TD 9755

HENRY ENGINEERING

NORTH INDIAN HILLS MORROW GAS FIELD AREA

EDDY COUNTY, NEW MEXICO

Case 3740

SCALE 1"=2000'