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 ____X_____Disposal _____Storage
Application qualifies for administrative approval? ____x_____Yes _____No

II. OPERATOR:_____Enduring Resources IV, LLC._____

ADDRESS: _____200 Energy Court, Farmington NM 87401_____

CONTACT PARTY: __Khem Suthiwan_____PHONE: _303-350-5721____

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 ___X_____No
If yes, give the Division order number authorizing the project: _____

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

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

VII. Attach data on the proposed operation, including:

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

VIII. 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: ____Khem Suthiwan_____TITLE: Regulatory Manager_____

SIGNATURE: Khem Suthiwan _____DATE: 11/30/2022

E-MAIL ADDRESS: ___ksuthiwan@enduringresources.com_____

XV. 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

Side 2

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.

III. Well Data

a) Tabular information

i) Name: NE Lybrook Com SWD 1
API: 30-039-31378
ULSTR: J-13-23N-07W
Well Location: 2335' FSL 2559' FEL Sec. 13, T. 23N., R. 7W
Lease: BLM lease NMSF-0078360
Lease Size: 2,565.24 acres
Lease Area: S2 Section 13, T. 23N., R. 7W

ii) Surface Casing (9.625", 36#, J-55) will be set at 500' in a 12.25" hole and cemented to the surface with 227 sacks Drake Type III surface cement.

iii) 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 405 sacks Type I/II. Tail with 381 sacks G-POZ blend. The 153' of cemented casing (rathole) below lowest perforation accommodates well operations.

iv) Tubing is 4.5" plastic lined injection string will be set at 7360'. Disposal interval is 7460' to 7665'.

v) Packer: Dual grip packers with externally coated, or plated with corrosion resistant, material will be set at 7360' (100' above top perforation of 7460'.

b) Additional Information

i) 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.

ii) Injection Interval: 7460' – 7665', cased, cemented, and perforated.

iii) Original Purpose: The well has not yet been drilled.

iv) Other Intervals: Wellbore will be perforated from 7460' to 7665'.

v) Oil/Gas Zones: Top of the Entrada is at 7458'. Bottom of the closest overlying productive formation (Dakota) is at 6562'. There will be an 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). The proposed wellbore diagram is included as Enclosure B.

IV. Proof of Notice

Enclosure C includes ten active wells and one plugged and abandoned well that are within the half-mile area of review. The plugged and abandoned well, Pre-Ongard Well 001, has a true vertical depth (TVD) of 5,536'. Well details for the plugged and abandoned well are included as Enclosure D.

Notice of this application (Enclosure E) has been sent to the surface owner (BLM), lessors (only BLM), well operators (only Epic), operating rights holders (Bannon, Jack Cole, DJR, Garg, Logos, Range, Resource Development, Vaughn, Walsh Trust, WPX), and other interested parties within a half-mile. Enduring is the only well owner/lease holder within the

area of review. A legal ad (Enclosure F) was published on December 8, 2022 in the Rio Grande Sun.

Part VII. Proposed Operation

1) The proposed injection well will be used to dispose of produced water from wellbores operated by Enduring Resources, LLC. Average injection rate will be 10,000 barrels of water per day (bwpd) with a maximum of 20,000 bwpd.
2) The system will initially be open (water will be trucked). A pipeline will be laid at a later date.
3) The proposed average and maximum injection pressure will be 1,200 pounds per square inch (psi) psi average, with a maximum of 1,492 psi.
4) Injection fluid will be from present and future Enduring Resources, LLC wells in the San Juan Basin. Water analyses were submitted with the original approved C-108 (Order Number: SWD-2314) and is attached as Enclosure G. 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 > 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 were submitted with the original approved C-108 (Order Number: SWD-2314) and are as follows. The samples 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). Water sample analysis from the well formation is included as Enclosure 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

Part VIII. Geologic Data

The Entrada sandstone is a very porous and permeable aeolian 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 as follows:

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

IX. Stimulation Program

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

X. Logging and Test Data

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

XI. Fresh Water Wells

A search for freshwater wells within one mile of the proposed disposal well was conducted using the New Mexico Office of the State Engineer website at http://nmwrrs.ose.state.nm.us/nmwrrs/index.html. State Engineer records indicated one water well (SJ 00681) is within one mile of the proposed disposal well. Enclosure A shows the closest water wells to the proposed disposal well.

XII. Statement of Geologic and Engineering Data

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 (Enclosure I). There are many injection and disposal wells active in the Entrada formation in New Mexico.

X

Costin McQueen
Program Geologist (Contractor)

Side 1

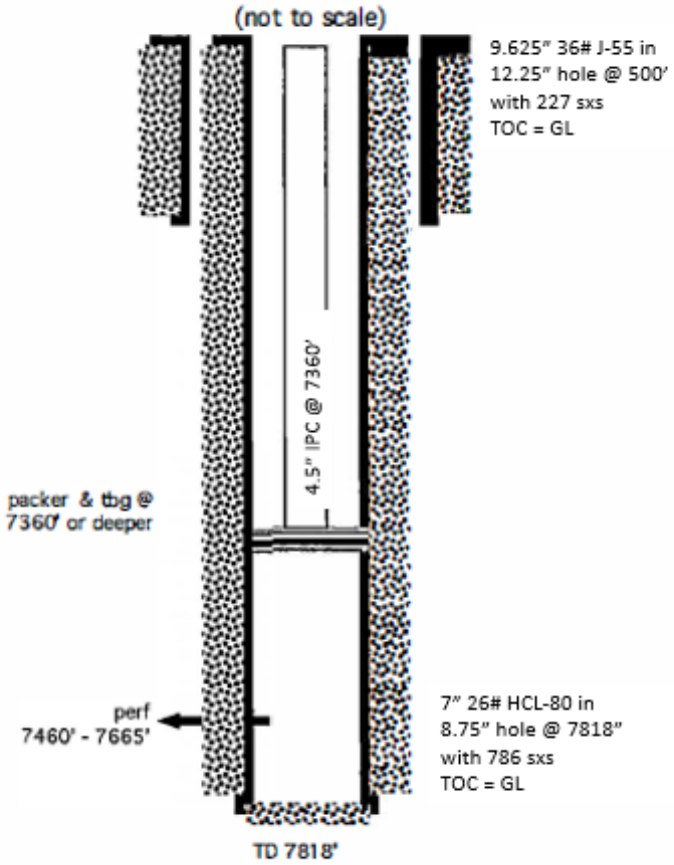
INJECTION WELL DATA SHEET

OPERATOR: ENDURING RESOURCES, LLC

WELL NAME & NUMBER: NE LYBROOK COM SWD 001

WELL LOCATION:	2,335' FSL & 2,559' FEL	J	13	23N	7W
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 227 sx. ***or*** _____ ft^3

Top of Cement: SURFACE Method Determined: CIRC.

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 8.75" Casing Size: 7"

Cemented with: 786 sx. ***or*** _____ ft^3

Top of Cement: SURFACE Method Determined: CIRC.

Total Depth: 7,818'

Injection Interval

7,460' feet to 7,665'

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 4.5" Lining Material: PLASTIC

Type of Packer: DUAL GRIP WITH EXTETNALLY COATED, OR PLATED WITH CORROSION RESISTANT MATERIAL

Packer Setting Depth: 7,360' OR DEEPER

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

Additional Data

1. Is this a new well drilled for injection? X 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)

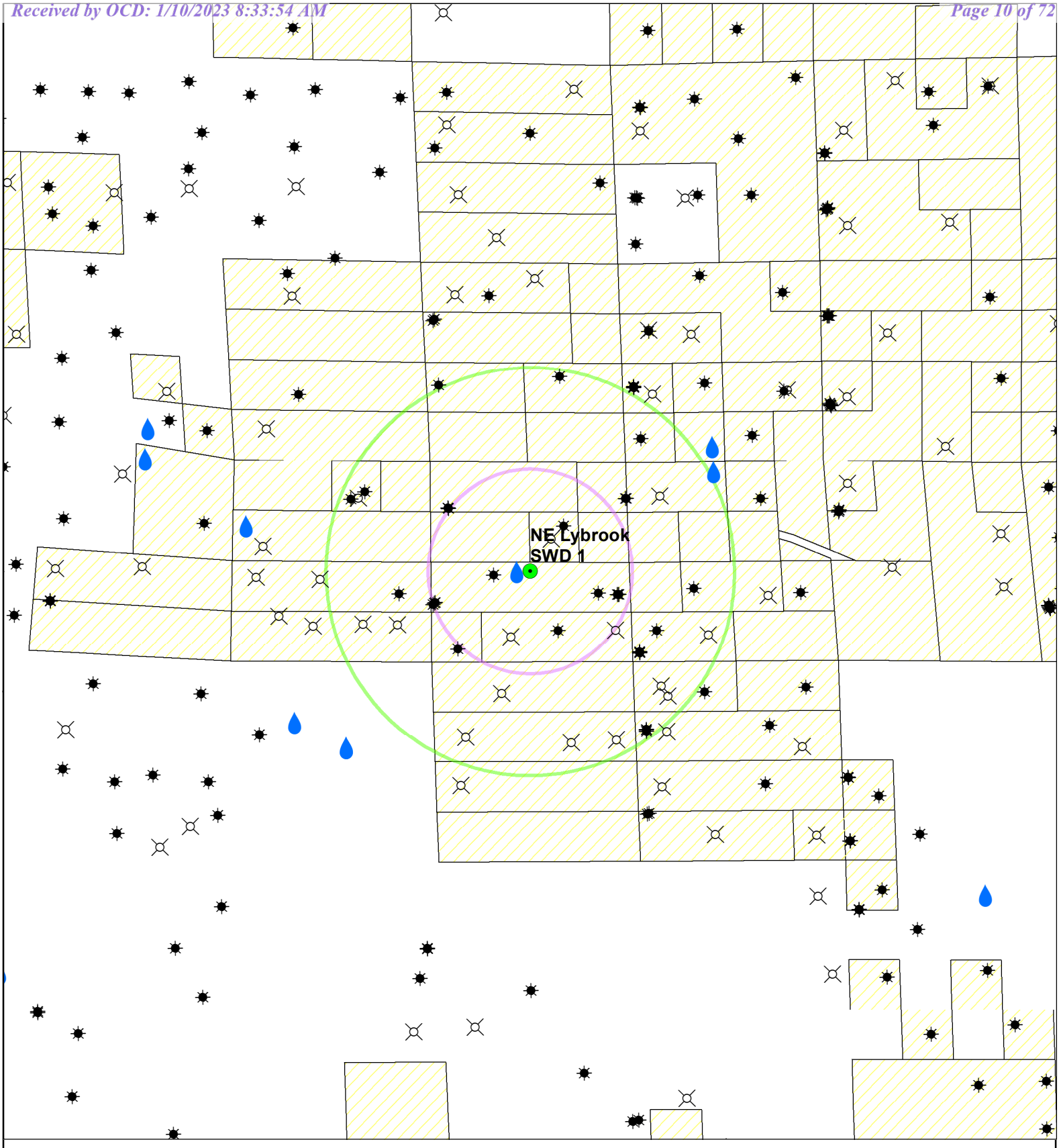
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

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

   OVER: MANCOS (4,483')

   UNDER: NONE IN THE AREA OF REVIEW

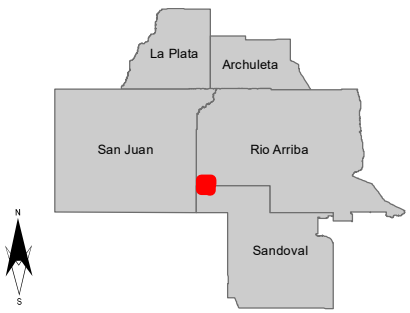
ENCLOSURE A: AREA OF REVIEW



NE Lybrook SWD 1 Area of Review

- NE Lybrook SWD
- Active
- Plugged (site released)
- OSE Points of Diversion
- Half Mile Buffer
- 2 Mile Buffer
- Leases

0 1 2 Miles



ENDURING RESOURCES, LLC

Data Source Statement:
BLM-FFO, Enduring Resources GIS, ESRI Inc., NCE Surveys, USGS

NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US	Author: drogers	Date: 11/29/2022

ENCLOSURE B: PROPOSED WELLBORE DIAGRAM

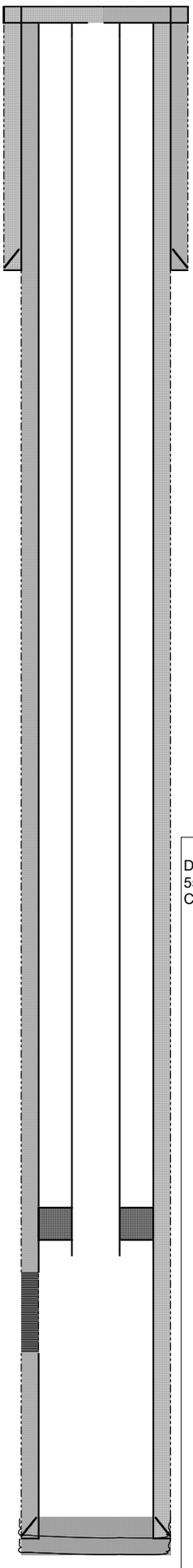
OPERATOR:	ENDURING RESOURCES IV, LLC	**CNTY:**	Rio Arriba	**FTG:**	2335' FSL & 2559' FEL
WELL:	NE CHACO COM SWD 001	**STATE:**	NM	**Q-Q:**	NWSE
FIELD:	NE CHACO COM	**SPUD:**		**SEC.:**	13
API #	30-043-XXXXX	**COMP:**		**TWS:**	23N
LEASE #:		**STATUS:**	SWD	**RGE:**	7W
ER WELL #:		**WBD DATE:**	02/07/19	**BY:**	ACB

IP GAS:	
IP OIL:	
IP WTR:	
CUM GAS:	
CUM OIL:	
CUM WTR:	
LAST PROD:	

CONCEPTUAL WELLBORE DIAGRAM

KBE: 6982.5 '
KB: 17.5 '
GLE: 6965 '

TD (ft): 7818 '
PBTD (ft): 7738 '



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)	JTS
12 1/4	9 5/8	36	J-55	0	500	
8 3/4	7	26	HCL-80	0	7818	

TUBING RECORD COND: NEW DATE:

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	TALLY (ft)	JTS
3 1/2	7.7	J-55	0	7400.00	

ITEM	MAKE/MODEL	SIZE (in)	TALLY (ft)	DEPTH (ft)	JTS
KB			0.00	0.00	
HANGER			1.00	1.00	
TUBING	J-55	3½	7400.00	7401.00	
PACKER	Injection Packer	7	3.00	7404.00	
				7404.00	
				7404.00	
				7404.00	
				7404.00	
				7404.00	
EOT @				**7404.00**	

PERFORATION & STIMULATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	STAGE	STATUS	VOL / PROP
Entrada	TBD	TBD			OPEN	
TOTALS						**0**

Driving Directions: From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM: south on Hwy 550 for 50.1 miles to MM 101.9, right (south) exiting Hwy 550 for 275', left on access road for 190' to NE Chaco SWD 001 location.

ENCLOSURE C: TABULATION OF DATA

ENCLOSURE D: PRE-ONGARD 001 P&A DETAILS

OCD Permitting

30-039-05067 PRE-ONGARD WELL #001 [30041]

General Well Information

Operator:	[214263] PRE-ONGARD WELL OPERATOR		
Status:	Plugged, Site Released	**Direction:**	Vertical
Well Type:	Oil	**Multi-Lateral:**	No
Work Type:	New	**Mineral Owner:**	Federal
		Surface Owner:	Federal
Surface Location:	G-13-23N-07W 1980 FNL 1980 FEL		
Lat/Long:	36.2270432,-107.5253754 NAD83		
GL Elevation:			
KB Elevation:		**Sing/Mult Compl:**	Single
DF Elevation:		**Potash Waiver:**	False

Pre-ONGARD Information

Original Well Name:	FEDERAL ELKINS
Original Operator Name:	RHODES DRILLING CO

Proposed Formation and/or Notes

RHODES DRILLING CO /FEDERAL ELKINS

Depths

Proposed:	0	**True Vertical Depth:**	5536
Measured Vertical Depth:	0	**Plugback Measured:**	0

Formation Tops

Formation	Top	Producing	Method Obtained
Pictured Cliffs Formation	1975		
Point Lookout Formation	4303		
Mancos Formation	4450		
Gallup Formation	5303		

Event Dates

Initial APD Approval:	11/14/1957		
Most Recent APD Approval:	11/14/1957	**Current APD Expiration:**	11/14/1959
APD Cancellation:			
APD Extension Approval:			
Spud:	11/12/1957	**Gas Capture Plan Received:**	
Approved Temporary Abandonment:		**TA Expiration:**	
Shut In:			
Plug and Abandoned Intent Received:		**PNR Expiration:**	
		Last MIT/BHT:	
Well Plugged:	11/27/1957		
Site Release:			
Last Inspection:			

Quic
- Gene
- Histo
- Comr
- Opera
- Pits
- Casin
- Well
- Finan
- Comp
- Order
- Produ
- Trans
- Points

Assc
- Well
- Well
- Well

New
- New
- New
- New
- New
- New
- New

11/14/1957	[30041] PRE-ONGARD WELL	#001	[214263] PRE-ONGARD WELL OPERATOR	New	Oil	Plugged, Site Released		11/27/1957

Comments

Pits

No Pits Found

Casing

			Boreholes, Strings and Equipment Specifications			Specifications for Strings and Tubing			Strings Cemented and Intervals			Cement and Plug Description		
String/Hole Type	Taper	Date Set	Diameter	Top	Bottom (Depth)	Grade	Length	Weight	Bot of Cem	Top of Cem	Meth	Class of Cement	Sacks	Pressure Test (Y/N)
Hole 1	1		11.500	0	161		0	0.0	0	0			0	No
Surface Casing	1		9.625	0	161		0	0.0	161	0		Class C Cement	100	No

Well Completions

[96894] WC D3; GALLUP

Status: Zone Permanently Plugged
Last Produced:
Bottomhole Location: G-13-23N-07W 1980 FNL 1980 FEL
Lat/Long:
Acreage:
DHC:
Consolidation Code:
Production Method:

Well Test Data

Production Test:
Test Length: 0 hours
Flowing Tubing Pressure: 0 psi
Flowing Casing Pressure: 0 psi
Choke Size: 0.000 inches
Testing Method:
Gas Volume: 0.0 MCF
Oil Volume: 0.0 bbls
Gas-Oil Ratio: 0 Kcf / bbl
Oil Gravity: 0.0 Corr. API
Disposition of Gas:
Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth

Notes

Event Dates

Directional Survey Run:	No	**Logs Received:**	No
Directional Survey Received:	No	**Closure Pit Plat Received:**	
First Oil Production:		**First Gas Production:**	
First Injection:			
Ready to Produce:	11/25/1957	**Completion Report Received:**	
C-104 Approval:		**New Well C-104 Approval:**	
Plug Back:			
Authorization Revoked Start:		**Revoked Until:**	

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
11/27/1957	[30041] PRE-ONGARD WELL	#001	[214263] PRE-ONGARD WELL OPERATOR	Zone Permanently Plugged	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
01/01/1900	Blanket	1	1	SEABOARD SURETY CO	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to OCDAdminComp@state.nm.us or fax a letter to (505) 476-3462.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports (Inactive Well Report, Financial Assurance Report).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

Orders

No Orders Found

Production / Injection

The production & injection volumes are sourced from monthly production reports (C-115) submissions.

Earliest Production in OCD Records: **Last** Show All Production Export to Excel

	Production				Injection				
Time Frame	Oil (BBLS)	Gas (MCF)	Water (BBLS)	Days P/I	Water (BBLS)	Co2 (MCF)	Gas (MCF)	Other	Pressure
Grand Total:	0	0	0	0	0	0	0	0	N/A

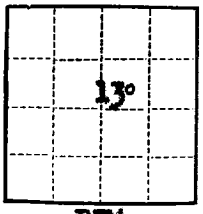
Transporters

Transporter	Product	Most Recent for Property

Points of Disposition

Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Santa Fe
Lease No. SF-078359
Unit Federal-Elkins

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
MAR 20 1958
U. S. GEOL. SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	XX
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 27, 19 57

Well No. 1 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 13

SW/4 NE/4 Sec. 13 — T-23N — R-7W — N.M.P.M.
(¼ Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Wildcat — Rio Arriba County — New Mexico
(Field) (County or Subdivision) (State or Territory)

RECEIVED
MAR 21 1958
OIL CON. COM.
DIST. 3

The elevation of the derrick floor above sea level is 6988 Gr. 7000 ft. KB

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well was plugged and abandoned on November 26 and 27, 1957, as follows:

Plug #1	5375' - 5525'	50 sacks of cement
Plug #2	4275' - 4325'	15 sacks of cement
Plug #3	1975' - 2050'	30 sacks of cement
Plug #4	100' - 175'	30 sacks of cement
Plug #5	0' - 45'	15 sacks of cement

Pits have been levelled and location cleaned.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company RHODES DRILLING COMPANY

Address Citizens National Bank Bldg.
Abilene, Texas

By Charles F. Ford

Title District Manager, Durango, Colo.

GPO 9 18 507

ENCLOSURE E: PROOF OF NOTICE

ENCLOSURE F: LEGAL ADVERTISEMENT

ENCLOSURE G: INJECTION FLUID ANALYSIS

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 :	2918.8	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.

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

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

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.

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~~ MV	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.

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

ENCLOSURE H: ENTRADA ANALYSIS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

RECEIVED
MAR 25 1977
Minerals Management Inc.

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

WATER ANALYSIS

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

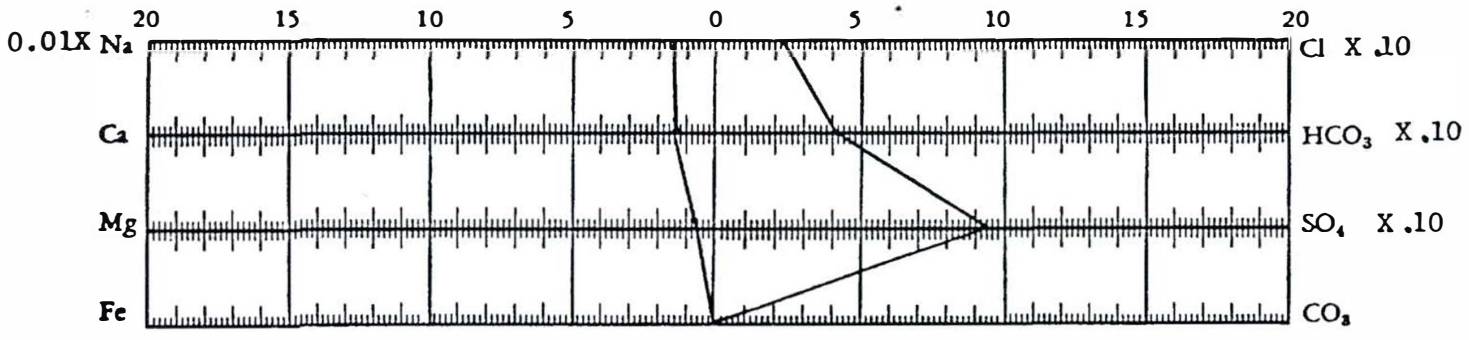
Total Dissolved Solids 11,114.5 mg/L _____ Sp. Gr. 1.009 @ 70 °F.

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.

THE WESTERN COMPANY OF NORTH AMERICA

API W A T E R A N A L Y S I S

Company: MERRION
Field:
Well: #1
Depth:
Formation: ENTRADA?
State:
County:

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

W.C.N.A. Sample No.: S106995
Legal Description:
Lease or Unit: EAGLE MESA
Water.B/D:
Sampling Point:
Sampled By: STEVE DUNN
Date Sampled: 05/03/95
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:	
Tempature:	64F	(see below)	

D I S S O L V E D 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:		:				

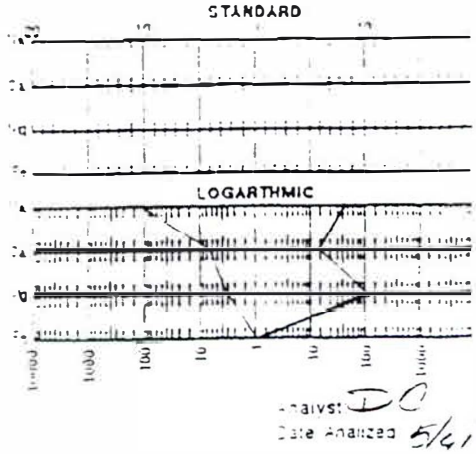
ANIONS	mg/l		me/l			
.5000Chloride, Cl:	1773	:	50	Sample(ml):	1.0 ml of AgNO3:	.10
Sulfate, SO4:	5000	:	104			
Carbonate, CO3:		:		Sample(ml):	1.0 ml of H2SO4:	
Bicarbonate, HCO3:	1220	:	20	Sample(ml):	1.0 ml of H2SO4:	.20

Total Dissolved Solids (calculated):	11928				
Total Hardness:	600	Sample(ml):	1.0	ml of EDTA:	.60

REMARKS AND RECOMMENDATIONS:

ENTRADA WATER

WATER PATTERNS-me/l



Analyst: DC
Date Analyzed 5/4/

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

Hall Environmental Analysis Laboratory, Inc.

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.

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.

CLIENT: John Shomaker & Assoc.
Project: Enduring Resources
Lab ID: 1810596-003 **Matrix:** AQUEOUS

Client Sample
Collection Date: 10/9/2018 3:15:00 PM
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		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

ENCLOSURE I: GEOLOGIC REVIEW

PERMITS WEST, INC.
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

General Information

NE Chaco Com SWD #I 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' 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 I). 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 3 D 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 I).

Structure contours of formation tops throughout the San Juan Basin show homogenously dipping surfaces to the northeast (Kelley et al., 20 I 4; Figure I). o 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.

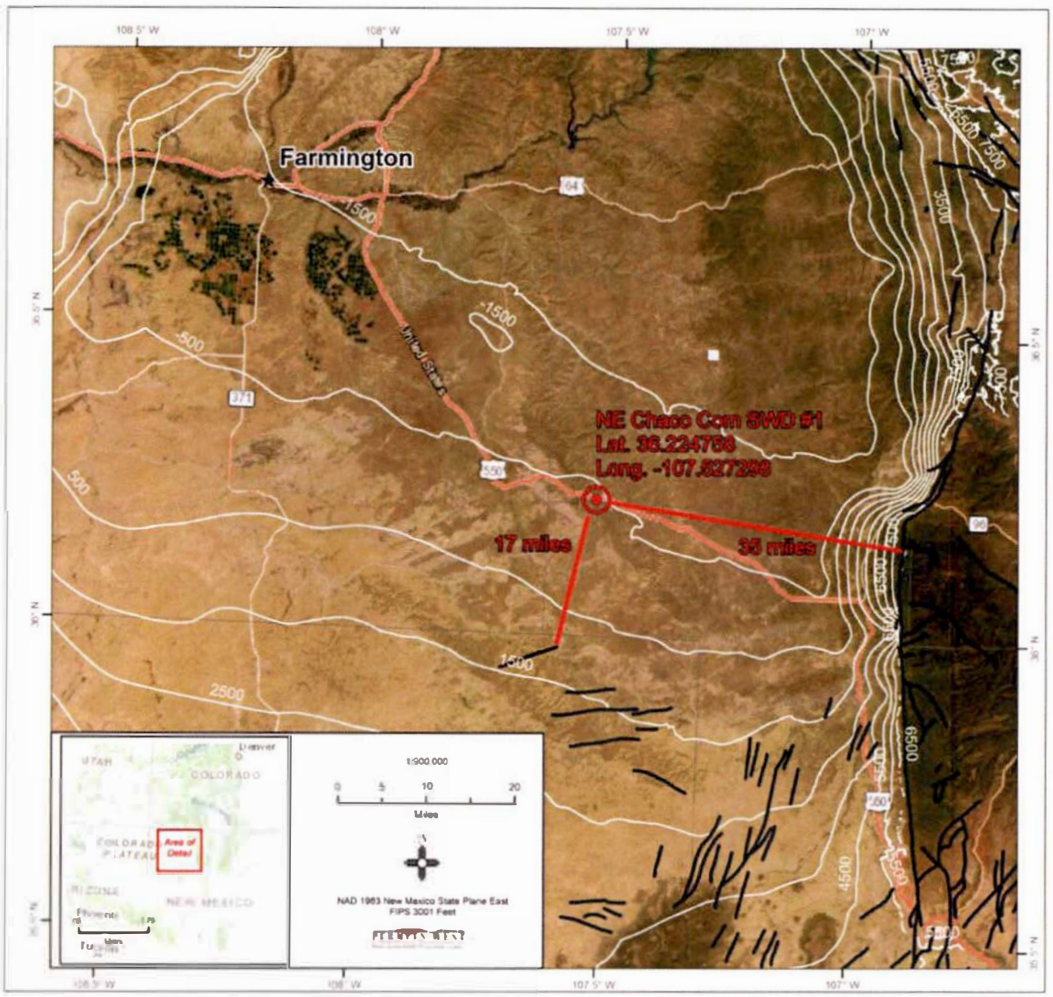


Figure 1 Regional map surrounding the NE Chaco Com SWD #1. White lines contour the top of the Entrada formation injection zone (Kelley et al., 2014). Thick black lines represent locations of fault traces and show that the nearest faults to the proposed SWD lie >17 miles away. Contours show northeast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

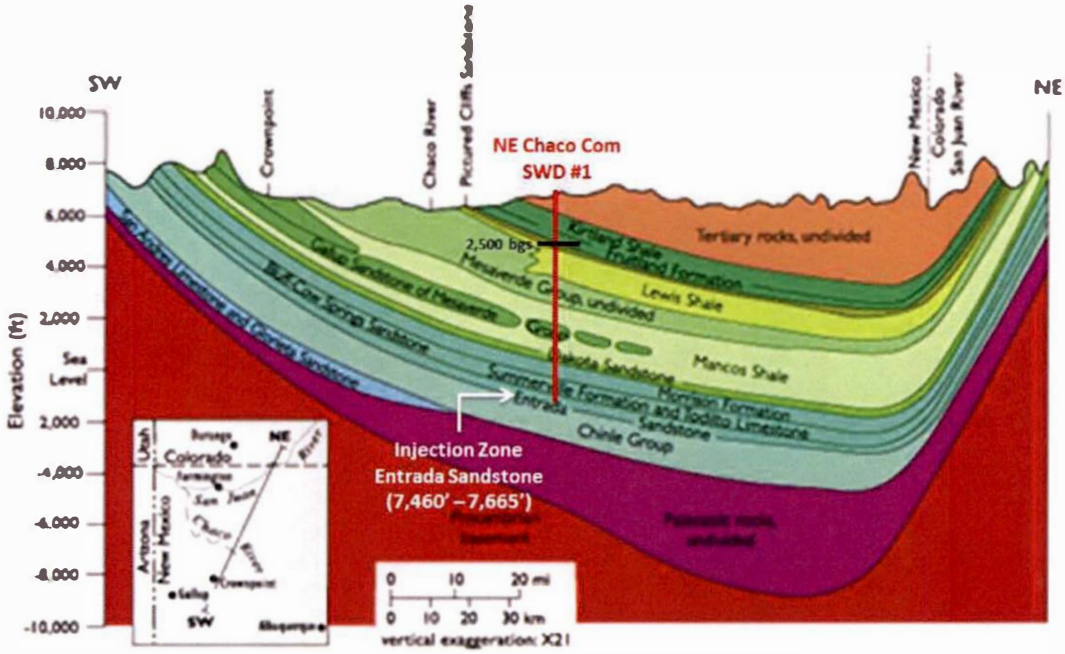


Figure 2 Schematic cross section of the San Juan Basin (modified from Stone et al., 1983). This cross section shows the two major confining layers, Mancos and Lewis Shale, separating the Entrada formation injection zone from the maximum depth of potable water at 2,500 ft bgs.

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.

District I
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

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-31378	321251	ENTRADA

[4] Property Code	[5] Property Name	[6] Well Number
	NE LYBROOK COM SWD	001

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

[10] Surface Location

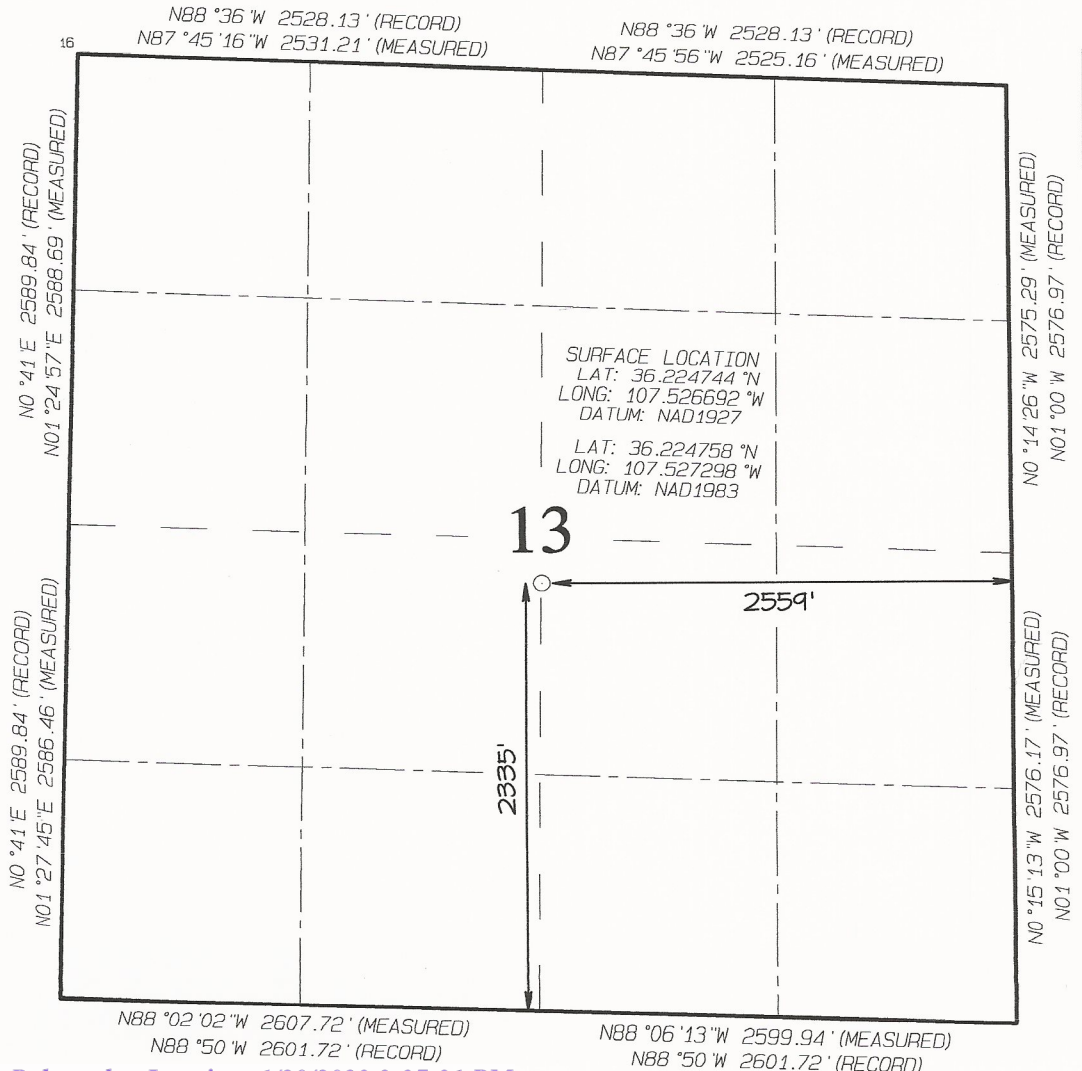
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	13	23N	7W		2335	SOUTH	2559	EAST	RIO ARRIBA

[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.

Khem Suthiwan — Signature
1/10/2023 — Date
Khem Suthiwan — Printed Name
ksuthiwan@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

OPERATOR:	ENDURING RESOURCES IV, LLC	CNTY:	Rio Arriba	FTG:	2335' FSL & 2559' FEL
WELL:	NE CHACO COM SWD 001	STATE:	NM	Q-Q:	NWSE
FIELD:	NE CHACO COM	SPUD:		SEC.:	13
API #	30-039-31378	COMP:		TWS:	23N
LEASE #:		STATUS:	SWD	RGE:	7W
ER WELL #:		WBD DATE:	11/30/22	BY:	ACB

IP GAS:	
IP OIL:	
IP WTR:	
CUM GAS:	
CUM OIL:	
CUM WTR:	
LAST PROD:	

CONCEPTUAL WELLBORE DIAGRAM

KBE: 6982.5 '
KB: 17.5 '
GLE: 6965 '

TD (ft): 7818 '
PBTD (ft): 7738 '

9-5/8", 36# J-55 Csg @ ± 500 '
Cemeted w/ TBD sxs ± 227
12 1/4" Hole

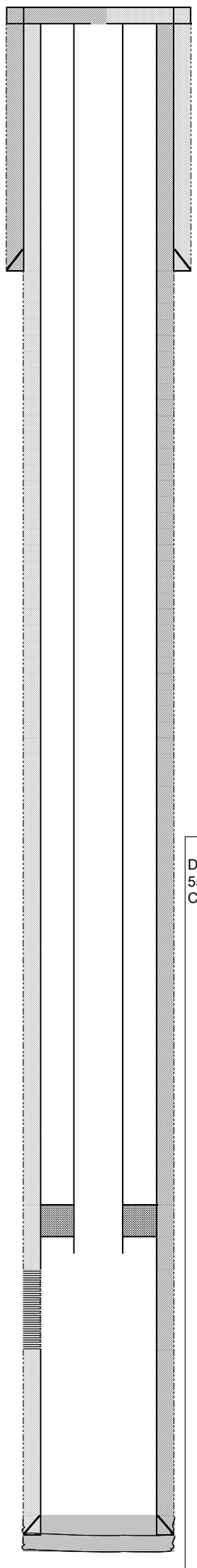
Est Tops
Top Fruitland Coal @ 1653 '
Top Picture Cliffs @ 5045 '
Top Mesaverde @ 3535 '
Top Dakota @ 6283 '
Top Entrada @ 7548 '

Packer @ 7401 '

EOT @ 7404 '

ENTRADA TBD
ENTRADA TBD
ENTRADA TBD
ENTRADA TBD
ENTRADA TBD

PBTD @ 7738 '
7", 26# HCL-80 Csg @ 7818 '
Cmtd w/ TBD sxs 405 lead
381 tail
TD @ 7818 '
8 3/4" Hole



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)	JTS
12 1/4	9 5/8	36	J-55	0	500	
8 3/4	7	26	HCL-80	0	7818	

TUBING RECORD COND: NEW DATE:

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	TALLY (ft)	JTS
4 1/2	11.6	J-55	0	7400.00	

ITEM	MAKE/MODEL	SIZE (in)	TALLY (ft)	DEPTH (ft)	JTS
KB			0.00	0.00	
HANGER			1.00	1.00	
TUBING	J-55 (lined)	4 1/2	7400.00	7401.00	
PACKER	Injection Packer	7	3.00	7404.00	
EOT @				7404.00	

PERFORATION & STIMULATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	STAGE	STATUS	VOL / PROP
Entrada	TBD	TBD			OPEN	
TOTALS						0

Driving Directions: From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM: south on Hwy 550 for 50.1 miles to MM 101.9, right (south) exiting Hwy 550 for 275', left on access road for 190' to NE Chaco SWD 001 location.

Affidavit of Publication

PUBLIC NOTICE
Enduring Resources, LLC has an approved permit to drill the NE Lybrook Com SWD 1 as a saltwater disposal well, API 30-039-31378. The well site is located 2,335' FSL and 2,559' FEL Sec. 13, T. 23 N., R. 7 W., Rio Arriba County. This is 1 mile east-southeast of Lybrook, NM. An application for saltwater injection will be filed with the NMOCD. Disposal will be in the Entrada sandstone (Pool 96436) from 7,460' to 7,665'. Maximum injection pressure will be 1,492 psi. Maximum disposal rate will be 20,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 S. St. Francis Drive, Santa Fe, NM 87505 within 15 days. Additional information can be obtained by contacting Ms. Khem Suthiwan, Enduring Resources, LLC, 200 Energy Ct., Farmington, NM 87401. Phone number is 505-636-9746. (Published On: December 15, 2022)

r's Bill

ime at $ 30.40

times at

Affidavit $ 5.00

Subtotal $ 35.40

Tax $ 3.16

Total $ 38.56

Payment received at Rio Grande SUN

Date 12/12/22

By

State of New Mexico
County of Rio Arriba

I, Richard L. Connor, 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

15 day of December 2022

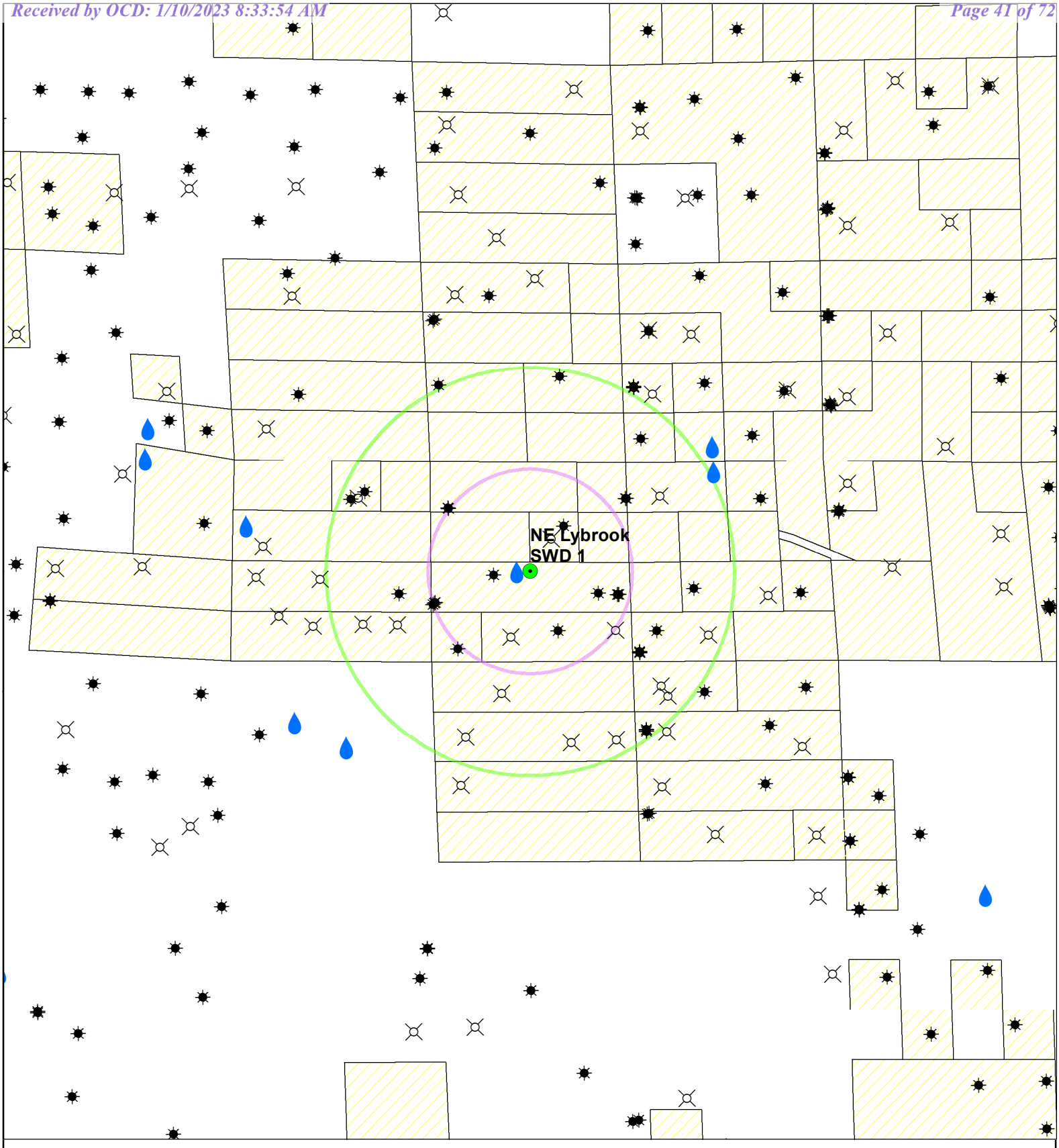
and the last publication on the 15 day of December 2022 payment for said advertisement has been duly made, or assessed as court costs. The undersigned has personal knowledge of the matters and things set forth in this affidavit.

Publisher

Subscribed and sworn to before me this 9 day of Jan. A.D. 2023

STATE OF NEW MEXICO
NOTARY PUBLIC
MARIA G. CHAVEZ
COMMISSION # 1092337
EXPIRES OCTOBER 21, 2024

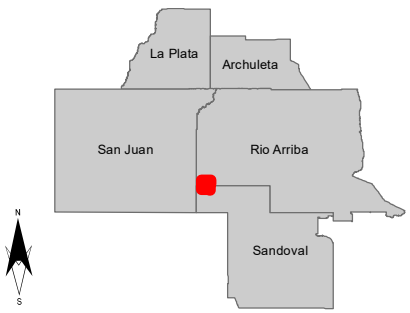
Maria G. Chavez/Notary Public
My commission expires 21 October 2024



NE Lybrook SWD 1 Area of Review

- NE Lybrook SWD
- Active
- Plugged (site released)
- OSE Points of Diversion
- Half Mile Buffer
- 2 Mile Buffer
- Leases

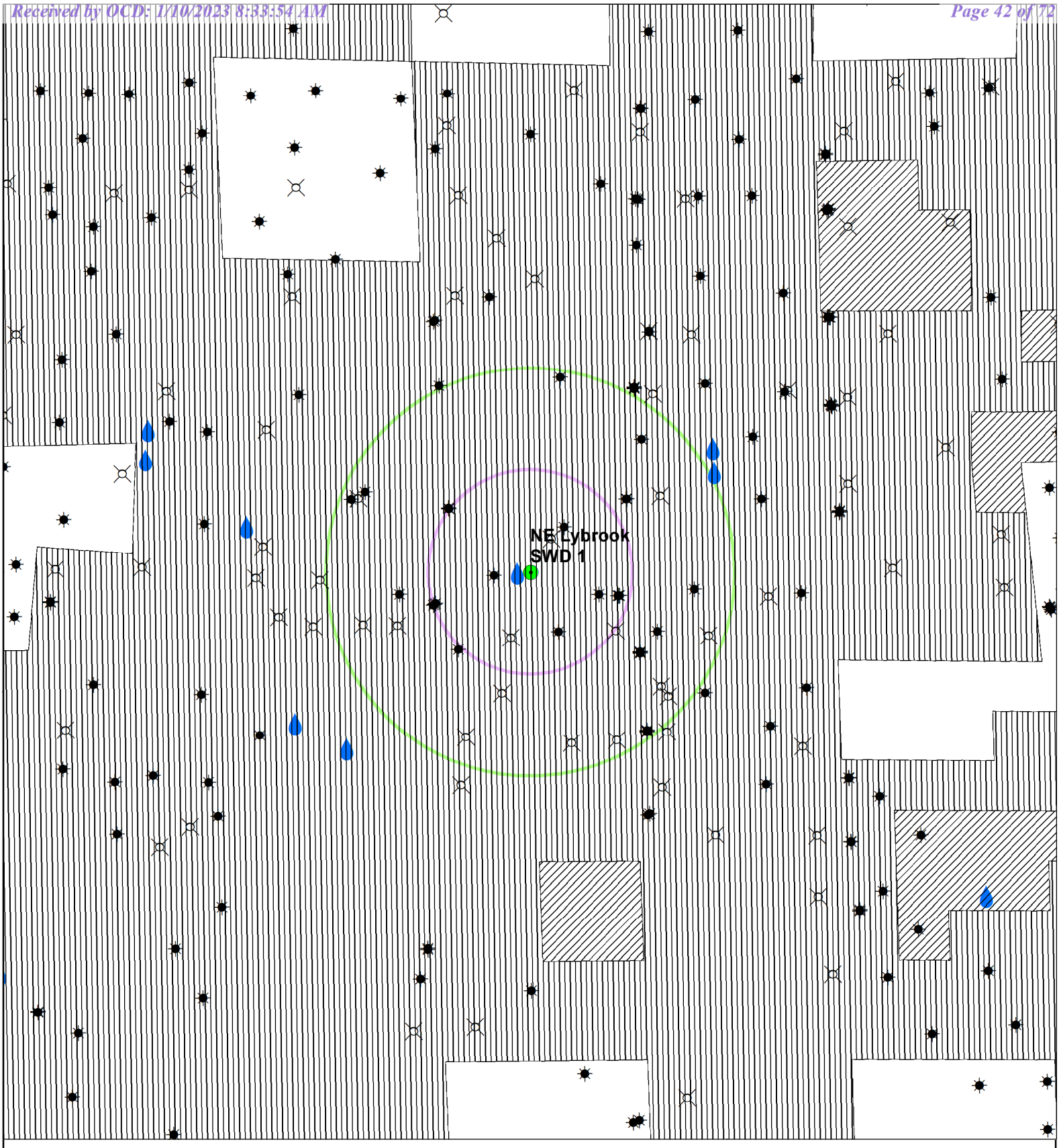
0 1 2 Miles



ENDURING RESOURCES, LLC

Data Source Statement:
BLM-FFO, Enduring Resources GIS, ESRI Inc., NCE Surveys, USGS

NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US	Author: drogers	Date: 11/29/2022

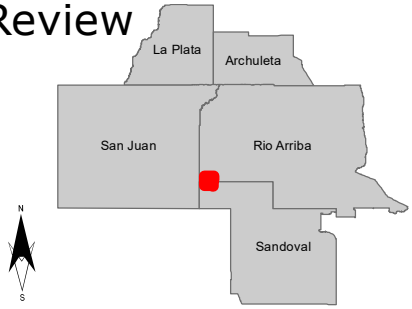


NE Lybrook SWD 1 Area of Review
(Mineral Ownership)
BLM

NE Lybrook SWD
Active
Plugged (site released)
OSE Points of Diversion
Half Mile Buffer
1 Mile Buffer

All Minerals
Coal Only
Oil, Gas + Coal Only
No Minerals
Oil + Gas Only
Other Minerals

0 0.5 1 2 Miles



ENDURING RESOURCES, LLC

Data Source Statement:
BLM-FFO, Enduring Resources GIS, ESRI Inc., NCE Surveys, USGS

NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US	Author: drogers	Date: 1/18/2023

Wells located within 1/2 mile radius of proposed SWD well (NE Lybrook COM SWD 1)														
Count	API	Name	Type	Status	OGRID	OGRID NAME	county	ULSTR	Footage	Plug Date	Entrada Penetration	Spud Date	Measured Depth	True Vertical Depth
1	30-039-31197	NE CHACO COM #174H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	L-13-23N-07W	1519 FSL 90 FWL	--	No	2/6/2014	10501	10370
2	30-039-24801	LYBROOK SOUTH #006	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	K-13-23N-07W	2260 FSL 1635 FWL	--	No	9/29/1990	5735	5735
3	30-039-05067	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	G-13-23N-07W	1980 FNL 1980 FEL	11/27/1957	No	11/12/1957	0	5536
4	30-039-31213	NE CHACO COM #238H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	L-13-23N-07W	1543 FSL 121 FWL	--	No	2/27/2014	10637	10540
6	30-039-24722	LYBROOK SOUTH #008	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	O-13-23N-07W	805 FSL 1889 FEL	--	No	9/5/1990	5712	5712
7	30-039-24451	RINCON #010	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	G-13-23N-07W	1650 FNL 1650 FEL	--	No	7/18/1989	5723	5723
8	30-039-31245	NE CHACO COM #204H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	I-13-23N-07W	1740 FSL 274 FEL	--	No	6/30/2014	11280	10971
9	30-039-31244	NE CHACO COM #203H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	I-13-23N-07W	1743 FSL 318 FEL	--	No	7/2/2014	11019	10931
10	30-039-31208	NE CHACO COM #187H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	I-13-23N-07W	1742 FSL 296 FEL	--	No	6/28/2014	11625	11536
11	30-039-24755	LYBROOK SOUTH #007	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	I-13-23N-07W	1772 FSL 813 FEL	--	No	8/2/1990	5710	5710
Wells located within 2 mile radius of proposed SWD well (NE Lybrook COM SWD 1)														
1	30-039-24537	LYBROOK SOUTH #001	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	B-14-23N-07W	797 FNL 1682 FEL	--	No	10/9/1989	5700	5700
2	30-039-27533	LYBROOK YARD WDW #001	Salt Water Disposal	Active	371838	DJR OPERATING, LLC	Rio Arriba	B-14-23N-07W	988 FNL 2035 FEL	--	No	5/7/2005	4930	4930
3	30-039-05080	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	B-14-23N-07W	970 FNL 1850 FEL	10/24/1989	No	12/7/1961	0	5700
4	30-039-24756	LYBROOK SOUTH #004	Oil	Plugged (site released)	149052	ELM RIDGE EXPLORATION COMPANY LLC	Rio Arriba	O-14-23N-07W	964 FSL 1758 FEL	6/4/2011	No	5/14/1990	5700	5700
5	30-039-24918	PRE-ONGARD WELL #010	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	P-14-23N-07W	949 FSL 864 FEL	--	No	--	0	0
6	30-039-31197	NE CHACO COM #174H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	L-13-23N-07W	1519 FSL 90 FWL	--	No	2/6/2014	10501	10370
7	30-039-24776	LYBROOK SOUTH #003	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	I-14-23N-07W	1766 FSL 818 FEL	--	No	7/22/1990	5710	5710
8	30-039-31192	NE CHACO COM #175H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	L-13-23N-07W	1494 FSL 60 FWL	--	No	8/30/2013	10603	10518
9	30-039-31214	NE CHACO COM #903H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	D-13-23N-07W	1186 FNL 474 FWL	--	No	7/22/2015	13376	5371
10	30-039-24938	LYBROOK SOUTH #005	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	M-13-23N-07W	334 FSL 697 FWL	--	No	10/6/1990	5757	5757
11	30-039-24801	LYBROOK SOUTH #006	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	K-13-23N-07W	2260 FSL 1635 FWL	--	No	9/29/1990	5735	5735
12	30-043-20854	PRE-ONGARD WELL #031	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Sandoval	E-24-23N-07W	1190 FSL 925 FEL	--	No	--	0	0
13	30-039-31207	NE CHACO COM #173H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	D-13-23N-07W	1205 FNL 484 FWL	--	No	6/23/2014	10871	10793
14	30-039-05067	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	G-13-23N-07W	1980 FNL 1980 FEL	11/27/1957	No	11/12/1957	0	5536
15	30-039-31213	NE CHACO COM #238H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	L-13-23N-07W	1543 FSL 121 FWL	--	No	2/27/2014	10637	10540
16	30-043-20851	PRE-ONGARD WELL #029	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Sandoval	C-24-23N-07W	812 FNL 1786 FWL	--	No	--	0	0
17	30-039-24939	PRE-ONGARD WELL #006	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	N-13-23N-07W	634 FSL 2053 FWL	--	No	--	0	0
18	30-039-24722	LYBROOK SOUTH #008	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	O-13-23N-07W	805 FSL 1889 FEL	--	No	9/5/1990	5712	5712
19	30-039-24451	RINCON #010	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	G-13-23N-07W	1650 FNL 1650 FEL	--	No	7/18/1989	5723	5723
20	30-039-30445	MARCUS B #001	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	J-12-23N-07W	2230 FSL 1599 FEL	--	No	9/9/2008	5960	5898
21	30-043-20853	PRE-ONGARD WELL #032	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Sandoval	G-24-23N-07W	2094 FNL 1647 FEL	--	No	--	0	0
22	30-039-24940	PRE-ONGARD WELL #008	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	P-13-23N-07W	813 FSL 396 FEL	--	No	--	0	0
23	30-039-31224	NE CHACO COM #184H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	A-13-23N-07W	929 FNL 18 FEL	--	No	6/4/2014	13202	13115
24	30-043-21188	NE CHACO COM #189H	Oil	Active	372286	ENDURING RESOURCES, LLC	Sandoval	E-19-23N-06W	1757 FNL 303 FWL	--	No	4/7/2014	10836	10743
25	30-039-24706	PRE-ONGARD WELL #016	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	D-18-23N-06W	870 FNL 870 FWL	--	No	--	0	0
26	30-043-20850	PRE-ONGARD WELL #030	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Sandoval	H-24-23N-07W	2025 FNL 483 FEL	--	No	--	0	0
27	30-039-31245	NE CHACO COM #204H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	I-13-23N-07W	1740 FSL 274 FEL	--	No	6/30/2014	11280	10971
28	30-039-31235	NE CHACO COM #240H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	M-18-23N-06W	231 FSL 195 FWL	--	No	6/11/2014	11629	11540
29	30-039-31236	NE CHACO COM #256H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	M-18-23N-06W	253 FSL 196 FWL	--	No	6/18/2014	10740	10649
30	30-039-31244	NE CHACO COM #203H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	I-13-23N-07W	1743 FSL 318 FEL	--	No	7/2/2014	11019	10931
31	30-039-31237	NE CHACO COM #292H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	M-18-23N-06W	275 FSL 197 FWL	--	No	6/16/2014	11064	10937
32	30-043-21204	NE CHACO COM #205H	Oil	Active	372286	ENDURING RESOURCES, LLC	Sandoval	E-19-23N-06W	1801 FNL 302 FWL	--	No	4/5/2014	10805	10712
33	30-043-20843	PRE-ONGARD WELL #006	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Sandoval	D-19-23N-06W	644 FNL 714 FWL	--	No	--	0	0
34	30-043-21136	NE CHACO COM #188H	Oil	Active	372286	ENDURING RESOURCES, LLC	Sandoval	E-19-23N-06W	1779 FNL 302 FWL	--	No	4/3/2014	10979	10885
35	30-039-24707	LYBROOK SOUTH #010	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	M-18-23N-06W	805 FSL 660 FWL	--	No	4/23/1990	5720	5720
36	30-039-31208	NE CHACO COM #187H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	I-13-23N-07W	1742 FSL 296 FEL	--	No	6/28/2014	11625	11536
37	30-043-20471	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Sandoval	D-19-23N-06W	900 FNL 890 FWL	8/16/1985	No	7/29/1980	0	5665
38	30-039-24755	LYBROOK SOUTH #007	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	I-13-23N-07W	1772 FSL 813 FEL	--	No	8/2/1990	5710	5710
39	30-039-24942	PRE-ONGARD WELL #007	Gas	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	Rio Arriba	N-18-23N-06W	672 FSL 1980 FWL	--	No	--	0	0
40	30-039-24563	MCBEE 7 #003	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	M-07-23N-06W	625 FSL 440 FWL	--	No	10/29/1989	5704	5704
41	30-039-31225	NE CHACO COM #185H	Oil	Active	372286	ENDURING RESOURCES, LLC	Rio Arriba	D-18-23N-06W	924 FNL 4 FWL	--	No	6/9/2014	10961	10879
42	30-039-24754	LYBROOK SOUTH #009	Oil	Active	372834	EPIC ENERGY, L.L.C.	Rio Arriba	K-18-23N-06W	1883 FSL 1664 FWL	--	No	9/21/1990	5716	5716

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

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

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 :	2918.8	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.

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

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

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:

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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~~ MV	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.

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

General Information

NE Chaco Com SWD #I 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 □ 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 I). 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 3 D 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 I).

Structure contours of formation tops throughout the San Juan Basin show homogenously dipping surfaces to the northeast (Kelley et al., 20 I 4; Figure I). o 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.

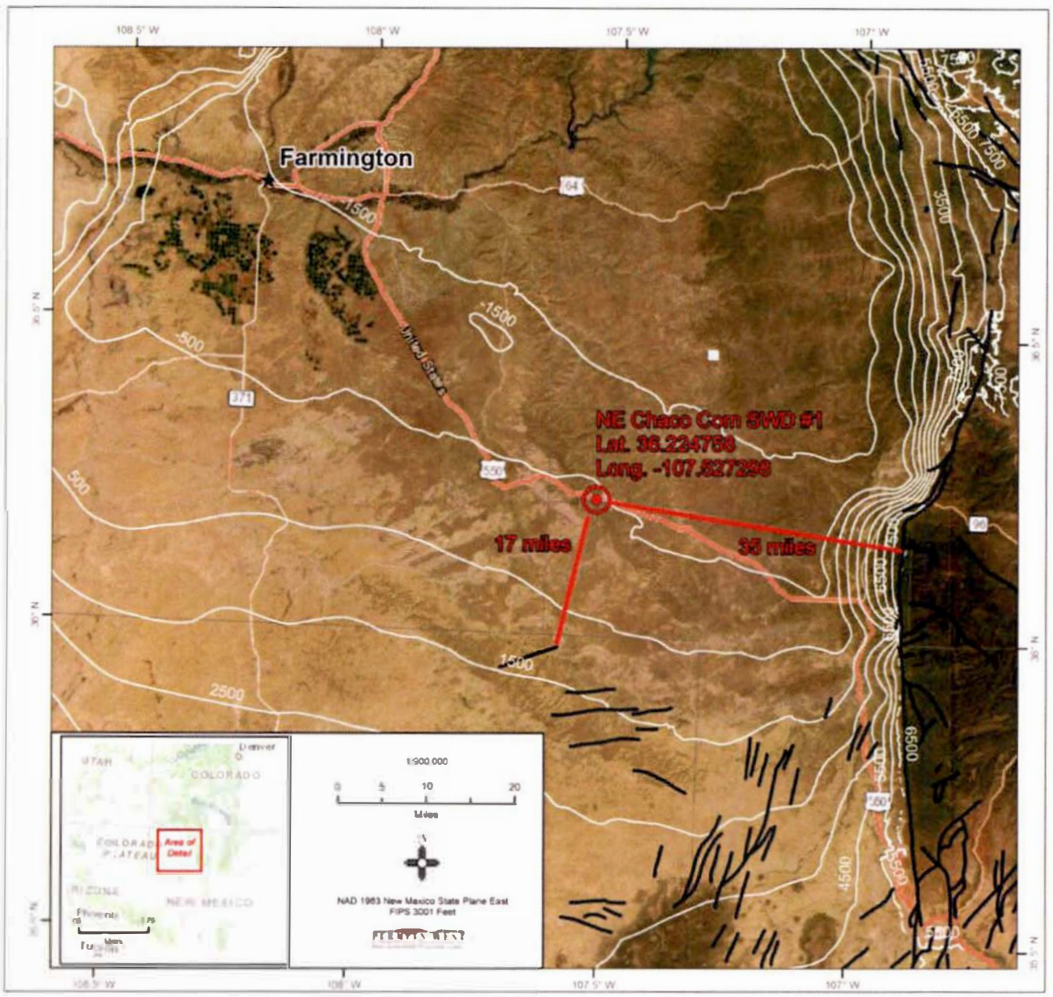


Figure 1 Regional map surrounding the NE Chaco Com SWD #1. White lines contour the top of the Entrada formation injection zone (Kelley et al., 2014). Thick black lines represent locations of fault traces and show that the nearest faults to the proposed SWD lie >17 miles away. Contours show northeast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

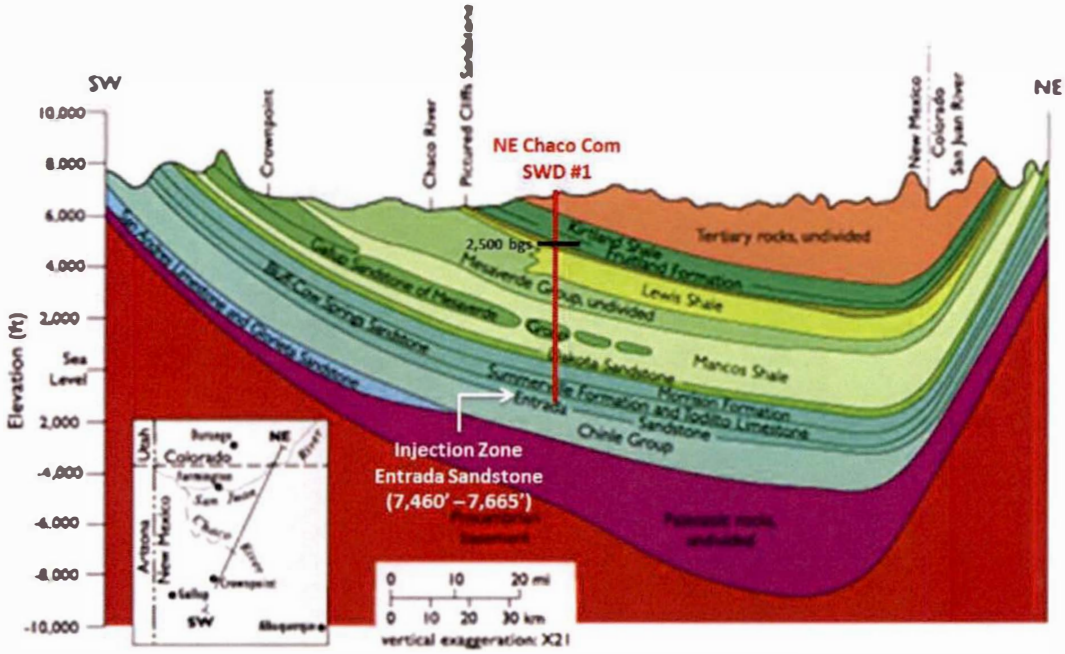


Figure 2 Schematic cross section of the San Juan Basin (modified from Stone et al., 1983). This cross section shows the two major confining layers, Mancos and Lewis Shale, separating the Entrada formation injection zone from the maximum depth of potable water at 2,500 ft bgs.

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.

III. Well Data

a) Tabular information

i) Name: NE Lybrook Com SWD 1
API: 30-039-31378
ULSTR: J-13-23N-07W
Well Location: 2335' FSL 2559' FEL Sec. 13, T. 23N., R. 7W
Lease: BLM lease NMSF-0078360
Lease Size: 2,565.24 acres
Lease Area: S2 Section 13, T. 23N., R. 7W

ii) Surface Casing (9.625", 36#, J-55) will be set at 500' in a 12.25" hole and cemented to the surface with 227 sacks Drake Type III surface cement.

iii) 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 405 sacks Type I/II. Tail with 381 sacks G-POZ blend. The 153' of cemented casing (rathole) below lowest perforation accommodates well operations.

iv) Tubing is 4.5" plastic lined injection string will be set at 7360'. Disposal interval is 7460' to 7665'.

v) Packer: Dual grip packers with externally coated, or plated with corrosion resistant, material will be set at 7360' (100' above top perforation of 7460'.

b) Additional Information

i) 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.

ii) Injection Interval: 7460' – 7665', cased, cemented, and perforated.

iii) Original Purpose: The well has not yet been drilled.

iv) Other Intervals: Wellbore will be perforated from 7460' to 7665'.

v) Oil/Gas Zones: Top of the Entrada is at 7458'. Bottom of the closest overlying productive formation (Dakota) is at 6562'. There will be an 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). The proposed wellbore diagram is included as Enclosure B.

IV. Proof of Notice

Enclosure C includes ten active wells and one plugged and abandoned well that are within the half-mile area of review. The plugged and abandoned well, Pre-Ongard Well 001, has a true vertical depth (TVD) of 5,536'. Well details for the plugged and abandoned well are included as Enclosure D.

Notice of this application (Enclosure E) has been sent to the surface owner (BLM), lessors (only BLM), well operators (only Epic), operating rights holders (Bannon, Jack Cole, DJR, Garg, Logos, Range, Resource Development, Vaughn, Walsh Trust, WPX), and other interested parties within a half-mile. Enduring is the only well owner/lease holder within the

area of review. A legal ad (Enclosure F) was published on December 8, 2022 in the Rio Grande Sun.

Part VII. Proposed Operation

1) The proposed injection well will be used to dispose of produced water from wellbores operated by Enduring Resources, LLC. Average injection rate will be 10,000 barrels of water per day (bwpd) with a maximum of 20,000 bwpd.
2) The system will initially be open (water will be trucked). A pipeline will be laid at a later date.
3) The proposed average and maximum injection pressure will be 1,200 pounds per square inch (psi) psi average, with a maximum of 1,492 psi.
4) Injection fluid will be from present and future Enduring Resources, LLC wells in the San Juan Basin. Water analyses were submitted with the original approved C-108 (Order Number: SWD-2314) and is attached as Enclosure G. 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 > 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 were submitted with the original approved C-108 (Order Number: SWD-2314) and are as follows. The samples 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). Water sample analysis from the well formation is included as Enclosure 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

Part VIII. Geologic Data

The Entrada sandstone is a very porous and permeable aeolian 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 as follows:

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

IX. Stimulation Program

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

X. Logging and Test Data

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

XI. Fresh Water Wells

A search for freshwater wells within one mile of the proposed disposal well was conducted using the New Mexico Office of the State Engineer website at http://nmwrrs.ose.state.nm.us/nmwrrs/index.html. State Engineer records indicated one water well (SJ 00681) is within one mile of the proposed disposal well. Enclosure A shows the closest water wells to the proposed disposal well.

XII. Statement of Geologic and Engineering Data

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 (Enclosure I). There are many injection and disposal wells active in the Entrada formation in New Mexico.

X

Costin McQueen
Program Geologist (Contractor)

C-108 APPLICATION FOR AUTHORIZATION TO INJECT
ADMINISTRATIVE COMPLETENESS FORM

Well Name: _____

Applicant: _____

PO Number: _____

Admin. App. No: _____

C-108 Item	Description of Required Content	Yes	No
I. PURPOSE	Selection of proper application type.		
II. OPERATOR	Name; address; contact information.		
III. WELL DATA	Well name and number; STR location; footage location within section.		
	Each casing string to be used, including size, setting depth, sacks of cement, hole size, top of cement, and basis for determining top of cement.		
	Description of tubing to be used including size, lining material, and setting depth.		
	Name, model, and setting depth of packer to be used, or description of other seal system or assembly to be used.		
	Well diagram: Existing (if applicable).		
	Well diagram: Proposed (either Applicant's template or Division's Injection Well Data Sheet).		
IV. EXISTING PROJECT	For an expansion of existing well, Division order number authorizing existing well (if applicable).		
V. LEASE AND WELL MAP	AOR map identifying all wells and leases within 2 mile radius of proposed well, and depicting a 1/2 mile radius circle around any another projected injection well and a 1 mile radius circle around any other projected injection well in the Devonian formation.		
VI. AOR WELLS	Tabulation of data for all wells of public record within AOR which penetrate the proposed injection zone, including well type, construction, date drilled, location, depth, and record of completion.		
	Schematic of each plugged well within AOR showing all plugging detail.		
VII. PROPOSED OPERATION	Proposed average and maximum daily rate and volume of fluids to be injected.		
	Statement that the system is open or closed.		
	Proposed average and maximum injection pressure.		
	Sources and analysis of injection fluid, and compatibility with receiving formation if injection fluid is not produced water.		
	A chemical analysis of the disposal zone formation water if the injection is for disposal and oil or gas is not produced or cannot be produced from the formation within 1 mile of proposed well. Chemical analysis may be based on sample, existing literature, studies, or nearby well.		
VIII. GEOLOGIC DATA	Proposed injection interval, including appropriate lithologic detail, geologic name, thickness, and depth.		
	USDW of all aquifers overlying the proposed injection interval, including the geologic name and depth to bottom.		
	USDW of all aquifers underlying the proposed injection interval, including the geologic name and depth to bottom.		

C-108 (SWD) APPLICATION FOR AUTHORIZATION TO INJECT ADMINISTRATIVE COMPLETENESS FORM

Well Name: _____

Applicant: _____

PO Number: _____

Admin. App. No: _____

C-108 Item	Description of Required Content	Yes	No
IX. PROPOSED STIMULATION	Description of stimulation process or statement that none will be conducted.		
X. LOGS/WELL TESTS	Appropriate logging and test data on the proposed well or identification of well logs already filed with OCD.		
XI. FRESH WATER	Chemical analysis of fresh water from two or more fresh water wells (if available and producing) within 1 mile of the proposed well, including location and sampling date(s).		
XII. AFFIRMATION STATEMENT	Statement of qualified person endorsing the application, including name, title, and qualifications.		
XIII. PROOF OF NOTICE	Identify of all "a*ffected persons*" identified on AOR map in Section V, including all affected persons within 1/2 mile radius circle around any another projected injection well and a 1 mile radius circle around any other projected injection well in the Devonian formation.		
	Identification and notification of all surface owners.		
	BLM and/or NMSLO notified per 19.15.2.7(A)(8)(d) NMAC.		
	Notice of publication in local newspaper in county where proposed well is located with the following specific content:		
	● Name, address, phone number, and contact party for Applicant;		
	● Intended purpose of proposed injection wel, including exact location of a single well, or the section, township, and range location of multiple wells;		
	● Formation name and depth, and expected maximum injection rates and pressures; and		
	● Notation that interested parties shall file objections or requests for hearing with OCD no later than 15 days after the admin completeness determination.		
XIV. CERTIFICATION	Signature by operator or designated agent, including date and contact information.		

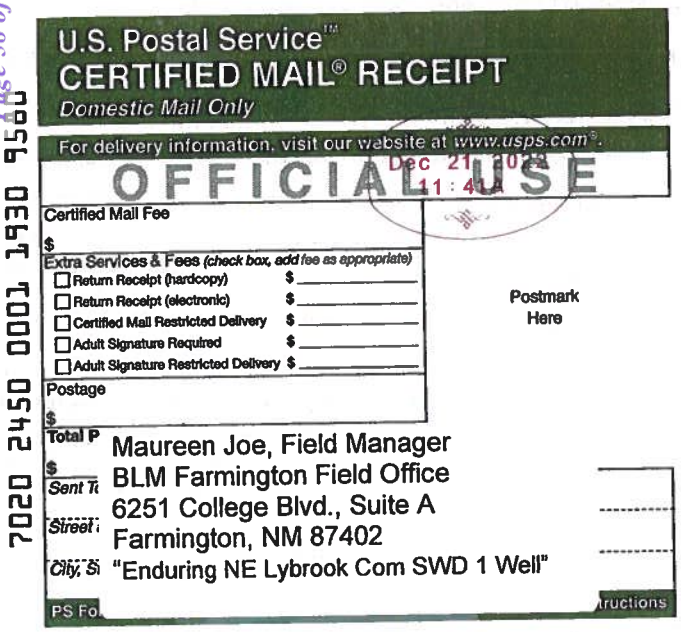
Review Date*: **Reviewer:**

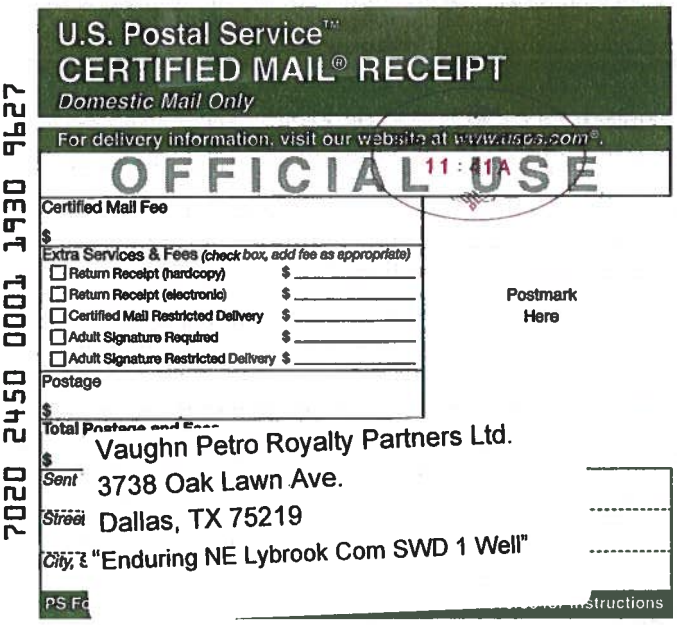
◯ **Administratively COMPLETE**

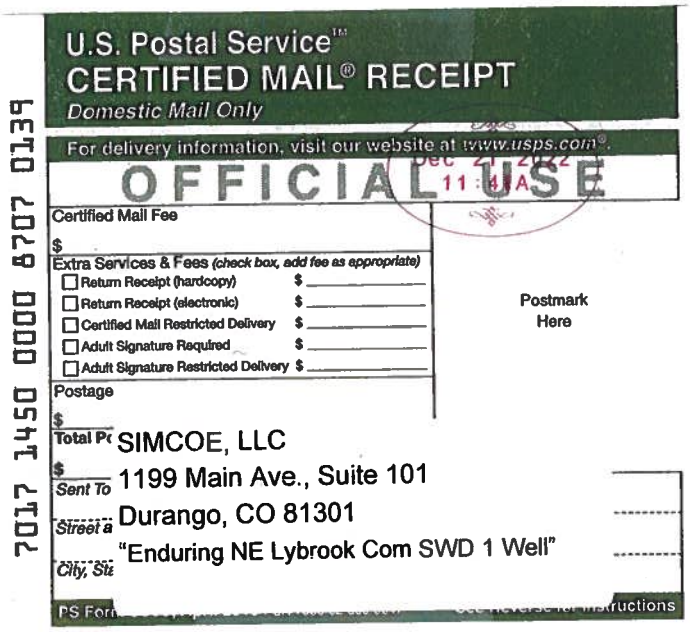
◯ **Administratively INCOMPLETE**

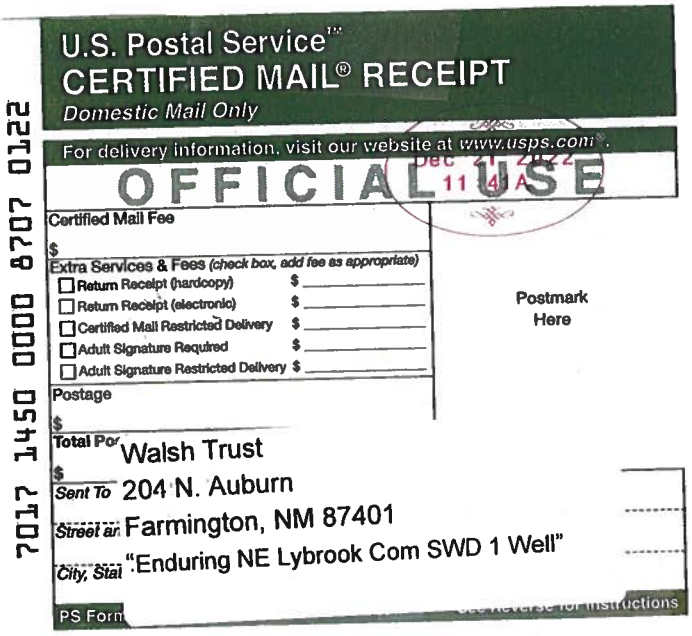
NOTES:

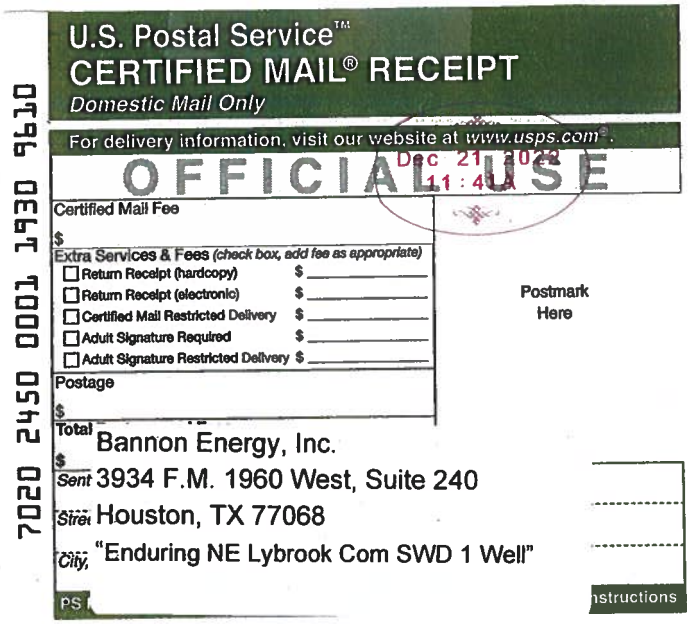
* The Review Date is the date of administrative completeness determination that commences the 15 day protest period in 19.15.26.8 (C)(2) NMAC.

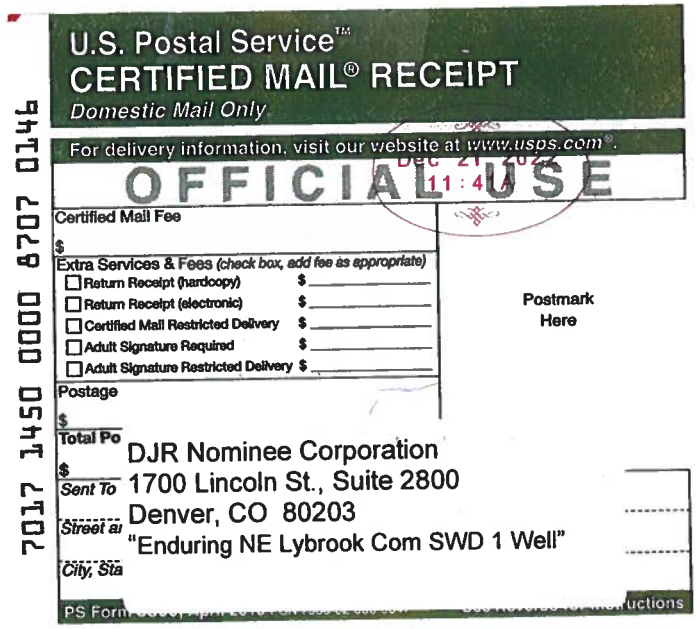












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Christopher J. Jeffus
LOGOS Resources II, LLC
2010 Afton Place
Farmington, NM 87401
"Enduring NE Lybrook Com SWD 1 Well"

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Garg Oil, c/o Tri-C Resources
909 Wirt Road
Houston, TX 77024
"Enduring NE Lybrook Com SWD 1 Well"

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Greg Twombly
Resource Development Technology
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Morrison, CO 80465
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332 County Road 3100
Aztec, NM 87410
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Street and
City, State,

Dec 21 2022
11:37A

Kenneth and Karen Murchison
7052 County Road 362
Jewett, TX 75846
"Enduring NE Lybrook Com SWD 1 Well"

PS Form 3

See Reverse for Instructions

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- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
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Street and
City, State,

Dec 21 2022
11:37A

Range Production Co.
500 Throckmorton
Fort Worth, Texas 76102
"Enduring NE Lybrook Com SWD 1 Well"

PS Form 3

ions

7017 1450 0000 8707 0160

OCD Permitting

30-039-05067 PRE-ONGARD WELL #001 [30041]

General Well Information

Operator:	[214263] PRE-ONGARD WELL OPERATOR		
Status:	Plugged, Site Released	**Direction:**	Vertical
Well Type:	Oil	**Multi-Lateral:**	No
Work Type:	New	**Mineral Owner:**	Federal
		Surface Owner:	Federal
Surface Location:	G-13-23N-07W 1980 FNL 1980 FEL		
Lat/Long:	36.2270432,-107.5253754 NAD83		
GL Elevation:			
KB Elevation:		**Sing/Mult Compl:**	Single
DF Elevation:		**Potash Waiver:**	False

Pre-ONGARD Information

Original Well Name:	FEDERAL ELKINS
Original Operator Name:	RHODES DRILLING CO

Proposed Formation and/or Notes

RHODES DRILLING CO /FEDERAL ELKINS

Depths

Proposed:	0	**True Vertical Depth:**	5536
Measured Vertical Depth:	0	**Plugback Measured:**	0

Formation Tops

Formation	Top	Producing	Method Obtained
Pictured Cliffs Formation	1975		
Point Lookout Formation	4303		
Mancos Formation	4450		
Gallup Formation	5303		

Event Dates

Initial APD Approval:	11/14/1957		
Most Recent APD Approval:	11/14/1957	**Current APD Expiration:**	11/14/1959
APD Cancellation:			
APD Extension Approval:			
Spud:	11/12/1957	**Gas Capture Plan Received:**	
Approved Temporary Abandonment:		**TA Expiration:**	
Shut In:			
Plug and Abandoned Intent Received:		**PNR Expiration:**	
		Last MIT/BHT:	
Well Plugged:	11/27/1957		
Site Release:			
Last Inspection:			

Quic
- Gene
- Histo
- Comr
- Opera
- Pits
- Casin
- Well
- Finan
- Comp
- Order
- Produ
- Trans
- Points

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- Well
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- Well

New
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11/14/1957	[30041] PRE-ONGARD WELL	#001	[214263] PRE-ONGARD WELL OPERATOR	New	Oil	Plugged, Site Released		11/27/1957

Comments

Pits

No Pits Found

Casing

			Boreholes, Strings and Equipment Specifications			Specifications for Strings and Tubing			Strings Cemented and Intervals			Cement and Plug Description		
String/Hole Type	Taper	Date Set	Diameter	Top	Bottom (Depth)	Grade	Length	Weight	Bot of Cem	Top of Cem	Meth	Class of Cement	Sacks	Pressure Test (Y/N)
Hole 1	1		11.500	0	161		0	0.0	0	0			0	No
Surface Casing	1		9.625	0	161		0	0.0	161	0		Class C Cement	100	No

Well Completions

[96894] WC D3; GALLUP

Status: Zone Permanently Plugged
Last Produced:
Bottomhole Location: G-13-23N-07W 1980 FNL 1980 FEL
Lat/Long:
Acreage:
DHC:
Consolidation Code:
Production Method:

Well Test Data

Production Test:
Test Length: 0 hours
Flowing Tubing Pressure: 0 psi
Flowing Casing Pressure: 0 psi
Choke Size: 0.000 inches
Testing Method:
Gas Volume: 0.0 MCF
Oil Volume: 0.0 bbls
Gas-Oil Ratio: 0 Kcf / bbl
Oil Gravity: 0.0 Corr. API
Disposition of Gas:
Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth

Notes

Event Dates

Directional Survey Run:	No	**Logs Received:**	No
Directional Survey Received:	No	**Closure Pit Plat Received:**	
First Oil Production:		**First Gas Production:**	
First Injection:			
Ready to Produce:	11/25/1957	**Completion Report Received:**	
C-104 Approval:		**New Well C-104 Approval:**	
Plug Back:			
Authorization Revoked Start:		**Revoked Until:**	

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
11/27/1957	[30041] PRE-ONGARD WELL	#001	[214263] PRE-ONGARD WELL OPERATOR	Zone Permanently Plugged	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
01/01/1900	Blanket	1	1	SEABOARD SURETY CO	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to OCDAdminComp@state.nm.us or fax a letter to (505) 476-3462.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports (Inactive Well Report, Financial Assurance Report).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

Orders

No Orders Found

Production / Injection

The production & injection volumes are sourced from monthly production reports (C-115) submissions.

Earliest Production in OCD Records: **Last** Show All Production Export to Excel

	Production				Injection				
Time Frame	Oil (BBLS)	Gas (MCF)	Water (BBLS)	Days P/I	Water (BBLS)	Co2 (MCF)	Gas (MCF)	Other	Pressure
Grand Total:	0	0	0	0	0	0	0	0	N/A

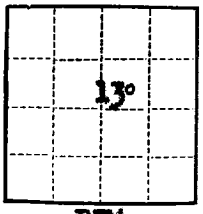
Transporters

Transporter	Product	Most Recent for Property

Points of Disposition

Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Santa Fe
Lease No. SF-078359
Unit Federal-Elkins

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
MAR 20 1958
U. S. GEOL. SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	XX
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 27, 19 57

Well No. 1 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 13

SW/4 NE/4 Sec. 13 (¼ Sec. and Sec. No.)
T-23N (Twp.)
R-7W (Range)
N.M.P.M. (Meridian)
Wildcat (Field)
Rio Arriba County (County or Subdivision)
New Mexico (State or Territory)

RECEIVED
MAR 21 1958
OIL CON. COM.
DIST. 3

The elevation of the derrick floor above sea level is 6988 Gr. 7000 ft. KB

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well was plugged and abandoned on November 26 and 27, 1957, as follows:

Plug #1	5375' - 5525'	50 sacks of cement
Plug #2	4275' - 4325'	15 sacks of cement
Plug #3	1975' - 2050'	30 sacks of cement
Plug #4	100' - 175'	30 sacks of cement
Plug #5	0' - 45'	15 sacks of cement

Pits have been levelled and location cleaned.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company RHODES DRILLING COMPANY

Address Citizens National Bank Bldg.
Abilene, Texas

By Charles F. Ford

Title District Manager, Durango, Colo.

GPO 9 18 507

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

RECEIVED
MAR 25 1977
Minerals Management Inc.

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

WATER ANALYSIS

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

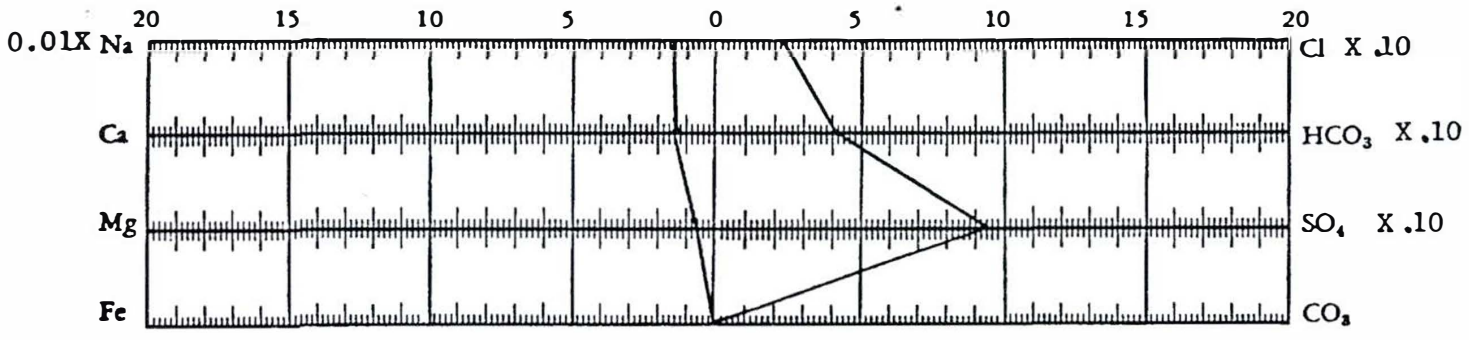
Total Dissolved Solids 11,114.5 mg/L _____ Sp. Gr. 1.009 @ 70 °F.

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.

THE WESTERN COMPANY OF NORTH AMERICA

API W A T E R A N A L Y S I S

Company: MERRION
Field:
Well: #1
Depth:
Formation: ENTRADA?
State:
County:

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

W.C.N.A. Sample No.: S106995
Legal Description:
Lease or Unit: EAGLE MESA
Water.B/D:
Sampling Point:
Sampled By: STEVE DUNN
Date Sampled: 05/03/95
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:	
Tempature:	64F	(see below)	

D I S S O L V E D 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:		:					

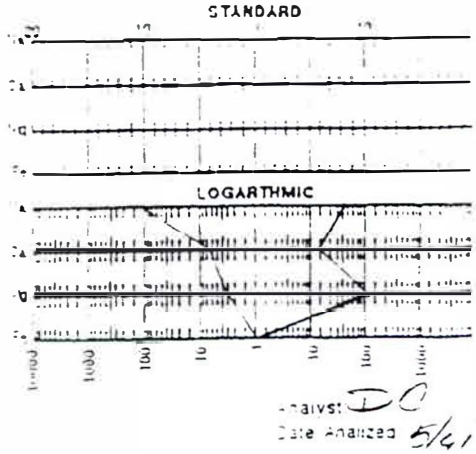
ANIONS	mg/l		me/l				
: .5000Chloride, Cl:	1773	:	50	Sample(ml):	1.0	ml of AgNO3:	.10
Sulfate, SO4:	5000	:	104				
Carbonate, CO3:		:		Sample(ml):	1.0	ml of H2SO4:	
Bicarbonate, HCO3:	1220	:	20	Sample(ml):	1.0	ml of H2SO4:	.20

Total Dissolved Solids (calculated):	11928						
Total Hardness:	600			Sample(ml):	1.0	ml of EDTA:	.60

REMARKS AND RECOMMENDATIONS:

ENTRADA WATER

WATER PATTERNS-me/l



Analyst: DC
Date Analyzed 5/4/

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

Hall Environmental Analysis Laboratory, Inc.

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.

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.

CLIENT: John Shomaker & Assoc.
Project: Enduring Resources
Lab ID: 1810596-003 **Matrix:** AQUEOUS

Client Sample
Collection Date: 10/9/2018 3:15:00 PM
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		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

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: _____ **OGRID Number:** _____
Well Name: _____ **API:** _____
Pool: _____ **Pool Code:** _____

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.

_____ Date

_____ Print or Type Name

_____ Phone Number

Khem Suthivan
_____ Signature

_____ e-mail Address

Side 1

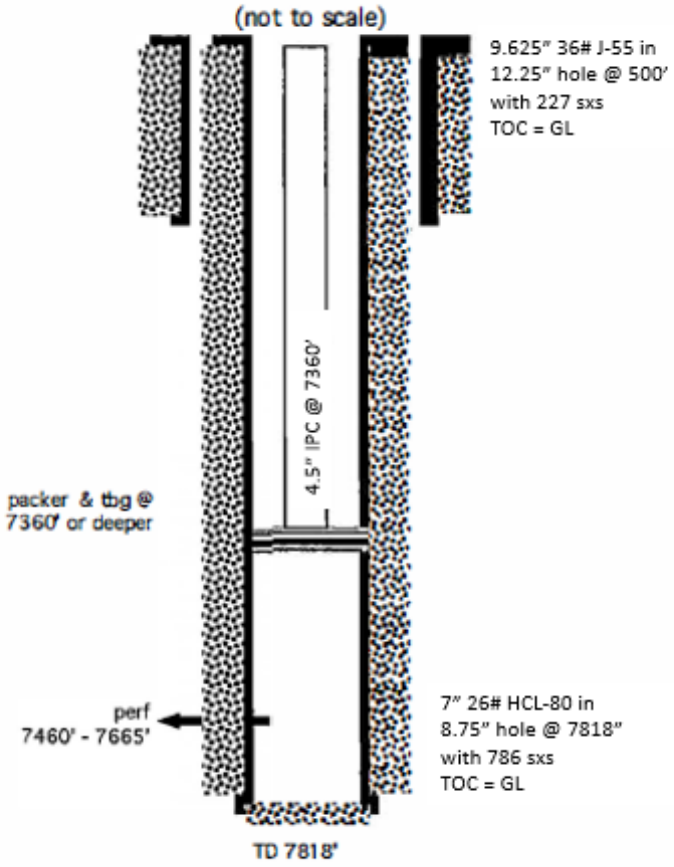
INJECTION WELL DATA SHEET

OPERATOR: ENDURING RESOURCES, LLC

WELL NAME & NUMBER: NE LYBROOK COM SWD 001

WELL LOCATION:	2,335' FSL & 2,559' FEL	J	13	23N	7W
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12.25" Casing Size: 9.625"

Cemented with: 227 sx. ***or*** _____ ft^3

Top of Cement: SURFACE Method Determined: CIRC.

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 8.75" Casing Size: 7"

Cemented with: 786 sx. ***or*** _____ ft^3

Top of Cement: SURFACE Method Determined: CIRC.

Total Depth: 7,818'

Injection Interval

7,460' feet to 7,665'

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 4.5" Lining Material: PLASTIC

Type of Packer: DUAL GRIP WITH EXTETNALLY COATED, OR PLATED WITH CORROSION RESISTANT MATERIAL

Packer Setting Depth: 7,360' OR DEEPER

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

Additional Data

1. Is this a new well drilled for injection? X 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 (4,483')

   UNDER: NONE IN THE AREA OF REVIEW

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 174396

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 174396
	Action Type: [C-108] Fluid Injection Well (C-108)

CONDITIONS

Created By	Condition	Condition Date
aschaefer	None	1/20/2023