

APPLICATION FOR AUTHORIZATION TO INJECT

Corinne B. Grace

Zac Federal, Well No. 1

1980' FWL & 660' FSL

Sec. 25, T.26S., R.30E., NMPM

Eddy County, New Mexico

Grace

6
9497

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Corinne B. Grace

Address: P. O. Box 1418, Carlsbad, NM 88220

Contact party: Doug Chandler Phone: 887-5581

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Doug Chandler

Title: Agent

Signature: Doug Chandler

Date: 9-15-88

If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

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- IX. Proposed Stimulation Program
- X. Logging and Test Data
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- XII. Affirmative Statement
- XIII. Proof of Notice
- XIV. Certification

Section I

Purpose

I. Purpose

- A. To inject disposal water from area wells into non-productive Bell Canyon and Upper Cherry Canyon Formations. Operator may accept disposal water from other operators.
- B. This application qualifies for administrative approval.

all 100% to
the well
the 24 and 15

production
operation
the 24 and 15
the 24 and 15
the 24 and 15

Section II

Operator

II. Operator

Corinne B. Grace
P. O. Box 1418
Carlsbad, New Mexico 88220

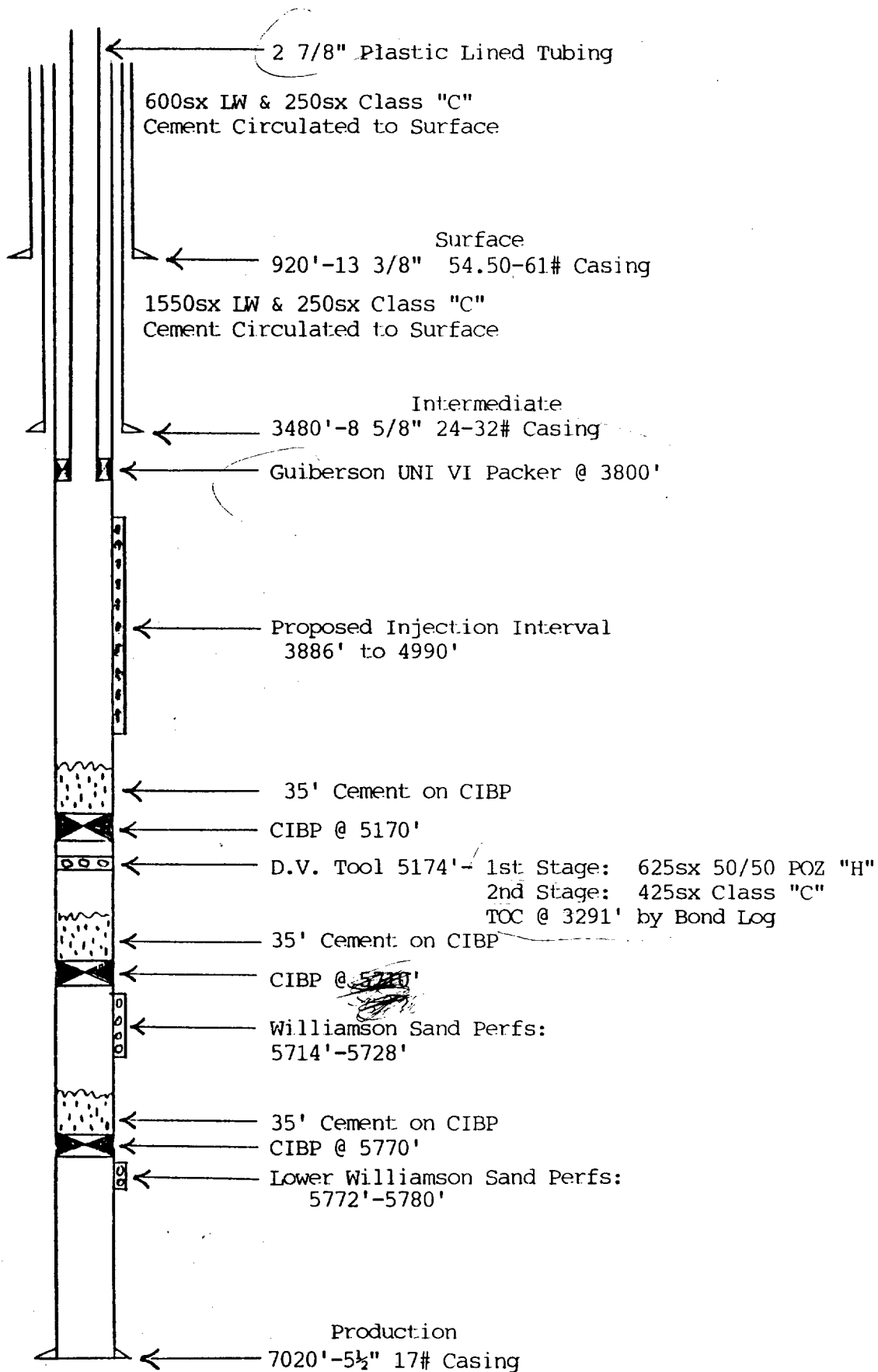
Contact Party: Doug Chandler
Phone: (505) 887-5581

Section III

Well Data

Zac Federal #1

1980' FWL & 660' FSL
Sec. 25, T26S, R30E., NMPM
Eddy County, New Mexico



III. Well Data

A.

1. Corinne B. Grace - Operator
Zac Federal Well No. 1
1980' FWL & 660' FSL
Sec. 25, T.26S., R.30E., NMPM
Eddy County, New Mexico
2. Casing Strings
 - a. Surface: Hole Size: 17½"
Casing Size: 13 3/8"
Casing Weight: 54.50#-61.00#
Setting Depth: 920'
Cemented with 600sx LW + 250sx Class "C".
Circulated Cement to Reserve.
 - b. Intermediate: Hole Size: 11"
Casing Size: 8 5/8"
Casing Weight: 24-32#
Setting Depth: 3480'
Cemented with 1550sx T.L.W. and 250sx
Class "C". Cement Top calculated at *circulated*
~~300' with 35% wash out factor.~~
 - c. Production: Hole Size: 7 7/8"
Casing Size: 5½"
Casing Weight: 17#
Setting Depth: 7020'
DV Tool Depth: 5174'
Cemented 1st stage with 625sx class
"H" 50/50 POZ. Cemented 2nd stage
with 425sx class "C". Cement Top at
3291' determined by Cement Bond Log.
3. Tubing: 2 7/8" plastic lined to be set
at 3800'±.
4. Packer: Guiberson UNI VI retrievable to
be set at 3800'±.

B.

1. Formation: Bell Canyon and Upper Cherry Canyon
Pool: East Ross Draw Delaware
2. Interval: 3886' to 4990' perforated.
Proposed Individual Intervals:
3886'-3892'
3904'-3928'
4026'-4040'
4084'-4110'
4140'-4150'
4158'-4168'
4320'-4340'
4354'-4376'
4424'-4444'
4474'-4518'

~~4518'-4518'~~

4586'-4624'

4650'-4666'

4714'-4746'

4770'-4786'

4873'-4990'

3. Well was drilled as Cherry Canyon Oil Producer.
4. Perforations at 5772'-5780': Set CIBP @ ~~5710'~~ 5770'
Cap with 35' Cement set CIBP @ 5170' cap with
35' cement.
5. Next Producing zone in area: Williamson Sand,
top at 5700'.

ORIGINAL COPY

RECEIVED

Form 3160-4
(November 1983)
(formerly 9-330)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

Oct 11 11 17 AM '87
See other in
Bureau of Land
Management

WELL COMPLETION OR RECOMPLETION REPORT

CARLSBAD RESERVE 27650

AMBEA QUARTERS

| | | | |
|--|-----------------|---|-------------------------|
| 1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> Other _____ | | 7. UNIT ASSIGNMENT NAME N/A | |
| 2. TYPE OF COMPLETION: NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PUMP BACK <input type="checkbox"/> PUMP REPAIR <input type="checkbox"/> Other _____ | | 8. FARM OR LEASE NAME Zac Federal | |
| 3. NAME OF OPERATOR Corinne B. Grace | | 9. WELL NO. 1 | |
| 4. ADDRESS OF OPERATOR P. O. Box 1418, Carlsbad, New Mexico 88220 | | 10. FIELD AND POOL, OR WILDCAT Und. East Ross Draw | |
| 5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements): At surface 1980' FWL & 660 FSL At top prod. interval reported below Same At total depth Same | | 11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 25, T26S, R30E. | |
| 14. PERMIT NO. | | DATE ISSUED 4-14-87 | |
| 15. DATE SPUNDED 6-9-87 | | 16. DATE T.D. REACHED 7-22-87 | |
| 17. DATE COMPL. (Ready to prod.) 9-14-87 | | 18. ELEVATIONS (OF, RKB, RT, OR, ETC.): 3039 GR | |
| 19. BLEV. CASINGHEAD 3039 | | 20. TOTAL DEPTH, MD & TVD 7020 MD | |
| 21. PLUS, BACK T.D., MD & TVD 6978 MD | | 22. IF HILL-THE COMPLETION HOW MADE ACCEPTED FOR RECORD | |
| 23. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD): 5720-5791 Williamson Sand | | 24. FAR DIRECTIONAL SURVEY MADE No | |
| 25. TYPE ELECTRIC AND OTHER LOGS RUN CNL-DLL-MSFL | | 26. WAS WELL CORED No | |
| 27. CARING RECORD (Report all strings set in well) | | | |
| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE |
| 13 3/8 | 54.50-61 | 920 | 17 1/2 |
| 8 5/8 | 24-32 | 3480 | 12 1/4 |
| 5 1/2 | 17 | 7020 | 7 7/8 |
| CEMENTING RECORD | | AMOUNT PULLED | |
| 600sx LW 250sx "C" | | -0- | |
| 1550 LW 250sx "C" | | -0- | |
| 625 "H" 425 "C" | | -0- | |
| 28. LINER RECORD | | | |
| DISS | TOP (MD) | BOTTOM (MD) | BACKS CEMENT* |
| | | | |
| 29. TUBING RECORD | | | |
| SIZE | DEPTH SET (MD) | PACKER SET (MD) | |
| | | | |
| 30. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. | | | |
| DEPTH INTERVAL (MD) | | AMOUNT AND KIND OF MATERIAL USED | |
| 5716-5722 | | 4500 gal Gel Fluid with 6000# 20/40 & 12/20 Sand | |
| 31. PRODUCTION | | | |
| DATE FIRST PRODUCTION 9-14-87 | | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping 2 1/2" x 1 1/2" x 24' Insert Pump | |
| DATE OF TEST 9-28-87 | | WELL STATUS (Producing or Shut-in) Producing | |
| HOURS TESTED 24 | CHOKED SIZE | PROD'N. FOR TEST PERIOD | OIL—BBL. 140 |
| | | | GAS—MCF. 111 |
| | | | WATER—BBL. 81 |
| | | | GAS-OIL RATIO 1412 |
| FLOW, TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | OIL GRAVITY-API (CORR.) |
| | | | |
| 32. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Fuel & Vented | | | |
| 33. TEST WITNESSED BY Doug Chandler | | | |
| 34. LIST OF ATTACHMENTS | | | |
| 35. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records | | | |

SIGNED

Billy Miller

TITLE

Agent

DATE 10-5-87

11

SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; add all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | NAME | TOP | |
|-----------|------|--------|-----------------------------|--|-------------|------------------|
| | | | | | MEAS. DEPTH | TRUE VERT. DEPTH |
| Rustler | 1416 | 1591 | Sand - Shale - Redbed | Salt Delaware Manzanita Limestone | 1591 | 1589 |
| Salt | 1591 | 3415 | Salt - Anhydrite | | 3608 | 3598 |
| Delaware | 3608 | 6899 | Sand - Shale | | 4770 | 4761 |
| | | | | | | |

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38. GEOLOGIC MARKERS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PERMITTER'S COPY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

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 checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> | | 5. LEASE DESIGNATION AND SERIAL NO. NM-27650 | |
| 2. NAME OF OPERATOR Corinne Grace | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A | |
| 3. ADDRESS OF OPERATOR P.O. Box 1418, Carlsbad, NM 88220 | | 7. UNIT AGREEMENT NAME N/A | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1980' FWL & 660' FSL | | 8. FARM OR LEASE NAME Zac Federal | |
| 14. PERMIT NO. | | 9. WELL NO. 1 | |
| 15. ELEVATIONS (Show whether DF, RT, OR, etc.) 3039 GR | | 10. FIELD AND POOL, OR WILDCAT East Ross Draw Dela. | |
| | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 25, T26S, R30E | |
| | | 12. COUNTY OR PARISH Eddy | |
| | | 13. STATE NM | |

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 type="checkbox"/> | ABANDONMENT* <input type="checkbox"/> |
| REPAIR WELL <input type="checkbox"/> | CHANGE PLANS <input type="checkbox"/> | (Other) <input type="checkbox"/> | |

(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.) *

11/18/87 Fracture interval 5716-5722' w/21,000 gal x-link gel fluid w/46,200# 20/40 & 12/20 sand.

ACCEPTED FOR RECORD
SJS
DEC 9 1987
CARLSBAD, NEW MEXICO

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

SIGNED Mike Bush TITLE Agent DATE 11/19/87

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Section IV

Expansion of Existing Project
(Not-Applicable)

Section V

Area Maps

8-1-82
16343

Meridian Oil
15311
HBP

Amoco
HBP
18626

Craig, Ltd.
1-1-90
60355
305

Union
0459862

Leckhart
King
TD3820

15311

24

Adobe,
Sptfire
2.9mil.

Meridian Oil

Barnett
King
TD4051

15311

APC Oper.
ACX Pet.
8-1-82
16343

1.3 Mil.

U.S.

U.S.

Corine
Grace
Ginger-
Fed.

Sohio
1-1-90
60355

60355

J.C.
Williamson
etal
HBP
11042

E.M. Craig, Jr.
Craig, Jr.
bel. 7245

Union

0438001

ache
TP
55 Draw

etal)

26

WC Disc. (J.C. Wil-
liamson, etal)
5 mil.
11042

25

(Mobil)

Corine
Grace
Fed.

Tex. Pac.
Phantom Draw
U.F. Fed.
TD12820

Williamson
Ross Draw
Unit
J.C.
Del. Disc. Williamson
Florida Exptl
PT2
15 0554499
Ross Draw

"Ross Draw Unit" U.S.

Corine Grace

7-1-87
0 v. 581

434 55 36 "Win-5"

DT38 56 DT38 56 DT38 56

Yates Pet. etal
4-1-94
67275
31

725.00 725.00

J.C.
Williamson, etal
HBP
11042

DT38 56 DT38 56 DT38 56

725.00 725.00

LOVING County

17

U.S.
Sohio

17
PHANTOM

Union,
Phonon,
Sachs Uni-Ford,
Sachs
Schie
1:1:30
60353

H. E. Deolittle
0437880

Wilson
Johnson-Rod Mendon oil
TD 58-09
DA-2-35-63
Pharmem Drew Unit
20
DEAN
WC DISC
19 7 JAN 1963

U.S. PRIESTS +962021

H. E. Doolittle
HGP
0437880

San 7/2
Telcom
5:05
3890

29

115
Gulf
MP E-320
32

U.S. 1

7

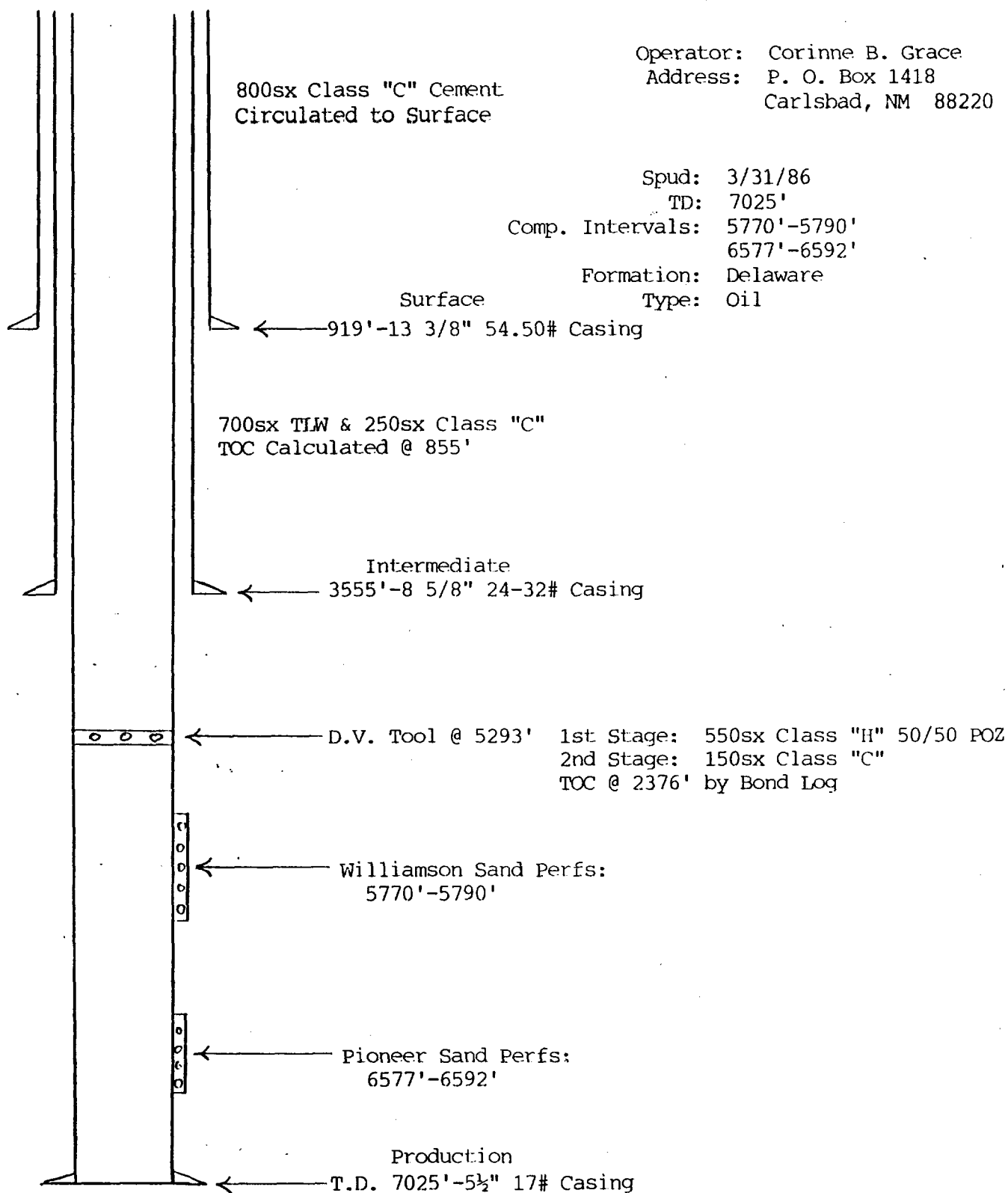
Section VI

Tabulation of Well Data

Grace "CG" Federal #1
 1980' FEL & 2310' FSL
 Sec. 25, T26S, R30E NMPM
 Eddy County, New Mexico

Operator: Corinne B. Grace
 Address: P. O. Box 1418
 Carlsbad, NM 88220

Spud: 3/31/86
 TD: 7025'
 Comp. Intervals: 5770'-5790'
 6577'-6592'
 Formation: Delaware
 Type: Oil



OPERATOR'S COPY
RECEIVED

SUBMIT IN DUPLICATE*

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(See other In-
structions on
reverse side)

12 05 PM '87

5. LEASE DESIGNATION AND SERIAL NO.

NM-27650

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

"CG" Federal

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

East Ross Draw

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

25-26S-30E NMPM

12. COUNTY OR
PARISH

Eddy

13. STATE

NM

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☒ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVEN. ☐ Other ☐

2. NAME OF OPERATOR

Corinne Grace

3. ADDRESS OF OPERATOR

P. O. Box 1418, Carlsbad, New Mexico 88220

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 180' FEL & 2310' FSL

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

3-31-86

15. DATE SPUDDED

3-31-86

16. DATE T.D. REACHED

8-5-86

17. DATE COMPL. (Ready to prod.)

1-31-87

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*

3061 GR

19. ELEV. CASINGHEAD

GR

20. TOTAL DEPTH, MD & TVD

7025

21. PLUG, BACK T.D., MD & TVD

22. IF MULTIPLE COMPL.,
HOW MANY*

23. INTERVALS
DRILLED BY

ROTARY TOOLS

CABLE TOOLS

X

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

5784-90 Delaware MD

26. TYPE ELECTRIC AND OTHER LOGS RUN

CNL-GR DLL-GR

25. WAS DIRECTIONAL
SURVEY MADE

No

27. WAS WELL CORED

No

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

| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|-------------|-----------------|----------------|-----------|-----------------------|---------------|
| 13 3/8 | 54.50 | 919 | 17 1/2 | 800 sx "C" Circulated | 0 |
| 8 5/8 | 24-32 | 3555 | 11 | 950 sx to Surface Csg | 0 |
| 5 1/2 | 17 | 7025 | 7 7/8 | 700 sx | 0 |

29. LINER RECORD

| SIZE | TOP (MD) | BOTTOM (MD) | SACKS CEMENT* | SCREEN (MD) |
|------|----------|-------------|---------------|-------------|
| | | | | |
| | | | | |
| | | | | |

30. TUBING RECORD

| SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|------|----------------|-----------------|
| | | |
| | | |
| | | |

ACCEPTED FOR RECORD

31. PERFORATION RECORD (Interval, size and number)

5770-82 .50 2SPF 20 Holes
5784-90 .50 2SPF 12 Holes

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

| DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |
|---------------------|----------------------------------|
| | SJS |
| | CARLSBAD, NEW MEXICO |
| | |
| | |

33. PRODUCTION

| | | | | | | | |
|-----------------------|-----------------|--|-------------------------|----------|------------|------------------------------------|---------------|
| DATE FIRST PRODUCTION | | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | | | | WELL STATUS (Producing or shut-in) | |
| 5-26-87 | | Pump 2½" x 2" x 24' | | | | Producing | |
| DATE OF TEST | HOURS TESTED | CHOKED SIZE | PROD'N. FOR TEST PERIOD | OIL—BBL. | GAS—MCF. | WATER—BBL. | GAS-OIL RATIO |
| 5-27-87 | 24 | W O | → | 130 | 29 | 111 | 1000 |
| FLOW, TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | OIL—BBL. | GAS—MCF. | WATER—BBL. | OIL GRAVITY-API (CORR.) | |
| | | → | | | | | |

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Fuel & Sold

TEST WITNESSED BY

Jo Huber

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

Billy Miller

TITLE

Agent

DATE

6-5-87

20

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | NAME | TOP | |
|---------------|------|--------|-----------------------------|------|-------------|------------------|
| | | | | | MEAS. DEPTH | TRUE VERT. DEPTH |
| Ramsey | 3692 | 3714 | Sand | | | |
| Cherry Canyon | 4576 | 5048 | Sand & Limestone | | | |
| Abby | 5160 | 5176 | Sand & Shale | | | |
| Williamson | 5768 | 5831 | Sand & Shale | | | |
| Amy | 5868 | 5902 | Sand & Shale | | | |
| Brushy Canyon | 6059 | | | | | |
| Pioneer | 6574 | 6610 | Sand & Shale | | | |
| MWJ | 6792 | 6850 | Sand & Shale | | | |

38. GEOLOGIC MARKERS

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(See other In-
structions on
reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐
2. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☒ DEEP-EN ☐ PLUG BACK ☐ DIFF. REGRV. ☐ Other ☐

2. NAME OF OPERATOR
Corinne Grace

3. ADDRESS OF OPERATOR

P. O. Box 1418, Carlsbad, New Mexico 88220

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface 1980' FEL & 2310' FSL

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

3-31-86

15. DATE SPUDDED 3-31-86 16. DATE T.D. REACHED 8-5-86 17. DATE COMPL. (Ready to prod.) 1-31-87 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 3061 GR 19. ELEV. CASINGHEAD GR

20. TOTAL DEPTH, MD & TVD 7025 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY → X 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 5770-82 Delaware MD 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN

CNL-GR DLL-GR

27. WAS WELL CORRED

NO

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

| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|-------------|-----------------|----------------|-----------|----------------------|---------------|
| 13 3/8 | 54.50 | 919 | 17 1/2 | 800sx "C" Circulated | 0 |
| 8 5/8 | 24-32 | 3555 | 11 | 950sx To Surface Csg | 0 |
| 5 1/2 | 17 | 7025 | 7 7/8 | 700sx | 0 |

29. LINER RECORD

| SIZE | TOP (MD) | BOTTOM (MD) | BACKS CEMENT* | SCREEN (MD) | SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|------|----------|-------------|---------------|-------------|-------|----------------|-----------------|
| | | | | | 2 7/8 | 5759 | |

31. PERFORATION RECORD (Interval, size and number)

5770-82 .50 2SPF 20 Holes

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

| DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |
|---------------------|---|
| 5770-82 | 1000 gal 15% HCL Frac 20,000 gals Gel - 159,000# 20/40 Sand |

33. PRODUCTION

| | | | | | | | |
|-----------------------|-----------------|--|------------------------------|----------|----------|------------------------------------|---------------|
| DATE FIRST PRODUCTION | | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | | | | WELL STATUS (Producing or shut-in) | |
| 1-31-87 | | Pump 2½"x2"x24' | | | | Producing | |
| DATE OF TEST | HOURS TESTED | CHOKED SIZE | PROD'N. FOR TEST PERIOD | OIL—BBL. | GAS—MCF. | WATER—BBL. | GAS-OIL RATIO |
| 2-20-87 | 24 | W 0 | → | 117 | 211 | 324 | 1808 |
| FLOW, TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | OIL—BBL. GAS—MCF. WATER—BBL. | | | OIL GRAVITY-API (CORR.) | |
| | | → | ACCEPTED FOR RECORD | | | | |

ACCEPTED FOR RECORD

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Fuel and vented

FEB 24 1987

TEST WITNESSED BY

Steve Lyons

35. LIST OF ATTACHMENTS

Well test chart.

36. I hereby certify that the foregoing and attached information is true and correct as far as it goes from all available records

SIGNED

Billy J Miller

TITLE

Agent

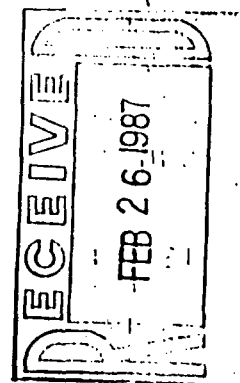
DATE

2-23-87

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

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, flowing and shut-in pressures, and recoveries):

| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | GEOLOGIC MARKERS | | |
|---------------|------|--------|-----------------------------|------------------|-------------|------------------|
| | | | | NAME | MEAS. DEPTH | TRUE VERT. DEPTH |
| Ramsey | 3692 | 3714 | Sand | | | |
| Cherry Canyon | 4576 | 5048 | Sand & Limestone | | | |
| Abby | 5160 | 5176 | Sand & Shale | | | |
| Williamson | 5768 | 5831 | Sand & Shale | | | |
| Amy | 5868 | 5902 | Sand & Shale | | | |
| Brushy Canyon | 6059 | | | | | |
| Pioneer | 6574 | 6610 | Sand & Shale | | | |
| MWJ | 6792 | 6850 | Sand & Shale | | | |



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other In-
structions on
reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVR. ☐

2. NAME OF OPERATOR

Corinne Grace

3. ADDRESS OF OPERATOR

P. O. Box 1418, Carlsbad, NM 88220

4. LOCATION OF WELL (Report location clearly and in accordance with any State regulations.)

At surface 1980' FEL & 2310' FSL

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

3-31-86

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

15. DATE SPUDDED 3-31-86 16. DATE T.D. REACHED 8-5-86 17. DATE COMPL. (Ready to prod.) 9-6-86 18. ELEVATIONS (OF, RKB, RT, OR, ETC.)* 3061 GR 19. ELEV. CASINGHEAD GR

20. TOTAL DEPTH, MD & TVD 7025 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 6577-84 6588-92 2SPF Delaware MD 25. WAS DIRECTIONAL SURVEY MADE NO

26. TYPE ELECTRIC AND OTHER LOGS RUN

CNL-GR DLL-GR

27. WAS WELL CORED

NO

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

| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
|-------------|-----------------|----------------|-----------|----------------------|---------------|
| 13 3/8 | 54.50 | 919 | 17 1/2 | 800sx "C" Circulated | 0 |
| 8 5/8 | 24-32 | 3555 | 11 | 950sx To Surface Csg | 0 |
| 5 1/2 | 17 | 7025 | 7 7/8 | 700sx | |

29. LINER RECORD

| SIZE | TOP (MD) | BOTTOM (MD) | BACKS CEMENT* | SCREEN (MD) |
|------|----------|-------------|---------------|-------------|
| | | | | |

30. TUBING RECORD

| SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|-------|----------------|-----------------|
| 2 7/8 | 6612 | |

31. PERFORATION RECORD (Interval, size and number)

6577-84 6588-92 .50 2SPF 22 Holes

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

| DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |
|---------------------|----------------------------------|
| 6577-84 88-92 | Acid 1400 gal 7 1/2 HCL |
| | Frac 30,000 gals Gel-45000 |
| | 12/20 Sand |

33. PRODUCTION

| DATE FIRST PRODUCTION | | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | | | | WELL STATUS (Producing or shut-in) | |
|-----------------------|-----------------|--|-------------------------|----------|----------|------------------------------------|-------------------------|
| 9-5-86 | | Pump 2 1/4" x 2" x 24' | | | | Shut-in | |
| DATE OF TEST | HOURS TESTED | CHOKE SIZE | PROD'N. FOR TEST PERIOD | OIL—BBL. | GAS—MCF. | WATER—BBL. | GAS-OIL RATIO |
| 9-15-86 | 24 | | → | 22 | | 216 | |
| FLOW, TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | ACCEPTED FOR RECORD | | | WATER—BBL. | OIL GRAVITY-API (CORR.) |
| | | → | | | | | |

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

SEP 26 1986

35. LIST OF ATTACHMENTS

Deviation Certification

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

SIGNED

TITLE

Agent

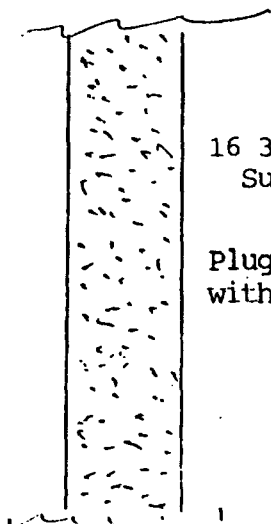
DATE 9-22-86

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

| 37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries); | | | | 38. GEOLOGIC MARKERS | | |
|---|------|--------|-----------------------------|----------------------|-------------|------------------|
| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | NAME | TOP | |
| | | | | | MEAS. DEPTH | TRUE VERT. DEPTH |
| Ramsey | 3692 | 3714 | Sand | Delaware | 3656 | |
| Cherry Canyon | 4576 | 5048 | Sand & Limestone | | | |
| Abby | 5160 | 5176 | Sand & Shale | | | |
| Williamson | 5768 | 5831 | Sand & Shale | | | |
| Amy | 5868 | 5902 | Sand & Shale | | | |
| Brushy Canyon | 6059 | | | | | |
| Pioneer | 6574 | 6610 | Sand & Shale | | | |
| MWJ | 6792 | 6850 | Sand & Shale | | | |
| Castle | 6897 | 6940 | Sand | | | |
| | | | | | | |

Win State #1

1980' FWL & 660' FNL
Sec. 36, T26S, R30E NMPM
Eddy County, New Mexico



16 3/4" Open Hole from
Surface to 201'

Plugged from TD to Surface
with 380sx Class "C"

Operator: Corinne B. Grace
Address: P. O.Box 1418
Carlsbad, New Mexico 88220

Spud: 6/27/87
TD: 201' Cable Tool
P&A: 4/15/88

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

| | |
|------------------------|--|
| NO. OF COPIES RECEIVED | |
| DISTRIBUTION | |
| SANTA FE | |
| FILE | |
| U.S.O.B. | |
| LAND OFFICE | |
| OPERATOR | |

5a. Indicate Type of Lease
State ☒ Fee ☐
5. State Oil & Gas Lease No.
V-581

1a. TYPE OF WELL
OIL WELL ☐ GAS WELL ☐ DRY ☒ OTHER _____
b. TYPE OF COMPLETION
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER P & A

7. Unit Agreement Name
N/A
8. Form or Lease Name
Win State
9. Well No.
1
10. Field and Pool, or Wildcat
East Ross Draw Dela.

2. Name of Operator
Corinne B. Grace
3. Address of Operator
P. O. box 1418, Carlsbad, New Mexico 88220
4. Location of Well

UNIT LETTER C LOCATED 1980 FEET FROM THE West LINE AND 660 FEET FROM THE North LINE OF SEC. 36 TWP. 26S RGE. 30E NMPM

12. County
Eddy

15. Date Spudded 6/27/87 16. Date T.D. Reached 2/13/88 17. Date Compl. (Ready to Prod.) P&A 4/15/88 18. Elevations (DF, RKB, RT, GR, etc.) 3025 GR 19. Elev. Casinghead _____
20. Total Depth 201' 21. Plug Back T.D. P&A to Surf. 22. If Multiple Compl., How Many _____ 23. Intervals Drilled By _____ Rotary Tools _____ Cable Tools 0-201

24. Producing Interval(s), of this completion - Top, Bottom, Name
None 25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run
None 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 |
|-------------|----------------|-----------|-----------|------------------|---------------|
| None | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

29. LINER RECORD

| SIZE | TOP | BOTTOM | SACKS CEMENT | SCREEN |
|------|-----|--------|--------------|--------|
| | | | | |
| | | | | |
| | | | | |

30. TUBING RECORD

| SIZE | DEPTH SET | PACKER SET |
|------|-----------|------------|
| | | |
| | | |
| | | |

31. Perforation Record (Interval, size and number)
None

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

| DEPTH INTERVAL | AMOUNT AND KIND MATERIAL USED |
|----------------|-------------------------------|
| | |
| | |
| | |
| | |

33. PRODUCTION

Date First Production _____ Production Method (Flowing, gas lift, pumping - Size and type pump) _____ Well Status (Prod. or Shut-in) _____

| Date of Test | Hours Tested | Choke Size | Prod'n. For Test Period | Oil - Bbl. | Gas - MCF | Water - Bbl. | Gas - Oil Ratio |
|--------------|--------------|------------|-------------------------|------------|-----------|--------------|-----------------|
| | | | | | | | |

| Flow Tubing Press. | Casing Pressure | Calculated 24-Hour Rate | Oil - Bbl. | Gas - MCF | Water - Bbl. | Oil Gravity - API (Corr.) |
|--------------------|-----------------|-------------------------|------------|-----------|--------------|---------------------------|
| | | | | | | |

34. Disposition of Gas (Sold, used for fuel, vented, etc.) _____ Test Witnessed By _____

35. List of Attachments _____

36. 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 Mike Butk TITLE Agent DATE 4/14/88 27

Section VII

Proposed Operation Data

VII. Proposed Operation Data

1. Injection Rate
 - a. Average Daily: 1500 Bbls. per day.
 - b. Maximum Daily: 7500 Bbls. per day.
2. System will be closed.
3. Injection Pressure
 - a. Average: Unknown
 - b. Maximum: ~~888~~# 777#
4. Injection fluids will be disposal water from area wells.
5. Disposal zone formation water is very similar to all produced Delaware waters. (See Attached water analyses.)

3886
2
7772

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

ARTESIA, NEW MEXICO 88210

LABORATORY WATER ANALYSIS

No. W200, W201, & W202-87

To Corinne GraceDate October 19, 1987P. O. Box 1418Carlsbad, NM 88220

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by Danny HarveyDate Rec. October 19, 1987Well No. _____ Depth 5700'Formation DelawareCounty Eddy Field Sec. 25, 26S, 30ESource Heater Treater

C. G. Fed. #1

Zac Fed. #1

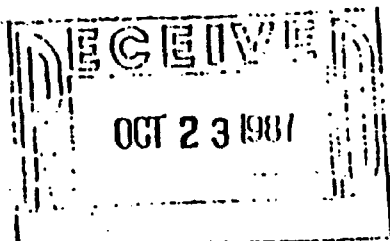
Resistivity 0.048 @ 72°0.048 @ 72°Specific Gravity 1.211.21pH 6.36.1Calcium (Ca) 38,21237,720

*MPL

Magnesium (Mg) 6,2695,970Chlorides (Cl) 191,000192,000Sulfates (SO₄) N11N11Bicarbonates (HCO₃) 3268Soluble Iron (Fe) ModerateModerate

Remarks:

*Milligrams per liter



Rocky Chambers
Respectfully submitted,

Analyst: Rocky Chambers - Special Operator

HALLIBURTON COMPANY

cc:

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBES, NEW MEXICO 88240
LABORATORY WATER ANALYSIS

No. W83-929

To BBC, Inc.
105 E. Marland
Hobbs, New Mexico

Date 8-4-83

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 8-4-83

Well No. Not Designated Depth _____ Formation As Marked

County _____ Field _____ Source _____

| | <u>Cherry Canyon</u> | <u>Bell Canyon</u> | |
|----------------------------------|----------------------|----------------------|------|
| Resistivity | <u>0.049 @ 74°F.</u> | <u>0.070 @ 74°F.</u> | |
| Specific Gravity | <u>1.181</u> | <u>1.086</u> | |
| pH | <u>5.4</u> | <u>6.9</u> | |
| Calcium (Ca) | <u>23,700</u> | <u>8,000</u> | *MPL |
| Magnesium (Mg) | <u>6,240</u> | <u>1,500</u> | |
| Chlorides (Cl) | <u>169,000</u> | <u>76,000</u> | |
| Sulfates (SO ₄) | <u>310</u> | <u>1,640</u> | |
| Bicarbonates (HCO ₃) | <u>75</u> | <u>145</u> | |
| Soluble Iron (Fe) | <u>5</u> | <u>Nil</u> | |
| Sodium, Na (Calc.) | <u>70,766</u> | <u>38,122</u> | |
| Total Dissolved Solids (Calc.) | <u>270,096</u> | <u>125,407</u> | |

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By W. L. Brewer
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-928BBC, Inc.Date 8-4-83103 5. MarlandHobbs, New Mexico

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 8-4-83Well No. Not Designated Depth _____ Formation As Marked

County _____ Field _____ Source _____

| | <u>Brushy Canyon</u> | <u>Wolfcamp</u> | |
|--------------------------------|----------------------|----------------------|------|
| Resistivity | <u>0.048 @ 74°F.</u> | <u>0.089 @ 74°F.</u> | |
| Specific Gravity | <u>1.209</u> | <u>1.057</u> | |
| Temperature | <u>5.3</u> | <u>6.0</u> | |
| Calcium (Ca) | <u>32,200</u> | <u>1,800</u> | *MPL |
| Magnesium (Mg) | <u>5,760</u> | <u>840</u> | |
| Chlorides (Cl) | <u>197,000</u> | <u>48,000</u> | |
| Sulfates (SO ₄) | <u>160</u> | <u>185</u> | |
| Carbonates (HCO ₃) | <u>95</u> | <u>230</u> | |
| Soluble Iron (Fe) | <u>Nil</u> | <u>5</u> | |
| Sodium, Na (Calc.) | <u>80,067</u> | <u>27,657</u> | |
| Total Dissolved Solids (Calc.) | <u>315,282</u> | <u>78,717</u> | |

Remarks: _____ *Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

By W. Z. Brewer
CHEMIST

NOTICE

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Section VIII

Geological Data

HARRY L. GUNN
Consulting Geologist

TELEPHONE 505/748-9012

813 S. FOURTH
ARTESIA, N.M. 88210

GRACE OIL COMPANY
CARLSBAD, NEW MEXICO

TO WHOM IT MAY CONCERN

FORM C-108 Oil Conservation Division, Energy and Minerals
Department, State of New Mexico

VIII. The planned injection interval (3,886' to 4,990') for the proposed disposal well, the Grace Oil Co., Zac Federal #1, 660' FSL and 1980 FNL, Sec 25, T-26-S, R-30-E, Ross Draw East Field, Eddy County, New Mexico will be in the Bell Canyon and Cherry Canyon Sand Formations of the Delaware Mountain Group.

These Delaware sands are composed of very fine to fine grained quartz sands. Core examination from the Grace Oil Company No. 1 Ginger Federal, at 4,078' to 4,108' confirmed the grain size and revealed the presence of a few thin shale laminations.

The highly porous sands 19% to 25% selected for water disposal, have very little carbonate cementing material with slight varying amounts of clay and feldspar content. The sands with the higher porosity are usually more permeable. These sand intervals should be well suited for disposal water as they are isolated from other porous sands by shaly limes and shales. There is no known oil or gas production nearby from this intervals.

The overall thickness of these sands is about 1380 feet, with the selected interval covering 1120 feet.

These sands lie below 2,000' of anhydrite and salt of the Castile Formation.

XII. There are no open faults in evidence throughout the Delaware Sands in this area, nor are there any possible geologic connections to any source of drinking water.

There is no palatable water below the injection interval, all these waters will be either salty or brackish sulfur water.

Sincerely,



Harry L. Gunn

HG/lm

Section IX

Proposed Stimulation Program

IX. Proposed Stimulation Program

A. Acidize sands with 10,000 gallons 15% acid.

Section X

Logging Data

X. Logging Data: Well logs on file with Division. Submitted 10-5-87 with Well Completion Report.

Section XI

Fresh Water

XI. Fresh Water: There is one (1) fresh water well within one (1) mile of proposed injection well. It was drilled 5/2/88. Total depth is 440'. It is located approximately 1750' FEL & 380' FSL, Sec. 24, T26S, R30E, Eddy County, New Mexico.

Section XII

Affirmative Statement

HARRY L. GUNN
Consulting Geologist

TELEPHONE 505/748-9012

813 S. FOURTH
ARTESIA, N.M. 88210

GRACE OIL COMPANY
CARLSBAD, NEW MEXICO

TO WHOM IT MAY CONCERN

FORM C-108 Oil Conservation Division, Energy and Minerals
Department, State of New Mexico

VIII. The planned injection interval (3,886' to 4,990') for the proposed disposal well, the Grace Oil Co., Zac Federal #1, 660' FSL and 1980 FNL, Sec 25, T-26-S, R-30-E, Ross Draw East Field, Eddy County, New Mexico will be in the Bell Canyon and Cherry Canyon Sand Formations of the Delaware Mountain Group.

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These sands lie below 2,000' of anhydrite and salt of the Castile Formation.

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There is no palatable water below the injection interval, all these waters will be either salty or brackish sulfur water.

Sincerely,



Harry L. Gunn

HG/lm

Section XIII

Proof of Notice

XIII. Proof of Notice

A. Certified Mail

1. Surface Owner

- a. Bureau of Land Management
P. O. Box 1778
Carlsbad, New Mexico 88220

2. Operators within $\frac{1}{2}$ mile of proposed injection well.

- a. Mobil Producing Texas & New Mexico, Inc.
P. O. Box 633
Midland, Texas 79702
- b. Amoco Production Company
Houston Region
501 Westlake Park Blvd.
P. O. Box 3092
Houston, Texas 77253
- c. Ralph E. Williamson
P. O. Box 994
Midland, Texas 79702
- d. J.C. Williamson
P. O. Box 16
Midland, Texas 79702
- e. Yates Petroleum Corporation
105 South 4th
Artesia, New Mexico 88210
- f. ARCO Oil and Gas Company
Box 1610
Midland, Texas 79702
- g. Chevron U.S.A., Inc.
Box 1150
Midland, Texas 79702

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Bureau of Land Management
P. O. Box 1778
Carlsbad, New Mexico 88220

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

Enclosed, please find a copy of our Application of Corinne Grace for a Salt Water Disposal Well, Eddy County, New Mexico, together with a copy of the Form C-108.

Should you have any questions concerning the Application you may contact the undersigned at this office.

The intended purpose of the injection well, located 660 feet from the south line and 1980 feet from the west line of Section 25, Township 26 South, Range 30 East, N.M.P.M., is for the disposal of disposal water in the Bell Canyon and Upper Cherry Canyon formations, with a planned injection interval of 3886 feet to 4990 feet. The expected maximum injection rate is 7500 barrels per day, with the maximum injection pressure to be 888 PSIG.

Surface owners or offset operators must file any objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501, within 15 days from the date hereof.

Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mobil Producing Texas & New Mexico, Inc.
P. O. Box 633
Midland, Texas 79702

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

Enclosed, please find a copy of our Application of Corinne Grace for a Salt Water Disposal Well, Eddy County, New Mexico, together with a copy of the Form C-108.

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Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Amoco Production Company
Houston Region
501 Westlake Park Blvd.
P. O. Box 3092
Houston, Texas 77253

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

Enclosed, please find a copy of our Application of Corinne Grace for a Salt Water Disposal Well, Eddy County, New Mexico, together with a copy of the Form C-108.

Should you have any questions concerning the Application you may contact the undersigned at this office.

The intended purpose of the injection well, located 660 feet from the south line and 1980 feet from the west line of Section 25, Township 26 South, Range 30 East, N.M.P.M., is for the disposal of disposal water in the Bell Canyon and Upper Cherry Canyon formations, with a planned injection interval of 3886 feet to 4990 feet. The expected maximum injection rate is 7500 barrels per day, with the maximum injection pressure to be 888 PSIG.

Surface owners or offset operators must file any objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501, within 15 days from the date hereof.

Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Ralph E. Williamson
P. O. Box 994
Midland, Texas 79702

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

Enclosed, please find a copy of our Application of Corinne Grace for a Salt Water Disposal Well, Eddy County, New Mexico, together with a copy of the Form C-108.

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Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. J.C. Williamson
P. O. Box 16
Midland, Texas 79702

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

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Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Yates Petroleum Corporation
105 South 4th
Artesia, New Mexico 88210

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

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Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

ARCO Oil and Gas Company
Box 1610
Midland, Texas 79702

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

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Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

Corinne B. Grace
Post Office Box 1418
Carlsbad, New Mexico 88220
Phone 505-887-5581

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Chevron U.S.A., Inc.
Box 1150
Midland, Texas 79702

Re: Zac Federal No. 1 Well
Section 25, T26S, R30E, N.M.P.M.,
Eddy County, New Mexico

Dear Sir:

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Sincerely,

Doug Chandler
Agent

Enclosures
MB/lm

B. Legal Notice

1. Date of Publication:
2. Name and Address of Publication:

Artesia Daily Press
503 West Main Street
Artesia, New Mexico 88210

Affidavit of Publication

Copy of Publication

No. 12488

STATE OF NEW MEXICO,

County of Eddy:

Gary D. Scott being duly sworn, says: That he is the Publisher of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of

the State of New Mexico for 1 consecutive weeks on the same day as follows:

First Publication September 14, 1988

Second Publication

Third Publication

Fourth Publication

and that payment therefore in the amount of \$ has been made.

Subscribed and sworn to before me this 14th day

of September, 1988

Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1991

LEGAL NOTICE

LEGAL NOTICE NOTICE IS HEREBY GIVEN THAT:

Corinne B. Grace has applied to the New Mexico Oil Conservation Division for administrative approval to convert an oil well located in Section 25, Township 26 South, Range 30 East, N.M.P.M., Eddy County, New Mexico, to a water injection well. The purpose of this conversion is to dispose of disposal water in the area. Water will be injected in the Bell Canyon and Upper Cherry Canyon formations (perforations at 3886'-4990') at a maximum rate of 7500 barrels per day, with maximum injection pressure of 888 PSI. Any questions concerning this project may be directed to Doug Chandler, Grace Oil Company, P.O. Box 1418, Carlsbad, New Mexico, 88220; phone number (505) 887-5581.

Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within 15 days.

Published in the Artesia Daily, Artesia N.M. September 14, 1988.

Legal 12488

Section XIV

Certification

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Doug Chandler Title: Agent

Signature: *Doug Chandler* Date: 9-15-88