Initial Application Part I

Received: 4/07/2022

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

YH6XL-220407-C-1080 Action ID: 96615 Revised March 23, 2017

RECEIVED: 4/07/2022	REVIEWER:	TYPE: SWD	APP NO: pJZT2209858452

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: EOG Resources Inc.. **OGRID Number:** 7377
Well Name: Bois D Arc SWD 1 **API:** 30-043-20981
Pool: SWD; Dakota **Pool Code:** 96198

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

SWD-2477

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

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

4-1-22
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: EOG RESOURCES INC.

ADDRESS: 104 SOUTH 4TH ST., ARTESIA NM 88210

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.

BOIS D ARC SWD 1
30-043-20981

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 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 B. Wood TITLE: CONSULTANT

SIGNATURE: _____ DATE: MAR. 29, 2022

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: EOG RESOURCES INC.

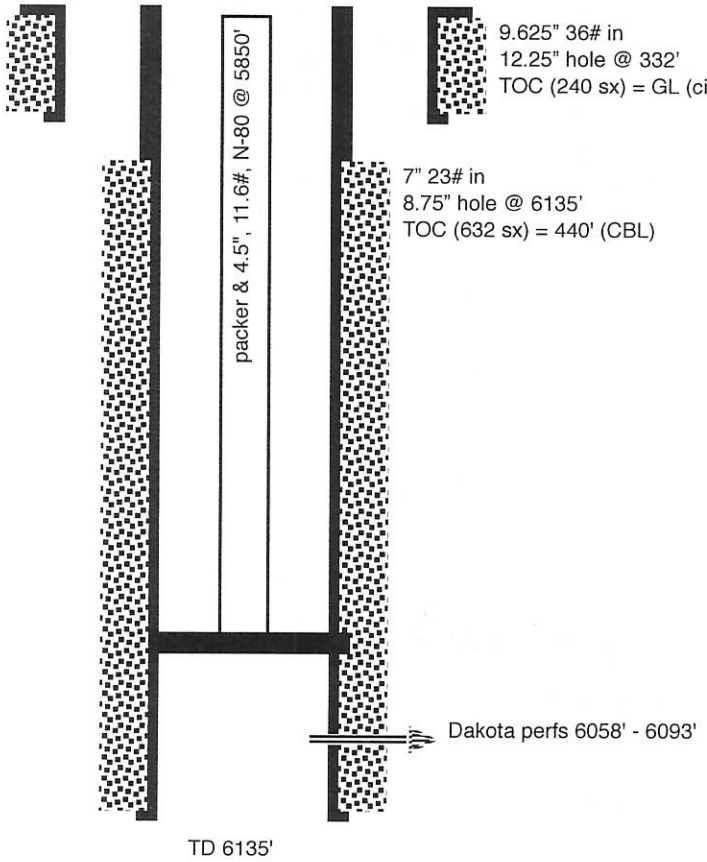
WELL NAME & NUMBER: BOIS D ARC SWD 1

WELL LOCATION:	2025' FSL & 675' FEL	I	22	21 N	5 W
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

"AS IS"

(not to scale)



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 240 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 23 BBL

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft³

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 8.75" Casing Size: 7"

Cemented with: 632 sx. *or* _____ ft³

Top of Cement: 440' Method Determined: CBL

Total Depth: 6135'

Injection Interval

6058 feet to 6093'

(Perforated or Open Hole; indicate which)

Side 1

INJECTION WELL DATA SHEET

OPERATOR: EOG RESOURCES INC.

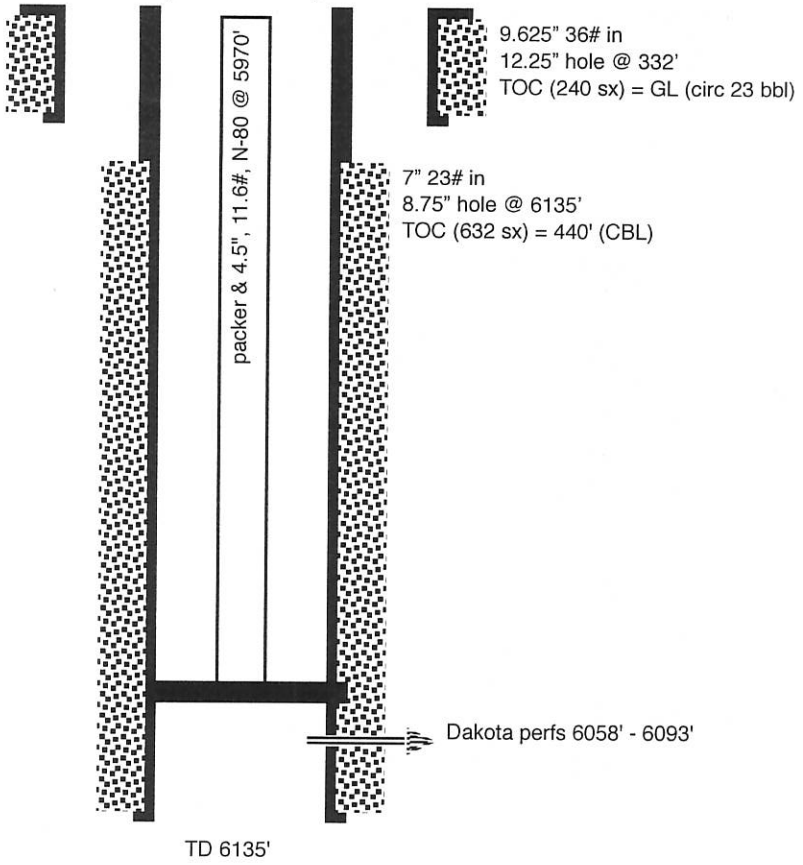
WELL NAME & NUMBER: BOIS D ARC SWD 1

WELL LOCATION:	I	22	21 N	5 W
2025' FSL & 675' FEL				
FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

"PROPOSED"

(not to scale)



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 240 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC. 23 BBL

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft³

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 8.75" Casing Size: 7"

Cemented with: 632 sx. *or* _____ ft³

Top of Cement: 440' Method Determined: CBL

Total Depth: 6135'

Injection Interval

6058 feet to 6093'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 4.5", 11.6", N-80 Lining Material: N/A

Type of Packer: 7" BAKER 87-47 PRODUCTION FAB PKR W/ K-22 82FA47 SEAL ASSEMBLY

Packer Setting Depth: NOW @ 5850', WILL MOVE TO 5970'

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? NOT NEW, BUT WHEN NEW (2003),

   IT WAS DRILLED AS A SWD; DAKOTA WELL (SWD-914)

2. Name of the Injection Formation: DAKOTA

3. Name of Field or Pool (if applicable): SWD; DAKOTA (POOL CODE 96198)

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. NO

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

   OVER: PICTURE CLIFF (1439'), MESA VERDE MENEFEE (2922'), GALLUP (4590')

   UNDER: NONE

TOPO! map printed on 02/03/22 from "Untitled.tpo"

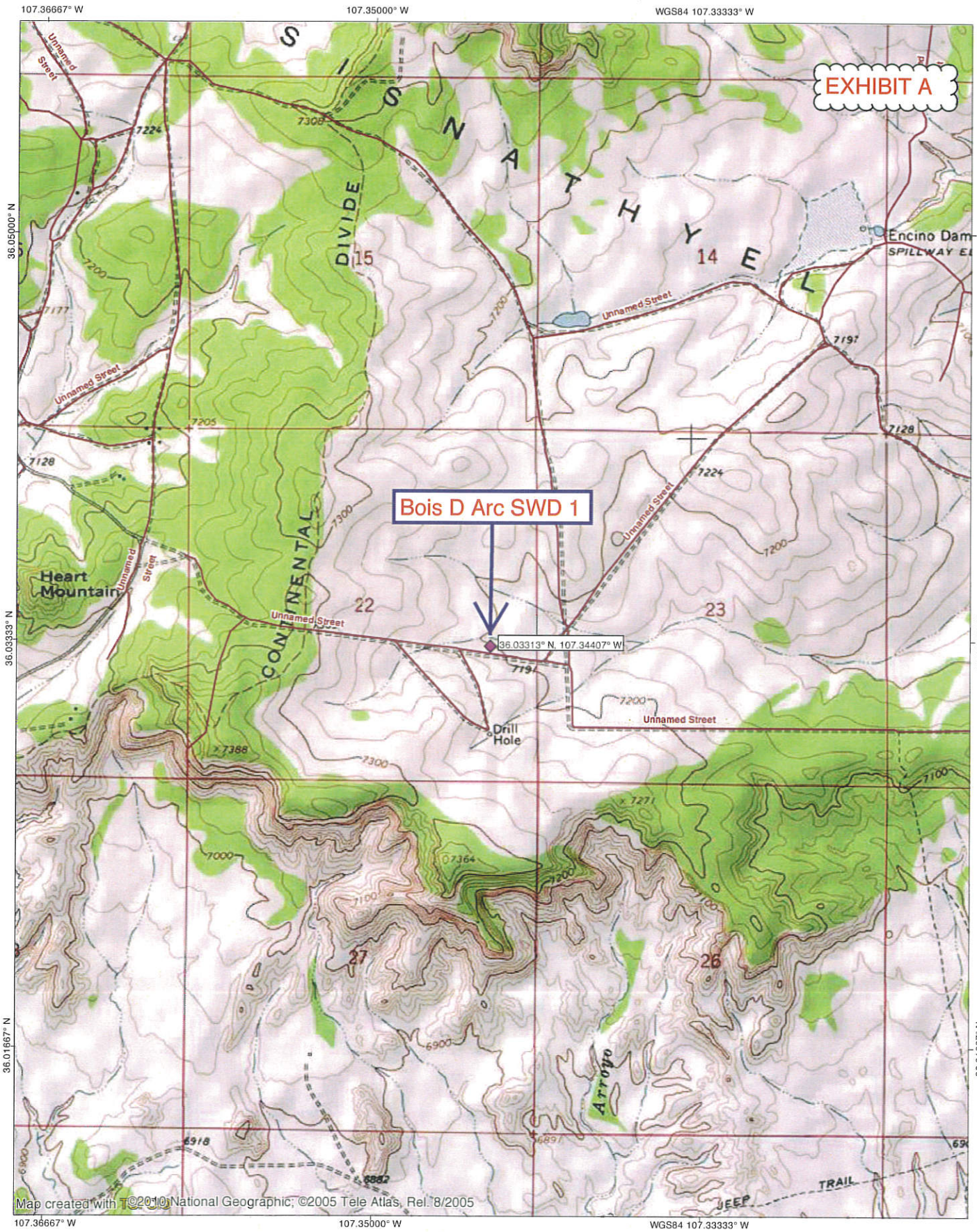


EXHIBIT A

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-043-20981	96198	SWD; Dakota

[4] Property Code	[5] Property Name	[6] Well Number
32581	BOIS d' ARC SWD	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
163458	SYNERGY OPERATING LLC.	7207

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	22	21-N	5-W		2025	SOUTH	675	EAST	SANDOVAL

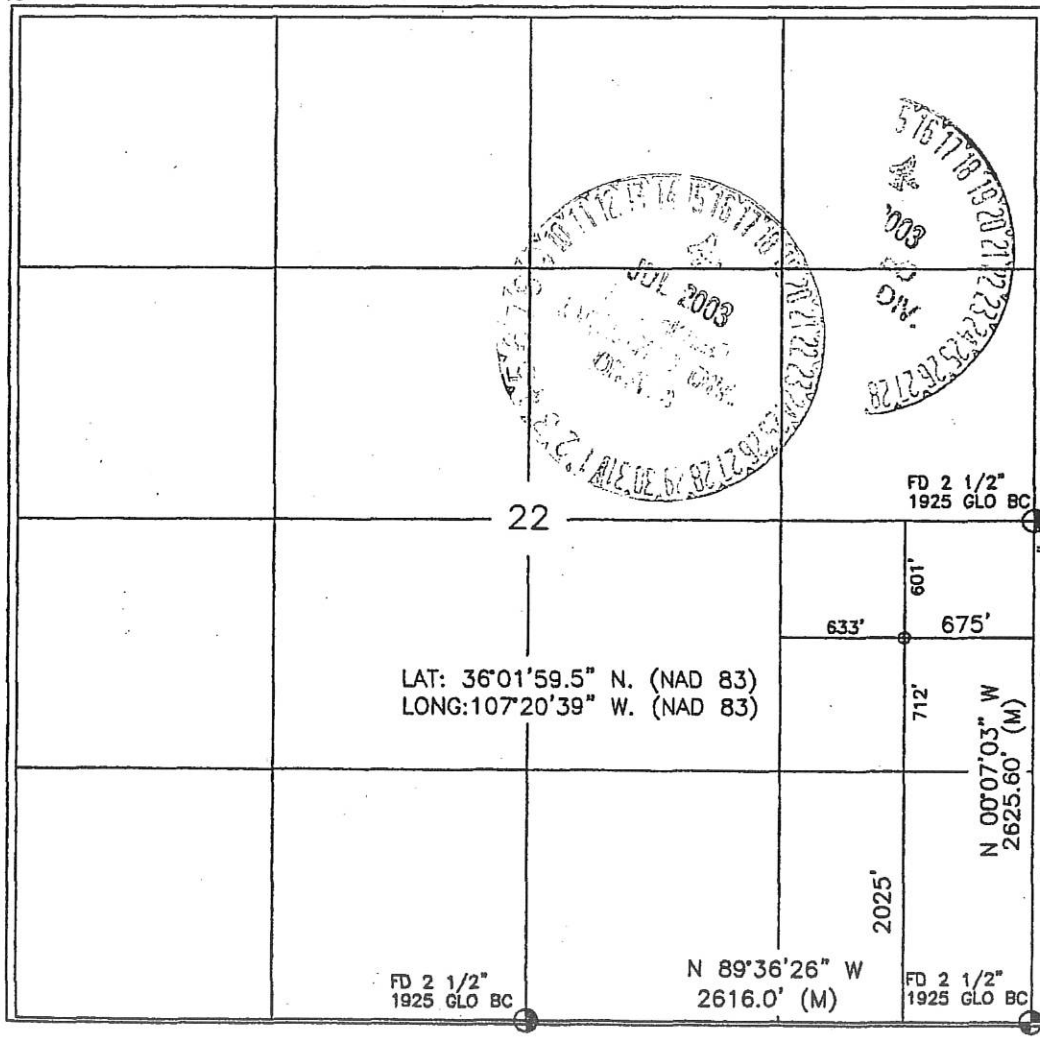
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
~~160~~ 0			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



[17] OPERATOR CERTIFICATION

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

Signature

THOMAS E. MULLINS
Printed Name

ENGINEERING MANAGER
Title

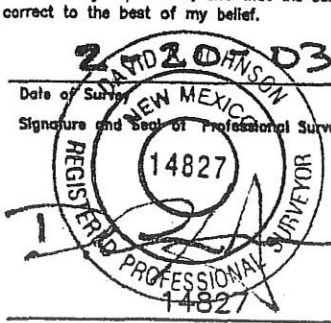
3-3-2003
Date

[18] SURVEYOR CERTIFICATION

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 belief.

2-20-03
Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number

EXHIBIT I

EOG Resources Inc. will apply to renew approval of the Bois D. Arc SWD 1 as a saltwater disposal well. The well will dispose into the Dakota formation from 6,058' to 6,093'. It is 21 miles west of Cuba, NM at 2025' FSL & 675' FEL Sec. 22, T. 21 N., R. 5 W., Sandoval County, NM. Maximum disposal rate will be 10,100 bwpd. Maximum injection pressure will be 1,211 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, or ocd.engineer@state.nm.us 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.

Observer: February 20, 2022

EVASTEPA5

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of Sandoval SS

David Montoya, the undersigned, authorized Representative of Rio Rancho Observer, on oath states that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937; that payment therefore has been made of assessed as court cost; and that the notice, copy of which is hereto attached, was published in said paper in the regular edition, for 1 time(s) on the following date(s):

02/20/2022

David Montoya

Official Seal
Christina White
Notary Public
State of New Mexico
My Commission Expires: 4/10/25

Sworn and subscribed before me, a Notary Public, in and for the County of Sandoval and State of New Mexico this 21 day of February of 2022

PRICE $40.06

Statement to come at the end of month.

ACCOUNT NUMBER 1029977

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

EXHIBIT J

March 29, 2022

BLM
6251 College Blvd.
Farmington NM 87402

EOG Resources Inc. is applying (see attached application) to renew approval of the Bois D Arc SWD 1 as a 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: Bois D Arc SWD 1 TD = 6135'
Proposed Disposal Zone: Dakota (6058' – 6093')
Location: 2025' FSL & 675' FEL Sec. 22, T. 21 N., R. 5 W, Sandoval County, NM
Approximate Location: 21 miles west of Cuba, NM
Applicant Name: EOG Resources Inc. (575) 748-4196
Applicant's Address: 104 South 4th St., Artesia NM 88210

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. NMOCD phone number is (505) 476-3441. E-mail address is: ocd.engineer@state.nm.us

Please call me if you have any questions.

Sincerely,

Brian Wood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Adult Signature Restricted Delivery
Postage
Total Postage and Fees
Sent To
Betswest Resources
5900 Highway 290E
Brenham TX 77833
EOG-Bois D Arc SWD 1
Street and Apt. No., or PO Box No.
City, State, ZIP+4®
PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
CORONADO STATION
SANTA FE NM 87505
MAR 31 2022
Postmark Here
7020 1810 0000 3948 7048


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Kerry Stein
13105 NW Freeway #530
Houston TX 77040
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PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
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Probe Resources
4250 Nationsbank Ctr
Houston TX 77002
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PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
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SANTA FE NM 87505
MAR 31 2022
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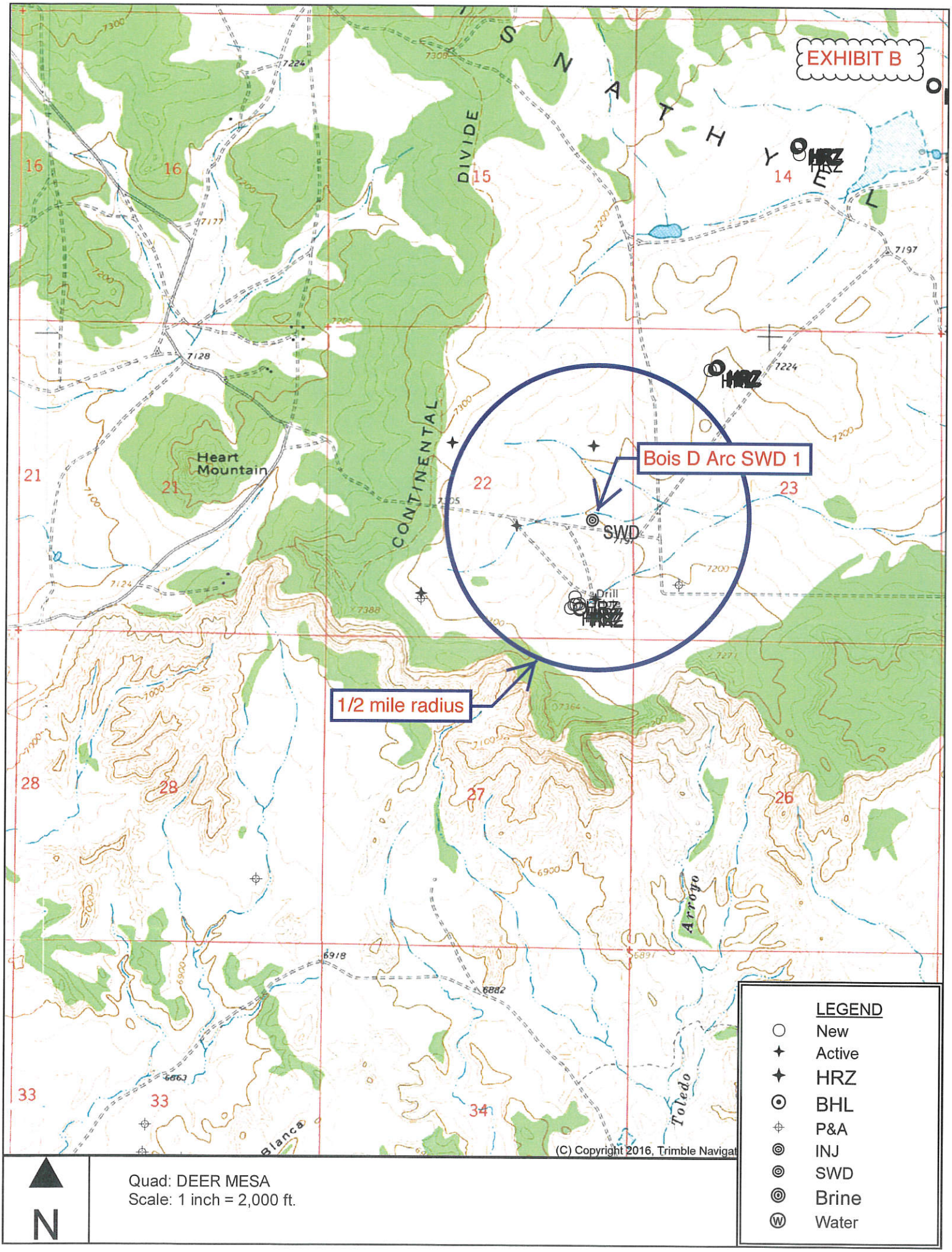
Adult Signature Required
Adult Signature Restricted Delivery
Postage
Total Postage and Fees
Sent To
Rock Hill Investments LLC
600 Travis St #5200
Houston TX 77002
EOG-Bois D Arc SWD 1
Street and Apt. No., or PO Box No.
City, State, ZIP+4®
PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
CORONADO STATION
SANTA FE NM 87505
MAR 31 2022
Postmark Here
7020 1810 0000 3948 0513

EXHIBIT J



WELLS WITHIN 1/2 MILE RADIUS OF BOIS D ARC SWD 1

API	WHO	WELL	STATUS	UNIT-SECTION-T21S-R5W	TVD	ZONE @ TD	FEET FROM BOIS D ARC SWD 1
3004320979	EOG	Bois D Arc Divide 22 005	O	H-22	4005	Mesa Verde	1253
3004320983	EOG	Bois D Arc Divide 22 003	O	J-22	4075	Mesa Verde	1306
3004320982	EOG	Bois D Arc Divide 22 002	O	P-22	4066	Mesa Verde	1338
3004360038	Shell	Pool Four 001	P&A	P-22	5095	Gallup	1352
3004320368	Benson	Federal 23-21-5 001	P&A	M-23	1596	Picture Cliffs	1848
3004320980	EOG	Bois D Arc Divide 22 004	O	F-22	4050	Mesa Verde	2718

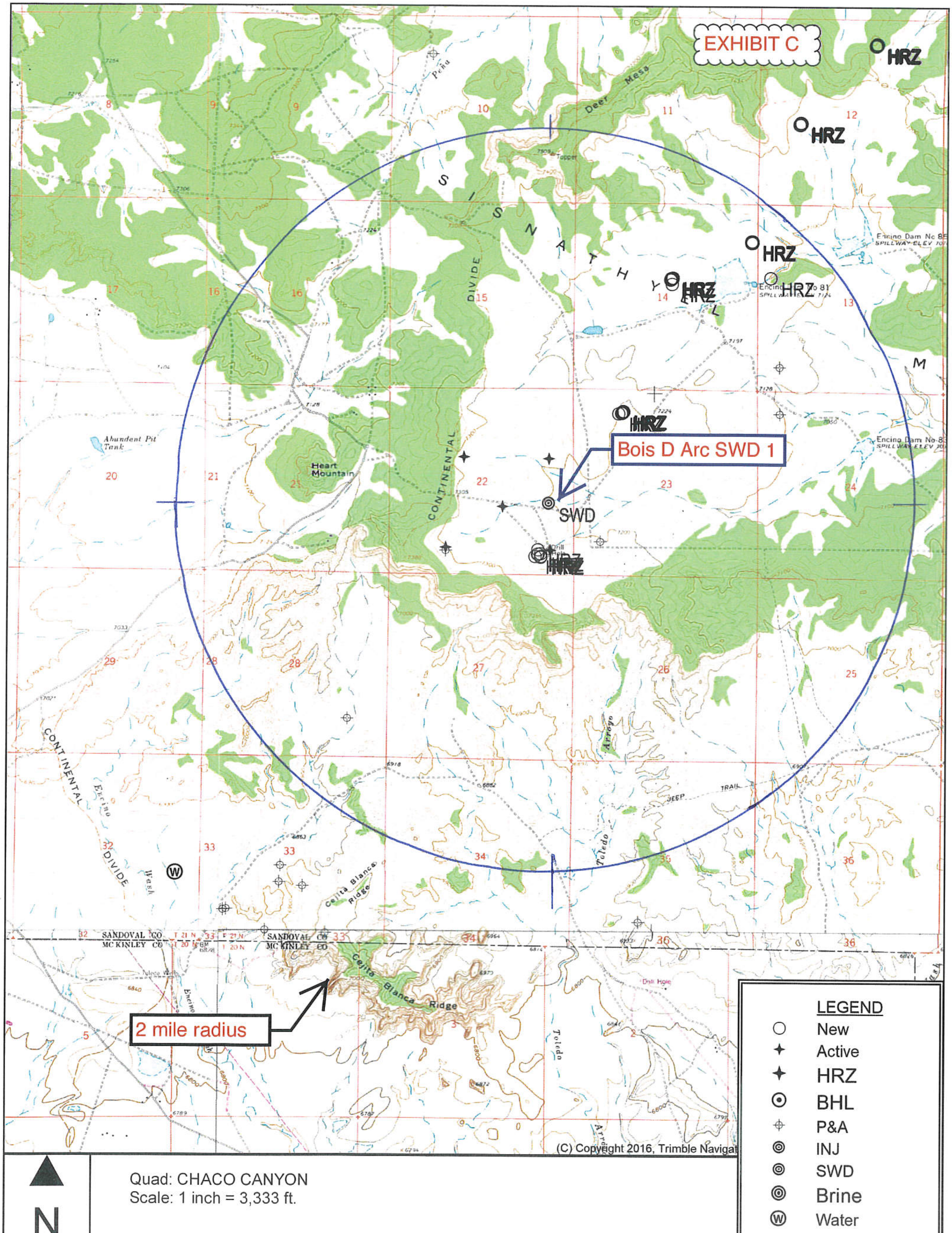


EXHIBIT C
Bois D Arc SWD 1
SWD
HRZ
2 mile radius
Deer Mesa
Heart Mountain
Abundant Pit Tank
CONTINENTAL DIVIDE
Encino Dam No 81
Encino Dam No 83
Cejita Blanca Ridge
JEEP TRAIL
Toledo Arroyo
SANDOVAL CO
MC KINLEY CO
(C) Copyright 2016, Trimble Navigat
N
Quad: CHACO CANYON
Scale: 1 inch = 3,333 ft.
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Brine
Water

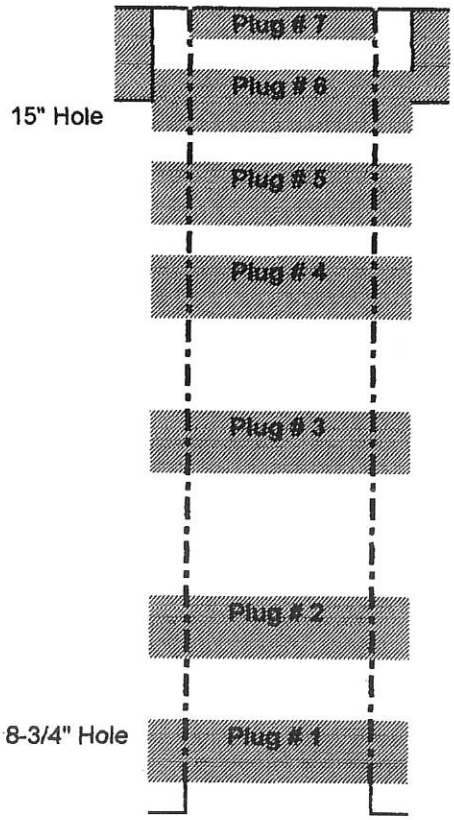
Dome Fed 22 # 1 (P&A)

EXHIBIT C

Dome Petroleum Ltd, Federal 22 # 1
Unit N, Section 22-T21N-R05W
660' FSL, 1650' FWL
7299' GL, 12' KB

Loffland Bros # ?

Spud: 11/16/76
Completed: Plugged & Abandoned



Open Hole TD @ 7135'

API # 30-043-2023300

10-3/4" 32.75# Casing @ 199' w/ 200 sxs to Surface

Plugged and Abandoned with Drilling Rig 12-16-1976
Seven Cement Plugs, Placed with Drill Pipe in Openhole

# 1	6991' to 6781' (210') 75 sxs Cement	Entrada Covered
# 2	6006' to 5856' (150') 55 sxs Cement	Dakota Covered
# 3	3995' to 3845' (150') 55 sxs Cement	Mancos Covered
# 4	1937' to 1787' (150') 55 sxs Cement	Chacra Covered
# 5	1205' to 1045' (160') 60 sxs Cement	Fruitland, Kirtland
# 6	250' to 150' (100') 35 sxs Cement @ Shoe	Shoe Covered
# 7	0' to 30' (30'), 15 sxs Cement, Installed Above Ground Dry Hole Marker	

This Well is located outside of the 1/2 Mile "Area of Review"
but is located within 1 Mile of the Injection Well

Supplied for Informational Purposes Only

Zones Covered by Cement Plugs

Formation Tops	
San Jose	
Nacimiento	
Ojo Alamo	
Kirtland	
Fruitland	
Pict Cliffs	1490'
Chacra:	1860'
La Ventana:	2255'
Pt. Lookout	3803'
Mancos	3945'
Gallup:	4565'
Sanastee:	5368'
Greenhorn	5691'
Graneros	5722'
Dakota:	5932'
Morrison:	6053'
Summerville	6880'
Todilto:	6902'
Entrada:	6911'
Carmel:	7107'
TD:	7135'

Specialty Logs, Misc
Full Core from 1855' to 1980' (125')
DST # 1 (1850' to 1920') - Misrun
DST # 2 (1850' to 1980') - slight blow and died
DST # 3 (3722' to 3737') - Menefee Misrun
DST # 4 (6909' to 6924') - Entrada (5090' - 100% Water)

Open Hole Logs
GR-Neu-Density

Cased Hole Logs (Blue Jet)
None Applicable

Thomas E. Mullins
January 5, 2003

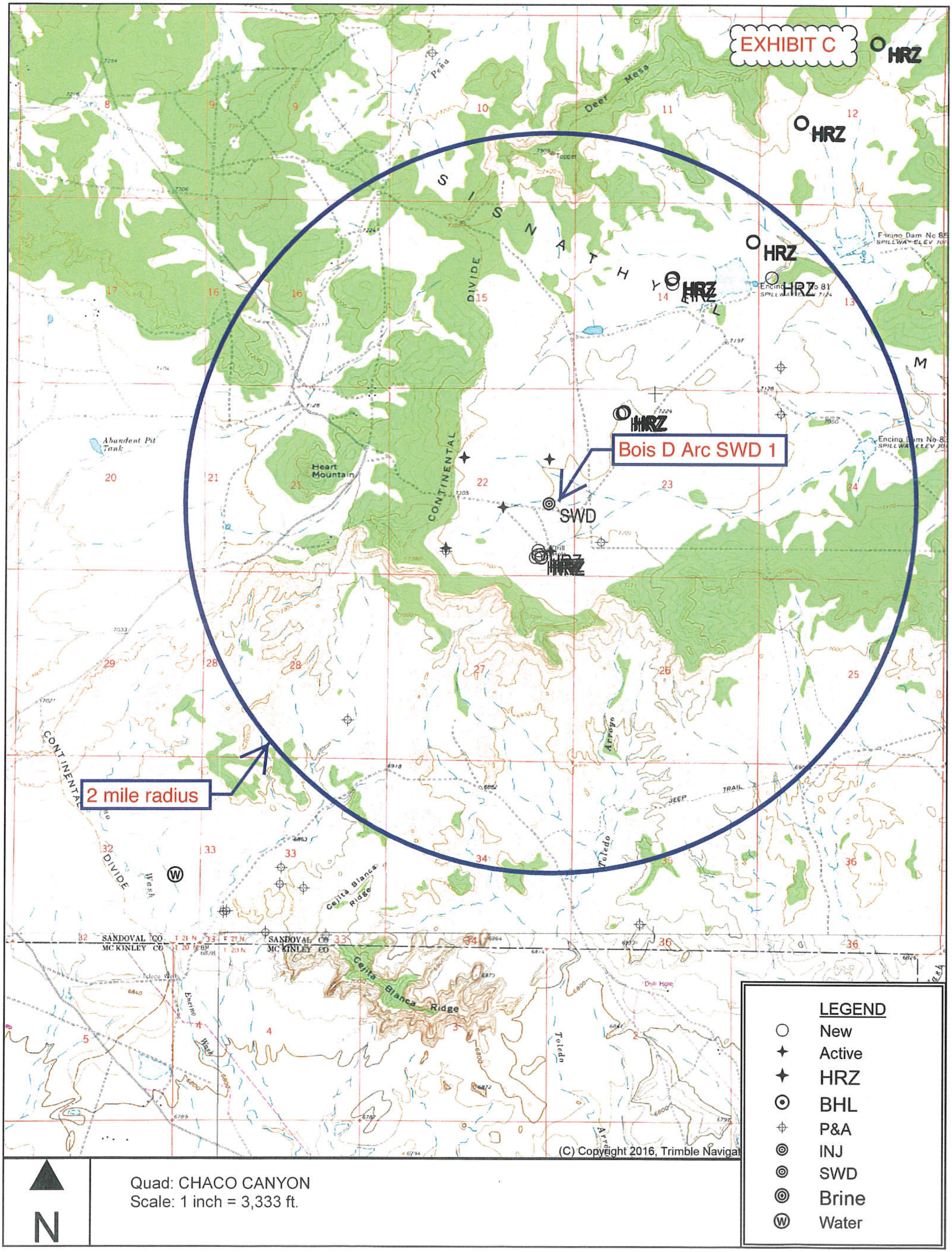
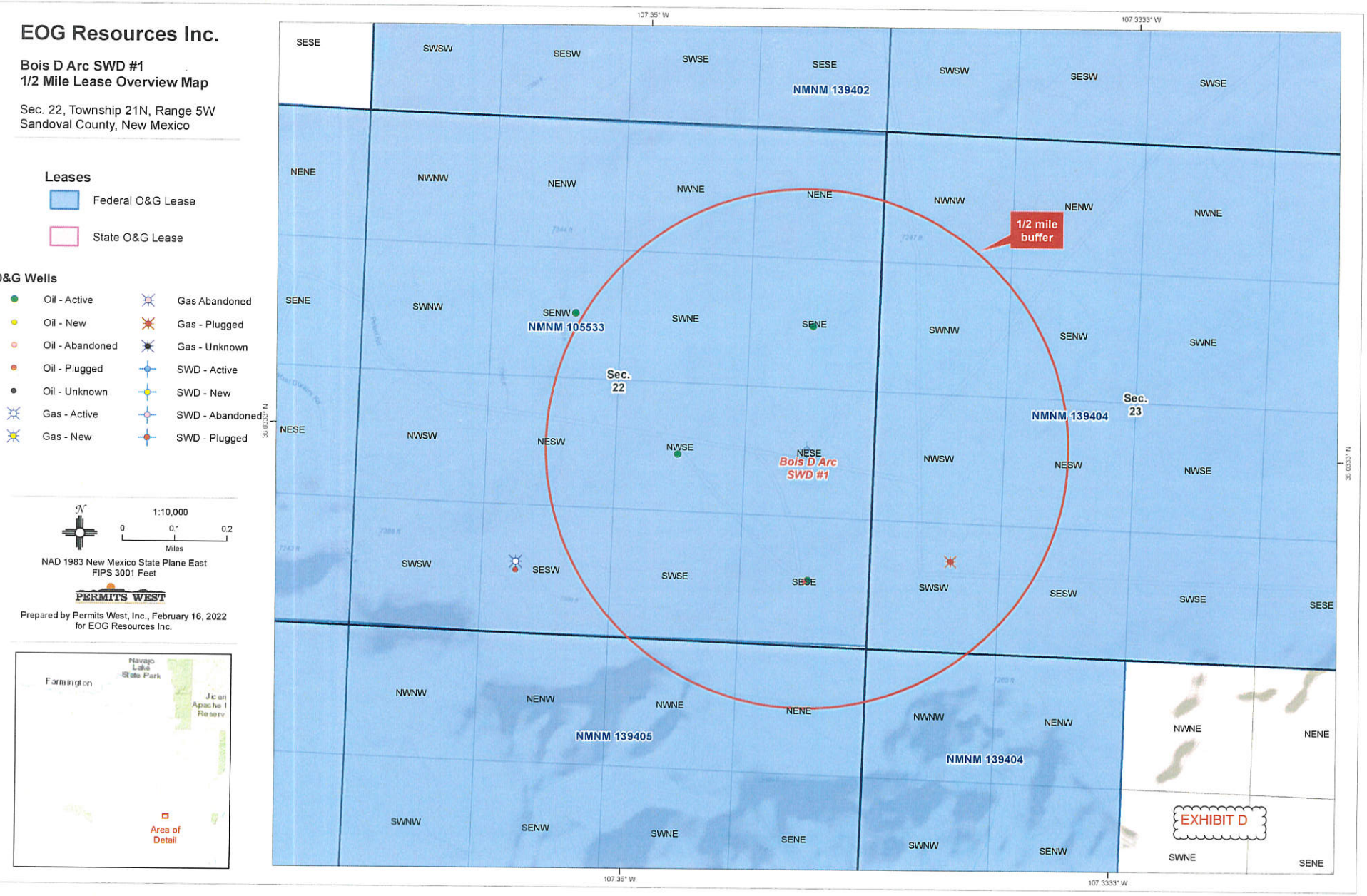


EXHIBIT C
Bois D Arc SWD 1
SWD
HRZ
2 mile radius
Deer Mesa
SISNATHYL
CONTINENTAL DIVIDE
Heart Mountain
Abundant Pit Tank
Encino Dam No 81 SPILLWAY ELEV
Encino Dam No 83 SPILLWAY ELEV
Cejita Blanca Ridge
JEEP TRAIL
Toledo
Arroyo
SANDOVAL CO
MC KINLEY CO
Drill Hole
(C) Copyright 2016, Trimble Navigat
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Brine
Water
N
Quad: CHACO CANYON
Scale: 1 inch = 3,333 ft.

EOG Resources Inc.

Bois D Arc SWD #1
1/2 Mile Lease Overview Map

Sec. 22, Township 21N, Range 5W
Sandoval County, New Mexico

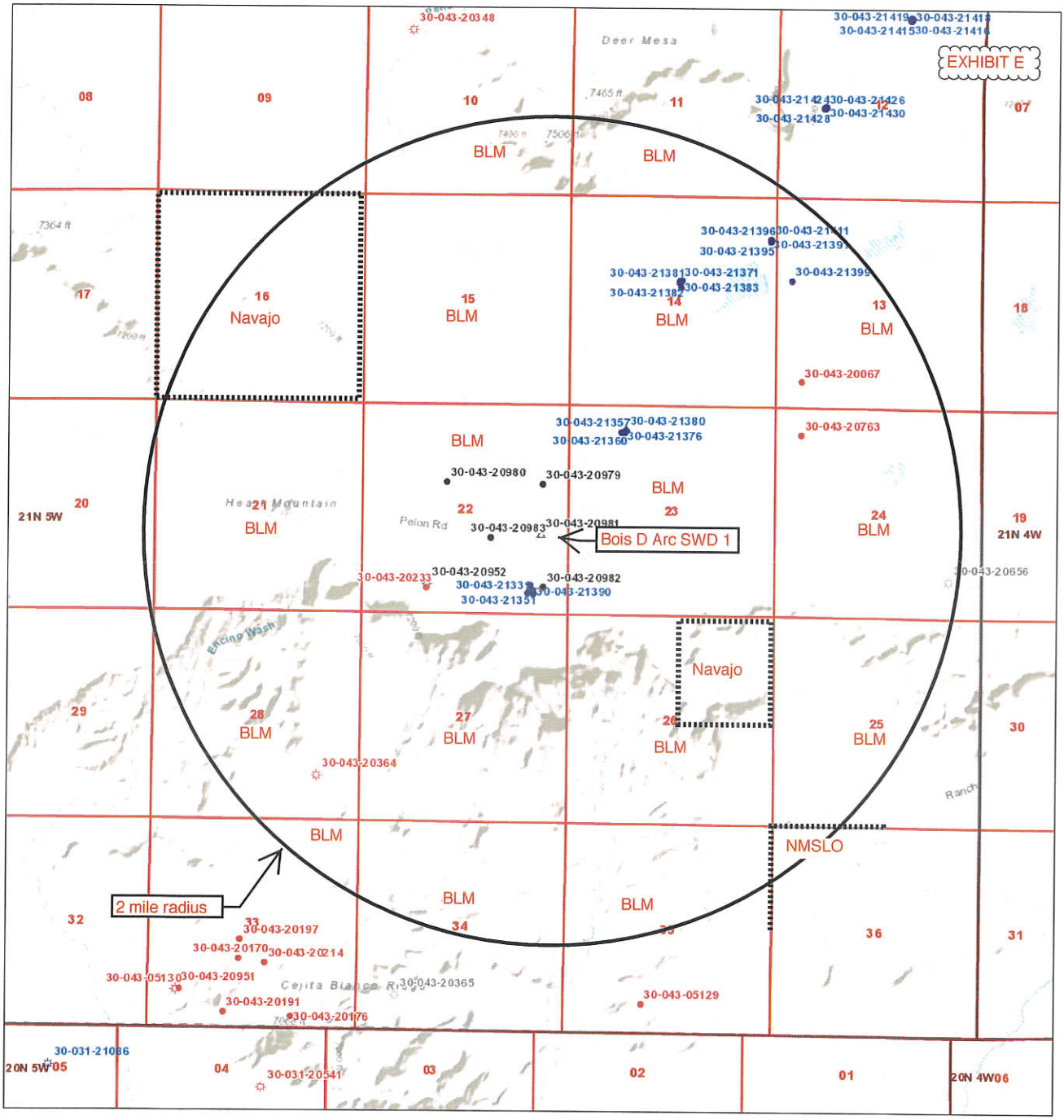


BOIS D ARC SWD 1 AREA OF REVIEW LEASES

Aliquot Parts in Area of Review (T. 21 N., R. 5 W.)	Lessor	Lease	Lessee(s) of Record	Well Operators
E2, SENW, E2SW4 Sec. 22	BLM	NMNM-105533	EOG	EOG
W2W2, SENW, & E2SW4 Sec. 23	BLM	NMNM-139404	EOG	EOG
NWNW Sec. 26	BLM	NMNM-139404	EOG	EOG
N2NE4 Sec. 27	BLM	NMNM-139405	EOG	none

EXHIBIT D

OCD Well Locations



2/20/2022, 3:30:11 PM

1:36,112

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Wells - Large Scale

- undefined
- Miscellaneous
- CO2, Active
- CO2, Cancelled
- CO2, New
- CO2, Plugged
- CO2, Temporarily Abandoned
- Gas, Active
- Gas, Cancelled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New
- Salt Water Injection, Plugged
- Salt Water Injection, Temporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged
- Water, Temporarily Abandoned
- PLSS First Division
- PLSS Townships

Bureau of Land Management, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA, Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., BLM

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

EXHIBIT F

BJ SERVICES
Farmington District Lab
Water Analysis Report

Test # FW02-0031

Customer/Well Information

Company:	Synergy Operating	**Date:**	3/23/02
Well Name:	Bois D Arc Encino 15-1	**Prepared for:**	Tom Mullins
Location:		**Submitted by:**	Tom Mullins
State:	MC Kinley County, NM	**Prepared by:**	Dave Shepherd
Formation:	Unspecified - DAKOTA #1	**Water Type:**	Produced
Depth:	ft		

Background Information

Reason for Testing: Sample Labeled #1
Completion type:
Well History:
Comments: Sample Labeled #1

Sample Characteristics

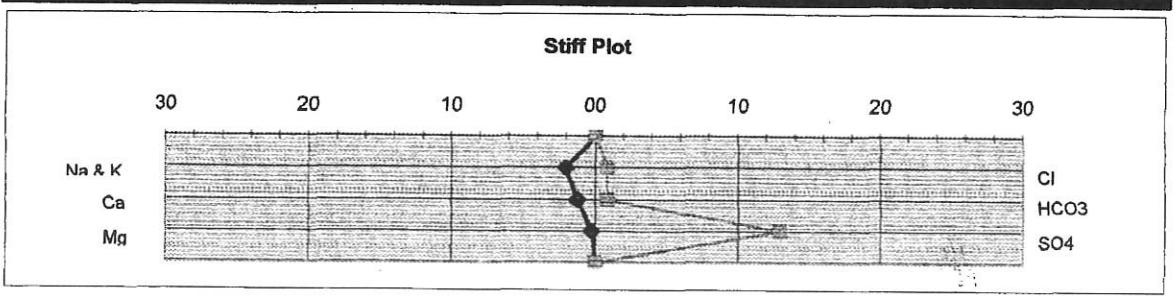
Sample Temp:	70 (°F)	**Viscosity:**	1 cp
pH:	7.10	**Color:**	Clear
Specific Gravity:	1.007	**Odor:**	None
S.G. (Corrected):	1.009 @ 60 °F	**Turbidity:**	Clear
Resistivity (Calc):	0.43 Ω-m	**Filtrates:**	Trace Iron

Sample Composition

		mg/l	me/l	ppm
CATIONS				
	Sodium (calc.)	4662	202.8	4630
	Calcium	257	12.8	255
	Magnesium	34	2.8	34
	Barium	0	0.0	0
	Potassium	180	4.6	179
	Iron	0.00	0.0	0.00
ANIONS				
	Chloride	3000	84.6	2979
	Sulfate	6300	131.2	6256
	Hydroxide	0	0.0	0
	Carbonate	< 1	----	----
	Bicarbonate	488	8.0	485
SUMMARY				
	Total Dissolved Solids(calc.)	14741		14638
	Total Hardness as CaCO3	781	15.6	776

Scaling Tendencies

CaCO3 Factor	125240.3	Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor	1616832	Calcium Sulfate Scale Probability -------> REMOTE



BJ SERVICES
Farmington District Lab
Water Analysis Report

EXHIBIT F

Test # FW02-0032

Customer/Well Information

Company:	Synergy Operating	**Date:**	3/23/02
Well Name:	Bois D Arc Encino 15-1	**Prepared for:**	Tom Mullins
Location:		**Submitted by:**	Tom Mullins
State:	MC Kinley County, NM	**Prepared by:**	Dave Shepherd
Formation:	Unspecified - DAKOTA # 2	**Water Type:**	Produced
Depth:	ft		

Background Information

Reason for Testing: Routine Water Analysis
Completion type:
Well History:
Comments: Sample Labeled #2

Sample Characteristics

Sample Temp:	70 (°F)	**Viscosity:**	1 cp
pH:	7.30	**Color:**	Clear
Specific Gravity:	1.007	**Odor:**	None
S.G. (Corrected):	1.009 @ 60 °F	**Turbidity:**	Clear
Resistivity (Calc):	0.43 Ω-m	**Filtrates:**	Trace Iron

Sample Composition

CATIONS

	mg/l	me/l	ppm
Sodium (calc.)	4753	206.7	4720
Calcium	265	13.2	263
Magnesium	29	2.4	29
Barium	0	0.0	0
Potassium	160	4.1	159
Iron	3.00	0.1	2.98

ANIONS

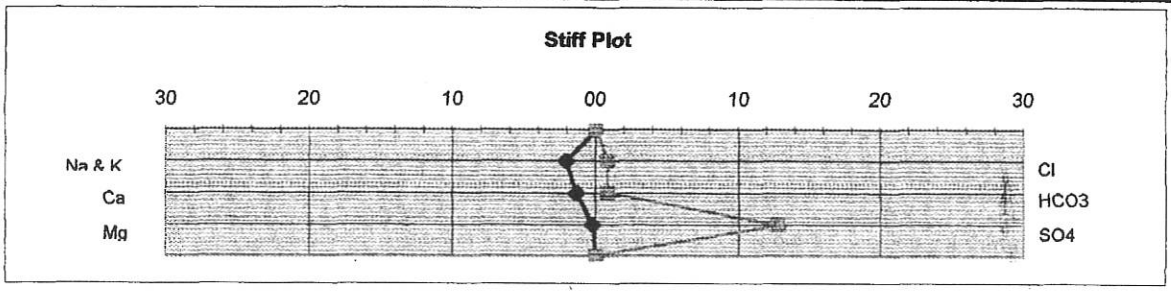
Chloride	3200	90.3	3178
Sulfate	6200	129.1	6157
Hydroxide	0	0.0	0
Carbonate	< 1	----	----
Bicarbonate	488	8.0	485

SUMMARY

Total Dissolved Solids(calc.)	14938		14834
Total Hardness as CaCO3	781	15.6	776

Scaling Tendencies

CaCO3 Factor	129154.1	Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor	1640892	Calcium Sulfate Scale Probability -------> REMOTE



BJ SERVICES
Farmington District Lab
Water Analysis Report

EXHIBIT F

Test # FW02-0033

Customer/Well Information

Company:	Synergy Operating	**Date:**	3/23/02
Well Name:	Bois D Arc Encino 15-1	**Prepared for:**	Tom Mullins
Location:		**Submitted by:**	Tom Mullins
State:	MC Kinley County, NM	**Prepared by:**	Dave Shepherd
Formation:	Unspecified - DAKOTA #3	**Water Type:**	Produced
Depth:	ft		

Background Information

Reason for Testing: Routine Water Analysis
Completion type:
Well History:
Comments: Sample Labeled #3

Sample Characteristics

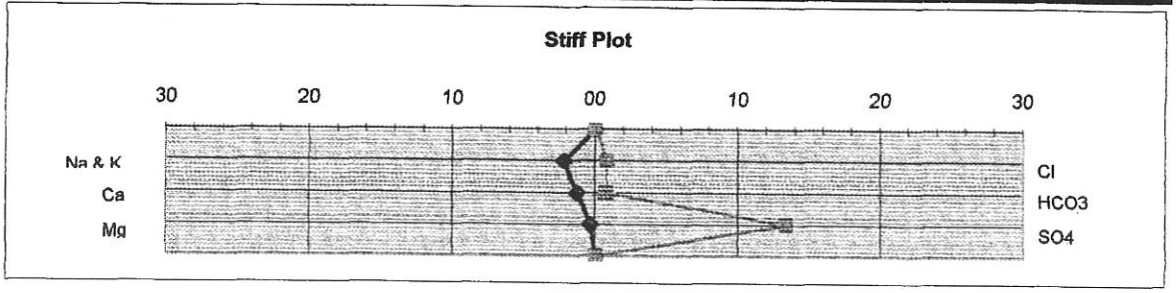
Sample Temp:	70 (°F)	**Viscosity:**	1 cp
pH:	7.36	**Color:**	Clear
Specific Gravity:	1.007	**Odor:**	None
S.G. (Corrected):	1.009 @ 60 °F	**Turbidity:**	Clear
Resistivity (Calc):	0.41 Ω-m	**Filtrates:**	Trace Iron

Sample Composition

		mg/l	me/l	ppm
CATIONS	Sodium (calc.)	4892	212.8	4858
	Calcium	257	12.8	255
	Magnesium	39	3.2	39
	Barium	0	0.0	0
	Potassium	140	3.6	139
	Iron	0.00	0.0	0.00
ANIONS	Chloride	3200	90.3	3178
	Sulfate	6500	135.3	6455
	Hydroxide	0	0.0	0
	Carbonate	< 1	----	----
	Bicarbonate	464	7.6	460
SUMMARY	Total Dissolved Solids(calc.)	15351		15244
	Total Hardness as CaCO3	801	16.0	795

Scaling Tendencies

CaCO3 Factor	118978.3	Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor	1668160	Calcium Sulfate Scale Probability -------> REMOTE



BJ SERVICES
Farmington District Lab
Water Analysis Report

EXHIBIT F

Test # FW03-0080

Customer/Well Information

Company:	Synergy	**Date:**	5/8/03
Well Name:	Encino 15-1	**Prepared for:**	Tom Mullins
Location:		**Submitted by:**	Tom Mullins
State:	County, NM	**Prepared by:**	Dave Shepherd
Formation:	Meneffe	**Water Type:**	Produced
Depth:	ft		

Background Information

Reason for Testing: Routine Water Analysis
Completion type:
Well History:
Comments:

Sample Characteristics

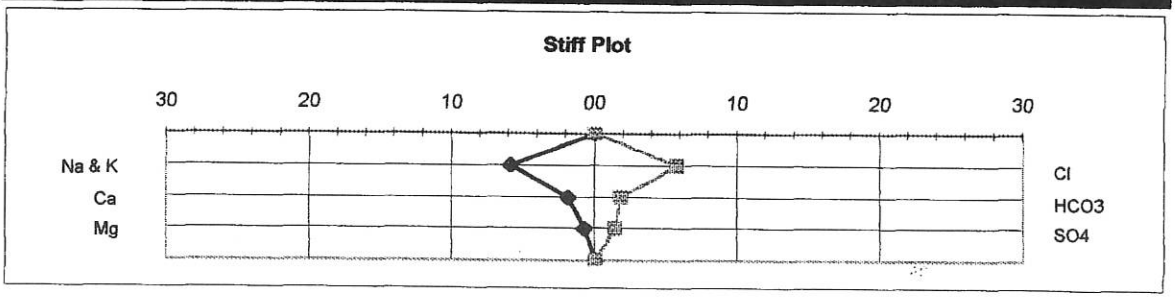
Sample Temp:	77 (°F)	**Viscosity:**	1 cp
pH:	7.51	**Color:**	Clear
Specific Gravity:	1.018	**Odor:**	Hydrocarbon
S.G. (Corrected):	1.021 @ 60 °F	**Turbidity:**	None
Resistivity (Calc):	0.17 Ω-m	**Filtrates:**	Trace

Sample Composition

		mg/l	me/l	ppm
CATIONS	Sodium (calc.)	13704	596.1	13462
	Calcium	369	18.4	362
	Magnesium	87	7.2	86
	Barium	0	0.0	0
	Potassium	59	1.5	58
	Iron	0.00	0.0	0.00
ANIONS	Chloride	21000	592.4	20629
	Sulfate	700	14.6	688
	Hydroxide	0	0.0	0
	Carbonate	< 1	----	----
	Bicarbonate	1135	18.6	1115
SUMMARY	Total Dissolved Solids(calc.)	36995		36341
	Total Hardness as CaCO3	1281	25.6	1259

Scaling Tendencies

CaCO3 Factor	418576.6	Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor	258244	Calcium Sulfate Scale Probability ------> REMOTE



BJ SERVICES
Farmington District Lab
Water Analysis Report

EXHIBIT F

Test # FW03-0079

Customer/Well Information

Company:	Synergy	**Date:**	5/8/03
Well Name:	Divide 22 #1	**Prepared for:**	Tom Mullins
Location:		**Submitted by:**	Tom Mullins
State:	County, NM	**Prepared by:**	Dave Shepherd
Formation:	Menffee	**Water Type:**	Produced
Depth:	ft		

Background Information

Reason for Testing: Routine Water Analysis
Completion type:
Well History:
Comments:

Sample Characteristics

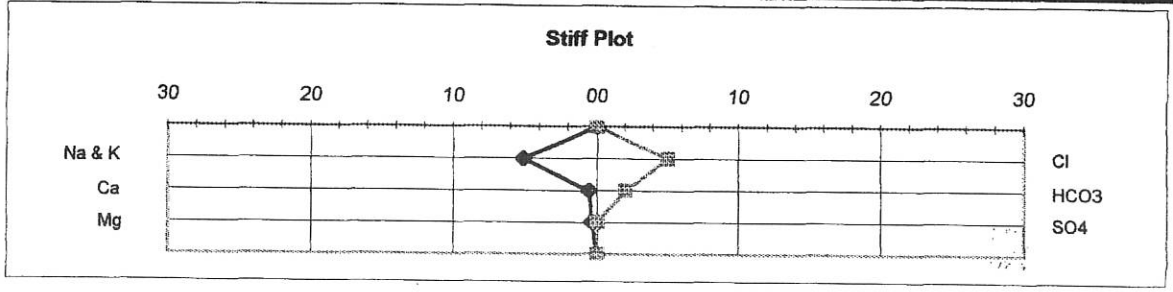
Sample Temp:	77 (°F)	**Viscosity:**	1 cp
pH:	7.92	**Color:**	Clear
Specific Gravity:	1.015	**Odor:**	Hydrocarbon
S.G. (Corrected):	1.018 @ 60 °F	**Turbidity:**	None
Resistivity (Calc):	0.20 Ω-m	**Filtrates:**	Trace

Sample Composition

		mg/l	me/l	ppm
CATIONS	Sodium (calc.)	11867	516.2	11691
	Calcium	112	5.6	111
	Magnesium	44	3.6	43
	Barium	0	0.0	0
	Potassium	45	1.2	44
	Iron	0.00	0.0	0.00
ANIONS	Chloride	18000	507.8	17734
	Sulfate	0	0.0	0
	Hydroxide	0	0.0	0
	Carbonate	< 1	----	----
	Bicarbonate	1269	20.8	1250
SUMMARY	Total Dissolved Solids(calc.)	31292		30829
	Total Hardness as CaCO3	460	9.2	454

Scaling Tendencies

CaCO3 Factor	142460.9	Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor	0	Calcium Sulfate Scale Probability -------> REMOTE



BJ SERVICES
Farmington District Lab
Water Analysis Report

EXHIBIT F

Test # FW03-0107

Company:	Synergy Operating	**Date:**	7/1/03
Well Name:	Divide 22 #1	**Prepared for:**	Tom Mullins
Location:		**Submitted by:**	Tom Mullins
State:	San Juan County, NM	**Prepared by:**	Dave Shepherd
Formation:	2nd Coal - Menefee	**Water Type:**	Produced
Depth:	ft		

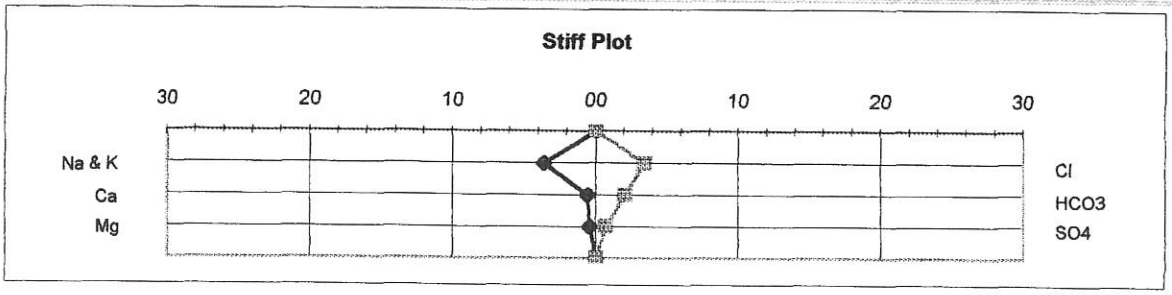
Reason for Testing:	Routine Water Analysis
Completion type:	N/A
Well History:	N/A
Comments:	

-

Sample Temp:	77 (°F)	**Viscosity:**	1 cp
pH:	7.57	**Color:**	Clear
Specific Gravity:	1.012	**Odor:**	Trace
S.G. (Corrected):	1.015 @ 60 °F	**Turbidity:**	None
Resistivity (Calc):	0.27 Ω-m	**Filtrates:**	Trace Oil

		mg/l	me/l	ppm
CATIONS				
	Sodium (calc.)	8091	351.9	7995
	Calcium	107	5.3	106
	Magnesium	49	4.0	48
	Barium	0	0.0	0
	Potassium	530	13.6	524
	Iron	0.00	0.0	0.00
ANIONS				
	Chloride	12333	347.9	12187
	Sulfate	350	7.3	346
	Hydroxide	0	0.0	0
	Carbonate	< 1	----	----
	Bicarbonate	1281	21.0	1266
SUMMARY				
	Total Dissolved Solids(calc.)	22210		21947
	Total Hardness as CaCO3	467	9.3	462

CaCO3 Factor	136981.6	Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor	37426.67	Calcium Sulfate Scale Probability ------> REMOTE



BJ SERVICES
Farmington District Lab
Water Analysis Report

EXHIBIT F

Test # FW02-0039

Customer/Well Information

Company:	Synergy Operating	**Date:**	4/11/02
Well Name:	Encino 15 #1	**Prepared for:**	Tom Mulins
Location:		**Submitted by:**	Tom Mulins
State:	County, NM	**Prepared by:**	Dave Shepherd
Formation:	Mancos — Between DK and Menefee	**Water Type:**	Produced
Depth:	ft		

Background Information

Reason for Testing: Routine Water Analysis
Completion type:
Well History:
Comments: Mancos Produced Water - Shown for comparison purposes only

Sample Characteristics

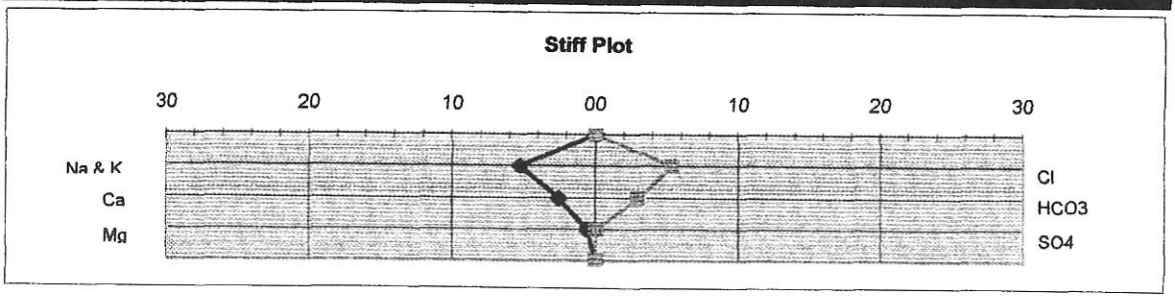
Sample Temp:	76 (°F)	**Viscosity:**	1 cp
pH:	6.82	**Color:**	Clear
Specific Gravity:	1.018	**Odor:**	Trace
S.G. (Corrected):	1.021 @ 60 °F	**Turbidity:**	Clear
Resistivity (Meas.):	0.28 Ω-m	**Filtrates:**	None

Sample Composition

		mg/l	me/l	ppm
CATIONS	Sodium (calc.)	12082	525.5	11869
	Calcium	521	26.0	512
	Magnesium	73	6.0	72
	Barium	0	0.0	0
	Potassium	480	12.3	472
	Iron	3.00	0.1	2.95
ANIONS	Chloride	19200	541.6	18861
	Sulfate	0	0.0	0
	Hydroxide	0	0.0	0
	Carbonate	< 1	----	----
	Bicarbonate	1854	30.4	1822
SUMMARY	Total Dissolved Solids(calc.)	33734		33137
	Total Hardness as CaCO3	1602	32.0	1574

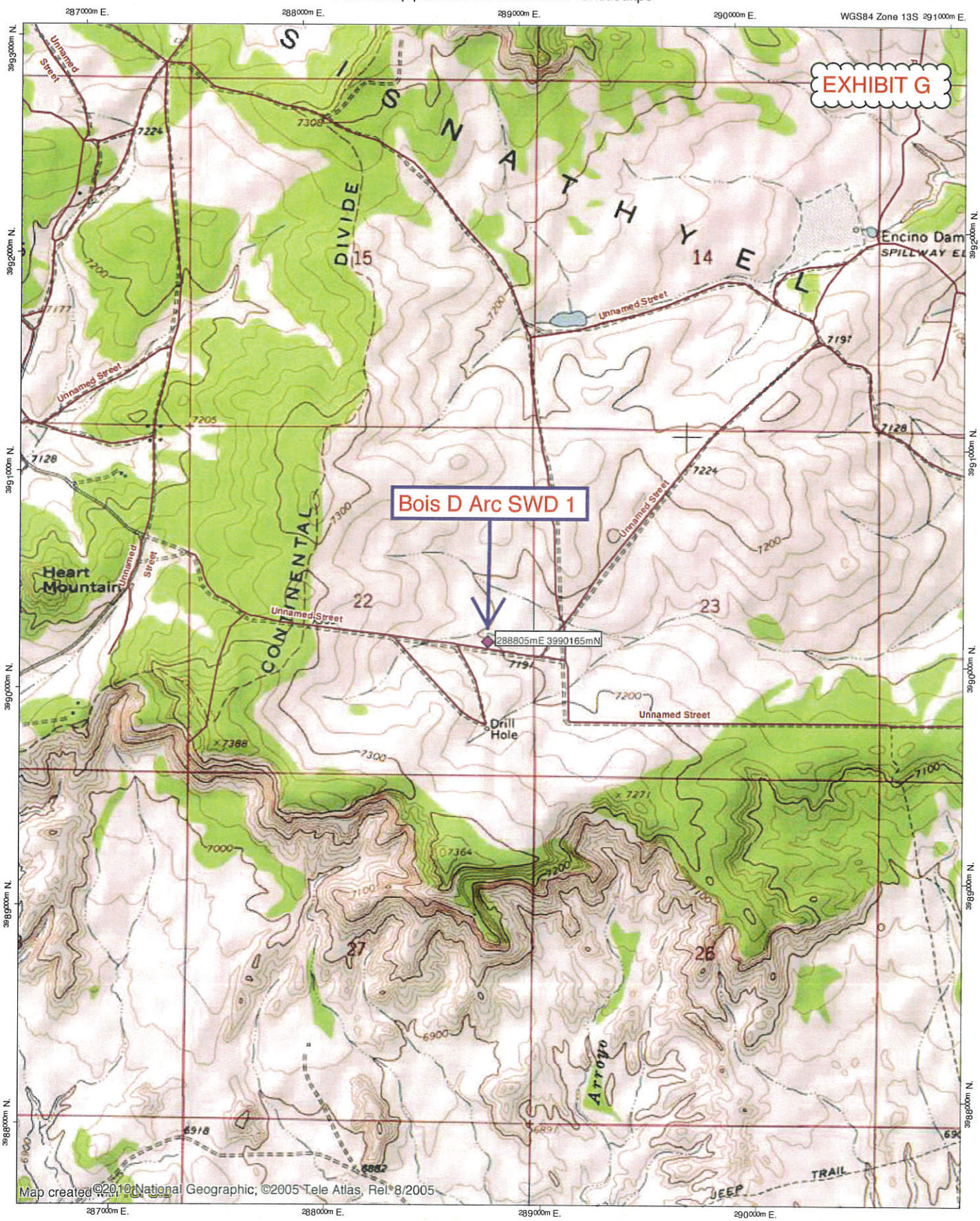
Scaling Tendencies

CaCO3 Factor	966698.7	Calcium Carbonate Scale Probability --> POSSIBLE
CaSO4 Factor	0	Calcium Sulfate Scale Probability -------> REMOTE



Fan

TOPO! map printed on 02/03/22 from "Untitled.tpo"



New Mexico Office of the State Engineer

EXHIBIT G

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RG 29678		MRG	SA		2	4	32	21N	05W	285514	3987070*	4517	2238	769	1469
RG 38724		MRG	SA	3	2	2	31	21N	04W	293440	3987523*	5335	860	445	415
RG 68048 POD1		MRG	SA		4	3	17	21N	04W	294437	3991199*	5726	300		
RG 74388		CH	RA							291495	3995350	5841	100	44	56

Average Depth to Water: **419 feet**

Minimum Depth: **44 feet**

Maximum Depth: **769 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 288805 **Northing (Y):** 3990165 **Radius:** 6440

***UTM location was derived from PLSS - see Help**

3/26/22 5:34 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

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

EXHIBIT H

NM Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Re: Geology Statement
EOG Resources Inc.
Bois D Arc SWD #1
Section 22, T. 21N, R. 5W
Sandoval County, New Mexico

To whom it may concern:

Publicly available geologic and engineering data related to the proposed SWD renewal have been thoroughly reviewed, and no evidence for open faults or any other hydrologic connection between the proposed Dakota injection zone and any underground sources of drinking water has been found. Please see the attached assessment for additional information.

Sincerely,

Cory Walk

Cory Walk
Geologist

EXHIBIT H

Seismic Risk Assessment

EOG Resources Inc.

Bois D Arc SWD #1

Section 22, Township 21 North, Range 5 West

Sandoval County, New Mexico

Cory Walk, M.S.

Cory Walk

Geologist

Permits West Inc.

March 29, 2022

EXHIBIT H

GENERAL INFORMATION

Bois D Arc SWD #1 is located in the SE ¼, section 22, T21N, R5W, about 21 miles west of Cuba, NM in the southeastern San Juan Basin. EOG Resources Inc. proposes to renew this SWD application to continue injecting within the Dakota Formation through a cased hole from 6,058'-6,093' below ground surface. The Dakota is primarily a sandstone reservoir. This report assesses any potential concerns relating to induced seismicity along faults or the connection between the injection zone and known underground potable water sources.

FAULTS AND FRACTURES

The Geologic Map of New Mexico (2003) shows the nearest faults to the SWD location are found 10 miles to the south (Figure 1). Several easterly striking faults displace the Cretaceous Pictured Cliffs Sandstone, Lewis Shale, and Cliff House Sandstone and do not appear to penetrate any deeper or shallower strata. Therefore, these faults are interpreted to have formed syndepositionally and are not viewed as a major pathway between the deeper Dakota Formation (injection zone) and the shallow fresh groundwater sources. Recent seismic imaging has identified subsurface faulting in the Fruitland and Kirtland formations in the Farmington, NM area. However, "interpreted faults and fracture zones have limited vertical extent and major penetrative faults are not observed in the 3D seismic interpretations" (Wilson et al., 2012). The only deep penetrating faults in the region lie 25 miles east of the Bois D Arc SWD at the western base of the Sierra Nacimiento's (Figure 1).

Structure contours of formation tops throughout the San Juan Basin show homogenously dipping surfaces to the northeast (Kelley et al., 2014; Figure 1). No evidence exists of a major subsurface fault that could act as a potential connecting pathway between the injection zone and shallow potable water at the location of the proposed SWD.

GROUNDWATER SOURCES

Kelley et al. (2014) performed a hydrologic assessment of the San Juan Basin including an analysis of water chemistries and found a depth of 2,500 ft bgs to be the maximum depth of subsurface potable water. This depth primarily includes water within Cenozoic aquifer systems such as the Nacimiento, Ojo Alamo, and San Jose formations.

The Dakota and underlying Morrison formations have historically been recognized as aquifers, however, "fresh water in the San Juan Basin is generally at depths <2,500-3,500 ft and is present 3-20 miles basinward of the outcrop belts for each aquifer. The remainder of the water at depth in the central basin is brackish to saline." (Kelley et al., 2014). The Bois D Arc SWD lies approximately 25 miles basinward and is therefore considered to be a brackish or saline aquifer. Geochemical water analyses reported in Kelley et al. (2014) from wells surrounding the Bois D Arc SWD support this statement (Figure 2).

EXHIBIT H

STRATIGRAPHY

According to Bois D Arc well records, two thick permeability barriers, the Mancos (1,667' thick) and Lewis (736' thick) formations, exist above the targeted Dakota injection zone (Figure 3). Well data indicates ~3,560 ft of rock (of which ~2,400' is considered impermeable) separating the top of the injection zone from the previously stated lower limit of potable water at 2,500' bgs.

CONCLUDING STATEMENT

All available geologic and engineering data evaluated around the Bois D Arc SWD #1 well show no potential structural or stratigraphic connection between the Dakota injection zone and any subsurface potable water sources. The shallow injection zone and proximity of nearby faults also removes any major concern of inducing seismic activity.

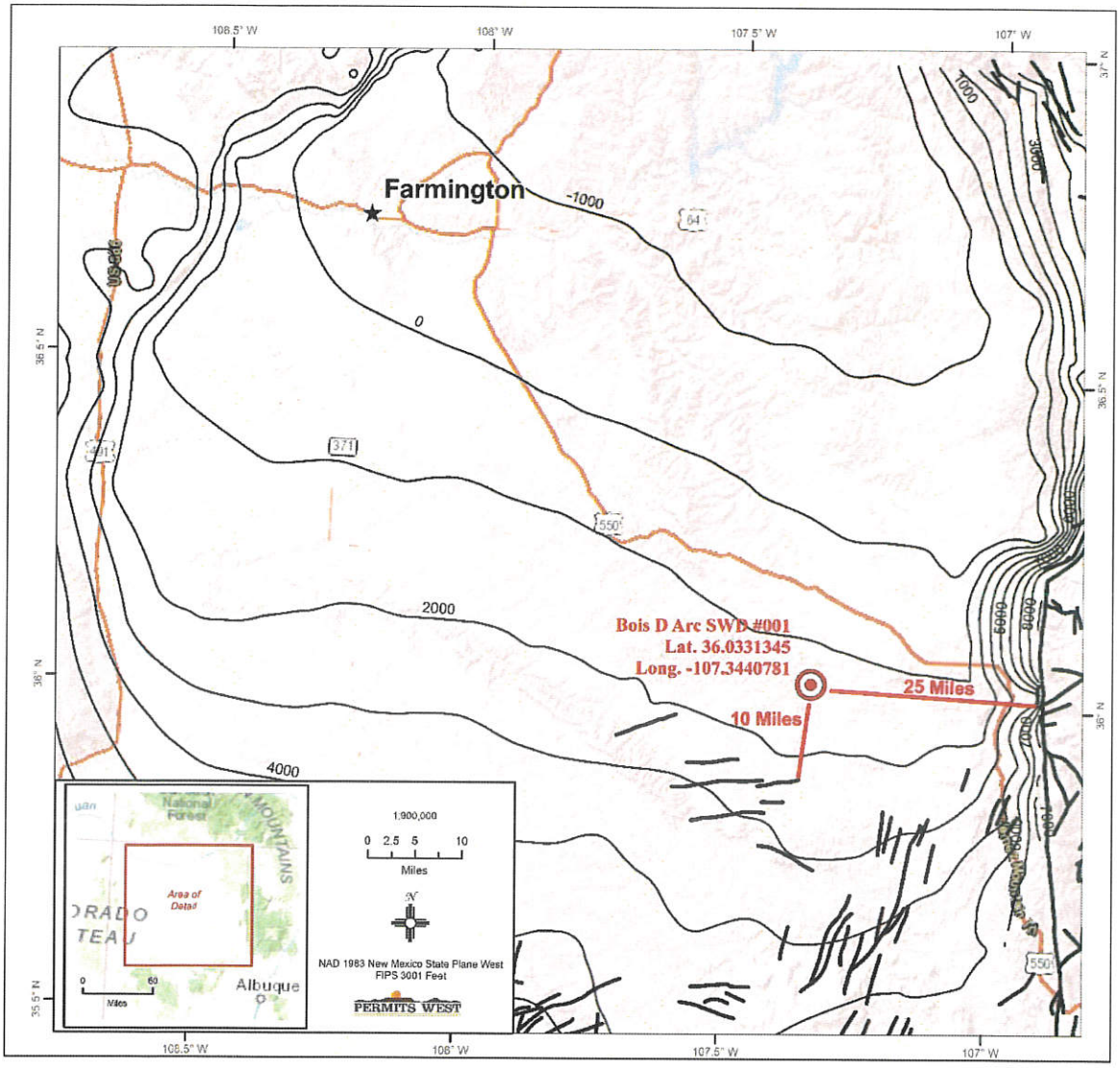


Figure 1. Regional map surrounding the Bois D Arc SWD. Black lines contour the top of the Dakota formation injection zone (Kelley et al., 2014). Contours show northeast dipping stratigraphy around the SWD location and no evidence of a deep penetrating fault into the formation. The Bois D Arc SWD #1 well lies ~25 miles west of the closest deeply penetrating fault and ~10 miles from the nearest shallow fault.

EXHIBIT H

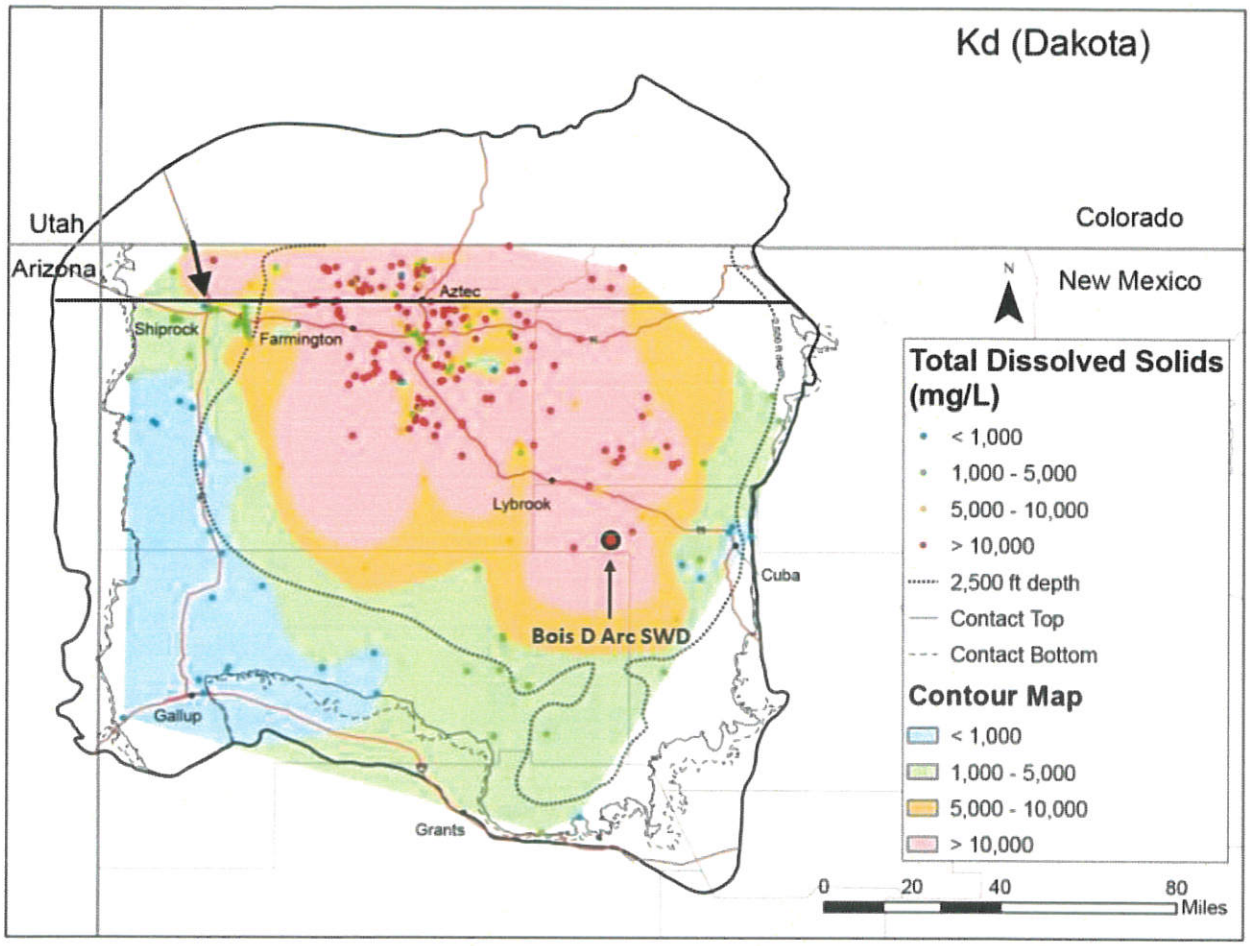


Figure 2. A TDS map of the Dakota formation (modified from Kelley et al., 2014). This map shows the Dakota aquifer as having high TDS values and therefore qualifying the Dakota as a brackish/saline aquifer.

EXHIBIT H

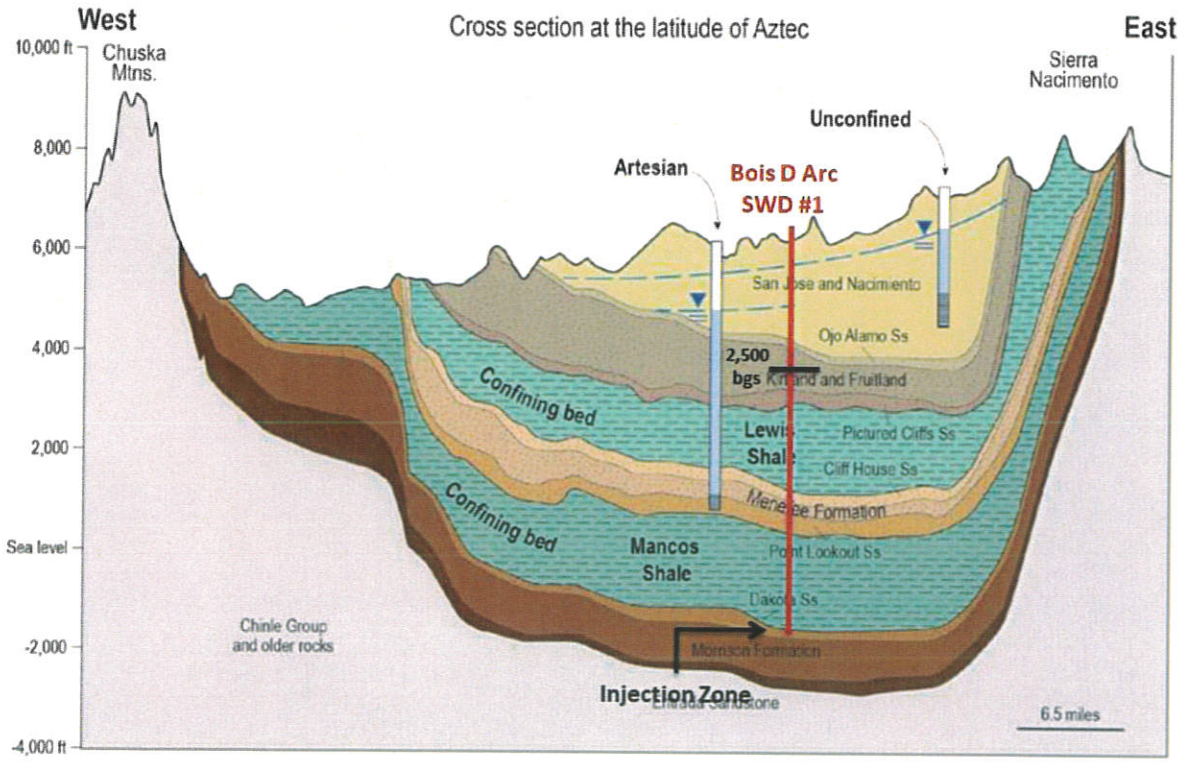


Figure 3. Schematic cross section of the San Juan Basin (modified from Kelley et al., 2014). This cross section shows the two major confining layers, Mancos and Lewis Shale, separating the Dakota formation injection zone from the maximum depth of potable water at 2,500 ft bgs.

EXHIBIT H

References Cited

Geologic Map of New Mexico, New Mexico Bureau of Geology and Mineral Resources, 2003, Scale 1:500,000.

Kelley, S., Engler, T.W., Cather, M., Pokorny, C., Yang, C., Mamer, E., Hoffman, G., Wilch, J., Johnson, P., Zeigler, K., 2014, Hydrologic assessment of oil and gas resource development of the Mancos Shale in the San Juan Basin, New Mexico, New Mexico Bureau Geology Mineral Resources, Open-file Report, v. 0566.

Wilson, T.H., Wells., A., Midouchowski, A., and Martines, G., 2012, Fracture evolution of the Southwest Regional Partnership's San Juan Basin Fruitland coal carbon sequestration pilot site, New Mexico: International Journal of Coal Geology, 19 pp.

EOG RESOURCES INC.
BOIS D ARC SWD 1
30-043-20981
SWD-914
2025' FSL & 675' FEL SEC. 22, T. 21 N., R. 5 W., SANDOVAL COUNTY, NM

I. Goal is to renew disposal approval for an existing 6135' deep saltwater disposal well. Approval expired due to a "continuous one-year period of non-injection". Last disposal was August 2019. Disposal interval is and will be 6058' – 6093' in the SWD; Dakota (96198). See Exhibit A for C-102 and topographic map. The well is on BLM surface and BLM minerals.

II. Operator: EOG Resources Inc. [OGRID 7377]
Operator phone number: (575) 748-4196
Operator address: 104 S. 4th St., Artesia NM 88210
Contact for Application: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease: BLM NMNM-105533
Lease Area: all of Sections 21 & 22, T. 2 N., R. 5 W.
Closest Lease Line: 675'
Well name and number: Bois D Arc SWD 1
Well Location: 2025' FSL & 675' FEL Section 22, T. 21 N., R. 5 W.

A. (2) Surface casing (9.625", 36", J-55, ST&C) was set in 2003 at 332' in a 12.25" hole and cemented to GL with 240 sacks. Circulated 23 bbl.

Production casing (7", 23#, L-80, J-55 & N-80) was set at 6135' in an 8.75" hole and cemented in 2 stages to 440' (CBL) with 632 sacks.

A. (3) Tubing (4.5", 11.6#, N-80) is now set at 5850'. (Disposal interval is 6058' – 6093'.) Same type tubing will be extended 120' deeper and set at 5970'

A. (4) A 7" Baker model 87-47 production FAB packer with a Baker K-22 82FA47 seal assembly is now set at 5850'. Packer will be moved 120' deeper and set at 5970'.

B. (1) Disposal zone is the Dakota sandstone (SWD; Dakota (96198) pool). Estimated fracture gradient is ≈0.8 psi per foot.

B. (2) Disposal interval is cased from 6058' to 6093'.

B. (3) Well was drilled as a Dakota saltwater disposal well.

B. (4) Dakota is perforated from 6058' to 6093' in the well.

B. (5) Three Mesa Verde oil wells (all EOG) produce within a half-mile radius. Closest productive zone above the Dakota is the Gallup at 4590'. No oil or gas zone is below the Dakota in the area of review. Most likely candidate to produce below the Dakota is the Entrada at ≈7000'.

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

V. Exhibit B shows and tabulates the five existing wells within a half-mile radius. Three are Mesa Verde producers and two are P&A. None of the five wells penetrated the Dakota. Deepest of the five is 5095'. Exhibit C shows all 12 existing wells (5 oil + 7 P&A) within a 2-mile radius. EOG has dozens of approved, but not yet drilled, horizontal Gallup wells within the 2-mile radius. Closest (3255' WSW) Dakota penetrating (7135' TD) well (30-043-20233) is in N-22-21n-5w. A diagram of the plugged well is in Exhibit C. Dakota is covered with a 55-sack plug in the P&A well.

All leases within a half-mile are BLM. Exhibit D shows and tabulates all leases within a half-mile. Two-mile radius leases are BLM, Navajo, or NMSLO (Exhibit E).

VI. No Dakota penetrator is within a half-mile.

VII. 1. Average injection rate will be ≈4,000 bwpd.
Maximum injection rate will be 10,100 bwpd.

2. System will be open and closed. Water will both be trucked and piped.
3. Average injection pressure will be ≈1,000 psi. Maximum injection pressure will be 1,211 psi (= 0.2 psi/foot x 6058' (highest perforation)).
4. Disposal water will be produced water, mainly Gallup, but also other San Juan Basin waters (e. g., Menefee, Mancos) too. Analyses of Dakota, Mancos, and Menefee water are in Exhibit F. Gallup data is from the NM Produced Water Quality Database v.2. A table of TDS ranges from those wells is below.

Formation	TDS range (mg/l)
Dakota	14,741 – 15,351
Gallup*	27,523
Mancos	33,734
Menefee	22,210 – 36,995

*30-043-60021 in B-14-22n-6w

No compatibility problem has been reported from the 12-years of operation and 28,172 barrels that have been disposed to date.

5. Closest Dakota producer is >8 miles NNW in 5-22n-5w.

VIII. The lower Dakota (≥136' thick) is a fluvial sandstone. Average porosity is 19%. Peak porosity is 26%. The disposal zone is confined by the Greenhorn Formation shale above and by the Brushy Basin shale below. Formation tops are:

Nacimiento = 0'
Ojo Alamo = 940'
Kirtland = 1093'
Fruitland = 1204'
Picture Cliff = 1439'
Lewis shale = 1544'
Cliffhouse = 2186'
Menefee = 2922'
Pt. Lookout = 3751'

Mancos = 4058'
Gallup = 4590'
Greenhorn = 5668'
Dakota = 5725'
Lower Dakota = 5999'
disposal interval = 6058' - 6093'
TD = 6135'

Closest possible underground source of drinking water above the proposed disposal interval is the Ojo Alamo sandstone (940' - 1092' deep). According to W. J. Stone et al in Hydrogeology and water resources of San Juan Basin, New Mexico, the Ojo Alamo "is a widely used source of domestic and stock water". According to State Engineer records (Exhibit G), the closest water well is 2.8 miles southwest. Water bearing strata were found from 1620' to 2144' in the 2238' deep well. There is 4632' of vertical separation, including confining shales, between the bottom of the Ojo Alamo and the top of the Dakota.

No underground source of drinking water is below the proposed disposal interval.

IX. Perforations will be cleaned with acid as needed.

X. CBL, GR-IND, NEU-Density, and mud logs were run.

XI. According to State Engineer records (Exhibit G), no water wells are within a 2-mile radius. No water wells were found during a February 10, 2022, field inspection.

XII. EOG Resources Inc. (Exhibit H) is not aware of any geologic or engineering data that may indicate the Dakota is in hydrologic connection with any underground sources of water. Deepest, and only, water well within a 2.8-mile radius is 2238'.

There are 4 active SWD; Dakota wells in New Mexico. Cumulative disposal is 414,895 barrels of water.

XIII. A legal ad (Exhibit I) was published on February 20, 2022. Notice (Exhibit J) and this application has been sent to the surface owner (BLM), all well operators regardless of depth (only EOG), government lessors (only BLM), lessees of record (only EOG), and operating right holders within a half-mile.