

## 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.

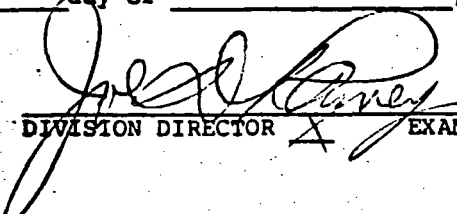
## THE DIVISION FINDS:

- (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.

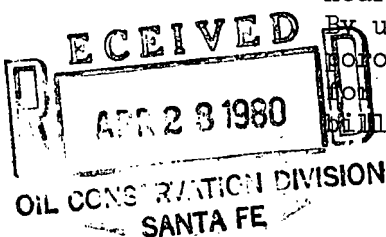
- Rule 5. C-101 and C-102 enclosed.  
Rule 6. The well was drilled into the Aztec Pictured Cliff Pool and the standard spacing unit size is 160 acres.  
Rule 7. N/A  
Rule 8. Description of all wells drilled on Proration Unit.

	<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.



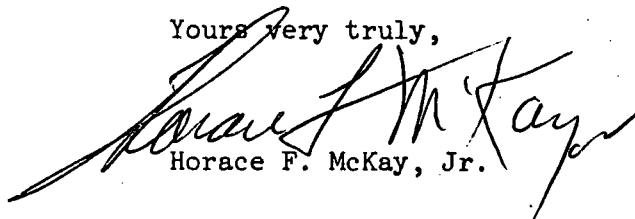
State of New Mexico  
Oil Conservation Division  
Sullivan 3J(3A) and Sullivan 3 Wells

page 2

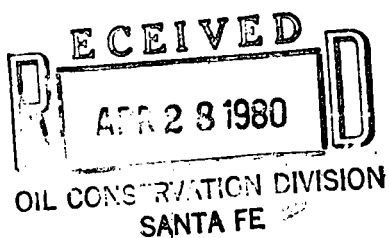
I believe that in order to effectively and efficiently recover the additional reserves, it is necessary to produce the Sullivan 3J (3A) and therefore the infill well was necessary.

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

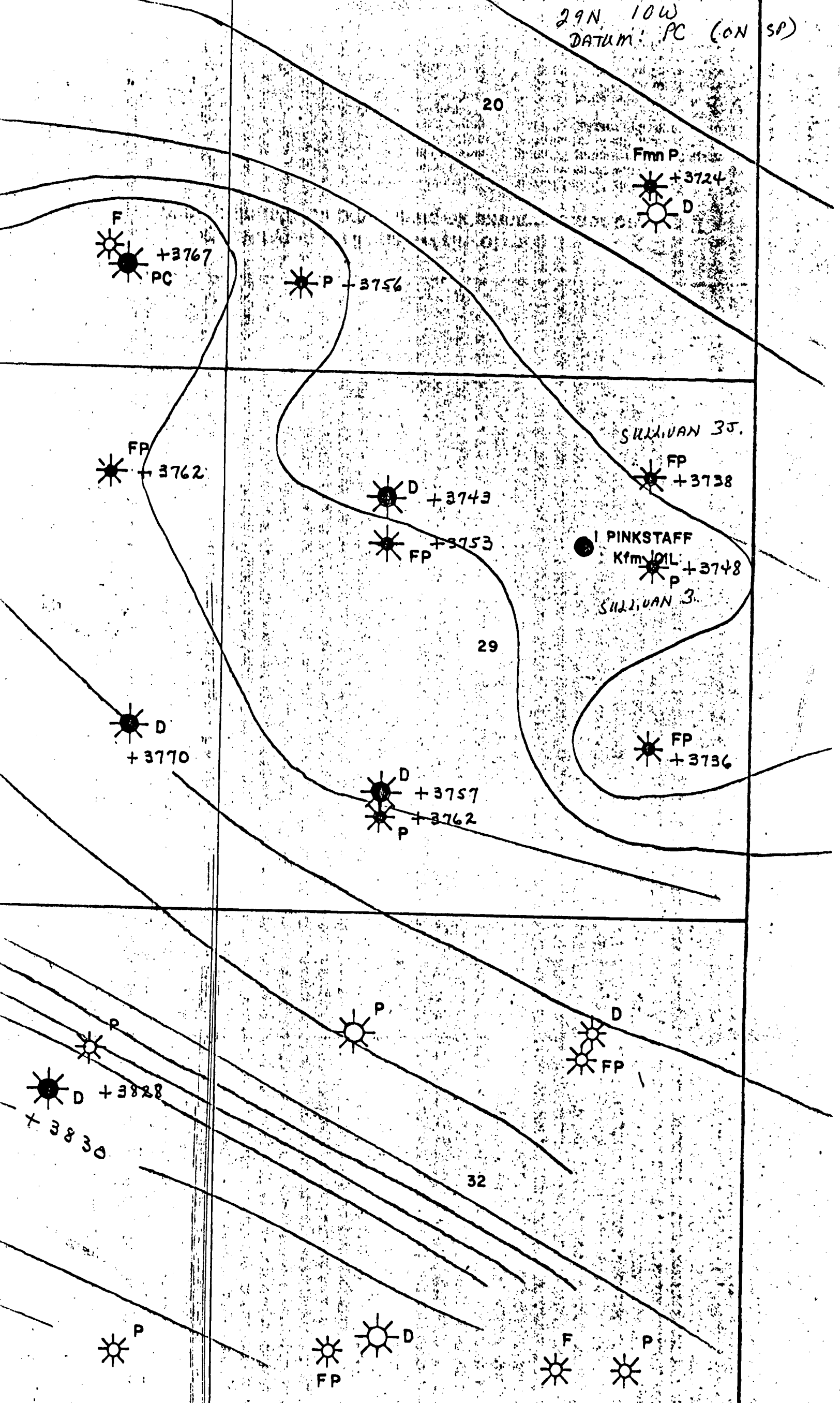
Yours very truly,

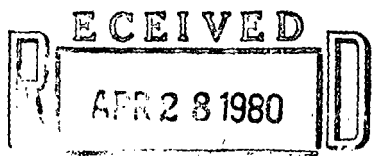
  
Horace F. McKay, Jr.

HFMCK:mm  
Encls.



29N 10W  
DATUM: PC (ON SP)





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.

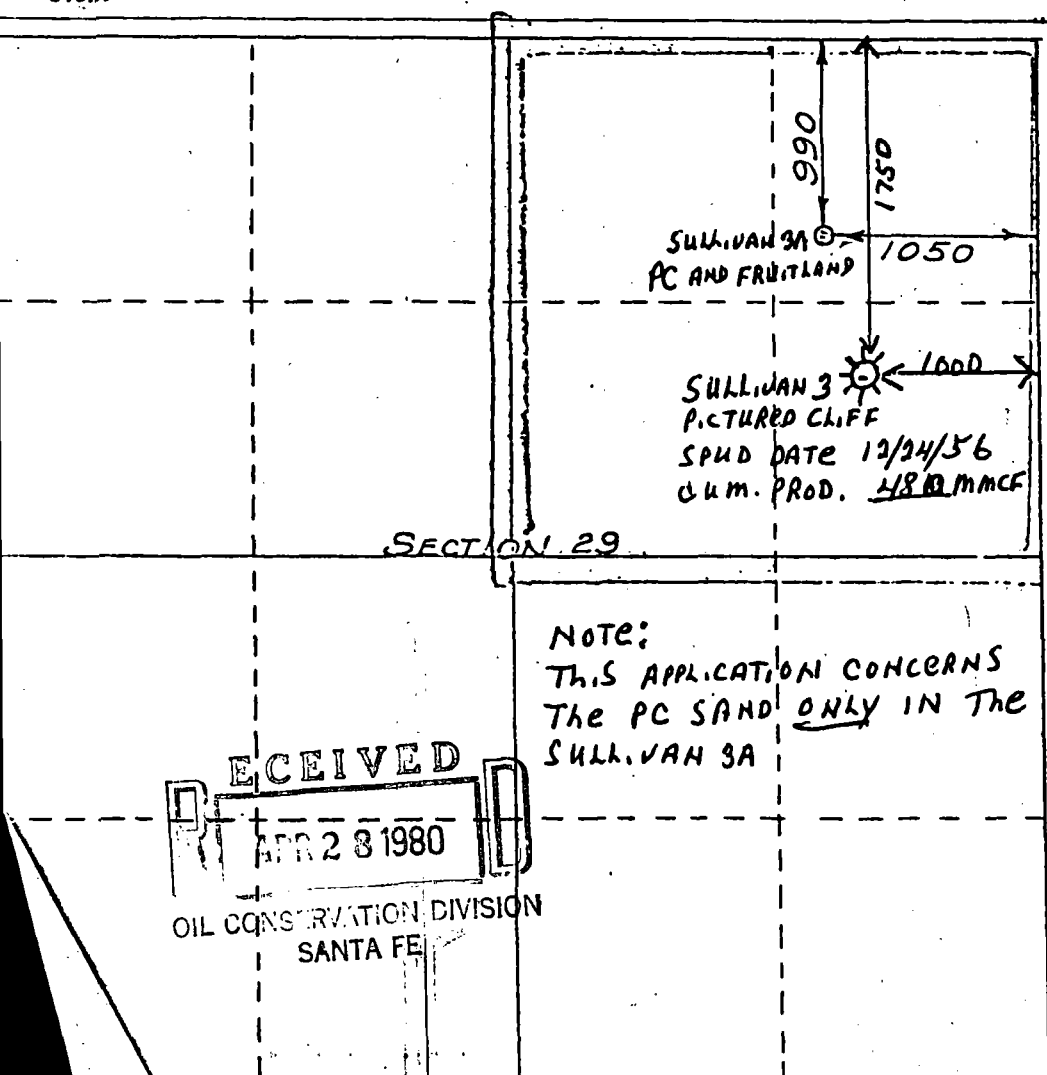
Operator Horace F. McKay, Jr.		Lease Sullivan		Well No. 3-A	
Well Letter A	Section 29	Township 29 North	Range 10 West	County San Juan	
Actual Footage Location of Well: 990 feet from the North line and 1050 feet from the East line					
Ground Level Elev. 5502'	Producing Formation Fruitland-Pictured Cliffs		Pool Aztec Fruitland <del>ex</del> 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.

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 3 1978

Registered  
and/or Licensed Surveyor  
RUSSELL H. HARRIS

Certificate No.  
1500

90 1320 1650 1980 2310 2640 2000 1500 1000 500 0

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

# NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease	
STATE <input type="checkbox"/>	FEE <input checked="" type="checkbox"/>

5. State Oil & Gas Lease No.

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

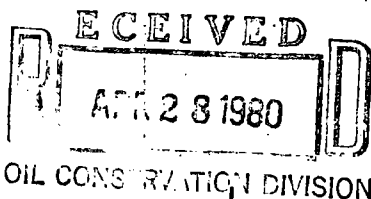
1a. Type of Work		7. Unit Agreement Name	
DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			
1b. Type of Well		8. Farm or Lease Name	
OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		Sullivan -	
2. Name of Operator		9. Well No.	
Horace F. McKay, Jr.		3-A	
3. Address of Operator		10. Field and Pool or Wildcat	
P.O. Box 14738		Aztec Fruitland ext	
Albuquerque, New Mexico 87111		Aztec Pictured Cliffs	
4. Location of Well		12. County	
UNIT LETTER <u>A</u> LOCATED <u>990</u> FEET FROM THE <u>North</u> LINE AND <u>1050</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>29</u> TWP. <u>29N</u> REC. <u>10W</u> NMPM		San Juan	
19. Proposed Depth		19A. Formation	
1900'		Pictured Cliffs	
20. Rotary or C.T.		Rotary	
21. Elevations (Show whether DF, RT, etc.)		21A. Kind & Status Plug. Bond	
5502 Gr.		Blanket	
21B. Drilling Contractor		22. Approx. Date Work will start	
Wilson		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 10...  
DRILLING COMPLETED,

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

(This space for State Use)

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

CONDITIONS OF APPROVAL, IF ANY:

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

Form C-105  
Revised 1-1-85

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

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
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

## c. Name of Operator

Horace F. McKay, Jr.

## d. Address of Operator

P.O. Box 14738

Albuquerque, New Mexico 87111

## e. 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 RGE. 11W NMPM

## 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

## 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	Eaker "Loc Set"
		1693-98

## 31. Perforation Record (Interval, size and number)

2 SPF (.40) 1504-82  
1 SPF (.32) 1766-1806

RECEIVED

APR 28 1980

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
1504-82	6700 water, 26,000 sand
	200,000 SCF/L2
1766-1806	16,000 water, 46,000 sand,
	288,800 SCF/L2

## 33. OIL CONSERVATION DIVISION PRODUCTION

Date First Production		Production Method		Well Status (Prod. or Shut-in)	
12-21-78		Flowing		Shut In	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF
1-5-79	3 hrs.	3/4			1401
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water
Dual SICP	26, 7 da			1401	

## 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

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

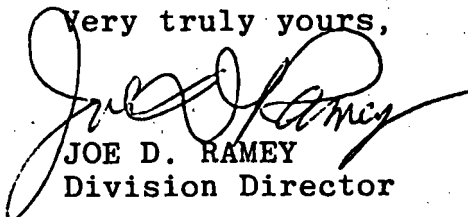
Re: Administrative Order No. ~~MC-2502~~ 2514

Dear Sir:

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

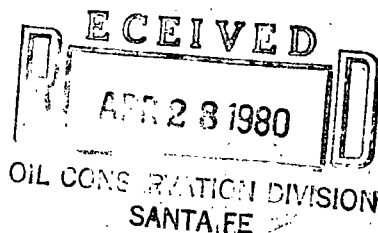
Sullivan Well No. 3-A  
located in Unit A, Section  
29, Township 29 North,  
Range 10 West, NMPM, San  
Juan County, New Mexico.

Very truly yours,

  
JOE D. RAMEY  
Division Director

JDR/CU/og

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



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

ORDER NO. MC-2502  
2514

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.

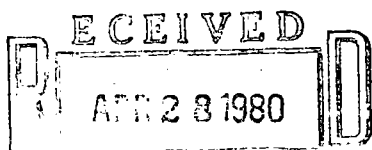
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Joe D. Ramey*  
JOE D. RAMEY  
Division Director

SEAL

*PC*  
*Old Price*



OIL CONSERVATION DIVISION  
SANTA FE

*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.

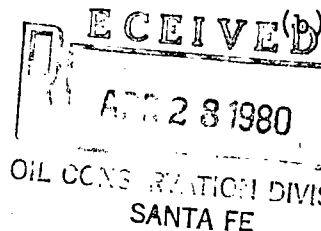
- Rule 5. C-101 and C-102 enclosed.  
Rule 6. The well was drilled into the Aztec Pictured Cliff Pool and the standard spacing unit size is 160 acres.  
Rule 7. N/A  
Rule 8. Description of all wells drilled on Proration Unit.

	<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.

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.



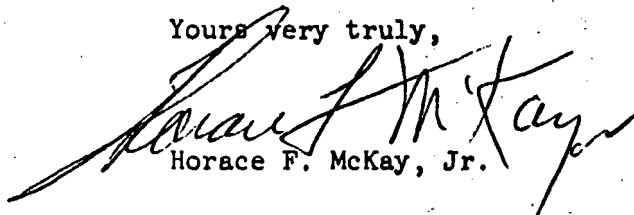
State of New Mexico  
Oil Conservation Division  
Sullivan 3J(3A) and Sullivan 3 Wells

page 2

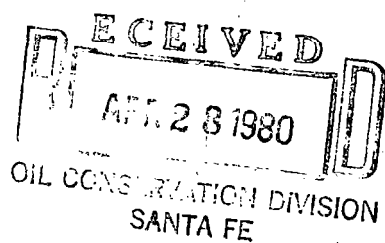
I believe that in order to effectively and efficiently recover the additional reserves, it is necessary to produce the Sullivan 3J (3A) and therefore the infill well was necessary.

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:mmm  
Encls.





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  
Kfm OIL  
P +3748

SULLIVAN 3

D  
+3770

29

D +3757  
P +3762

FP +3736

P

D +3828  
+3830

P

D  
FP

32

P

FP D

F P

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23 1980  
OIL CONSERVATION DIVISION  
SANTA FE



NE 100 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.

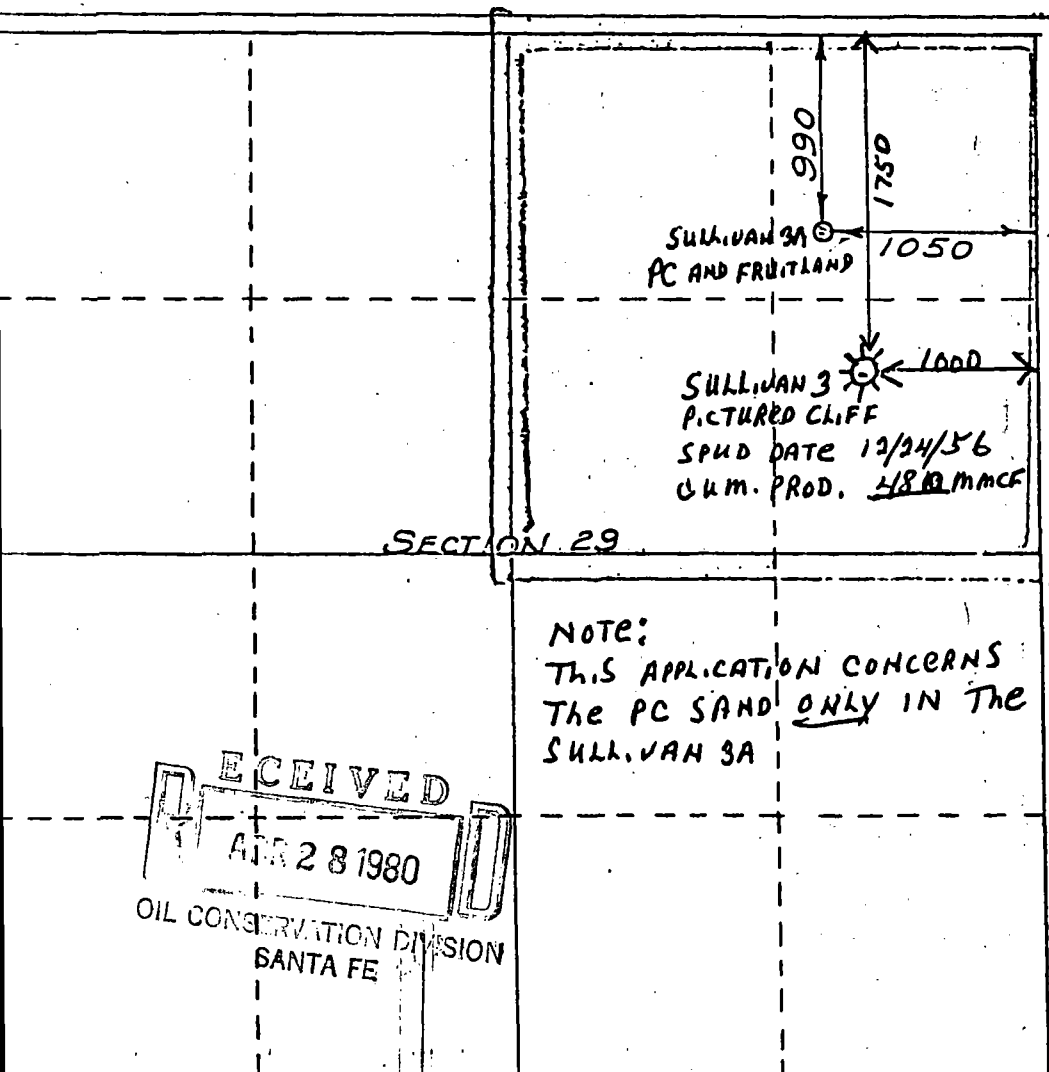
Operator <b>Horace F. McKay, Jr.</b>		Lease <b>Sullivan</b>		Well No. <b>3-A</b>	
Plat Letter <b>A</b>	Section <b>29</b>	Township <b>29 North</b>	Range <b>10 West</b>	County <b>San Juan</b>	
Actual Footage Location of Wells:					
<b>990</b> feet from the <b>North</b> line and		<b>1050</b> feet from the <b>East</b> line			
Ground Level Elev. <b>5502'</b>	Producing Formation <b>Fruitland-Pictured Cliffs</b>	Pool <b>Aztec Fruitland &amp; Aztec Pictured Cliffs</b>	Dedicated Acreage: <b>160</b> 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.

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 31 1978**

Register  
**1500**

Certificate No.  
**1500**

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APR 28 1980  
OIL CONSERVATION DIVISION  
SANTA FE

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SANTA FE	1
FILE	1
U.S.G.S.	2
LAND OFFICE	
OPERATOR	1

# NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease	
STATE <input type="checkbox"/>	FEE <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			
b. Type of Well		8. Farm or Lease Name	
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"/>		Sullivan	
2. Name of Operator		9. Well No.	
Horace F. McKay, Jr.		3-A	
3. Address of Operator		10. Field and Pool or Wildcat	
P.O. Box 14738		Aztec Fruitland ext	
Albuquerque, New Mexico 87111		Aztec Pictured Cliffs	
4. Location of Well		12. County	
UNIT LETTER <u>A</u> LOCATED <u>990</u> FEET FROM THE <u>North</u> LINE AND <u>1050</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>29</u> TWP. <u>29N</u> RGE. <u>10W</u> NMPM		San Juan	
21. Elevations (Show whether DF, RT, etc.)		19. Proposed Depth	19A. Formation
5502 Gr.		1900'	Pictured Cliffs
21A. Kind & Status Plug. Bond	21B. Drilling Contractor	20. Rotary or C.T.	
Blanket	Wilson	Rotary	
22. Approx. Date Work will start			
11-3-1978			

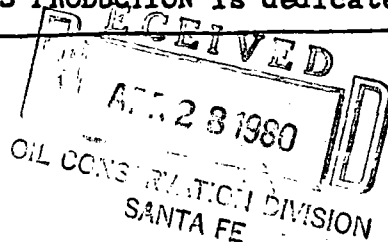
## PROPOSED CASING AND CEMENT PROGRAM

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.



FOR 10 DAYS  
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.

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. Ray TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE NOV 7 1978

CONDITIONS OF APPROVAL, IF ANY:

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

Form C-105  
Revised 1-1-65

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

5a. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

a. TYPE OF WELL	OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____	7. Unit Agreement Name
b. TYPE OF COMPLETION	NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____	8. Farm or Lease Name Sullivan
c. Name of Operator	Horace F. McKay, Jr.	9. Well No. 3-A
d. Address of Operator	P.O. Box 14738 Albuquerque, New Mexico 87111	10. Field and Pool, or Wildcat Aztec Fruitland Aztec Pictured Cliffs
e. Location of Well	North 1050	
f. NEAR LETTER A LOCATED 990 FEET FROM THE LINE AND 1050 FEET FROM		12. County San Juan
g. 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	

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

LINER RECORD					TUBING RECORD		
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 1564-82 1766-1806 AMOUNT AND KIND MATERIAL USED 6700 water, 26,000 sand 200,000 SCF/l.2 16,000 water, 46,000 sand, 288,800 SCF/l.2
--	--

33. Date First Production 12-21-78	34. Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing	35. Well Status (Prod. or Shut-in) Shut In
Date of Test 1-5-79	Hours Tested 3 hrs.	Choke Size 3/4
Flow Tubing Press. Dual SICP 426, 7 da	Casing Pressure	Calculated 24-Hour Rate
Oil - Bbl. 1401	Gas - MCF 1401	Water
Oil - Bbl.	Gas - MCF	Water
Oil Gravity - API (Corr.)		

36. Disposition of Gas (Sold, used for fuel, vented, etc.) PICTURED CLIFFS ZONE 1766-1806	37. Test Conducted By A. Birdsell
38. 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 Harold 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*  
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

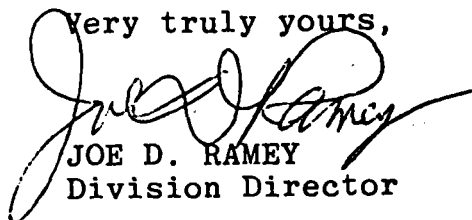
Re: Administrative Order No. ~~MC-2502~~

Dear Sir:

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

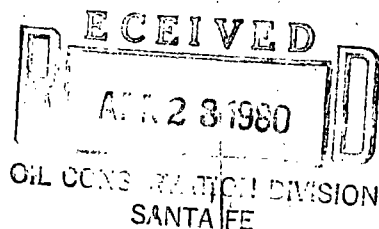
Sullivan Well No. 3-A  
located in Unit A, Section  
29, Township 29 North,  
Range 10 West, NMPM, San  
Juan County, New Mexico.

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.

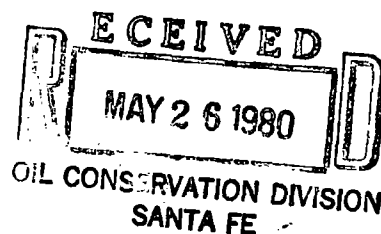
Gentlemen:

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



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

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

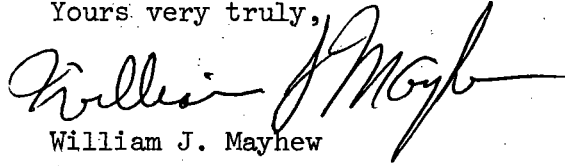
Energy and Minerals Department  
May 20, 1980

-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 dark ink, appearing to read 'William J. Mayhew', with a long horizontal flourish extending to the right.

William J. Mayhew

WJM:mm





*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 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



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

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.

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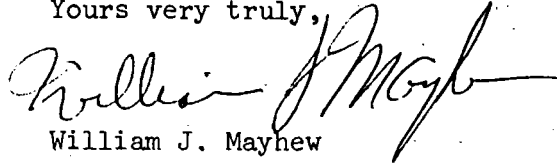
Energy and Minerals Department  
May 20, 1980

-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 dark ink, appearing to read "William J. Mayhew", written in a cursive style.

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-A See 29-T29 N R104*  
*Hate - 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.

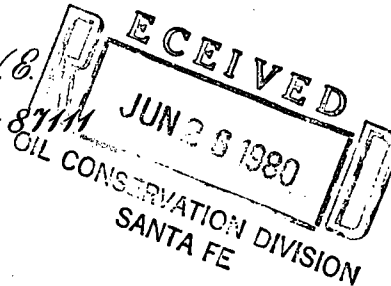
The ~~Factors~~ factors used for determining estimated recovery must be shown (pressure, porosity, saturations, ~~pressure~~ production decline curve, productive acres). The calculations and formula used should be shown. A pressured/production decline curve would be very helpful if available.

- ☒ Other:

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

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

June 25, 1980



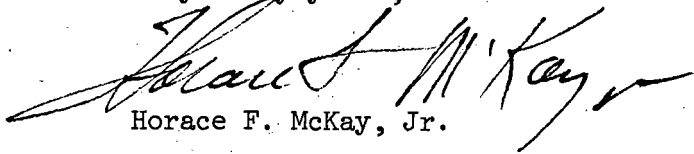
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

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.



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

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

ADMINISTRATIVE ORDER

NFL

19

Immediate

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 17 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 Antec-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 17 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 \_\_\_\_\_