

## OIL CONSERVATION DIVISION

P. O. Box 2088  
SANTA FE, NEW MEXICO  
87501

ADMINISTRATIVE ORDER

NFL 19

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

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

I.

Operator Horace F. McKay, Jr. Well Name and No. Sullivan Well No. 3ALocation: Unit A Sec. 29 Twp. 29N Rng. 10W Cty. San Juan

II.

## THE DIVISION FINDS:

(1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.

(2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) That the well for which a finding is sought is ~~not~~ completed in the Aztec-Pictured Cliffs Pool, and the standard spacing unit in said pool is 160 acres.

(4) That a 160-acre proration unit comprising the NE/4 of Sec. 29, Twp. 29N, Rng. 10W, is currently dedicated to the Horace F. McKay, Jr. Sullivan Well No. 3 located in Unit H of said section.

(5) That this proration unit is ( standard) ( nonstandard); if nonstandard, said unit was previously approved by Order No. \_\_\_\_\_.

(6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.

(7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 500 M MCF of gas from the proration unit which would not otherwise be recovered.

(8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

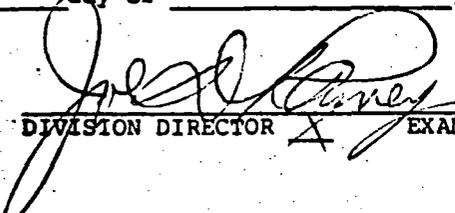
(9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

## IT IS THEREFORE ORDERED:

(1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this 27th day of June, 19 80.

  
DIVISION DIRECTOR  EXAMINER \_\_\_\_\_

*Horace F. McKay, Jr.*  
*P. O. Box 14738*  
*5900 Tramway Blvd., N.E.*  
*Albuquerque, New Mexico 87111*

April 24, 1980

State of New Mexico  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Sullivan 3J (3A) Well  
Sullivan 3  
T-29N, R-10W, Section 29  
San Juan County, New Mexico

Gentlemen:

In accordance with the Special Rules and Regulations, NGPA Infill Findings, Administrative Procedures (amended February 8, 1980), the following information is submitted for your review.

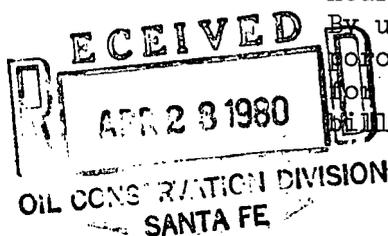
- Rule 5. C-101 and C-102 enclosed.
- Rule 6. The well was drilled into the Aztec Pictured Cliff Pool and the standard spacing unit size is 160 acres.
- Rule 7. N/A
- Rule 8. Description of all wells drilled on Proration Unit.

	<u>Sullivan 3J (3A)</u>	<u>Sullivan 3</u>
Name - Location	see C-102	see C-102
Spud Date	11/3/78	12/24/56
Completion Date	11/21/78	1/13/57
Mechanical Problems	None	None
Current Production	400 mcf a day	16 mcf a day

I believe it is evident that the Sullivan # 3 well is not capable of effectively and efficiently draining the Proration Unit. The Sullivan # 3 was completed 23 years ago. It was an open-hole completion with a very small frac job. As you can see, production has declined to almost nothing (18 mcf a day) and the Sullivan 3J (3A) production is holding very strong at about 400 mcf a day after about one year of production.

Rule 9.(a) A formation structure map is included.

- (b) It is estimated that the Sullivan 3J (3A) will recover an additional 500 mmcf of reserves. The Sullivan 3 has recovered about 450 mmcf. There are several Pictured Cliff wells in the near vicinity which have produced more than a billion cubic feet. By using an average 40 ft. thickness of the sand and an average porosity of 15% and plugging these figures into a long formula for determining reserves, I came up with reserves of about one billion cubic feet of gas.



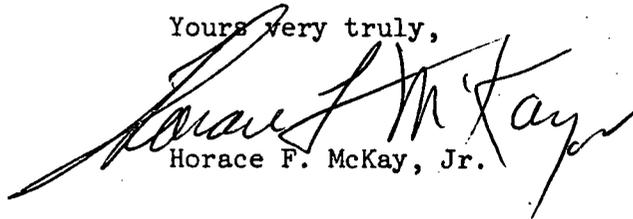
State of New Mexico  
Oil Conservation Division  
Sullivan 3J(3A) and Sullivan 3 Wells

page 2

I believe that in order to effectively and efficiently recover the additional reserves, it is necessary to produce the Sullivan 3J (3A) and therefore the infill well was necessary.

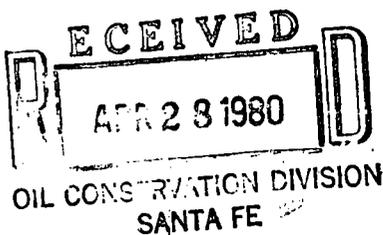
Rule 10. I certify that all offset operators have been notified that an infill finding is being sought.

Yours very truly,



Horace F. McKay, Jr.

HFMCK:mm  
Encls.



29N 10W  
DATUM: PC (ON SP)

20

Fm P  
+3724  
D

F  
+3767  
PC

P +3756

FP  
+3762

D +3743

SULLIVAN 3J.  
FP  
+3738

FP  
+3753

1 PINKSTAFF  
Kfm OIL  
+3748  
P  
SULLIVAN 3.

29

D  
+3770

FP  
+3736

D +3757  
P +3762

P

P

D  
FP

D +3828  
+3830

32

P

FP D

F P

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OIL CONSERVATION DIVISION  
SANTA FE

NE 1/4 CO OIL CONSERVATION COMMISSIC  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

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

Operator <b>Horace F. McKay, Jr.</b>		Lease <b>Sullivan</b>		Well No. <b>3-A</b>	
Well Letter <b>A</b>	Section <b>29</b>	Township <b>29 North</b>	Range <b>10 West</b>	County <b>San Juan</b>	

Actual Footage Location of Well:  
**990** feet from the **North** line and **1050** feet from the **East** line  
 Ground Level Elev. **5502'**  
 Producing Formation **Fruitland-Pictured Cliffs**  
 Pool **Aztec Fruitland ex f**  
**Aztec Pictured Cliffs**  
 Dedicated Acreage: **160** Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

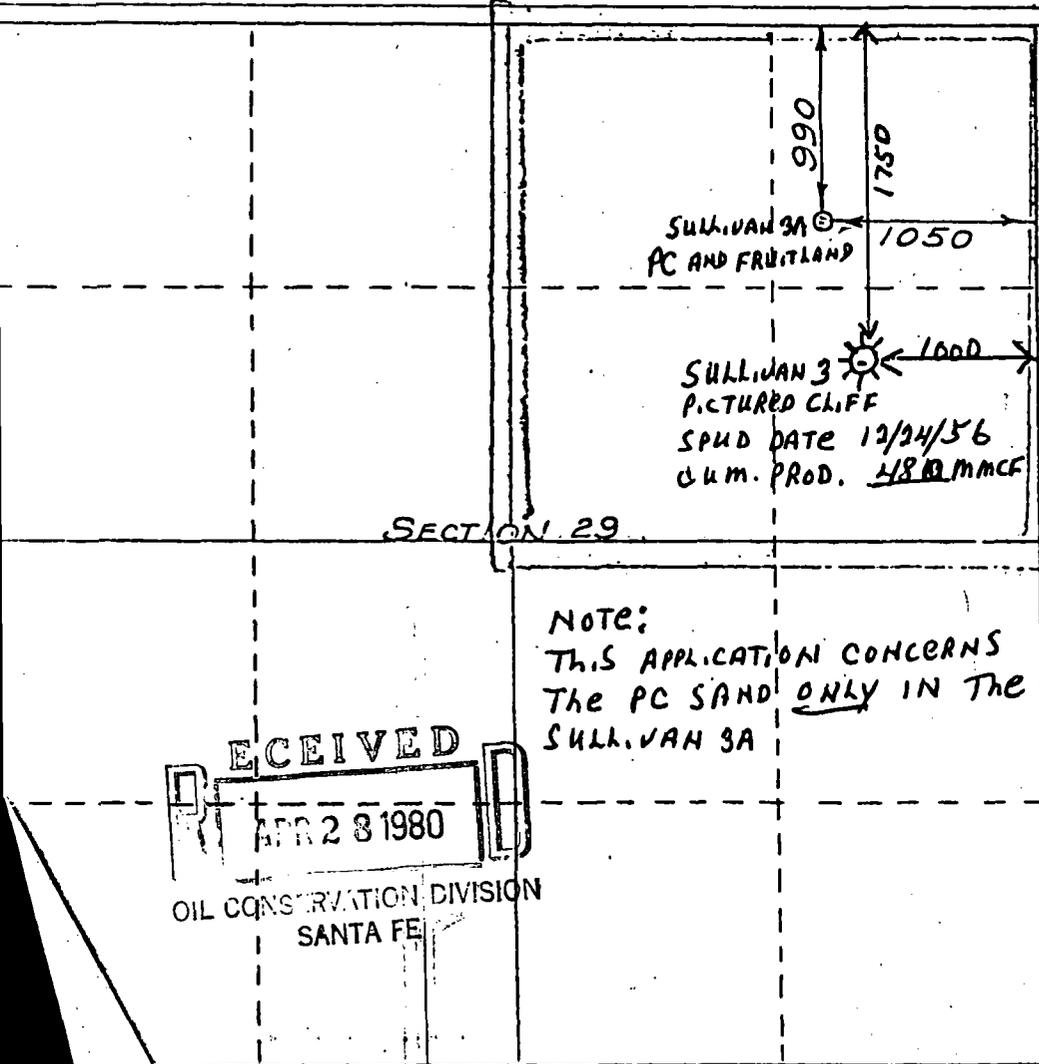
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

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

*Claude C. Kennedy*  
 Name **Claude C. Kennedy**

Position **Agent**

Company **Horace F. McKay, Jr.**

Date **Nov. 6, 1978**

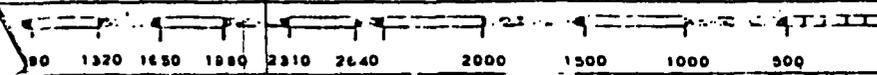
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed **NOV 23 1978**

Register: **1500**  
 and/or Licensed Surveyor

*Russell H. Peace*  
 Certificate No. **1500**

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OPERATOR	1

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease STATE <input type="checkbox"/> FEDERAL <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.
7. Unit Agreement Name
8. Farm or Lease Name Sullivan
9. Well No. 3-A
10. Field and Pool or Wildcat Aztec Fruitland ext Aztec Pictured Cliffs
12. County San Juan

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>
2. Name of Operator Horace F. McKay, Jr.
3. Address of Operator P.O. Box 14738 Albuquerque, New Mexico 87111
4. Location of Well UNIT LETTER A LOCATED 990 FEET FROM THE North LINE AND 1050 FEET FROM THE East LINE OF SEC. 29 TWP. 29N REC. 10W NMPM
19. Proposed Depth 1900'
19A. Formation Pictured Cliffs
20. Rotary or C.T. Rotary
21. Elevations (Show whether DF, RT, etc.) 5502 Gr.
21A. Kind & Status Plug. Bond Blanket
21B. Drilling Contractor Wilson
22. Approx. Date Work will start 11-3-1978

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
10-3/4	7	24	86	100	Circ
6-1/4	4 1/2	9.5	1900	200	Circ

Drill, case, frac, and prepare well for commingle production and pipeline connection.

It is understood by the operator that a hearing and approved order from N.M.O.C.C. to authorize commingled production will be required prior to first delivery.

UNIT GAS PRODUCTION is dedicated to EPNG.

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FOR INFORMATION  
DRILLING COMMENCED

EXPIRES 2-5-79

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Stanley C. Kennedy Title Agent Date 11-6-1978

APPROVED BY Frank S. Day TITLE DEPUTY OIL & GAS INSPECTOR, DIV. #3 DATE NOV 7 1978

CONDITIONS OF APPROVAL, IF ANY:

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NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease  
State  Fee

5. State Oil & Gas Lease No.

a. TYPE OF WELL  
OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_

b. TYPE OF COMPLETION  
NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF. RESRV.  OTHER \_\_\_\_\_

7. Unit Agreement Name

8. Farm or Lease Name  
Sullivan

9. Well No.  
3-A

1. Name of Operator  
Horace F. McKay, Jr.

2. Address of Operator  
P.O. Box 14738  
Albuquerque, New Mexico 87111

3. Location of Well

10. Field and Pool, or Wildcat  
Aztec Fruitland  
Aztec Pictured Cliffs

4. NEIT LETTER A LOCATED 990 FEET FROM THE North LINE AND 1050 FEET FROM East LINE OF SEC. 29 TWP. 29N RGE. 11W NMPM

11. Section, Township, Range, Meridian

12. County  
San Juan

15. Date Spudded 11-3-78 16. Date T.D. Reached 11-9-78 17. Date Compl. (Ready to Prod.) 12-21-1978 18. Elevations (DF, RKB, RT, GR, etc.) 5492 Gr 19. Elev. Casinghead 5491

20. Total Depth 1900 21. Plug Back T.D. 1850 22. If Multiple Compl., How Many 2 23. Intervals Drilled By Rotary Tools 0-1900 Cable Tools \_\_\_\_\_

24. Producing Interval(s), of this completion - Top, Bottom, Name  
1564-1582 Fruitland  
1766-1806 Pictured Cliffs

25. Was Directional Survey Made  
Yes

26. Type Electric and Other Logs Run  
IES - Density

27. Was Well Cored  
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
7	20	86	11	100 SX	None
4 1/2	10.5	1891	6 3/4	300 SX	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

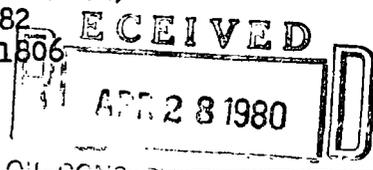
30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-3/8	1693	Packer "Loc Set" 1693-98

31. Perforation Record (Interval, size and number)  
2 SPF (.40) 1504-82  
1 SPF (.32) 1766-1806

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
<u>1504-82</u>	6700 water, 26,000 sand, 200,000 SCR/lr2
<u>1766-1806</u>	16,000 water, 46,000 sand, 288,800 SCR/lr2



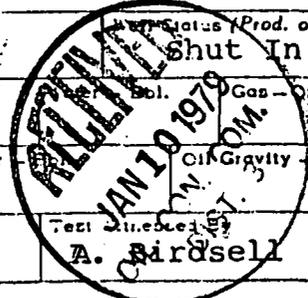
33. Date First Production 12-21-78 Production Method Flowing Status (Prod. or Shut-in) Shut In

Date of Test 1-5-79 Hours Tested 3 hrs. Choke Size 3/4 Prod'n. For Test Period 1401 Oil - Bbl. 1401 Gas - MCF 1401 Water \_\_\_\_\_

Flow Tubing Press. Dual SICP Casing Pressure 26, 7 da Calculated 24-Hour Rate 1401 Oil - Bbl. 1401 Gas - MCF 1401 Water \_\_\_\_\_

34. Disposition of Gas (Sold, used for fuel, vented, etc.)  
PICTURED CLIFFS ZONE 1766-1806

35. List of Attachments



I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED David S. Kennedy TITLE Agent DATE 1-8-79



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

JERRY APODACA  
GOVERNOR

NICK FRANKLIN  
SECRETARY

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

January 30, 1979

Horace F. McKay, Jr.  
P. O. Box 14738  
Albuquerque, New Mexico 87111

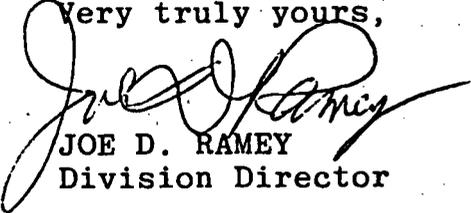
Re: Administrative Order No. ~~MC-2502~~ 2514

Dear Sir:

Enclosed herewith please find Administrative Order No. MC-2502 for the following described well:

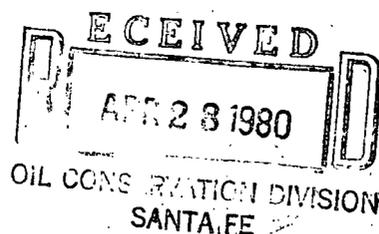
Sullivan Well No. 3-A  
located in Unit A, Section  
29, Township 29 North,  
Range 10 West, NMPM, San  
Juan County, New Mexico.

Very truly yours,

  
JOE D. RAMEY  
Division Director

JDR/CU/og

cc: Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, New Mexico



ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 112-A, Horace F. McKay, Jr. made application to the New Mexico Oil Conservation Division on January 10, 1979, for permission to dually complete his Sullivan Well No. 3A located in Unit A of Section 29, Township 29 North, Range 10 West, NMPM, San Juan County, New Mexico, in such a manner as to permit production of gas from the Fruitland formation adjacent to the Aztec-Fruitland Pool and from the Aztec-Pictured Cliffs Pool.

NOW, on this 30th day of January, 1979, the Division Director finds:

- (1) That application has been filed under the provisions of Rule 112-A of the Division's Rules and Regulations;
- (2) That satisfactory information has been provided that all operators of offset acreage have been duly notified; and
- (3) That no objections have been received within the waiting period as prescribed by said rule.
- (4) That the proposed dual completion will not cause waste nor impair correlative rights.
- (5) That the mechanics of the proposed dual completion are feasible and consonant with good conservation practices.

IT IS THEREFORE ORDERED:

That the applicant herein, Horace F. McKay, Jr., be and the same is hereby authorized to dually complete its Sullivan Well No. 3A located in Unit A of Section 20, Township 29 North, Range 10 West, NMPM, San Juan County, New Mexico, in such a manner as to permit production of gas from the Fruitland formation adjacent to the Aztec-Fruitland Pool and from the Aztec-Pictured Cliffs Pool through the casing-tubing annulus and the tubing respectively.

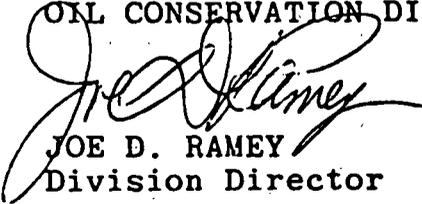
PROVIDED HOWEVER, That applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A.

PROVIDED FURTHER, That applicant shall take packer-leakage tests upon completion and annually thereafter.

IT IS FURTHER ORDERED: That jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY  
Division Director

SEAL

PC  
Old Price

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OIL CONSERVATION DIVISION  
SANTA FE

*Horace F. McHenry, Jr.*  
*P. O. Box 14738*  
*5900 Tramway Blvd. N.E.*  
*Albuquerque, New Mexico 87111*

April 24, 1980

State of New Mexico  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Sullivan 3J (3A) Well  
Sullivan 3  
T-29N, R-10W, Section 29  
San Juan County, New Mexico

Gentlemen:

In accordance with the Special Rules and Regulations, NGPA Infill Findings, Administrative Procedures (amended February 8, 1980), the following information is submitted for your review.

- Rule 5. C-101 and C-102 enclosed.  
Rule 6. The well was drilled into the Aztec Pictured Cliff Pool and the standard spacing unit size is 160 acres.  
Rule 7. N/A  
Rule 8. Description of all wells drilled on Proration Unit.

	<u>Sullivan 3J (3A)</u>	<u>Sullivan 3</u>
Name - Location	see C-102	see C-102
Spud Date	11/3/78	12/24/56
Completion Date	11/21/78	1/13/57
Mechanical Problems	None	None
Current Production	400 mcf a day	16 mcf a day

I believe it is evident that the Sullivan # 3 well is not capable of effectively and efficiently draining the Proration Unit. The Sullivan # 3 was completed 23 years ago. It was an open-hole completion with a very small frac job. As you can see, production has declined to almost nothing (18 mcf a day) and the Sullivan 3J (3A) production is holding very strong at about 400 mcf a day after about one year of production.

Rule 9.(a) A formation structure map is included.

It is estimated that the Sullivan 3J (3A) will recover an additional 500 mmcf of reserves. The Sullivan 3 has recovered about 450 mmcf. There are several Pictured Cliff wells in the near vicinity which have produced more than a billion cubic feet. By using an average 40 ft. thickness of the sand and an average porosity of 15% and plugging these figures into a long formula for determining reserves, I came up with reserves of about one billion cubic feet of gas.

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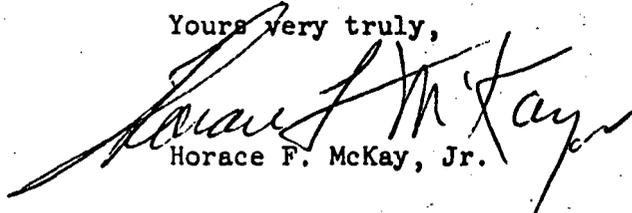
State of New Mexico  
Oil Conservation Division  
Sullivan 3J(3A) and Sullivan 3 Wells

page 2

I believe that in order to effectively and efficiently recover the additional reserves, it is necessary to produce the Sullivan 3J (3A) and therefore the infill well was necessary.

Rule 10. I certify that all offset operators have been notified that an infill finding is being sought.

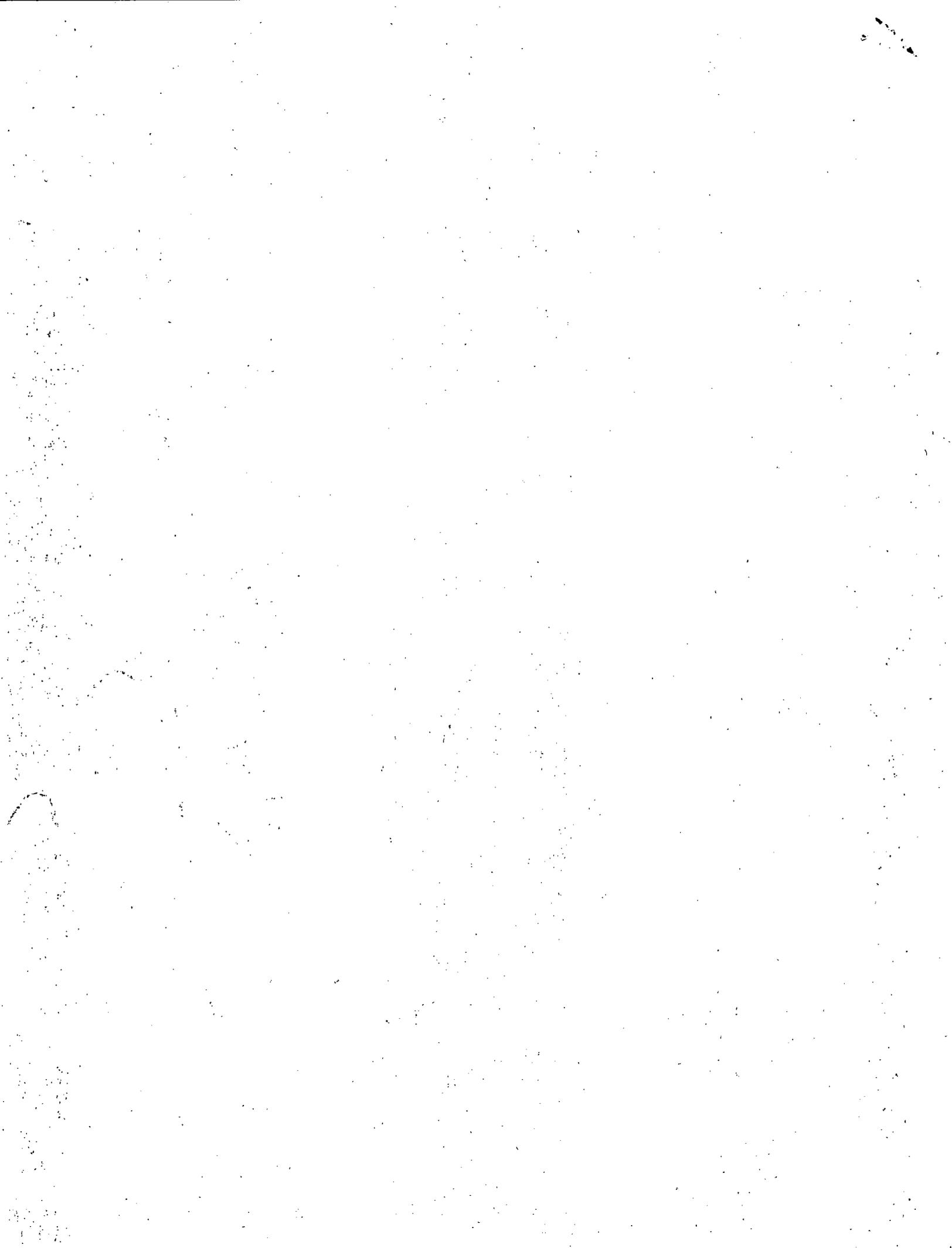
Yours very truly,



Horace F. McKay, Jr.

HFMCK:mm  
Encls.

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SANTA FE



29N 10W  
DATUM: PC (ON SP)

20

Fm P +3724  
D

F +3767  
PC

P +3756

FP +3762

D +3743

FP +3753

SULLIVAN 3J.  
FP +3738

I PINKSTAFF  
KIM OIL +3748  
SULLIVAN 3

29

D +3770

FP +3736

D +3757  
P +3762

P  
D +3828

+3830

P

D  
FP

32

P

FP D

F P

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NE 10 OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

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

Operator <b>Horace F. McKay, Jr.</b>	Lease <b>Sullivan</b>	Well No. <b>3-A</b>
---	--------------------------	------------------------

Well Letter <b>A</b>	Section <b>29</b>	Township <b>29 North</b>	Range <b>10 West</b>	County <b>San Juan</b>
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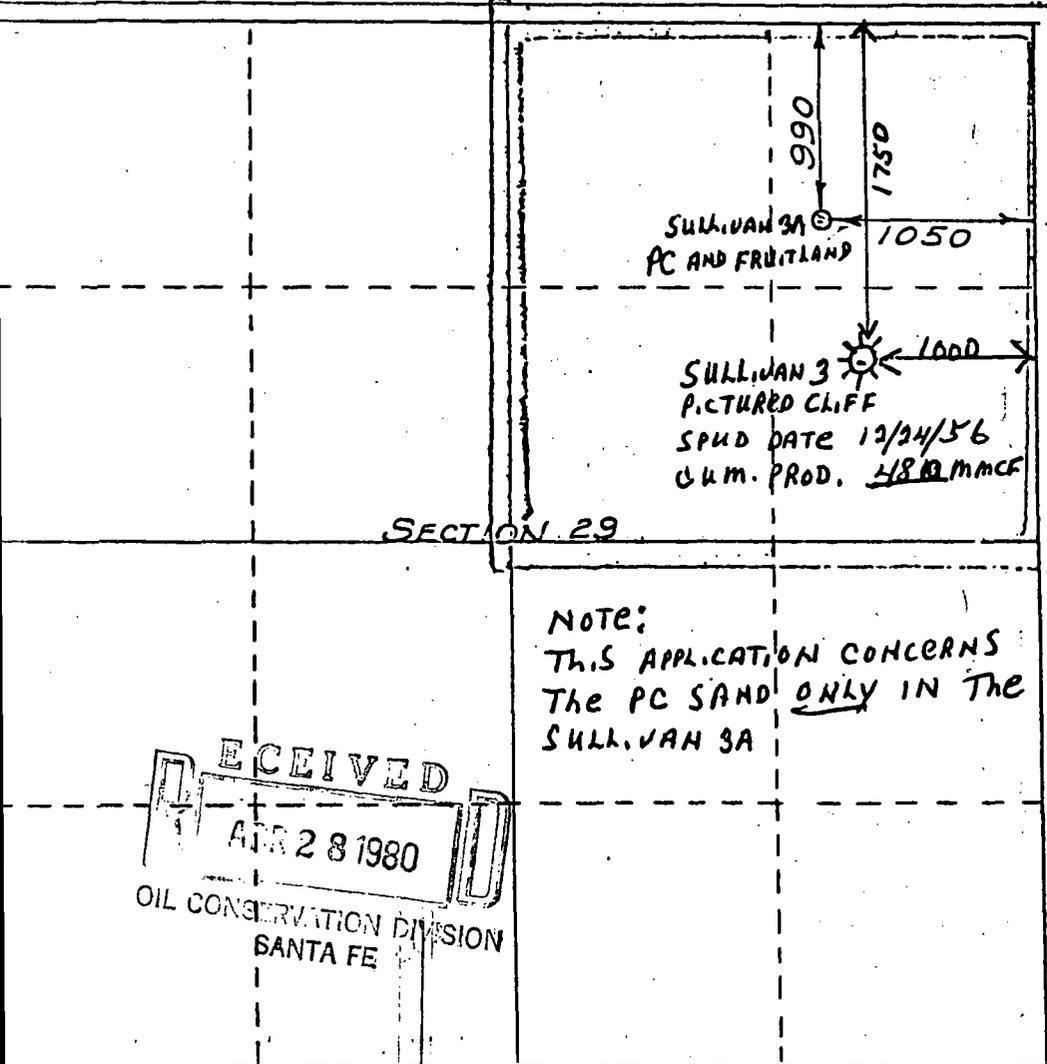
Actual Footage Location of Wells: <b>990</b> feet from the <b>North</b> line and <b>1050</b> feet from the <b>East</b> line	Producing Formation <b>Fruitland-Pictured Cliffs</b>	Pool <b>Aztec Fruitland Ext + Aztec Pictured Cliffs</b>	Dedicated Acreage: <b>160</b> Acres
--	---	--	--

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?
 

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

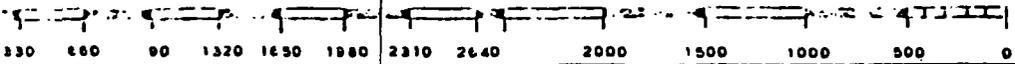
If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



<b>CERTIFICATION</b>	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
Name	<i>Claude C. Kennedy</i> Claude C. Kennedy
Position	Agent
Company	Horace F. McKay, Jr.
Date	Nov. 6, 1978
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.	
Date Survey	<i>Nov 31 1978</i>
Register:	<i>1500</i>
Certificate No.	1500

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Form C-101  
Revised 1-1-65

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

b. Type of Well  
 DRILL  DEEPEN  PLUG BACK   
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. Name of Operator

Horace F. McKay, Jr.

3. Address of Operator

P.O. Box 14738  
Albuquerque, New Mexico 87111

4. Location of Well

UNIT LETTER A LOCATED 990 FEET FROM THE North LINE  
1050 FEET FROM THE East LINE OF SEC. 29 TWP. 29N RGE. 10W HMPM

5A. Indicate Type of Lease  
 STATE  FEE

5. State Oil & Gas Lease No.

7. Unit Agreement Name

8. Farm or Lease Name  
Sullivan

9. Well No.

3-A

10. Field and Pool or Wildcat  
Aztec Fruitland ext  
Aztec Pictured Cliffs

12. County:  
San Juan

19. Proposed Depth 1900' 19A. Formation Pictured Cliffs 20. Rotary or C.T. Rotary

21. Elevations (Show whether DF, RT, etc.) 5502 Gr. 21A. Kind & Status Plug. Bond Blanket 21B. Drilling Contractor Wilson 22. Approx. Date Work will start 11-3-1978

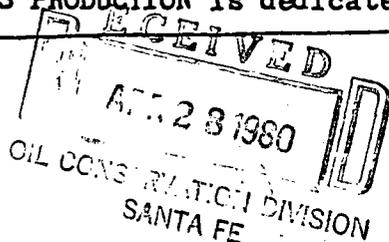
23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
10-3/4	7	24	86	100	Circ
6-1/4	4 1/2	9.5	1900	200	Circ

Drill, case, frac, and prepare well for commingle production and pipeline connection.

It is understood by the operator that a hearing and approved order from N.M.O.C.C. to authorize commingled production will be required prior to first delivery.

UNIT GAS PRODUCTION is dedicated to EPNG.



FOR THE STATE OF NEW MEXICO  
DRILLING COMMISSION

EXPIRES 2-5-79

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Stanley C. Kennedy Title Agent Date 11-6-1978

(This space for State Use)

APPROVED BY Frank S. Gray TITLE DEPUTY OIL & GAS INSPECTOR, DIV. #3 DATE NOV 7 1978

CONDITIONS OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED	5
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SANTA FE FILE	1
U.S.G.S.	2
LAND OFFICE	
OPERATOR	1

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease  
State  Fee   
5. State Oil & Gas Lease No.

a. TYPE OF WELL  
OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_  
b. TYPE OF COMPLETION  
NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF. RESVR.  OTHER \_\_\_\_\_

7. Unit Agreement Name

8. Farm or Lease Name  
Sullivan

9. Well No.  
3-A

1. Name of Operator  
Horace F. McKay, Jr.  
2. Address of Operator  
P.O. Box 14738  
Albuquerque, New Mexico 87111

10. Field and Pool, or Wildcat  
Aztec Fruitland  
Aztec Pictured Cliffs

3. Location of Well  
4. NEIT LETTER A LOCATED 990 FEET FROM THE North LINE AND 1050 FEET FROM



5. East LINE OF SEC. 29 TWP. 29N RGE. 11W NMPM

12. County  
San Juan

6. Date Spudded 11-3-78  
16. Date T.D. Reached 11-9-78  
17. Date Compl. (Ready to Prod.) 12-21-1978

18. Elevations (UF, RKB, RT, GR, etc.) 5492 Gr  
19. Elev. Casinghead 5491

20. Total Depth 1900  
21. Plug Back T.D. 1850  
22. If Multiple Compl., How Many 2

23. Intervals Drilled By  
24. Rotary Tools 0-1900  
25. Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name  
1564-1582 Fruitland  
1766-1806 Pictured Cliffs

25. Was Directional Survey Made  
Yes

26. Type Electric and Other Logs Run  
IES - Density

27. Was Well Cared  
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
7	20	86	11	100 SX	None
4 1/2	10.5	1891	6 3/4	300 SX	None

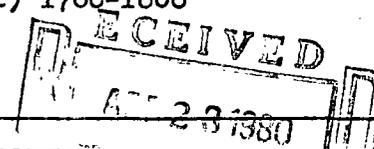
29. LINER RECORD (Left) and TUBING RECORD (Right)

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-3/8	1693	Eaker "Loc Set" 1693-98

31. Perforation Record (Interval, size and number)  
2 SPF (.40) 1564-82  
1 SPF (.32) 1766-1806

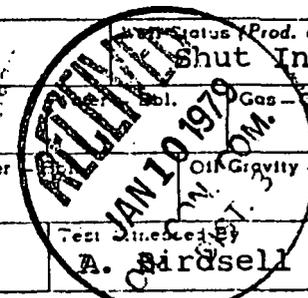
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
1504-82	6700 water, 26,000 sand 200,000 SCF/1:2
1766-1806	16,000 water, 46,000 sand, 288,600 SCF/1:2



33. PRODUCTION

33. Date First Production 12-21-78  
Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing  
Date of Test 1-5-79  
Hours Tested 3 hrs.  
Casing Size 3/4  
Prod'n. For Test Period  
Oil - Ebl. 1401  
Gas - MCF 1401  
Water  
Oil Gravity - API (Corr.)  
Gas - Oil Ratio



34. Disposition of Gas (Sold, used for fuel, vented, etc.)  
PICTURED CLIFFS ZONE 1766-1806  
Test Directed by A. Birdsall

35. List of Attachments

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED Robert A. Kennedy TITLE Agent DATE 1-8-79

THE APPLICATION OF HORACE F. MCKAY, JR.  
FOR A DUAL COMPLETION

9674  
2504  
ORDER NO. MC-2502  
MC-2574

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 112-A, Horace F. McKay, Jr. made application to the New Mexico Oil Conservation Division on January 10, 1979, for permission to dually complete his Sullivan Well No. 3A located in Unit A of Section 29, Township 29 North, Range 10 West, NMPM, San Juan County, New Mexico, in such a manner as to permit production of gas from the Fruitland formation adjacent to the Aztec-Fruitland Pool and from the Aztec-Pictured Cliffs Pool.

NOW, on this 30th day of January, 1979, the Division Director finds:

- (1) That application has been filed under the provisions of Rule 112-A of the Division's Rules and Regulations;
- (2) That satisfactory information has been provided that all operators of offset acreage have been duly notified; and
- (3) That no objections have been received within the waiting period as prescribed by said rule.
- (4) That the proposed dual completion will not cause waste nor impair correlative rights.
- (5) That the mechanics of the proposed dual completion are feasible and consonant with good conservation practices.

IT IS THEREFORE ORDERED:

That the applicant herein, Horace F. McKay, Jr., be and the same is hereby authorized to dually complete its Sullivan Well No. 3A located in Unit A of Section 20, Township 29 North, Range 10 West, NMPM, San Juan County, New Mexico, in such a manner as to permit production of gas from the Fruitland formation adjacent to the Aztec-Fruitland Pool and from the Aztec-Pictured Cliffs Pool through the casing-tubing annulus and the tubing respectively.

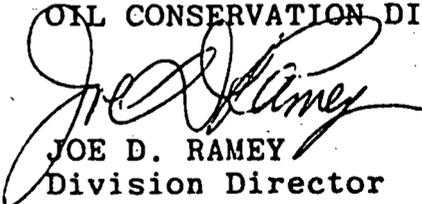
PROVIDED HOWEVER, That applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A.

PROVIDED FURTHER, That applicant shall take packer-leakage tests upon completion and annually thereafter.

IT IS FURTHER ORDERED: That jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY  
Division Director

PC  
old Price  
SEAL

RECEIVED  
APR 28 1980  
OIL CONSERVATION DIVISION  
SANTA FE



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

JERRY APODACA  
GOVERNOR

NICK FRANKLIN  
SECRETARY

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

January 30, 1979

Horace F. McKay, Jr.  
P. O. Box 14738  
Albuquerque, New Mexico 87111

2514

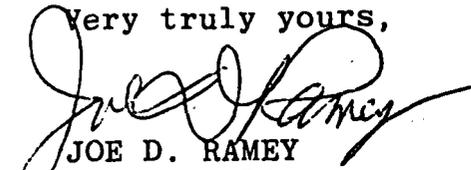
Re: Administrative Order No. ~~MC-2502~~

Dear Sir:

Enclosed herewith please find Administrative Order No. MC-2502 for the following described well:

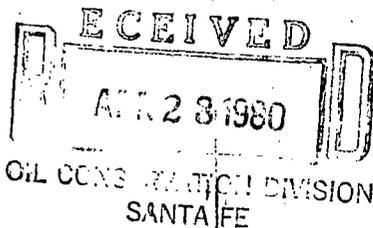
Sullivan Well No. 3-A  
located in Unit A, Section  
29, Township 29 North,  
Range 10 West, NMPM, San  
Juan County, New Mexico.

Very truly yours,

  
JOE D. RAMEY  
Division Director

JDR/CU/og

cc: Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, New Mexico



256-0070  
296-5504

Horace F. McKay, Jr.  
P. O. Box 14738  
5900 Tramway Blvd., N.E.  
Albuquerque, New Mexico 87111

Dick

May 21, 1980

Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Sullivan # 3A - Aztec Pictured Cliff  
Section 29, Twp. 29N, R. 11W  
San Juan County, New Mexico  
Application for NGPA Infill Well.

Gentlemen:

In response to your letter of April 30, 1980, the following information is submitted.

In determining the reserves, the following formula and factors were used:

$$N = H \times \phi \times (1-CW) \times \frac{T}{T_1} \times \frac{P_1}{P_2} \times (RF \times \text{No. acre feet})$$

- N = Gas in place
- $\phi$  = Porosity
- CW = (1-CW) connate water
- T = Temp. corrected to ranging 60°
- T<sub>1</sub> = Formation temperature
- P<sub>1</sub> = Formation pressure
- P<sub>2</sub> = Pressure base used
- H = Number of feet in acres
- RF = Recovery factor

RECEIVED  
MAY 26 1980  
OIL CONSERVATION DIVISION  
SANTA FE

$$43,560 \times .15 \times .60 \times \frac{60}{60} \times \frac{600}{14.73} \times .90 \times 6400 = 919,808,000 \text{ Cu. Ft. of gas}$$

It is our opinion and the opinion of two other engineers familiar with the San Juan Basin that a workover of the Sullivan 3 would neither be feasible nor economical. The Sullivan 3 is a 23-year old open-hole completion. It would be necessary to deepen the well, re-log, run a liner, cement and selectively perforate. The present casing would not stand any kind of frac at all. There is a very high probability that we would lose what permeability and porosity we have in the formation when the liner is cemented in place. The risk of damaging the formation and loss of what production we have is too great to consider a program of this sort.

It is our opinion that in this particular case a new well, The Sullivan 3A, is necessary to effectively and efficiently drain the proration unit. By utilizing modern completion techniques in the Sullivan 3A, additional reserves will be

Called 5-27-80  
For statement of what  
these based on  
#39 logs etc.

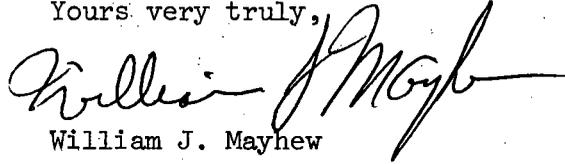
Energy and Minerals Department  
May 20, 1980

-2-

recovered from the proration unit.

I do not have records available that go far enough back to be of any use to come up with a pressure or production decline curve.

Yours very truly,

A handwritten signature in cursive script, appearing to read "William J. Mayhew". The signature is written in dark ink and is positioned above the typed name.

William J. Mayhew

WJM:mm

Handwritten marks or scribbles in the top right corner.

*Horace F. McKay, Jr.*  
*P. O. Box 14738*  
*5900 Tramway Blvd., N.E.*  
*Albuquerque, New Mexico 87111*

May 21, 1980

Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Sullivan # 3A - Aztec Pictured Cliff  
Section 29, Twp. 29N, R. 11W  
San Juan County, New Mexico  
Application for NGPA Infill Well.

Gentlemen:

In response to your letter of April 30, 1980, the following information is submitted.

In determining the reserves, the following formula and factors were used:

$$N = H \times \emptyset \times (1-CW) \times \frac{T}{T_1} \times \frac{P_1}{P_2} \times (RF \times \text{No. acre feet})$$

N = Gas in place

$\emptyset$  = Porosity

CW = (1-CW) connate water

T = Temp. corrected to rancing 60°

T<sub>1</sub> = Formation temperature

P<sub>1</sub> = Formation pressure

P<sub>2</sub> = Pressure base used

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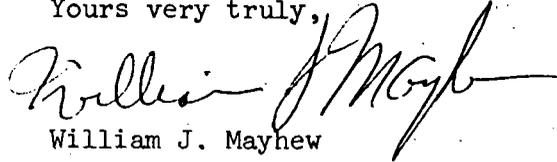
Energy and Minerals Department  
May 20, 1980

-2-

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William J. Mayhew

WJM:mm



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

April 30, 1980

BRUCE KING  
GOVERNOR

LARRY KEHOE  
SECRETARY

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

Horace F. McKay, Jr.  
P. O. Box 14738  
Albuquerque, New Mexico 87111

Re: Application for NGPA Infill Well  
Findings Under Provisions of  
Order No. R-6013 -A, Sullivan Well  
No. 3-A, Sec. 29, T-29-N, R-10-W,  
Aztec-Pictured Cliffs Pool, 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,

R. L. STAMETS  
Technical Support Chief

RLS/dr



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR  
LARRY KEHOE  
SECRETARY

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

*McKay*

Re: Application for NGPA Infill Well  
Findings Under Provisions of  
Order No. R-6013 - *A*, *Sullivan*  
*Well No 3-17 Sec 29-T29 N10 R104*  
*Water - Pictured Cliffs Pool*  
*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,

R. L. STAMETS  
Technical Support Chief

RLS/dr

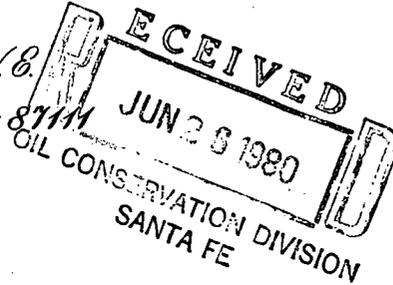
- A copy of Form C-101 must be submitted.
- A copy of Form C-102 must be submitted.
- The pool name must be shown.
- The standard spacing unit size for the pool must be shown.
- Give the Division Order No. which granted the non-standard proration unit.
- Please state whether or not the well has been 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.  
The ~~Factors~~ factors used for determining estimated recovery must be shown (pressure, porosity, saturations, pressure/production decline curve, productive acres). The calculations and formula used should be shown. A pressure/production decline curve would be very helpful if available.

Other:  
There should be an explanation as to why workover of the Sullivan Well No 3 would not be expected to be successful.

*Horace F. McKay, Jr.*  
*P. O. Box 14738*  
*5900 Tramway Blvd., N.E.*  
*Albuquerque, New Mexico 87111*

June 25, 1980



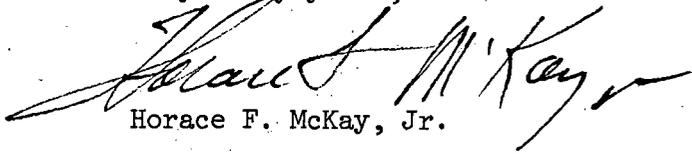
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Sullivan Well No. 3A  
Twp. 29N, Rge 10W, Section 29  
San Juan County, New Mexico  
NGPA INFILL APPLICATION

Gentlemen:

I certify that the information used to determine reserves for the Sullivan 3A proration limit came from the Sullivan 3A Logs and well file.

Very truly yours,

  
Horace F. McKay, Jr.

HFMCK:mm

- A copy of Form C-101 must be submitted.
- 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. The factors used for determining estimated recovery must be shown (pressure, porosity, saturations, curve, productive acres). The calculations and formula used should be shown. A pressured/production decline curve would be very helpful if available.

Other: There should be an explanation as to why workover of the Sullivan Well No. 3 would not be expected to be successful.

OIL CONSERVATION DIVISION  
P. O. Box 2088  
SANTA FE, NEW MEXICO  
87501

*Immediate*

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER  
NFL 19

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

I.  
Operator Horace F. McKay, Jr. Well Name and No. Sullivan Well No 3 A  
Location: Unit H Sec. 29 Twp. 29 N Rng. 10 W Cty. San Juan

II.  
THE DIVISION FINDS:

(1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.

(2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) That the well for which a finding is sought is ~~to be~~ completed in the Artec-Picture  
cliffs Pool, and the standard spacing unit in said pool is 160 acres.

(4) That a 160-acre proration unit comprising the NE 1/4  
of Sec. 29, Twp. 29 N, Rng. 10 W, is currently dedicated to the Horace F. McKay,  
Jr Sullivan Well No 3 located in Unit H of said section.

(5) That this proration unit is  standard ( ) nonstandard; if nonstandard, said unit was previously approved by Order No. \_\_\_\_\_.

(6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.

(7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 500 M MCF of gas from the proration unit which would not otherwise be recovered.

(8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

(9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

DIVISION DIRECTOR \_\_\_\_\_ EXAMINER \_\_\_\_\_