AE Order Number Banner

Application Number: pMSG2404533365

PMX-350

OCCIDENTAL PERMIAN LTD [157984]

Returner/panagement/AdminOrders/Banner/pMSG2404533365



5 Greenway Plaza, Suite 110, Houston, Texas 77046-0521 P.O. Box 27570, Houston, Texas 77227-7570 Phone 713.215.7000

January 9, 2024

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

RE: Pressure Maintenance Project North Hobbs Unit Well No. 221; API 30-025-07504 Lea County, NM

Occidental Permian Ltd. respectfully requests administrative approval without hearing, to commence injection (water, CO2, and produced gas) per the authorized Order No. R-6199-F. The H2S contingency plan which covers both North and South Hobbs Units will be updated to reflect this change.

In support of this request, please find the following documentation:

- Administrative Application Checklist
- Form C-108 with required data attached
- Injection Well Data Sheet with Wellbore Schematic
- Form C-102
- AOR Map

Per R-6199-F Paragraph 3 on page 9, "(...) Application for approval of additional injection wells in the expanded Phase I Area of the North Hobbs Unit shall be filed in accordance with NMAC 19.15.26.8 and may be approved administratively by the Division Director without Notice and hearing." The injector in this application is located within the expanded Phase I Area of the North Hobbs Unit.

If you have any questions regarding this application, please contact me at 713-215-7827 or email roni_mathew@oxy.com.

Sincerely,

Roni Mathew

Roni Mathew Regulatory Advisor

Recei	ved by OCD: 2/14	4/2024 9:21:38 A	M			Page	2 3 of 37
	DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.	
		•	•			•	-

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION



- 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	
Application Acronyms:	
[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication] [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement] [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion] [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase] [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]	
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]"	
[A] Location - Spacing Unit - Simultaneous Dedication"	
Check One Only for [B] or [C]"	
[B] Commingling - Storage - Measurement" DHC CTB PLC PC OLS OLM"	
 [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery" WFX X PMX SWD IPI EOR PPR" 	
[D] Other: Specify <u>Additional Injector within approved project area (R-6199-G)</u>	
[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply [A] Working, Royalty or Overriding Royalty Interest Owners	
[B] Offset Operators, Leaseholders or Surface Owner	
[C] Application is One Which Requires Published Legal Notice	
[D] Notification and/or Concurrent Approval by BLM or SLO U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office	
[E] For all of the above, Proof of Notification or Publication is Attached, and/or,	
[F] Waivers are Attached	

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **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.

Roni Mathew	Roni Mathew	Regulatory Advisor	1/9/2024
Print or Type Name	Signature	Title	Date

roni_mathew@oxy.com e-mail Address *Received by OCD: 2/14/2024 9:21:38 AM* STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery X Pressure Maintenance Application qualifies for administrative approval? X Yes No	DisposalStorage
II.	OPERATOR: OCCIDENTAL PERMIAN LTD	
	ADDRESS: P.O. Box 4294 Houston, TX 77210-4294	
	CONTACT PARTY: Roni Mathew	PHONE: 713-215-7827
III.	WELL DATA: Complete the data required on the reverse side of this form for each well proportional sheets may be attached if necessary.	osed for injection.
IV.	Is this an expansion of an existing project? <u>X</u> Yes No If yes, give the Division order number authorizing the project: <u>R-6199-F</u>	
V	Attach a man that identifies all walls and leases within two miles of any proposed injection we	Il with a one half mile radius circle

- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
 - 1. Proposed average and maximum daily rate and volume of fluids to be injected;
 - 2. Whether the system is open or closed;
 - 3. Proposed average and maximum injection pressure;
 - 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 - 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate 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: Roni Mathew	TITLE: Regulatory Advisor
SIGNATURE: <u>Roni Mathew</u>	DATE: <u>1/9/2024</u>

E-MAIL ADDRESS: <u>roni_mathew@oxy.com</u>

* 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: <u>February 11, 2014 as part of Order No. R-6199-F application</u> 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.

C-108 Application Attachment Occidental Permian Ltd. North Hobbs G/SA Unit No. 221 Lea County, New Mexico

- I. This is a pressure maintenance project. The project qualifies for administrative approval.
- II. OCCIDENTAL PERMIAN Ltd. P.O. Box 4294 Houston, TX 77210-4294 Contact Party: Roni Mathew, 713-215-7827
- III. Injection well data sheet and wellbore schematic has been attached for NORTH HOBBS G/SA UNIT No. 221
- IV. This is an expansion of an existing project authorized under Order No. R-6199-F.
- V. The map with a two mile radius surrounding the injection well and a one half mile radius for area of review is attached.
- VI. In accordance to Order No. R-6199-F Section 4 OCCIDENTAL PERMIAN Ltd certifies that: The area of review for well "NORTH HOBBS G/SA UNIT #221" shows no substantive changes in the information furnished in support of Order No. R-6199-F concerning the status of construction of any well that penetrates the injection interval within the one-half (1/2) mile around the injection well, with the exemption of the wells listed below:

ΑΡΙ	Well Name	Operator	Well Status
30-025-49764	NORTH HOBBS G/SA UNIT #971	OCCIDENTAL PERMIAN LTD	New
30-025-49765	NORTH HOBBS G/SA UNIT #972	OCCIDENTAL PERMIAN LTD	New
30-025-49768	NORTH HOBBS G/SA UNIT #980	OCCIDENTAL PERMIAN LTD	New
30-025-49740	NORTH HOBBS G/SA UNIT #970	OCCIDENTAL PERMIAN LTD	New
30-025-49742	NORTH HOBBS G/SA UNIT #981	OCCIDENTAL PERMIAN LTD	New
30-025-49767	NORTH HOBBS G/SA UNIT #978	OCCIDENTAL PERMIAN LTD	New
30-025-07510	NORTH HOBBS G/SA UNIT #141	OCCIDENTAL PERMIAN LTD	Plugged
30-025-07509	NORTH HOBBS G/SA UNIT #131	OCCIDENTAL PERMIAN LTD	Plugged

The wellbore diagrams, their tabulated data, and the area of review map are attached. Proposed Operation

1.	Average Injection Rate	3,000 BWPD / 10,000 MCFGPD
	Maximum Injection Rate	8,000 BWPD / 20,000 MCFGPD

- 2 This will be a closed system.
- Average Surface Injection Pressure 1,300 PSIG Maximum Surface Injection Pressure
 Produced Water 1150 PSIG

Produced Water	1,150 PSIG
CO2	1,250 PSIG
CO2 w/produced gas	1,650 PSIG

(In accordance with Order No. R-6199-F, effective 7/18/13)

4. Source Water – San Andres Produced Water

(Analysis previously provided at hearing, Case No. 14981)

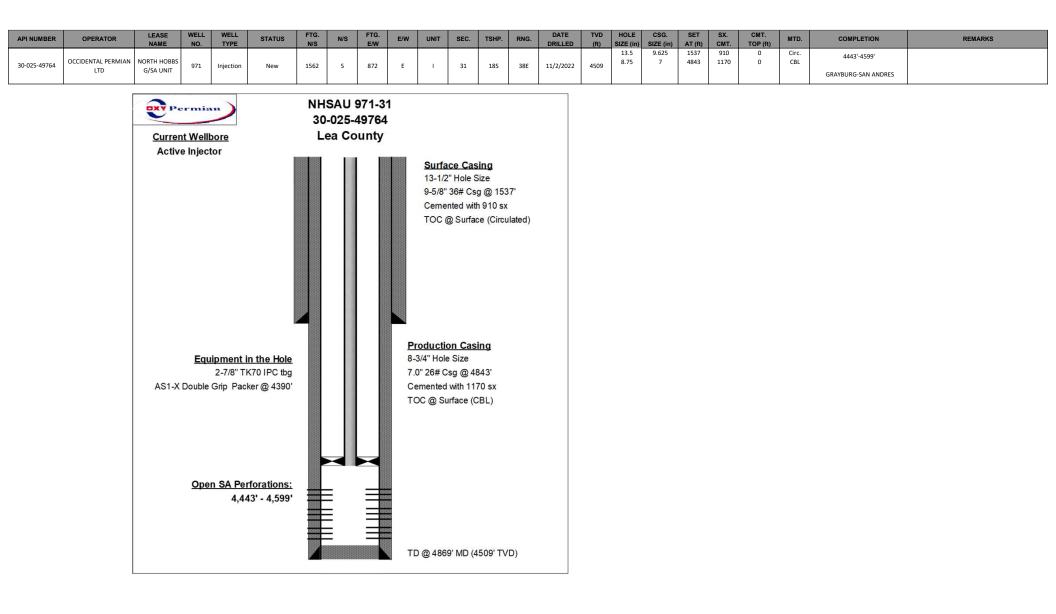
VIII. The information was previously submitted as part of Order No. R-6199-F application

VII.

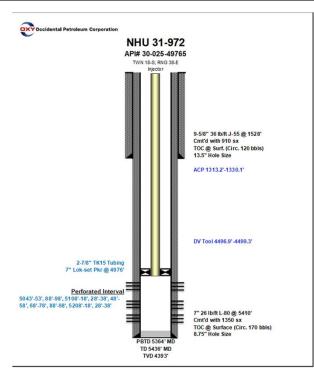
- IX. Acid stimulate well with ~4,000 gal 15% HCL. Max rate = 4-5 BPM. Flush acid with ~200 bbls off fresh water.
- X. Logs were filed at the time of drilling.
- XI. Per our field personnel, the water wells noted below are located within 1 mile of the subject well. Water analysis for each are included with the application.

Water Well Name	Lat	Long	Date Collected
L-4920X	32.707399°	-103.197122°	6/18/2021
L-4920	32.703335°	-103.196544°	6/18/2021
L-14866-POD1 – N. Goings Ln.	32.705239°	-103.183839°	10/13/2013

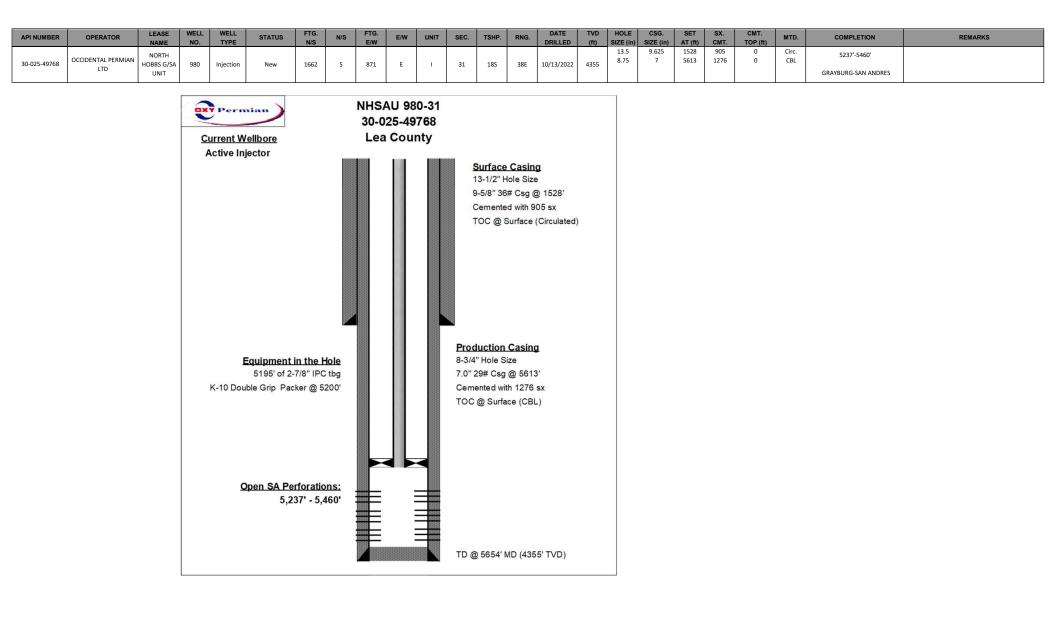
- XII. N/A. This is a pressure maintenance project, not a disposal well.
- XIII. Order No. R-6199-F allows the administrative approval, from the Division Director, of additional injection wells without notice and hearing. Notices to producers and surface owners for the water/CO2 flood area were provided at the time of the application and hearing for Order No. R-6199-F.

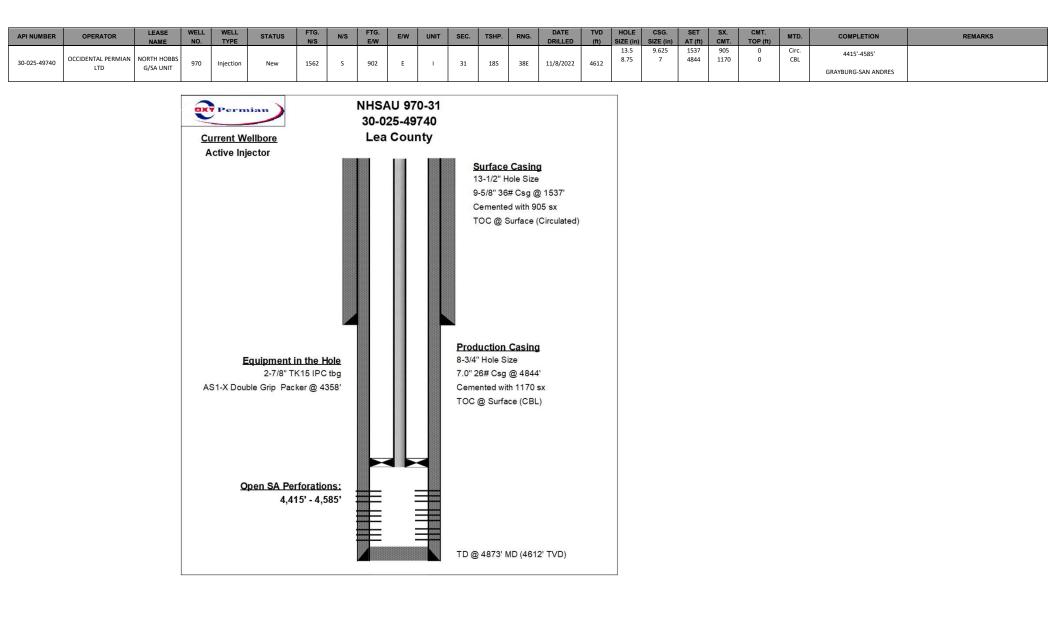


API NUMBER	OPERATOR	LEASE	WELL	WELL	STATUS	FTG.	N/S	FTG.	E/W	UNIT	SEC.	TSHP.	RNG.	DATE	TVD	HOLE	CSG.	SET	SX.	CMT.	MTD.	COMPLETION	REMARKS
ATTROMBER	or Elotron	NAME	NO.	TYPE	011100	N/S		E/W		0				DRILLED (ft)		SIZE (in)	SIZE (in)	AT (ft)	CMT.	TOP (ft)		COMPLETION	11211/1010
		NORTH														13.5	9.625	1528	910	0	Circ.	E042' E228'	
30-025-49765	OCCIDENTAL PERMIAN	-	070	to to others	New	145		4604			24	100	205	40/20/2022	4202	8.75	7	5410	1350	0	CBL	5043'-5238'	
30-025-49765	LTD	HOBBS G/SA UNIT	972	Injection	New	145	5	1604	w	1	31	185	38E	10/28/2022	4393							GRAYBURG-SAN ANDRES	

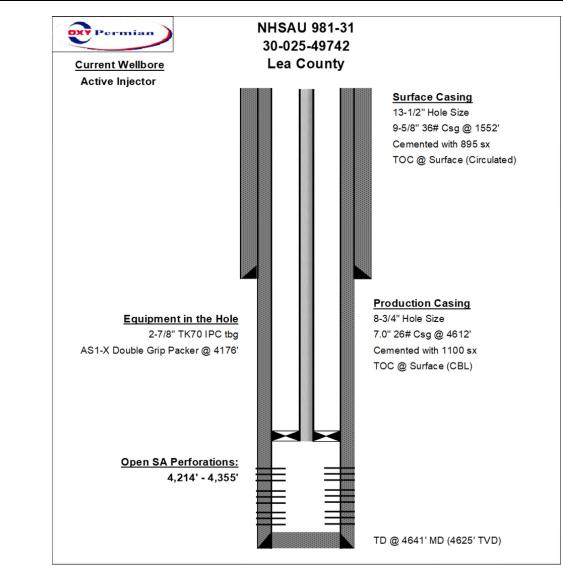


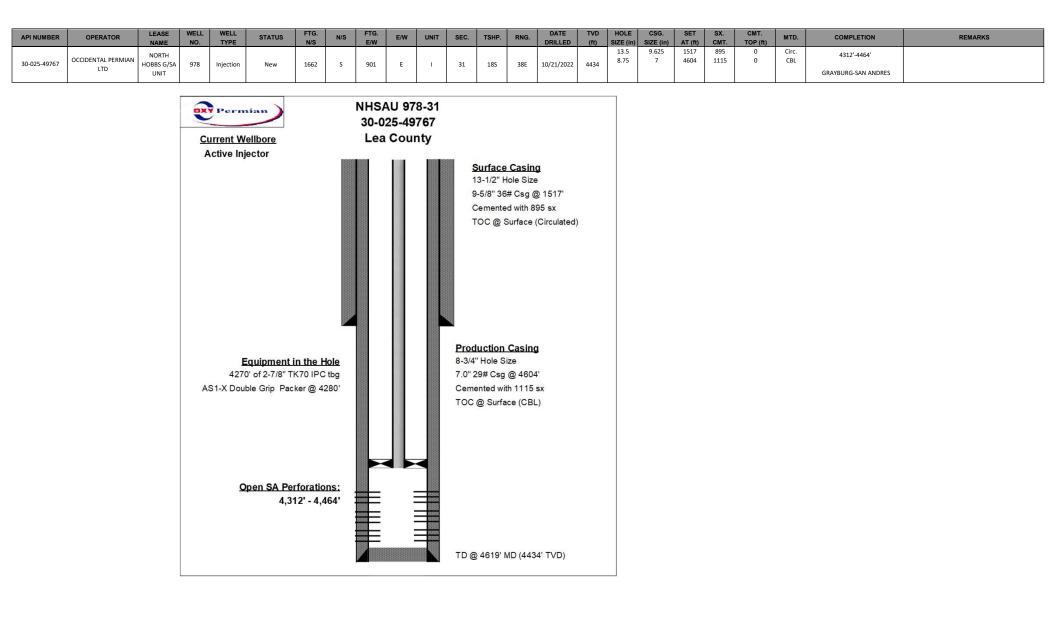
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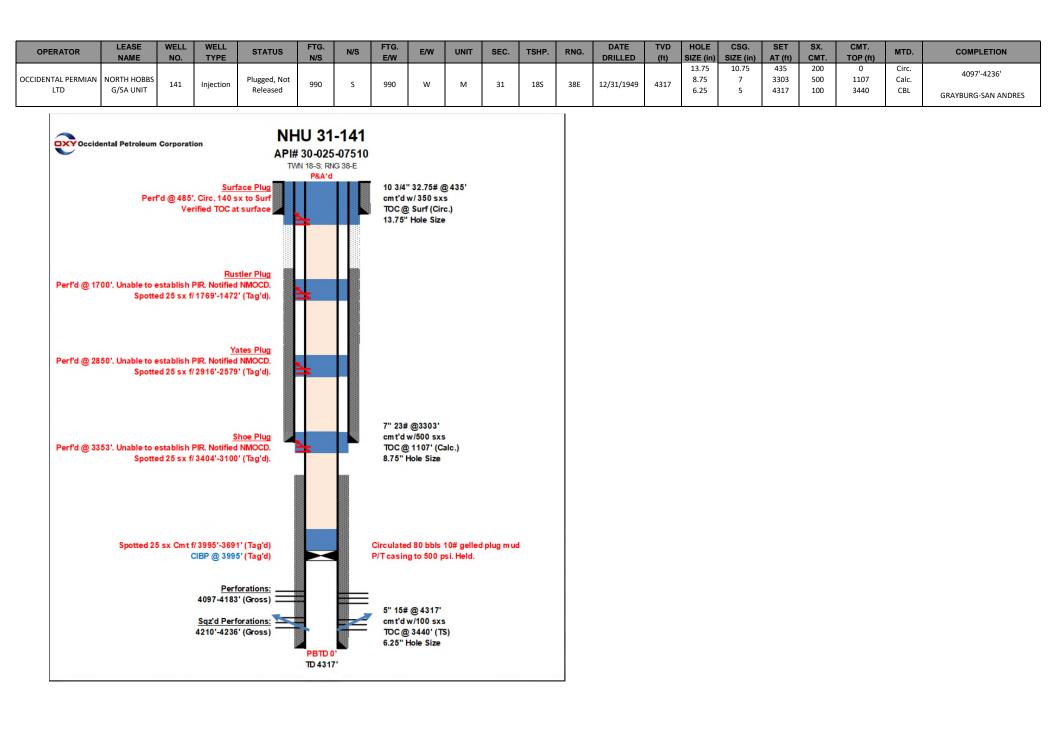




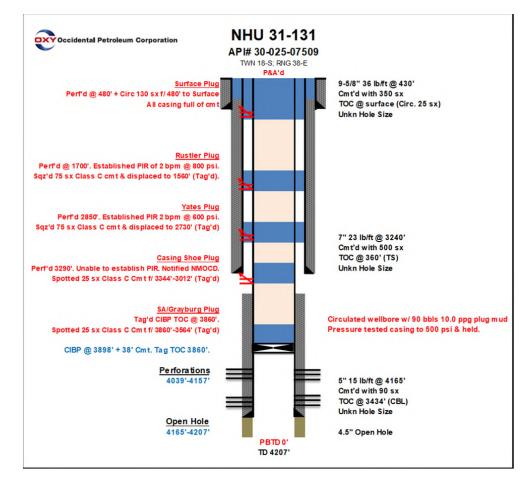
API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TVD (ft)	HOLE SIZE (in)	CSG. SIZE (in)	SET AT (ft)	SX. CMT.	CMT. TOP (ft)	MTD.	COMPLETION
30-025-49742	OCCIDENTAL PERMIAN		981	Injection	New	980	z	1702	w	c	31	18S	38E	9/15/2022	4625	13.5 8.75	9.625 7	1552 4612	895 1100	0 0	Circ. CBL	4214'-4355'
	LTD	G/SA UNIT								-				-,,								GRAYBURG-SAN ANDRES







API NUMBER	OPERATOR	LEASE	WELL	WELL	STATUS	FTG.	N/S	FTG.	E/W	UNIT	SEC.	TSHP.	RNG.	DATE	TVD	HOLE	CSG.	SET	SX.	CMT.	MTD.	COMPLETION
		NAME	NO.	TYPE		N/S		E/W						DRILLED	(ft)	SIZE (in)	SIZE (in)	AT (ft)	CMT.	TOP (ft)		
																12.25	9.625	430	350	0	Circ.	4039'-4207'
30-025-07509	OCCIDENTAL PERMIAN	NORTH HOBBS	131	Oil	Plugged, Not	2310	c	990	14/		21	18S	38F	9/29/1949	4207	8.75	7	3240	500	360	TS	4039 -4207
30-023-07309	LTD	G/SA UNIT	151	Oli	Released	2310	3	330	vv	L	51	103	DOL	5/25/1945	4207	6.25	5	4165	90	3434	CBL	GRAYBURG-SAN ANDRES
																						GRATBURG-SAN ANDRES



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Side 1

INJECTION WELL DATA SHEET

OPERATOR: Occidental Permian LTD.

WELL NAME & NUMBER: NORTH HOBBS G/SA UNIT 221

WELL LOCATION: _	2194' FNL 2246' FV	L F	31		18 S	38 E
	FOOTAGE LOCATION		R SEC	CTION	TOWNSHIP	RANGE
<u>WELI</u>	<u>LBORE SCHEMATIC</u>			WELL CON Surface Ca	NSTRUCTION DATA asing	-
		Hole Size:	16.0"		Casing Size: 12-1/2	"
Production		Cemented	with: _300	SX.	or	ft ³
Hole Size: 6 Casing Size		Top of Cer	ment: Surface		Method Determined:	Circulated
Cemented V TOC: 2944'	With: 325 sx		Ī	Intermediate	Casing	
	ermined: CBL	Hole Size:	11-3/4"		Casing Size: 9-5/	/8"
		Cemented	with: 400	SX.	or	ft ³
Proposed L		Top of Cer	ment: 1328'		Method Determined:	Calculated
Casing Size Liner top: 3 Liner Btm: 4	800'			Production	Casing	
Cemented TOC: 3800	With: 100 sx	Hole Size:	8 3/4"		Casing Size: 7.0"	
100.0000		Cemented	with:450	SX.	or	ft ³
		Top of Cer	ment: 1243'		Method Determined:	Calculated
		Total Dept	h:	MC)	
				Injection In	nterval	
		~4120	TVD (Perforated)	feet	to_~4300' TVD (P	erforated)

(Perforated or Open Hole; indicate which)

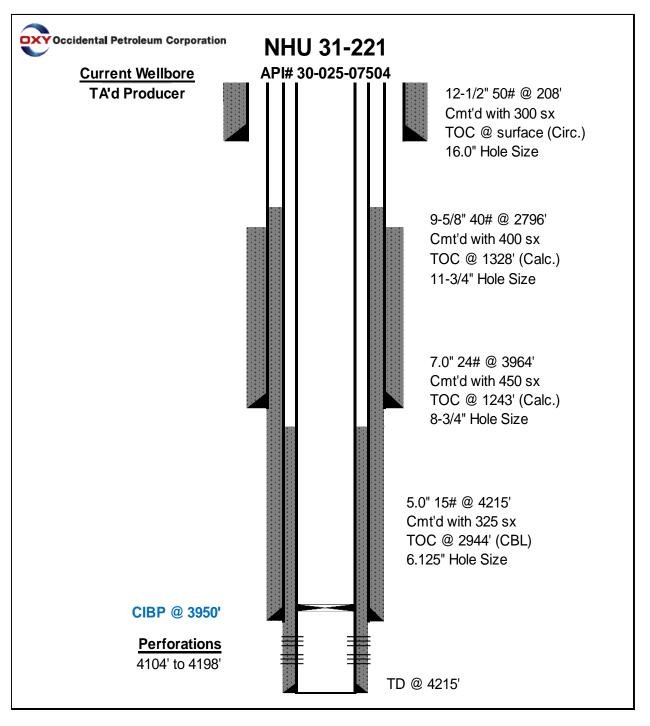
Side 2

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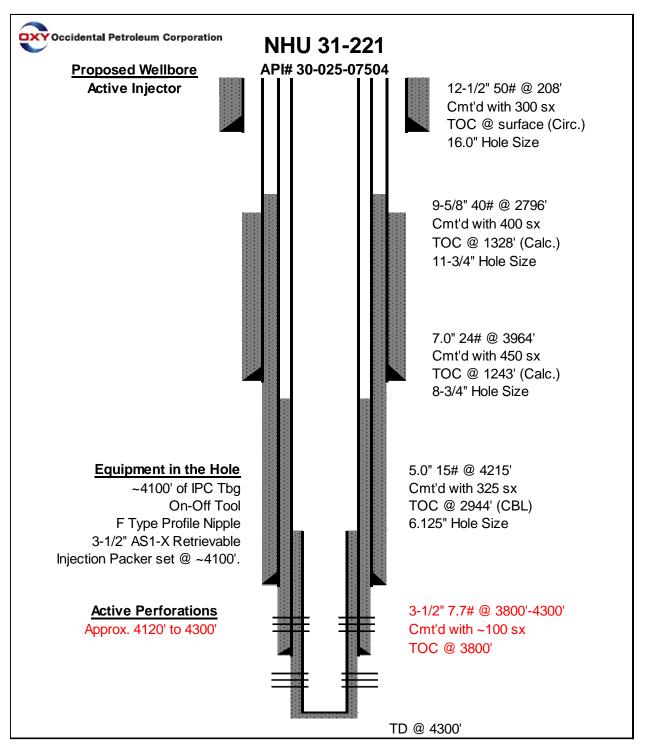
INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" & 2-1/16" Lining Material: IPC
Type of Packer: 3-1/2" x 2-1/16" AS1-X Packer
Packer Setting Depth: Approx. 4100' TVD
Other Type of Tubing/Casing Seal (if applicable):
Additional Data
1. Is this a new well drilled for injection?YesYesYes
If no, for what purpose was the well originally drilled? Production
2. Name of the Injection Formation: <u>San Andres</u>
3. Name of Field or Pool (if applicable): <u>Hobbs; Grayburg - San Andres</u>
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:
Byers (Queen) @ ~180' TVDSS
Glorieta @ -1820' TVDSS

Current WBD



Proposed WBD



31-221 Convert to Injector Preliminary Job Plan:

- 1. RU WL
- 2. RIH w/ RBP & set at 1000'
- 3. Dig out and install new wellhead
- 4. RD WL
- 5. MIRU PU
- 6. ND WH x NU BOP
- 7. PU & RIH w/ bit
- 8. DO CIBP @ 3950'. CO to 4215' TD.
- 9. Squeeze existing perfs under CICR w/ ~500 sx cmt
- 10. DO cmt. Test squeeze.
- 11. Deepen well to ~4300' new TD.
- 12. Install 3-1/2" Liner f/ ~3800' to 4300'. Cmt liner in place.
- 13. Perforate liner f/ ~4120' to 4300'.
- 14. Acid treat perfs w/ ~5000 gal 15% HCl
- 15. RIH w/ injection packer set ~4100'. Install IPC tubing.
- 16. Put well on sour WAG injection.

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DISTRICT IV	NM 87505 476-3462	FIL LOCAT		ACDEA	CE DEDICATI	ON DIAT		ED REPORT						
API Number		Pool (Pool Name								
	3	31920				URG-SAN A		- h - m						
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OGRID No. 157984		00												
	1		Surf	ace Loca	ation									
		2			North/South line									
F 31	18-S	38-E	2	194	NORTH	2246	WEST	LEA						
]	Bottom Hole												
UL or lot No. Section	Township	Range Lot	Idn Feet	from the	North/South line	Feet from the	East/West line	County						
Dedicated Acres Joint o	r Infill Cons	solidation Code	Order No.											
40														
NO ALLOWABLE W	ILL BE ASS	SIGNED TO T	HIS COMPI	LETION U	UNTIL ALL INTER	ESTS HAVE BE	EN CONSOLIDA	ATED						
	OR A NO	DN-STANDAR	D UNIT HA	S BEEN	APPROVED BY	THE DIVISION								
		тт. А. Т. С. 194. С. 194. С. 194. Г. 194.	<u>EURFACE LOCA</u> Y=622137.8 X=893364.7 AT.=32.70507/ NG.=103.1889	TION N E 5' N 26' W 26' W 		I hereby of herein is true a my knowledge a organization eith or unleased min including the purchased owner of such no or to a voluntar compulsory pool by the division. Remi Signature Roni Mathe Printed Name E-mail Address SURVEYOI I hereby of shown on this p notes of actual under my super true and correct DECEM Da Signature & Se	ertify that the inf and complete to the nod complete to the nod belief, and that her owns a working teral interest in the to drill this well at no drill the well to the best of m no drill the t	ormation e best of this this e location this interest, at or a e entered 0/2024 te VION I location m field ne or e same is y belief. 0 1 Surveyor						

Religentin (10 2052024 9:21:38)	SENW (F)	SWNE (G)	(H) ×	30-025 :44408 (E)	SENW • ³⁰⁻⁰ (F) 30-025-371	25-09876 30-025 <u>-</u> 05480 ³¹ 52	0-025-43039 30-025-29073	5-43074 30-025-0735 30-025-0735	57 SENW •30 30-025-29172	30-025-0736 025-07355	30-025-37446 3 30-025-408	0-025-37435 ^V 9 (E)	30-025-07377 SERWW (F)	1 R 30-025-073 SW 30-025 (G)	80 30-025-073 -07379 SENE (H)	30-025-27 •30-025-073 age 22	777 89 (F)
Kerander UN UUD BUB2024 9.21.302	NESW	NWSE	025-05474 31 NESE	0-025-05467 30-02 NWSW		0	30-02	5-05487	and a		-025-07367 330-025-12490 NESE		30-025-07382			17	NESW
G/SA Unit 221	(K)	(J) 23	(1)	(L) 30-025-35		30-025-43580 430-025-26832	30-025-36 30-02 30-025-05488	193 L 330-025 25-37410 30-025-29098			260130-025-3744	30-025-2:	3206 30-025-272 30-025-07384	NWSE 1430-025-0738130 20 \$30-025-073	30-025-073 0-025-0737630-025 72	-0738630-025-073	93 (K) 21 30-025-07394
•		025-44824 30	0-025-05475 30-	025-05473	30-025-46880 c	(,	Ø 30-025-43038	30-025-442283	30-025-27138 0-025-44227	Wjones-Ln	- Wijones-Ln-30	-025-28881 — —	30-025-07384	\mathbf{X}	<u>k</u>	5.111	30-023-07334
AOR	SESW (N)	SWSE (0)	SESE (P)	swsw 30 02	5-4482630-025-43	847 swse	SESE	L 4 0548630-025-0736	SES 30-025-	12492 _{SWSE} Rd 23481 (0) •30-025-1249	W TSESE Rd	SWSW W T	revino Rd <mark>SESW</mark> 383 (N) 30	SWSE (0)	SESE (P) 30-025-073	SWSW (M) 20.025.073	30-025-22690 90 30-025-07391
Oil and Gas Wells					•	-025-44828	30-025-29062		1 31	0.025-07364	30-023-	0736630-023-07.	W Pender Slud	•30-025-073	71 30-025-073	73 30-025-073 07385 30-025-2	267030-025-22602
Wells - Large Scale		30-025-0550 🎤 30-02	730-025-44825	30-025-05491 ³⁰	-025-44827	25-0548930-025-	05506 0 30-025-37480	30-025-070	30-025-29063 77 30-025-0 NEI 30-025-0 25-37102) 30-02	746330-025-2327	0 30-025-291975	0-025-07470 = 030-025-074	30-025-374 452 × • 30	-025-07433			i i irişiş
Miscellaneous	(C)	NWNE (30)-025-43	NENE 3730 (A)	(PD)	NENW (C)	NWNE	37481 (30-025-3	39007 118 L 1 30-0	NEL30-025-0 25-37102) 30-02	7466 ³⁰⁻⁰²³⁻⁰⁷⁴⁶ NWNE 25-35332 ^B)	NENE30-02	5-23384 30-02	5-23222 N-30-025-3 319 30-025-236 25-21964 30-025- IS 38E 38E	7474 NWNE	NENE	NWNW 30-025-07	NENW 422 30-025:07425
* CO2, Active		Δ		185 37	\		•	30-025-2906	4 30-025-26833	30-02	25-34983 5 30-025-27059	• 30-02 30-02	25-21964 IS 38E 30-025-	26934 30-025-28	2 ⁰ 30 ¹ 025-07	154	م
★ CO2, Cancelled			/	30	-025-05502		30-025-26933	1 ⁰	30-025-36297	30-025-28555	30-025-27059	30-025-289	53 53 0-025-37213 3	0-025-37128 3	0-025-37475	30 025-2896	
★ CO2, New	SENW (F)	SWNE (G)	SENE (H)	SWNW (E)	SENW 30-	025-0549630-025- (G)	05505 SENE	L2	SEN30-025-0	7465 SWNE 30	025-07488 _{NE} 30	025-2317630-02	53 0-025-37213 3 5-12802 330-025-37558 30-7 7 30-025-37558 30-025-32 44730.025-07438 30	-07435 SW 30-025	-07434 SENE	50 5,30,025-0	30-025-07429 7426 OSENW 20 30-025-07428
★ CO2, New ★ CO2, Plugged			(,	(2)	$ $ \rangle	(0)	30-025	0550430-025-0746	4 30-025-0 30-025-22172	746230-025-0746 30-025-22173	57 30-025-0746 30-025-07461	30-025-2196 30-025-3689	30-025-37558 7 30-025-38 30-025-38	025-36315 7 591530-025-28941	30-025-0745 ³⁰	30-025-074 -025-07459	20 30-025-07428 3645 /t 30-025-07427
 CO2, Frugged CO2, Temporarily Abandoned 	+	/-26	673 ji.		2 30-1	5 025-05498	30-02	5-0549230-025-074	30-025-28942 81 ₀	030-025-2895 30-025-074	430-025-35727 M. 472 30-025-0747	4 30-025-07	30-025-37538 54 30-025-07438 30-025-380 0-025-23131W 2196230-025-26917 30-025-26917 30-025-26917	-025-37250 30-02	5-35541 30-02	District30-025-12	97 30-025-28882
	NESW	NVSE	NESE	NWSW		30-025-0549430-		-025-05495 30-025-07486 ₃₀₋₀	25-37120 SW 30-02	5-36216vsc30-02	5-36281NESE 30-02	5-28580 25-07450/SW 3	•30-025-360 0-025-23131:W	11 20 025 24959 30-0	30-025-35376 25-23049.ESE 30-	25-07424/SV30-02	5-23277
Gas, Active	(K)		(1)	(L)	(К)	(3)	(1) 30-02 •657 ft	25-37105	(30-025-22 30-025-26935	4630:025:22305 30-025-2895	(T) 30-025	-36280 (30-025- 30-025-	2196230-025-07440 34871	30-025-07436 30-025-07436 30-0	30-025-37409 25-3734930-025-35	(C)	30-025-23308
Gas, Cancelled			+			025-05501	3	0:025-05499 20	¢	30-025-35755	30-025-270	30-025-357	56 30-025-26917 30-025-	34870-30-025-3	293 ₃₀₋₀₂₅₋₃₅₆₇₃	30-025-28885 30-025	29276
Gas, New	SESW	SWSE	SESE	SWSW	SESW		0-025-05497	30-02	025-07487 5-0748430-025-36	30-025-21966 ³⁰ 30-025-3628	025-24665 6 30-025-36242 ³⁰	-025-36837	2196230-025-26917 34871 56 30-025-26917 30-025-35852 025-2302230-025-2 7448 30-025-258 2841330-025-3567 665 w compared	30-025-2888 2934 30-025-	4 30-025-3464 35384 30-025-074	4 •30-0 42 30-025-2	25-51410 324630-025-23304
Gas, Plugged	(N)	(0)	(P)	(M)	(N)	(0)	(P) 30	L 4 -025-05493	(N) 30-025-28880	30-025-23235 ³⁰	-025-0747730-025 30-025-28959	26485 30-025-0	7448	-07437 30-025-074	45 30-025-35672	30-025-371 30-025-124	91 30-025 \$1663 96 30-025 12498
Gas, Temporarily Abandoned					20	025.05542-		-30-025-0748	ß	-W Sange St	30-4	25-07473 30-025 30-025-35	669 ⁹⁰ w sanger st	30-025-35670	30-025-29017-	-	
Dijection, Active	(C)	NWNE 35	NENE (A)	NWNW (D)	NENW 30	6 (B) •	025-05541NE 3 (A)		025-07(511) 30	025-07503)	38-025-07494 ³⁰	025-07490 ^W	NENW 3((C)☆	3025-07522NE (B)	A NENF30-02	5-07516 ³⁰⁻⁰²⁵⁻¹²	505/30-025-49477 025-49476
✓ Injection, Cancelled	NENW	NWNE	NENE	NWNW	NENW	NWNE	NENE	•30-	025-07512 NEX04025-49	742 NWNE 025	07496 NE 30-025	23204 30-025-35	5-07528 30-025-3 657 30-025:22792 ₃₀ (C)	-025-07525 30-0	53 30- 25-35304	25-23207 30-	025-23330 464330-025-44719
∫ Injection, New		(B)	(A)	(D)	(C)	(B)	(A)		(C)	(B) 30-025-37428	30-025-27060 30	025-07493	(C) م	30-025-35667	(A) 30-025-26973	30-025-29074	30-025-44718
Injection, Plugged						30	0-025-05540		025-07513 30-	025-07506							
Injection, Temporarily Abandoned	SENW (F)	SWNE (G)	SENE (H)	SWNW (E)	SENW (F)	SWNE (G)	SENE (H)	L 2 • 30-	025-07 <u>514</u> W (F30 O -0	SWI 30-025- 750430-025-0749	07497 <u>30-0</u> 25-07	19530-025-07531	30-025-27140 30-025-07529 30-025-07529 30-025-34907 45	• SWNE	30-025-36150 (H30-025	-23130 \$30-025-2	326330-025-34372
Oil, Active										¢	30-025-30204	•	30-025-28944	-30-020-070	00-010-10100	30-025-075 •30-025-075	⁵⁹ 30-025-075 <mark>6</mark> 2
Oil, Cancelled	11	BS 37E 35		3661 ft	3	6	10	025-22753 130-		025-07507 3639 ft	30-025-372 4	n st 30-025-0	7527 30-02	5-0752130-025-07	538 30-0	25-0753730-025-0	754530-025-28410
 Oil, New 	NESW	NWSE (J)	NESE (1)	NWSW (L)	NESW (K)	NWSE	NESE (1) 2	L3	NESW 30-0	25-0749930-025	12503 NE30,025-0 25-4976830,025-4	750130-025-230	45 30-025-35385	30-025-07535 30-025-2330930	30-025-34374 30 025-07542 SE 30- (1) 30-025 73 30-025 26974	025-07544 025-07549	30-025-43282
 Oil, Plugged 	T	(0)	(1)	(2)	(K)	(0)	Syca V	N		(3) 30-0.	30-025-07 500	5-35451	30-025-27139	30-025-291	73 30-025 30-025 26974	-34375 30	025-34980 30-025-26834 11 30 <u>-</u> 025-44720
 Oil, Temporarily Abandoned 	-1	1 1 3	PR					30	0-025-07510	30-0 025-07508 30	26-4974030-025-4 -028-07502	764 -30-025-289	143		P	00-020-204	30-025-44720 4 30-025-44721
△ Salt Water Injection, Active	SESW	SWSE	SESE B	SWSW 30-0	25-12803SW	W Dunnar	SESE		SESW	SWSE	SESE 30-		0-025-0753430-025- 30-025-31662 30-025-28265			-07536 30-025-0	30-025-34993 7543 SESW
A Salt Water Injection, Cancelled		(0)	(P)	(M) S	(N) 000 Rd	Ryco (O)	(P)	14	(N)	(0)	(P) 30-02	07498 ³⁰²⁰²⁵⁻⁰	7523 (N) 30-025-28265	-07524 ³⁰⁻⁰²⁵⁻⁰⁷⁵	39 (1930-02 30-025-28266	30-025-0	755030-02507547
Salt Water Injection, New		13	8	Hobbs A	port			30	-025-07649 20	025 07647	30-025-28304 025-07640 ³⁰⁻⁰²⁵	0762620 025 07	30-025	-07624 30-025-076	σ •••		3
Salt Water Injection, Plugged		\mathbf{N}	\land	ee Covi -				3646 ft 30-	025-27622 L 30-025-	025-07647 30 30	-025-07640 -025-07637 -025-07637	0763530-025-2	8975	30.025.0761530	0-025-07616	-07619 30-025-2	830530-025-28306
Salt Water Injection, Temporarily Abandoned	L3		L1	L 4	L 3	L 2	L1	Ľ4	30-025	-49524 •30-025-294					30-025-29752 978 30-025-29752 30-025-28979	30-025	-07605
 Water, Active 	$ \rightarrow $			21_/A		Hobbs.Cot	untry		24		j d	30-025-28974	30-025-26115 30-025-358	30-025-29751	· 30-0	25-2611630-025-3	5318 30-025-29891
Water, Cancelled						Club			A State	SWNE (G)	30-02	44610 30-025- 025-07641 30-0	30-025-358 0762830-025-27628 25-076310 SEN 30-025 vest St (F)	30-025-29083	5-07620 30-02	30-025-29 5-07613	30-025-28334 30-025-31427 25-07610 F
Water, New	(F)	(G)	SENE (H)	SWNW (E)	SENW (F) 0	1 SWNE	SENE (H)	L 5 19S 38E	SENW (F) 30-025-2	6 29410	SENE ³⁰⁻ 30-025-29459	(*E ^V) ^{Midw}	vest St (F)	05	(H)	(E) 30-025-2898	01025-07597
Water, Plugged			195	37E		(G)	Hobbs Airport		E w	*30-025-4438 *	B9 • •	00-023-20110	30-025-28980	30-025-44612	30-025-29084	30-025-43099	30-025-28339
Water, Temporarily Abandoned	Lee D		\sum			Lee County			30-025-2819730-0	25-07646	30-025-0764 0-025-07644	30-025-44313	30-025-28980 79 30-025-44611 c 5-29520 S 5-29520 S	5.07623 30.025	30-025-20933 0762130-025-3494	-025-42596/(30-0	25-42594
? undefined	NESWE	NWSE Lea (J) R	County ESE	NWSW (L) 364	NESW (K)	NWSE (J)	NESE (1)	L 6	NESW (K)	NWSE (J)	NESE	NWSW (E)	(-K)	NWSE 30-025-29085	30-025-12	14 0 125-230 30-025-2	025-43102 025-43102 3983 (K)
	SESW	SWSE	SESE	swsw	SESW2	SWSE 363	SESE		SESW	SWSE3518 ft	•30-025-29443 SESE	30-025-294 SWSW	60 5 30-025-21	3616 ft SWSE	SESE /	swsw	30-025-31429
OCD Districts and Offices	(N) Arpo		(₽) \		(N)-1-	(0)	т <u> </u>	t7	(N)	(0) 3	0-025-07645 3	(M) 0-025-07643	(N) 30-025-07632 3 3	0-025-29521 30	-025-07622		
OCD District Offices	SESW	SWSE 02	SESE	ewsw	SESW 0	1.	SESE	L7	SESW		SESE	swsw	SESW		SESE	SWSW	761230-025-07608 04
*	(N)	(0) 02	(P)	m	(N) 3 0	SWSE (0)	(P)		(N) U	30-025-4430 • SWSE (O)	09 (P)	30-025-29	411 (30-025-4 30-025-294			025-07618	SESW
Public Land Survey System		105 h (P0			$\overline{}$	(-)	- Committee	1		(-)	30	-025-07650 3	30=025=29522 0-025-07654	0-025-07658	30-025-07652 -025-12512 Ø 3	025-3995530-025	43106 5-43100,
	NENW	MWNE	NENE	37E NWNW	NENN	NWNE	NENE	19S 38E L 1	NENW	NWNE	NENE	NWNW	NENW	30 025-30954	NENE	N30-025-2	854430-025-07662
PLSS Second Division	(0)	_{сес} со (В)	(A)	(D)	(C)	(В)	(A)		(C)	(B)	(A)	(D)	(C)	(B) 30	-025-31933	(AB3)-025	-07658 (C) 30-025-28356
	_4	11			1				0		++	>		025.07655	025.12512		09 0-025-07670
PLSReteased to Imaging: 2/14/2024 9:23:4	19. A		SENE (H)	SWNW (E)	SENW (F)	SWNE (G)	SENE (H)	L2	SENW (F)	SWNE (G)	SENE	SWN Kesou	Esri, NASA, NGA, LA Irces DepartENAL, Esri CONANP, Esri, TomTon	Communite Conserver	arten Dersten of the 1 30 025 076	State SWARKY, Te	Vinerals and Natural xas Park SE
	(1)	(0)	(1)	(-)	(.)	(3)	()		()	(0)		(-)	CONAINP, ESIT, RomTon	r, Garmin, GafeGraph,	geo recnnológies, Inc	Bureau, USD	EPA, NPS, US CENSUS A USFWS, OCD, BLM



June 25, 2021

Dusty Armstrong

Laboratory Services, Inc.

2609 W. Marland

Hobbs, NM 88240

RE: OXY

Enclosed are the results of analyses for samples received by the laboratory on 06/18/21 10:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceg.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240				Reported: 25-Jun-21 17:23
Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WELL # 1L-4920 X WELL # 2L-4920	H211573-01 H211573-02	Water Water	18-Jun-21 10:15 18-Jun-21 10:30	18-Jun-21 10:45 18-Jun-21 10:45

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any daim arising, whether based in contract or tort, shall be limited to the amount paid by dlient for analyses. All daims, including those for negligence ar any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be libble for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su claim is based upon any of the above stated reasons or otherwise. Results relate only to the sample identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240		Project:OXYReported:Project Number:NONE GIVEN25-Jun-21 17:23Project Manager:Dusty ArmstrongFax To:(505) 397-3713											
			WEL	L#1L-492	0 X								
			H211	.573-01 (Wat	er)								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes			
			Cardi	nal Laborato	ories								
Inorganic Compounds													
Alkalinity, Bicarbonate	220		5.00	mg/L	1	1060808	AC	18-Jun-21	310.1				
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	1060808	AC	18-Jun-21	310.1				
Chloride*	100		4.00	mg/L	1	1061604	GM	21-Jun-21	4500-Cl-B				
Conductivity*	770		1.00	umhos/cm @ 25°C	1	1061814	AC	18-Jun-21	120.1				
pH*	7.49		0.100	pH Units	1	1061814	AC	18-Jun-21	150.1				
Temperature °C	17.7			pH Units	1	1061814	AC	18-Jun-21	150.1				
Resistivity	13.0			Ohms/m	1	1061814	AC	18-Jun-21	120.1				
Specific Gravity @ 60° F	1.003		0.000	[blank]	1	1061801	AC	18-Jun-21	SM 2710F				
Sulfate*	61.6		10.0	mg/L	1	1061811	AC	18-Jun-21	375.4				
TDS*	453		5.00	mg/L	1	1061813	GM	21-Jun-21	160.1				
Alkalinity, Total*	180		4.00	mg/L	1	1060808	AC	18-Jun-21	310.1				
Sulfide, total	< 0.0100		0.0100	mg/L	1	1062103	AC	21-Jun-21	376.2				

Green Analytical Laboratories

Total Recoverable Meta	ls by ICP (E200.7)								
Barium*	0.064	0.050	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7	
Calcium*	80.3	0.100	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7	
Iron*	< 0.050	0.050	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7	
Magnesium*	14.2	0.100	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7	
Potassium*	2.41	1.00	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7	
Sodium*	45.0	1.00	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7	

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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any daim arising, whether based in contract or tort, shall be limited to the amount paid by dient for analyses. All daims, including those for negligence ar any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of profits incurred by dient, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su daim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be erproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240		Project:OXYReported:Project Number:NONE GIVEN25-Jun-21 17:23Project Manager:Dusty ArmstrongFax To:(505) 397-3713											
				CLL # 2L-49 1573-02 (Wat									
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes			
			Cardi	inal Laborato	ories								
Inorganic Compounds													
Alkalinity, Bicarbonate	224		5.00	mg/L	1	1062105	AC	21-Jun-21	310.1				
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	1062105	AC	21-Jun-21	310.1				
Chloride*	92.0		4.00	mg/L	1	1061604	GM	21-Jun-21	4500-Cl-B				
Conductivity*	773		1.00	umhos/cm @ 25°C	1	1061814	AC	18-Jun-21	120.1				
pH*	7.49		0.100	pH Units	1	1061814	AC	18-Jun-21	150.1				
Temperature °C	17.7			pH Units	1	1061814	AC	18-Jun-21	150.1				
Resistivity	12.9			Ohms/m	1	1061814	AC	18-Jun-21	120.1				
Specific Gravity @ 60° F	1.001		0.000	[blank]	1	1061801	AC	18-Jun-21	SM 2710F				
Sulfate*	66.9		10.0	mg/L	1	1061811	AC	18-Jun-21	375.4				
TDS*	461		5.00	mg/L	1	1061813	GM	21-Jun-21	160.1				
Alkalinity, Total*	184		4.00	mg/L	1	1062105	AC	21-Jun-21	310.1				
Sulfide, total	< 0.0100		0.0100	mg/L	1	1062103	AC	21-Jun-21	376.2				
			Green An	alytical Labo	ratories								
Total Recoverable Metals by IC	CP (E200.7)												
Barium*	0.067		0.050	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7				
Calcium*	74.4		0.100	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7				
Iron*	< 0.050		0.050	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7				
Magnesium*	11.7		0.100	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7				
Potassium*	2.41		1.00	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7				
Sodium*	67.5		1.00	mg/L	1	B211388	JDA	25-Jun-21	EPA200.7				

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240	Project: Project Number: Project Manager: Fax To:	NONE GIVEN	Reported: 25-Jun-21 17:23
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1060808 - General Prep - Wet Chem										
Blank (1060808-BLK1)				Prepared &	Analyzed:	08-Jun-21				
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
LCS (1060808-BS1)				Prepared &	z Analyzed:	08-Jun-21				
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120			
Alkalinity, Total	250	10.0	mg/L	250		100	80-120			
LCS Dup (1060808-BSD1)				Prepared &	z Analyzed:	08-Jun-21				
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120	0.00	20	
Alkalinity, Total	250	10.0	mg/L	250		100	80-120	0.00	20	
Batch 1061604 - General Prep - Wet Chem										
Blank (1061604-BLK1)				Prepared &	z Analyzed:	16-Jun-21				
Chloride	ND	4.00	mg/L							
LCS (1061604-BS1)				Prepared &	z Analyzed:	16-Jun-21				
Chloride	104	4.00	mg/L	100		104	80-120			
LCS Dup (1061604-BSD1)				Prepared &	z Analyzed:	16-Jun-21				
Chloride	100	4.00	mg/L	100		100	80-120	3.92	20	
Batch 1061801 - General Prep - Wet Chem										
Duplicate (1061801-DUP1)	Sou	rce: H211562-	01	Prepared &	z Analyzed:	18-Jun-21				
Specific Gravity @ 60° F	1.003	0.000	[blank]		1.010			0.701	20	

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Celey D. Keene, Lab Director/Quality Manager

Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240		Project Nu Project Mai	nager: [OXY NONE GIVEN Dusty Armstrong (505) 397-3713				Reported: 25-Jun-21 17:23		
	Ino	rganic Comj	pounds	- Quality	Control					
		Cardin	al Labo	oratories						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1061811 - General Prep - Wet Chem										
Blank (1061811-BLK1)				Prepared &	Analyzed:	18-Jun-21				
Sulfate	ND	10.0	mg/L							
LCS (1061811-BS1)				Prepared &	Analyzed:	18-Jun-21				
Sulfate	23.4	10.0	mg/L	20.0		117	80-120			
LCS Dup (1061811-BSD1)				Prepared &	Analyzed:	18-Jun-21				
Sulfate	23.3	10.0	mg/L	20.0		116	80-120	0.257	20	
Batch 1061813 - Filtration										
Blank (1061813-BLK1)				Prepared: 1	8-Jun-21 A	nalyzed: 23	-Jun-21			
rDS	ND	5.00	mg/L							
LCS (1061813-BS1)				Prepared: 1	8-Jun-21 A	nalyzed: 21	-Jun-21			
TDS	527		mg/L	500		105	80-120			
Duplicate (1061813-DUP1)	Sou	rce: H211552-(02	Prepared: 18-Jun-21 Analyzed: 23-Jun-21						
TDS /	571	5.00	mg/L	571		0.00	20			
Batch 1061814 - General Prep - Wet Chem										
LCS (1061814-BS1)				Prepared &	Analyzed:	18-Jun-21				
pH	7.10		pH Units	7.00		101	90-110			
Conductivity	501		uS/cm	500		100	80-120			
Duplicate (1061814-DUP1)	Sou	rce: H211572-(01	Prepared &	Analyzed:	18-Jun-21				
ъН	6.83		pH Units		6.80			0.440	20	
Conductivity	7450	1.00 ur	nhos/cm @ 25°C		7200			3.41	20	
Resistivity	1.34		Ohms/m		1.39			3.41	20	
Femperature °C	17.6		pH Units		17.7			0.567	200	

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Page 29 of 37

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240		Project Nu Project Ma	nager:	OXY NONE GIVEN Dusty Armstrong (505) 397-3713				Reported: 25-Jun-21 17:23		
	Ino	rganic Com	pounds	s - Quality	Control					
		Cardin	al Lab	oratories						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1062103 - General Prep - Wet Chem										
Blank (1062103-BLK1)				Prepared &	Analyzed:	21-Jun-21				
Sulfide, total	ND	0.0100	mg/L							
Duplicate (1062103-DUP1)	Sou	rce: H211572-	01	Prepared &	Analyzed:	21-Jun-21				
Sulfide, total	0.0329	0.0100	mg/L		0.0344			4.54	20	
Batch 1062105 - General Prep - Wet Chem										
Blank (1062105-BLK1)				Prepared &	Analyzed:	21-Jun-21				
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
LCS (1062105-BS1)				Prepared & Analyzed: 21-Jun-21						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	292	12.5	mg/L				80-120			
Alkalinity, Total	240	10.0	mg/L	250		96.0	80-120			
LCS Dup (1062105-BSD1)				Prepared & Analyzed: 21-Jun-21						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	330	12.5	mg/L				80-120	12.0	20	
Alkalinity, Total	270	10.0	mg/L	250		108	80-120	11.8	20	
Matrix Spike (1062105-MS1)	Sou	rce: H211573-	02	Prepared &	Analyzed:	21-Jun-21				
Alkalinity, Total	264	4.00	mg/L	100	184	80.0	70-130			

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Celey D. Keene, Lab Director/Quality Manager



Laboratory Services, Inc. 2609 W. Marland Hobbs NM, 88240	Project: OXY Project Number: NONE GIVEN Project Manager: Dusty Armstrong Fax To: (505) 397-3713	Reported: 25-Jun-21 17:23
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Total Recoverable Metals by ICP (E200.7) - Quality Control

Green Analytical Laboratories

			-							
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B211388 - Total Rec. 200.7/200.8/200.2										
Blank (B211388-BLK1)				Prepared: 2	24-Jun-21 A	nalyzed: 25	5-Jun-21			
Potassium	ND	1.00	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
Barium	ND	0.050	mg/L							
Iron	ND	0.050	mg/L							
LCS (B211388-BS1)				Prepared: 2	24-Jun-21 A	nalyzed: 25	5-Jun-21			
Potassium	8.22	1.00	mg/L	8.00		103	85-115			
Barium	2.00	0.050	mg/L	2.00		99.8	85-115			
Sodium	2.91	1.00	mg/L	3.24		89.9	85-115			
Magnesium	20.6	0.100	mg/L	20.0		103	85-115			
Calcium	4.00	0.100	mg/L	4.00		100	85-115			
Iron	4.00	0.050	mg/L	4.00		100	85-115			
LCS Dup (B211388-BSD1)				Prepared: 2	24-Jun-21 A	nalyzed: 25	5-Jun-21			
Magnesium	20.6	0.100	mg/L	20.0		103	85-115	0.00238	20	
Barium	1.97	0.050	mg/L	2.00		98.6	85-115	1.13	20	
Potassium	8.08	1.00	mg/L	8.00		101	85-115	1.71	20	
Iron	4.03	0.050	mg/L	4.00		101	85-115	0.696	20	
Sodium	2.89	1.00	mg/L	3.24		89.2	85-115	0.817	20	
Calcium	4.00	0.100	mg/L	4.00		100	85-115	0.0699	20	

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

PLEASE NOTI analyses. All cl service. In no affiliates or suc Relinqui Relinqui Sampler Delivere Project Sample Project Project Ha Lab

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9	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C	Bacteria (only) to Cool Intact	Standard Rush	Turnaround Time:	(Initials)	30 Sample Condition	Corrected Temp. °C	Bus - Other:	Sampler - UPS - Bus - Other
							-		
				REMARKS:	REM	Received By:	Date:	W: C	Relinquished By:
	*	Verbal Result:	. Please provi	Verbal Result:	All Re	Received By:	Late: 6-18-21 Time:	1 h	
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	REQUEST	ANALYSIS REC			BILL TO	ices	sy Scrut	ne: Laborade	Company Name:
		A.				240 476	(575) 393-2326 FAX (575) 393-2476	(575) 393-23	
						DAD	101 East Marland Hohns NM 88240	101 Fast Marl	

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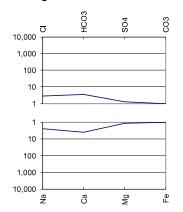
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Page 10 of 12

CARDINAL LABORATORIES SCALE INDEX WATER ANALYSIS REPORT

Company:LABORATORY SERVICESLease Name:OXYWell Number:WELL #1 1L-4920 X (H211573-01)Location:NOT GIVEN		Date Sampled : 06/18/21 Company Rep. : DUSTY ARMSTRONG
ANALYSIS		
1. pH	7.49	
2. Specific Gravity @ 60/60 F.	1.0030	
3. CaCO3 Saturation Index @ 80 F.	-0.200	
@ 140 F.	+0.500	'Calcium Carbonate Scale Possible'
Dissolved Gasses		
4. Hydrogen Sulfide	0.000	PPM
5. Carbon Dioxide	ND	PPM
6. Dissolved Oxygen	ND	PPM
Cations		/ Eq.Wt. = MEQ/L
7. Calcium (Ca++)	80.30	/ 20.1 = 4.00
8. Magnesium (Mg++)	14.20	/ 12.2 = 1.16
9. Sodium (Na+)	45	/ 23.0 = 2.52
10. Barium (Ba++)	0.064	/ 68.7 = 0.00
Anions		
11. Hydroxyl (OH-)	0	/ 17.0 = 0.00
12. Carbonate (CO3=)	0	/ 30.0 = 0.00
13. Bicarbonate (HCO3-)	220	/ 61.1 = 3.60
14. Sulfate (SO4=)	62	/ 48.8 = 1.26
15. Chloride (Cl-)	100	/ 35.5 = 2.82
Other		
16. Total Iron (Fe)	0.000	/ 18.2 = 0.00
17. Total Dissolved Solids	453	
18. Total Hardness As CaCO3	259.0	
19. Calcium Sulfate Solubility @ 90 F.	1,426	
20. Resistivity (Measured)	13.000	Ohm/Meters @ 77 Degrees (F)

Logarithmic Water Pattern



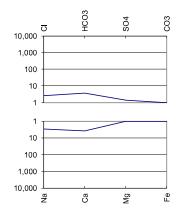
PROBA	PROBABLE MINERAL COMPOSITION										
COMPOUND	Eq. Wt.	Х	MEQ/L	=	mg/L						
Ca(HCO3)2	81.04	Х	3.60	=	292						
CaSO4	68.07	Х	0.39	=	27						
CaCl2	55.50	Х	0.00	=	0						
Mg(HCO3)2	73.17	Х	0.00	=	0						
MgSO4	60.19	Х	0.00	=	0						
MgCl2	47.62	Х	1.16	=	55						
NaHCO3	84.00	Х	0.00	=	0						
NaSO4	71.03	Х	0.87	=	62						
NaCl	58.46	Х	1.65	=	97						

ND = Not Determined

CARDINAL LABORATORIES SCALE INDEX WATER ANALYSIS REPORT

Company : LABORATORY SERVICES			e Sampled			
Lease Name : OXY		Con	npany Rep	. : D	USTY AR	MSTRONG
Well Number : WELL #2 L-4920 X (H211573-02)						
Location : NOT GIVEN						
1. pH	7.49					
2. Specific Gravity @ 60/60 F.	1.0010					
3. CaCO3 Saturation Index @ 80 F.	-0.226					- ····
@ 140 F.	+0.474	'(Calcium Ca	arbc	onate Scale	e Possible'
Dissolved Gasses		_				
4. Hydrogen Sulfide	0.000	-	PM			
5. Carbon Dioxide	ND		PM			
6. Dissolved Oxygen	ND	F	PM			
Cations		/	Eq. Wt.	=	MEQ/L	
7. Calcium (Ca++)	74.40	/	20.1	=	3.70	
8. Magnesium (Mg++)	11.70	/	12.2	=	0.96	
9. Sodium (Na+)	68	/	23.0	=	2.97	
10. Barium (Ba++)	0.067	/	68.7	=	0.00	
Anions						
11. Hydroxyl (OH-)	0	/	17.0	=	0.00	-
12. Carbonate (CO3=)	0	/	30.0	=	0.00	
13. Bicarbonate (HCO3-)	224	/	61.1	=	3.67	
14. Sulfate (SO4=)	67	/	48.8	=	1.37	
15. Chloride (Cl-)	92	1	35.5	=	2.59	
Other						
16. Total Iron (Fe)	0.000	/	18.2	=	0.00	-
17. Total Dissolved Solids	461					
18. Total Hardness As CaCO3	234.0					
19. Calcium Sulfate Solubility @ 90 F.	1,439					
20. Resistivity (Measured)	12,900	C	Dhm/Meter	s	@ 77	Degrees (F)
······································					9	J (,)

Logarithmic Water Pattern



PROBABLE MINERAL COMPOSITION									
COMPOUND	Eq. Wt.	Х	MEQ/L	=	mg/L				
Ca(HCO3)2	81.04	Х	3.67	=	297				
CaSO4	68.07	Х	0.04	=	2				
CaCl2	55.50	Х	0.00	=	0				
Mg(HCO3)2	73.17	Х	0.00	=	0				
MgSO4	60.19	Х	0.00	=	0				
MgCl2	47.62	Х	0.96	=	46				
NaHCO3	84.00	Х	0.00	=	0				
NaSO4	71.03	Х	1.34	=	95				
NaCl	58.46	Х	1.63	=	95				

ND = Not Determined

Released to In	naging:	2/14/2024	9:23:42 AM
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MITCHELL ANALYTICAL LABORATORY

2638 Faudree Odessa, Texas 79765-8538 561-5579

Company:	Nalco Co	ompany					
Well Number: Lease: Location: Date Run: Lab Ref #:	Going Lane OXY 10/31/2013 13-nov-n72	3			Sample Temp: Date Sampled: Sampled by: Employee #: Analyzed by:	70 10/24/20 Bobby H 27-022 GR	
		Ι	Dissolved C	Gases	/.		
Hydrogen Suli	fide (H2	S)			Mg/L .00	Eq. Wt. 16.00	MEq/L .00
Carbon Dioxid Dissolved Oxy	le (CC)2)	NOT ANA				
			Cations				
Calcium Magnesium Sodium	•	++) g++)			57.89 21.03 116.11	20.10 12.20 23.00	2.88 1.72 5.05
Barium	•			YZED			
Manganese Strontium	(Mr			V755	.00	27.50	.00
Strontium	(Sr	++) I	NOT ANAL	YZED			
l la colore a col	(0)		Anions			17.00	0.0
Hydroxyl Carbonate	(OF (CC	1-))3=)			.00 .00	17.00 30.00	.00 .00
BiCarbonate	-	CO3-)			342.16	61.10	5.60
Sulfate	•)4=)			56.00	48.80	1.15
Chloride	(Cl-	·)			103.11	35.50	2.90
Total Iron Total Dissolve Total Hardnes Conductivity N	s as CaCO3	-			0 696.30 230.95 976	18.60	.00
рН	7.600			Specifi	c Gravity 60/60) F.	1.000
CaSO4 Solubili	ity @ 80 F.	19.1	5MEq/L,	CaSO4 s	scale is unlikely	,	
CaCO3 Scale Inc	dex						
70.0	280	100.0	.070	130.	0.58	0	
80.0	150	110.0	.310	140.	0.58	0	
90.0	.070	120.0	.310	150.	0.81	0	

Nalco Company

Goins Lane Office

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

Operator:	OGRID:	
OCCIDENTAL PERMIAN LTD	157984	
P.O. Box 4294	Action Number:	
Houston, TX 772104294	314244	
	Action Type:	
	[IM-SD] Admin Order Support Doc (ENG) (IM-AAO)	

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	2/14/2024

Action 314244

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