

Initial Application Part I

Received: 07/19/2019

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

RECEIVED: 07/19/2019	REVIEWER:	TYPE: SWD	APP NO: pMAM1920031548
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: 3Bear Field Services, LLC **OGRID Number:** 372603
Well Name: Gillock-Brown SWD No. 1 **API:** 30-015-45219
Pool: SWD: SWD; Devonian-Silurian **Pool Code:** 97869

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

1) TYPE OF APPLICATION: Check those which apply for [A] **SWD-2198**

A. Location – Spacing Unit – Simultaneous Dedication

☐ NSL

☐ NSP (PROJECT AREA)

☐ NSP (PRORATION UNIT)

☐ SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

☐ DHC

☐ CTB

☐ PLC

☐ PC

☐ OLS

☐ OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX

☐ PMX

☒ SWD

☐ IPI

☐ EOR

☐ PPR

2) NOTIFICATION REQUIRED TO: Check those which apply.

A. ☒ Offset operators or lease holders

B. ☐ Royalty, overriding royalty owners, revenue owners

C. ☒ Application requires published notice

D. ☐ Notification and/or concurrent approval by SLO

E. ☐ Notification and/or concurrent approval by BLM

F. ☒ Surface owner

G. ☒ For all of the above, proof of notification or publication is attached, and/or,

H. ☐ No notice required

FOR OCD ONLY

☐ Notice Complete
☐ Application Content Complete

3) CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

July 11, 2019

Steve Pattee – Agent of 3Bear Field Service

Print or Type Name

Signature

Date

(512) 600-1774

Phone Number

steve@lonquist.com

e-mail Address

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

July 11, 2019

New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division District IV
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
(505) 476-3440

RE: GILLOCK BROWN SWD NO. 1 AUTHORIZATION TO INJECT

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for 3Bear Field Service, LLC's (3Bear") Gillock-Brown SWD No. 1. In addition, Forms C-101 and C-102 have also been included with this package. Notices have been sent to offset, operators, leaseholders and the surface owner. Proof of notice will be sent to the OCD upon receipt.

Any questions should be directed towards 3Bear Field Services, LLC's agent Lonquist & Co., LLC.


Regards,



Ramona K. Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
ramona@lonquist.com

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ ☒ Disposal _____ Storage
Application qualifies for administrative approval? _____ ☒ Yes _____ No
- II. OPERATOR: 3Bear Field Services, LLC
ADDRESS: 415 W. Wall St., Suite 1212
CONTACT PARTY: Kevin Burns PHONE: 432-686-2973
- 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: Steve Pattee TITLE: Consulting Engineer – Agent for 3Bear Field Service
SIGNATURE:  DATE: 7/11/2019
E-MAIL ADDRESS: ramona@lonquist.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: _____

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.

INJECTION WELL DATA SHEET

OPERATOR: 3Bear Field Services, LLCWELL NAME & NUMBER: Gillock-Brown SWD No. 1WELL LOCATION: 182' FNL & 2,172' FWL
FOOTAGE LOCATIONC
UNIT LETTER33
SECTION22S
TOWNSHIP26E
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17.500"Casing Size: 13.375"Cemented with 570 sacksor ft³Top of Cement: surfaceMethod Determined: circulationIntermediate CasingHole Size: 12.250"Casing Size: 9.625"Cemented with 1,810 sacksor ft³Top of Cement: surfaceMethod Determined: circulationLinerHole Size: 8.750"Casing Size: 7.625"Cemented with 280 sacksor ft³Top of Cement: 8,200'Method Determined: circulationTotal Depth: 13,345'Injection Interval12,225 feet to 13,345 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 20 lb/ft, HCL-80, BTC from 0' – 12,175'

Lining Material: Duoline

Type of Packer: 7-5/8" X 5-1/2" Permanent Packer with High Temperature Elastomer and Full Inconel 925 Trim

Packer Setting Depth: 12,175'

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

Additional Data

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

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

2. Name of the Injection Formation: Devonian, Fusselman,

3. Name of Field or Pool (if applicable): SWD; Devonian-Silurian (Pool Code: 97869)

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, new drill.

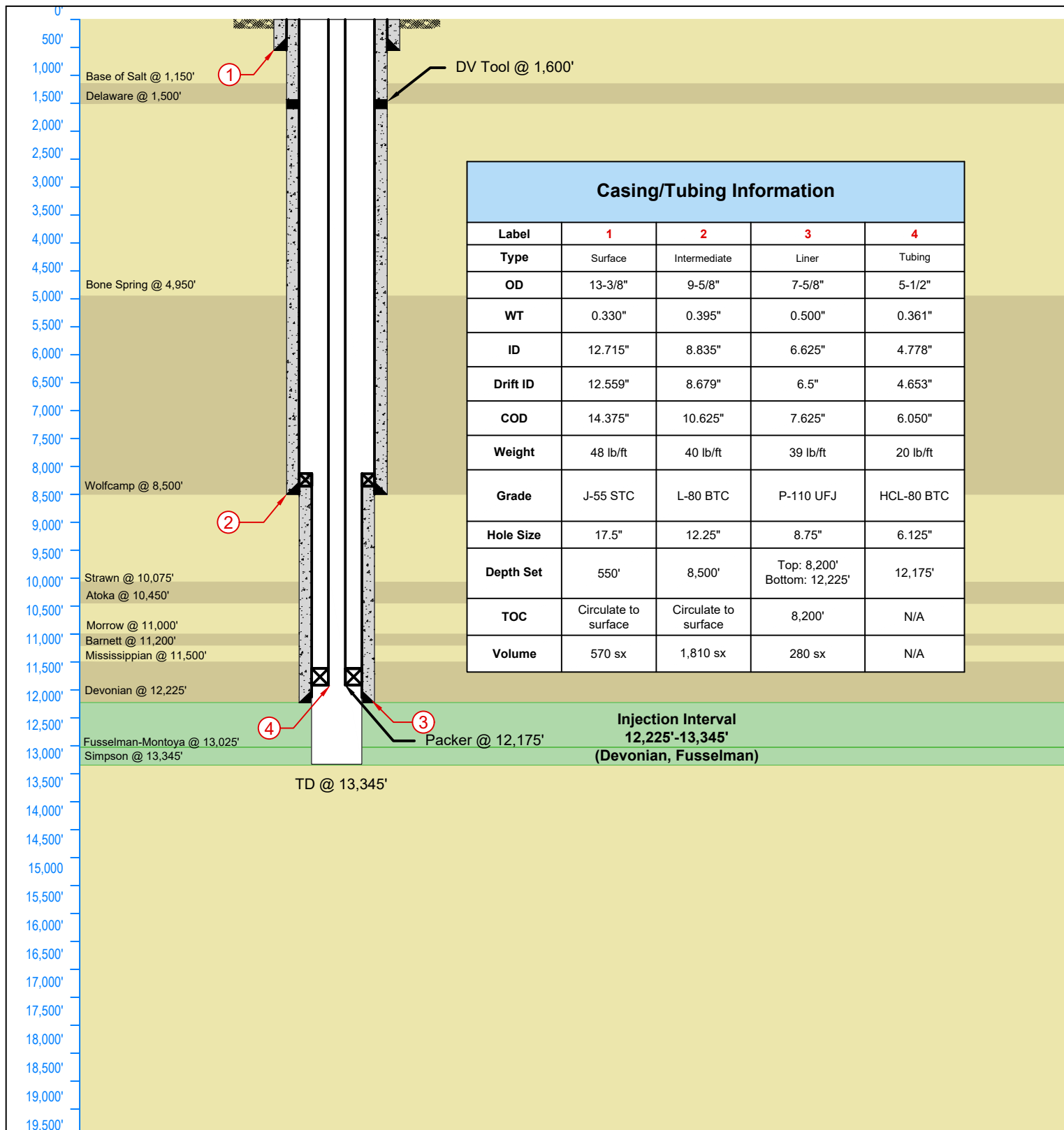
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Bone Spring: 4,950'

Wolfcamp: 8,500'

Strawn: 10,075'

Morrow: 11,000'



LONGQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS <small>AUSTIN • HOUSTON CALGARY • WICHITA</small> <small>DENVER • COLLEGE STATION BATON ROUGE • EDMONTON</small> Texas License F-9147	3 Bear Field Services, LLC		Gillock-Brown SWD No. 1	
	Country: USA		State/Province: New Mexico	County/Parish: Eddy
12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Location:		Site: 182' FNL & 2,172' FWL	Survey: S33-T22S-R26E
	API No: N/A		Field: Devonian-Silurian	Well Type/Status: SWD
	NMOCD District No: 2		Project No: 2094	Date: 07/09/2019
	Drawn: TFM		Reviewed:	Approved:
	Rev No: 1		Notes:	



3Bear Field Services, LLC

Gillock-Brown SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Gillock-Brown SWD
Well No.	1
Location	S-33 T-22S R-26E
Footage Location	182' FNL & 2,172' FWL

2.

a. Wellbore Description

Casing Information			
Type	Surface	Intermediate	Liner
OD	13.375"	9.625"	7.625"
WT	0.330"	0.395"	0.500"
ID	12.715"	8.835"	6.625"
Drift ID	12.559"	8.679"	6.500"
COD	14.375"	10.625"	7.625"
Weight	48 lb/ft	40 lb/ft	39 lb/ft
Grade	J-55 STC	HCL-80 BTC	P-110 UFJ
Hole Size	17.5"	12.25"	8.75"
Depth Set	550'	8,500'	8,200'-12,225'

b. Cementing Program

Cement Information			
Casing String	Surface	Intermediate	Liner
Lead Cement	Class C	Class C	Class H
Lead Cement Volume	-	Stage 1: 1,145 sks Stage 2: 375 sks	100 sks
Lead Cement Density	-	Stage 1: 12.7 ppg Stage 2: 12.9 ppg	12.7 ppg
Tail Cement	Class C	Class C	Class H
Tail Cement Volume	570 sks	Stage 1: 145 sks Stage 2: 375 sks	180 sks
Tail Cement Density	14.8 ppg	Stage 1: 14.8 ppg Stage 2: 14.8 ppg	14.5 ppg
Total Sacks	570 sks	1,810 sks	280 sks
TOC	Surface	Stage 1: 1,600' Stage 2: Surface	8,200'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface

3. Tubing Description

Tubing Information	
OD	5.5"
WT	0.361"
ID	4.778"
Drift ID	4.653"
COD	6.050"
Weight	20 lb/ft
Grade	HCL-80 BTC
Depth Set	0-12,175'

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Fusselman

2. Gross Injection Interval: 12,225'-13,345'

Completion Type: Open Hole

3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Bone Spring	4,950'
Wolfcamp	8,500'
Strawn	10,075'
Morrow	11,000'

VI. Area of Review

No wells within the area of review penetrate the proposed injection zone.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD

Maximum Volume: 25,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 1,834 PSI (surface pressure)

Maximum Injection Pressure: 2,445 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Artesia formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Artesia, Bone Spring, Delaware, Grayburn/San Andreas, Morrow, Pennsylvanian, and Strawn formations.
5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

Devonian Formation Lithology:

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

Fusselman Formation Lithology:

The Silurian/Ordovician Fusselman Formation is stratigraphically below the Wristen Group and is above and separated from the Montoya Formation by the Sylvan Shale. The Sylvan Shale is the lower confining layer for the proposed well. Fusselman facies include a laminated skeletal wackestone in the upper part and a buildup complex in the lower part composed of ooid and bryozoan grainstones. These grainstones can also be potentially prolific zones for disposal.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Base of Salt	1,150'
Delaware	1,500'
Bone Spring	4,950'
Wolfcamp	8,500'
Strawn	10,075'
Atoka	10,450'
Morrow	11,000'
Barnett	11,200'
Mississippian Lime	11,500'
Devonian	12,225'
Fusselman	13,025'

B. Underground Sources of Drinking Water

Eleven (11) water wells exist within the proposed well. Water wells have an average depth of 142 feet. Across the one-mile radius, fresh water wells are usually drilled between 100' and 505' in depth. The Rustler is known to exist in this general area and may also be another USDW and will be protected by setting surface casing at 550' before the Salado salt to prevent contamination of the aquifer.

IX. Proposed Stimulation Program

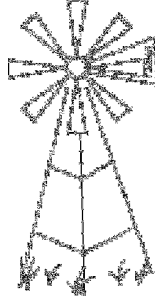
No stimulation program planned.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

Attached is a map of the eleven (11) water wells that exists within one-mile of the well location. Samples from the well are being obtained by Cardinal Laboratories and will be reported to the Oil Conservation Division as soon as a report is received. Water right summaries are attached for all wells.



ZEIGLER GEOLOGIC CONSULTING, LLC

13170 Central Ave. SE, Suite B #137

Albuquerque, NM 87123

zeiglergeo@gmail.com; zeiglergeo.com

(505) 263.5448 (575) 207.7826

For: 3Bear Energy, LLC
415 W. Wall St., Suite 1212
Midland, TX 79701

August 7, 2018

Re: Gillock-Brown SWD #1, Eddy County, New Mexico

With regards to the Gillock-Brown SWD #1 well, located in unit letter C, section 33, T22S, R26E (NM Prime Meridian) in Eddy County, the nearest documented basement-penetrating fault is located approximately 26 miles southwest of the well's location. Available geologic and engineering data has been examined and suggest no evidence of faults in proximity to the well, nor hydrological connection between the proposed injection zone and any freshwater aquifers utilized for domestic, municipal or livestock water resources.

Sincerely,

A handwritten signature in blue ink that reads "Kate Zeigler". The signature is cursive and fluid.

Kate Zeigler, Ph.D., CPG (AIPG #11803)
Geologist

**NM OIL CONSERVATION
ARTESIA DISTRICT**

JAN 16 2019

Form C-102

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ **AMENDED REPORT
SHL CHANGE**

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45219	² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN
⁴ Property Code 322295	⁵ Property Name GILLOCK - BROWN SWD	
⁷ OGRID No. 372603	⁸ Operator Name 3BEAR FIELD SERVICES, LLC	⁶ Well Number 1 ⁹ Elevation 3285'

" Surface Location

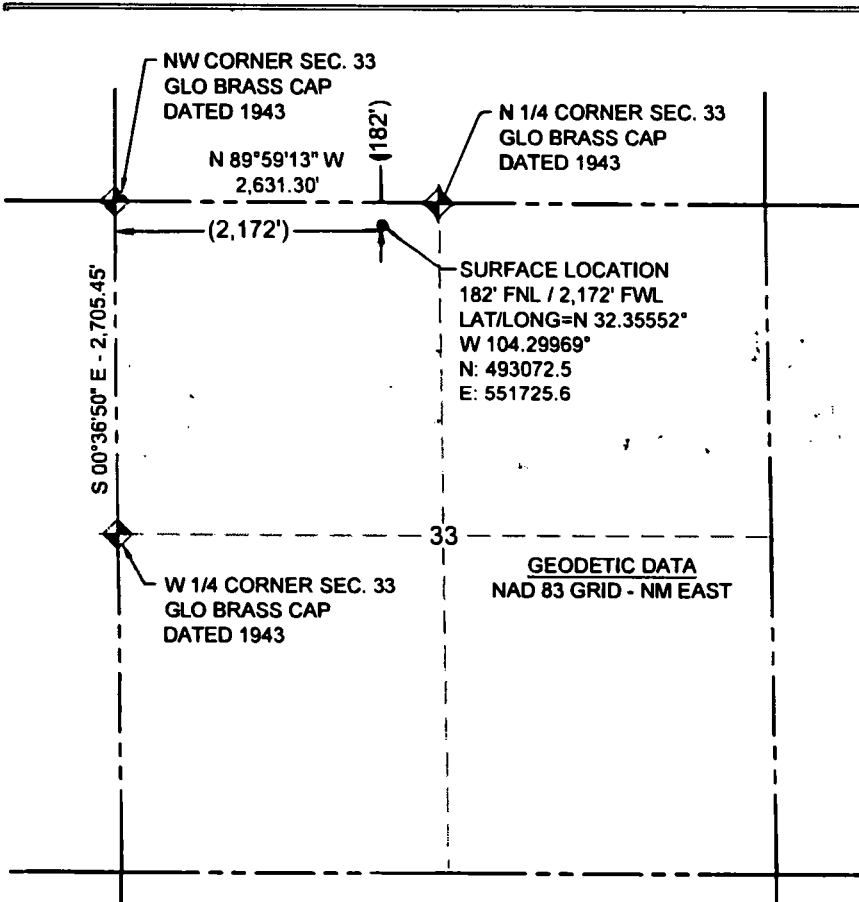
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
NW 1/4 C	33	22S	26E		182	NORTH	2,172	WEST	EDDY

" Bottom Hole Location If Different From Surface

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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



" OPERATOR CERTIFICATION

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

Jennifer Elrod 01/15/2019
Signature Date

JENNIFER ELROD

Printed Name

jelrod@chisholmenergy.com

E-mail Address

" SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11/06/18

Date of Survey

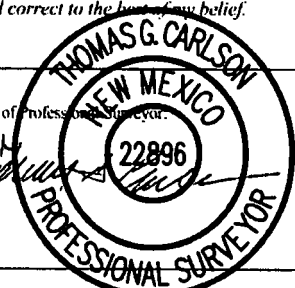
Signature and Seal of Professional Surveyor

Surface Location only

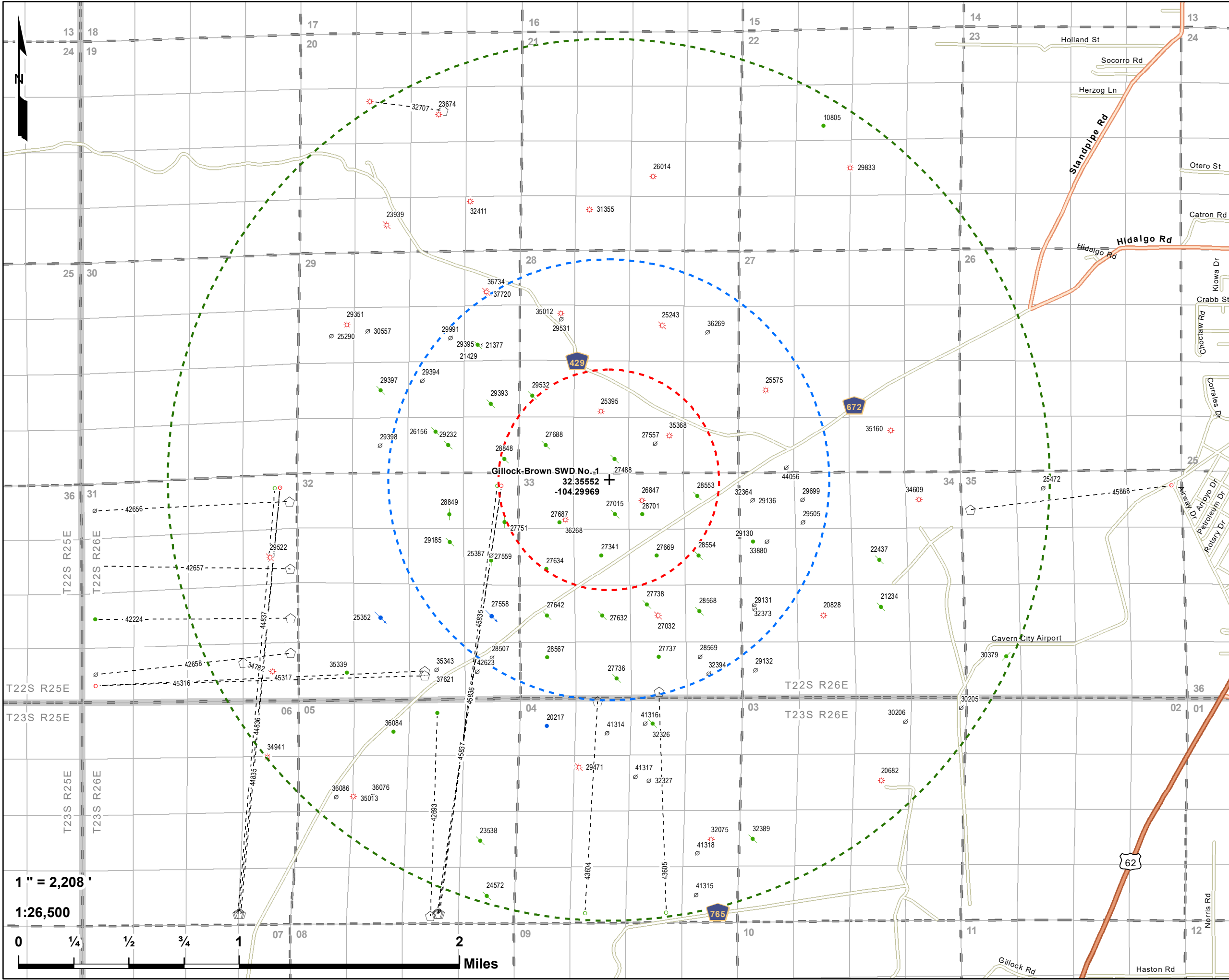
Thomas G. Carlson
11-8-18

22896

Certificate Number



RWP 2-7-19



Gillock-Brown SWD No. 1
2 Mile Area of Review
3Bear Field Services LLC
Eddy County, NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)

Drawn by: SJL Date: 6/15/2019 Approved by: CBW

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

AUSTIN • HOUSTON CALGARY • WICHITA
DENVER • COLLEGE STATION BATON ROUGE • EDMONTON

- + Gillock-Brown SWD No. 1
- 1/2 Mile Radius
- 1 Mile Radius
- 2 Mile Radius
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)
- Laterals

API (30-015-...) SHL Status - Type (Count)

- Horizontal Surface Location (18)
- Active - Oil (12)
- Active - Gas (19)
- Active - Salt Water Disposal (2)
- Approved TA - Oil (3)
- Plugged (Not Released) - Oil (1)
- Plugged (Site Released) - Oil (25)
- Plugged (Site Released) - Gas (7)
- Plugged (Site Released) - Water (1)
- Canceled Location (35)

API (30-015-...) BHL Status - Type (Count)

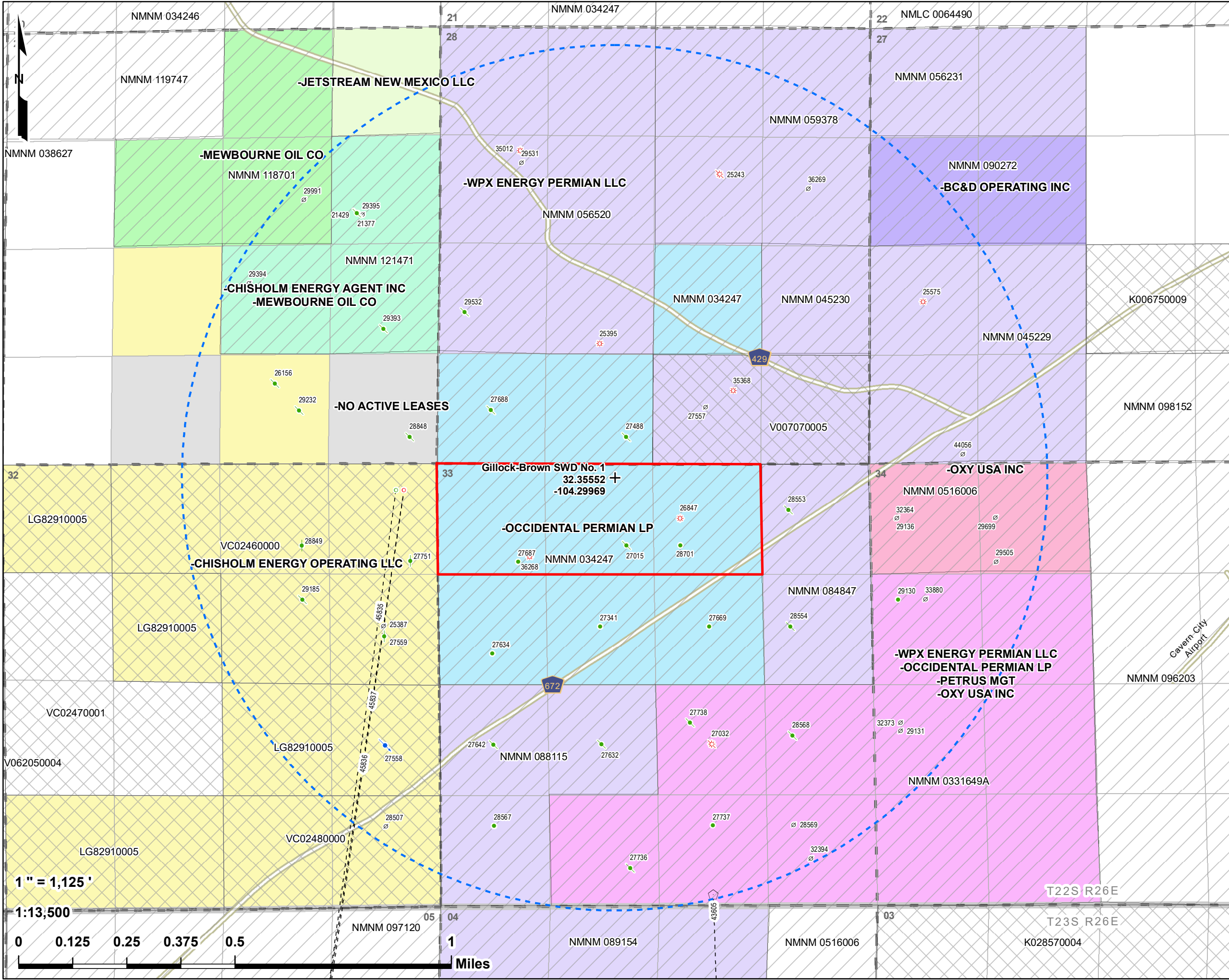
- Active - Oil (2)
- Active - Gas (2)
- Permitted - Oil (5)
- Permitted - Gas (6)
- Canceled Location (3)

*Well Data Source: NM-OCD, DrillingInfo (2019)



Gillock-Brown SWD No. 1
1 Mile Area of Review List

API (30-015-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	SPUD DATE	FIELD
21377	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	190	32.3644104000	-104.309852600	9/28/1974	
21429	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	11720	32.3644104000	-104.309875500	12/4/1974	
25243	HAPPY VALLEY FEDERAL COM #001	G	P	E G L RESOURCES INC	11840	32.36570360	-104.29554750	3/2/1993	[74200] CARLSBAD, WOLFCAMP, SOUTH (GAS); [78070] HAPPY VALLEY, STRAWN (GAS)
25387	PRE-ONGARD WELL #001	O	C	PRE-ONGARD WELL OPERATOR	0	32.3505491527	-104.308824172	-	
25395	HAPPY VALLEY B FEDERAL COM #001	G	A	WPX Energy Permian, LLC	11692	32.36002730	-104.30027770	12/16/1985	[78060] HAPPY VALLEY, MORROW (GAS)
25575	J.A. TOMAINO FEDERAL #001	G	A	WPX Energy Permian, LLC	11751	32.36142730	-104.28749850	5/25/1986	[78060] HAPPY VALLEY, MORROW (GAS)
26156	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	11650	32.3586922000	-104.313125600	8/10/1989	
26847	SHEEP DRAW FEDERAL COM #001	G	A	WPX Energy Permian, LLC	11735	32.35416790	-104.29710390	12/7/1992	[78060] HAPPY VALLEY, MORROW (GAS); [85200] SHEEP DRAW, STRAWN (GAS)
27015	SHEEP DRAW FEDERAL #002	O	P	WPX Energy Permian, LLC	4990	32.35326000	-104.29922490	9/14/1992	[29665] HAPPY VALLEY, DELAWARE
27032	RAM EWE FEDERAL COM #001	G	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	11750	32.3465881000	-104.295867900	5/2/1993	[73960] CARLSBAD, MORROW, SOUTH (GAS); [96171] CARLSBAD, WOLFCAMP, SOUTHEAST (GAS)
27341	SHEEP DRAW FEDERAL #003	O	A	WPX Energy Permian, LLC	5000	32.35054020	-104.30026250	3/22/1993	[29665] HAPPY VALLEY, DELAWARE
27488	SHEEP DRAW 28 FEDERAL #001	O	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	5002	32.3568878000	-104.299247700	7/26/1993	[29665] HAPPY VALLEY, DELAWARE
27557	BIG HORN STATE #001	O	C	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	0	32.3578904408	-104.296096423	-	
27558	BARBADOS STATE #001	S	A	WPX Energy Permian, LLC	5040	32.34654620	-104.30876920	12/21/1995	[96100] SWD, DELAWARE
27559	EV STATE COM #002	O	T	CHISHOLM ENERGY OPERATING, LLC	11800	32.3502083000	-104.308807400	10/17/1996	[73800] CARLSBAD, ATOKA, SOUTH (GAS); [78055] HAPPY VALLEY, ATOKA (GAS); [78060] HAPPY VALLEY, MORROW (GAS)
27632	DALL FEDERAL COM #001	O	P	WPX Energy Permian, LLC	5050	32.34657670	-104.30021670	9/7/1993	[29665] HAPPY VALLEY, DELAWARE
27634	SHEEP DRAW FEDERAL #005	O	A	WPX Energy Permian, LLC	5040	32.34963610	-104.30452730	8/23/1993	[29665] HAPPY VALLEY, DELAWARE
27642	DALL FEDERAL #002	O	P	WPX Energy Permian, LLC	5030	32.34656910	-104.30448910	7/5/1995	[29665] HAPPY VALLEY, DELAWARE
27669	SHEEP DRAW FEDERAL #008	O	A	WPX Energy Permian, LLC	5040	32.35053630	-104.29595950	9/22/1993	[29665] HAPPY VALLEY, DELAWARE
27687	SHEEP DRAW FEDERAL #006	O	A	WPX Energy Permian, LLC	4987	32.3527145000	-104.303497300	5/28/1995	[29665] HAPPY VALLEY, DELAWARE
27688	SHEEP DRAW 28 FEDERAL #002	O	P	WPX Energy Permian, LLC	4975	32.35779950	-104.30458070	3/2/1996	[29665] HAPPY VALLEY, DELAWARE
27736	RAM EWE FEDERAL #002	O	P	WPX Energy Permian, LLC	3300	32.34243010	-104.29909520	8/30/1997	[29665] HAPPY VALLEY, DELAWARE
27737	RAM EWE FEDERAL #003	O	A	WPX Energy Permian, LLC	3055	32.34386440	-104.29581450	10/27/1996	[29665] HAPPY VALLEY, DELAWARE
27738	RAM EWE FEDERAL #004	O	P	WPX Energy Permian, LLC	5025	32.34730150	-104.29673000	8/14/1995	[29665] HAPPY VALLEY, DELAWARE
27751	EV STATE #003	O	T	CHISHOLM ENERGY OPERATING, LLC	5010	32.35274120	-104.30776980	11/25/1995	[29665] HAPPY VALLEY, DELAWARE
28507	EV STATE #005	O	C	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	0	32.3438240796	-104.308743830	-	
28553	AOUDAD FEDERAL #001	O	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	3025	32.3544388000	-104.292831400	4/13/1996	[29665] HAPPY VALLEY, DELAWARE
28554	AOUDAD FEDERAL #002	O	P	WPX Energy Permian, LLC	4990	32.35053250	-104.29274750	7/17/1995	[29665] HAPPY VALLEY, DELAWARE
28567	DALL FEDERAL #003	O	A	WPX Energy Permian, LLC	5070	32.34384540	-104.30445860	11/10/1995	[29665] HAPPY VALLEY, DELAWARE
28568	RAM EWE FEDERAL #005	O	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	3050	32.3468704000	-104.292671200	2/23/1996	[29665] HAPPY VALLEY, DELAWARE
28569	RAM EWE FEDERAL #006	O	C	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	0	32.3438828973	-104.292621579	-	
28701	SHEEP DRAW FEDERAL #004	O	A	WPX Energy Permian, LLC	4990	32.35326000	-104.29708860	7/31/1995	[29665] HAPPY VALLEY, DELAWARE
28848	HAPPY VALLEY 29 #044	O	P	WPX Energy Permian, LLC	4500	32.35689160	-104.30780030	4/22/1996	[29665] HAPPY VALLEY, DELAWARE
28849	EV STATE #004	O	T	CHISHOLM ENERGY OPERATING, LLC	4400	32.3532486000	-104.312057500	3/31/1996	[29665] HAPPY VALLEY, DELAWARE
29130	MIDWEST L FEDERAL #002	O	A	OXY USA INC	5100	32.35144420	-104.28849790	12/27/1996	[29665] HAPPY VALLEY, DELAWARE
29131	MIDWEST L FEDERAL #003	O	C	POGO PRODUCING CO	0	32.34702544	-104.28839357	-	
29136	MIDWEST L FEDERAL #005	O	C	POGO PRODUCING CO	0	32.35417405	-104.28854819	-	
29185	EV STATE #006	O	P	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	3098	32.3514366000	-104.312034600	11/4/1996	[29665] HAPPY VALLEY, DELAWARE
29232	HAPPY VALLEY 29 #034	O	P	WPX Energy Permian, LLC	4857	32.35778810	-104.31216430	7/7/1997	[29665] HAPPY VALLEY, DELAWARE
29393	HACKBERRY 29 FEDERAL #001	O	P	DEVON ENERGY PRODUCTION CO.	4990	32.36051940	-104.30883030	9/19/1997	[29665] HAPPY VALLEY, DELAWARE
29394	HACKBERRY 29 FEDERAL #002	O	C	DEVON ENERGY PRODUCTION CO.	0	32.36205880	-104.31414727	-	
29395	HACKBERRY 29 FEDERAL #003	O	C	DEVON ENERGY PRODUCTION CO.	0	32.36434738	-104.30965536	-	
29505	MIDWEST L FEDERAL #006	O	C	POGO PRODUCING CO	0	32.35270709	-104.28462729	-	
29531	SHEEP DRAW 28 FEDERAL #012	O	C	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	0	32.3660999369	-104.303370856	-	
29532	SHEEP DRAW 28 FEDERAL #013	O	P	WPX Energy Permian, LLC	4950	32.36107250	-104.30561830	7/1/1997	[29665] HAPPY VALLEY, DELAWARE
29699	JET FEDERAL #001	O	C	POGO PRODUCING CO	0	32.35419132	-104.28465939	-	
29991	HACKBERRY 29 FEDERAL #004	O	C	DEVON ENERGY PRODUCTION CO.	0	32.36485304	-104.31196718	-	
32364	MIDWEST L FEDERAL #005Q	O	A	OXY USA INC	5130	32.35416410	-104.28855130	11/9/2002	[29665] HAPPY VALLEY, DELAWARE
32373	MIDWEST L FEDERAL #003Q	O	C	POGO PRODUCING CO	0	32.34730030	-104.28839951	-	
32394	RAM EWE FEDERAL #006A	O	C	DOMINION OKLAHOMA TEXAS EXPL. & PROD INC	0	32.3427571035	-104.291946322	-	
33880	MIDWEST FEDERAL COM #002	G	C	CHI OPERATING INC	0	32.35145773	-104.28741544	-	[73960] CARLSBAD, MORROW, SOUTH (GAS)
35012	MILAGRO 28 FEDERAL COM #001	G	A	MEWBOURNE OIL CO	11710	32.3665047000	-104.303413400	6/22/2006	[78060] HAPPY VALLEY, MORROW (GAS)
35368	MCKITTRICK DRAW 28 STATE COM #001	G	A	MEWBOURNE OIL CO	11750	32.3584518000	-104.294998200	9/2/2007	[78060] HAPPY VALLEY, MORROW (GAS); [85200] SHEEP DRAW, STRAWN (GAS)
36268	SHEPHERD DRAW 33 FEDERAL COM #001	G	A	MEWBOURNE OIL CO	11730	32.3528709000	-104.303047200	6/19/2008	[78060] HAPPY VALLEY, MORROW (GAS)
36269	MILAGRO 28 FEDERAL COM #002C	G	C	MEWBOURNE OIL CO	0	32.36522918300	-104.29202849600	-	[78060] HAPPY VALLEY, MORROW (GAS)
43605	SARAGOSSA FEDERAL 4 #002H	O	N	WPX Energy Permian, LLC	0	32.34154666	-104.29580030	-	[98056] WC-015 G-04 S232628M, BONE SPRING
44056	HAPPY VALLEY 27 FEDERAL COM #001H	O	C	WPX Energy Permian, LLC	0	32.3563190000	-104.285928300	-	[96605] HAPPY VALLEY, BONE SPRING, SE
45835	BODACIOUS 5 32 FEDERAL COM 3BS #004H	O	N	CHISHOLM ENERGY OPERATING, LLC	0	32.32696510	-104.31281990	-	[98056] WC-015 G-04 S232628M, BONE SPRING
45836	BODACIOUS 5 32 FEDERAL COM WCA #005H	G	N	CHISHOLM ENERGY OPERATING, LLC	0	32.32696500	-104.31291680	-	[98220] PURPLE SAGE, WOLFCAMP (GAS)
45837	BODACIOUS 5 32 FEDERAL COM WCB #006H	G	N	CHISHOLM ENERGY OPERATING, LLC	0	32.32696490	-104.31301400	-	[98220] PURPLE SAGE, WOLFCAMP (GAS)



Gillock-Brown SWD No. 1

1 Mile Offset Lessees

3Bear Field Services LLC

Eddy County, NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)

Drawn by: SJL | Date: 7/11/2019 | Approved by: CBW

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN • HOUSTON | CALGARY • WICHITA
DENVER • COLLEGE STATION | BATON ROUGE • EDMONTON

Legend:

- + Gillock-Brown SWD No. 1
- 1 Mile Radius
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)
- Surface Owner (GILLOCK, WILLIAM F JR & BROWN, BONNIE M K/S)
- NM - BLM (O&G Leases)
- NM - SLO (O&G Leases)
- Laterals

API (30-015-...) SHL Status - Type (Count)

- Horizontal Surface Location (4)
- Active - Oil (9)
- Active - Gas (6)
- Active - Salt Water Disposal (1)
- Approved TA - Oil (3)
- Plugged (Site Released) - Oil (18)
- Plugged (Site Released) - Gas (2)
- Canceled Location (17)

API (30-015-...) BHL Status - Type (Count)

- Permitted - Oil (2)
- Permitted - Gas (2)

Lessees

- BC&D OPERATING INC
- CHISHOLM ENERGY AGENT INC; -MEWBOURNE OIL CO
- CHISHOLM ENERGY OPERATING LLC
- JETSTREAM NEW MEXICO LLC
- MEWBOURNE OIL CO
- OCCIDENTAL PERMIAN LP
- OXY USA INC
- WPX ENERGY PERMIAN LLC
- WPX ENERGY PERMIAN LLC; -OCCIDENTAL PERMIAN LP; -PETRUS MGT; -OXY USA INC
- NO ACTIVE LEASES

*Well Data Source: NM-OCD, DrillingInfo (2019)

Map Extent

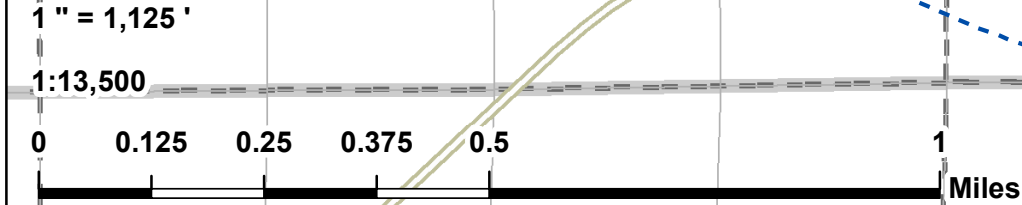
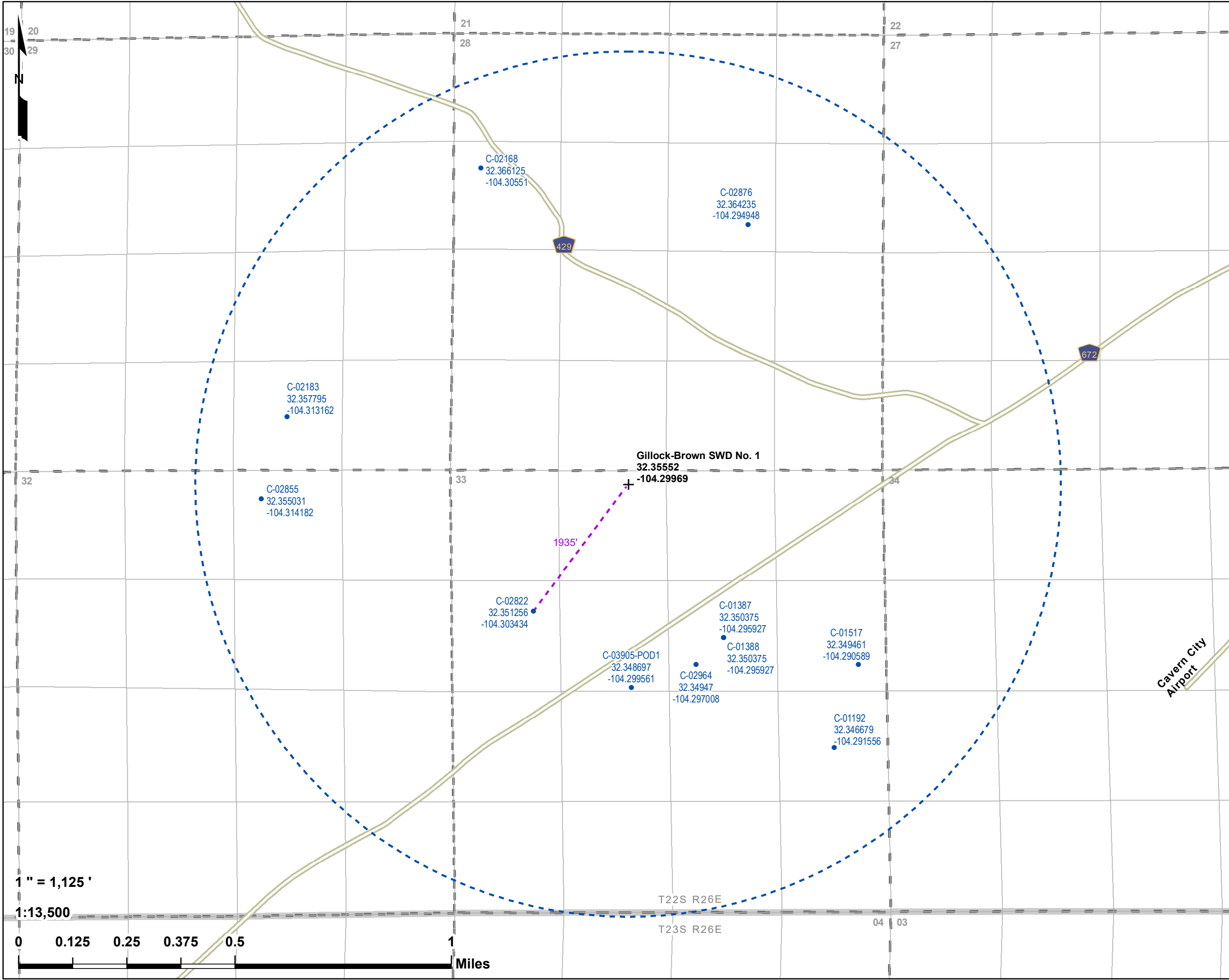
CHAVES | EDDY | LEA | OTERO

NEW MEXICO

TEXAS | CULBERSON | REEVES | LOVING

Gillock-Brown SWD No. 1
1 Mile Offset Operators and Lessees List

S/T/R	QQ UNIT LETTER(S)	OPERATOR	MINERAL LESSEE	MINERAL OWNER	SURFACE OWNER	ADDRESS 1	ADDRESS 2
29/22S/26E	B,F,G	-	MEWBOURNE OIL CO	-	-	500 W TEXAS ST #1020	MIDLAND, TX 79701
	H,I,J	-	MEWBOURNE OIL CO	-	-	500 W TEXAS ST #1020	MIDLAND, TX 79701
			CHISHOLM ENERGY AGENT INC	-	-	801 CHERRY ST STE 1200 UNIT 20	FORT WORTH, TX 76102
	A	-	JETSTREAM NEW MEXICO LLC	-	-	PO BOX 471396	FORT WORTH, TX 76147
	K,O	-	CHISHOLM ENERGY OPERATING LLC	-	-	801 CHERRY STREET	FORT WORTH, TX 76102
	N	-	-	WELLS FARGO BANK N.A. (NORMA B. WILEY IRREVOCABLE TRUST B)	-	PO BOX 1959	MIDLAND, TX 79702
	P	-	-	KIMBERLEY ANN CALVERT	-	1360 LEMMERS RD	CASPER, WY 82601
28/22S/26E	A,B,C,D,E,F,G,H	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
	I,J,K,L,M,N,O,P	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
		WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
27/22S/26E	D,E,F,K,L,M,N	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
34/22S/26E	C,D,E,F,K,L,M	OXY USA INC	-	-	-	PO BOX 4294	HOUSTON, TX 77210
33/22S/26E	A,B,C,D,E,F,G,H	MEWBOURNE OIL CO	-	-	-	PO BOX 5270	HOBBS, NM 88241
		WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
	M,O	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
	K,L	-	WPX ENERGY PERMIAN LLC	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
			Operating Rights on BLM Lease NMNM 088115:				
			CHISHOLM ENERGY AGENT INC	-	-	801 CHERRY ST STE 1200 UNIT 20	FORT WORTH, TX 76102
			DOMINION OK TX EXPL & PROD INC	-	-	14000 QUAIL SPGS PKY #600	OKLAHOMA CITY, OK 73134
			MEWBOURNE OIL CO	-	-	500 W TEXAS ST #1020	MIDLAND, TX 79701
	I,J,N,P	-	WPX ENERGY PERMIAN LLC	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
			OCCIDENTAL PERMIAN LP	-	-	5 E GREENWAY PLAZA #110	HOUSTON, TX 77046
			PETRUS MGT	-	-	12201 MERRIT DR #900	DALLAS, TX 75251
			OXY USA INC	-	-	PO BOX 27570	HOUSTON, TX 77227
			Operating Rights on BLM Lease NMNM 0 331649A:				
			PENROC OIL CORP	-	-	1515 W CALLE SUR ST STE 174	HOBBS, NM 88240
			DESERT PRODUCTION INC	-	-	PO BOX 351	MIDLAND, TX 79702
			CHISHOLM ENERGY AGENT INC	-	-	801 CHERRY ST STE 1200 UNIT 20	FORT WORTH, TX 76102
			POGO RESOURCES LLC	-	-	4809 COLE AVE STE 106	DALLAS, TX 75205
			MEWBOURNE OIL CO	-	-	500 W TEXAS ST #1020	MIDLAND, TX 79701
			MERIT ENE MGT PARTNERS I LP	-	-	13727 NOEL RD #500	DALLAS, TX 75240
			MERIT ENE MGT PARTNERS II LP	-	-	13727 NOEL RD #500	DALLAS, TX 75240
			MERIT ENERGY PTNRS III LP	-	-	13727 NOEL RD #500	DALLAS, TX 75240
			MERIT ENERGY PTNRS	-	-	13727 NOEL RD #500	DALLAS, TX 75240
			MERIT ENERGY PTNRS VII LP	-	-	13727 NOEL RD #500	DALLAS, TX 75240
			DOMINION OK TX EXPL & PROD INC	-	-	14000 QUAIL SPGS PKY #600	OKLAHOMA CITY, OK 73134
			CHEVRON USA INC	-	-	6301 DEAUVILLE	MIDLAND, TX 79706
			PXP PRODUCING CO LLC	-	-	717 TEXAS ST STE 2100	HOUSTON, TX 77002
32/22S/26E	A,B,G,H,J,O,P	CHISHOLM ENERGY OPERATING LLC	-	-	-	801 CHERRY STREET	FORT WORTH, TX 76102
	I	CHISHOLM ENERGY OPERATING LLC	-	-	-	801 CHERRY STREET	FORT WORTH, TX 76102
		WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
	C,F	-	CHISHOLM ENERGY OPERATING LLC	-	-	801 CHERRY ST STE 1200 UNIT 20	FORT WORTH, TX 76102
4/23S/26E	B,C	WPX ENERGY PERMIAN LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
Surface Location	-	-	-	-	GILLOCK, WILLIAM F JR & BROWN, BONNIE M K/S	159 GILLOCK ROAD	CARLSBAD, NM 88220



Gillock-Brown SWD No. 1

1 Mile Offset Water Wells

3Bear Field Services LLC

Eddy County, NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)

Drawn by: SJL | Date: 6/15/2019 | Approved by: CBW

LONQUIST & CO. LLC

PETROLEUM ENGINEERS **ENERGY ADVISORS**

AUSTIN • HOUSTON • CALGARY • WICHITA
DENVER • COLLEGE STATION • BATON ROUGE • EDMONTON

+

 Gillock-Brown SWD No. 1

• Water Well (11)

1 Mile Radius

Distance Call

QQ-Section (NM-PLSS 2nd Div.)

Section (NM-PLSS 1st Div.)

Township/Range (NM-PLSS)

*Water Well Data Source: NM-OSE (2019)

CHAVES EDDY LEA
OTERO
NEW MEXICO
TEXAS
CULBERSON REEVES LOVING

Gillock-Brown SWD No. 1 Produced Water Samples																		
Well Name	API	Section	Township	Range	Unit	County	Formation	ph	tds_mgl	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl
CRAWFORD #001	3001501121	9 24S	27E	27E	K	EDDY	DELAWARE		95055							58570	95	187
ST HAMILTON #001	3001501126	15 24S	27E	27E	M	EDDY	DELAWARE		301812							189600	192	2040
DOC HOLIDAY 32 STATE COM #001	3001541145	32 24S	27E	27E	D	EDDY	BONE SPRING 2ND SAND	6.7	193316.3	59944.7	8287.7	63.6	1065.9		1.03	120600	170.8	17
PREACHER 19 FEDERAL #003H	3001541187	19 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	6.5	193786.1	67996.2	3049.5	50	455.6			119000	130	34
PREACHER 19 FEDERAL #003H	3001541187	19 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	7	177819.6	60298.5	5557.4	49.5	771.3			108940.6	366	0
JOSEY WALES 16 STATE COM #003H	3001541090	16 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	6.47	179419.7	56191	7263	34	907	0.8		112857	146.4	573
DOC HOLIDAY 32 STATE COM #001	3001541145	32 24S	27E	27E	D	EDDY	BONE SPRING 2ND SAND	6.3	205799.3	64141.4	9202.6	68.4	1164.7	1.1		128748.7	122	17
PREACHER 19 FEDERAL #003H	3001541187	19 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	5.8	203717.6	70834.8	3255.7	51	483.4	0		125604.7	144	34
JOSEY WALES 16 STATE COM #003H	3001541090	16 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	7.6	176588.8	56605.8	7257.2	41.9	919.6	0		109722	146	0
DOC HOLIDAY 32 STATE COM #001	3001541145	32 24S	27E	27E	D	EDDY	BONE SPRING 2ND SAND	7.3	197760.1	61580.1	8480.7	68.7	1113.9	1.11		123849.8	146	0
DOC HOLIDAY 32 STATE COM #001	3001541145	32 24S	27E	27E	D	EDDY	BONE SPRING 2ND SAND	7.3	127681.6	49333.7	2003.8	31.4	394.2	0		77098	195.2	0
PREACHER 19 FEDERAL #003H	3001541187	19 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	7.4	312558	120501	1427.3	43.3	362.7	0		186000	201.4	3947
PREACHER 19 FEDERAL #003H	3001541187	19 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	7.4	312550	120501	1427.3	43.3	362.7	0		186000	201.4	0
JOSEY WALES 16 STATE COM #003H	3001541090	16 24S	27E	27E	O	EDDY	BONE SPRING 2ND SAND	6.5	179414.4	59469	7527.1	41	943.9	0		109122.7	73.2	0
DOC HOLIDAY 32 STATE COM #001	3001541145	32 24S	27E	27E	D	EDDY	BONE SPRING 2ND SAND	7	203230.2	65823.6	9280.1	59.4	1154	1.17		124768.5	48.8	0
HABANERO 17 FEDERAL COM #001H	3001536108	17 24S	27E	27E	A	EDDY	WOLFCAMP	6.5	108205	35110.8	4480.2	28.5	627.9	0.61		65927.2	146	0
WHITE CITY PENN GAS COM UNIT 1 #001	3001500408	29 24S	26E	26E	A	EDDY	WOLFCAMP	7		6000	990	0	130			10000	645	1320
SERRANO 29 FEDERAL #001H	3001537763	29 24S	27E	27E	H	EDDY	WOLFCAMP	6.9	102136.2	30415.1	5311.5	40.2	643.7	1.47		62812.7	183	0
SERRANO 29 FEDERAL #001H	3001537763	29 24S	27E	27E	H	EDDY	WOLFCAMP	6.5	100994.9	28702.1	5341.9	46.2	619.5	1.46		63450.1	268	0
LEE J FED #001	3001505973	18 24S	26E	26E	J	EDDY	WOLFCAMP	8.1								9100	7300	350
BRADLEY FEDERAL #006	3001500386	11 24S	26E	26E	I	EDDY	SAN ANDRES	8.5	10492							5070	618	413
BRADLEY #007	3001500385	11 24S	26E	26E	O	EDDY	SAN ANDRES	8.8	6811							2948	429	887
FED D #002	3001500389	12 24S	26E	26E	P	EDDY	ATOKA		60623									
R.S. STATE #001	3001501132	27 24S	27E	27E	N	EDDY	PENNSYLVANIAN		48387							26570	1505	2263
O'NEILL FEDERAL #001	3001520301	11 24S	26E	26E	L	EDDY	MORROW	5.7	123887	49189.7	2808	351				81000	368.28	81



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 01192

Subbasin: C

Cross Reference: -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: ANTONIO MEDRANO

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
462577	72121	1964-04-21	PMT	LOG	C 01192	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc		
			64 16 4	Sec	Tws	Rng	X		Y	
C 01192		Shallow	2	4	33	22S	26E	566664	3579084*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 01517

Subbasin: C

Cross Reference: -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: EXP EXPIRED

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: ARMANDO D LAREZ

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
463463	72121	1973-10-24	EXP	EXP	C 01517	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc				
			64 16 4	Sec	Tws	Rng	X		Y			
C 01517			4	4	2	33	22S	26E	566753	3579393*		

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02855

Subbasin: CUB

Cross Reference:-

Primary Purpose: PLS NON 72-12-1 LIVESTOCK WATERING

Primary Status: DCL DECLARATION

Total Acres: 0

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: THUNDER RUN LAND & CATTLE CO

Contact: GEORGE HARVICK


Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
554320	COWNF	2014-08-21	CHG	PRC	C 02855	T	0	0	
375906	COWNF	2007-01-11	CHG	PRC	C 02855	T	0	0	
308474	COWNF	2004-06-24	CHG	PRC	C 02855	T	0	0	
216074	DCL	2001-10-22	DCL	PRC	C 02855	T	0	3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)			Other Location Desc
			64	16	4	X	Y		
C 02855			1	1	2	32	22S	26E	564529 3579996* 

An () after northing value indicates UTM location was derived from PLSS - see Help

Source

Acres	Diversion	CU	Use	Priority	Source Description
0	3		PLS		GW



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02876

Subbasin: C

Cross Reference: -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: CITY OF CARLSBAD

Contact: LOUIS CAMERO

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status	From/	To	Acres	Diversion	Consumptive
			1 2	Transaction Desc.				
466679	72121	2001-12-17	PMT LOG	C 02876	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q	64 16 4	Sec Tws Rng	X	Y	Other Location Desc
C 02876		Artesian	4 3 2	28	22S 26E	566332	3581028*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02964

Subbasin: C

Cross Reference: -

Primary Purpose: DOL 72-12-1 DOMESTIC AND LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: LYNN THOMPSON

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
466794	72121	2003-04-15	PMT	LOG	C 02964	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc			
			64	16	4	X	Y				
C 02964			3	3	2	33	22S	26E	566149	3579390*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 03905

Subbasin: C

Cross Reference: -

Primary Purpose: SAN 72-12-1 SANITARY IN CONJUNCTION WITH A COMMERCIAL USE

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 1

Cause/Case: -

Owner: TRI STAR SERVICES LLC

Contact: MARIA PARRAS

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/	Acres	Diversion	Consumptive
			1	2		To			
574595	72121	2015-08-24	PMT	APR	C 03905 POD1	T			1

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)			Other Location Desc		
			64	16	4	X	Y				
C 03905 POD1			4	4	1	33	22S	26E	565909	3579302	MCKINTRICK RD 1/2 MILE EAST



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02822

Subbasin: C

Cross Reference: -

Primary Purpose: MUL 72-12-1 MULTIPLE DOMESTIC HOUSEHOLDS

Primary Status: EXP EXPIRED

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: TOMMY HARDESTY

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
466510	72121	2001-05-03	EXP	EXP	C 02822	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc			
			64	16	4	X	Y				
C 02822			2	3	1	33	22S	26E	565543	3579584*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02168

Subbasin: C

Cross Reference: -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: RONALD D. FREDERICK

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
468945	72121	1988-07-29	PMT	LOG	C 02168	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc			
			64	16	4	X	Y				
C 02168		Shallow	1	3	1	28	22S	26E	565337	3581231*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02183

Subbasin: C

Cross Reference: -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: JESSE F. RAYROUX

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
469008	72121	1989-10-13	PMT	APR	C 02183	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc
			64	16	4	X	Y	
C 02183			3	4	29 22S 26E	564623	3580303*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 01388

Subbasin: C

Cross Reference: -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: L A CARTER

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
463286	72121	1968-07-30	PMT	APR	C 01388	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc	
			64 16 4	Sec	Tws	Rng	X		Y
C 01388			3	2	33	22S 26E	566250	3579491*	

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 01192

Subbasin: C

Cross Reference: -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 3

Cause/Case: -

Owner: ANTONIO MEDRANO

Documents on File



[get images](#)

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
462577	72121	1964-04-21	PMT	LOG	C 01192	T		3	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc		
			64 16 4	Sec	Tws	Rng	X		Y	
C 01192		Shallow	2	4	33	22S	26E	566664	3579084*	

An () after northing value indicates UTM location was derived from PLSS - see Help

CARLSBAD CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001291085

LONQUIST & CO
1001 MCKINNEY, SUITE 1650

HOUSTON TX 77002

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

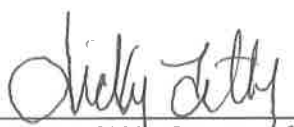
07/11/19

3Bear Field Services, LLC, 1512 Larimer St, Suite 540, Denver, CO 80202, is filling Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for administrative approval for its salt water disposal well Gillock-Brown SWD No. 1. The proposed well will be located at 182' FNL & 2,172' FWL in Section 33, Township 22S, Range 26E in Eddy County, New Mexico. Disposal water will be sourced from area production, and will be injected into the Devonian-Silurian Formation (determined by offset log analysis) through an open hole completion between an applied for top of 12,225' feet to a maximum depth of 13,345' feet. The maximum surface injection pressure will not exceed 2,445 psi with a maximum rate of 25,000 BWPd. Interested parties opposing the action must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. Additional information can be obtained from the applicant's agent, Lonquist & Co., LLC, at (512) 600-1774.

Run: July 11, 2019 Legal ad #1291085


Legal Clerk

Subscribed and sworn before me this
11th of July 2019.


State of WI, County of Brown
NOTARY PUBLIC

9/9-21
My Commission Expires



Ad#:0001291085
P O : 1291085
of Affidavits :0.00

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
NM OIL CONSERVATION
Oil Conservation Division **ARTESIA DISTRICT** **AMENDED REPORT**

1220 South St. Francis Dr. **AUG 27 2018**
Santa Fe, NM 87505

RECEIVED

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address 3BEAR FIELD SERVICES, LLC 1512 LARIMER ST., SUITE 540 DENVER, CO 80202		² OGRID Number 320495 372603 ³ API Number 30-015 45219
⁴ Property Code 322295	⁵ Property Name GILLOCK-BROWN SWD	⁶ Well No. 1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
C	33	22S	26E		696	NORTH	1568	WEST	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name SWD; DEVONIAN-SILURIAN	Pool Code 97869
--	---------------------------

Additional Well Information

¹¹ Work Type N	¹² Well Type S	¹³ Cable/Rotary R	¹⁴ Lease Type P	¹⁵ Ground Level Elevation 3297
¹⁶ Multiple YES	¹⁷ Proposed Depth 13,345'	¹⁸ Formation SILURO-DEVONIAN	¹⁹ Contractor NABORS	²⁰ Spud Date 11/01/2018
Depth to Ground water 187'		Distance from nearest fresh water well 1841'		Distance to nearest surface water 760' (SHEEP DRAW)

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
SURF	17.5"	13.375"	48#	1600	570	0
INTER	12.25"	9.625"	40#	8500	1810	0
LINER	8.75"	7.625"	39#	12225	280	8200

Casing/Cement Program: Additional Comments

PLEASE SEE ATTACHED WELLBORE DIAGRAM

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
SEE ATTACHMENT			

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> if applicable. Signature: <i>Jennifer Elrod</i> Printed name: JENNIFER ELROD Title: SR. REGULATORY TECH E-mail Address: jelrod@chisholmenenergy.com Date: 08/27/2018	<div style="text-align: center;">OIL CONSERVATION DIVISION</div> Approved By: <i>Raymond W. Godany</i> Title: <i>Geologist</i> Approved Date: 8-29-18 Expiration Date: 8-29-20 Conditions of Approval Attached Approved C-108
Phone: 817-953-3728	

**NM OIL CONSERVATION
ARTESIA DISTRICT**

AUG 27 2018

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45219		² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN
⁴ Property Code 322295	⁵ Property Name GILLOCK - BROWN SWD		⁶ Well Number 1
⁷ OGRID No. 320495 372603	⁸ Operator Name 3BEAR FIELD SERVICES, LLC		⁹ Elevation 3297'

" Surface Location

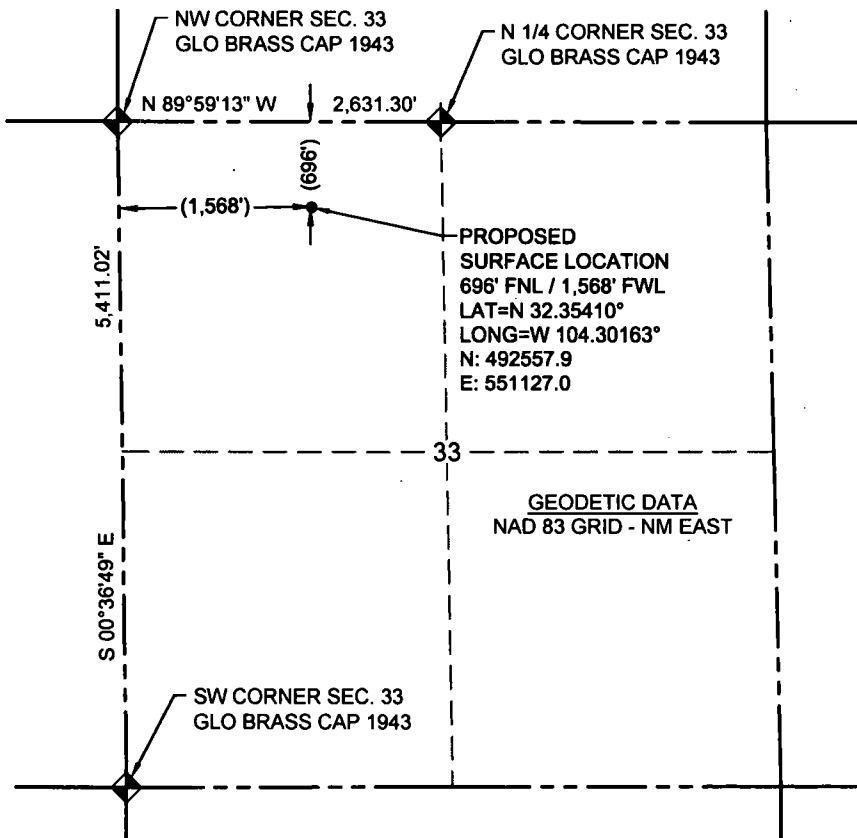
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	33	22S	26E		696	NORTH	1,568	WEST	EDDY

" Bottom Hole Location If Different From Surface

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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



" OPERATOR CERTIFICATION

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

Jennifer Elrod 08/06/2018
Signature Date

JENNIFER ELROD

Printed Name

jelrod@chisholmenenergy.com

E-mail Address

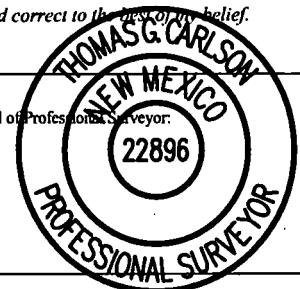
" SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

6/07/18

Date of Survey

Signature and Seal of Professional Surveyor:



22896

Certificate Number

Ref 8-29-18

JDC Drilling Company, LLC

RIG NO. 7

Annular Preventer

13-5/8" 5,000 PSI WP

Ram Preventers

13-5/8" 10,000 PSI WP Double Ram

13-5/8" 10,000 PSI WP Single Ram

Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump.

Test the annular to 250 psi/2,500 psi with same as above.

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

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

WELL API NO. 30-015-45219
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name SILLOCK BROWN SWD
8. Well Number 1
9. OGRID Number 372603
10. Pool name or Wildcat SWD; DEVONIAN-SILURIAN

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM NM-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other SWD	ARTESIA DISTRICT
2. Name of Operator 3BEAR FIELD SERVICES, LLC	JAN 16 2019
3. Address of Operator	RECEIVED
4. Well Location Unit Letter C : 182 feet from the NORTH line and 2172 feet from the WEST line Section 33 Township 22S Range 26E NMPM EDDY County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3285	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

LOCATION CHANGE

FROM: 696 FNL/1568 FWL
TO: 182 FNL/2172 FWL
C-102 Attached

Please note: Well cannot be spud
until C102 is approved.

Spud Date:

Rig Release Date:

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

SIGNATURE Jennifer Elrod TITLE SR. REGULATORY TECH DATE 01/15/2019

Type or print name JENNIFER ELROD E-mail address: jelrod@chisholmenergy.com PHONE: 817-953-3728

For State Use Only

APPROVED BY Raymond W. Bodany TITLE Geologist DATE 2-7-19
Conditions of Approval (if any):

**NM OIL CONSERVATION
ARTESIA DISTRICT**

JAN 16 2019

Form C-102

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
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1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ **AMENDED REPORT
SHL CHANGE**

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45219	² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN
⁴ Property Code 322295	⁵ Property Name GILLOCK - BROWN SWD	
⁷ OGRID No. 372603	⁸ Operator Name 3BEAR FIELD SERVICES, LLC	⁶ Well Number 1
		⁹ Elevation 3285'

" Surface Location

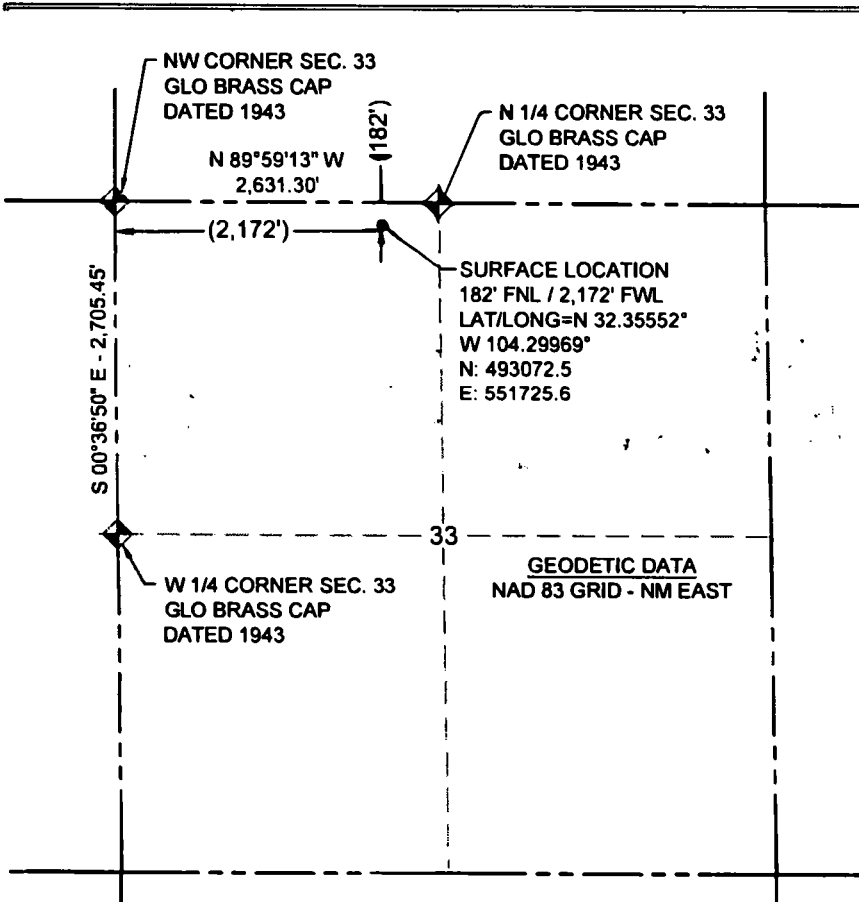
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
NW 1/4 C	33	22S	26E		182	NORTH	2,172	WEST	EDDY

" Bottom Hole Location If Different From Surface

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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



" OPERATOR CERTIFICATION

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

Jennifer Elrod 01/15/2019
Signature Date

JENNIFER ELROD

Printed Name

jelrod@chisholmenergy.com

E-mail Address

" SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11/06/18

Date of Survey

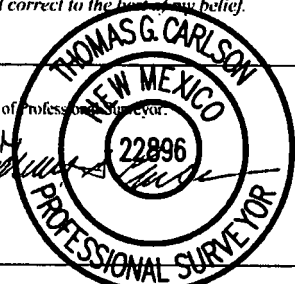
Signature and Seal of Professional Surveyor

Surface Location only

11-8-18

22896

Certificate Number



RWP 2-7-19

DETERMINATION AND NOTICE OF AFFECTED PARTIES – NEW MEXICO

If an operator or mineral lessee has legal acreage or leases within one mile of the proposed salt water disposal well, their contact information is collected for notification purposes. Legal acreage of offset operators is gathered from the New Mexico Oil Conservation District's Permitting website. Minerals leased from the federal government are determined by referencing the Bureau of Land Management's Land and Mineral System Reports database. Minerals leased from the state government are determined by referencing the New Mexico State Land Office's Data Access database. Contact information for the affected parties is then extracted from the reports that were filed with the appropriate regulatory agency. Should any private minerals that are not public information fall within the one-mile radius, a title search was performed to discover the current lessee of those minerals or identifying the mineral owner of the acreage.

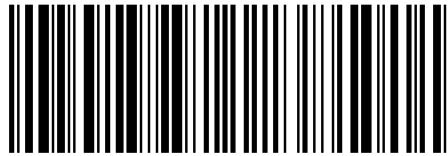
Notices were sent for the Gillock-Brown SWD No. 1 application by mailing them a copy of Form C-108 on 7/11/2019. The individual tracking numbers are attached in the following pages of this application. Receipt of each application will be monitored and presented to the Oil Conservation Division upon request.



Tyler Moehlman
Petroleum Engineer

Project: 3Bear Field Services, LLC
Gillock-Brown SWD No. 1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



9314 8699 0430 0061 0943 87

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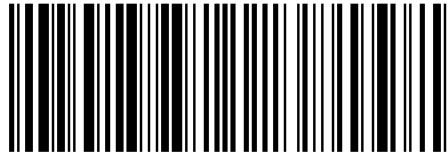


Total Postage: \$6.55

MEWBOURNE OIL CO
500 W TEXAS ST #1020
MIDLAND, TX 79701

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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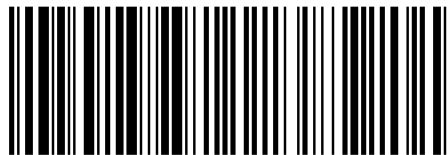


Total Postage: \$6.55

CHISHOLM ENERGY AGENT INC
801 CHERRY ST STE 1200 UNIT 20
FORT WORTH, TX 76102

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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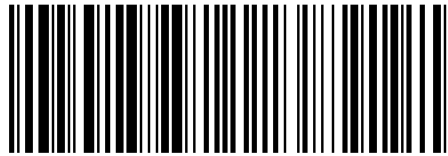


Total Postage: \$6.55

JETSTREAM NEW MEXICO LLC
PO BOX 471396
FORT WORTH, TX 76147

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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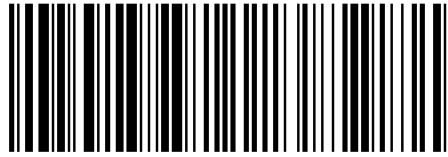


Total Postage: \$6.55

CHISHOLM ENERGY OPERATING LLC
801 CHERRY STREET
FORT WORTH, TX 76102

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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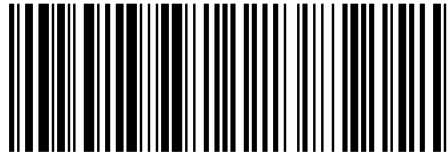


Total Postage: \$6.55

WELLS FARGO BANK N.A.
NORMA B WILEY TRUST B
PO BOX 1959
MIDLAND, TX 79702

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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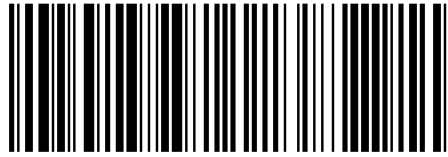


Total Postage: \$6.55

KIMBERLEY ANN CALVERT
1360 LEMMERS RD
CASPER, WY 82601

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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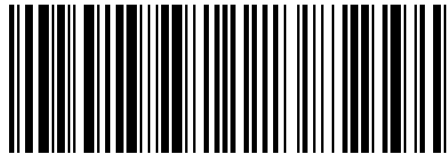


Total Postage: \$6.55

WPX ENERGY PERMIAN LLC
3500 ONE WILLIAMS CENTER
TULSA, OK 74172

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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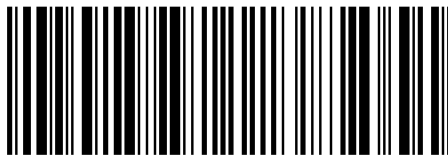


Total Postage: \$6.55

OXY USA INC
PO BOX 4294
HOUSTON, TX 77210

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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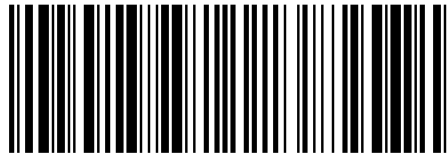


Total Postage: \$6.55

MEWBOURNE OIL CO
PO BOX 5270
HOBBS, NM 88241

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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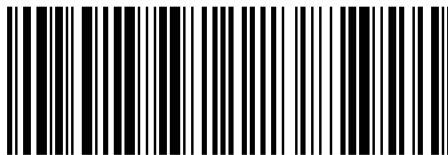


Total Postage: \$6.55

DOMINION OK TX EXPL & PROD INC
14000 QUAIL SPGS PKY #600
OKLAHOMA CITY, OK 73134

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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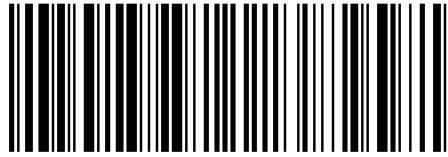


Total Postage: \$6.55

OCCIDENTAL PERMIAN LP
5 E GREENWAY PLAZA #110
HOUSTON, TX 77046

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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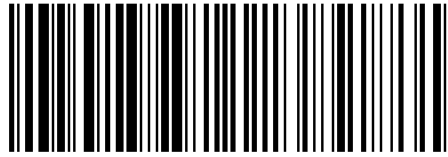


Total Postage: \$6.55

PETRUS MGT
12201 MERRIT DR #900
DALLAS, TX 75251

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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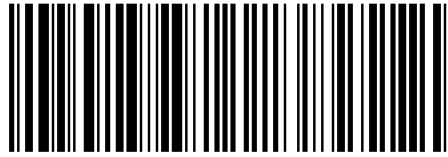


Total Postage: \$6.55

OXY USA INC
PO BOX 27570
HOUSTON, TX 77227

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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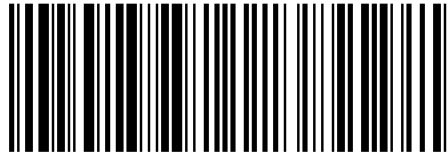


Total Postage: \$6.55

PENROC OIL CORP
1515 W CALLE SUR ST STE 174
HOBBS, NM 88240

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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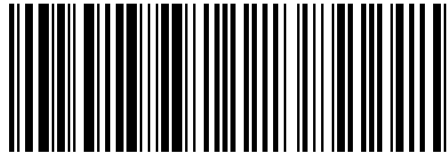


Total Postage: \$6.55

DESERT PRODUCTION INC
PO BOX 351
MIDLAND, TX 79702

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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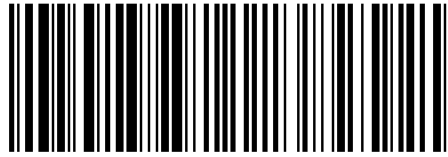


Total Postage: \$6.55

POGO RESOURCES LLC
4809 COLE AVE STE 106
DALLAS, TX 75205

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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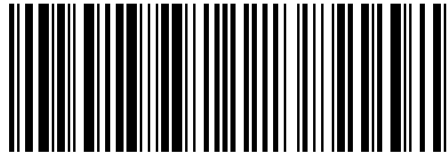


Total Postage: \$6.55

MERIT ENE MGT PARTNERS
I, II, III, VII
13727 NOEL RD #500
DALLAS, TX 75240

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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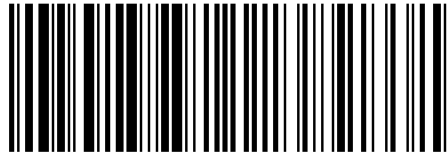


Total Postage: \$6.55

MERIT ENERGY PTNRS
13727 NOEL RD #500
DALLAS, TX 75240

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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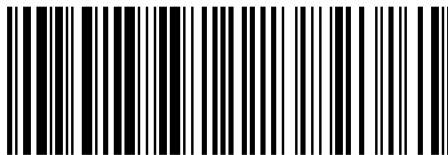


Total Postage: \$6.55

CHEVRON USA INC
6301 DEAUVILLE
MIDLAND, TX 79706

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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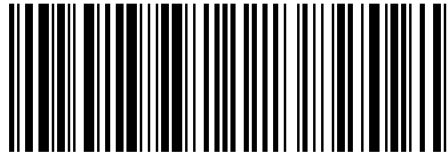


Total Postage: \$6.55

PXP PRODUCING CO LLC
717 TEXAS ST STE 2100
HOUSTON, TX 77002

Reference Number: 2094.GILLOCK BROWN SWD #1

Ramona Hovey
Lonquist & CO LLC
1001 McKinney Street
Ste 1650
Houston, TX 77002



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Total Postage: \$6.55

GILLOCK, WILLIAM F JR & BROWN, BONNIE M K/S
159 GILLOCK ROAD
CARLSBAD, NM 88220

Reference Number: 2094.GILLOCK BROWN SWD #1

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ ☒ Disposal _____ Storage
Application qualifies for administrative approval? _____ ☒ Yes _____ No
- II. OPERATOR: 3Bear Field Services, LLC
ADDRESS: 415 W. Wall St., Suite 1212
CONTACT PARTY: Kevin Burns PHONE: 432-686-2973
- 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: Steve Pattee TITLE: Consulting Engineer – Agent for 3Bear Field Service
SIGNATURE:  DATE: 7/11/2019
E-MAIL ADDRESS: ramona@lonquist.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: _____

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.

INJECTION WELL DATA SHEET

OPERATOR: 3Bear Field Services, LLC

WELL NAME & NUMBER: Gillock-Brown SWD No. 1

WELL LOCATION: 182' FNL & 2,172' FWL
FOOTAGE LOCATION

C
UNIT LETTER

33 SECTION 22S TOWNSHIP 26E RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17.500"
Cemented with 570 sacks.
Top of Cement: surface

Casing Size: 13.375"
or ft³
Method Determined: circulation

Intermediate Casing

Hole Size: 12.250"
Cemented with 1,810 sacks.
Top of Cement: surface

Casing Size: 9.625"
or ft³
Method Determined: circulation

Liner

Hole Size: 8.750"
Cemented with 280 sacks.
Top of Cement: 8.200'
Total Depth: 13.345'

Casing Size: 7.625"
or ft³
Method Determined: circulation

Injection Interval

12.225 feet to 13.345 feet
(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 20 lb/ft. HCL-80, BTC from 0' - 12,175'

Lining Material: Duoline

Type of Packer: 7-5/8" X 5-1/2" Permanent Packer with High Temperature Elastomer and Full Incone1 925 Trim

Packer Setting Depth: 12,175'

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

Additional Data

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

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

2. Name of the Injection Formation: Devonian, Fusselman,

3. Name of Field or Pool (if applicable): SWD; Devonian-Silurian (Pool Code: 97869)

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, new drill.

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

Bone Spring: 4,950'

Wolfcamp: 8,500'

Strawn: 10,075'

Morrow: 11,000'

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
NM OIL CONSERVATION
Oil Conservation Division **ARTESIA DISTRICT** **AMENDED REPORT**

1220 South St. Francis Dr. **AUG 27 2018**
Santa Fe, NM 87505

RECEIVED

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address 3BEAR FIELD SERVICES, LLC 1512 LARIMER ST., SUITE 540 DENVER, CO 80202		² OGRID Number 320495 372603 ³ API Number 30-015 45219
⁴ Property Code 322295	⁵ Property Name GILLOCK-BROWN SWD	
		⁶ Well No. 1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
C	33	22S	26E		696	NORTH	1568	WEST	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name SWD; DEVONIAN-SILURIAN	Pool Code 97869
--	---------------------------

Additional Well Information

¹¹ Work Type N	¹² Well Type S	¹³ Cable/Rotary R	¹⁴ Lease Type P	¹⁵ Ground Level Elevation 3297
¹⁶ Multiple YES	¹⁷ Proposed Depth 13,345'	¹⁸ Formation SILURO-DEVONIAN	¹⁹ Contractor NABORS	²⁰ Spud Date 11/01/2018
Depth to Ground water 187'		Distance from nearest fresh water well 1841'		Distance to nearest surface water 760' (SHEEP DRAW)

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
SURF	17.5"	13.375"	48#	1600	570	0
INTER	12.25"	9.625"	40#	8500	1810	0
LINER	8.75"	7.625"	39#	12225	280	8200

Casing/Cement Program: Additional Comments

PLEASE SEE ATTACHED WELLBORE DIAGRAM

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
SEE ATTACHMENT			

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> if applicable. Signature: <i>Jennifer Elrod</i> Printed name: JENNIFER ELROD Title: SR. REGULATORY TECH E-mail Address: jelrod@chisholmenenergy.com Date: 08/27/2018	<div style="text-align: center;">OIL CONSERVATION DIVISION</div> Approved By: <i>Raymond W. Godany</i> Title: <i>Geologist</i> Approved Date: 8-29-18 Expiration Date: 8-29-20 Conditions of Approval Attached Approved C-108
Phone: 817-953-3728	

**NM OIL CONSERVATION
ARTESIA DISTRICT**

AUG 27 2018

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45219		² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN
⁴ Property Code 322295	⁵ Property Name GILLOCK - BROWN SWD		⁶ Well Number 1
⁷ OGRID No. 320495 372603	⁸ Operator Name 3BEAR FIELD SERVICES, LLC		⁹ Elevation 3297'

" Surface Location

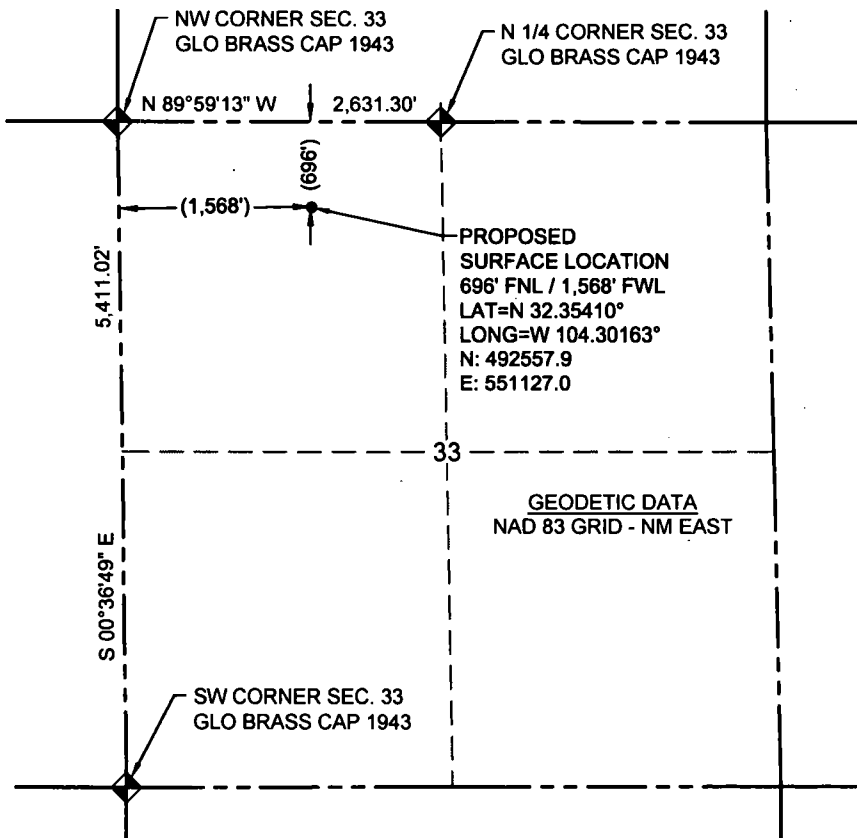
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	33	22S	26E		696	NORTH	1,568	WEST	EDDY

" Bottom Hole Location If Different From Surface

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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



" OPERATOR CERTIFICATION

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

Jennifer Elrod 08/06/2018
Signature Date

JENNIFER ELROD

Printed Name

jelrod@chisholmenenergy.com

E-mail Address

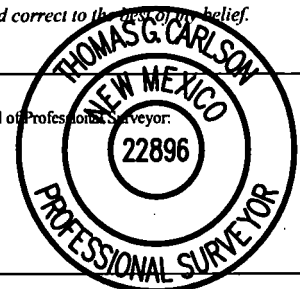
" SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

6/07/18

Date of Survey

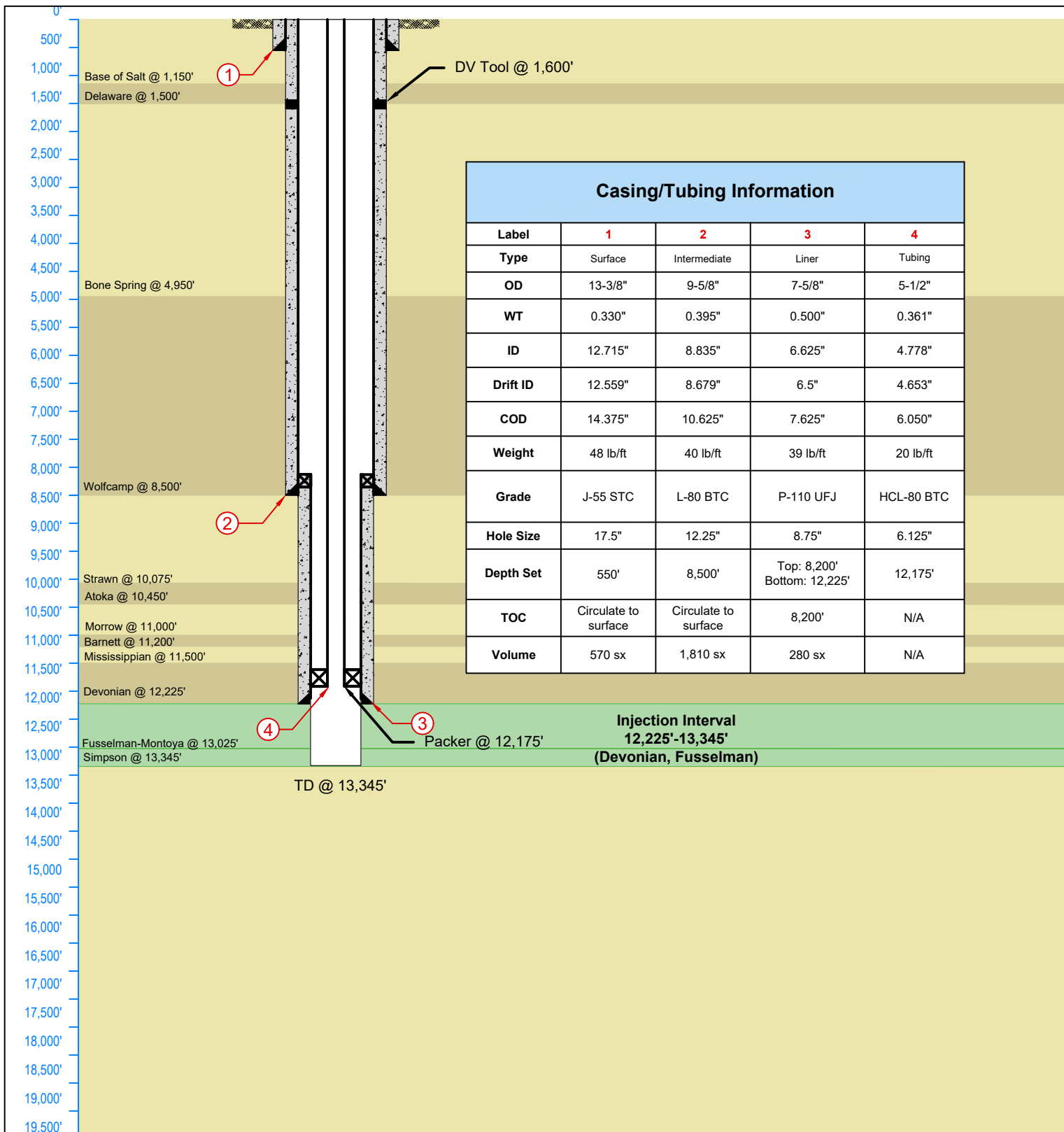
Signature and Seal of Professional Surveyor:



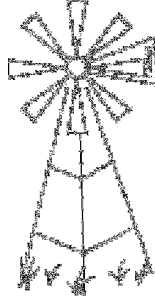
22896

Certificate Number

Ref 8-29-18



LONGQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS <small>AUSTIN • HOUSTON CALGARY • WICHITA</small> <small>DENVER • COLLEGE STATION BATON ROUGE • EDMONTON</small> Texas License F-9147	3 Bear Field Services, LLC		Gillock-Brown SWD No. 1	
	Country: USA		State/Province: New Mexico	County/Parish: Eddy
12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	Location:		Site: 182' FNL & 2,172' FWL	Survey: S33-T22S-R26E
	API No: N/A		Field: Devonian-Silurian	Well Type/Status: SWD
	NMOCD District No: 2		Project No: 2094	Date: 07/09/2019
	Drawn: TFM		Reviewed:	Approved:
	Rev No: 1		Notes:	



ZEIGLER GEOLOGIC CONSULTING, LLC

13170 Central Ave. SE, Suite B #137

Albuquerque, NM 87123

zeiglergeo@gmail.com; zeiglergeo.com

(505) 263.5448 (575) 207.7826

For: 3Bear Energy, LLC
415 W. Wall St., Suite 1212
Midland, TX 79701

August 7, 2018

Re: Gillock-Brown SWD #1, Eddy County, New Mexico

With regards to the Gillock-Brown SWD #1 well, located in unit letter C, section 33, T22S, R26E (NM Prime Meridian) in Eddy County, the nearest documented basement-penetrating fault is located approximately 26 miles southwest of the well's location. Available geologic and engineering data has been examined and suggest no evidence of faults in proximity to the well, nor hydrological connection between the proposed injection zone and any freshwater aquifers utilized for domestic, municipal or livestock water resources.

Sincerely,

A handwritten signature in blue ink that reads "Kate Zeigler". The signature is cursive and stylized.

Kate Zeigler, Ph.D., CPG (AIPG #11803)
Geologist



3Bear Field Services, LLC

Gillock-Brown SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Gillock-Brown SWD
Well No.	1
Location	S-33 T-22S R-26E
Footage Location	182' FNL & 2,172' FWL

2.

a. Wellbore Description

Casing Information			
Type	Surface	Intermediate	Liner
OD	13.375"	9.625"	7.625"
WT	0.330"	0.395"	0.500"
ID	12.715"	8.835"	6.625"
Drift ID	12.559"	8.679"	6.500"
COD	14.375"	10.625"	7.625"
Weight	48 lb/ft	40 lb/ft	39 lb/ft
Grade	J-55 STC	HCL-80 BTC	P-110 UFJ
Hole Size	17.5"	12.25"	8.75"
Depth Set	550'	8,500'	8,200'-12,225'

b. Cementing Program

Cement Information			
Casing String	Surface	Intermediate	Liner
Lead Cement	Class C	Class C	Class H
Lead Cement Volume	-	Stage 1: 1,145 sks Stage 2: 375 sks	100 sks
Lead Cement Density	-	Stage 1: 12.7 ppg Stage 2: 12.9 ppg	12.7 ppg
Tail Cement	Class C	Class C	Class H
Tail Cement Volume	570 sks	Stage 1: 145 sks Stage 2: 375 sks	180 sks
Tail Cement Density	14.8 ppg	Stage 1: 14.8 ppg Stage 2: 14.8 ppg	14.5 ppg
Total Sacks	570 sks	1,810 sks	280 sks
TOC	Surface	Stage 1: 1,600' Stage 2: Surface	8,200'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface

3. Tubing Description

Tubing Information	
OD	5.5"
WT	0.361"
ID	4.778"
Drift ID	4.653"
COD	6.050"
Weight	20 lb/ft
Grade	HCL-80 BTC
Depth Set	0-12,175'

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Fusselman

2. Gross Injection Interval: 12,225'-13,345'

Completion Type: Open Hole

3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Bone Spring	4,950'
Wolfcamp	8,500'
Strawn	10,075'
Morrow	11,000'

VI. Area of Review

No wells within the area of review penetrate the proposed injection zone.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 20,000 BPD

Maximum Volume: 25,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 1,834 PSI (surface pressure)

Maximum Injection Pressure: 2,445 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Artesia formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Artesia, Bone Spring, Delaware, Grayburn/San Andreas, Morrow, Pennsylvanian, and Strawn formations.
5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

Devonian Formation Lithology:

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

Fusselman Formation Lithology:

The Silurian/Ordovician Fusselman Formation is stratigraphically below the Wristen Group and is above and separated from the Montoya Formation by the Sylvan Shale. The Sylvan Shale is the lower confining layer for the proposed well. Fusselman facies include a laminated skeletal wackestone in the upper part and a buildup complex in the lower part composed of ooid and bryozoan grainstones. These grainstones can also be potentially prolific zones for disposal.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Base of Salt	1,150'
Delaware	1,500'
Bone Spring	4,950'
Wolfcamp	8,500'
Strawn	10,075'
Atoka	10,450'
Morrow	11,000'
Barnett	11,200'
Mississippian Lime	11,500'
Devonian	12,225'
Fusselman	13,025'

B. Underground Sources of Drinking Water

Eleven (11) water wells exist within the proposed well. Water wells have an average depth of 142 feet. Across the one-mile radius, fresh water wells are usually drilled between 100' and 505' in depth. The Rustler is known to exist in this general area and may also be another USDW and will be protected by setting surface casing at 550' before the Salado salt to prevent contamination of the aquifer.

IX. Proposed Stimulation Program

No stimulation program planned.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

Attached is a map of the eleven (11) water wells that exists within one-mile of the well location. Samples from the well are being obtained by Cardinal Laboratories and will be reported to the Oil Conservation Division as soon as a report is received. Water right summaries are attached for all wells.