Initial Application Part I

Received: **09/16/2019**

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

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

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: Enduring Resources, LLC **OGRID Number:** 372286
Well Name: NE Chaco Com SWD 1 **API:** 30-039-31378
Pool: SWD; Entrada **Pool Code:** 96436

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

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

9-15-19
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: ENDURING RESOURCES, LLC

ADDRESS: 200 ENERGY COURT, FARMINGTON NM 87401

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: **NE CHACO COM SWD 1**

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).

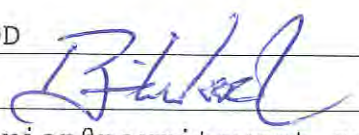
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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:  DATE: AUG. 30, 2019

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: ENDURING RESOURCES, LLC

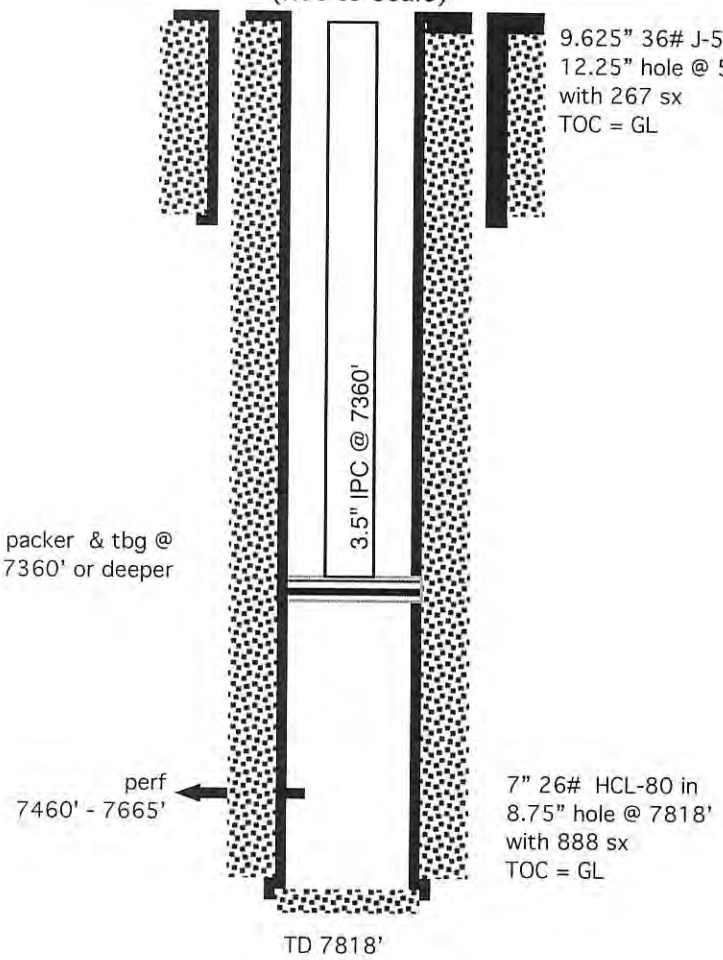
WELL NAME & NUMBER: NE CHACO COM SWD 1

WELL LOCATION: 2335 FSL & 2559 FEL | J | 13 | 23 N | 7 W

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

(not to scale)



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 267 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC.

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: 888 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC.

Total Depth: 7818'

Injection Interval

7460 feet to 7665'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3.5" Lining Material: PLASTIC

Type of Packer: DUAL GRIP WITH CORROSION RESSISTANT PLATING OR COATING

Packer Setting Depth: 7360' OR DEEPER

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

Additional Data

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

   If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: ENTRADA

3. Name of Field or Pool (if applicable): SWD; ENTRADA (96436)

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: MANCOS (4483')

   UNDER: NONE IN THE AREA OF REVIEW

Enduring Resources, LLC
NE Chaco Com SWD 1
2335' FSL & 2559' FEL
Sec. 13, T. 23 N., R. 7 W.
Rio Arriba County, New Mexico

I. Purpose is water disposal in the SWD; Entrada (96436) from 7460' to 7665'.

II. Operator: Enduring Resources, LLC (OGRID 372286)
Operator phone number: (505) 386-8205
Operator address: 200 Energy Court, Farmington NM 87401
Contact: Brian Wood (Permits West, Inc.)
Phone: (505) 466-8120

III. A. (1) Lease: BLM lease NMSF-0078360
Lease Size: 2,565.24 acres
Lease Area: S2 Section 13, T. 23 N., R. 7 W.
Closest Lease Line: 305'
Well Name & Number: NE Chaco Com SWD 1
Well Location: 2335' FSL and 2559' FEL Sec. 13, T. 23 N., R. 7 W.
(see Exhibit A)

A. (2) Surface casing (9.625", 36#, J-55) will be set at 500' in a 12.25" hole and cemented to the surface with 267 sacks Halliburton HALCEM® surface cement blend or its equivalent.

Production casing (7", 26#, HCL-80) will be set at 7818' in a 8.75" hole and cemented to the surface. Lead with slurry of 481 sacks G-POZ blend. Tail with 407 sacks G-POZ blend. The 153' of cemented casing (rathole) below lowest perforation will accommodate well operations.

A. (3) Tubing will be 3.5" IPC plastic lined injection string set at ≥7360'. (Disposal interval will be 7460' to 7665'.)

A. (4) Dual grip packer with externally coated, or plated with corrosion resistant, material will be set at ≥7360' (which would be 100' above top perforation of 7460').

B. (1) Disposal zone will be the Entrada sandstone in the SWD; Entrada (96436) pool. Entrada was described as a fine to very fine-grained sandstone with fair to good porosity and permeability in a well (30-045-22291) 15 miles southwest. Fracture gradient is expected to be ≈0.75 psi per foot.

B. (2) Disposal interval will be 7460' - 7665', cased, cemented, and perforated.

B. (3) Well has not yet been drilled.

B. (4) Well bore will be perforated from 7460' to 7665'.

B. (5) Top of the Entrada is at 7458'. Bottom of the closest overlying productive formation (Dakota) is at ≈6562'. There will be a ≈896' interval between the highest perforation and the bottom of the Dakota. There is no underlying productive formation within at least a dozen miles. Closest current Entrada producer is 20 miles southeast in the Ojo Encino Entrada Pool (48030).

IV. This is not an expansion of an existing injection project.

V. Exhibit B shows and tabulates all 10 well bores (1 P & A + 9 oil) within a half-mile radius area of review. Deepest well within a half-mile is 5735' TVD.

There are 135 (88 oil or gas + 42 P&A + 4 water + 1 SWD) wells within a two-mile radius (see Exhibit C).

Maps showing all leases (BLM only) within a half-mile (see Exhibit D) and all leases (BLM, fee, or NMSLO) within two miles (see Exhibit E) are attached. Details on the leases within a half-mile are in Exhibit D.

VI. Ten wells are within a half-mile. Deepest well is 5735'. Entrada top is 7458'. None of the wells penetrated the Entrada.

VII. 1. Average injection rate = 10,000 bwpd. Maximum rate = 12,000 bwpd.
2. System will initially be open (water will be trucked). A pipeline will be laid at a later date.
3. Average injection pressure =1200 psi Maximum pressure =1492 psi
4. Water source will be present and future Enduring wells in the San Juan Basin. Water analyses (Exhibit F) are attached. A summary follows.

Parameter	Fruitland	Gallup	Gallup	Entrada
bicarbonates	752.6	497.7	389.6	5612
calcium	258.7	517.4	239.5	176
carbonates				40
chlorides	5970.1	12736.3	13173.7	2200
H2S	0	0	0	
iron	0	0	5	0
magnesium	495.7	41	873.1	15
pH	7.5	7.8	7.4	8.4
potassium	160	100	150	200
resistivity	0.45	0.75	0.62	0.89
sodium	2919.8	7069.4	6760.6	4165
sulfates	0	0	0	2000
specific gravity	1.005	1.005	1.002	1.005
TDS	10557.4	21332.65	21592.05	14408

5. The Entrada has not been proven productive within two miles of the proposed well. In general, Entrada water near recharge zones (basin fringe) has a specific conductance of <1,500 μmhos. Entrada water from deeper parts of the basin has a specific conductance of >10,000 μmhos. Stone et al in Hydrogeology and water resources of San Juan Basin, New Mexico wrote, "Generally, however, water from the Entrada is not suitable for drinking, especially in deeper parts of the basin." Summaries of analyses of Entrada produced water follow. The samples (see Exhibit G) are from Santa Fe 20 1 (30-045-22291) in SW4NE4 20-21n-8w (≈31 miles southeast) and Eagle Mesa 1 (30-043-20175) in SW4SW4 12-19n-4w (≈60 miles southeast). Mancos analyses are in Exhibit H.

Parameter	Santa Fe 20 1	Eagle Mesa 1
Bicarbonate	2546 mg/l	1220 mg/l
Calcium	27 mg/l	160 mg/l
Chloride	903 mg/l	1773 mg/l
Iron	0.9 mg/l	0 mg/l
Magnesium	8 mg/l	49 mg/l
pH	7.73	7.32
Sodium	3228 mg/l	3726 mg/l
Sulfate	4400 mg/l	5000 mg/l
Specific Gravity	1.009	1.010
Total Dissolved Solids	11,114 mg/l	11,928 mg/l

VIII. The Entrada sandstone is a very porous and permeable æolian sandstone. It has produced oil elsewhere in the San Juan Basin (e.g., Eagle Mesa, Leggs, Media, Ojo Encino, Papers Wash, Snake Eyes Fields). It is an estimated 210' thick in the well. Estimated tops are:

San Jose Formation: 0'
Ojo Alamo Sandstone: 1313'
Kirtland Formation: 1450'
Fruitland Formation: 1653'
Pictured Cliffs Sandstone: 1913'
Lewis Shale: 2043'
Chacra Sandstone: 2743'
Cliff house Sandstone: 3448'
Menefee Formation: 3473'
Point Lookout Sandstone: 4253'
Mancos Shale: 4483'
Greenhorn: 6193'
Graneros: 6241'
Dakota: 6283'
Burro Canyon: 6563'
Burshy Basin: 6643'
Bluff Sandstone: 6963'
Salt Wash Basin: 7133'
Summerville: 7373'

Todilto: 7433'
Entrada: 7458'
Disposal Zone: 7460' to 7665'
Chinle: 7668' (not perforated)
Total Depth: 7818'

No water is well within a 1-mile radius. State Engineer records indicate four water wells are within a 2-mile radius. Closest (SJ 01156) of the four wells is 1.02 miles northeast. Deepest of the wells is 1709'. The three closest wells could not be found during a May 13, 2019 field inspection. The 4th (SJ 01507 (Lybrook Water Users) and 1.99 miles northwest) was locked and the Lybrook Water Users President said he was not feeling well. No existing underground drinking water sources are below the Entrada within a 2-mile radius. There is over a mile of vertical separation between the bottom of the lowest existing underground water source and the top of the Entrada.

IX. The well will be stimulated with acid and/or a sand frac.

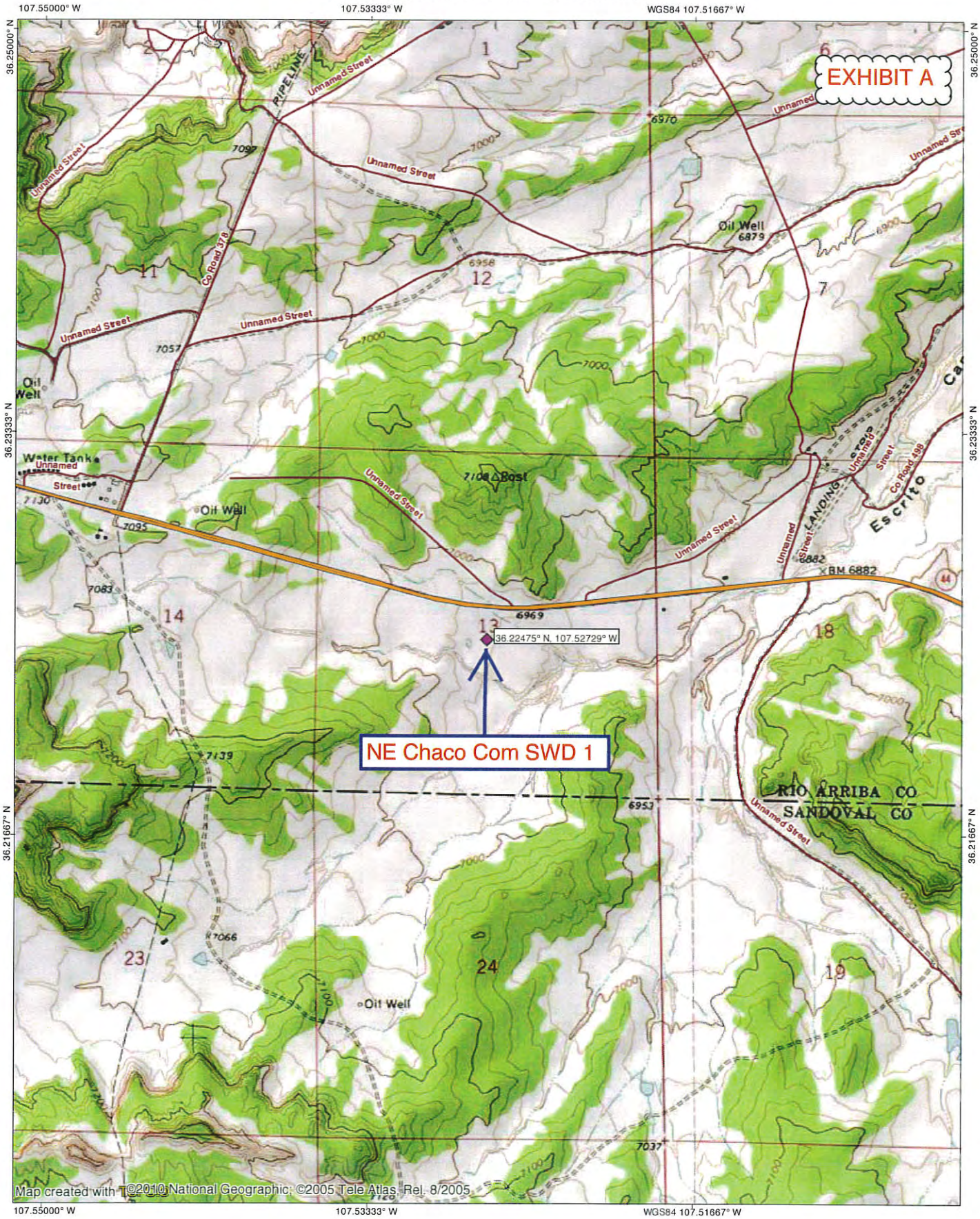
X. A triple combo log will be run from TD to surface.

XI. Treated water samples (Exhibit J) were collected from faucets supplied by the Lybrook Water Users on May 13, 2019.

XII. Enduring Resources, LLC is not aware of any geologic or engineering data that may indicate the Entrada is in hydrologic connection with any underground sources of water. There is >mile of vertical separation and multiple shale zones between the top (7458') of the Entrada and the bottom (1709') of the closest existing water well. Closest Quaternary fault is dozens of miles east in the Rio Grande Valley (Exhibit K). Two Entrada injection wells and 56 Entrada SWD wells are active in New Mexico.

XIII. A legal ad (see Exhibit L) was published on May 23, 2019. Notice (this application) has been sent (Exhibit M) to the surface owner (BLM), lessors (only BLM), well operators (only Epic), lessees of record (only DJR), operating rights holders (Bannon, Jack Cole, DJR, Garg, Logos, Range, Resource Development, Vaughn, Walsh Trust, WPX), and other interested parties within a half-mile.

TOPO! map printed on 05/10/19 from "Untitled.tpo"



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
9°
05/10/19

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

EXHIBIT A

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
	321251	ENTRADA

4 Property Code	5 Property Name	6 Well Number
	NE CHACO COM SWD	001

7 OGRID No.	8 Operator Name	9 Elevation
372286	ENDURING RESOURCES, LLC	6965'

10 Surface Location

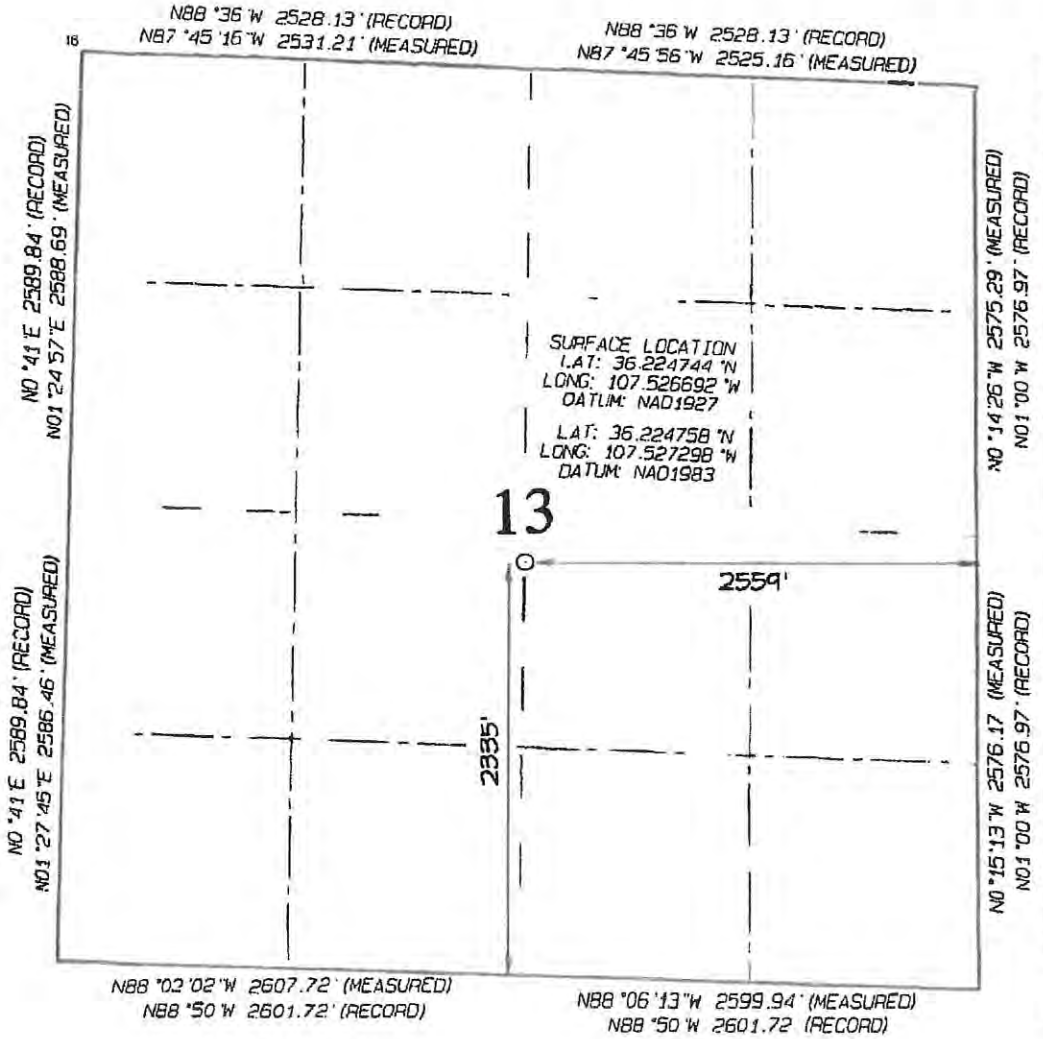
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	13	23N	7W		2335	SOUTH	2559	EAST	RIO ARRIBA

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.
640.00 Entire Section			

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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

2/11/19

Signature Date

Lacey Granillo

Printed Name

JGranillo@enduringresources.com

E-mail Address

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.

Date Revised: DECEMBER 20, 2018
Survey Date: SEPTEMBER 15, 2018

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269

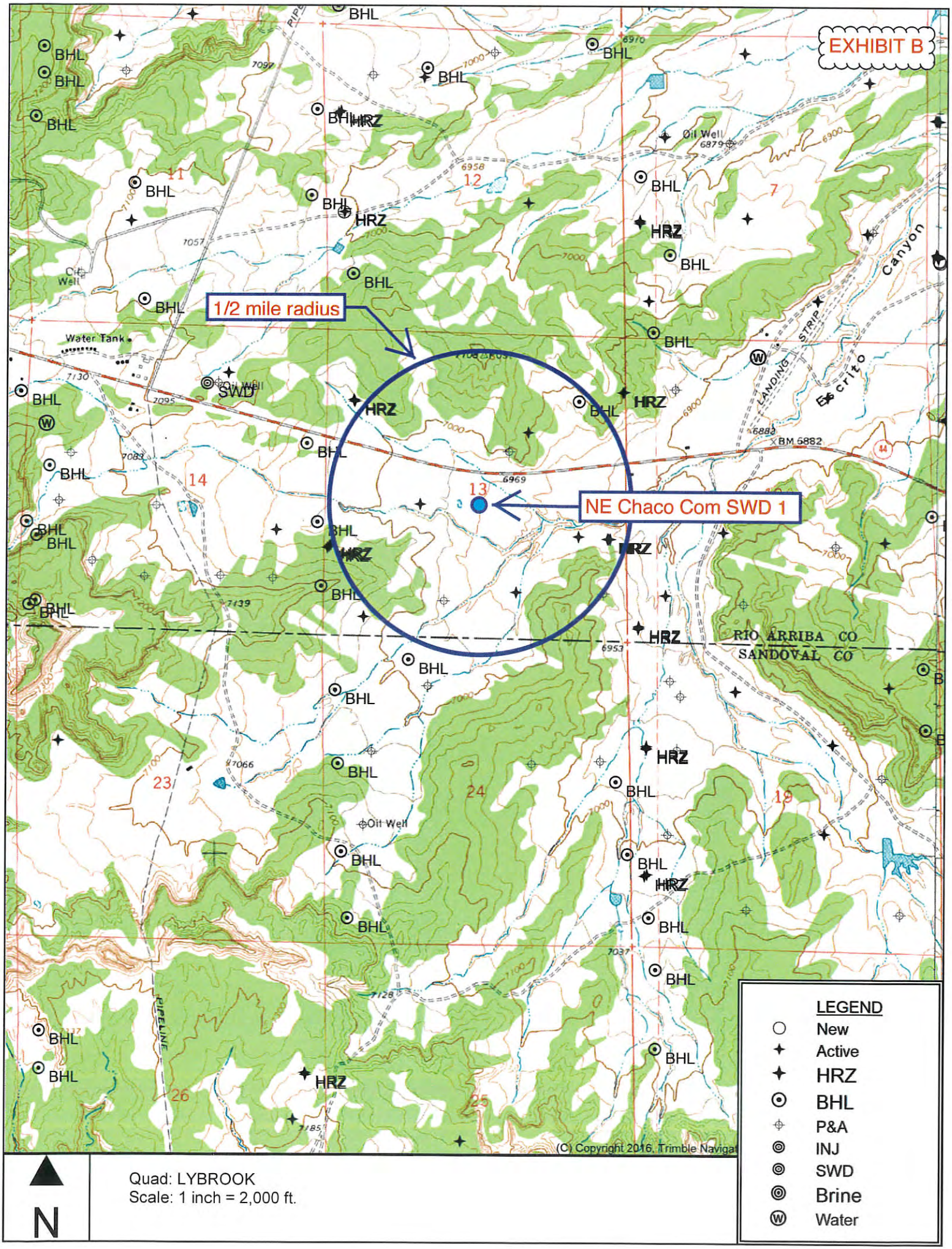


EXHIBIT B
1/2 mile radius
NE Chaco Com SWD 1
RIO ARRIBA CO
SANDOVAL CO
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Brine
Water
N
Quad: LYBROOK
Scale: 1 inch = 2,000 ft.
(C) Copyright 2016, Trimble Navigat

SORTED BY DISTANCE FROM NE CHACO COM SWD 1

API	OPERATOR	WELL	UNIT-SECTION-T23N-R7W	TYPE	TVD	ZONE @ TD	FEET FROM NE CHACO COM SWD 1
3003924801	Epic	Lybrook South 006	K-13	O	5735	Gallup	935
3003905067	Rhodes	Federal Elkins 001	G-13	P&A	5536	Gallup	1002
3003924451	Epic	Rincon 010	G-13	O	5723	Gallup	1454
3003924722	Epic	Lybrook South 008	O-13	O	5712	Gallup	1694
3003924755	Epic	Lybrook South 007	I-13	O	5710	Gallup	1855
3003931208	Enduring	NE Chaco Com 187H	I-13	O	5409	Gallup	2238
3003931244	Enduring	NE Chaco Com 203H	I-13	O	5492	Gallup	2342
3003931245	Enduring	NE Chaco Com 204H	I-13	O	5478	Gallup	2386
3003931213	Enduring	NE Chaco Com 238H	L-13	O	4887	Gallup	2574
3003931197	Enduring	NE Chaco Com 174H	L-13	O	5519	Gallup	2625
3003931192	Enduring	NE Chaco Com 175H	L-13	O	5481	Gallup	2647
3003931207	Enduring	NE Chaco Com 173H	D-13	O	5501	Gallup	2663
3003931214	Enduring	NE Chaco Com 172H	D-13	O	5371	Gallup	2683

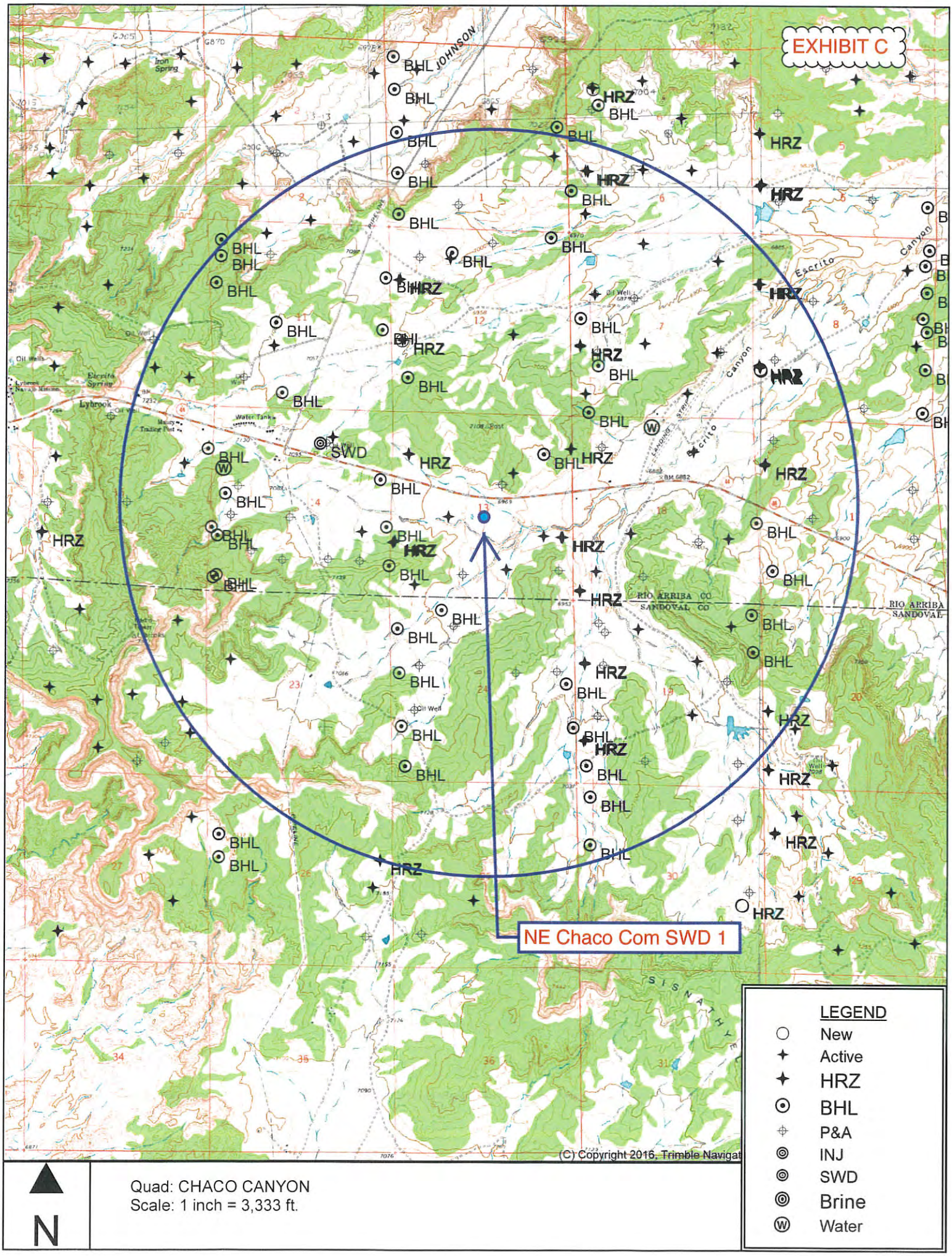
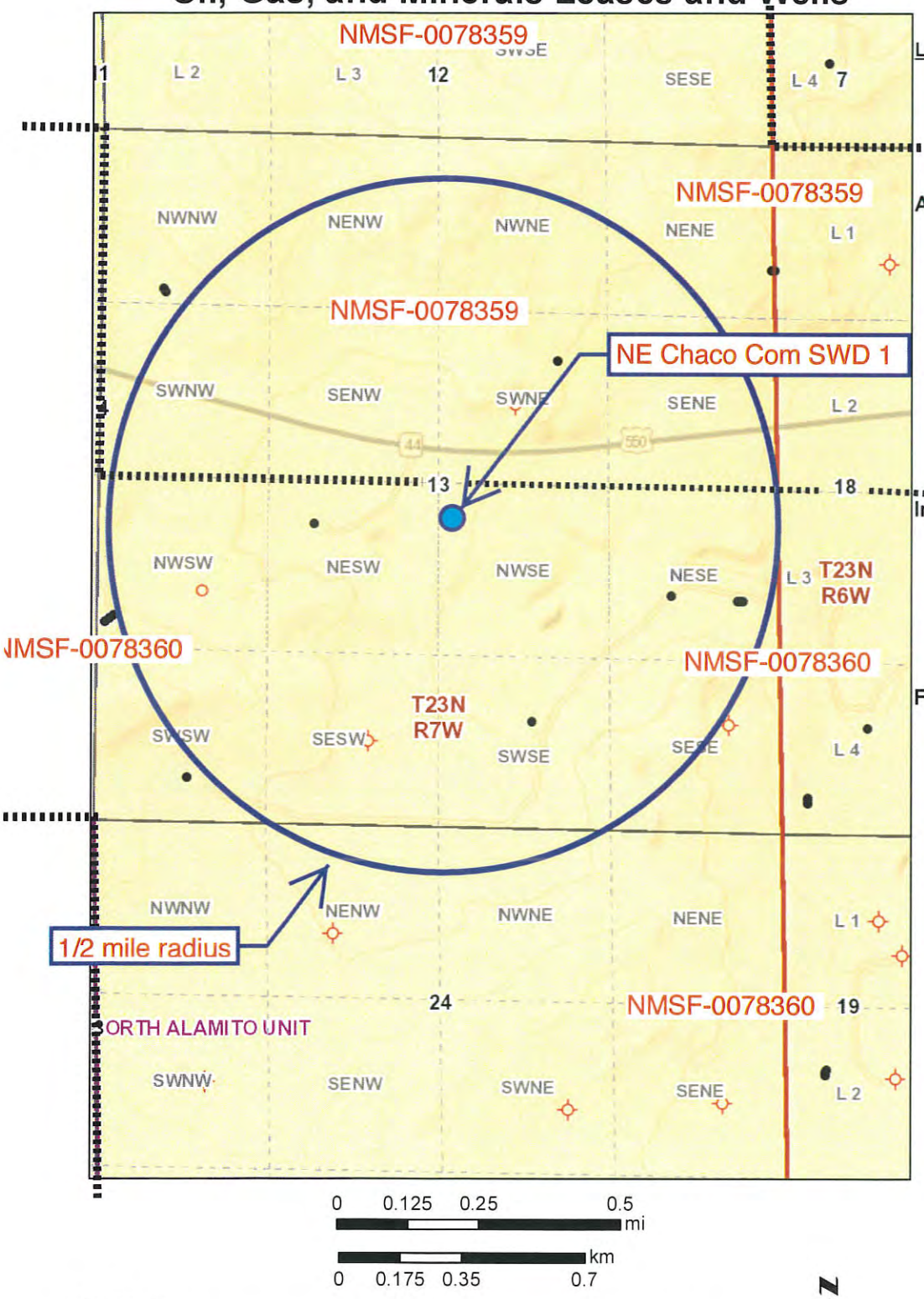


EXHIBIT C
NE Chaco Com SWD 1
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Brine
Water
N
Quad: CHACO CANYON
Scale: 1 inch = 3,333 ft.
(C) Copyright 2016, Trimble Navigat

New Mexico State Land Office

EXHIBIT D

Oil, Gas, and Minerals Leases and Wells



Legend

- Townships
- Sections
- Subdivisions

Active Wells

- Water Storage
- Miscellaneous
- Salt Water Disposal
- Injection
- Carbon Dioxide
- Gas
- Oil

Inactive Wells

- Plugged / Dry / Abandoned
- Cancelled / Not Drilled

- Unit Agreement Boundaries
- Oil and Gas Leases

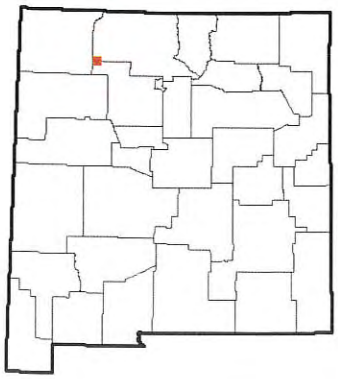
Federal Minerals Ownership

- 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



Map Created: 7/6/2019

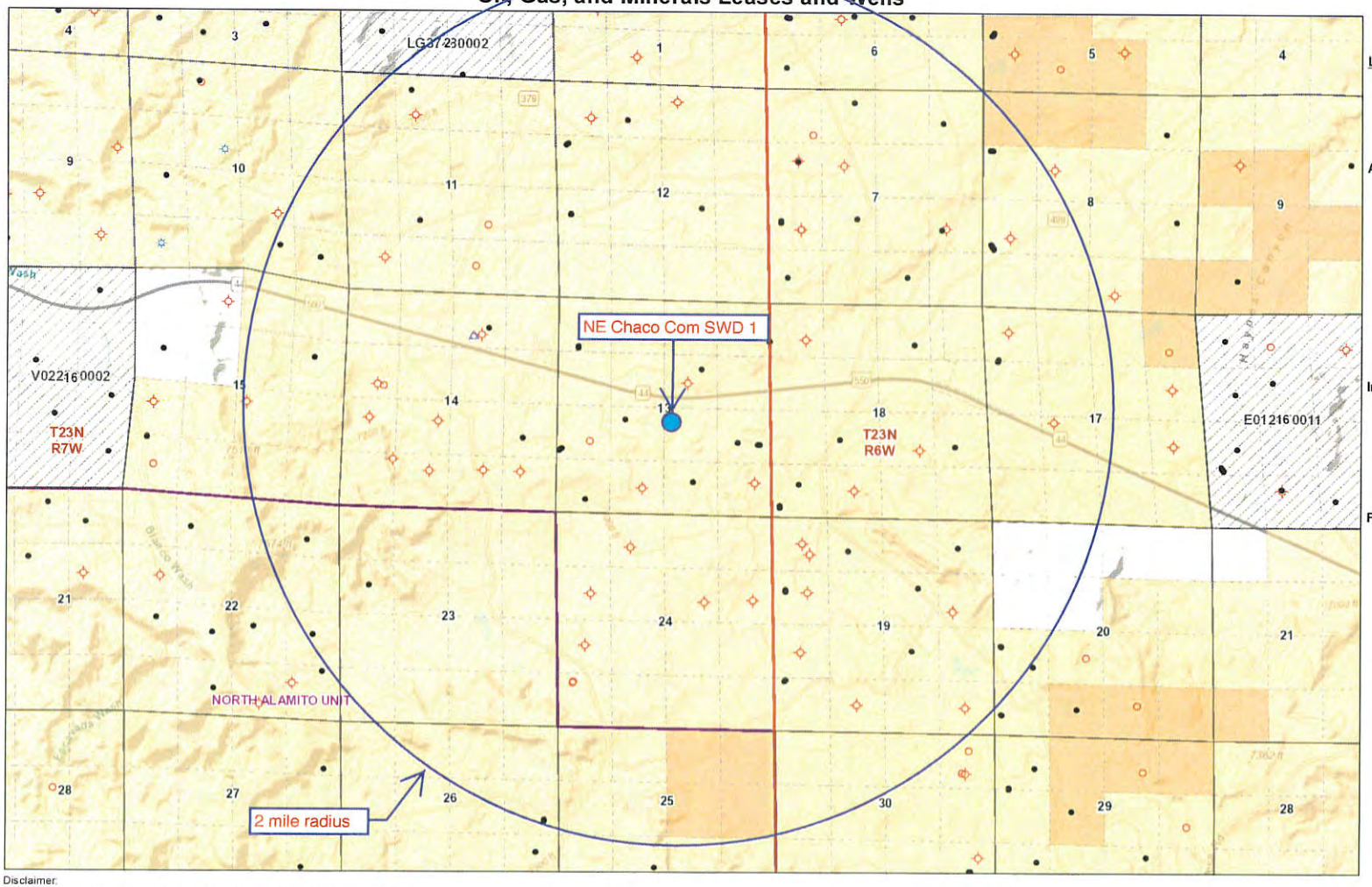
NE CHACO COM SWD 1 AREA OF REVIEW LEASES

Aliquot Parts in Area of Review	Lessor	Lease	Lessee of Record	Well operators (all shallower than Entrada)
T. 23 N., R. 6 W.				
Lots 3 & 4 Sec. 18	BLM	NMSF-0078359	DJR	Enduring & Epic
T. 23 N., R. 7 W.				
N2 Sec. 13	BLM	NMSF-0078359	DJR	Enduring & Epic
S2 Sec. 13	BLM	NMSF-0078360	DJR	Enduring & Epic
NWNE & NENW Sec. 24	BLM	NMSF-0078360	DJR	Enduring

New Mexico State Land Office

Oil, Gas, and Minerals Leases and Wells

EXHIBIT E



Legend

- Townships
- Sections
- Subdivisions

Active Wells

- Water Storage
- Miscellaneous
- Salt Water Disposal
- Injection
- Carbon Dioxide
- Gas
- Oil

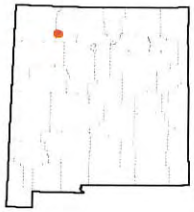
Inactive Wells

- Plugged / Dry / Abandoned
- Cancelled / Not Drilled

- Unit Agreement Boundaries
- Oil and Gas Leases

Federal Minerals Ownership

- All Minerals
- Coal Only
- Oil and Gas Only
- Oil, Gas and Coal Only
- Other Minerals



0 0.4 0.8 1.6 mi

0 0.5 1 2 km

N

Map Created: 7/6/2019

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Operator:	Elm Ridge	Date:	October 15, 2002
Well :	B.C. 28-1	District:	Farmington
Formation:	Coal	Requested by:	Tim Duggan
County:	San Juan	Technician:	Mike Brown
Depth:	1200	Source:	Well

PHYSICAL AND CHEMICAL DETERMINATION

SPECIFIC GRAVITY: 1.005 AT 67 Degrees F

pH:	7.5		SULFATES:	0 ppm
			CALCIUM:	258.7 ppm
IRON:	0	ppm	BICARBONATES:	752.6 ppm
			RESISTIVITY:	0.45 ohm/meter
H2S:	0	ppm	CHLORIDES:	5970.1 ppm
			SODIUM :	2919.8 ppm
			POTASSIUM:	160.0 ppm
MAGNESIUM:	495.7	ppm	TDS:	10557.4 ppm

CaCO3 Scale Tendency = Remote
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

EXHIBIT F

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Operator:	Elm Ridge	Date:	October 15, 2002
Well	C.T.B.	District:	Farmington
Formation	Gallup	Requested by:	Tim Duggan
County:	San Juan	Technician:	Mike Brown
Depth:	4800	Source:	Well

PHYSICAL AND CHEMICAL DETERMINATION

SPECIFIC GRAVITY: 1.005 AT 67 Degrees F.

pH:	7.8		SULFATES:	0	ppm
			CALCIUM:	517.4	ppm
IRON:	0	ppm	BICARBONATES:	497.7	ppm
			RESISTIVITY:	0.75	ohm/meter
H2S:	0	ppm	CHLORIDES:	12736.3	ppm
			SODIUM :	7069.4	ppm
			POTASSIUM:	100.0	ppm
MAGNESIUM:	411.0	ppm	TDS:	21332.65	ppm

CaCO3 Scale Tendency = Remote
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

EXHIBIT F

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Operator:	Elm Ridge	Date:	October 15, 2002
Well :	~~Joe Hixon #1~~ Joe Hixon #1 SESW 22-25n-12w	District:	Farmington
Formation:	~~N/A~~ PC	Requested by:	Tim Duggan
County:	San Juan	Technician:	Mike Brown
Depth:	4800	Source:	Well

PHYSICAL AND CHEMICAL DETERMINATION

SPECIFIC GRAVITY:	1.002	AT 67 Degrees F.			
pH:	7.4			SULFATES:	0 ppm
				CALCIUM:	239.5 ppm
IRON:	5	ppm		BICARBONATES:	389.6 ppm
				RESISTIVITY:	0.62 ohm/meter
H2S:	0	ppm		CHLORIDES:	13173.7 ppm
				SODIUM :	6760.6 ppm
				POTASSIUM:	150.0 ppm
MAGNESIUM:	873.1	ppm		TDS:	21592.05 ppm

CaCO3 Scale Tendency = Remote
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

EXHIBIT F

HALLIBURTON

Water Analysis Report

30-045-33217
F-11-24n-11w

To:	Dugan Production	**Date:**	11/10/2005
Submitted by:	Halliburton Energy Services	**Date Rec:**	11/10/2005
Attention:	Darrin Steed	**Report #:**	FLMM5A44
Well Name:	Herry Monster #3 SWD	**Formation:**	Entrada/SWD

Specific Gravity	1.005	
pH	8.4	
Resistivity	0.89	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	200	Mg / L
Sodium (Na)	4165	Mg / L
Calcium (Ca)	176	Mg / L
Magnesium (Mg)	15	Mg / L
Chlorides (Cl)	2200	Mg / L
Sulfates (SO4)	2000	Mg / L
Carbonates (CO3)	40	Mg / L
Bicarbonates (HCO3)	5612	Mg / L
Total Dissolved Solids	14408	Mg / L

Respectfully: Bill Loughridge

Title: Senior Scientist

Location: Farmington, NM

EXHIBIT F

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

WATER ANALYSIS

RECEIVED
MAR 25 1977
Minerals Management Inc.

30-045-22291
G-20-21n-8w

File WA - 5

Company Dome Petroleum Corp. Well Name Sante Fe 20 No. 1 Sample No. SS-2

Formation _____ Depth _____ Sampled From _____

Location Sec 20 T 21N R 8W Field _____ County San Juan State N.M.

Date Sampled 3-9-77 Date Analyzed 3-13-77 Engineer RGC

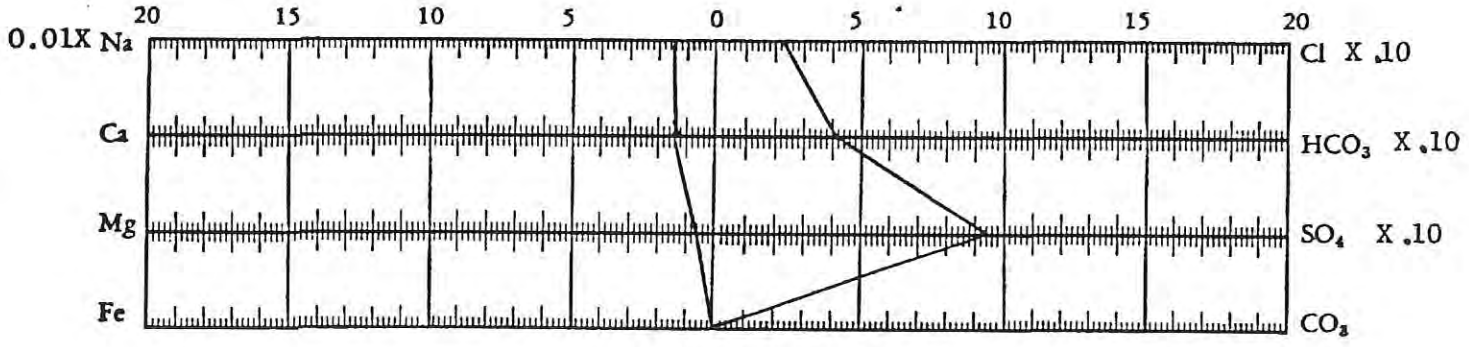
Total Dissolved Solids 11,114.5 mg/L _____ Sp. Gr. 1.009 @ 70 °F.

Resistivity 1.0 ohm-meters @ 70 °F. _____ Hydrogen Sulfide Present

pH 7.73

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	140.44	3228.7	Chloride	25.47	903.0
Calcium	1.35	27.0	Bicarbonate	41.73	2546.0
Magnesium	0.73	8.9	Sulfate	91.61	4400.0
Iron	0.03	0.9	Carbonate	ND	ND*
Barium	ND	ND	Hydroxide	ND	ND

*ND = Less than 0.1 mg/L



Scale: meq/L

All analyses except iron determination performed on a filtered sample.

EXHIBIT G

THE WESTERN COMPANY OF NORTH AMERICA

API WATER ANALYSIS

Company:	MERRION	W.C.N.A. Sample No.:	S106995
Field:		Legal Description:	
Well:	#1	Lease or Unit:	EAGLE MESA
Depth:		Water.B/D:	
Formation:	ENTRADA?	Sampling Point:	
State:		Sampled By:	STEVE DUNN
County:		Date Sampled:	05/03/95

30-043-20175
M-12-19n-4w

Type of Water(Produced,Supply, ect.): PROD.

PROPERTIES

pH:	7.32	Iron, Fe(total):	0
Specific Gravity:	1.010	Sulfide as H2S:	0
Resistivity (ohm-meter):	.81	Total Hardness: (see below)	
Tempature:	64F		

DISSOLVED SOLIDS

CATIONS	mg/l		me/l		
Sodium, Na:	3726	:	162		
Calcium, Ca:	160	:	8	Sample(ml): 1.0 ml of EDTA:	.40
Magnesium, Mg:	49	:	4	Sample(ml): 1.0 ml of EDTA:	.20
Barium, Ba:	N/A	:	N/A		
Potassium, K:		:			

ANIONS	mg/l		me/l		
:: .5000Chloride, Cl:	1773	:	50	Sample(ml): 1.0 ml of AgNO3:	.10
Sulfate, SO4:	5000	:	104		
Carbonate, CO3:		:		Sample(ml): 1.0 ml of H2SO4:	
Bicarbonate, HCO3:	1220	:	20	Sample(ml): 1.0 ml of H2SO4:	.20

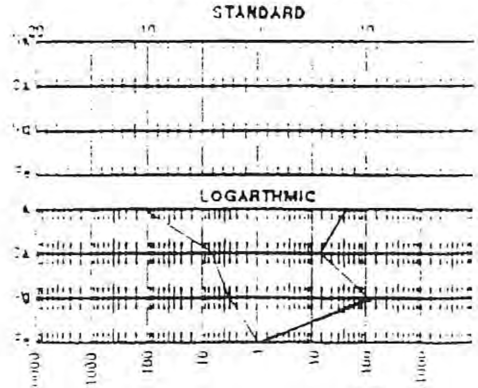
Total Dissolved Solids (calculated): 11928

Total Hardness: 600 — Sample(ml): 1.0 ml of EDTA: .60

REMARKS AND RECOMMENDATIONS:

ENTRADA WATER

EXHIBIT G



Analyst: DO
Date Analyzed 5/4

SWKD 5/4 326-5900

Analytical Report
Lab Order **1810596**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

EXHIBIT H

CLIENT: John Shomaker & Assoc.
Client Sample ID: First Swab Run
Project: Enduring Resources
Collection Date: 10/9/2018 8:37:00 AM
Lab ID: 1810596-001 **Matrix:** AQUEOUS **Received Date:** 10/10/2018 12:40:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	ND	0.50		mg/L	5	10/10/2018 7:01:11 PM	R54788
Chloride	27	2.5		mg/L	5	10/10/2018 7:01:11 PM	R54788
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/10/2018 7:01:11 PM	R54788
Bromide	ND	0.50		mg/L	5	10/10/2018 7:01:11 PM	R54788
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/10/2018 7:01:11 PM	R54788
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	10/10/2018 7:01:11 PM	R54788
Sulfate	460	10	*	mg/L	20	10/10/2018 7:13:35 PM	R54788
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MRA**	
Conductivity	1300	5.0		µmhos/c	1	10/11/2018 2:57:17 PM	R54833
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	820	100	*D	mg/L	1	10/15/2018 4:39:00 PM	40981
SM4500-H+B / 9040C: PH						Analyst: **MRA**	
pH	8.22		H	pH units	1	10/11/2018 2:57:17 PM	R54833
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	15	1.0		mg/L	1	10/16/2018 6:57:32 PM	40970
Magnesium	4.5	1.0		mg/L	1	10/16/2018 6:57:32 PM	40970
Potassium	9.3	1.0		mg/L	1	10/16/2018 6:57:32 PM	40970
Sodium	270	10		mg/L	10	10/16/2018 6:59:21 PM	40970

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

Analytical Report
Lab Order **1810596**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

EXHIBIT H

CLIENT: John Shomaker & Assoc.
Client Sample ID: First Formation
Project: Enduring Resources
Collection Date: 10/9/2018 11:52:00 AM
Lab ID: 1810596-002
Matrix: AQUEOUS
Received Date: 10/10/2018 12:40:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	5.8	0.50	*	mg/L	5	10/10/2018 7:26:00 PM	R54788
Chloride	1400	100	*	mg/L	200	10/12/2018 3:31:22 AM	R54823
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/10/2018 7:26:00 PM	R54788
Bromide	1.5	0.50		mg/L	5	10/10/2018 7:26:00 PM	R54788
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/10/2018 7:26:00 PM	R54788
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	10/10/2018 7:38:25 PM	R54788
Sulfate	6100	100	*	mg/L	200	10/12/2018 3:31:22 AM	R54823
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MRA**	
Conductivity	13000	10		µmhos/c	2	10/15/2018 3:53:19 PM	R54896
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	10200	200	*D	mg/L	1	10/15/2018 4:39:00 PM	40981
SM4500-H+B / 9040C: PH						Analyst: **MRA**	
pH	7.93		H	pH units	1	10/11/2018 3:01:50 PM	R54833
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	1100	100		mg/L	100	10/16/2018 7:07:08 PM	40970
Magnesium	72	10		mg/L	10	10/16/2018 7:03:08 PM	40970
Potassium	320	10		mg/L	10	10/16/2018 7:03:08 PM	40970
Sodium	3300	100		mg/L	100	10/16/2018 7:07:08 PM	40970

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

Analytical Report
Lab Order **1810596**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

EXHIBIT H

CLIENT: John Shomaker & Assoc.
Client Sample ID: Final Swab Run
Project: Enduring Resources
Collection Date: 10/9/2018 3:15:00 PM
Lab ID: 1810596-003
Matrix: AQUEOUS
Received Date: 10/10/2018 12:40:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	6.1	0.50	*	mg/L	5	10/10/2018 7:50:49 PM	R54788
Chloride	950	100	*	mg/L	200	10/12/2018 3:43:47 AM	R54823
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/10/2018 7:50:49 PM	R54788
Bromide	0.72	0.50		mg/L	5	10/10/2018 7:50:49 PM	R54788
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/10/2018 7:50:49 PM	R54788
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	10/10/2018 8:03:14 PM	R54788
Sulfate	6500	100	*	mg/L	200	10/12/2018 3:43:47 AM	R54823
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **MRA**	
Conductivity	13000	10		µmhos/c	2	10/15/2018 3:57:20 PM	R54896
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	9980	200	*D	mg/L	1	10/15/2018 4:39:00 PM	40981
SM4500-H+B / 9040C: PH						Analyst: **MRA**	
pH	7.66		H	pH units	1	10/11/2018 3:05:50 PM	R54833
EPA METHOD 200.7: METALS						Analyst: **JLF**	
Calcium	260	100		mg/L	100	10/16/2018 7:10:47 PM	40970
Magnesium	16	10		mg/L	10	10/16/2018 7:08:55 PM	40970
Potassium	84	10		mg/L	10	10/16/2018 7:08:55 PM	40970
Sodium	3300	100		mg/L	100	10/16/2018 7:10:47 PM	40970

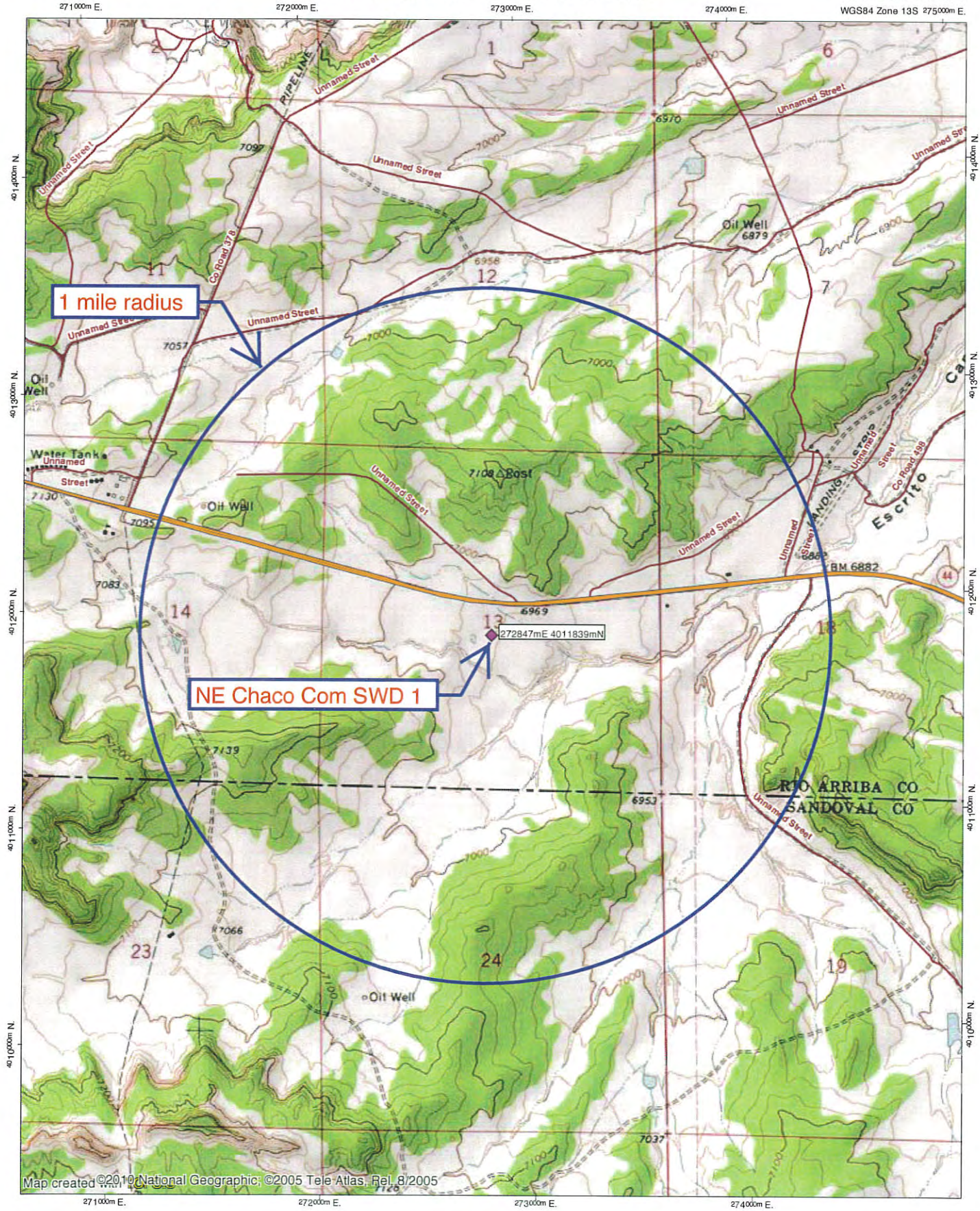
Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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

EXHIBIT I

TOPO! map printed on 05/10/19 from "Untitled.tpo"



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
9°
05/10/19

EXHIBIT I

New Mexico Office of the State Engineer
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	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
SJ 01156		SJ	RA	2	2	1	18	23N	06W	274330	4012555*	1646	1500	200	1300
SJ 04054 POD1		SJ	RA			1	14	23N	07W	270627	4012298	2266	273	180	93
SJ 02233		SJ	RA	1	1	2	15	23N	07W	269856	4012864*	3161	1100		
SJ 02233 CLW223636	O		RA	1	1	2	15	23N	07W	269856	4012864*	3161	1100		
SJ 01507		SJ	RA	3	3	4	10	23N	07W	269889	4013098*	3214	1709	900	809

Average Depth to Water: **426 feet**
Minimum Depth: **180 feet**
Maximum Depth: **900 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 272847 **Northing (Y):** 4011839 **Radius:** 3220

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

EXHIBIT I

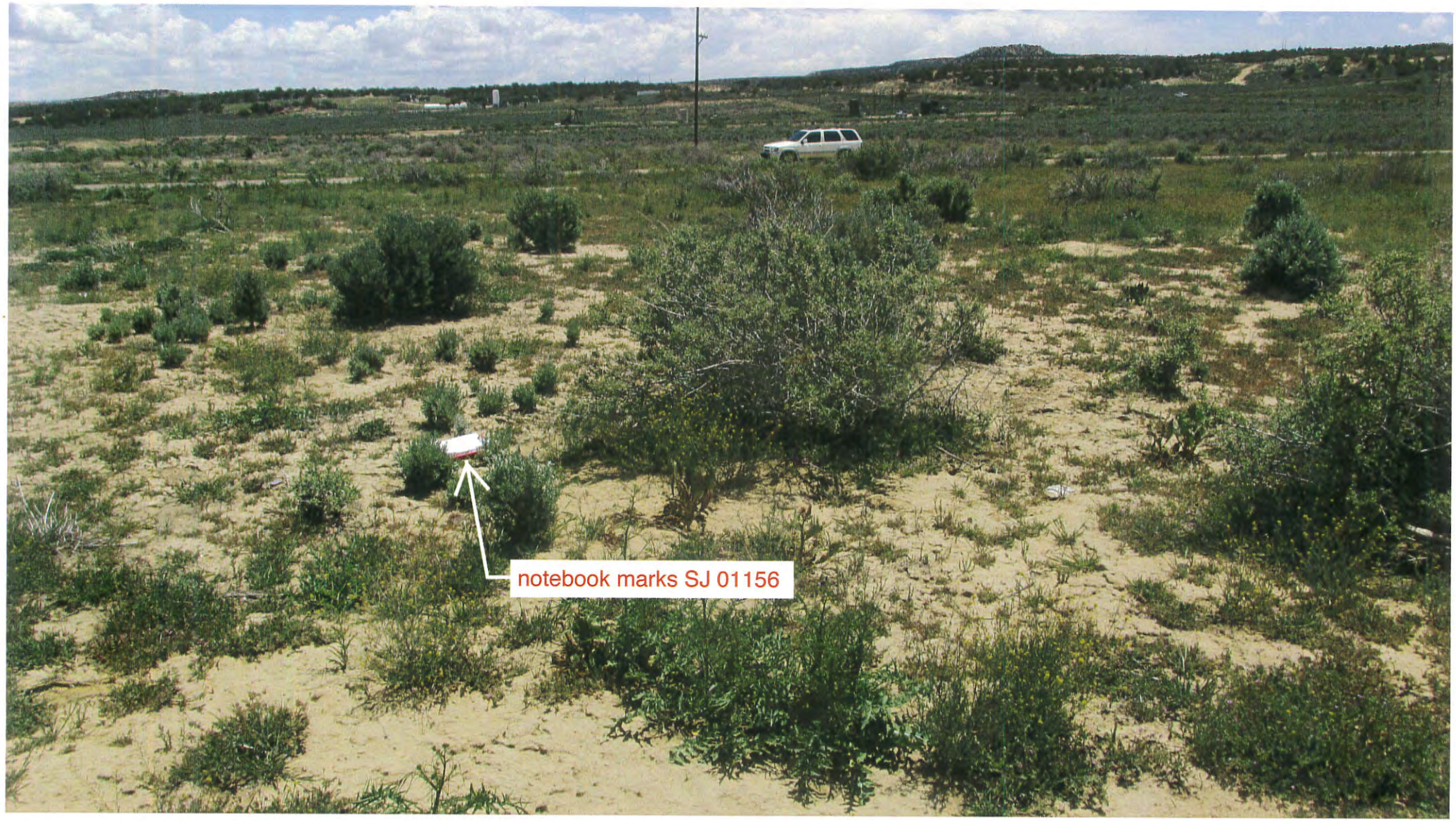


EXHIBIT I

EXHIBIT J

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Enduring Lybrook Saltwater Disposal We
Lab ID: 1905693-001 **Matrix:** AQUEOUS

Client Sample ID: Ernie Current
Collection Date: 5/13/2019 3:30:00 PM
Received Date: 5/14/2019 9:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B						Analyst: **plr**	
N-Hexane Extractable Material	ND	9.76		mg/L	1	5/20/2019 10:12:00 AM	45035
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	6.8	0.50		mg/L	1	5/14/2019 5:52:45 PM	R59859
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	614	20.0	*	mg/L	1	5/21/2019 11:06:00 AM	45020

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

Qualifiers:

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

EXHIBIT J

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Permits West
Project: Enduring Lybrook Saltwater Disposal We
Lab ID: 1905693-002 **Matrix:** AQUEOUS

Client Sample ID: Christ For All Nations
Collection Date: 5/13/2019 3:00:00 PM
Received Date: 5/14/2019 9:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B						Analyst: **plr**	
N-Hexane Extractable Material	ND	9.85		mg/L	1	5/20/2019 10:12:00 AM	45035
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	6.8	0.50		mg/L	1	5/14/2019 6:42:24 PM	R59859
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	613	20.0	*	mg/L	1	5/21/2019 11:06:00 AM	45020

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

EXHIBIT J

WO#: 1905693

24-May-19

Client: Permits West

Project: Enduring Lybrook Saltwater Disposal Well

Sample ID: **MB-45035**	SampType: **MBLK**	TestCode: **EPA Method 1664B**
Client ID: **PBW**	Batch ID: **45035**	RunNo: **60038**
Prep Date: **5/20/2019**	Analysis Date: **5/20/2019**	SeqNo: **2026958** Units: **mg/L**

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

Sample ID: **LCS-45035**	SampType: **LCS**	TestCode: **EPA Method 1664B**
Client ID: **LCSW**	Batch ID: **45035**	RunNo: **60038**
Prep Date: **5/20/2019**	Analysis Date: **5/20/2019**	SeqNo: **2026959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	35.2	10.0	40.00	0	88.0	78	114			

Qualifiers:

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

EXHIBIT J

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905693**

24-May-19

Client: Permits West

Project: Enduring Lybrook Saltwater Disposal Well

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59859**	RunNo: **59859**							
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020028**	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: **R59859**	RunNo: **59859**							
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020029**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.8	90	110			

Sample ID: **1905693-001BMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **Ernie Current**	Batch ID: **R59859**	RunNo: **59859**							
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020031**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	5.000	6.780	107	61.7	139			

Sample ID: **1905693-001BMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **Ernie Current**	Batch ID: **R59859**	RunNo: **59859**							
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020032**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	5.000	6.780	107	61.7	139	0.131	20	

Qualifiers:

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

EXHIBIT J

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905693**

24-May-19

Client: Permits West

Project: Enduring Lybrook Saltwater Disposal Well

Sample ID: **MB-45020**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **45020**	RunNo: **60028**
Prep Date: **5/19/2019**	Analysis Date: **5/21/2019**	SeqNo: **2026555** 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-45020**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **45020**	RunNo: **60028**
Prep Date: **5/19/2019**	Analysis Date: **5/21/2019**	SeqNo: **2026556** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

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

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

EXHIBIT K

Geologic Assessment

Enduring Resources, LLC

NE Chaco Com SWD #1

Section 13, Township 23 North, Range 7 West

Rio Arriba County, New Mexico

Cory Walk

Cory Walk

B.S., M.S.

Geologist

Permits West Inc.

June 19, 2018

EXHIBIT K

General Information

NE Chaco Com SWD #1 will be located in the SE 1/4, section 13, T23N, R7W, about 4 miles west of Counselor, NM in the San Juan Basin. Enduring Resources, LLC proposes the injection zone to be within the Entrada formation through an open hole from 7,460' – 7,665' below ground surface. This report assesses any potential concerns relating to the connection between the injection zone and known underground potable water 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. At the NE Chaco Com SWD location, the base of the Cenozoic aquifer system is at a depth of approximately 800'.

Faults and Fractures

The Geologic Map of New Mexico (2003) shows the nearest faults to the SWD location are found 17 miles to the south-southeast (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 deep Entrada 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 35 miles east of the proposed SWD at the western base of the Sierra Nacimiento Mountains (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.

Stratigraphy

Well data indicates ~6,660' of formations including several confining/impermeable layers separating the Entrada formation from the previously stated base of the Cenozoic aquifer system at approximately 800' bgs. Major confining formations lying at depths >800' bgs include the Lewis and Mancos Shales (Figure 2). Ridgely et al. (2013) state that the Mancos Shale has an approximate thickness of 1,600' – 1,800' in this location. These impermeable shales act as stratigraphic boundaries restraining any potential upward migration of injected fluids.

Concluding Statement

Geologic data evaluated around Enduring Resources' NE Chaco Com SWD well show no potential structural or stratigraphic connection between the Entrada formation injection zone and any subsurface potable water sources nor is there any risk of inducing seismicity on nearby faults.

EXHIBIT K

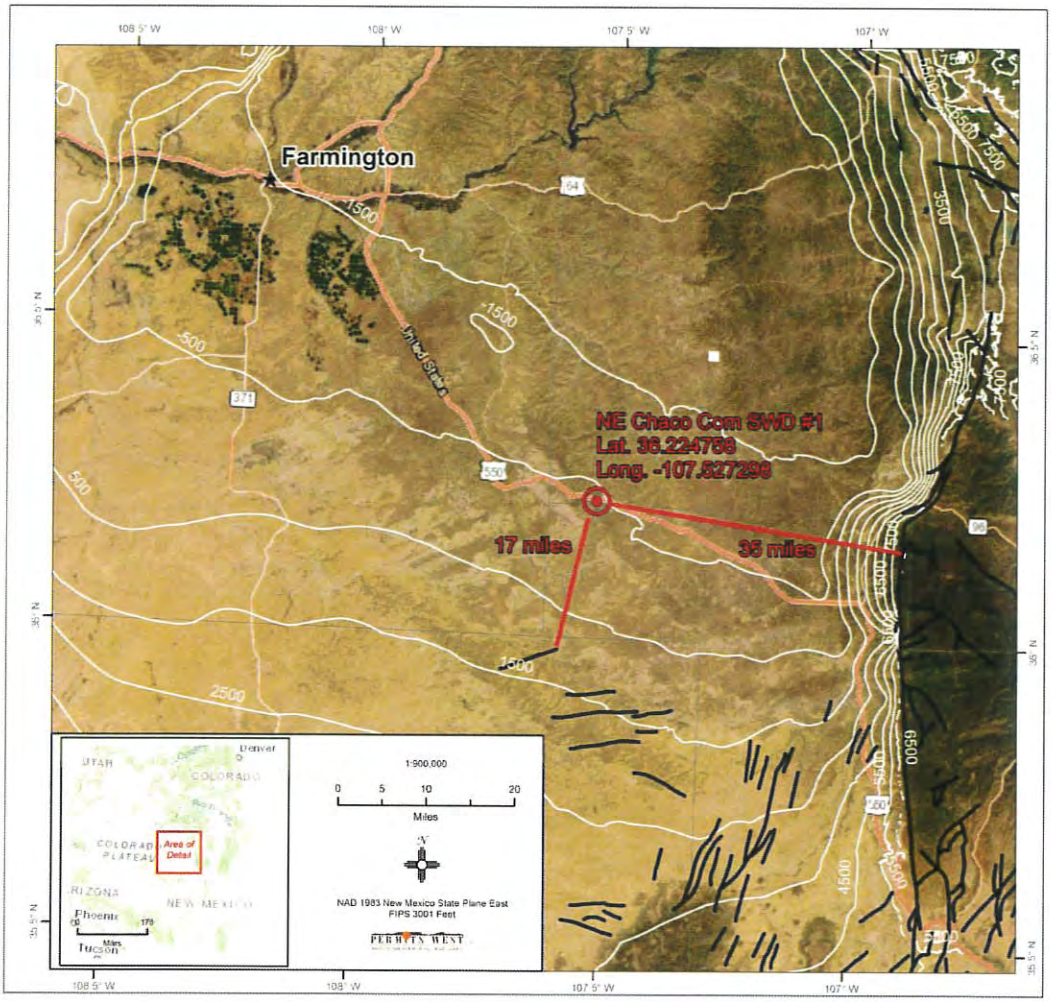

Figure 1 Regional map surrounding the NE Chaco Com SWD #1. White lines contour the top of the Entrada formation injection zone (Kelley et al., 2014). Thick black lines represent locations of fault traces and show that the nearest faults to the proposed SWD lie >17 miles away. Contours show northeast dipping stratigraphy around the SWD location and no evidence of a fault penetrating the Entrada formation.

EXHIBIT K

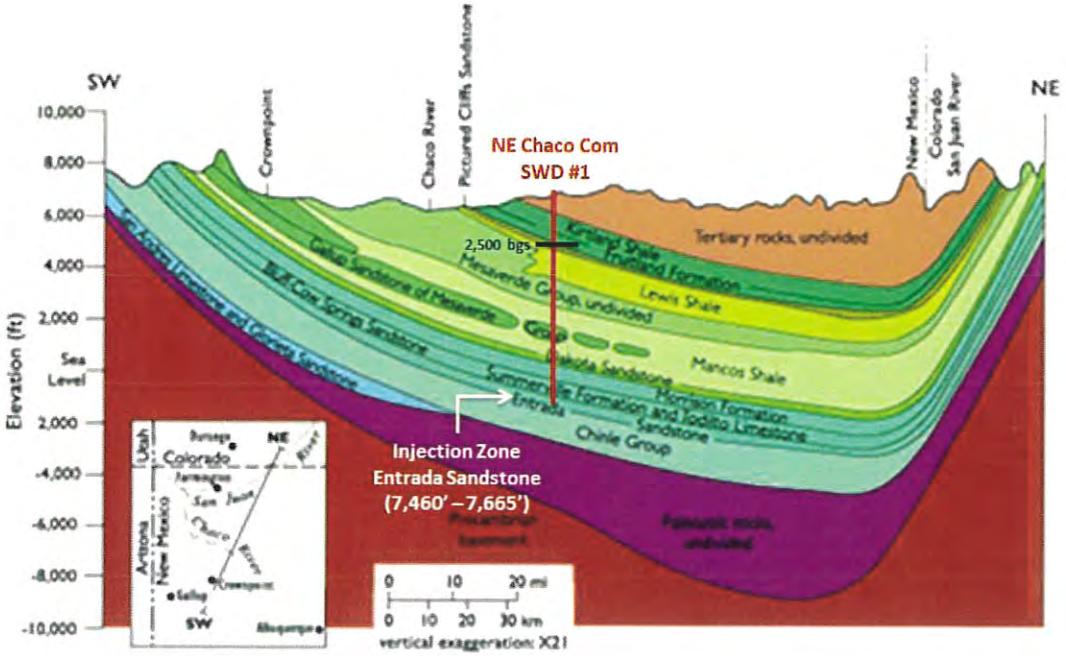

Figure 2 Schematic cross section of the San Juan Basin (modified from Stone et al., 1983). This cross section shows the two major confining layers, Mancos and Lewis Shale, separating the Entrada formation injection zone from the maximum depth of potable water at 2,500 ft bgs.

EXHIBIT K

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.

Ridgley, J.L., Condon, S.M., and Hatch, J.R., 2013. Geology and oil and gas assessment of the MancosMenefee Composite Total Petroleum System, San Juan Basin, New Mexico and Colorado, chap. 4 of U.S. Geological Survey San Juan Basin Assessment Team, Total petroleum systems and geologic assessment of undiscovered oil and gas resources in the San Juan Basin Province, exclusive of Paleozoic rocks, New Mexico and Colorado. U.S. Geological Survey Digital Data Series 69-F, p. 1- 97.

Stone, W. J. Lyford, F. P., Frenzel, P. F., Mizell, N. H., and Padgett, E. T., 1983, Hydrogeology and water resources of the San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6, 70 pp.

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.

Affidavit of Publication

Publisher

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PUBLIC NOTICE

Enduring Resources, LLC is applying to drill the NE Chaco Com SWD 1 as a saltwater disposal well. The well is staked at 2335' FSL & 2559' FEL Sec. 13, T. 23 N., R. 7 W., Rio Arriba County. This is 1 mile east-southeast of Lybrook, NM. Disposal will be in the Entrada from 7,460' to 7,665'. Maximum injection pressure will be 1,492 psi. Maximum disposal rate will be 12,000 bwpd. 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.
(Published May 23, 2019)

Affidavit $3.00

Subtotal $27.40

Tax $2.45

Total $29.85

Payment received at Rio Grande SUN

Date May 17, 2019

By _____

State of New Mexico
County of Rio Arriba

EXHIBIT L

I, Robert Trapp, being first duly sworn, declare and say I am the publisher of the Rio Grande SUN, a weekly newspaper published in the English language and having a general circulation in the County of Rio Arriba, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937. The publication, a copy of which is hereto attached, was published in said paper once each week for

1 consecutive weeks and on the same day of each week in the regular issue of the paper during the time of publication and the notice was published in the newspaper proper, and not in any supplement. The first publication being on the 23 day of May, 2019 and the last publication on the 23 day of May, 2019 payment for said advertisement has been duly made, or assessed as court costs. The undersigned has personal knowledge of the matters and things set forth in this affidavit.

Robert Trapp
Publisher

Subscribed and sworn to before me this 23 day of May A.D. 2019

Maria V. Lopez-Garcia/Notary Public
My commission expires 13 July 2021

OFFICIAL SEAL
MARIA V. LOPEZ-GARCIA
Notary Public
State of New Mexico
My Comm. Expires 7/13/21

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

EXHIBIT M

August 30, 2019

BLM
6251 College Blvd.
Farmington NM 87402

Enduring Resources, LLC is applying (see attached application) to drill the NE Chaco Com SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposed saltwater disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: NE Chaco Com SWD 1 TD = 7,818'
Proposed Disposal Zone: Entrada (from 7,460' to 7,665')
Location: 2335' FSL & 2559' FEL Sec.13, T. 23 N., R. 7 W.,
Approximate Location: 1 mile ESE of Lybrook, NM in Rio Arriba County, NM
Applicant: Enduring Resources, LLC (505) 386-8205
Applicant's Address: 200 Energy Court, Farmington NM 87401

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. NMOCD address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Phone is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood


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Houston, TX 77068-3339
Enduring-Chaco Com SWD 1
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BLM
6251 College Blvd, Suite A
Farmington, NM 87402
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4770
DJR Nominee Corp
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Denver, CO 80202-4955
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7019 0140 0000 9915 4480
Enduring Resources, IV LLC
511 16th St, Suite 700
Denver, CO 80202-4248
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7019 0140 0000 9915 4701
Epic Energy, LLC
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Farmington, NM 87402
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4756
Garg Oil
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Houston, TX 77024
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4497
Jacks A Cole
PO Box 191
Farmington, NM 87499
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4732
Kenneth & Karen Murchison
7052 CR 362
Jewett, TX 75846
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4718
Logos Resources, LLC
919 Milam St, Ste 2300
Houston, TX 77002-5418
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4749
Pettigrew Family Trust
734 Kingswood
Richardson, TX 75080
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7019 0140 0000 9915 4763
Range Production Co
500 Throckmorton
Fort Worth, TX 76102
Enduring-Chaco Com SWD 1
7019 0140 0000 9915 4688
Resource Development Technology LLC
PO Box 1020
Morrison, CO 80465-9020
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City, State, ZIP+4® Tulsa, OK 74172-0135
Enduring-Chaco Com SWD 1

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AUG 30 2019
SANTA FE, NM 87508

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

EXHIBIT M

EXHIBIT M

Affidavit of Publication

LEGAL NOTICE
To the Heirs and Assigns of W.H. Rogers and Frances H. Rogers whose last known address was Dallas, Tx; to the Heirs and Assigns of E. Kenneth Murchison whose last known address is Jewett Tx; and to the Heirs and Assigns of D. E. Kervin, whose last address is unknown; Enduring Resources, LLC is applying to drill the NE Chaco Com SWD 1 as a saltwater disposal well. The well is staked at 2335' FSL & 2559' FEL Sec. 13, T.23 N., R. 7 W., Rio Arriba County. This is 1 mile east-southeast of Lybrook, NM. Disposal will be in the Entrada from 7,460' to 7,665'. Maximum injection pressure will be 1,492 psi. Maximum disposal rate will be 12,000 bwpd. 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.
(Published on: September 12, 2019)

lisher's Bill

es one time at 36.00

s _____ times at _____

Affidavit 5.00

Subtotal 41.00

Tax 3.606

Total $44.606

Payment received at Rio Grande SUN

Date SEPTEMBER 06, 2019

By Dupita Trujillo

State of New Mexico
County of Rio Arriba

I, Robert Trapp, being first duly sworn, declare and say I am the publisher of the Rio Grande SUN, a weekly newspaper published in the English language and having a general circulation in the County of Rio Arriba, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937. The publication, a copy of which is hereto attached, was published in said paper once each week for

1 consecutive weeks and on the same day of each week in the regular issue of the paper during the time of publication and the notice was published in the newspaper proper, and not in any supplement. The first publication being on the

12TH day of SEPTEMBER 2019

and the last publication on the 12TH day of

SEPTEMBER 2019 payment for said advertisement has been duly made, or assessed as court costs. The undersigned has personal knowledge of the matters and things set forth in this affidavit.

Maria V Chavez
Publisher

Subscribed and sworn to before me this 12 day of Sept A.D. 2019

OFFICIAL SEAL
MARIA G CHAVEZ
Notary Public
State of New Mexico
My Comm. Expires 10/21/20

Maria G. Chavez Notary Public
My commission expires 21 October 2020