| OLL CONSERVATION DIVISION | BOM THE CONSTRUCT OF STREET |
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| P. O. Box 2088 State of New Mexico Santa Fe, New Mexico | ADMINISTRATIVE ORDER |
| ENERGY AND MINERALS DEPARTMENT 87501 | NFL44 |
| | · · · · · · · · · · · · · · · · · · · |
| INFILL DRILLING FINDINGS PURSUANT TO | |
| SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY | |
| COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978 | |
| AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A | |
| $\mathbf{r}_{\mathbf{r}}$, we have the set of the set | |
| Operator C & E Operators, Inc. Well Name and No. Fee Well No. | 8 |
| Location: Unit H Sec. 8 Twp. 30N Rng. 11W Cty. San Jua | |
| III. | |
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| THE DIVISION FINDS: | • |
| (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regul pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an as a new onshore production well under Section 103 of said Act, the Division m infill well is necessary to effectively and efficiently drain a portion of the by the proration unit which cannot be so drained by any existing well within t | infill well to qualify must find that the e reservoir covered |
| (2) That by Order No. R-6013-A, dated February 8, 1980, the Division establis | hed an administrative |
| procedure whereby the Division Director and the Division Examiners are empower Division and find that an infill well is necessary. | ed to act for the |
| (3) That the well for which a finding is sought is completed in the Aztec - | Pictured Cliffs |
| Pool, and the standard spacing unit in said pool is | 160 acres. |
| | NE/4 |
| of Sec. 8, Twp. 30N, Rng. 11W, is currently dedicated to | |
| | |
| <u>Well No. 1</u> located in Unit <u>B</u> of said section. (5) That this proration unit is (x) standard () nonstandard; if nonstandard, | |
| approved by Order No (6) That said proration unit is not being effectively and efficiently drained | l by the existing |
| well(s) on the unit. | |
| (7) That the drilling and completion of the well for which a finding is sough | |
| the production of an additional35,000MCF of gas from the proration otherwise be recovered. | unit which would not |
| (8) That all the requirements of Order No. R-6013-A have been complied with, for which a finding is sought is necessary to effectively and efficiently drai reservoir covered by said proration unit which cannot be so drained by any exi- unit. | n a portion of the sting well within the |
| (9) That in order to permit effective and efficient drainage of said proratic application should be approved. | on unit, the subject |
| IT IS THEREFORE ORDERED: | |
| | |
| (1) That the applicant is hereby authorized to drill the well described in Se | ction I above as an |
| infill well on the existing promation unit described in Section II(4) above. for infill drilling granted by this order is necessary to permit the drainage reservoir covered by said promation unit which cannot be effectively and effic | The authorization of a portion of the |
| infill well on the existing promation unit described in Section II(4) above. for infill drilling granted by this order is necessary to permit the drainage reservoir covered by said promation unit which cannot be effectively and efficient any existing well thereon. (2) That jurisdiction of this cause is retained for the entry of such further | The authorization of a portion of the ciently drained by corders as the |
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NMO & GEC Hobbs AR "AL" Kendrick

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A. R. "Al" Kendrick

P. O. Box 516 • AZTEC, NEW MEXICO 87410 • (505) 334-2555

February 22, 1982

Mr. Joe D. Ramey Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

RE: Application for Approval of Infill Well for Gas Pricing

Dear Mr. Ramey:

We respectfully request that the C & E Operators, Inc. Fee #8 well located 2280' FNL 790' FEL of Section 8, T30N, R11W be approved as a necessary infill well in the Aztec-Pictured Cliffs Pool to effectively and efficiently drain the spacing unit shared with the Hartman #1 well.

The standard spacing unit in the Aztec-Pictured Cliffs Pool is 160 acres.

Enclosed for your consideration are copies of the Permit to Drill, Acreage Dedication Plat, Data Sheet, Structure Map, and Map showing the cumulative gas production to 1/1/81.

A copy of this application is being sent by certified mail to the operator of each developed offset spacing unit at the time of this mailing.

If further information is desired, please contact us.

Yours very truly,

an Kendnick

A. R. Kendrick

Enclosures

xc: Offset operators

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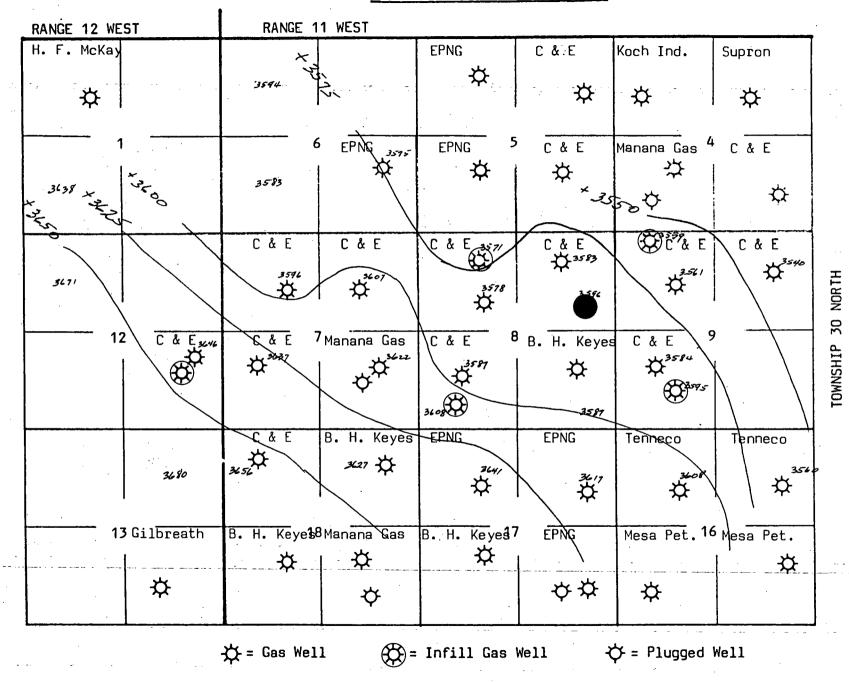
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DATA SHEET

ORIGINAL WELL: Operator: C & E Operatros, Inc. Lease: Hartman #1 Location: 846' FNL 2024' FEL Section 8, T30N, R11W Spud: 5/27/54 Completed: 7/18/54 Stimulation: Shot w/ 242 quarts of solidified nitroglycerin Mechanical problems: none Retreatment: none Current producing rate: 5136 MCF during 1980 REASON that the existing well cannot effectively and efficiently drain the drill tract is because of the narrow radius of effective stimulation by the shot treatment. A high-volume fracture treatment is not feasible at this time due to the possibility of casing rupture. Four wells are shown on the structure map which have been plugged because of casing failure. INFILL WELL: C & E Operators, Inc. Operatro: Fee #8 Lease: 2280' FNL 790 ' FEL Section 8, T30N, R11W Location: Spud: 1/22/81 Completed: 6/26/81 Stimulation: Sand/foam fractured w/ 70 quality foam and 84,000 pounds ofisand VOLUME of expected additional recovery: 108 MMCF BASED on Boyle's Law, if the initial shut-in pressure of 668 psi represented 190% of the recoverable reserves, and if the shut-in pressure of 250 psi measured 10/19/81 represented the remaining recoverable reserves, and considering the production of 629 MMCF having been produced through 40/31/81; then, the remaining recoverable reserves were 226 MMCF at an abandooment pressure of 50 psi. The

shut-in pressure of 272 psi measured 9/30/81 on the infill well indicates recoverable reserves of 034 MMCF at an abandonment pressure of 50 psi. Therefore, the additional recoverable reserves will be 108 MMCF.

PICTURED CLIFFS STRUCTURE MAP



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9-6 REGULATION OF THE DRILLING AND PRODUCTION OF OIL AND/OR GAS WELLS

CITY OF AZTER

9-6-1 SCOPE:

The scope of this article shall be for the regulation of the drilling and production of oil and/or gas or for liquid hydrocarbons within the City of Aztec, New Mexico, and shall include any well to be used as an injection well for secondary recovery.

9-6-2 PERMITS

Every person, firm, partnership or corporation hereafter desiring to drill a well within the City of Aztec, New Mexico, or rework an existing well shall obtain a permit for the drilling or reworking of such well and the production thereof, such permit to be obtained as follows:

- a. Written application shall be filed therefore with the City Clerk and shall contain the following:
 - 1. The name of the operator desiring to drill and produce such well.
 - 2. The exact location of the proposed well together with a description of the area to be occupied by the drilling machinery pits and equipment in the drilling of such well and the area to be occupied by the machinery to be used in the production of such well, and

3. Names and address of all property owners within 200 feet of well location.

4. A certificate of insurance which certifies that the operator and all persons who may be engaged in the drilling or operation of such well are insured to the public for any operation in the sum of One Hundred Thousand (\$100,000.00) dollars for damages to any one (1) person, and Three Hundred Thousand Dollars (\$300,000.00) for damages to more than one person, from any one (1) accident; also, for the sum of One Hundred Thousand Dollars (\$100,000.00) for damages to property.

5. Such application shall be accompanied by a \$350.00 filing fee.

b. Upon the receipt of all of the above the City Clerk shall establish a hearing date when the application is to be considered by the City Commission. Public notice of the hearing at which the application is to be considered must be given by at least one publication in a newspaper of general circulation in the municipality at least 15 days before the date of the hearing. All property owners within 200 feet of the proposed well location shall be notified of the hearing date by written notice by certified mail, return receipt requested, not less than five days before the date of the hearing.

Section 9-6 Page two

- c. The City Clerk shall issue a written recommendation for approval or denial to the City Commission at the hearing.
- d. In all matters pertaining to this chapter the City Manager shall advise the City Commission and shall make recommendations concerning all matters pertaining to this chapter.

9-6-3 OBSTRUCTING STREETS BY DRILLING, ETC.:

No well shall be drilled and no permit shall be issued for any well to be drilled at any one location which is within any of the streets or alleys of the City. No such street or alley shall be blocked or encumbered or closed in any drilling, production or pipeline operation except by written permission of the oil and gas inspector and the City Manager and then only temporarily.

9-6-4 PROXIMITY OF WELL, TANKS OR PIPELINES TO BUILDINGS:

No well shall be drilled and no permit shall be issued for any well to be drilled at any location or storage tank to be located which is nearer than two hundred (200) feet to any residence or commercial building without the applicant having first secured the written permission of the City Commission.

No high pressure gas injection well or a compressor used in conjunction with the gas injection well shall be located nearer than two hundred (200) feet to any residential, commercial or industrial structure, except by permission of the City Commission. In exceptional cases for reasons of safety, the City Commission may require that any such facility shall be located at a greater distance than 200 feet to any such structure.

No residential, commercial or industrial structure other than structures necessary to operate the pipeline shall be erected or moved to a location nearer than thirty (30) feet to any pipeline transporting gas when the pipeline operating pressure is greater than 250 PSI unless a greater or lesser distance is recommended by the then applicable ASA Code.

9-6-5 REQUIREMENT FOR OPERATION OF PRODUCING WELL:

Any person, firm partnership or corporation who completes an oil or gas well within the limits of the City of Aztec, New Mexico, shall operate the same in accord with the following provisions:

> a. The area to be occupied by the producing equipment in the event any well located within the City of Aztec is completed as a commercial producer shall be confined to an area not to exceed one hundred (100) feet by one hundred and fifty (150) feet and the 100 feet by 150 feet area to be occupied by the producing equipment shall be enclosed in a chain link fence six (6) feet in height and three (3) strands of barbed wire at the top, which barbed wire strands shall slope outward.

Section 9-6 Page three

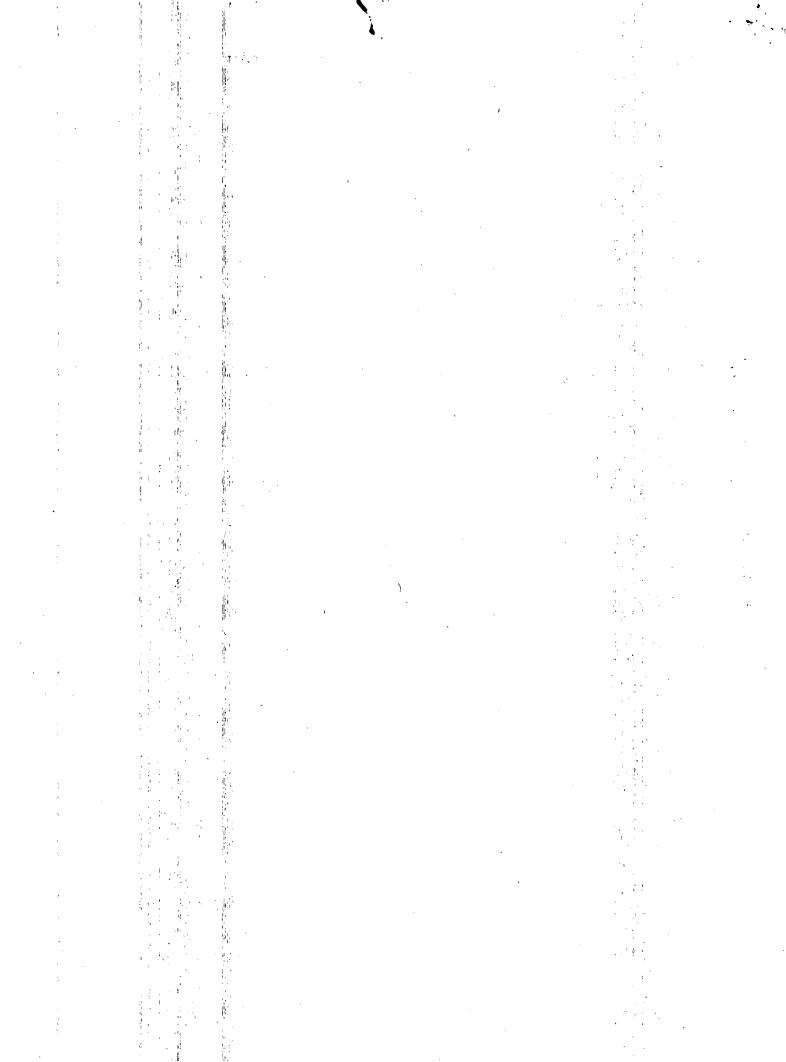
- b. The fence and area referred to in sub-paragraph above shall be landscaped and maintained if such well location is within five hundred (500) feet of a residential lot as described in the City Zoning Ordinance.
- c. Any tank containing oil or distillate shall be located within a dike or fire wall capable of holding one and one-half (l_2^k) times the volume of the tank; and all operations shall be maintained so as not to be a fire hazard and so as not to jeopardize the health and safety of the Citizens of the City of Aztec.
 - d. All fluids produced shall be produced into a tank and hauled off the location.
 - e. All operations shall be conducted in such a manner so that they will make the least noise possible.

9-6-6 REQUIREMENTS FOR OPERATION OF DRILLING WELL:

Any person, firm, partnership or corporation drilling a well for oil and gas within the limits of the City of Aztec, New Mexico, shall contain all drilling fluids in pits which will be completely covered at the completion of drilling.

9-6-7 PENALTY

Any firm, person, partnership or corporation convicted of drilling or operating a well in violation of the provisions of this article shall be punished by a fine of not less than one hundred dollars (\$100.00) or more than three hundred dollars (\$300.00) and each day that any person, firm, partnership or corporation shall be in violation of this ordinance shall be taken as a separate offense.





A. R. "Al" Kendrick

P. O: BOX 516 • AZTEC, NEW MEXICO 87410 • (505) 334-2555

February 22, 1982

Dear Offset Operator:

If you have no objection to the attached Application for Approval of Infill Well for Gas Pricing, please sign the waiver below and send it to the New Mexico Oil Conservation Division office in Santa Fe, New Mexico.

Yours very truly,

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A. R. Kendrick

Mr. Joe D. Ramey Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Ramey:

We, as offset operator, hereby waive objection to the Application for Approval of Infill Well for Gas Pricing filed for C & E Operators, Inc.

| WELL: <u>Fee #8</u> | | · | • |
|-------------------------|-----------|----------------|-------|
| LOCATION: <u>H-8-T3</u> | ON-R11W | | · · · |
| • | | | |
| | OPERATOR: | Manana Gas, In | nc. |
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| | DATE: | 2/25/82 | , |

RECEIVED FEB 2 4 1982

33 WALL MULL AN & INW 10E-334 MMLE BANK Well Pur. Pur 51-1 1WW 50h 13839) (1982 wwell) - 406 wwell manger manger 301 minet human husersoft lucesines to delle. 17WWSL-- 25 WWC & yourner yournes & date 17WW 629 -=1 JWW 5001 so of for mond 2000: / 19 2 ber (1002 ware) = 32 ware mana a opa 150899 @ SONIDST 899 - 220 82: - 418 2: > 418 2: > bicssale acquire : " 222 = 112M 11:50 105 0'I'S אף סיעקט שנעך גנכצחוב = 200: 37WW 689 Cummulative Broduction to Date = 150056 = d'T'S 242022 ניחבט: Fee Well No. 8 . H - 8 - 30 N - 11 Jan Jun Co H. H. MI Kendirick Jor C. + E. Opperators, Inc. Michael E. Stogner 2851 88 4710/ O'TOWN

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| -OIL C | ONSERVATION PROV | |

P. O. Box 516 • Aztec, New Mexico 87410 • (505) 334-2555

SANTA FE

February 22, 1982

Mr. Joe D. Ramey Oil Conservation Diviison P.O. Box 2088 Santa Fe, New Mexico 87501

A. R. "Al" Kendrick

RE: Applications for Approval of Infill Wells for Gas Pricing

Dear Mr. Ramey:

Enclosed are application for approval of infill wells in the Aztec-Pictured Cliffs Pool.

These wells are the C & E Operators, Inc. Aztec #8 M-8-30N-11W

| | Aztec #9 | M-9-30N-11W |
|---|----------|--------------|
| • | Fee #8 | H-8-30N-11W |
| | Fee #8-A | C-8-30N-11W |
| | Fee #9-Y | D-9-30N-11W |
| : | Fee #12 | I-12-30N-12W |
| | | |

All of these Pictured Cliffs completions are zones in multiple completions.

The wells in sections 8 & 9 are all within the City Limits of Aztec. Places to drill are getting harder to find in town as houses are being built. A copy of the City Ordinance is enclosed for your convenience.

The Fee#12 well is located outside of the city. It is not offset by another operator who has developed his drill tract.

If there is other data that you would like, please contact me.

Yours very truly,

aid A. R. Kendrick

Enclosures



BRUCE KING

SECRETARY

MES/dp

March 23, 1982

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-2434

A. R. "AL" Kendrich P.O. Box 516 Aztec, New Mexico 87410

> Re: Application for NGPA Infill Well Findings Under Provisions of Order No. R-6013-A

> > C & E OPERATORS, INC. - Fee Well No. 8, H-8-T-30N-R+11W,

San Juan County, New Mexico.

We may not process the subject application for infill findings until the required information, forms, or plats checked on the reverse side of this letter are submitted.

Sincerely,

E. Stoepen heel

Michael E. Stogner, Petroleum Engineer A copy of Form C-101 must be submitted.

A copy of Form C-102 must be submitted.

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calculations.

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Other:

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The pool name must be shown.

The standard spacing unit size for the pool must be shown.

Give the Division Order No. which granted the non-standard proration unit.

Please state whether or not the well has been spudded and give the spud date, if any.

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Information relative to other wells on the proration unit is incomplete.

The geologic and reservoir data is incomplete or insufficient.

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Please re-check volume of expected additional recovery

OIL CUIVES SANIA

A. R. "Al" Kendrick

P. O. Box 516 • AZTEC, NEW MEXICO 87410 • (505) 334-2555

March 26, 1982

Mr. Michael E. Stogner Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

RE: Application for Approval of Infill Well for Gas Pricing

Dear Mr. Stogner:

Please substitute the enclosed Data Sheet copies in my application for Infill Designation for the C & E Operators, Inc. Fee #8 well submitted on February 22, 1982. There was an arithmetic mistake on the original Data Sheet.

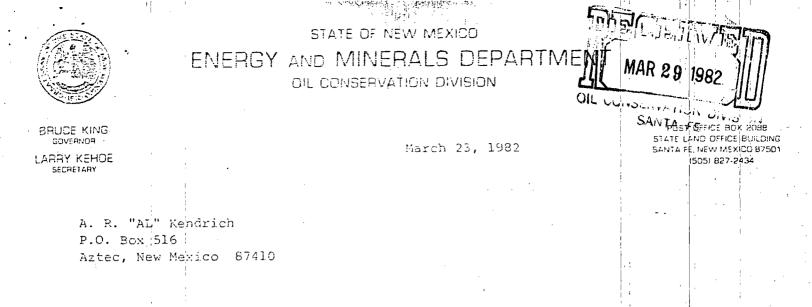
Thank you very much for your consideration of this application.

If there are further questions, please contact me.

Yours very truly,

udrick A. R. Kendrick

Enclosures



Re: Application for NGPA Infill Well Findings Under Provisions of Order No. R-6013-A

C & E OPERATORS, INC. - Fee

Well No. 8, H-8-T-30N-R-11W,

1 1 -

San Juan County, New Mexico.

We may not process the subject application for infill findings until the required information, forms, or plats checked on the reverse side of this letter are submitted.

MES/dp

Sincerely,

E. Stogner

Michael E. Stogner, Petroleum Engineer

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| | A copy of Form C-101 must be submitted. | SAIVIA FE | |
| | A copy of Form C-102 must be submitted. | | |
| | The pool name must be shown. | | : (. |
| | The standard spacing unit size for the | pool must be shown. | |
| | Give the Division Order No. which grant unit. | ed the non-standard proration | - |
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DATA SHEET

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MAR 29 1982

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ORIGINAL WELL:

Operator:C & E Operators, Inc.Lease:Hartman #1Location:846' FNL 2024 ' FEL Section 8, T30N, R11WSpud:5/27/54Completed:7/18/54Stimulation:Shot w/ 242 quarts of solidified nitroglycerinMechanical problems:none

Retreatment: none

Current producing rate: 5136 MCF during 1980

<u>REASON</u> that the existing well cannot effectively and efficiently drain the drill tract is because of the narrow radius of effective stimulation by the shot treatment. A high-volume fracture treatment is not feasible at this time due to the possibility of casing rupture. Four wells are shown on the structure map which have been plugged because of casing failure.

INFILL WELL:

| Operator: | C & E Operators, Inc. |
|-----------------|--|
| Lease: | {Fee #8 |
| Location: | 2280' FNL 790' FEL Section 8, T30N, R11W |
| Spud: 1/22/81 | Completed: 6/26/81 |
| Stimulation: Sa | nd/Foam fractured w/ 70 quality foam and 84,000 pounds |
| of | sand. |

VOLUME of expected additional recovery: 35 MMCF

BASED on Boyle's Law, if the initial shut-in pressure of 668 psi represented 100% of the recoverable reserves, and if the shut-in pressure of 250 psi measured 10/19781 represented the remaining recoverable reserves, and considering the production of 629 MMCF having been produced through 10/31/81; then, the remaining recoverable reserves were 320 MMCF at an abandonment pressure of 50 psi. The shut-in pressure of 272 psi measured 9/30/81 on the infill well indicates recoverable reserves of 355 MMCF at an abandonment pressure of 50 psi. Therefore, the additional recoverable reserves will be (35) MMCF.

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DATA SHEET

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MAR 29 1982

ORIGINAL WELL:

Operator: Lease:

C & E Operators, Inc. Hartman #1

Location: 846' FNL 2024 ' FEL Section 8, 130N, R11₩

Spud: 5/27/54 Completed: 7/18/54

Stimulation: Shot w/ 242 quarts of solidified nitroglycerin

Mechanical problems: none

Retreatment: none

Current producing rate: 5136 MCF during 1980

REASON that the existing well cannot effectively and efficiently drain the drill tract is because of the narrow radius of effective stimulation by the shot treatment. A high-volume fracture treatment is not feasible. at this time due to the possibility of casing rupture. Four wells are shown on the structure map which have been plugged because of casing : failure.

INFILL WELL:

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|------------------|--|-----------|---------|
| Operator: | C & E Operators, Inc. | | |
| Lease: | Fee #8 | | |
| Location: | 2280' FNL 790' FEL Section 8, T30N, R11W | | , ; |
| Spud: 1/22/81 | Completed: 6/26/81 | | • |
| Stimulation: Sar | nd/Foam fractured w/ 70 quality foam and { | 34,000 pd | ounds |
| | sand. | | 1. 1. s |

VOLUME of expected additional recovery: 35 MMCF

BASED on Boyle's Law, if the initial shut-in pressure of 668 psi represented 100% of the recoverable reserves, and if the shut-inpressure of 250 psi measured 10/19/81 represented the remaining recoverable reserves, and considering the production of 629 MMCF [] having been produced through 10/31/81; then, the remaining recoverable reserves were 320 MMCF at an abandonment pressure of 50 psi. The shut-in pressure of 272 psi measured 9/30/81 on the infill well indicates recoverable reserves of 355 MMCF at an abandonment pressure of 50 psi. Therefore, the additional recoverable reserves will be 35 MMCF.

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| | TE OF NEW MEXICO D Minerals Depart | | L CONSERVATION P. O. Box Santa Fe, New 87501 | MEXICO | | | TRATIVE | ORDER |
|---|---|--|---|--|--|---|--|---|
| | COMMIS | ION 271.305(b SION REGULATION | ILLING FINDING) of the feder Ons, natural g Ion division o | AL ENERGY R AS POLICY A | EGULATORY CT OF 1978 | | | |
| I. | | | • | | | | | |
| - | C & E Operat | tors, Inc. | Well Name | and No. | Fee Well No | . 8 | : | |
| · · · · | Unit <u>H</u> Sec. | | | | · · · | | · · · · · · · · · · · · · · · · · · · | |
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| II. THE DIVIS | ION FINDS: | | | | | | | |
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| procedure Division a | by Order No. R-6 whereby the Divi and find that an | sion Director infill well is | and the Divis s necessary. | ion Examine | rs are empo | wered to a | ct for | the |
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| | D MINERALS DEPARTMEN | T | FE, NEW MEXICO 87501 | | NFL44 | ····· |
| · | | | | | | |
| • | COMMISSIC | 271.305(b) OF N REGULATIONS, | G FINDINGS PURS The Federal Ene Natural Gas Pol | RGY REGULATORY | 8 | • |
| , * . , | AND OIL | CONSERVATION E | IVISION ORDER N | 0. R-6013-A | | |
| | | | | | | • |
| _ | C & E Operator | | | | | |
| | Unit <u>H</u> Sec | 8_ Twp . <u>30N</u> | Rng11W_ | CtySan | Juan | |
| L. | ION FINDS: | | | | | |
| | | | | | • | |
| ursuant t s a new c nfill wel y the pro 2) That | Section 271.305(b) to the Natural Gas P Dishore production w ll is necessary to e Dration unit which o by Order No. R-6013 whereby the Divisio | olicy Act'of 19 ell under Secti ffectively and annot be so dra -A, dated Febru | 78 provides that on 103 of said efficiently dra ined by any exi ary 8, 1980, th | t, in order fo Act, the Divis in a portion o sting well wit e Division est | r an infill well ion must find tha f the reservoir o hin that unit. ablished an admir | to qualify at the covered sistrative |
| lvision a | and find that an inf | ill well is nec | essary. | | - | , |
| 3) That | the well for which | | - | | | |
| () That | a 155.28 | | g unit in said | | 160 NE/4 | acres. |
| | | - | | | | |
| Sec. | 8 , Twp. 30N | , Rng11 | W, is curr | ently dedicate | d to theHar | cman |
| We | ell No. 1 | _ located in Un | it <u>B</u> o | f said section | • • • • • • • • • • • • • • • • • • • | |
| pproved b | this proration unit by Order No | • | | | | |
| 6) That ell(s) on | said proration unit the unit. | is not being ϵ | ffectively and | efficiently dr | ained by the exis | sting |
| 7) That | the drilling and co | mpletion of the | well for which | a finding is | sought should res | ult in |
| e produc | tion of an addition be recovered. | | 1. · · · | · · · | | |
| or which | all the requirement a finding is sought covered by said pro | is necessary t | o effectively a | nd efficiently | drain a portion | of the |
|)) That | in order to permit on should be approve | effective and e d. | fficient draina | ge of said pro | ration unit, the | subject |
| | REFORE ORDERED: | | • | | • | |
| l) That hfill wel or infill eservoir | the applicant is he ll on the existing p l drilling granted b covered by said pro ing well thereon. | roration unit d y this order is | escribed in Sec necessary to p | tion II(4) abo ermit the drai | ve. The authoriz nage of a portion | ation of the |
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| ONE at Sa | may deem necessary. anta Fe, New Mexico, | on this 7/2 | day of a | sil | , 19 <u>8</u> 2. | • |
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| - | Machine Acct. S.F. & GEC Hobbs | | | • | | |
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AR "AL" Kendrick

A. R. "Al" Kendrick

P. O. Box 516 • AZTEC, NEW MEXICO 87410 • (505) 334-2555

February 22, 1982

Mr. Joe D. Ramey Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

RE: Application for Approval of Infill Well for Gas Pricing

Dear Mr. Ramey:

We respectfully request that the C & E Operators, Inc. Fee #8 well located 2280' FNL 790' FEL of Section 8, T30N, R11W be approved as a necessary infill well in the Aztec-Pictured Cliffs Pool to effectively and efficiently drain the spacing unit shared with the Hartman #1 well.

The standard spacing unit in the Aztec-Pictured Cliffs Pool is 160 acres.

Enclosed for your consideration are copies of the Permit to Drill, Acreage Dedication Plat, Data Sheet, Structure Map, and Map showing the cumulative gas production to 1/1/81.

A copy of this application is being sent by certified mail to the operator of each developed offset spacing unit at the time of this mailing.

If further information is desired, please contact us.

Yours very truly,

endrick

A. R. Kendrick

Enclosures

xc: Offset operators

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| 5616 Pictured Cliffs Aztec PC 155.28 | <u>v:v -</u> |
| | 14.31 |
| | Actes |
| 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. | |
| 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to we interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been conducted by communitization, unitization, force-pooling, etc? N/A Yes No If answer is "yes," type of consolidation | dc of tion, mis- |
| in the state of Annon and the state of Annon | ~ |
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DATA SHEET

ORIGINAL WELL: Operator: C & E Operatros, Inc. Lease: Hartman #1 Location: 846' FNL 2024' FEL Section 8, T30N, R11W Spud: 5/27/54 Completed: 7/18/54 Stimulation: Shot w/ 242 quarts of solidified nitroglycerin Mechanical problems: none Retreatment: none Current producing rate: 5136 MCF during 1980

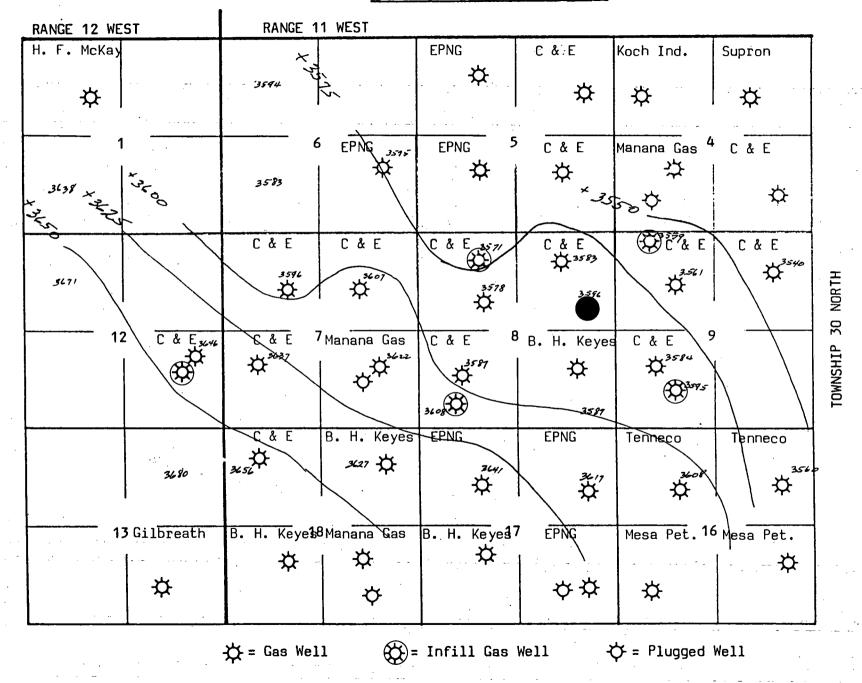
<u>REASON</u> that the existing well cannot effectively and efficiently drain the drill tract is because of the narrow radius of effective stimulation by the shot treatment. A high-volume fracture treatment is not feasible at this time due to the possibility of casing rupture. Four wells are shown on the structure map which have been plugged because of casing failure.

INFILL WELL:

| Operatro: | C & E Opérators, Inc. | .1 | 2 |
|---------------|--|------------|---------|
| Lease: | Fee #8 | . , | .t. 1., |
| Location: | 2280' FNL 790 ' FEL Section 8, T30N | I, R11W | |
| Spud: 1/22/81 | Completed: 6/26/81 | | |
| Stimulation: | Sand/foam fractured w/ 70 quality foam | and 84,000 | pounds |
| | of sand | | • • • • |

VOLUME of expected additional recovery: 108 MMCF

BASED on Boyle's Law, if the initial shut-in pressure of 668 psi represented 100% of the recoverable reserves, and if the shut-in pressure of 250 psi measured 10/19/81 represented the remaining recoverable reserves, and considering the production of 629 MMCF having been produced through 10/31/81; then, the remaining recoverable reserves were 226 MMCF at an abandonment pressure of 50 psi. The shut-in pressure of 272 psi measured 9/30/81 on the infill well indicates recoverable reserves of 334 MMCF at an abandonment pressure of 50 psi. Therefore, the additional recoverable reserves will be 108 MMCF. PICTURED CLIFFS STRUCTURE MAP



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9-6 REGULATION OF THE DRILLING AND PRODUCTION OF OIL AND/OR GAS WELLS

CITY OF AZTER

9-6-1 SCOPE:

The scope of this article shall be for the regulation of the drilling and production of oil and/or gas or for liquid hydrocarbons within the City of Aztec, New Mexico, and shall include any well to be used as an injection well for secondary recovery.

9-6-2 PERMITS

b.

Every person, firm, partnership or corporation hereafter desiring to drill a well within the City of Aztec, New Mexico, or rework an existing well shall obtain a permit for the drilling or reworking of such well and the production thereof, such permit to be obtained as follows:

> a. Written application shall be filed therefore with the City Clerk and shall contain the following:

I. The name of the operator desiring to drill and produce such well.

2. The exact location of the proposed well together with a description of the area to be occupied by the drilling machinery pits and equipment in the drilling of such well and the area to be occupied by the machinery to be used in the production of such well, and

3. Names and address of all property owners within 200 feet of well location.

A certificate of insurance which certifies that the operator and all persons who may be engaged in the drilling or operation of such well are insured to the public for any operation in the sum of One Hundred Thousand (\$100,000.00) dollars for damages to any one (1) person, and Three Hundred Thousand Dollars (\$300,000.00) for damages to more than one person, from any one (1) accident; also, for the sum of One Hundred Thousand Dollars (\$100,000.00) for damages to property.

5. Such application shall be accompanied by a \$350.00 filing fee.

Upon the receipt of all of the above the City Clerk shall establish a hearing date when the application is to be considered by the City Commission. Public notice of the hearing at which the application is to be considered must be given by at least one publication in a newspaper of general circulation in the municipality at least 15 days before the date of the hearing. All property owners within 200 feet of the proposed well location shall be notified of the hearing date by written notice by certified mail, return receipt requested, not less than five days before the date of the hearing. c.

The City Clerk shall issue a written recommendation for approval or denial to the City Commission at the hearing.

d. In all matters pertaining to this chapter the City Manager shall advise the City Commission and shall make recommendations concerning all matters pertaining to this chapter.

9-6-3 OBSTRUCTING STREETS BY DRILLING, ETC.:

No well shall be drilled and no permit shall be issued for any well to be drilled at any one location which is within any of the streets or alleys of the City. No such street or alley shall be blocked or encumbered or closed in any drilling, production or pipeline operation except by written permission of the oil and gas inspector and the City Manager and then only temporarily.

9-6-4 PROXIMITY OF WELL, TANKS OR PIPELINES TO BUILDINGS:

No well shall be drilled and no permit shall be issued for any well to be drilled at any location or storage tank to be located which is nearer than two hundred (200) feet to any residence or commercial building without the applicant having first secured the written permission of the City Commission.

No high pressure gas injection well or a compressor used in conjunction with the gas injection well shall be located nearer than two hundred (200) feet to any residential, commercial or industrial structure, except by permission of the City Commission. In exceptional cases for reasons of safety, the City Commission may require that any such facility shall be located at a greater distance than 200 feet to any such structure.

No residential, commercial or industrial structure other than structures necessary to operate the pipeline shall be erected or moved to a location nearer than thirty (30) feet to any pipeline transporting gas when the pipeline operating pressure is greater than 250 PSI unless a greater or lesser distance is recommended by the then applicable ASA Code.

9-6-5 REQUIREMENT FOR OPERATION OF PRODUCING WELL:

Any person, firm partnership or corporation who completes an oil or gas well within the limits of the City of Aztec, New Mexico, shall operate the same in accord with the following provisions:

> a. The area to be occupied by the producing equipment in the event any well located within the City of Aztec is completed as a commercial producer shall be confined to an area not to exceed one hundred (100) feet by one hundred and fifty (150) feet and the 100 feet by 150 feet area to be occupied by the producing equipment shall be enclosed in a chain link fence six (6) feet in height and three (3) strands of barbed wire at the top, which barbed wire strands shall slope outward.

Section 9-6 Page three

b.

The fence and area referred to in sub-paragraph above shall be landscaped and maintained if such well location is within five hundred (500) feet of a residential lot as described in the City Zoning Ordinance.

2. Any tank containing oil or distillate shall be located within a dike or fire wall capable of holding one and one-half (1½) times the volume of the tank; and all operations shall be maintained so as not to be a fire hazard and so as not to jeopardize the health and safety of the Citizens of the City of Aztec.

d. All fluids produced shall be produced into a tank and hauled off the location.

e. All operations shall be conducted in such a manner so that they will make the least noise possible.

9-6-6 REQUIREMENTS FOR OPERATION OF DRILLING WELL:

Any person, firm, partnership or corporation drilling a well for oil and gas within the limits of the City of Aztec, New Mexico, shall contain all drilling fluids in pits which will be completely covered at the completion of drilling.

9-6-7 PENALTY

Any firm, person, partnership or corporation convicted of drilling or operating a well in violation of the provisions of this article shall be punished by a fine of not less than one hundred dollars (\$100.00) or more than three hundred dollars (\$300.00) and each day that any person, firm, partnership or corporation shall be in violation of this ordinance shall be taken as a separate offense.



A. R. "Al" Kendrick

P. O. BOX 516 . AZTEC, NEW MEXICO 87410 . (505) 334-2555

February 22, 1982

Dear Offset Operator:

If you have no objection to the attached Application for Approval of Infill Well for Gas Pricing, please sign the waiver below and send it to the New Mexico Oil Conservation Division office in Santa Fe, New Mexico.

Yours very truly,

ak benduich A. R. Kendrick

Mr. Joe D. Ramey Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Ramey:

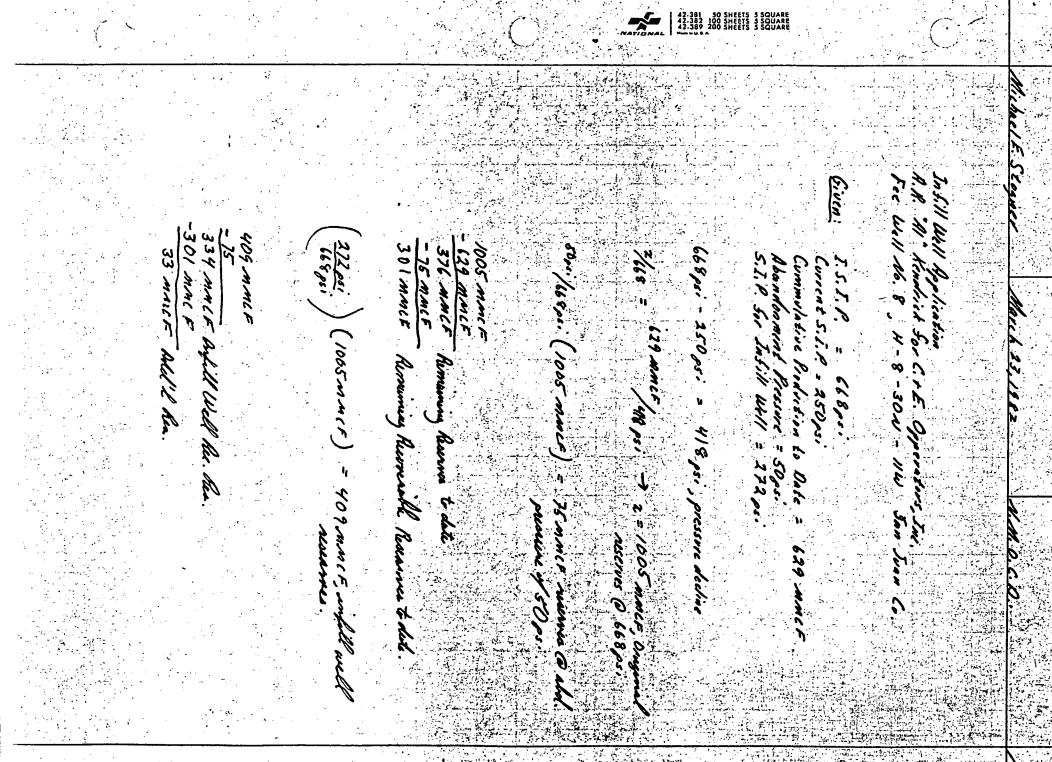
We, as offset operator, hereby waive objection to the Application for Approval of Infill Well for Gas Pricing filed for C & E Operators, Inc.

| WELL: | Fee #8 | |
|-------|--------|--|

LOCATION: <u>H-8-T30N-R11W</u>

OPERATOR: Manana Gas Inc. Ed BY: DATE: 2/25/82

RECEIVED FEB 2 4 1982



| A. R. "Al" Kendrick | | | EB 8.4 | | IJ |
|--|---|----------|---------|---|-----------|
| P. O. Box 516 • Aztec. New Mexico 87410 • (505) 334- | 2555 | -OIL-COI | SANTA | ON DIVI | SION |
| | | . * | | - | |
| February 22, 1982 | | | | | |
| | | | | | |
| | | | | , | |
| 1r. Joe D. Ramey | | | | | |
| Dil Conservation Diviison 2.0. Box 2088 | | | | 1 x - x y | |
| Santa Fe, New Mexico 87501 | | ** | : | | |
| | | | | | |
| | | | | | |
| RE: Applications for Approval of Infill | . Wells for | Gas Pri | cing | | |
| | | • | | | |
| Dear Mr. Ramey: | | · , | | | |
| Jear Mr. Ramey: | | | | | |
| Enclosed are application for approval of | `infill wel | ls in t | he Azte | c-Pict | ured |
| Cliffs Pool. | | | | | |
| | | • | | | |
| These wells are the C & E Operators, Inc | • | | | : | |
| Aztec #8 M-8-30N-11W Aztec #9 M-9-30N-11W | | | | | l is : |
| Fee #8 H-8-30N-11W | • | | | · · · | |
| Fee #8-A C-8-30N-11W | | | | | |
| Fee #9-Y D-9-30N-11W | | | - | | |
| Fee #12 I-12-30N-12W | 1. The second | • | | 1997 - 1 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - | ta esta a |

The wells in sections 8 & 9 are all within the City Limits of Aztec. Places to drill are getting harder to find in town as houses are being built. A copy of the City Ordinance is enclosed for your convenience.

The Fee#12 well is located outside of the city. It is not offset by another operator who has developed his drill tract.

If there is other data that you would like, please contact me.

Yours very truly,

A. R. Kendrick

Enclosures

| | | ENERGY | STATE OF NE AND MINEF OIL CONSERVAT | RALS DEPARTMEN | Т | | | | |
|--------------------------|-------|---|---|---------------------------------------|------|----------|-------|------------|--|
| | | - - - - - - - - - - - - - - - - - - - | | March 23, 1982 | | STA | TEL | |) 2088 E BUILDING XICO 87501 |
| LARRY KEHOE SECRETARY | | ۶ • | | | | : | · , · | (505) 827- | 2434 |
| | | | | · · · · | | · . | ; | i. | |
| | | | • • | | 1 | • |) | • | |
| A. R. "AL" | ' Kei | hdrich | | | | | į | | |
| P.O. Box 5 | 516 | 1 • | | · · · · · · · · · · · · · · · · · · · | | | • | | |
| Aztec, New | v Mez | kico 87410 | | | | | : | | |
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| | | 1 | Ret | Application for NGPA In: | 6111 | Woll | | | |
| | | | | Findings Under Provision | | | | i 2 | |
| | | | | Order No. R-6013-A | | | , | | |
| | | | | | 1 | <u>.</u> | - | | |
| | | | ` | C & E OPERATORS, INC | Fee | 2 | | () | |

Sincerely,

We may not process the subject application for infill findings until the required information, forms, or plats checked on the reverse side of this

242 Ult

Well No. 8, H-8-T-30N-R-11W,

San Juan County, New Mexico.

•• : <u>t</u>e

Michael E. Stogner, Petroleum Engineer

MES/dp

letter are submitted.

| A copy | / of | Form | C-101 | must | be | submitted. |
|--------|------|------|-------|------|----|------------|
|--------|------|------|-------|------|----|------------|

A copy of Form C-102 must be submitted.

The pool name must be shown.

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· p] h

Other:

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calculations

The standard spacing unit size for the pool must be shown.

Give the Division Order No. which granted the non-standard proration unit.

Please state whether or not the well has been spudded and give the spud date, if any.

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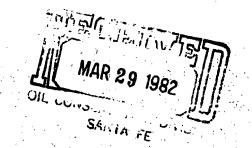
Information relative to other wells on the proration unit is incomplete.

The geologic and reservoir data is incomplete or insufficient.

x

Please re-check volume of expected additional recovery

.



A. R. "Al" Kendrick

P. O. BOX 516 . AZTEC. NEW MEXICO 87410 . (505) 334-2555

March 26, 1982

Mr. Michael E. Stogner Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87501

RE: Application for Approval of Infill Well for Gas Pricing

Dear Mr., Stogner:

Please substitute the enclosed Data Sheet copies in my application for Infill Designation for the C & E Operators, Inc. Fee #8 well submitted on February 22, 1982. There was an arithmetic mistake on the original Data Sheet.

Thank you very much for your consideration of this application.

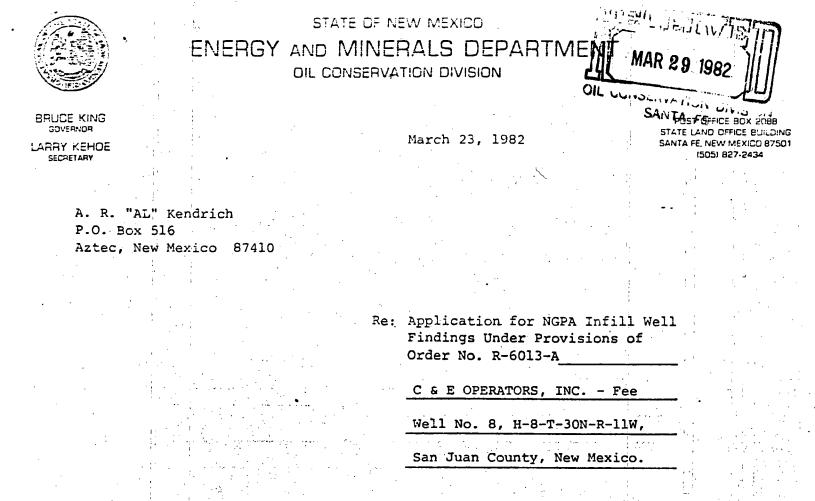
If there are further questions, please contact me.

Yours very truly,

Endrick

A. R. Kendrick

Enclosures



We may not process the subject application for infill findings until the required information, forms, or plats checked on the reverse side of this letter are submitted.

Sincerely;

E. Stogner

Michael E. Stogner, Petroleum Engineer

MES/dp

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|---------------------------------------|---|-----------|
| • • • • • • • • • • • • • • • • • • • | MAR 29 1982 | |
| | A copy of Form C-101 must be submitted. SANIA FE | |
| | A copy of Form C-102 must be submitted. | • |
| | The pool name must be shown. | |
| | The standard spacing unit size for the pool must be shown. | |
| 🗆 | Give the Division Order No. which granted the non-standard proration unit. | · · · · · |
| | Please state whether or not the well has been spudded and give the spud date, if any. | • |
| | Information relative to other wells on the proration unit is incomplete. | |
| | | |
| • | | |
| • • • | | • • |
| | The geologic and reservoir data is incomplete or insufficient. | • |
| • • • • • | | · · · · |
| · · · · · | | • |
| | | |
| x | Other: | |
| | Please re-check volume of expected additional recovery | |
| | calculations. | |
| • | | |
| | | |
| | | |
| | | |

DATA SHEET

MAR 2.9 1982

SALITA FE

ORIGINAL WELL:

Operator: C & E Operators, Inc. Lease: Hartman #1 Location: 846' FNL 2024 ' FEL Section 8, T30N, R11W Spud: 5/27/54 Completed: 7/18/54 Stimulation: Shot w/ 242 quarts of solidified nitroglycerin Mechanical problems: none Retreatment: none Current producing rate: 5136 MCF during 1980

<u>REASON</u> that the existing well cannot effectively and efficiently drain the drill tract is because of the narrow radius of effective stimulation by the shot treatment. A high-volume fracture treatment is not feasible at this time due to the possibility of casing rupture. Four wells are shown on the structure map which have been plugged because of casing failure.

INFILL WELL:

| | Operator: | C & E Operators, | Inc. | | | |
|-----|------------------|-------------------|---------------|------------|---------|--------|
| | Lease: | Fee #8 | | | | |
| | Location: | 2280' FNL 790' FE | L Section 8, | T30N, R11W | | |
| | | Completed: 6/26/ | | | | |
| • • | Stimuletion: Sar | d/Foam fractured | w/ 70 quality | foam and 8 | 4,000 r | oounds |
| • • | 11 | sand. | | | | |

VOLUME of expected additional recovery: 35 MMCF

BASED on Boyle's Law, if the initial shut-in pressure of 668 psi represented 100% of the recoverable reserves, and if the shut-in pressure of 250 psi measured 10/19/81 represented the remaining recoverable reserves, and considering the production of 629 MMCF having been produced through 10/31/81; then, the remaining recoverable reserves were 320 MMCF at an abandonment pressure of 50 psi. The shut-in pressure of 272 psi measured 9/30/81 on the infill well indicates recoverable reserves of 355 MMCF at an abandonment pressure of 50 psi. Therefore, the additional recoverable reserves will be 35 MMCF.

Corrected Copy

DATA SHEET

MAR 29 1982

ORIGINAL WELL:

Operator:

Lease:

C & E Operators, Inc.

Hartman #1

Location: 846' FNL 2024 ' FEL Section 8, T30N, R11W Spud: 5/27/54 Completed: 7/18/54 Stimulation: Shot w/ 242 quarts of solidified nitroglycerin

Mechanical problems: none

Retreatment: none

Current producing rate: 5136 MCF during 1980

<u>REASON</u> that the existing well cannot effectively and efficiently drain the drill tract is because of the narrow radius of effective stimulation by the shot treatment. A high-volume fracture treatment is not feasible at this time due to the possibility of casing rupture. Four wells are shown on the structure map which have been plugged because of casing failure.

INFILL WELL:

Operator: C & E Operators, Inc. Lease: Fee #8 Location: 2280' FNL 790' FEL Section 8, T30N, R11W Spud: 1/22/81 Completed: 6/26/81 Stimulation: Sand/Foam fractured w/ 70 quality foam and 84,000 pounds of sand.

VOLUME of expected additional recovery: 35 MMCF

BASED on Boyle's Law, if the initial shut-in pressure of 668 psi represented 100% of the recoverable reserves, and if the shut-in pressure of 250 psi measured 10/19/81 represented the remaining recoverable reserves, and considering the production of 629 MMCF having been produced through 10/31/81; then, the remaining recoverable reserves were 320 MMCF at an abandonment pressure of 50 psi. The shut-in pressure of 272 psi measured 9/30/81 on the infill well indicates recoverable reserves of 355 MMCF at an abandonment pressure of 50 psi. Therefore, the additional recoverable reserves will be 35 MMCF.