

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

Operator James L. Ludwick Well Name and No. Jicarilla Well No. 6-J  
Location: Unit 0 Sec. 28 Twp. 24N Rng. 5W Cty. Rio Arriba

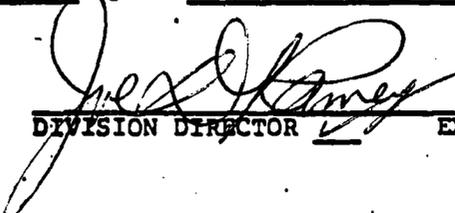
I.  
THE DIVISION FINDS:

- 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 completed in the Ballard Pictured Cliffs Pool, and the standard spacing unit in said pool is 160 acres.
- 4) That a 160-acre proration unit comprising the SE/4 of Sec. 28, Twp. 24N, Rng. 5W, is currently dedicated to the James L. Ludwick Jicarilla Well No. 6 located in Unit I of said section.
- 5) That this proration unit is (X) 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 125,000 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:

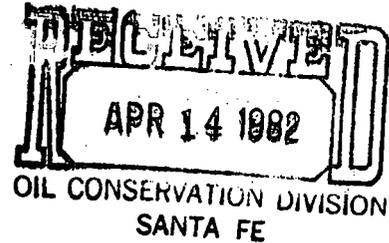
- 1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir 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 17th day of August, 19 82.

  
DIVISION DIRECTOR EXAMINER

CLAUDE C. KENNEDY  
INDEPENDENT OIL AND GAS OPERATOR

April 12, 1982



New Mexico OCD  
Attn: Mr. Michael Stogner  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Re: APPLICATION FOR ADMINISTRATIVE  
APPROVAL OF NFL ORDER for:  
James L. Ludwick  
6-J Jicarilla  
Unit O, 800'FSL, 1520'FEL,  
Section 28, T24N, R5W,  
Rio Arriba County, New Mexico.

Gentlemen:

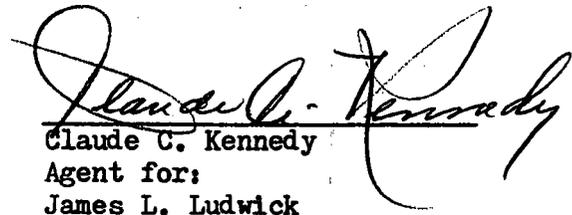
This application is filed in order to qualify the subject well for  
the section 103 gas price.

The attached data is furnished to aid in this determination.

Please advise if any additional information is required.

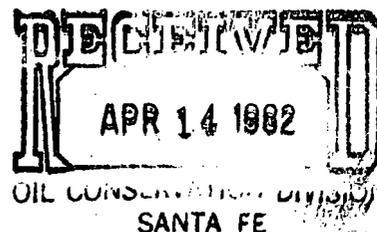
Thanking you, I remain

Very truly yours,

  
Claude C. Kennedy  
Agent for:  
James L. Ludwick

CLAUDE C. KENNEDY  
INDEPENDENT OIL AND GAS OPERATOR

April 12, 1982



Rule 5: Proration Unit:  
T24N, R5W, Section 28; SE $\frac{1}{4}$ .  
C-101 & C-102 attached.

Rule 6: Pool: Ballard Pictured Cliffs.

Rule 7: Standard Location.

Rule 8: Original Proration Unit Well:  
Jay J. Harris  
6- Jicarilla  
Unit I, 1650'FSL, 790'FEL,  
Sec. 28, T24N, R5W.

Spud: 4-1-1955

Complete: 5-18-1955

During the year 1981 this well ceased to produce and the Proration Unit was purchased by James L. Ludwick.

Operator, James L. Ludwick re-entered this well on 10-23-1981. It was determined that the well was logged off by fluid. Due to the original open hole completion, it required five (5) days to reach original TD 2219 because of the slumping and caving hole conditions encountered.

The 2-3/8 tubing was replaced with a string of 1 inch tubing landed at 2170 and the well was returned to production on 10-30-1981.

Delivery against current line pressure shows an average of 30 MCF per day.

Rule 8: In-Fill Proration Unit Well:  
James L. Ludwick  
6-J Jicarilla  
Unit O, 800'FSL, 1520'FEL,  
Sec. 28, T24N, R5W.

Spud: 12-12-1981

Complete: 3-22-1982

When this in-fill well reached TD 2295, the attempt to run electric logs failed due to heaving, caving hole conditions.

CLAUDE C. KENNEDY  
INDEPENDENT OIL AND GAS OPERATOR

Page - 2

April 12, 1982

Gamma Ray Casing Collar Locator log was run, the casing was selectively perforated, and the formation was stimulated with a fracture treatment using 500 barrels of N<sub>2</sub> Foam and 50,000 pounds of sand.

During the clean out procedure the hole on several occasions filled with sand. While attempting to clean out, it was determined that a 3 foot coal lens was present some 10 feet below the main Pictured Cliffs coal marker.

Due to drainage, this coal lens is re-acting as a "thief zone" in the new well.

This "thief zone" theory is evident due to complete lost returns during the clean out procedure while using air. With the bottom of the hole sanded off, it was impossible to build pressure after several hours blowing air into this zone which is present at 2185-88.

Rule 8:       g.     Need for In-Fill Well:

A detailed geological and engineering study was made of all wells within 1½ miles of the subject proration unit.

Within this study area, wells have been completed from a minimum of 14 feet to a maximum of 82 feet.

The isopac map attached shows that the subject well is located in the area indicating a Pictured Cliffs thickness in excess of 60 feet.

The original proration unit well exposed only the upper 41 feet of the Pictured Cliffs zone to production.

It was concluded that the In-Fill well was required to effectively and efficiently drain the bottom 41 feet of the Pictured Cliffs which appears to be present in this locality.

Rule 9:       Structure Map Attached  
              Isopac Map Attached

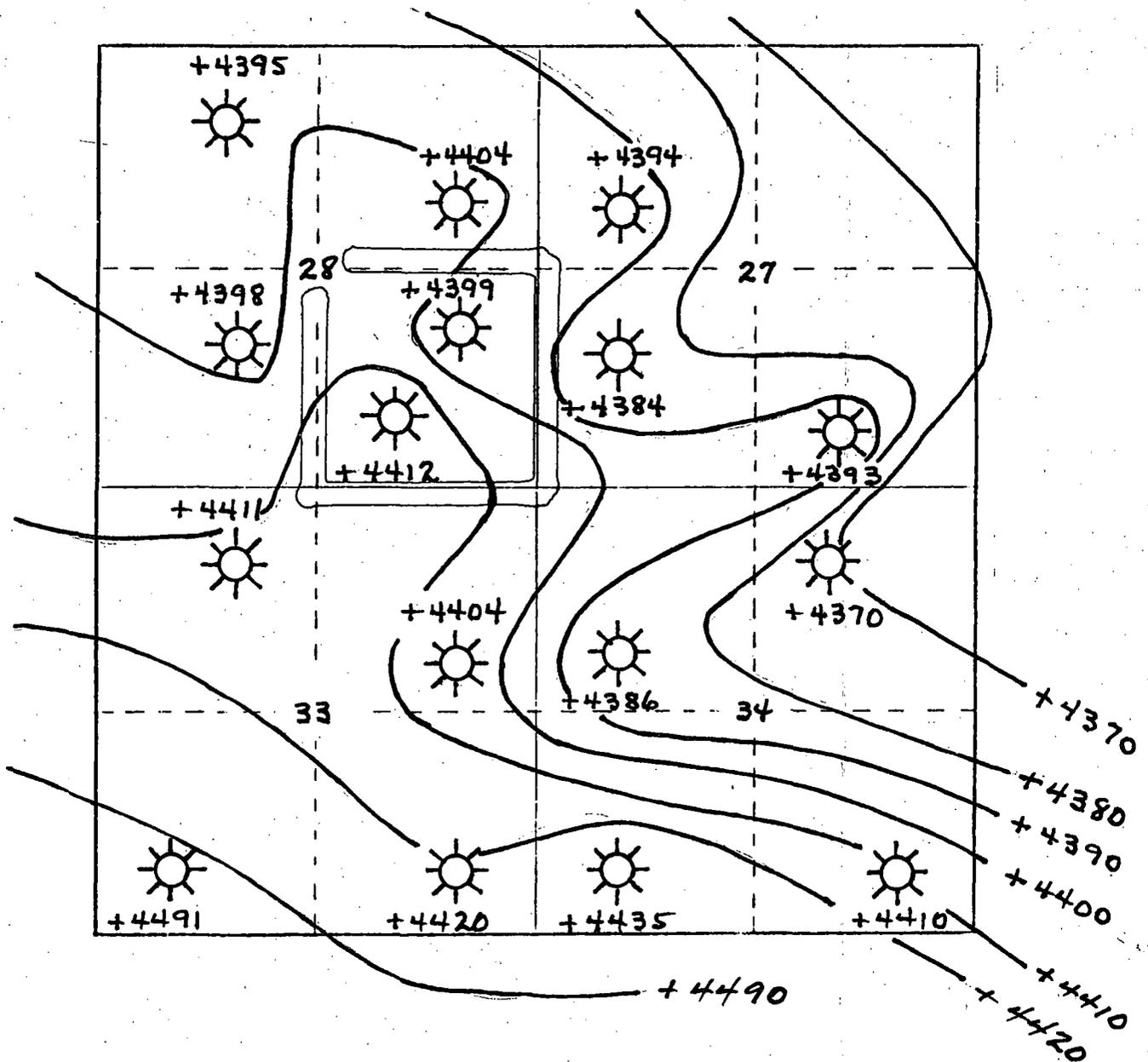
EXPECTED INCREASED ULTIMATE RECOVERY:     125 MMCF

We arrive at the above figure, expecting to deliver 25% of 250 mcf potential, projecting a 10% decline over 10 years.

Rule 11:     El Paso Natural Gas Company  
              is the Operator of all direct offset wells.  
  
              El Paso Natural Gas Company  
              has been notified of this application by Certified Mail.

PICTURED CLIFFS - CONTOURS

SCALE 1 IN. = 1000 FT.



SECTION: 

28	27
33	34

 TOWNSHIP 24-NORTH RANGE 5-WEST

STATE NEW MEXICO COUNTY RIO ARRIBA

# PICTURED CLIFFS ISOPAC

R 6 W

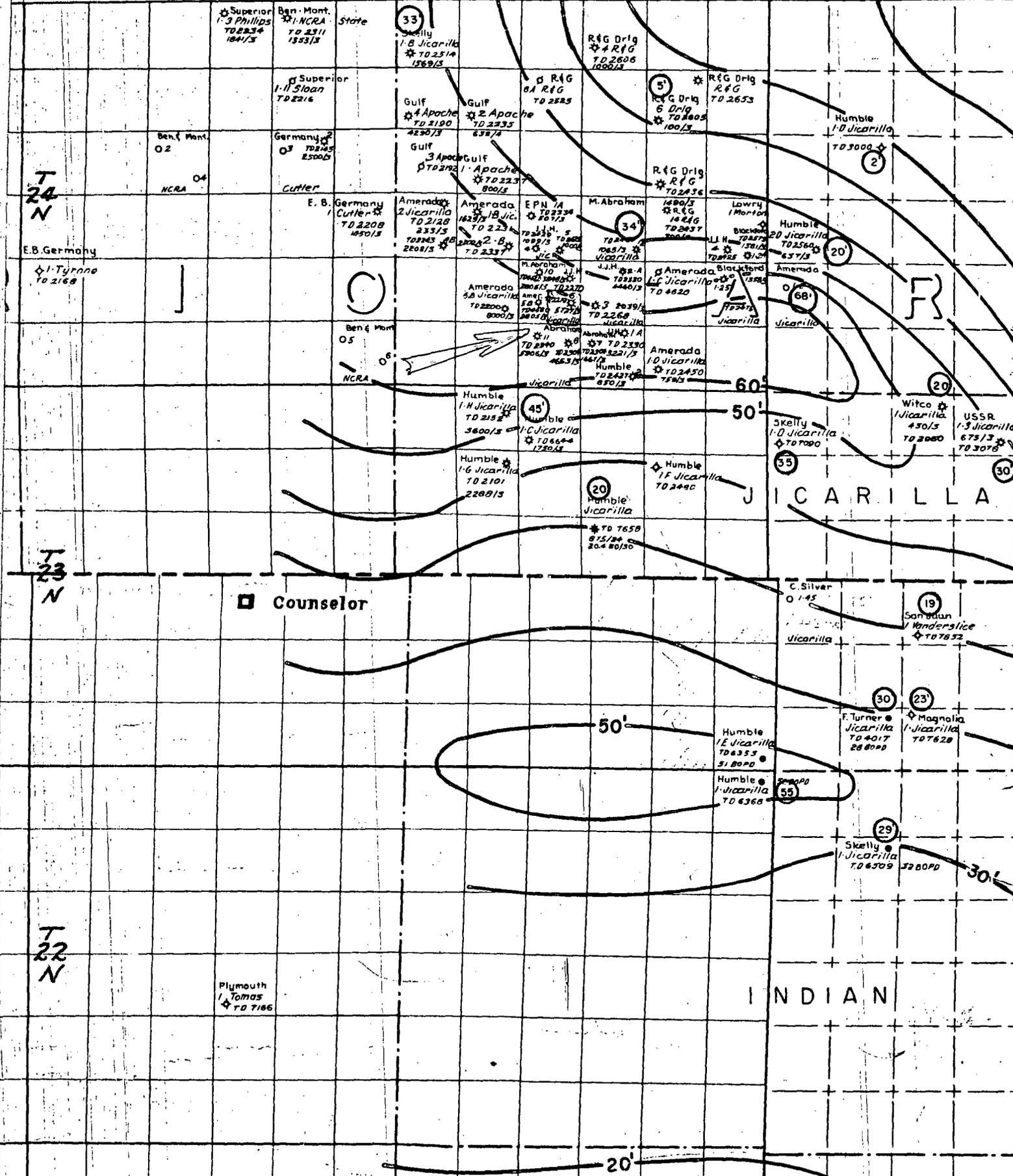
R 5 W

R 4 W

T 24 N

T 23 N

T 22 N



PROBABLE SOUTHERN LIMIT OF COMMERCIAL PICTURED CLIFFS

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

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

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
 James L. Ludwick

3. ADDRESS OF OPERATOR  
 P. O. Box 70  
 Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
 800' FSL, 1520' FEL  
 At proposed prod. zone  
 same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 10 miles northeast Cuncelor's, New Mexico

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any)  
 800'

16. NO. OF ACRES IN LEASE  
 2560

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 160

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 1200'

19. PROPOSED DEPTH  
 2400 PC

20. ROTA. \* OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6592 GR.

22. APPROX. DATE WORK WILL START\*  
 11-25-1981

5. LEASE DESIGNATION AND SERIAL NO.  
 Jicarilla Contract #12

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
 Jicarilla Tribe

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 Jicarilla

9. WELL NO.  
 1-J

10. FIELD AND POOL, OR WILDCAT  
 Ballard Pictured Cliffs

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 28, T24N, R5W

12. COUNTY OR PARISH  
 Rio Arriba

13. STATE  
 New Mexico

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8 3/4	7	24#	100'	100 sx circ.
6 1/4	2 7/8	6.5#	2400'	200 sx

See NTL-6 Attachments

Gas is dedicated: EPNG

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. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program if any.

24. SIGNED James L. Ludwick TITLE Agent DATE 10-26-1981  
 (This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

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

Form C-102  
Revised 10-1-78

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

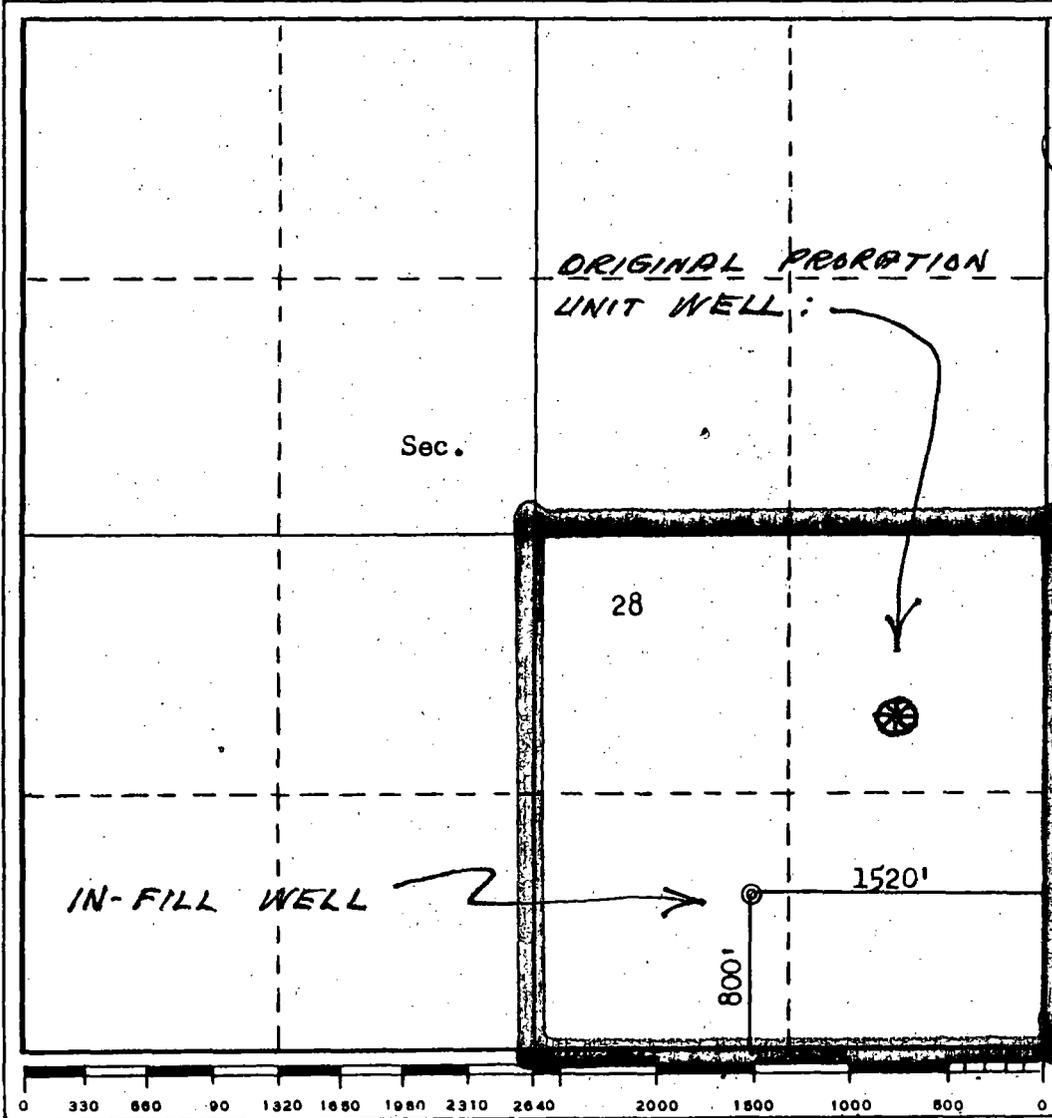
Operator <b>JAMES L. LUDWICK</b>		Lease <b>JICARILLA</b>			Well No. <b>1 = J</b>
Unit Letter <b>0</b>	Section <b>28</b>	Township <b>24N</b>	Range <b>5W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>800</b> feet from the <b>South</b> line and <b>1520</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6592</b>	Producing Formation <b>Pictured Cliffs</b>		Pool <b>Ballard 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.

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

Position **Agent**

Company **James L. Ludwick**

Date **October 26, 1981**

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 **October 26, 1981**

Registered Professional Engineer and/or Land Surveyor  
*Fred E. Kerr Jr.*  
**Fred E. Kerr Jr.**

Certificate No. **3950**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Bureau Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

Jicarilla Contract 12

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Tribal

7. UNIT AGREEMENT NAME

Jicarilla

8. FARM OR LEASE NAME

Jicarilla

9. WELL NO.

10. FIELD AND POOL, OR WILDCAT  
Ballard Pictured Cliffs

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 28, T24N, R5W

12. COUNTY OR PARISH

Rio Arriba

13. STATE

New Mex.

SUNDRY NOTICES AND REPORTS ON WELLS  
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
James L. Ludwick

3. ADDRESS OF OPERATOR  
P.O. Box 70  
Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
1650' FSL, 790' FEL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, ST, GR, etc.)

6574 Gr

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

REPAIR WELL

CHANGE PLANS

(Other) Return to Production

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

TOTAL DEPTH 2219  
10-23-1981 MICT - Pull Tubing,  
10-24 Well logged off w/fluid - unloaded hole,  
10-26 Attempting to clean out at 2190,  
10-27 Stuck in cave at 2200,  
10-28 Cleaning out at 2200, Open hole caving,  
10-29 Open hole continues to cave,  
Ran 1" tubing @ 2170,  
Return to line.

18. I hereby certify that the foregoing is true and correct  
SIGNED Clayton A. Kennedy TITLE Agent

DATE 11-24-1981

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

DATE \_\_\_\_\_

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.  
6. LEASE DESIGNATION AND SERIAL NO.

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.  OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**James L. Ludwick**

3. ADDRESS OF OPERATOR  
**P.O. Box 70  
Farmington, New Mexico 87401**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface  
**800'FSL, 1520'FEL**

14. PERMIT NO. \_\_\_\_\_ 15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**6592'Gr.**

**Jicarilla Contract #12**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**Jicarilla Tribe**

7. UNIT AGREEMENT NAME \_\_\_\_\_

8. FARM OR LEASE NAME  
**Jicarilla**

9. WELL NO.  
**6-J**

10. FIELD AND POOL, OR WILDCAT  
**Ballard Pictured Cliffs**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**Sec. 28, T24N, R5W**

12. COUNTY OR PARISH  
**Rio Arriba**

13. STATE  
**New Mexico**

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Surface Casing</u> <input checked="" type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

CHANGE WELL NO. FROM: 1-J to 6-J  
To comply with request from N.M.O.C.D.  
Spud: 12-12-1981  
Set 3 jts, 7" casing, 24#, Set at 102', cemented 65 sacks,  
Class 'B', 2% CaCl, circulated 3 barrels.  
P.D. 6:20 P.M., 12-12-1981.  
USGS notified, witness not present.  
12-18-1981: Drilling @ 1700'

18. I hereby certify that the above is true and correct.

SIGNED *James L. Ludwick* TITLE Agent DATE 12-18-1981

(This space for Federal or State official use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPL  
(Other instructions  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. <b>Jicarilla Contract #12</b>
2. NAME OF OPERATOR <b>James L. Ludwick</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Jicarilla Tribe</b>
3. ADDRESS OF OPERATOR <b>P.O. Box 70 Farmington, New Mexico 87401</b>		7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>800°FSL, 1520°FEL</b>		8. FARM OR LEASE NAME <b>Jicarilla</b>
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>6592 Gr.</b>	9. WELL NO. <b>6-J</b>
		10. FIELD AND POOL, OR WILDCAT <b>Ballard Pictured Cliffs</b>
		11. SEC. T., R., M., OR BLK. AND SURVEY OR AREA <b>Sec. 28, T24N, R5W</b>
		12. COUNTY OR PARISH   13. STATE <b>Rio Arriba   New Mexico</b>

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <b>Production Casing</b> <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) \*

12-22-1981 TD 2295' Unable to run electric logs due to heaving, caving hole conditions.

12-23-1981 TD 2295' PB 2285' Wait on Completion, Ran 79 jts, J-55, New, 2-7/8 casing, 6.5#, 2296' landed @ 2295', cemented with 200 sacks, Class B cement, 2% CaCl, good circulation during jog. Cement did not circulate. P.D. @ 5:00 P.M., 12-23-1981. Ran Bond log. Cement top at 1025'.

18. I hereby certify that the foregoing is true and correct.

SIGNED *Glenn C. Kennedy* TITLE Agent DATE 12-29-1981

(This space for Federal or State official use.)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

**JICARILLA CONTRACT #12**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

**JICARILLA TRIBE**

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

**JICARILLA**

9. WELL NO.

**6-J**

10. FIELD AND POOL, OR WILDCAT

**Ballard Pictured Cliffs**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

**Sec. 28, T24N, R5W**

12. COUNTY OR PARISH 13. STATE

**Rio Arriba New Mexico**

1.  OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**James L. Ludwick**

3. ADDRESS OF OPERATOR  
**P.O. Box 70  
Farmington, New Mexico 87401**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
**800°FSL, 1520°FEL**

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**6592 Gr.**

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input checked="" type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

**TD 2295' PB 2285' Cleaning Out Frac on 1-25-1982.**  
**Perf 1 SPF @ 2181-85, 2188-2204, 2207-08,**  
**1 SPF @ 2210, 2214, 2216, 2218, 2222,**  
**2224, 2226, 2233, 2236, 2239,**  
**2242, 2244, 2248, 2251, 2254,**  
**2256, 2259, 2262, Total 40 holes.**

**Frac 2181-2262**  
**500 Barrels N<sub>2</sub> FOAM,**  
**50,000 # Sand,**  
**BDP 2600, TP 2000,**  
**IR: 15 B/M.**

18. I hereby certify that the foregoing is true and correct.

SIGNED *James L. Ludwick* TITLE Agent DATE 1-25-1982

(This space for Federal or State official use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE\*

(See instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R365.5.

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG \***

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> Other _____		5. LEASE DESIGNATION AND SERIAL NO. <b>Jicarilla Contract -12</b>	
b. TYPE OF COMPLETION: NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Jicarilla Tribe</b>	
2. NAME OF OPERATOR <b>James L. Ludwick</b>		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR <b>P.O. Box 70 Farmington, New Mexico 87401</b>		8. FARM OR LEASE NAME <b>Jicarilla</b>	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface <b>800'FSL, 1520'FEL</b> At top prod. interval reported below <b>Same</b> At total depth <b>Same</b>		9. WELL NO. <b>6-J</b>	
14. PERMIT NO.		DATE ISSUED	
15. DATE SPUDDED <b>12-12-81</b>		16. DATE T.D. REACHED <b>12-22-81</b>	
17. DATE COMPL. (Ready to prod.) <b>3-22-1982</b>		18. ELEVATIONS (DF, REB, RT, OR, ETC.)* <b>6592 Gr.</b>	
19. ELEV. CASINGHEAD <b>6593</b>		10. FIELD AND POOL, OR WILDCAT <b>Ballard Pictured Cliffs</b>	
20. TOTAL DEPTH, MD & TVD <b>TD 2295</b>		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA <b>Sec. 28, T24N, R5W</b>	
21. PLUG, BACK T.D., MD & TVD <b>PB 2285</b>		12. COUNTY OR PARISH <b>Rio Arriba</b>	
22. IF MULTIPLE COMPL., HOW MANY*		13. STATE <b>New Mexico</b>	
23. INTERVALS DRILLED BY <b>→</b>		ROTARY TOOLS <b>0-2285</b>	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* <b>2181-2262 Pictured Cliffs</b>		25. WAS DIRECTIONAL SURVEY MADE <b>Yes</b>	
26. TYPE ELECTRIC AND OTHER LOGS RUN <b>GRCCCL only</b>		27. WAS WELL CORED <b>No</b>	

28. CASING RECORD (Report all strings set in well)																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>CASING SIZE</th> <th>WEIGHT, LB./FT.</th> <th>DEPTH SET (MD)</th> <th>HOLE SIZE</th> <th>CEMENTING RECORD</th> <th>AMOUNT PULLED</th> </tr> <tr> <td>7</td> <td>24#</td> <td>102 Gr</td> <td>8-3/4</td> <td>65 sx Circ Cl "B" 2% CaCl<sub>2</sub></td> <td></td> </tr> <tr> <td>2-7/8</td> <td>6.5#</td> <td>2295 Gr</td> <td>6-1/4</td> <td>200 sx CT 1025' Cl "B" 2% CaCl<sub>2</sub></td> <td></td> </tr> </table>	CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED	7	24#	102 Gr	8-3/4	65 sx Circ Cl "B" 2% CaCl <sub>2</sub>		2-7/8	6.5#	2295 Gr	6-1/4	200 sx CT 1025' Cl "B" 2% CaCl <sub>2</sub>		
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED														
7	24#	102 Gr	8-3/4	65 sx Circ Cl "B" 2% CaCl <sub>2</sub>															
2-7/8	6.5#	2295 Gr	6-1/4	200 sx CT 1025' Cl "B" 2% CaCl <sub>2</sub>															
29. LINER RECORD																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SIZE</th> <th>TOP (MD)</th> <th>BOTTOM (MD)</th> <th>SACKS CEMENT*</th> <th>SCREEN (MD)</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)						<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SIZE</th> <th>DEPTH SET (MD)</th> <th>PACKER SET (MD)</th> </tr> <tr> <td>1 1/4</td> <td>2255</td> <td></td> </tr> </table>	SIZE	DEPTH SET (MD)	PACKER SET (MD)	1 1/4	2255			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)															
SIZE	DEPTH SET (MD)	PACKER SET (MD)																	
1 1/4	2255																		

31. PERFORATION RECORD (Interval, size and number) <b>1-SPF (0.40) Hole at 2181-85, 2188-2204, 2207, 2208, 2210, 2214, 2216, 2218, 2222, 2224, 2226, 2233, 2236, 2239, 2242, 2244, 2248, 2251, 2254, 2256, 2259, 2262. Total: 40</b>		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DEPTH INTERVAL (MD)</th> <th>AMOUNT AND KIND OF MATERIAL USED</th> </tr> <tr> <td>2181-2262</td> <td>500 bbl. N<sub>2</sub> Foam 50,000# Sand BDP 2600 IR: 15 B/M</td> </tr> </table>		DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED	2181-2262	500 bbl. N <sub>2</sub> Foam 50,000# Sand BDP 2600 IR: 15 B/M
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED						
2181-2262	500 bbl. N <sub>2</sub> Foam 50,000# Sand BDP 2600 IR: 15 B/M						

33.* PRODUCTION	
DATE FIRST PRODUCTION <b>SHUT IN WAITING ON PIPELINE CONNECTION</b>	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) <b>SI/WOPIC</b>
DATE OF TEST <b>3-22-82</b>	HOURS TESTED <b>3</b>
CHOKE SIZE <b>3/4</b>	PROD'N. FOR TEST PERIOD <b>→</b>
OIL—BBL. <b>31</b>	GAS—MCF. <b>31</b>
WATER—BBL.	GAS-OIL RATIO <b>N/A</b>
FLOW. TUBING PRESS. <b>SIPT 180</b>	CASING PRESSURE <b>7 da</b>
CALCULATED 24-HOUR RATE <b>→</b>	OIL—BBL. <b>250</b>
GAS—MCF.	WATER—BBL.
OIL GRAVITY-API (CORR.) <b>N/A</b>	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) <b>To be sold</b>		TEST WITNESSED BY <b>James L. Ludwick</b>	
35. LIST OF ATTACHMENTS			

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED *Claude L. Kennedy* TITLE Agent DATE 3-23-1982

(See Instructions and Spaces for Additional Data on Reverse Side)

PICTURED CLIFFS TOP: 2180



GAMMA RAY NEUTRON

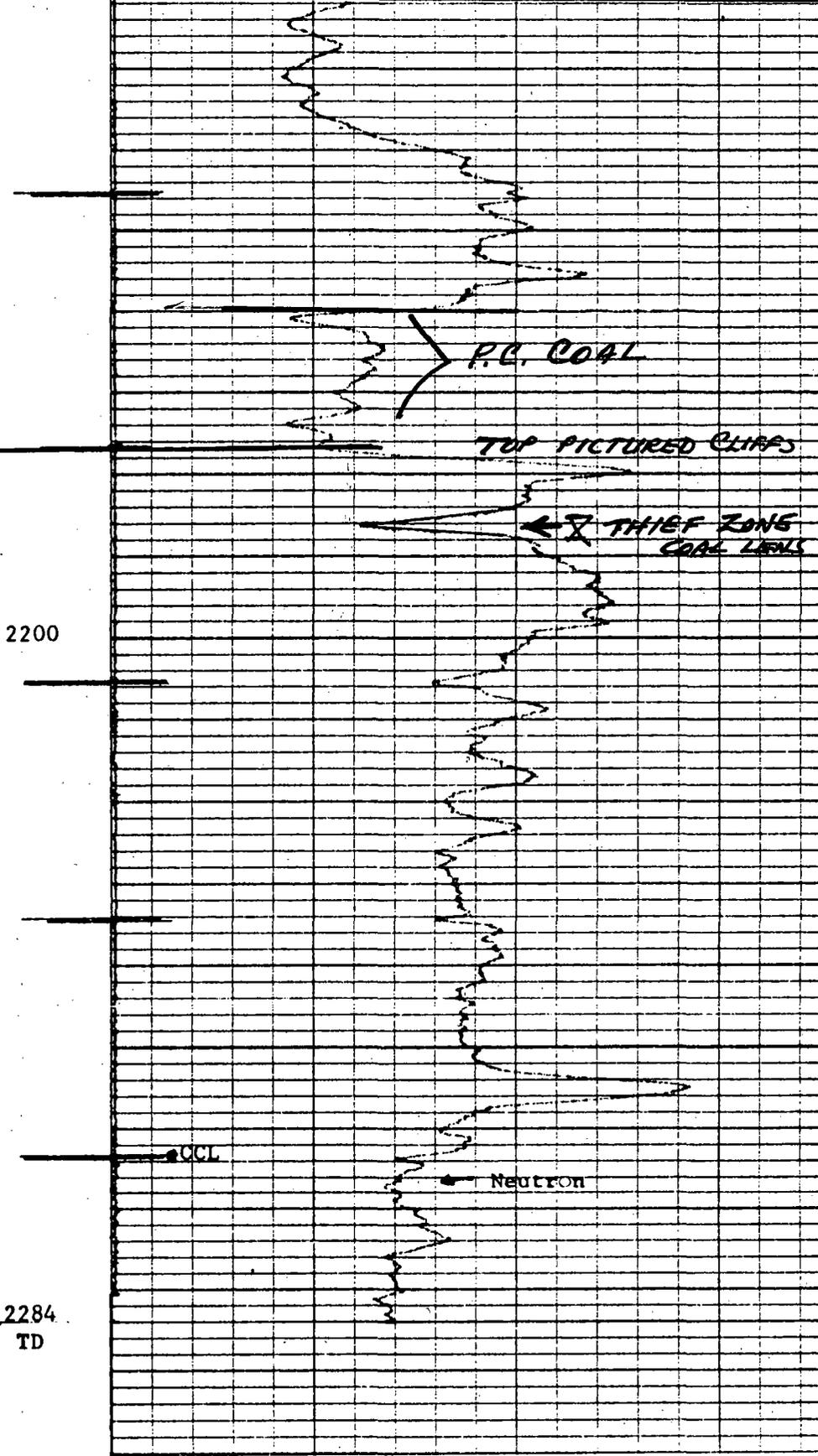
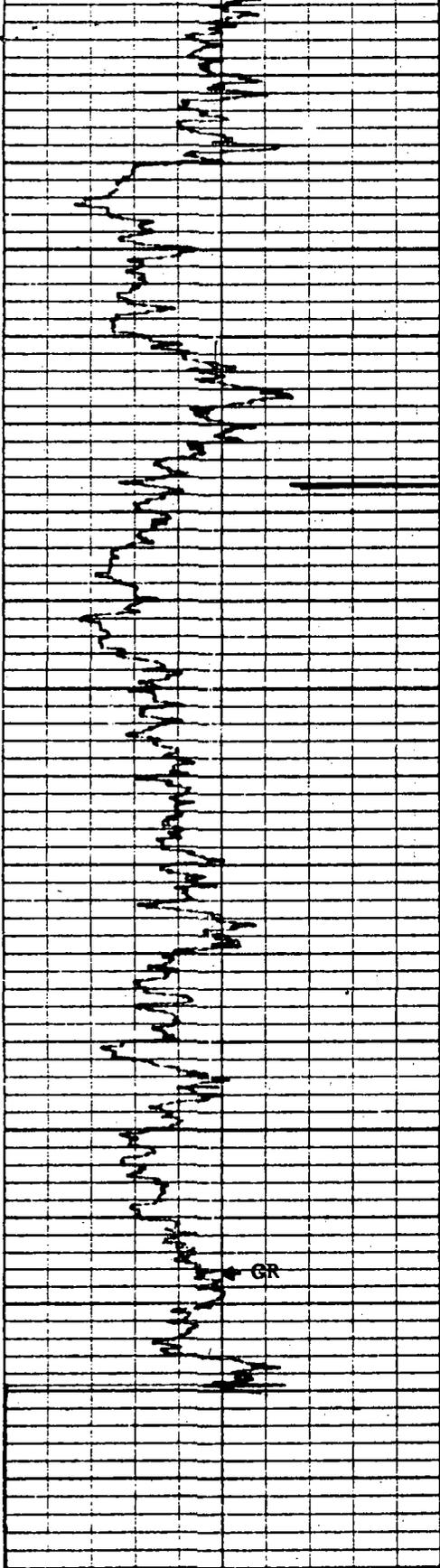
FILING NO.	COMPANY	JAMES L. LUDWICK	
	WELL	JICARILLA #6-J	
	FIELD	BALLARD PICTURED CLIFFS	
	COUNTY	RIO ARRIBA	STATE NEW MEXICO
LOCATION:		800' FSL & 1520' FEL	OTHER SERVICES: CBL
SEC. 28		T. 24N	R. 5W

PERMANENT DATUM:	GROUND LEVEL	ELEV. 6592	ELEV. K.B. -
LOG MEASURED FROM:	G.L.	0	FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM:	G.L.		D.F. -
			G.L. 6592

DATE	12-26-81
RUN NO.	One
TYPE LOG	GRN-CCL
DEPTH-DRILLER	2295
DEPTH-LOGGER	2284
BOTTOM LOGGED INTERVAL	2284
TOP LOGGED INTERVAL	800
TYPE FLUID IN HOLE	Water
SALINITY, PPM CL.	-
DENSITY	-
LEVEL	Full
MAX. REC. TEMP., DEG F.	-
OPERATING BIG TIME	2 Hours
RECORDED BY	Akins-Pearson
WITNESSED BY	Mr. Ludwick

RUN NO.	BORE-HOLE RECORD			CASING RECORD			
	BIT	FROM	TO	SIZE	WGT.	FROM	TO
1	8 3/4	Surf.	103	7"	24	Surf.	101
	5 1/8	103	2295	2 7/8	6.5	Surf.	2285

THIS HEADING AND LOG CONFORMS TO API RP 33 FOLD HERE



X



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR  
LARRY KEHOE  
SECRETARY

May 19, 1982

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

Claude C. Kennedy  
6109 Del Campo Place, NE  
Albuquerque, NM 87109

Re: Application for NGPA Infill Well  
Findings Under Provisions of  
Order No. R-6013-A James L. Ludwick,  
Jicarilla Well No. 6-J, Unit O, Section  
28; Township 24 North, Range 5 West,  
Rio Arriba County, New Mexico

Dear Mr. Kennedy:

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,

A handwritten signature in cursive script that reads "Michael E. Stogner".

Michael E. Stogner,  
Petroleum Engineer

MES/dp

- 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. Please submit a more detailed account on how the increase of production was determined, include production decline curves and calculation.

---

---

---

- Other:

---

---

CLAUDE C. KENNEDY  
INDEPENDENT OIL AND GAS OPERATOR

July 7, 1982

JUL 08 1982

OIL COMPANY  
SANTA FE

New Mexico OGD  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. Michael Stogner

Re: APPLICATION FOR ADMINISTRATIVE  
APPROVAL OF NFL ORDER for:  
James L. Ludwick  
6-J Jicarilla  
Unit 0, 800'FSL, 1520'FEL  
Section 28, T24N, R5W  
Rio Arriba County, New Mexico

Dear Mr. Stogner:

In reply to your letter dated May 19, 1982 requesting additional information, we furnish the following:

1. Subject well is waiting on pipeline connection; therefore, a decline production curve can not be furnished.

On page 2 of the original application it was stated:

EXPECTED INCREASED ULTIMATE RECOVERY: 125 MMCF

We arrive at the above figure, expecting to deliver 25% of 250 mcf potential, projecting a 10% decline over 10 years.

The expected recovery could be tabulated as follows:

<u>Year</u>	<u>Recovery MCF</u>
1st	22,000
2nd	20,000
3rd	18,000
4th	16,000
5th	14,000
6th	12,000
7th	10,000
8th	8,000
9th	7,000
10th	6,000

JUL 08 1982  
OIL COMPANY  
SANTA FE

CLAUDE C. KENNEDY  
INDEPENDENT OIL AND GAS OPERATOR

July 7, 1982

page - 2

Letter - New Mexico OCD  
Attn: Mr. Michael Stogner

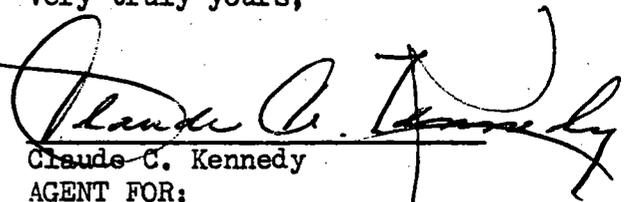
ESTIMATED PROJECTED 10 YR RECOVERY: 133 MMCF

As a comparison, the projection can be compared to the actual decline as shown below which represents production for the offset well in Unit C, Section 33, T24N, R5W.

1972	22,455 MCF
1973	14,306
1974	8,791
1975	8,015
1976	7,356
1977	8,150
1978	7,332
1979	5,602
1980	3,768
1981	4,061
TOTAL:	<u>90,133 MCF</u>

Under the circumstances, I would think that this Expected Recovery as presented would be as accurate as could be expected, since this is the first infill drilling in this immediate area.

Very truly yours,

  
Claude C. Kennedy  
AGENT FOR:  
James L. Ludwick