Revised March 23, 2017

| RECEIVED: | REVIEWER: | TYPE: | APP NO: |
|---|---|---|---|
| 4/30/2018 | MAM | SWD | pMAM1812038320 |

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**
- Geological & Engineering Bureau –
1220 South St. Francis Drive, Santa Fe, NM 87505

## ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Applicant:** V-F Petroleum Inc. **OGRID Number:** 24010
**Well Name:** Northcott 3 **API:** 30-015-22892
**Pool:** SWD; Devonian **Pool Code:** 96101

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW**

SWD-1734

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐NSL ☐NSP(PROJECT AREA) ☐NSP(PRORATION UNIT) ☐SD APR 30 2018

B. Check one only for [ I ] or [ II ]
[ I ] Commingling – Storage – Measurement
☐DHC ☐CTB ☐PLC ☐PC ☐OLS ☐OLM
[ II ] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐PMX ☒SWD ☐IPI ☐EOR ☐PPR

**FOR OCD ONLY**
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☒ Royalty, overriding royalty owners, revenue owners
C. ☒ Application requires published notice
D. ☒ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☒ Surface owner
G. ☒ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

Brian Wood
Print or Type Name

B. Wood
Signature

4-28-18
Date

505 466-8120
Phone Number

brian@permitswest.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

**Oil Conservation Division**
**1220 South St. Francis Dr.**
**Santa Fe, New Mexico 87505**

FORM C-108
Revised June 10, 2003

## APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance XXX Disposal _____ Storage
Application qualifies for administrative approval? XXX Yes _____ No

II. OPERATOR: V-F PETROLEUM INC.

ADDRESS: PO BOX 1889, MIDLAND TX 79702

CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120

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 XXX 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:

**Northcott 3**
**30-015-22892**
**SWD; Devonian**

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: BRIAN WOOD TITLE: CONSULTANT

SIGNATURE: B Wood DATE: APR. 1, 2018

E-MAIL ADDRESS: brian@permitswest.com

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

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

---

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

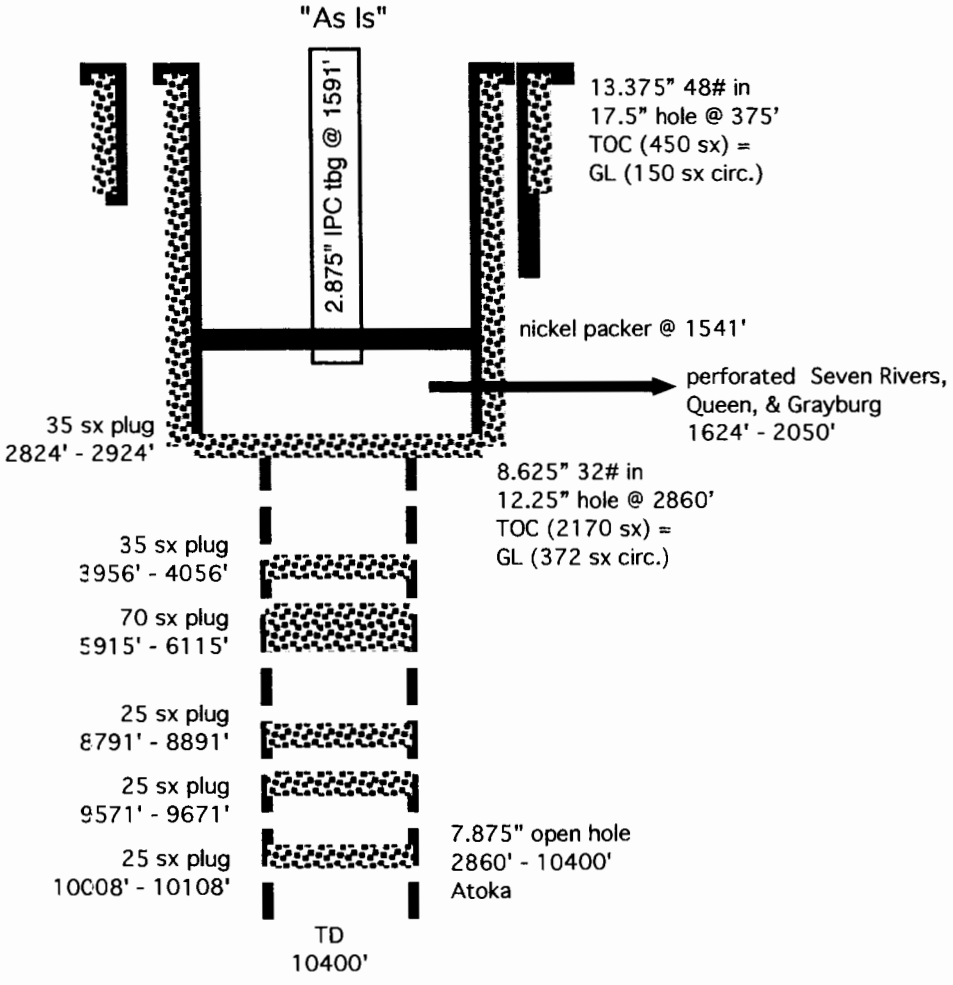
# INJECTION WELL DATA SHEET

OPERATOR: V-F PETROLEUM INC.

WELL NAME & NUMBER: NORTHCOTT 3

| WELL LOCATION: | 1980 FNL & 1980 FEL | G | 24 | 19 S | 28 E |
|---|---|---|---|---|---|
| | FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE |

## *WELLBORE SCHEMATIC*




(not to scale)

## *WELL CONSTRUCTION DATA*

### Surface Casing

Hole Size: 17.5" Casing Size: 13.375"

Cemented with: 450 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 150 SX

### Intermediate Casing

Hole Size: 12.25" Casing Size: 8.625"

Cemented with: 2170 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 372 SX

### Production Casing

Hole Size: 7.875" Casing Size: 5.5"

Cemented with: 2200 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRCULATE

Total Depth: 12,060'(csg) & 14,000'(TD)

### Injection Interval

7.875" HOLE SIZE 12,060 feet to 14,000'

~~(Perforated~~ or Open Hole; indicate which)

Side 1

# INJECTION WELL DATA SHEET

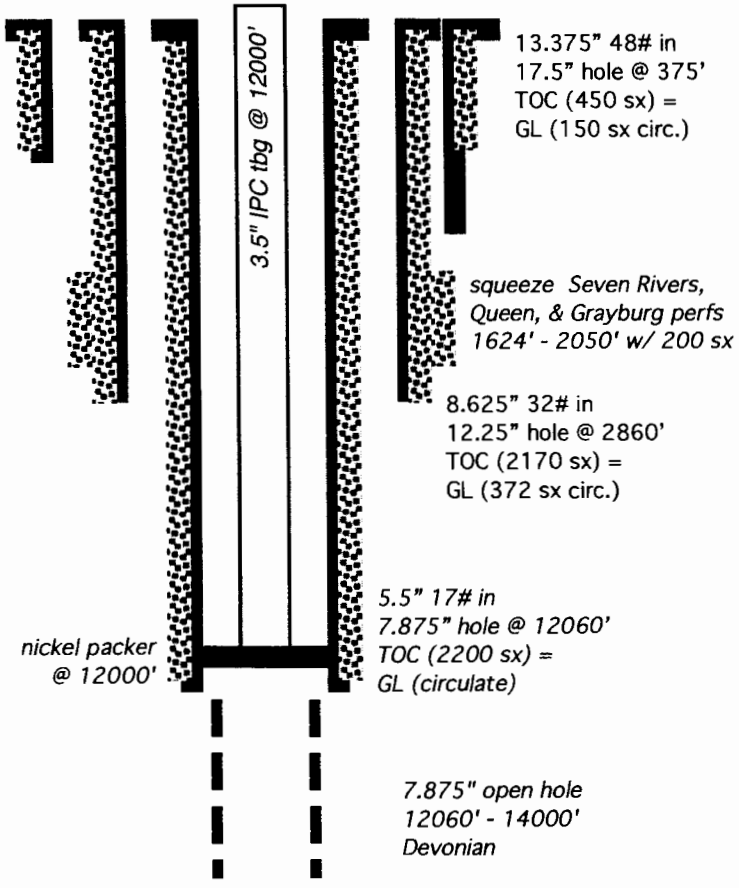
OPERATOR: V-F PETROLEUM INC.

WELL NAME & NUMBER: NORTHCOTT 3

| WELL LOCATION: | 1980 FNL & 1980 FEL | G | 24 | 19 S | 28 E |
|---|---|---|---|---|---|
| | FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE |

## *WELLBORE SCHEMATIC*

*"Proposed"*




(not to scale)

## *WELL CONSTRUCTION DATA*

### Surface Casing

Hole Size: 17.5" Casing Size: 13.375"

Cemented with: 450 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 150 SX

### Intermediate Casing

Hole Size: 12.25" Casing Size: 8.625"

Cemented with: 2170 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 372 SX

### Production Casing

Hole Size: 7.875" Casing Size: 5.5"

Cemented with: 2200 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRCULATE

Total Depth: 12,060'(csg) & 14,000'(TD)

### Injection Interval

7.875" HOLE SIZE 12,060 feet to 14,000'

~~(Perforated~~ or Open Hole; indicate which)

## INJECTION WELL DATA SHEET

Tubing Size: 3.5" Lining Material: IPC

Type of Packer: ARROW NICKEL PLATED 10,000# WP

Packer Setting Depth: ≈14,000'

Other Type of Tubing/Casing Seal (if applicable): _____

### Additional Data

1. Is this a new well drilled for injection? _____ Yes XXX No

   If no, for what purpose was the well originally drilled? DRILLED TO 10,400' IN 1979 AS AN UPPER PENN GAS WELL (DRY)

2. Name of the Injection Formation: DEVONIAN

3. Name of Field or Pool (if applicable): SWD;DEVONIAN (96101)

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. YES

   PERFORATED 1624' - 2050' (SEVEN RIVERS, QUEEN, & GRAYBURG)
   WILL SQUEEZE 200 SX TO 3000# & WOC 24 HOURS

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   OVER: YATES (890'), SEVEN RIVERS (1300'), QUEEN (1700'), GRAYBURG (2200'), SAN ANDRES (2818'), BONE SPRING (3972'), WOLFCAMP (8894'), MORROW (10575')

   UNDER: NONE

I. Purpose is to convert a SWD; Grayburg (96108) well to a SWD; Devonian (96101) commercial saltwater disposal well. Seven Rivers, Queen, and Grayburg will be squeezed, plugs drilled out, and well deepened to 14,000'. Disposal will be from 12,060' to 14,000' in the Devonian. Grayburg approval was issued as SWD-342 in 1988. See Exhibit A for a USGS map and C-102 form.

II. Operator: V-F Petroleum Inc. (OGRID 24010)
Operator phone number: (432) 683-3344
Operator address: PO Box 1889, Midland TX 79702
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease: NMSLO lease E0-5073-0005
Lease Size: 1,280 acres
Closest Lease Line: 1980'
Lease: all of Sections 24 & 36, T. 19 S., R. 28 E.
Surface Owner: NMSLO

A. (2) Surface casing (13.375", 48#, H-40) was set by Exxon in 1979 at 375' in a 17.5" hole. Casing was cemented to GL with 450 sacks, of which 150 sacks circulated.

Intermediate casing (8.625", 32#, K-55) was set at 2860' in 12.25" hole. Casing was cemented to GL with 2170 sacks, of which 372 sacks circulated.

A 7.875" hole was drilled to 10,400' (TD) in the Atoka. No long string was run and the well was P&A by Exxon in 1979.

Well was re-entered in 1988 by Kersey & Co., perforated from 1624' to 2050' in the Seven Rivers, Queen, and Grayburg, and converted to SWD in 1989. V-F became operator in 2002. V-F will squeeze the perforations with 200 sacks Class C to 3000#. WOC = 24 hours.

V-F will drill a 7.875" hole to 14,000'. Production casing (5.5", 17#, L-80) will be set at 12,060' and cemented to GL with 2200 sacks. Well will be completed open hole Devonian from 12,060' to 14,000'.

A. (3) Tubing (3.5", 12.95#, L-80, IPC) will be set @ ≈12,000'. (Disposal interval will be 12,060' - 14,000'.)

A. (4) An Arrow 10,000# WP nickel-plated packer will be set @ ≈12,000' (or in any event, ≤100' above the top (12,060') of the open-hole.

B. (1) Disposal zone will be carbonates in the SWD; Devonian (NMOCD pool 96101). Estimated fracture gradient is ≈0.7 psi per foot.

B. (2) Injection interval (12,060' to 14,000') will be open hole.

B. (3) Well was drilled and plugged in 1979 as a dry Upper Penn well. Well was re-entered in 1988 and converted to a shallow SWD well.

B. (4) See following table for perforation and isolation history.

| DEPTH | ASPECT | STATUS | WHEN |
|---|---|---|---|
| 1624' - 2050' | perforated | open | 1988 |
| *1624' - 2050'* | *squeeze* | *will squeeze 200 sx* | *2018* |
| 2676' - 2774' | 35 sx plug | set | 1979 |
| 2824' - 2924' | 35 sx plug | set | 1979 |
| 3956' - 4056' | 35 sx plug | set | 1979 |
| 5915' - 6115' | 70 sx plug | set | 1979 |
| 8791' - 8891' | 25 sx plug | set | 1979 |
| 9571' - 9671' | 25 sx plug | set | 1979 |
| 10088' - 10108' | 25 sx plug | set | 1979 |
| 2860' - 10400' | uncased | open hole | 1979 |
| *12000'* | *packer* | *will set* | *2018* |
| *GL - 12060'* | *5.5" csg* | *will run & cement to GL w/ 2200 sx* | *2018* |
| *12060' - 14000'* | *deepen* | *will complete open hole* | *2018* |

B. (5) Next higher oil or gas zone in the area of review is the Morrow. Morrow bottom is ≈11,280'. Top of open hole will be 12,060'. There is no lower producing oil or gas zone in the area of review.

Closest Devonian producer is a Chevron well (30-015-05614) >16 miles ENE. Closest SWD; Devonian wells are 5.6 miles distant.

IV. This is not an expansion of an existing injection project. It is disposal only.

V. Exhibit B shows and tabulates 6 wells (3 producers + 3 P&A) within a half-mile radius. Exhibit C shows 277 existing wells (198 oil or gas + 54 P&A + 25 water injectors or disposals) within a 2-mile radius.

Exhibit D shows all leases and lessors (only NMSLO) within a half-mile radius. Exhibit E shows all leases and lessors (NMSLO and BLM) within a 2-mile radius. Details on the leases (only NMSLO) and operators within a half-mile radius follow. No Devonian operators are within a half-mile.

| Aliquot Parts in Area of Review | Lease | Lessee of Record | Well Operator(s) |
|---|---|---|---|
| SESW 13-19s-28e | OG-0784-0003 | Stephens & Johnson | Stephens & Johnson |
| S2SE4 13-19s-28e | OG-0784-0002 | S & J Operating | Stephens & Johnson and Mewbourne |
| N2, N2S2, SESW, & S2SE4 24-19s-28e | E0-5073-0005 | Mewbourne | Mewbourne and V-F |
| Lots 1 & 2 19-19s-29e | L0-6367-0004 | Oxy USA | Matador |
| Lot 3 19-19s-29e | LG-0945-0001 | Devon | Matador |

VI. None of the 6 wells that are within a half-mile penetrated the Devonian (≈12,060'). Deepest well (30-015-35689) within a half-mile went to 11,384' in the Barnett shale.

VII. 1. Average injection rate will be ≈10,000 bwpd.
Maximum injection rate will be 20,000 bwpd.
2. System will be open.
3. Average injection pressure will be ≈2000 psi. Maximum injection pressure will be 2412 psi (= 0.2 psi/foot x 12,060' (top of open hole)).
4. Water source will be produced water from Permian Basin wells. Exhibit F tabulates Township 19 South, Ranges 28 and 29 East analyses from New Mexico Produced Water Quality Database v.2. Samples from two Devonian wells show TDS ranged from 33,414 mg/l to 45,778 mg/l. No compatibility problems have been reported from the closest (5.6 miles SE and SSE) SWD; Devonian wells (30-015-41691 and 30-015-30828). A minimum 9,553,838 barrels have been disposed to date.
5. Closest Devonian producer (30-015-05614) is 16 miles northeast. Devonian water samples from Lea Unit 8 (30-025-02431) and Lea Unit 9 (30-025-02432) show:

| Lea Unit Well | TDS (mg/L) | Chlorides (mg/L) | Sulfate (mg/L) |
|---|---|---|---|
| 8 | 33,414 | 18,570 | 1,961 |
| 9 | 45,778 | 26,440 | 729 |

VIII. The Devonian is comprised of carbonates. It is an estimated 1940' thick in this well. Closest possible underground source of drinking water above the proposed disposal interval are the red beds from GL to 425'. There is ≈835' of salt and anhydrite below the red beds and 11,635' of separation between the bottom of the red beds and the top of the Devonian.

State Engineer records (Exhibit G) do not show any water wells within a 2-mile radius. However, a water well ("West Well" on USGS map) 1.2 miles north was found and sampled on February 22, 2018. Analysis is in Exhibit G. Northcott 3 is two miles northwest of the Capitan.

No underground source of drinking water is below the proposed disposal interval. Produced water is currently being injected in 24 wells and disposed in 3 wells within 19s-28e. Target zones are the Yates, Seven Rivers, Queen, Grayburg, San Andres, Cisco, and Canyon.

Formation tops are:

Quaternary = 0'
Salado = 350'
Base salt = 600'
Yates = 890'
Seven Rivers = 1300'
Grayburg = 2200'
San Andres = 2818'
Bone Spring = 3972'
Wolfcamp = 8894'
Penn = 9595'
Cisco = 9660'
Strawn = 10,094'
Atoka = 10,358'
Morrow = 10,575'
Devonian = 12,060'
*Proposed Disposal Zone = 12060' - 14,000'*
TD: 14,000'

IX. The well will be stimulated with acid to clean out scale or fill.

X. DLL, compensated neutron, and gamma ray logs are on file with NMOCD.

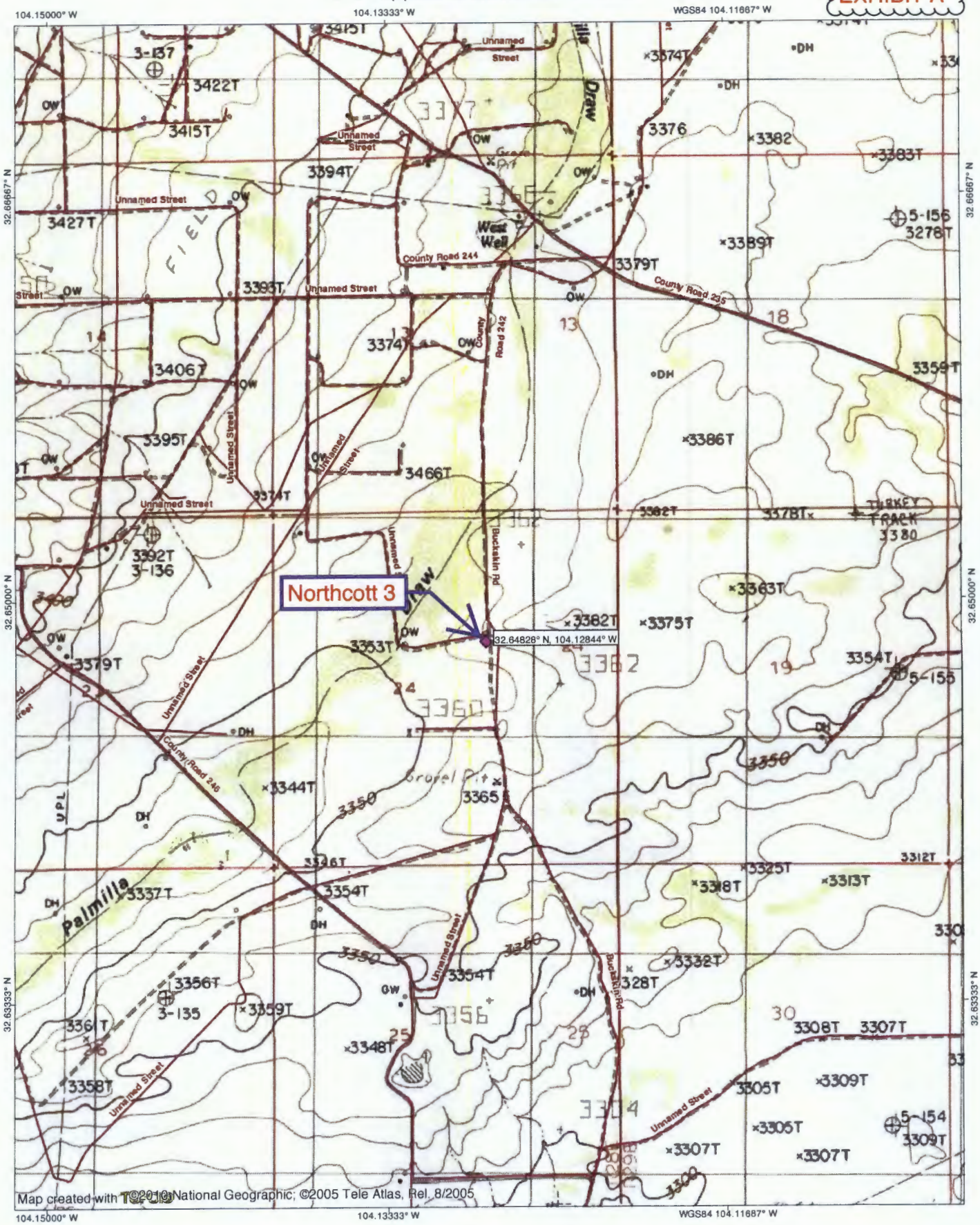
XI. No water well is within a mile. See Exhibit G for sample point and results of a water well that is 1.2 miles north.

XII. V-F Petroleum Inc. is not aware of any geologic or engineering data that may indicate the Devonian is in hydrologic connection with any underground source of water. There are 126 active Devonian saltwater disposal wells in New Mexico. Closest Quaternary fault (Guadalupe) is ≈60 miles west (Exhibit H).

XIII. A legal ad (Exhibit I) was published on February 27, 2014. Notice (this application) is being sent to the surface owner (NMSLO), lessor (NMSLO), and all oil and gas lessees (Devon Energy Production Co. LP, Mewbourne Oil Company, OXY USA Inc., S & J Operating Company, Stephens & Johnson Operating Company), or operators (Matador Production Company, Mewbourne Oil Co., and Stephens & Johnson Operating Company) within a half-mile (Exhibit J).

TOPO! map printed on 03/28/18 from "Untitled.tpo"

EXHIBIT A




NATIONAL GEOGRAPHIC

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 miles
0.0 0.5 1.0 km

TN MN
7°
03/28/18

EXHIBIT A

Exxon Lse. No. _____ ' 'MEXICO OIL CONSERVATION COMMIS N

State Lse. No. _____ WELL LOCATION AND ACREAGE DEDICATION PLAT

Federal Lse. No. _____ All distances must be from the outer boundaries of the Section.

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

| Operator | Lease | Well No. |
|---|---|---|
| Exxon Corporation | New Mexico "CU" State | 3 |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| G | 24 | 19 South | 28 East | Eddy |

Actual Footage Location of Well: 1980 feet from the North line and 1980 feet from the East line

| Ground Level Elev. | Producing Formation | Pool | Dedicated Acreage: |
|---|---|---|---|
| | Cisco | Winchester Upper Penn | 320 Acres |

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

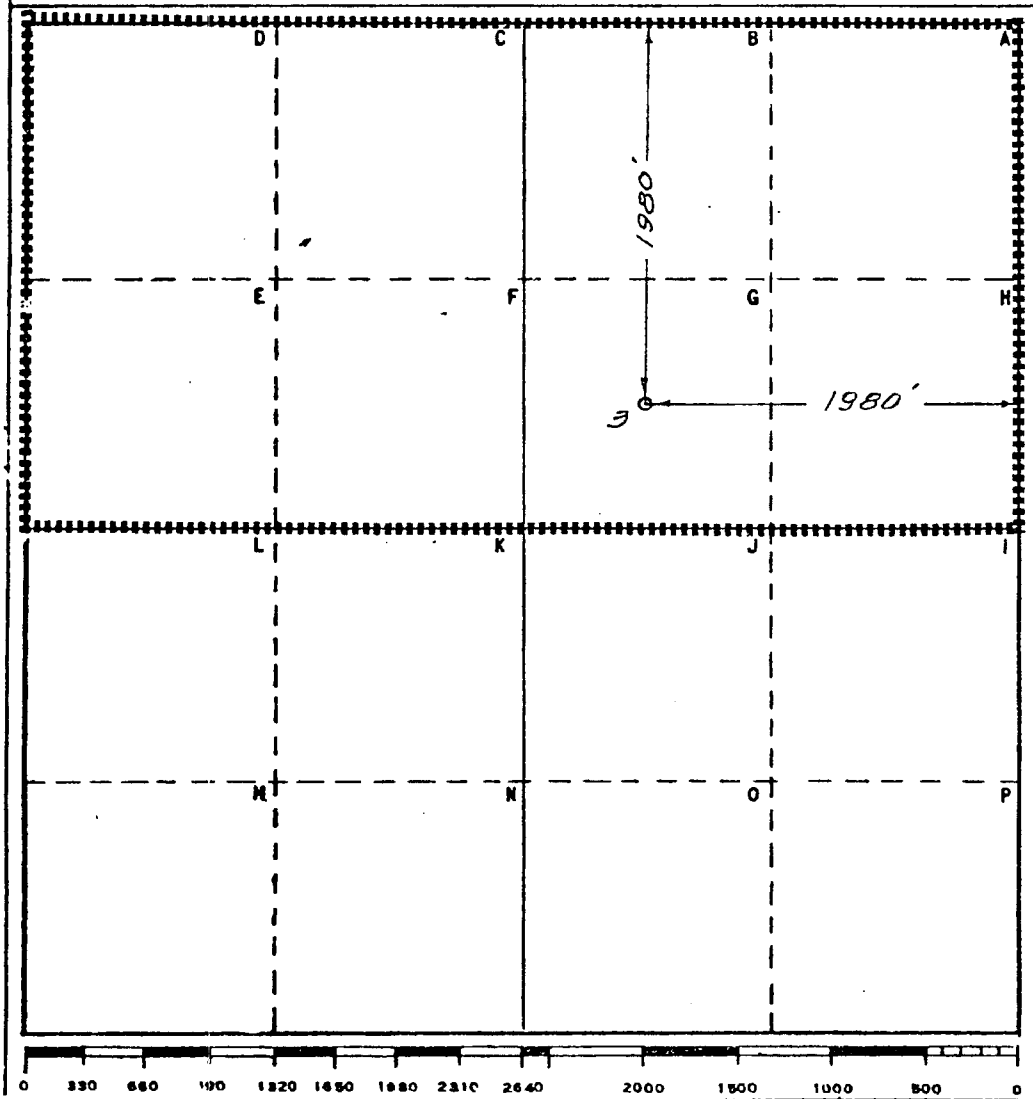
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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: Melba Knipling

Position: *Proration Specialist*

Company: Exxon Corporation

Box 1600 Midland, Texas

Date: 3-22-79

*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.*

3-21-79

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

W. B. Mitchell

Certificate No. 1382

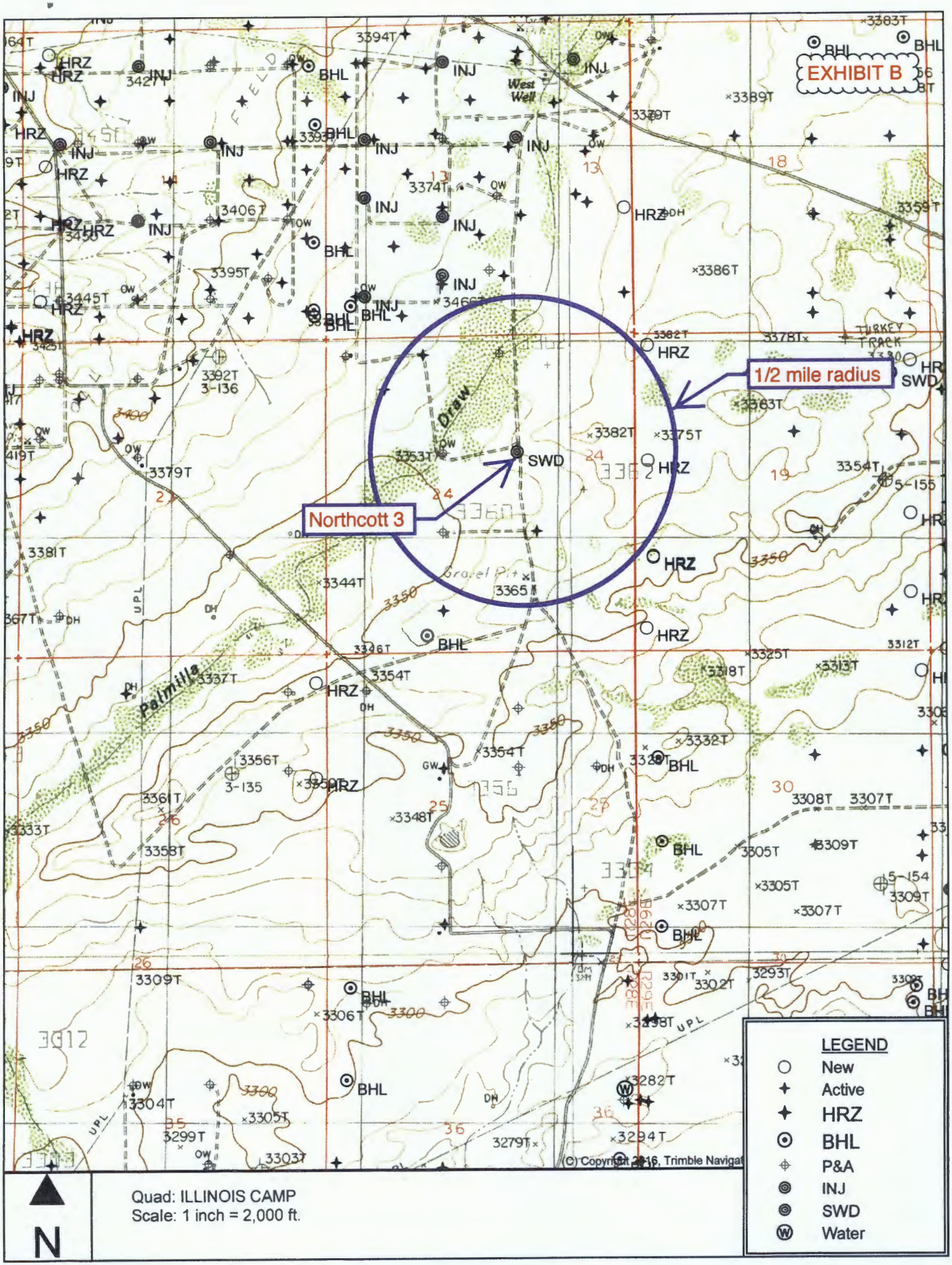


EXHIBIT B
1/2 mile radius
Northcott 3
SWD
Draw
Gravel Pit
Palmilla
FIELD
West Well
TURKEY TRACK
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Water
Quad: ILLINOIS CAMP
Scale: 1 inch = 2,000 ft.
N
(C) Copyright 2016, Trimble Navigat

ALL WELLS WITHIN 2700 FEET
SORTED BY DISTANCE FROM NORTHCOTT 3

| API | OPERATOR | WELL | UNIT-SECTION | TVD | STATUS | MOST RECENT ZONE | FEET FROM NORTHCOTT 3 |
|---|---|---|---|---|---|---|---|
| 3001502300 | Dominion Oklahoma Texas | State A 001 | F-24 | 2693 | P&A | Millman;Yates-SR-QN-GB-SA, East | 1246 |
| 3001527722 | V-F Petroleum | Parkchester 24 State 001 | J-24 | 11320 | O | Millman;Yates-SR-QN-GB-SA, East | 1367 |
| 3001523390 | Webb | Ruth 001 | B-24 | 2270 | P&A | Millman;Yates-SR-QN-GB-SA, East | 1675 |
| 3001502299 | Continental | State A-24 001 | K-24 | 3715 | P&A | Millman;Yates-SR-QN-GB-SA, East | 1831 |
| 3001537998 | Mewbourne | Parkchester 24 ST 003H | C-24 | 7609 | O | Scanlon Draw; Bone Spring | 2276 |
| 3001535689 | Mewbourne | Parkchester 24 ST 002 | D-24 | 11384 | G | Winchester; Morrow (G) | 2504 |

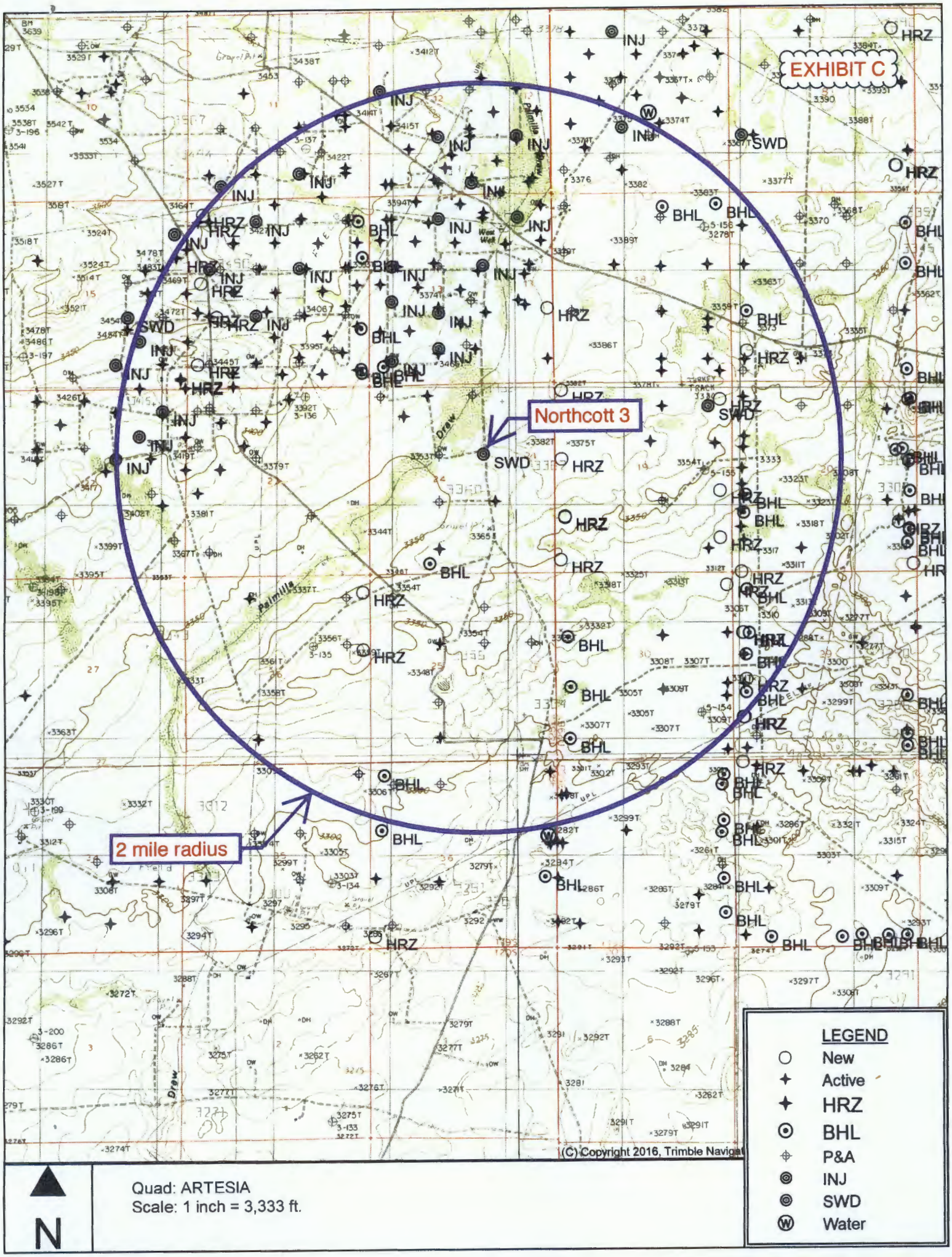
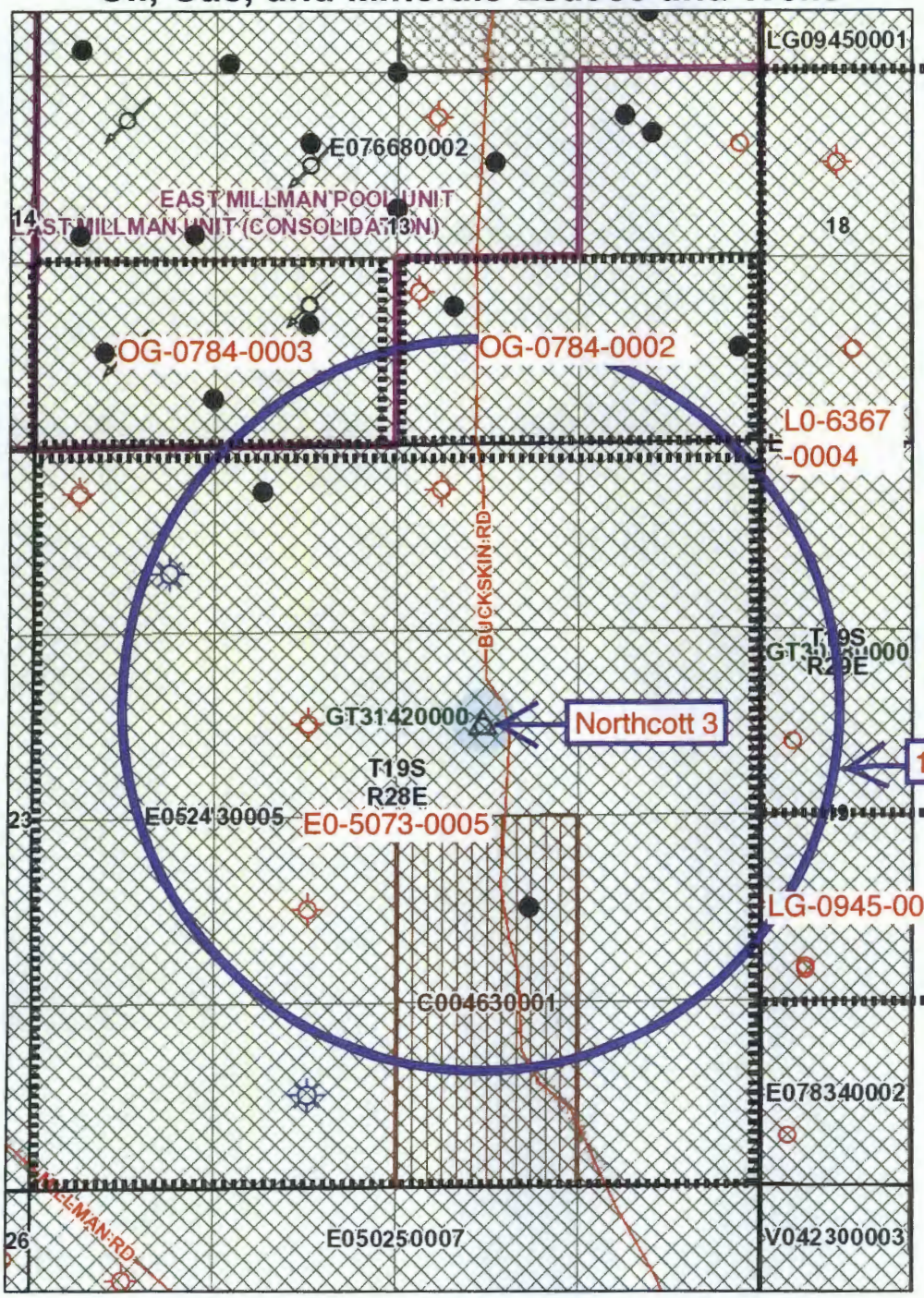


EXHIBIT C
Northcott 3
2 mile radius
(C) Copyright 2016, Trimble Navigat
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Water
N
Quad: ARTESIA
Scale: 1 inch = 3,333 ft.

New Mexico State Land Office

# Oil, Gas, and Minerals Leases and Wells

EXHIBIT D




- Oil
- Salt Water Disposal
- Water Storage
- Miscellaneous
- Plugged / Dry / Abandoned
- Cancelled / Not Drilled
- Highway Mileposts
- Detailed Roads
- Unit Agreement Boundaries
- Participating Areas in Units
- Commercial Leases
- Minerals Leases
- Oil and Gas Leases
- Agricultural Leases
- Energy Leases
- Potash District
- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

0 0.125 0.25 0.5 mi

0 0.175 0.35 0.7 km

N

Disclaimer:
The New Mexico State Land Office assumes no responsibility or liability for, or in connection with the accuracy, reliability or use of the information provided herein with respect to State Land Office data or data from other sources.

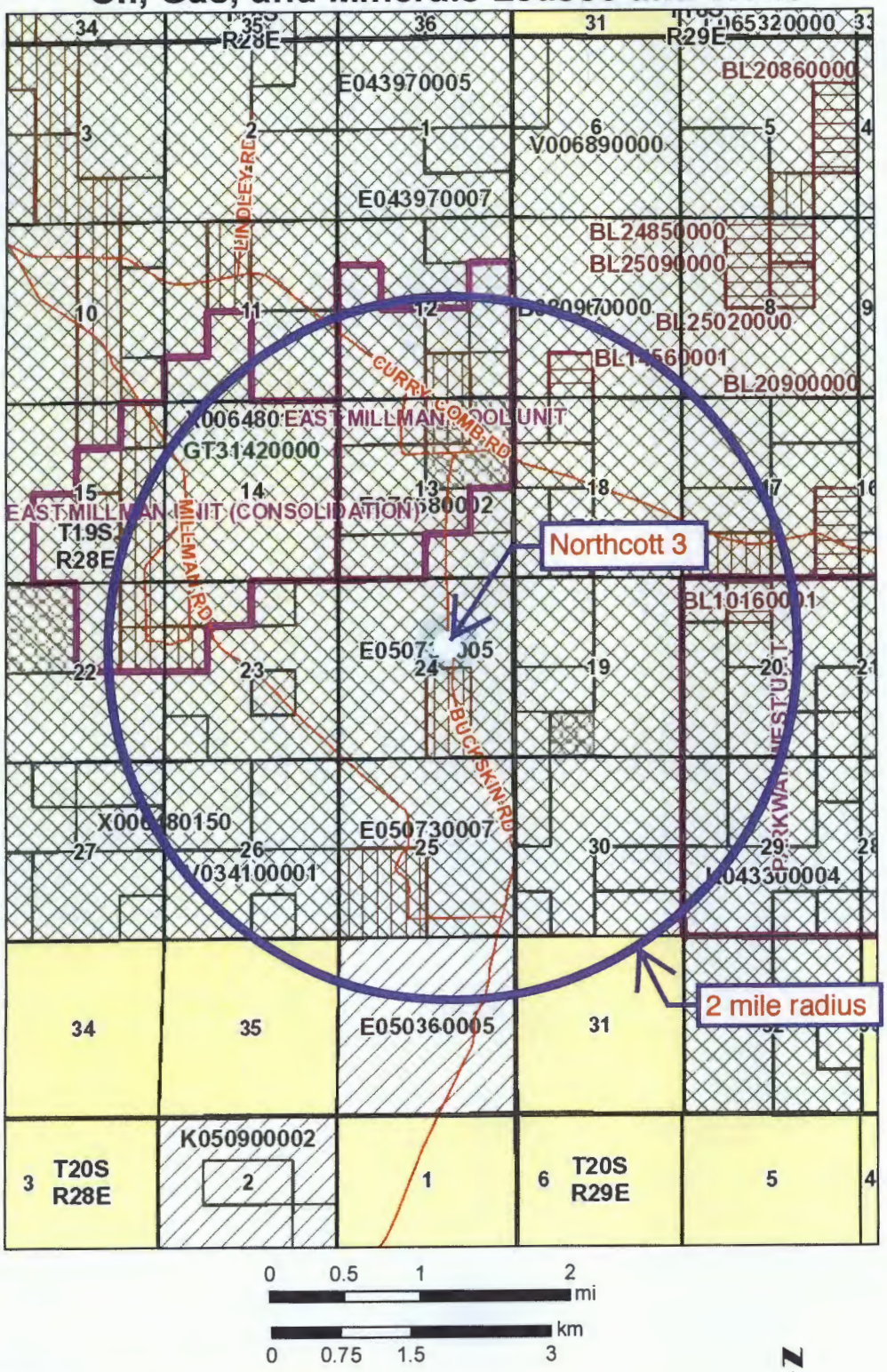
Data pertaining to New Mexico State Trust Lands are provisional and subject to revision, and do not constitute an official record of title. Official records may be reviewed at the New Mexico State Land Office in Santa Fe, New Mexico.

Map Created: 3/29/2018

New Mexico State Land Office

EXHIBIT E

# Oil, Gas, and Minerals Leases and Wells




- Larger Towns
- Cities
- State Boundary
- Continental Divide
- County Boundaries
- Townships
- Sections
- Highway Mileposts
- Detailed Roads
- Unit Agreement Boundaries
- Participating Areas in Units
- Commercial Leases
- Minerals Leases
- Oil and Gas Leases
- Agricultural Leases
- Energy Leases
- Potash District
- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals

0 0.5 1 2 mi

0 0.75 1.5 3 km

N

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Map Created: 3/29/2018

All Constituents in mg/l

| API | Section | Township | Range | Unit | Formation | TDS | Na | Ca | Fe | Mg | Cl | HCO3 | SO4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3001502302 | 25 | 19S | 28E | D | Queen | 66874 | 23288 | 1804 | | 608 | 39757 | 1154 | 262 |
| 3001502226 | 12 | 19S | 28E | P | Artesia | 100179 | | | | | 59426 | 1088 | 1050 |
| 3001502239 | 13 | 19S | 28E | M | Artesia | 122436 | | | | | 71810 | 1000 | 2404 |
| 3001502301 | 25 | 19S | 28E | H | Delaware | 55498 | | | | | 32420 | 601 | 984 |
| 3001502178 | 4 | 19S | 28E | C | Artesia | 140946 | | | | | 85640 | 450 | 2229 |
| 3001502280 | 21 | 19S | 28E | G | Wolfcamp | 118720 | | | | | 70200 | 2700 | 1080 |
| 3001502301 | 25 | 19S | 28E | H | Queen | | | | | | | | |
| 3001502301 | 25 | 19S | 28E | H | Queen | | | | | | | | |
| 3001502302 | 25 | 19S | 28E | D | Artesia | 66858 | | | | | 39750 | 1154 | 262 |
| 3001502303 | 26 | 19S | 28E | A | Seven Rivers | | | | | | | | |
| 3001523998 | 16 | 19S | 28E | G | Morrow | 56555 | | 1680 | 60 | 730 | 34080 | 866 | 13 |
| 3001510105 | 13 | 19S | 28E | N | Artesia | 113098 | | | | | 64800 | 1728 | 4104 |
| | | | | | | | | | | | | | |
| 3001538338 | 20 | 19S | 29E | D | Bone Spring 2nd Ss | 214079 | 68545 | 11436 | 36 | 1947 | 129500 | 110 | 0 |
| 3001538421 | 20 | 19S | 29E | E | Bone Spring 2nd Ss | 212073 | 68607 | 11378 | 31 | 2164 | 127200 | 122 | 0 |
| 3001539365 | 20 | 19S | 29E | L | Bone Spring 2nd Ss | 204892 | 66120 | 11033 | 41 | 1821 | 123300 | 134 | 0 |
| 3001539373 | 29 | 19S | 29E | L | Bone Spring 2nd Ss | 204175 | 66112 | 11002 | 43 | 1752 | 122800 | 98 | 0 |
| 3001539790 | 33 | 19S | 29E | M | Bone Spring 2nd Ss | 194362 | 62735 | 10730 | 33 | 1733 | 116600 | 134 | 0 |
| 3001539806 | 33 | 19S | 29E | N | Bone Spring 2nd Ss | 212965 | 67869 | 11454 | 40 | 2204 | 128700 | 146 | 0 |
| 3001540025 | 20 | 19S | 29E | E | Bone Spring 3rd Ss | 103835 | 32098 | 6912 | 84 | 1008 | 62300 | 281 | 0 |
| 3001540037 | 20 | 19S | 29E | M | Bone Spring 2nd Ss | 206939 | 68708 | 11434 | 41 | 1886 | 122200 | 146 | 0 |
| 3001540423 | 29 | 19S | 29E | E | Bone Spring 2nd Ss | 202518 | 66051 | 11044 | 45 | 1871 | 121000 | 134 | 0 |
| 3001540424 | 29 | 19S | 29E | M | Bone Spring 2nd Ss | 199175 | 65110 | 10607 | 27 | 1713 | 119200 | 134 | 0 |
| 3001540512 | 21 | 19S | 29E | M | Bone Spring 1st Ss | | 101408 | 3045 | 12 | 671 | 162925 | 549 | 290 |
| 3001540515 | 29 | 19S | 29E | P | Bone Spring 1st Ss | | 97526 | 2676 | 0 | 586 | 155601 | 927 | 310 |
| 3001540584 | 32 | 19S | 29E | B | Bone Spring 1st Ss | 213293 | 72011 | 3096 | 26 | 608 | 134925 | | 603 |
| 3001540606 | 32 | 19S | 29E | B | Bone Spring 1st Ss | 243754 | 81606 | 2589 | 36 | 973 | 152761 | | 3578 |
| 3001540777 | 12 | 19S | 29E | K | Bone Spring 2nd Ss | 211237 | 62106 | 11194 | 88 | 1452 | 133575 | | 789 |
| 3001540778 | 12 | 19S | 29E | H | Bone Spring 2nd Ss | 220688 | 66570 | 12206 | 66 | 1590 | 137383 | | 732 |
| 3001540822 | 22 | 19S | 29E | D | Bone Spring 1st Ss | 208209 | 71859 | 3449 | 40 | 701 | 129492 | | 622 |

EXHIBIT F

All Constituents in mg/l

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3001538421 | 20 | 19S | 29E | E | Bone Spring 2nd Ss | 218593 | 71348 | 11431 | 44 | 2171 | 130625 | | 593 |
| 3001539806 | 33 | 19S | 29E | N | Bone Spring 2nd Ss | 211695 | 65999 | 10786 | 37 | 2077 | 129142 | | 629 |
| 3001540025 | 20 | 19S | 29E | E | Bone Spring 3rd Ss | 76582 | 25463 | 2775 | 38 | 498 | 45756 | | 930 |
| 3001540509 | 28 | 19S | 29E | D | Bone Spring 1st Ss | 208768 | 75798 | 3376 | 73 | 684 | 126019 | | 536 |
| 3001543321 | 28 | 19S | 29E | H | Bone Spring 3rd Ss | 105001 | 35624 | 3951 | 18 | 690 | 62695 | | 685 |
| 3001538334 | 22 | 19S | 29E | D | Bone Spring 2nd Ss | 209176 | 74633 | 3152 | 32 | 653 | 127957 | | 559 |
| 3001539373 | 29 | 19S | 29E | L | Bone Spring 2nd Ss | 207229 | 72432 | 7735 | 62 | 1304 | 122859 | | 588 |
| 3001539386 | 29 | 19S | 29E | A | Bone Spring 2nd Ss | 210082 | 79107 | 2905 | 16 | 645 | 124634 | | 624 |
| 3001540035 | 32 | 19S | 29E | B | Bone Spring 2nd Ss | 204442 | 69490 | 2892 | 17 | 616 | 128687 | | 738 |
| 3001540135 | 28 | 19S | 29E | D | Bone Spring 1st Ss | 216803 | 79610 | 2917 | 15 | 650 | 130755 | | 662 |
| 3001540216 | 27 | 19S | 29E | M | Bone Spring 2nd Ss | 205198 | 76060 | 2957 | 69 | 598 | 122742 | | 502 |
| 3001540289 | 27 | 19S | 29E | M | Bone Spring 1st Ss | 205841 | 75826 | 2827 | 98 | 580 | 123798 | | 504 |
| 3001540584 | 32 | 19S | 29E | B | Bone Spring 1st Ss | 214766 | 78221 | 3072 | 15 | 673 | 129950 | | 680 |
| 3001540587 | 20 | 19S | 29E | I | Bone Spring 1st Ss | 220041 | 82296 | 3071 | 19 | 678 | 131023 | | 709 |
| 3001540781 | 12 | 19S | 29E | H | Bone Spring 1st Ss | 213636 | 79761 | 3295 | 22 | 662 | 127089 | | 481 |
| 3001540822 | 22 | 19S | 29E | D | Bone Spring 1st Ss | 209470 | 75384 | 3145 | 35 | 658 | 127594 | | 557 |
| 3001542809 | 21 | 19S | 29E | I | Bone Spring 3rd Ss | 117585 | 38613 | 4526 | 39 | 774 | 71782 | | 550 |
| 3001540778 | 12 | 19S | 29E | H | Bone Spring 2nd Ss | 210922 | 63737 | 10725 | 60 | 1439 | 132273 | | 617 |
| 3001542946 | 20 | 19S | 29E | D | Bone Spring 3rd Ss | 106366 | 34602 | 4236 | 19 | 736 | 64935 | | 703 |
| 3001538605 | 21 | 19S | 29E | E | Bone Spring 2nd Ss | 187069 | 59558 | 9295 | 39 | 1457 | 112389 | 73 | 2422 |
| 3001539372 | 21 | 19S | 29E | I | Bone Spring 2nd Ss | 179727 | 56773 | 9354 | 42 | 1408 | 108290 | 73 | 2022 |
| 3001539373 | 29 | 19S | 29E | L | Bone Spring 2nd Ss | 207257 | 64962 | 11127 | 37 | 1762 | 125792 | 61 | 1442 |
| 3001540037 | 20 | 19S | 29E | M | Bone Spring 2nd Ss | 188897 | 58687 | 10476 | 29 | 1659 | 114294 | 49 | 1768 |
| 3001539386 | 29 | 19S | 29E | A | Bone Spring 2nd Ss | 207902 | 67569 | 9690 | 27 | 1472 | 126295 | 49 | 1128 |
| 3001540135 | 28 | 19S | 29E | D | Bone Spring 1st Ss | 79317 | 27817 | 1901 | 23 | 288 | 46791 | 573 | 1057 |
| 3001540423 | 29 | 19S | 29E | E | Bone Spring 2nd Ss | 191835 | 60132 | 10463 | 55 | 1576 | 116618 | 73 | 1132 |
| 3001540779 | 12 | 19S | 29E | L | Bone Spring 1st Ss | 210479 | 78858 | 3619 | 17 | 723 | 124000 | 488 | 639 |
| 3001540782 | 12 | 19S | 29E | K | Bone Spring 2nd Ss | 196138 | 62689 | 10129 | 36 | 1390 | 118800 | 98 | 929 |
| 3001538605 | 21 | 19S | 29E | E | Bone Spring 2nd Ss | 212439 | 70396 | 10624 | 35 | 1653 | 126800 | 49 | 777 |
| 3001540134 | 21 | 19S | 29E | M | Bone Spring 2nd Ss | 221551 | 66995 | 10754 | 24 | 2054 | 138800 | 37 | 652 |
| 3001540512 | 21 | 19S | 29E | M | Bone Spring 1st Ss | 167727 | 59396 | 2871 | 16 | 546 | 102000 | 317 | 748 |

All Constituents in mg/l

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3001538335 | 21 | 19S | 29E | D | Bone Spring 2nd Ss | 207620 | 63676 | 10340 | 38 | 1579 | 129265 | 24 | 0 |
| 3001539328 | 28 | 19S | 29E | P | Bone Spring 2nd Ss | 209249 | 63419 | 10816 | 27 | 1939 | 130309 | 61 | 0 |
| 3001539386 | 29 | 19S | 29E | A | Bone Spring 2nd Ss | 210714 | 64075 | 11182 | 47 | 1749 | 130950 | 37 | 0 |
| 3001540135 | 28 | 19S | 29E | D | Bone Spring 1st Ss | 204699 | 70858 | 2959 | 31 | 647 | 127420 | 268 | 0 |
| 3001540206 | 28 | 19S | 29E | D | Bone Spring 2nd Ss | 210487 | 63900 | 10990 | 45 | 1916 | 130880 | 61 | 0 |
| 3001540217 | 28 | 19S | 29E | C | Bone Spring 2nd Ss | 200099 | 62122 | 10663 | 30 | 1899 | 122620 | 85 | 0 |
| 3001540508 | 27 | 19S | 29E | L | Bone Spring 1st Ss | 209710 | 72736 | 3012 | 71 | 575 | 130499 | 305 | 0 |
| 3001540513 | 21 | 19S | 29E | M | Bone Spring 1st Ss | 214315 | 74061 | 3014 | 60 | 687 | 133469 | 366 | 0 |
| 3001538333 | 27 | 19S | 29E | D | Bone Spring 2nd Ss | | 56874 | 10448 | 40 | 1708 | 112925 | 146 | 540 |
| 3001538605 | 21 | 19S | 29E | E | Bone Spring 2nd Ss | | 68390 | 10388 | 61 | 1720 | 130427 | 110 | 820 |
| 3001539374 | 21 | 19S | 29E | L | Bone Spring 2nd Ss | | 69882 | 10737 | 28 | 1836 | 133839 | 49 | 760 |
| 3001540134 | 21 | 19S | 29E | M | Bone Spring 2nd Ss | | 71254 | 10986 | 12 | 2354 | 138115 | 122 | 540 |
| 3001540511 | 20 | 19S | 29E | I | Bone Spring 1st Ss | | 79272 | 3440 | 21 | 664 | 131794 | 366 | 500 |
| 3001540591 | 20 | 19S | 29E | H | Bone Spring 1st Ss | | 68603 | 10342 | 23 | 1757 | 130837 | 73 | 800 |
| 3001540606 | 32 | 19S | 29E | B | Bone Spring 1st Ss | | 78663 | 3352 | 0 | 651 | 130698 | 366 | 540 |
| 3001540782 | 12 | 19S | 29E | K | Bone Spring 2nd Ss | | 72789 | 11481 | 40 | 1699 | 139551 | 61 | 620 |
| 3001538333 | 27 | 19S | 29E | D | Bone Spring 2nd Ss | | 78323 | 9979 | 32 | 1800 | 145351 | 98 | 640 |
| 3001538338 | 20 | 19S | 29E | D | Bone Spring 2nd Ss | | 57466 | 11211 | 23 | 2455 | 117396 | 110 | 540 |
| 3001538421 | 20 | 19S | 29E | E | Bone Spring 2nd Ss | | 59008 | 11203 | 17 | 2524 | 119999 | 146 | 480 |
| 3001539372 | 21 | 19S | 29E | I | Bone Spring 2nd Ss | | 58456 | 10738 | 40 | 1975 | 116569 | 110 | 640 |
| 3001539373 | 29 | 19S | 29E | L | Bone Spring 2nd Ss | | 76748 | 10831 | 41 | 2005 | 145145 | 244 | 460 |
| 3001539386 | 29 | 19S | 29E | A | Bone Spring 2nd Ss | | 82889 | 11278 | 58 | 2174 | 156139 | 134 | 520 |
| 3001540036 | 21 | 19S | 29E | P | Bone Spring 2nd Ss | | 83934 | 10820 | 39 | 1849 | 155753 | 122 | 600 |
| 3001540037 | 20 | 19S | 29E | M | Bone Spring 2nd Ss | | 88453 | 11171 | 27 | 2368 | 164953 | 122 | 440 |
| 3001540135 | 28 | 19S | 29E | D | Bone Spring 1st Ss | | 92567 | 3277 | 21 | 696 | 152161 | 366 | 460 |
| 3001540207 | 28 | 19S | 29E | O | Bone Spring 2nd Ss | | 76325 | 13728 | 0 | 2631 | 152008 | 122 | 640 |
| 3001540217 | 28 | 19S | 29E | C | Bone Spring 2nd Ss | | 84893 | 11130 | 15 | 2281 | 159026 | 110 | 740 |
| 3001540289 | 27 | 19S | 29E | M | Bone Spring 1st Ss | | 103455 | 3590 | 21 | 706 | 170216 | 378 | 400 |
| 3001540501 | 27 | 19S | 29E | L | Bone Spring 2nd Ss | | 86090 | 13546 | 25 | 1952 | 164708 | 171 | 580 |
| 3001540506 | 27 | 19S | 29E | H | Bone Spring 2nd Ss | | 84563 | 13920 | 39 | 2008 | 163345 | 98 | 740 |
| 3001540508 | 27 | 19S | 29E | L | Bone Spring 1st Ss | | 85353 | 3256 | 28 | 620 | 141209 | 366 | 360 |

All Constituents in mg/l

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3001540509 | 28 | 19S | 29E | D | Bone Spring 1st Ss | | 93253 | 3591 | 16 | 683 | 153680 | 366 | 480 |
| 3001541380 | 30 | 19S | 29E | I | Bone Spring 1st Ss | | 109466 | 2731 | 0 | 609 | 174338 | 549 | 440 |
| 3001540780 | 12 | 19S | 29E | K | Bone Spring 1st Ss | | 93423 | 5621 | 0 | 1224 | 157841 | 415 | 470 |
| 3001540782 | 12 | 19S | 29E | K | Bone Spring 2nd Ss | | 87943 | 20188 | 99 | 2702 | 179698 | 183 | 600 |
| 3001541014 | 21 | 19S | 29E | P | Bone Spring 1st Ss | | 86063 | 5256 | 27 | 1154 | 145983 | 488 | 490 |
| 3001540512 | 21 | 19S | 29E | M | Bone Spring 1st Ss | | 85156 | 5652 | 21 | 1173 | 145584 | 476 | 510 |
| 3001540591 | 20 | 19S | 29E | H | Bone Spring 1st Ss | | 104490 | 5604 | 21 | 1237 | 175022 | 964 | 490 |
| 3001541008 | 22 | 19S | 29E | E | Bone Spring 1st Ss | | 86589 | 5601 | 51 | 1217 | 147547 | 537 | 510 |
| 3001540509 | 28 | 19S | 29E | D | Bone Spring 1st Ss | | 78139 | 5701 | 122 | 1195 | 134723 | 476 | 490 |
| 3001540511 | 20 | 19S | 29E | I | Bone Spring 1st Ss | | 91931 | 5555 | 20 | 1182 | 155717 | 439 | 470 |
| 3001503554 | 3 | 19S | 29E | F | Artesia | 6605 | | | | | 1933 | 246 | 2296 |
| 3001503537 | 1 | 19S | 29E | M | DEVONIAN | 29011 | | | | | 16000 | 520 | 1500 |
| 3001503555 | 3 | 19S | 29E | D | Artesia | 5776 | | | | | 1926 | 184 | 1846 |
| 3001503563 | 5 | 19S | 29E | F | Artesia | 200307 | | | | | 118800 | 1641 | 2853 |
| 3001503597 | 18 | 19S | 29E | L | Artesia | 76473 | | | | | 43850 | 1260 | 2424 |
| 3001503612 | 32 | 19S | 29E | D | Bone Spring | 33760 | | | | | 15600 | 290 | 5500 |
| 3001503612 | 32 | 19S | 29E | D | PENNSYLVANIAN | 6420 | | | | | | | |
| 3001503615 | 34 | 19S | 29E | P | Artesia | 51629 | | | | | 25250 | 1964 | 6000 |
| 3001503615 | 34 | 19S | 29E | P | Artesia | 152978 | | | | | 82800 | 183 | 11900 |
| 3001503615 | 34 | 19S | 29E | P | Artesia | 66591 | | | | | 35200 | 1365 | 5200 |
| 3001540584 | 32 | 19S | 29E | B | Bone Spring 1st Ss | 195749 | 70891 | 3422 | 17 | 683 | 117441 | | 964 |
| 3001540217 | 28 | 19S | 29E | C | Bone Spring 2nd Ss | 211734 | 70916 | 11464 | 16 | 2278 | 123941 | 98 | 0 |
| 3001540514 | 29 | 19S | 29E | H | Bone Spring 1st Ss | 203297 | 76713 | 3056 | 29 | 651 | 119809 | 390 | 0 |
| 3001540583 | 27 | 19S | 29E | A | Bone Spring 1st Ss | | 94174 | 3444 | 25 | 695 | 155343 | 305 | 420 |
| 3001540592 | 28 | 19S | 29E | I | Bone Spring 1st Ss | | 94735 | 3617 | 15 | 717 | 156241 | 231 | 480 |
| 3001540777 | 12 | 19S | 29E | K | Bone Spring 2nd Ss | | 77378 | 11310 | 33 | 1609 | 145992 | 171 | 660 |
| 3001540779 | 12 | 19S | 29E | L | Bone Spring 1st Ss | | 94968 | 3407 | 3 | 730 | 155973 | 659 | 480 |
| 3001540780 | 12 | 19S | 29E | K | Bone Spring 1st Ss | | 90194 | 3568 | 0 | 718 | 149598 | 244 | 420 |
| 3001540782 | 12 | 19S | 29E | K | Bone Spring 2nd Ss | | 77810 | 13519 | 232 | 1752 | 151421 | 183 | 540 |
| 3001540822 | 22 | 19S | 29E | D | Bone Spring 1st Ss | | 95292 | 3405 | 14 | 671 | 156438 | 342 | 440 |
| 3001541008 | 22 | 19S | 29E | E | Bone Spring 1st Ss | | 96553 | 3472 | 11 | 698 | 158477 | 550 | 440 |

EXHIBIT F

All Constituents in mg/l

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3001540516 | 29 | 19S | 29E | H | Bone Spring 1st Ss | 210488 | 74730 | 3363 | 39 | 728 | 129027 | | 548 |
| 3001540781 | 12 | 19S | 29E | H | Bone Spring 1st Ss | 208284 | 75251 | 3375 | 18 | 677 | 126406 | | 488 |
| 3001538476 | 32 | 19S | 29E | A | Bone Spring 2nd Ss | 203063 | 60960 | 10276 | 46 | 1680 | 127495 | | 669 |
| 3001540507 | 27 | 19S | 29E | H | Bone Spring 1st Ss | 194044 | 69009 | 2891 | 47 | 594 | 119143 | | 546 |
| 3001540583 | 27 | 19S | 29E | A | Bone Spring 1st Ss | 207101 | 72181 | 3108 | 45 | 663 | 128420 | | 785 |
| 3001541007 | 21 | 19S | 29E | I | Bone Spring 1st Ss | 202394 | 71386 | 3167 | 66 | 688 | 124677 | | 552 |
| 3001541014 | 21 | 19S | 29E | P | Bone Spring 1st Ss | 204994 | 71291 | 3070 | 33 | 665 | 127550 | | 545 |
| 3001542809 | 21 | 19S | 29E | I | Bone Spring 3rd Ss | 115850 | 36308 | 4673 | 12 | 801 | 72335 | | 564 |
| 3001539806 | 33 | 19S | 29E | N | Bone Spring 2nd Ss | 216504 | 62855 | 10959 | 36 | 2056 | 137871 | | 647 |
| 3001540037 | 20 | 19S | 29E | M | Bone Spring 2nd Ss | 212555 | 61902 | 10789 | 34 | 1765 | 135296 | | 786 |
| 3001540423 | 29 | 19S | 29E | E | Bone Spring 2nd Ss | 213597 | 61082 | 10818 | 31 | 1979 | 137006 | | 753 |
| 3001540424 | 29 | 19S | 29E | M | Bone Spring 2nd Ss | 206242 | 59619 | 10150 | 26 | 1615 | 132172 | | 701 |
| 3001510329 | 36 | 19S | 29E | I | Artesia | 43392 | | | | | 20700 | 1428 | 5589 |
| 3001538335 | 21 | 19S | 29E | D | Bone Spring 2nd Ss | 18243 | 5584 | 971 | 15 | 165 | 10069 | 220 | 1055 |
| 3001538334 | 22 | 19S | 29E | D | Bone Spring 2nd Ss | 142243 | 45640 | 6959 | 44 | 989 | 85871 | 37 | 1319 |
| 3001538335 | 21 | 19S | 29E | D | Bone Spring 2nd Ss | 172529 | 55589 | 8279 | 37 | 1270 | 104676 | 24 | 1100 |
| 3001538338 | 20 | 19S | 29E | D | Bone Spring 2nd Ss | 215251 | 67241 | 11580 | 33 | 1943 | 130663 | 49 | 1549 |
| 3001538421 | 20 | 19S | 29E | E | Bone Spring 2nd Ss | 222698 | 70153 | 11230 | 23 | 2195 | 135411 | 49 | 1399 |
| 3001538476 | 32 | 19S | 29E | A | Bone Spring 2nd Ss | 197878 | 63015 | 9639 | 55 | 1655 | 119391 | 110 | 1990 |
| 3001539365 | 20 | 19S | 29E | L | Bone Spring 2nd Ss | 192416 | 60668 | 10063 | 40 | 1543 | 116201 | 98 | 1863 |
| 3001539386 | 29 | 19S | 29E | A | Bone Spring 2nd Ss | 192324 | 60013 | 10466 | 27 | 1697 | 116431 | 61 | 1722 |
| 3001539790 | 33 | 19S | 29E | M | Bone Spring 2nd Ss | 168771 | 52934 | 9017 | 37 | 1376 | 102210 | 98 | 1308 |
| 3001540036 | 21 | 19S | 29E | P | Bone Spring 2nd Ss | 179518 | 56819 | 9252 | 57 | 1394 | 108013 | 98 | 2157 |
| 3001540134 | 21 | 19S | 29E | M | Bone Spring 2nd Ss | 158405 | 49315 | 8392 | 23 | 1577 | 95620 | 122 | 1731 |

DEVONIAN PRODUCED WATER SAMPLES (mg/L)

| WELL | API | SECTION | TOWNSHIP | RANGE | FORMATION | TDS | CHLORIDE | SULFATE |
|---|---|---|---|---|---|---|---|---|
| Lea Unit 8 | 3002502431 | 12 | 20S | 34E | Devonian | 33414 | 18570 | 1961 |
| Lea Unit 9 | 3002502432 | 13 | 20S | 34E | Devonian | 45778 | 26440 | 729 |

EXHIBIT FF

# *New Mexico Office of the State Engineer*
# Water Column/Average Depth to Water

EXHIBIT G

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

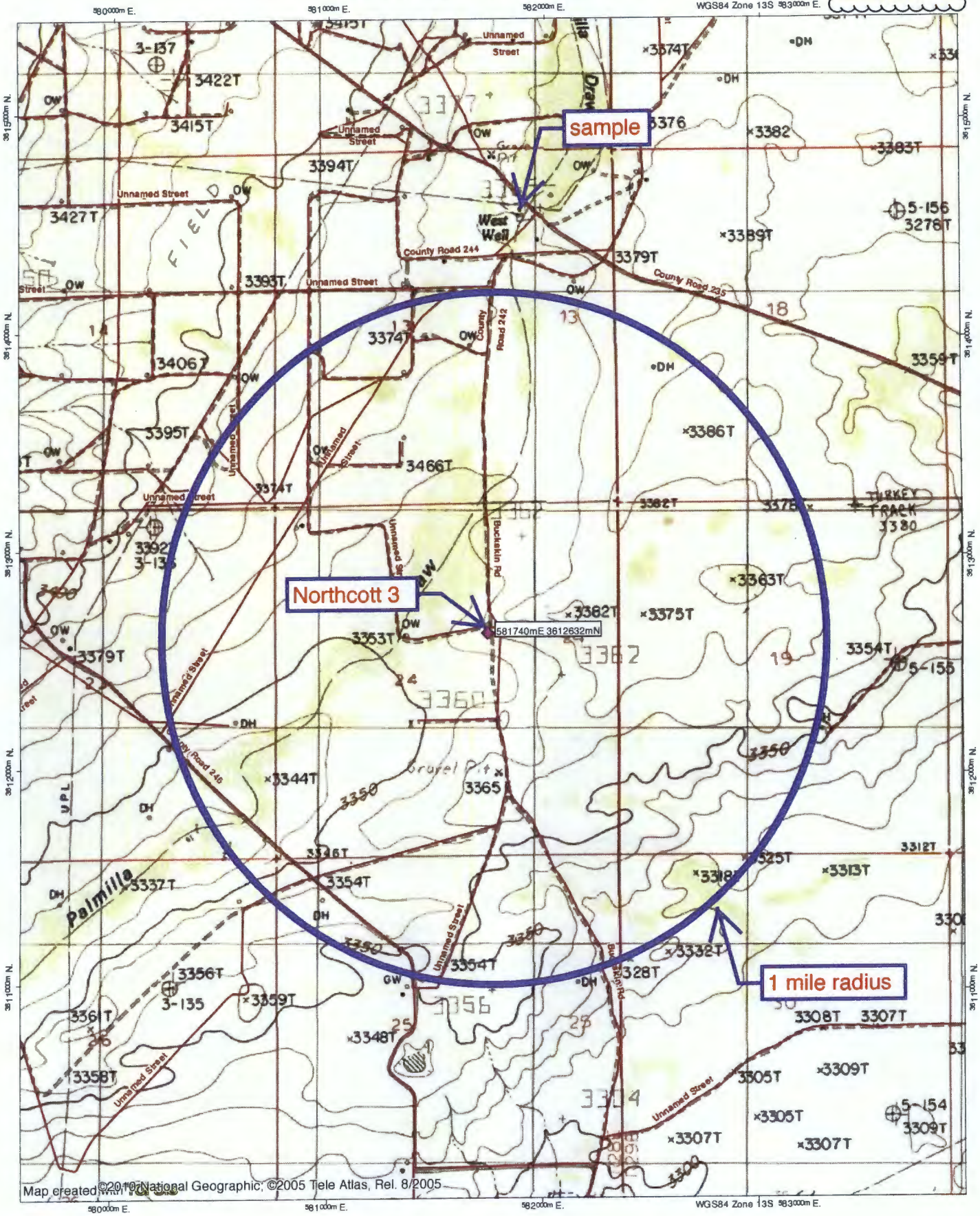
No records found.

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 581740 **Northing (Y):** 3612632 **Radius:** 3220

TOPO! map printed on 03/28/18 from "Untitled.tpo"

EXHIBIT G






NATIONAL GEOGRAPHIC

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 miles
0.0 0.5 1.0 km

TN + MN
7°
03/28/18

EXHIBIT G

**Analytical Report**
Lab Order **1802C89**
Date Reported: **3/13/2018**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Permits West
**Project:** V F Northcott SWD 3
**Lab ID:** 1802C89-001 **Matrix:** AQUEOUS

**Client Sample ID:** V-F NC Sec 18
**Collection Date:** 2/22/2018 9:51:00 AM
**Received Date:** 2/23/2018 10:06:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 1664B** | | | | | | Analyst: **dbf** | |
| N-Hexane Extractable Material | ND | 9.84 | | mg/L | 1 | 2/27/2018 12:00:00 PM | 36707 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | 160 | 10 | | mg/L | 20 | 2/23/2018 7:50:21 PM | R49381 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **KS** | |
| Total Dissolved Solids | 3340 | 20.0 | * | mg/L | 1 | 3/1/2018 11:43:00 AM | 36759 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

EXHIBIT G

WO#: 1802C89

## Hall Environmental Analysis Laboratory, Inc.

*13-Mar-18*

**Client:** Permits West
**Project:** V F Northcott SWD 3

| Sample ID | MB-36707 | SampType: | MBLK | TestCode: | EPA Method 1664B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 36707 | RunNo: | 49423 | | | | | |
| Prep Date: | 2/26/2018 | Analysis Date: | 2/27/2018 | SeqNo: | 1595614 | Units: | mg/L | | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| N-Hexane Extractable Material | ND | 10.0 | | | | | | | | |
| Silica Gel Treated N-Hexane Extrac | ND | 10.0 | | | | | | | | |

| Sample ID | LCS-36707 | SampType: | LCS | TestCode: | EPA Method 1664B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 36707 | RunNo: | 49423 | | | | | |
| Prep Date: | 2/26/2018 | Analysis Date: | 2/27/2018 | SeqNo: | 1595615 | Units: | mg/L | | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| N-Hexane Extractable Material | 32.2 | 10.0 | 40.00 | 0 | 80.5 | 78 | 114 | | | |
| Silica Gel Treated N-Hexane Extrac | 15.2 | 10.0 | 20.00 | 0 | 76.0 | 64 | 132 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

EXHIBIT G

WO#: 1802C89

## Hall Environmental Analysis Laboratory, Inc.

*13-Mar-18*

**Client:** Permits West
**Project:** V F Northcott SWD 3

| Sample ID **MB** | SampType: **mblk** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R49381** | RunNo: **49381** |
| Prep Date: | Analysis Date: **2/23/2018** | SeqNo: **1594453** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | |

| Sample ID **LCS** | SampType: **lcs** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R49381** | RunNo: **49381** |
| Prep Date: | Analysis Date: **2/23/2018** | SeqNo: **1594454** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.7 | 0.50 | 5.000 | 0 | 94.5 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

EXHIBIT G

# QC SUMMARY REPORT

WO#: 1802C89

## Hall Environmental Analysis Laboratory, Inc.

*13-Mar-18*

**Client:** Permits West
**Project:** V F Northcott SWD 3

| Sample ID | MB-36759 | SampType: | MBLK | | | TestCode: | SM2540C MOD: Total Dissolved Solids | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 36759 | | | RunNo: | 49477 | | | |
| Prep Date: | 2/27/2018 | Analysis Date: | 3/1/2018 | | | SeqNo: | 1598404 | Units: | mg/L | |

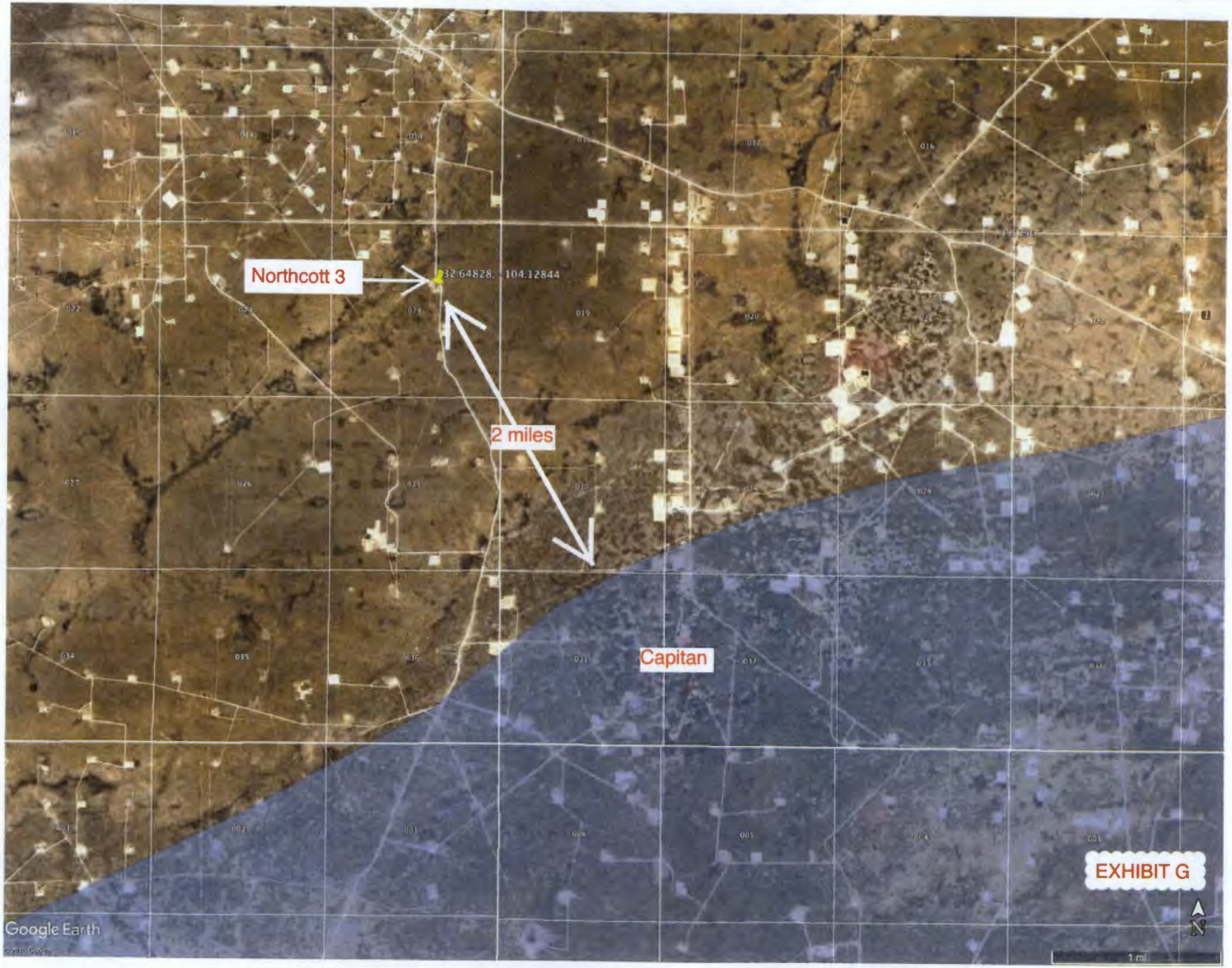
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | 20.0 | | | | | | | | |

| Sample ID | LCS-36759 | SampType: | LCS | | | TestCode: | SM2540C MOD: Total Dissolved Solids | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 36759 | | | RunNo: | 49477 | | | |
| Prep Date: | 2/27/2018 | Analysis Date: | 3/1/2018 | | | SeqNo: | 1598405 | Units: | mg/L | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1000 | 20.0 | 1000 | 0 | 100 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitativc Limit | RL | Rcporting Dctcction Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |


Northcott 3
32.64828, -104.12844
2 miles
Capitan
EXHIBIT G
Google Earth
N
1 mi

# V-F Petroleum Inc.

500 W. Texas, Suite 350, Midland, Texas 79701
Mailing Address: P.O. Box 1889, Midland, TX 79702
432-683-3344
FAX:432-683-3352

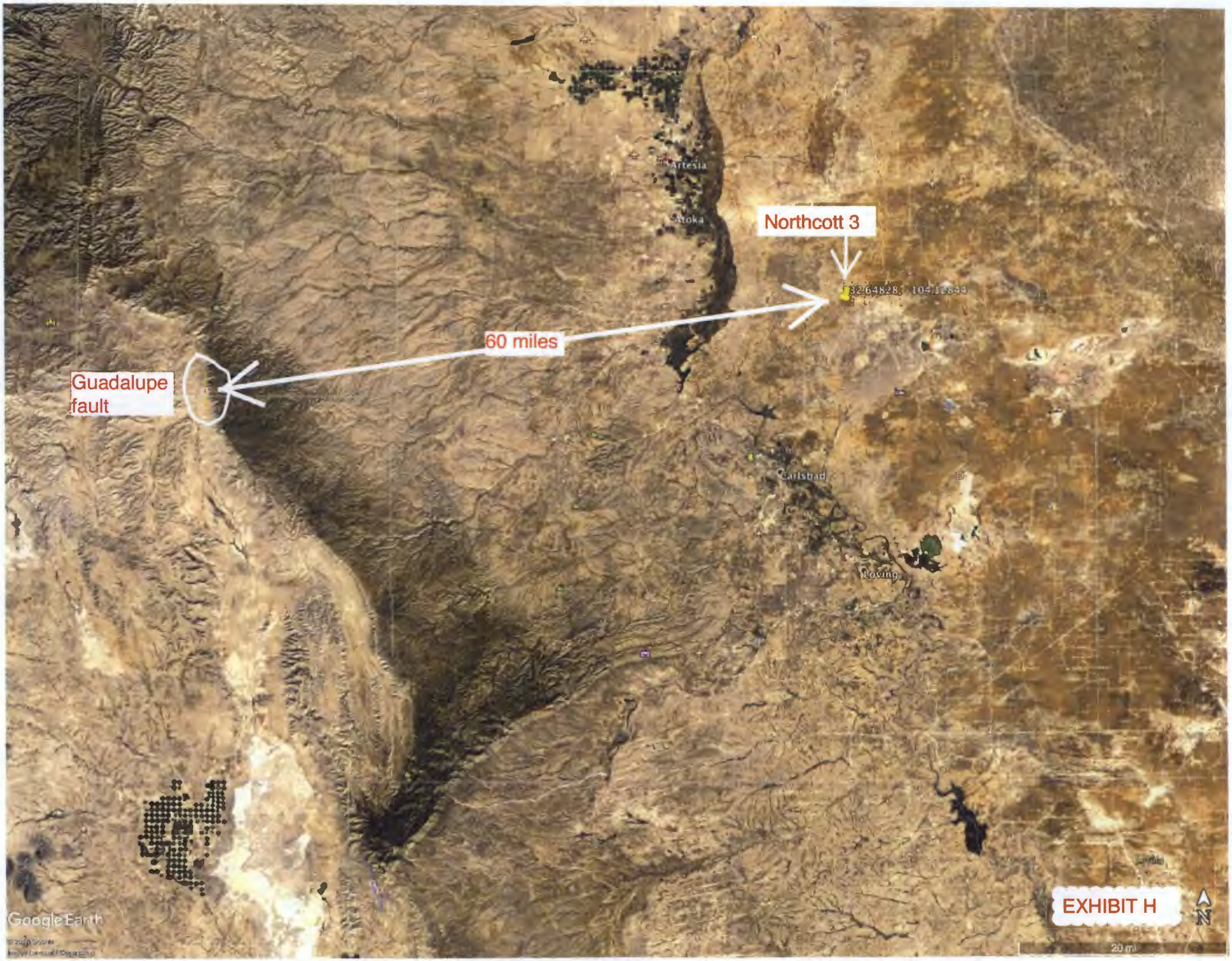
**Form C-108**
**Affirmative Statement**
**Northcott #3 SWD**
**Section 24, T-19-S, R-28-E, NMPM**
**Eddy County, New Mexico**

Available geologic and engineering data has been examined and no evidence of open faults or hydrological connection between the injection zone and any underground sources of drinking water has been found.

Dale Lubinski
Geologist

4-4-18
Date

EXHIBIT H


Artesia
Atoka
Northcott 3
32.64828, -104.12844
60 miles
Guadalupe fault
Carlsbad
Loving
EXHIBIT H
N
Google Earth
20 mi

**Affidavit of Publication**

State of New Mexico,
County of Eddy, ss.

**Danny Fletcher**, being first duly sworn, on oath says:

That he is the Publisher of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

February 27 2018

That the cost of publication is **$54.19** and that payment thereof has been made and will be assessed as court costs.

Subscribed and sworn to before me this 1 day of March, 2018

Cynthia Arredondo

My commission Expires 2/13/21

Notary Public

OFFICIAL SEAL
CYNTHIA ARREDONDO
Notary Public
State of New Mexico
My Comm. Expires 2/13/21

***February 27, 2018***

V-F Petroleum Inc. will apply to deepen the Northcott 3 saltwater disposal well. V-F will squeeze the existing Grayburg disposal zone and add the deeper Devonian as a disposal zone. The well will dispose into the Devonian formation from 12,060' to 14,000'. It is 16 miles northeast of Carlsbad, NM at 1980 FNL & 1980 FEL Sec. 24, T. 19 S., R. 28 E., Eddy County, NM. Maximum disposal rate will be 20,000 bwpd. Maximum injection pressure will be 2,412 psi. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120.

EXHIBIT I

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

April 1, 2018

NM State Land Office
PO Box 1148
Santa Fe NM 87504

TYPICAL LETTER

V-F Petroleum Inc. is applying (see attached application) to deepen and convert the Northcott 3 to a deeper saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposal. This letter is a notice only. No action is needed unless you have questions or objections.

Well: Northcott 3 TD = 14,000'
Proposed Disposal Zone: Devonian (12,060' - 14,000')
Location: 1980' FNL & 1980' FEL Sec. 24, T. 19 S., R. 28 E., Eddy County, NM
Approximate Location: 16 miles northeast of Carlsbad, NM
Applicant Name: V-F Petroleum Inc. (432) 683-3344
Applicant's Address: PO Box 1889, Midland TX 79702

Submittal Information: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood

EXHIBIT J

7017 0190 0001 1435 0443

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Extra Services & Fees (check box, add fee as appropriate)
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- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Total Postage and Fees
$ 7.83

Postmark Here
APR 2 2018

Sent To
Matador Production Company
Street and Apt. No., or PO Box No. 5400 LBJ Freeway, #1500
City, State, ZIP+4® Dallas TX 75240
VF – Northcott 3

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0190 0001 1435 0467

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Postage
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Sent To
Devon Energy Production Co LP
Street and Apt. No., or PO Box No. 333 W. Sheridan Ave.
City, State, ZIP+4® Oklahoma City OK 73102

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Extra Services & Fees (check box, add fee as appropriate)
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- ☐ Adult Signature Required $
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Postage
$

Total Postage and Fees
$ 7.83

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APR 2 2018

Sent To
Mewbourne Oil Company
Street and Apt. No., or PO Box No. PO Box 7698
City, State, ZIP+4® Tyler TX 75711
VF – Northcott 3

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0190 0001 1435 0450

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Extra Services & Fees (check box, add fee as appropriate)
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- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Total Postage and Fees
$ 7.83

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APR 2 2018

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Mewbourne Oil Co.
Street and Apt. No., or PO Box No. PO Box 5270
City, State, ZIP+4® Hobbs NM 88240

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0190 0001 1435 0375

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Total Postage and Fees 7.83
$

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NM State Land Office
Street and Apt. No., or PO Box No. PO Box 1148
City, State, ZIP+4® Santa Fe NM 87504
VF – Northcott

PS Form 3800, April 2015 PSN [illegible] See Reverse for Instructions

EXHIBIT J

7017 0190 0001 1435 0412

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Postage
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Total Postage and Fees
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OXY USA Inc.
Street and Apt. No., or PO Box No. PO Box 27570
City, State, ZIP+4® Houston TX 77227
VF – Northcott-3

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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- ☐ Return Receipt (hardcopy) $
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- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Total Postage and Fees
$ 7.83

Postmark Here
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OXY USA Inc.
Street and Apt. No., or PO Box No. PO Box 4294
City, State, ZIP+4® Houston TX 77210
VF – Northcott 3

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Extra Services & Fees (check box, add fee as appropriate)
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- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Total Postage and Fees
$ 7.83

Postmark Here
APR 2 2018
CLORETA NM 87535-9998
USPS

Sent To
Stephens & Johnson Op Co
Street and Apt. No., or PO Box No. PO Box 2249
City, State, ZIP+4® Wichita Falls TX 76307
VF – Northcott 3

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0190 0001 1435 0382

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- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Total Postage and Fees
$ 7.83

Postmark Here
APR 2018
CLORETA NM 87535-9998
USPS

Sent To
Stephens & Johnson Operating Company
Street and Apt. No., or PO Box No. PO Box 2249
City, State, ZIP+4® Wichita Falls TX 76307
VF – Northcott 3

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

EXHIBIT J

**ENDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Devon Energy Production Co LP
333 W. Sheridan Ave.
Oklahoma City OK 73102

V-F Northcott 3

9590 9402 3732 7335 6656 39

Article Number (Transfer from service label)
7017 0190 0001 1435 0436

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

CENTER CITY APR 5 2018

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**ENDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Mewbourne Oil Co.
PO Box 5270
Hobbs NM 88240

V-F Northcott 3

9590 9402 3732 7335 6656 15

Article Number (Transfer from service label)
7017 0190 0001 1435 0450

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) S Lathan | C. Date of Delivery 4-9-18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**ENDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Mewbourne Oil Company
PO Box 7698
Tyler TX 75711

V-F Northcott 3

9590 9402 3732 7335 6656 60

Article Number (Transfer from service label)
7017 0190 0001 1435 0405

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Eric M Stowell | C. Date of Delivery 4/9/18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**NDER: COMPLETE THIS SECTION**

Complete items 1, 2, and 3.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

NM State Land Office
PO Box 1148
Santa Fe NM 87504

V-F Northcott 3

9590 9402 3732 7335 6656 91

Article Number (Transfer from service label)
7017 0190 0001 1435 0375

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

U.S. POSTAGE PITNEY BOWES NM 87501 $ [redacted]
APR - 6 2018
[redacted]
SANTA FE MAIN POST

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

EXHIBIT J

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

OXY USA Inc.
PO Box 27570
Houston TX 77227

V-F Northcott 3

9590 9402 3732 7335 6656 53

2

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

JAMES BRAAD

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

S & J Operating Company
PO Box 2249
Wichita Falls TX 76307

V-F Northcott 3

9590 9402 3732 7335 6656 84

2. Article Number (Transfer from service label)
7017 0190 0001 1435 0382

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X Diana Walker ☐ Agent ☐ Addressee

B. Received by (Printed Name) Diana Walker C. Date of Delivery APR - 6 2018

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

WICHITA FALLS TX USPS

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

RS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Stephens & Johnson Op Co
PO Box 2249
Wichita Falls TX 76307

V-F Northcott 3

9590 9402 3732 7335 6656 77

2. Article Number (Transfer from service label)
7017 0190 0001 1435 0399

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

USPS

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☐ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

EXHIBIT J

*New Mexico Office of the State Engineer*

# Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

**PLSS Search:**

**Section(s):** 22-27 **Township:** 19S **Range:** 28E



5/24/18 1:18 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

# FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

**DATE RECORD:** First Rec:_____ **Admin Complete:** 4/30/2018 **or Suspended:** _____ Add. Request/Reply:_____

**ORDER TYPE:** WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No. 3 Well Name(s): North Catt

API : 30-0 15 - 22892 Spud Date: 0 N New or Old (EPA): 4-16-73 IBD (UIC Class II Primacy 03/07/1982)

Footages 1980 FNL & 660 FEL Lot____ or Unit G Sec 24 Tsp 19S Rge 28E County Eddy

General Location: 2 1/2 mile S/ Artesia Pool: SWD; Devonian Pool No.: 96101

BLM 100K Map: Artesia Operator: V-F Petroleum Inc OGRID: 24010 Contact: Brian Woods Agent

**COMPLIANCE RULE 5.9:** Total Wells:_____ Inactive:_____ **Fincl Assur:**_____ Compl. Order?_____ **IS 5.9 OK?**____ **Date:**_____

**WELL FILE REVIEWED** ◯ Current Status: Active

**WELL DIAGRAMS: NEW:** Proposed ✓ or **RE-ENTER:** Before Conv. ◯ After Conv. ◯ Logs in Imaging: Y (SHALLOW PORTION)

Planned Rehab Work to Well: Cement & squeeze Rivers, Queen & Grayburg perfs.

| Well Construction Details | Sizes (in) Borehole / Pipe | Setting Depths (ft) | Stage Tool | Cement (Sx) or Cf | Cement Top and Determination Method |
|---|---|---|---|---|---|
| Planned __or Existing __Surface | 17 1/2 / 13 3/8 | 375 | | 300 | Surface / Visual |
| Planned__or Existing __ Interm/Prod | 12 1/4" / 8 5/8" | 2860 | | 2170 | Surface / Visual |
| Planned__or Existing __Interm/Prod | 7 7/8" / 5 1/2" | 12060 | | 220 | Surface / Visual |
| Planned__or Existing __ Prod/Liner | | | | | |
| Planned__or Existing __ Liner | | | | | |
| Planned__or Existing __ OH / PERF | 12060/11400 | | Inj Length 1940 | | |

| Injection Lithostratigraphic Units: | Depths (ft) | Injection or Confining Units | Tops |
|---|---|---|---|
| Adjacent Unit: Litho. Struc. Por. | | | |
| Confining Unit: Litho. Struc. Por. | | | |
| Proposed Inj Interval TOP: | | | |
| Proposed Inj Interval BOTTOM: | | | |
| Confining Unit: Litho. Struc. Por. | | | |
| Adjacent Unit: Litho. Struc. Por. | | | |

**Completion/Operation Details:**

Drilled TD 10400 PBTD _____

NEW TD 14000 NEW PBTD _____

NEW Open Hole ✓ or NEW Perfs ◯

Tubing Size 3 1/2 in. Inter Coated? X

Proposed Packer Depth 12000 ft

Min. Packer Depth 11960 (100-ft limit)

Proposed Max. Surface Press. 2412 psi

Admin. Inj. Press. 2412 (0.2 psi per ft)

## AOR: Hydrologic and Geologic Information

**POTASH:** R-111-P MK *Noticed?*____ **BLM Sec Ord** ◯ **WIPP** ◯ *Noticed?*____ **Salt/Salado T:** 350 B: 600 **NW:** Cliff House fm____

SA 2880

**FRESH WATER:** Aquifer N Max Depth_____ **HYDRO AFFIRM STATEMENT By Qualified Person** ✓

**NMOSE Basin:** Roswell-Artesia **CAPITAN REEF:** thru____ adj (NA) **No. GW Wells in 1-Mile Radius?** 0 FW Analysis? Y

**Disposal Fluid:** Formation Source(s) Wolfcamp, Atoka, Morrow, Bs. Antesia, Queen, Grayburg Analysis? Y On Lease ◯ Operator Only ◯ or Commercial ✓

**Disposal Interval:** Inject Rate (Avg/Max BWPD): 10K 20K Protectable Waters? N/A Source:_____ System: Closed or Open

**HC Potential:** Producing Interval?_____ Formerly Producing?_____ Method: Logs/DST/P&A/Other_____ 2-Mi Radius Pool Map ◯

**AOR Wells:** 1/2-M Radius Map and Well List? Y **No. Penetrating Wells:** 0 [AOR Horizontals: _____ AOR SWDs:_____ ]

**Penetrating Wells: No. Active Wells** 0 Num Repairs?____ on which well(s)?_____ Diagrams?_____

**Penetrating Wells: No. P&A Wells** 0 Num Repairs?____ on which well(s)? _____ Diagrams?_____

**NOTICE:** Newspaper Date 2-27-2018 Mineral Owner_____ Surface Owner NMSLO N. Date 03-02-2018

**RULE 26.7(A): Identified Tracts?** _____ Affected Persons: Devon, Mewbourne, Oxy, MAT Stephens & Johnson N. Date 03-02-2018

**Order Conditions:** Issues: (A) Circulate cement b/s casing to surface

**Additonal COAs:** If not circulated, notify Artesia & must [illegible] All steps to circulate to surface