

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**APPLICATION OF CML EXPLORATION,
LLC FOR APPROVAL OF A WATERFLOOD
PROJECT, LEA COUNTY, NEW MEXICO**

Case No. _____

APPLICATION

Pursuant to 19.15.26.8.F NMAC, CML Exploration, LLC (“CML”) requests an order authorizing CML to implement a waterflood project within the Cisco formation to inject produced water through its Beams 15 State #3 well (API No. 30-025-41407), which will be the initial injection well in the waterflood project. In support of its application, CML states the following.

1. CML seeks authorization to implement the Maljamar Cisco Waterflood Project by the injection of produced water into the Sanmal Penn Pool within the Cisco formation. CML’s Application for Authorization to Inject (Division Form C-108) through the Beams 15 State #3 well is attached as Exhibit A.

2. The proposed Maljamar Cisco Waterflood Project area will be comprised of 640 acres, more or less, of the following State lands:

Township 17 South, Range 33 East, Lea County

Section 9: NE/4 SW/4, N/2 SE/4, and SE/4 SE/4

Section 10: SW/4 and S/2 SE/4

Section 11: SW/4 SW/4

Section 15: N/2 NW/4, SE/4 NW/4, and W/2 NE/4

3. CML is the designated operator of the waterflood project. 100% of the working interests in the waterflood acreage are committed to the project.

4. The Beams 15 State No. 3 well is located 352' FNL and 2094' FEL in Unit B in Section 15, Township 17 South, Range 33 East in Lea County. The proposed injection interval is located in the Cisco formation at a depth of 11,029 to 11,127 feet, and the proposed maximum injection rate is 1,000 barrels per day at a maximum injection pressure of 3,000 psig.

5. CML requests that, pursuant to 19.15.26.8.F (5), NMAC, the Division permit CML to obtain administrative approval of additional injection wells within the project area without the necessity of additional hearings.

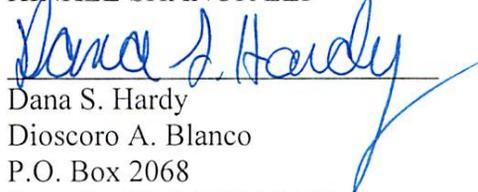
6. The creation and operation of the Maljamar Cisco Waterflood Project will serve the interests of conservation, the protection of correlative rights, and the prevention of waste.

WHEREFORE, CML requests that this Application be set for hearing on February 6, 2020 and that, after notice and hearing, the Division enter an order:

1. Approving the Maljamar Cisco Waterflood Project;
2. Designating CML as the operator of the waterflood project; and
3. Allowing future applications for additional injection wells to be approved administratively.

Respectfully submitted,

HINKLE SHANOR LLP



Dana S. Hardy

Dioscoro A. Blanco

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Santa Fe, NM 87504-2068

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Counsel for CML Exploration, LLC

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 Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: CML Exploration, LLC

ADDRESS: P.O. Box 890, Snyder, Texas 79550

CONTACT PARTY: Nolan von Roeder PHONE: 325-574-6295

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 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. 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).

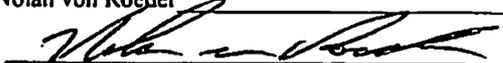
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: Nolan von Roeder TITLE: Engineer

SIGNATURE:  DATE: 5/1/19

E-MAIL ADDRESS: vonroedern@cmlexp.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: 10 2014 upon Initial Completion

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.

111.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: CML EXPLORATION, LLC

WELL NAME & NUMBER: BEAMS 15 STATE NO. 3

WELL LOCATION: 352' FNL & 2094' FEL B 15 17S 33E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC - Attached

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17½" Casing Size: 13 3/8"

Cemented with: 1250 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Observed

Intermediate Casing

Hole Size: 12¼" Casing Size: 9 5/8"

Cemented with: 1500 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Observed

Production Casing

Hole Size: 7 7/8" Casing Size: 5½"

Cemented with: 1910 sx. *or* _____ ft³

Top of Cement: 3170' Method Determined: CBL

Total Depth: 13,130'

Injection Interval

11,029' feet to 11,127' Perforated

(Perforated or Open Hole; indicate which)

Side 2 III.

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: Fiberglass

Type of Packer: Arrowset 1X 10K w/ stainless steel mandrel

Packer Setting Depth: 10,950'

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

Additional Data

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

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

2. Name of the Injection Formation: Cisco lime

3. Name of Field or Pool (if applicable): Maljamar; Cisco

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. None

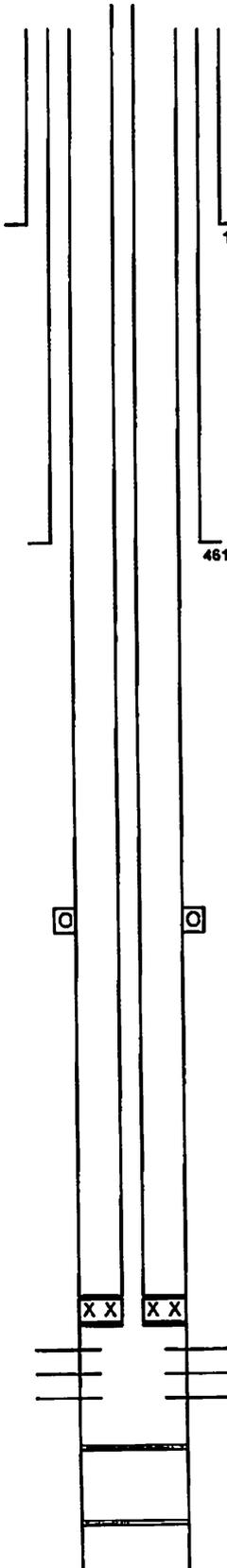
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Morrow (gas) + 13,600', Wolfcamp (oil) (10, 100' - 10,900')

Abo (oil) 8800', Yeso (oil) 6100', Grayburg/San Andres (oil) 4100'

111.

CML EXPLORATION, LLC

Updated: 03/14/19



RKB 4176' Lease & Well No.: Beams 15 State # 3
 GL 4158'
 Well Category:
 Area: New Mexico
 Subarea: Buckeye
 Legal Description: API #30-025-41407
 B, 352' FNL, 2094' FEL, Sec 15, T-17-S, R-33-E
 Lea County, NM

Spudded: 10/7/2013
 TD: 11/04/13
 Completed: 11/26/2013
 Stimulation: 11/26/13 Cisco- 5200 gals 15% NEFE HCL
 + 200 ball sealers
 5/5/16 - 2500 gals 15% HCL + 100 BS
 Propose: 6000 gals of 15% HCL acid

1557'
 17 1/2" hole
 13 3/8" 54.5# J55
 set @ 1557'
 1250 sx cement

4615'
 12 1/2" hole
 9 5/8" 40# J-55 & L-80
 set @ 4615'
 1500 sx cement.
 TOC = SURF

PRESSURE DATA
 12/2/13 80 HR BHP= 1194 psi

5 1/2" TOC = 3170' CBL

DV tool @ 7519'
 Cmt'd 2nd Stage w/ 750 sks

Proposed Injection Tbg
 ± 344- jts 2 7/8" 6.5# N80 tubing w/ fiberglass liner
 1- On-Off tool receiver Stainless Steel
 1- 1.87" F profile nipple SS
 1 - 5 1/2" Arrowsat IX 10K SS injection PKR
 End of PKR @ ± 10,950'

Cisco Perfs
 (11,029-44') 4 spf, 90"
 (11,046-60') 4spf, 90"
 (11,062-72') 4spf, 90"
 (11,076-85') 4spf, 90"
 (11,089- 11,101') 4spf, 90"
 (11,122-27') 4spf, 90"

CIBP @ 11,260' + 35' cement ** Proposed

CIBP @ 11,960' + 35' cement ** Proposed

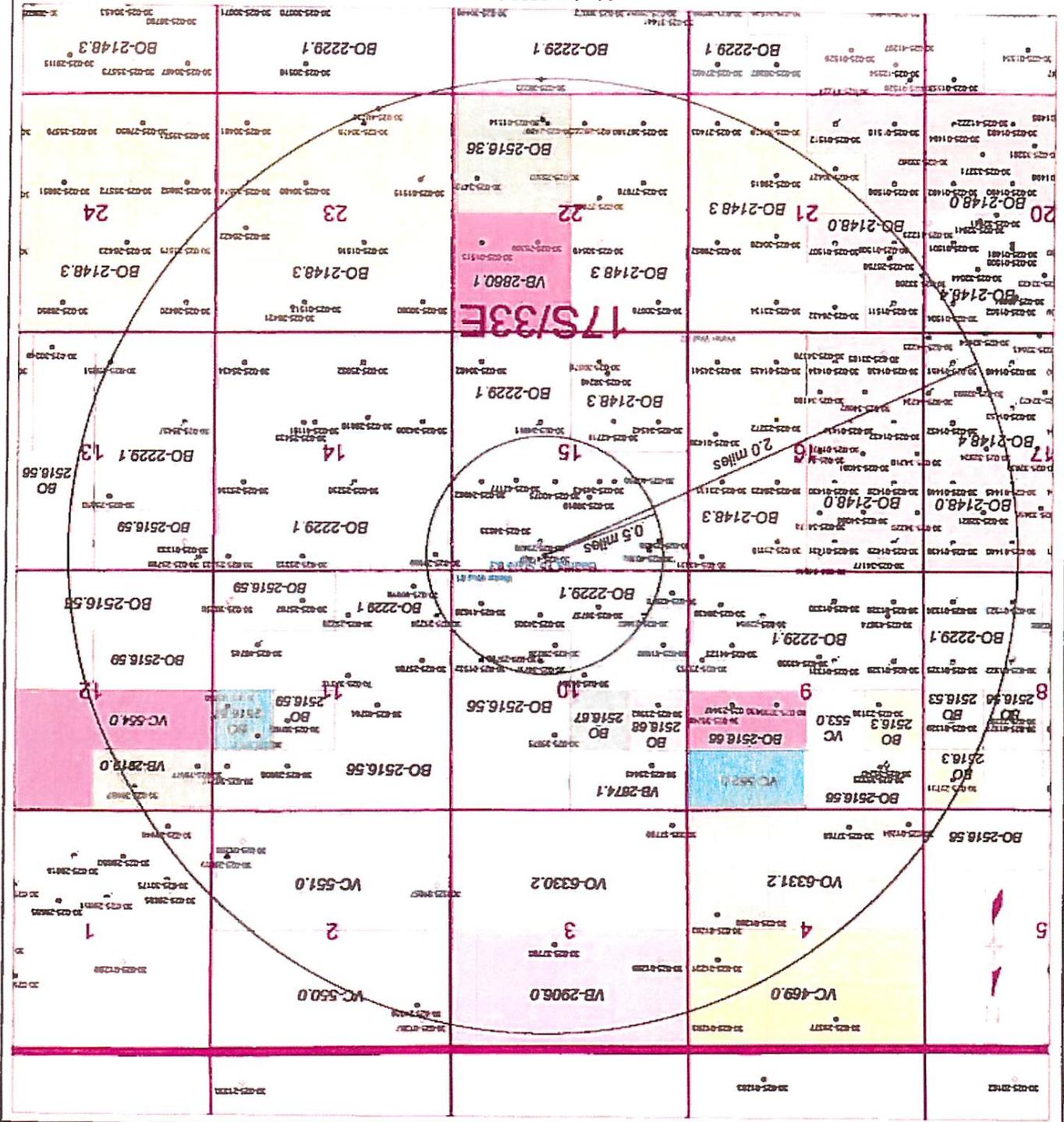
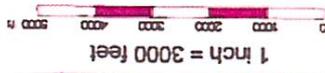
5 1/2" 17# N80& P110 @ 13,110'
 Cmt'd 1st Stage w/ 1160 sks

PBTD: 12,950'
 TD: 13,130'

Beams 15 State #3 Injection Application
 Lea County, New Mexico
 Wells and Leases Within 2 miles of Proposed
 Injection Well with 1/2 mile Area of Review
 as of 3-14-2019



- Oil, Active
- Oil, Plugged
- Oil-Gas, Abandoned
- Dry & Abandoned
- Oil Converted to Injection
- Oil Converted to Injection, Plugged
- Salt Water Disposal, Plugged
- Abandoned Location
- NMSLO Oil and Gas Leases
- Highlighted with Lease Number Noted



V

VI. Well Records

Wells within 1/2 mile Area of Review penetrating proposed injection interval

BEAMS 15 STATE # 1

CML EXPLORATION, LLC

API 30-025-39919

Location F, 1650' FNL 2180' FWL, S:15, T:17S, R:33E

Well Type: Oil Well (Active)

TD: 13,100'

TD on: 11/29/2010

Completion Depth: 11,045' - 11,138'

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 54.5# J55	1522'	1450 sx	Surface
Intermediate Casing	8 5/8" 32# J-55	4611'	1800 sx	Surface
Production Casing	5 1/2" 17# N80& P110	13,074'	1350 sx	4250' (CBL)

BEAMS 15 STATE # 2

CML EXPLORATION, LLC

API 30-025-40392

Location D, 450' FNL, 885' FWL, S:15, T17S, R33E

Well Type: Oil Well (Active)

TD: 11,600'

TD on: 2/21/2012

Completion Depth: 11,057' - 11,143'

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 54.5# J55	1565'	1250 sx	Surface
Intermediate Casing	8 5/8" 32# J-55	4514'	1950 sx	1285' (TS)
Production Casing	5 1/2" 17# N80& P110	11,567'	1150 sx	4500' EST

BEAMS 15 STATE # 4

CML EXPLORATION, LLC

API 30-025-42177

Location G, 2105' FNL, 1450' FEL, S:15, T17S, R33E

Well Type: Oil Well (Active)

TD: 13,075'

TD on: 1/8/2015

Completion Depth: 10,194' - 11,396'

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 54.5# J55	1557'	1150 sx	Surface
Intermediate Casing	8 5/8" 32# J-55	4598'	1800 sx	Surface
Production Casing	5 1/2" 17# P110	13,075'	1198 sx	4190' (CBL)

VI. Well Records

Wells within 1/2 mile Area of Review penetrating proposed injection interval

page 2

ABENAKI 10 STATE # 1

CML EXPLORATION, LLC

API 30-025-39737

Location N, 800' FSL, 1980' FWL, S:10, T17S, R33E

Well Type: Oil Well (Active)

TD: 11,610

TD on: 6/25/2010

Completion Depth: 11,038 - 11,136'

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 54.5# J55	1508'	1825 sx	Surface
Intermediate Casing	8 5/8" 32# J-55	4610'	1950 sx	Surface
Production Casing	5 1/2" 17# N80& P110	11,606'	1475 sx	3950' (CBL)

ABENAKI 10 STATE # 2

CML EXPLORATION, LLC

API 30-025-41626

Location P, 730' FSL, 680' FEL, S:10, T17S, R33E

Well Type: Oil Well (Active)

TD: 13,020

TD on: 3/29/2014

Completion Depth: 11,030 - 11,050'

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 54.5# J55	1553'	1250 sx	Surface
Intermediate Casing	8 5/8" 32# J-55 & L80	4630'	1770 sx	Surface
Production Casing	5 1/2" 17# P110	13,020'	1110 sx	4350' (CBL)

ARROWHEAD STATE 15 # 1

PATTERSON PETROLEUM, LP

API 30-025-34633

Location A, 1087' FNL, 1235' FEL, S:15, T17S, R33E

Well Type: Dryhole

TD: 13,826

TD on: 7/12/1999

Completion Depth: -----

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 48# H40	405'	400 sx	Surface
Intermediate Casing	8 5/8" 32# J-55 & HCK55	4799'	1900 sx	Surface
Production Casing	None	-----	-----	-----

VI. Well Records

Wells within 1/2 mile Area of Review penetrating proposed injection interval

page 3

STINGRAY STATE 10 # 1

COG OPERATING, LLC

API 30-025-34757

Location J, 2000' FSL, 2000' FEL, S:10, T17S, R33E

Well Type: Plugged & Abandoned oil well

TD: 11,748

TD on: 1/13/2000

Completion Depth: 10,505 - 11,089'

	Csg Size	Depth Set	Cmt Record	TOC
Surface Casing	13 3/8" 48# H40	445'	525 sx	Surface
Intermediate Casing	9 5/8" 36/40# J-55	4596'	1950 sx	Surface
Production Casing	5 1/2" 17/20# L-80	11240'	430 sx	9790'

VI.

**AFTER PLUGGING
WELLBORE DIAGRAM**

P&A DATE: 7/16/1999

RKB 3970'
GL 3990'

Operator : Patterson Petroleum, LP
Lease & Well No : Arrowhead State 15 # 1

Well Category:
Area: New Mexico
Subarea: Morrow
Legal Description: API #30-025-34633
A, 1087' FNL, 1235' FEL, Sec 15, T-17-S, R-33-E
Lea County, New Mexico

Spudded: 06/01/1999
TD: 07/12/1999
Completed

Stimulation: None

405'

17 1/2" hole
13 3/8" 48# H40
set @ 405'
400 sx cement
TOC = surface

4799'

11" hole
8 5/8" 32# J-55 & HCK-55
set @ 4799'
1900sx cement., TOC = surface'

10 sx "C" cement @ surface

30 sx "C" cement 450' - 350'

30 sx "C" cement 1,670' - 1,570'

50 sx "C" cement 4,850' - 4,655'

30 sx "C" cement 6,110' - 6,010'

30 sx "H" cement 8,110' - 8,010'

30 sx "H" cement 9,520' - 9,420'

30 sx "H" cement 12,410' - 12,310'

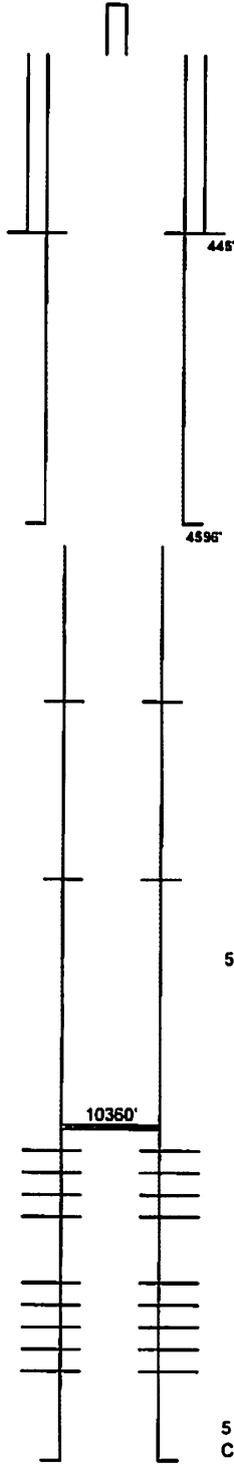
30 sx "H" cement @ 13,820' - 13 720'

P8TD:
TD: 13,826' 7 7/8" Hole

VI.

**AFTER PLUGGING
WELLBORE DIAGRAM**

P&A DATE 5/21/2018



RKB 4164'
GL 4152'

17 1/2" hole
13 3/8" 48# H40
set @ 445'
525 sx cement

12 1/2" hole
9 5/8" 36 & 40#
set @ 4596'
1950 sx cement
TOC = SURF

5 1/2" TOC = 9790

PERFS

(10,505-24') 2 spf
(10,525-31') 2 spf
(10,549-68') 2 spf
(10,599-602') 2 spf
(10,627-31') 2 spf
(10,661-75') 2 spf
(10,732-38') 2 spf
(10,750-65') 2 spf
(10,785-90') 2 spf

(10,918-35') 2 spf
(10,976-91') 2 spf
(11,021-34') 2 spf
(11,050-53') 2 spf
(11,059-70') 2 spf
(11,075-89') 2 spf

5 1/2" 17 & 20# L80 @ 11,240
Cmt'd w/ 430 sks

PBT.D. 11,153'
TD 11,750'

Operator : COG Operating LLC
Lease & Well No Stingray 10 State # 1

Well Category:
Area New Mexico
Subarea Malljamar
Legal Description API #30-025-34757
J, 2000' FSL, 2000' FEL, Sec 10, T-17-S, R-33-E
Lea County, NM

Spudded 12/16/1999
TD 1/13/2000
Completed 1/31/2000

Stimulation 1/20/00 Cisco- 6000 gals 15% HCL
1/28/00 Wifcp - 7000 gals 15% HCL

Perf @ 495', Spot 180 sx Surf - 545'

Spot 55 sx 1583 - 1750'

Spot 55 sx 2033 - 2200'

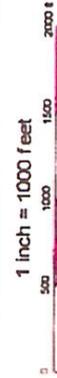
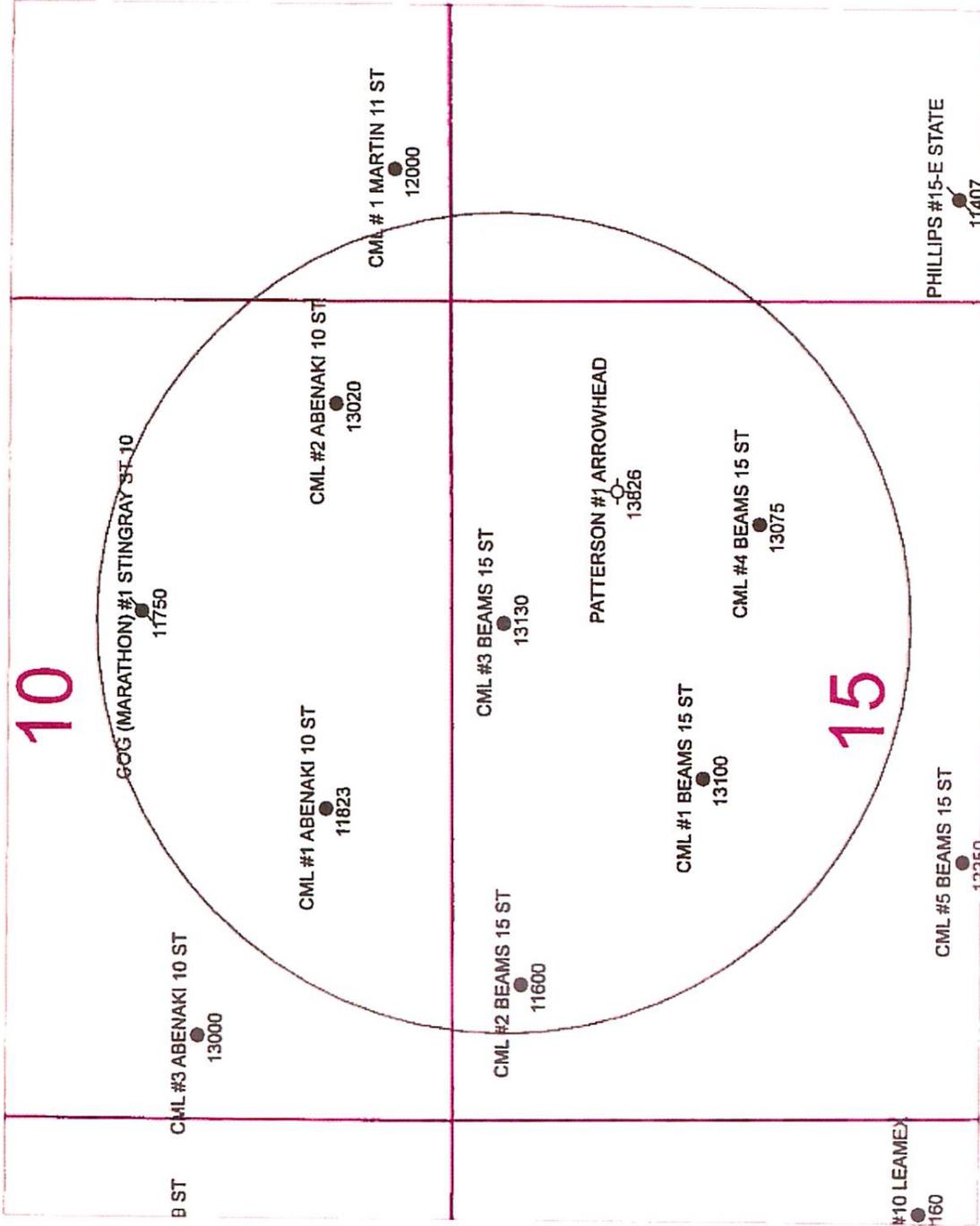
Spot 80 sx 4433 - 4733'

Perf 6070', spot 100 sx 5300- 6120'

Perf 7815' & Sqz 50 sx cement from 7815 - 7960'

25 sk cement plug (10,120 - 10,360')
CIBP @ 10,360'

VI.



- Oil, Active
- ◌ Oil, Plugged
- ⊗ Dry & Abandoned

Beams 15 State #3 Injection Application
 Lea County, New Mexico
 Area of Review as of 3-14-2019
 0.5 Mile Radius Map

VII. Proposed Injection Operational Parameters

Beams 15 State # 3

Injection Rate

Average: 600 BBL/Day

Maximum: 1000 BBL/Day

Injection Pressure

Average: 1200 psig

Maximum: 3000 psig

Closed or Open Loop?

CLOSED

Water Sources

Formations: Yeso (Paddock) & Abo

The following three pages are chemical analysis' done on two of the wells to be contributing water for injection and a chemical analysis of a 50/50 mixture of the two wells to check for compatibility issues and to simulate the composition of the water expected to be injected into the Beams 15 State # 3.

VII.



Martin Water Laboratories, Inc.

Analysts & Consultants since 1953
Bacterial & Chemical Analysis

TO: <u>Jordan Owens</u>	LABORATORY NO. <u>16-10-207 Page 3</u>
ADDRESS: <u>P.O. Box 890 Snyder, TX 79550</u>	SAMPLE RECEIVED: <u>10/20/16</u>
COMPANY: <u>CML Exploration, LCC</u>	RESULTS REPORTED: <u>10/26/16</u>
LEASE:	COUNTY, STATE:
FORMATION:	FIELD OR POOL:

DESCRIPTION OF SAMPLES	
No. 1	Submitted water sample - taken 10/20/16 from AB Pad 10 State #1
Chemical and Physical Properties (milligrams per liter)	
	No. 1
Specific Gravity @ 60°F.	1.1645
pH When Sampled	
pH When Received	6.1
Bicarbonate as HCO ₃	102
Total Hardness, as CaCO ₃	87 000
Calcium, as Ca	26 800
Magnesium, as Mg	4 860
Sodium and/or Potassium	69,890
Sulfate, as SO ₄	505
Chloride, as Cl	169 025
Iron, as Fe	7.9
Barium, as Ba	0
Total Dissolved Solids, Calculated	271 183
Carbon Dioxide, Calculated	133
Hydrogen Sulfide	0.0
Resistivity, ohms/m @ 77°F.	0.049
Corrosiveness	Severe
Barium Sulfate Scaling Tendency	None
Calcium Carbonate S.I. @ 77° F. (Stiff-Davis)*	1.90
Calcium Carbonate S.I. @ 122° F. (Stiff-Davis)*	3.01
Calcium Sulfate Scaling Tendency	None
* Calcium Carbonate S.I. - A positive fig. signifies a scaling potential proportionate to the magnitude of the number, and a negative fig. signifies no scaling potential.	
REMARKS: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.	

By: Greg Ogden, B.S.

VII.



Martin Water Laboratories, Inc.

Analysts & Consultants since 1953
Bacterial & Chemical Analysis

TO:	Jordan Owens	LABORATORY NO.	16-10-207 Page 4
ADDRESS:	P.O. Box 890 Snyder, TX 79550	SAMPLE RECEIVED:	10/20/16
COMPANY:	CML Exploration, LCC	RESULTS REPORTED:	10/26/16
LEASE:		COUNTY, STATE:	
FORMATION:		FIELD OR POOL	

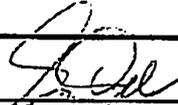
DESCRIPTION OF SAMPLES

No. 1	Submitted water sample - taken 10/20/16 from	Cameron 22 State #1
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Chemical and Physical Properties (milligrams per liter)	No. 1
Specific Gravity @ 60°F.	1.1285
pH When Sampled	
pH When Received	6.6
Bicarbonate as HCO ₃	107
Total Hardness, as CaCO ₃	31 500
Calcium, as Ca	8 600
Magnesium, as Mg	2 430
Sodium and/or Potassium	74 510
Sulfate, as SO ₄	1 084
Chloride, as Cl	136,356
Iron, as Fe	27
Barium, as Ba	0
Total Dissolved Solids, Calculated	223 089
Carbon Dioxide, Calculated	44
Hydrogen Sulfide	0.0
Resistivity, ohms/m @ 77°F.	0.053
Corrosiveness	Moderate
Barium Sulfate Scaling Tendency	None
Calcium Carbonate S.I. @ 77° F. (Stiff-Davis)*	0.66
Calcium Carbonate S.I. @ 122° F. (Stiff-Davis)*	1.48
Calcium Sulfate Scaling Tendency	None

* Calcium Carbonate S.I. - A positive fig. signifies a scaling potential proportionate to the magnitude of the number, and a negative fig. signifies no scaling potential.

REMARKS: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.


 By: Greg Ogden, B.S.

VII.



Martin Water Laboratories, Inc.

Analysts & Consultants since 1953
Bacterial & Chemical Analysis

TO: <u>Jordan Owens</u>	LABORATORY NO. 16-10-207 Page 5
ADDRESS: <u>P.O. Box 890 Snyder, TX 79550</u>	SAMPLE RECEIVED: 10/20/16
COMPANY: <u>CML Exploration, LCC</u>	RESULTS REPORTED: 10/26/16
LEASE:	COUNTY, STATE:
FORMATION:	FIELD OR POOL

DESCRIPTION OF SAMPLES	
No. 1	Submitted water sample - taken 10/20/16 from 50/50 mixture of AB Pad 10 State #1 and Cameron 22 Sta
Chemical and Physical Properties (milligrams per liter)	No. 1
Specific Gravity @ 60°F.	1.1480
pH When Sampled	
pH When Received	6.2
Bicarbonate as HCO ₃	122
Total Hardness, as CaCO ₃	67 000
Calcium, as Ca	21 600
Magnesium, as Mg	3 159
Sodium and/or Potassium Sulfate, as SO ₄	62 644
Chloride, as Cl	775
Iron, as Fe	143 458
Barium, as Ba	7.4
	0
Total Dissolved Solids, Calculated	231,759
Carbon Dioxide, Calculated	134
Hydrogen Sulfide	0.0
Resistivity, ohms/m @ 77°F.	0.052
Corrosiveness	Severe
Barium Sulfate Scaling Tendency	None
Calcium Carbonate S.I. @ 77° F. (Stiff-Davis)*	1.03
Calcium Carbonate S.I. @ 122° F. (Stiff-Davis)*	2.03
Calcium Sulfate Scaling Tendency	None
<small>* Calcium Carbonate S.I. - A positive fig. signifies a scaling potential proportionate to the magnitude of the number, and a negative fig. signifies no scaling potential.</small>	
REMARKS: These results show that a combination of these two produced waters does not reveal any significant incompatibilities that would increase scale or precipitation beyond what already may exit in each water individually.	

By: Greg Ogden, B.S.

(432) 683-4521 * 709 W. Indiana, Midland, Texas 79701 * (fax) 682-8819

Remit to Address: P.O. Box 98, Midland, Texas 79702

VIII.

**Beams 15 State #3
Lea County, New Mexico
Geologic Data**

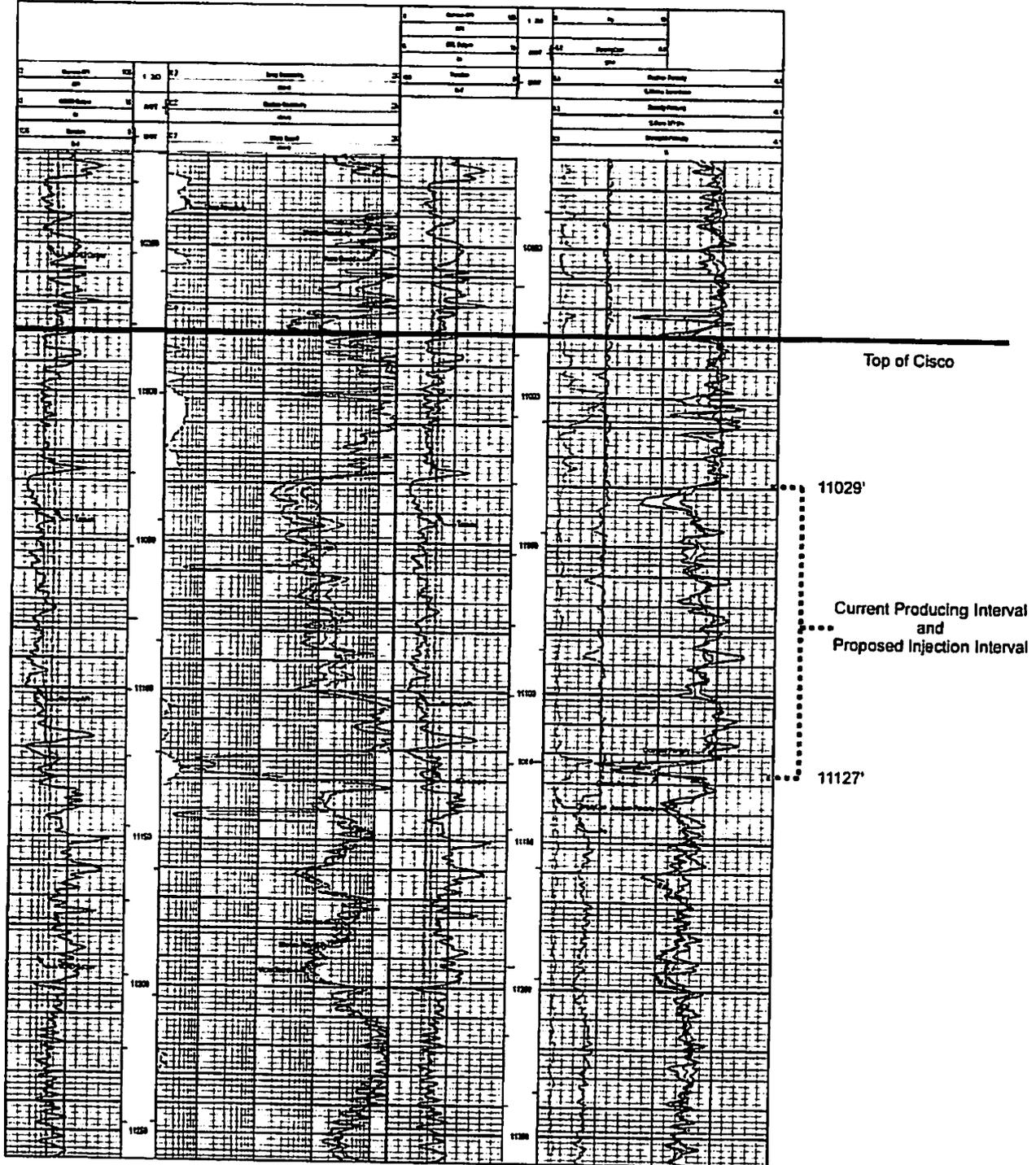
The Beams 15 State #3 is currently producing from the Upper Pennsylvanian Cisco Formation at a depth of 11,029 feet as shown on the Halliburton Dual Laterolog and Dual Spaced Neutron Spectral Density logs dated 11/03/2013. The predominately limestone interval has a gross thickness of approximately 98 feet and has been described by side wall core data as gray to tan limestone, slightly silty with scattered small vugs. Porosity obtained from the side wall core data ranges between 4.4% and 11.6% with permeabilities between 0.047 mD and 5.253 mD. The Beams 15 State #3 has produced 29,534 BO and 142,798 MCF through January 2019 with an average daily rate of 6 BOPD and 16 MCFPD. The injection interval proposed will be the same as the currently producing interval.

Underground sources of drinking water near the Beams 15 State #3 were reviewed utilizing the USGS National Water Information System website. Groundwater sites within two miles of the Beams 15 State #3 were shown to be completed in the Ogallala Formation at depths of less than 300 feet. Water analysis for two of these wells is included in this packet.

VIII.

30025414070000

CML
BEAMS 15 ST 3
352FNL/2094FEL
TWP: 17 S - Range: 33 E - Sec. 15
KB: 4176.00



TD=13130.00

BEAMS 15 STATE # 3

IX. Proposed Stimulation Program – Operator proposes to treat the injection perforations with 6,000 gals of 15% HCL acid to clean out any existing scale or other debris. Then perform a step-rate injection test.

X. Logging and test data are already on file with the NMOCD.

XI.



Martin Water Laboratories, Inc.

Analysts & Consultants since 1953
Bacterial & Chemical Analysis

TO:	Jordan Owens	LABORATORY NO.	16-10-207 Page 1
ADDRESS:	P.O. Box 890 Snyder, TX 79550	SAMPLE RECEIVED:	10/20/16
COMPANY:	CML Exploration, LCC	RESULTS REPORTED:	10/26/16
LEASE:		COUNTY, STATE:	
FORMATION:		FIELD OR POOL:	

DESCRIPTION OF SAMPLES	
No. 1	Submitted water sample - taken 10/20/16 from Fresh Water Well #1 Location- Lat: 32.842815 deg, Long: -103.648312 deg NAD83
Chemical and Physical Properties (milligrams per liter)	No. 1
Specific Gravity @ 60°F.	1.0028
pH When Received	7.60
Bicarbonate as HCO ₃	185
Total Hardness, as CaCO ₃	160
Calcium, as Ca	50
Magnesium, as Mg	9
Sodium and/or Potassium	29
Sulfate, as SO ₄	25
Chloride, as Cl	33
Iron, as Fe	0.15
Barium, as Ba	0
Total Dissolved Solids, Calculated	331
Hydrogen Sulfide	0.00
Resistivity, ohms/m @ 77°F.	26.150
REMARKS: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.	

By: Greg Ogden, B.S.

XI.

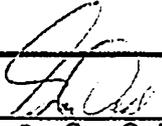


Martin Water Laboratories, Inc.

Analysts & Consultants since 1953
Bacterial & Chemical Analysis

TO: <u>Jordan Owens</u>	LABORATORY NO. <u>16-10-207 Page 2</u>
ADDRESS: <u>P.O. Box 890 Snyder, TX 79550</u>	SAMPLE RECEIVED: <u>10/20/16</u>
COMPANY: <u>CML Exploration, LCC</u>	RESULTS REPORTED: <u>10/26/16</u>
LEASE:	COUNTY, STATE:
FORMATION:	FIELD OR POOL:

DESCRIPTION OF SAMPLES	
No. 1	Submitted water sample - taken 10/20/16 from Fresh Water Well #2 Location- Lat: 32.827940 deg, Long: -103.663124 deg NAD83
Chemical and Physical Properties (milligrams per liter)	No. 1
Specific Gravity @ 60°F.	1.0028
pH When Received	7.60
Bicarbonate as HCO ₃	185
Total Hardness, as CaCO ₃	192
Calcium, as Ca	54
Magnesium, as Mg	14
Sodium and/or Potassium	78
Sulfate, as SO ₄	146
Chloride, as Cl	41
Iron, as Fe	0.15
Barium, as Ba	0
Total Dissolved Solids, Calculated	518
Hydro en Sulfide	0.00
Resistivity, ohms/m @ 77°F.	15.660
REMARKS: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.	


 By: Greg Ogden, B.S.

XIII.

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

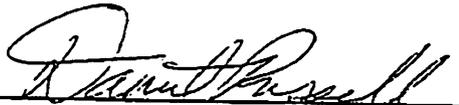
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
March 22, 2019
and ending with the issue dated
March 22, 2019.

**LEGAL NOTICE
MARCH 22, 2019**

CML Exploration, LLC, P.O. Box 890, Snyder, TX 79550
Contact: Nolan von Roeder (325) 573-0750 is seeking administrative approval from the New Mexico Oil Conservation Division to convert the Beams 15 State NO. 3 (API # 30-025-41407) 352' FN Land 2094' FEL, Sec. 15, Township 17S, Range 33E, Lea County, NM from oil production to injection for secondary recovery in the Maljamar, Cisco Pool (43270).

The proposed injection interval will be from 11,029' - 11,127' which includes the Cisco formation. The maximum injection rate will be 1000 barrels of produced water per day. Maximum injection pressure will be 3000 psi at the surface. Interested parties must file objections, or a request for hearing with the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87504 within 15 days of this notice #33935

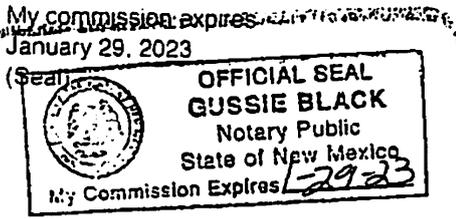


Publisher

Sworn and subscribed to before me this
22nd day of March 2019.



Business Manager



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

02108842

00226217

JANIS KEY
CML EXPLORATION
P.O. BOX 890
SNYDER, TX 79550

*Mailed
3/22/19
JB*

XIII. Proof of Notice - Interested Parties

I, Kyle Kawa, do hereby certify that a complete copy of the "Application for Authorization to Inject" for CML Exploration LLC's – Beams 15 State No. 3 well was sent to the parties listed below via US Certified Mail on the 1st day of October, 2019.

Signed: [Signature]

Representing: CML Exploration, LLC

Land Owner

State of New Mexico
Commissioner of Public Lands
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

Land Tennant

Angell 2 Family Limited Partnership
P.O. Box 190
Lovington, New Mexico 88260

Offset Operator

ConocoPhillips Company
600 N. Dairy Ashford
Houston, Texas 77079
Attn: Stewart O'Neal



P.O. Box 890
Snyder, Texas 79550-0890

Ofc (325) 573-0750 ■ Fax (325) 573-0749

May 1, 2019

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

State of New Mexico
Commissioner of Public Lands
P.O. Box 1148
Santa Fe, NM 87504-1148

APPLICATION FOR AUTHORIZATION TO INJECT FOR THE BEAMS 15 STATE NO. 3

CML Exploration, LLC is seeking administrative approval from the New Mexico Oil Conservation Division to inject produced water into the above mentioned well in the Maljamar; Cisco formation for secondary recovery.

You are receiving this package because you have been identified as having, past or current, interest in the acreage near the vicinity of our proposed well.

The Beams 15 State No. 3 is located 352' FNL and 2094' FEL of Section 15, Township 17S, Range 33E, Lea County, NM.

According to Rule 701C the State of New Mexico, Oil Conservation Division, Engineering Bureau (1220 South Saint Francis Drive, Santa Fe, NM 87505) can make a decision on our application after 15 days, if no objection is received.

If you have any questions regarding the enclosed application, I can be reached at the address above, phone number (325) 573-0750, or email vonroedern@cmlexp.com.

Sincerely,

Nolan von Roeder
Area Engineer



P.O. Box 890
Snyder, Texas 79550-0890

Ofc (325) 573-0750 ■ Fax: (325) 573-0749

May 1, 2019

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Angell 2 Family Limited Partnership
P.O. Box 190
Lovington, NM 88260

APPLICATION FOR AUTHORIZATION TO INJECT FOR THE BEAMS 15 STATE NO. 3

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If you have any questions regarding the enclosed application, I can be reached at the address above, phone number (325) 573-0750, or email vonroeder@cmlexp.com.

Sincerely,

Nolan von Roeder
Area Engineer



P.O. Box 890
Snyder, Texas 79550-0890

Ofc: (325) 573-0750 ■ Fax (325) 573-0749

May 1, 2019

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

ConocoPhillips Company
Attention Stewart O'Neal
600 N. Dairy Ashford
Houston, TX 77079

APPLICATION FOR AUTHORIZATION TO INJECT FOR THE BEAMS 15 STATE NO. 3

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Sincerely,

Nolan von Roeder
Area Engineer

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY												
<input type="checkbox"/> Complete items 1, 2, and 3. <input type="checkbox"/> Print your name and address on the reverse so that we can return the card to you. <input type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery 10/4/15</p>												
<p>1. Article Addressed to:</p> <p><i>State of New Mexico Commissioner of Public Lands PO Box 1148 Santa Fe, NM 87504-1148</i></p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>												
 9590 9402 2304 6225 1752 83	<p>3. Service Type</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> </table>	<input checked="" type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery
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<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery												
<p>2. Article Number (Transfer from service label)</p> <p>7014 1820 0001 3113 2194</p>	<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>												

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY												
<input type="checkbox"/> Complete items 1, 2, and 3. <input type="checkbox"/> Print your name and address on the reverse so that we can return the card to you. <input type="checkbox"/> Attach this card to the back of the mailpiece, or on the front if space permits.	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery OCT - 3 2015</p>												
<p>1. Article Addressed to:</p> <p><i>Angell 2 Family LP PO Box 190 Livingston, NM 88260</i></p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>												
 9590 9402 2304 6225 1752 45	<p>3. Service Type</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> </table>	<input checked="" type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery
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<p>2. Article Number (Transfer from service label)</p> <p>7014 1820 0001 3113 2200</p>	<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>												