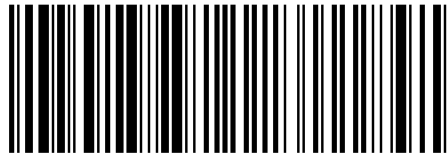


Additional Information

Received: 06/20/2019

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

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



9314 8699 0430 0061 3731 09

RETURN RECEIPT (ELECTRONIC)

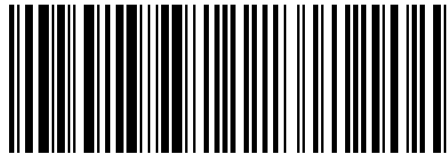


Total Postage: \$6.10

Bureau of Land Management
301 Dinosaur Trail
Santa Fe, NM 87508

Reference Number: 2094-Gillick Brown SWD #1

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



9314 8699 0430 0061 3732 22

RETURN RECEIPT (ELECTRONIC)



Total Postage: \$6.10

New Mexico State Land Office
a. 310 Old Santa Fe Trail
Santa Fe, NM 87508

Reference Number: 2094-Gillick Brown SWD #1

July 19, 2019

Bureau of Land Management
301 Dinosaur Trail
Santa Fe, NM 87508

Subject: 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 Services LLC's Gillock-Brown SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius

According to the New Mexico Oil Conservation Division, surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date in which this application was mailed to them.

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
steve@lonquist.com

July 19, 2019

New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87508

Subject: 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 Services LLC's Gillock-Brown SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius

According to the New Mexico Oil Conservation Division, surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date in which this application was mailed to them.

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
steve@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, 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
Oil Conservation Division

Form C-101
Revised July 18, 2013

NM OIL CONSERVATION
ARTESIA DISTRICT

1220 South St. Francis Dr.
Santa Fe, NM 87505

AUG 27 2018

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			

AUG 27 2018

RECEIVED Revised August 1, 2011

District Office

☐ AMENDED REPORT

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

¹ API Number 30-015-45219		² Pool Code 97869	³ Pool Name SWD; DEVONIAN-SILURIAN	
⁴ Property Code 322295	⁵ Property Name GILCOCK - BROWN SWD			⁶ Well Number 1
⁷ OGRID No. 320485 372603	⁸ Operator Name 3BEAR FIELD SERVICES, LLC			⁹ Elevation 3297'

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

UL or lot no.	Section	Township	Range	Lot 1dn	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.

17 OPERATOR CERTIFICATION

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

Jennifer Elrod 08/06/2018
Signature Date

JENNIFER ELROD

Printed Name _____

jelrod@chisholmenergy.com

E-mail Address

18 SURVEYOR CERTIFICATION

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

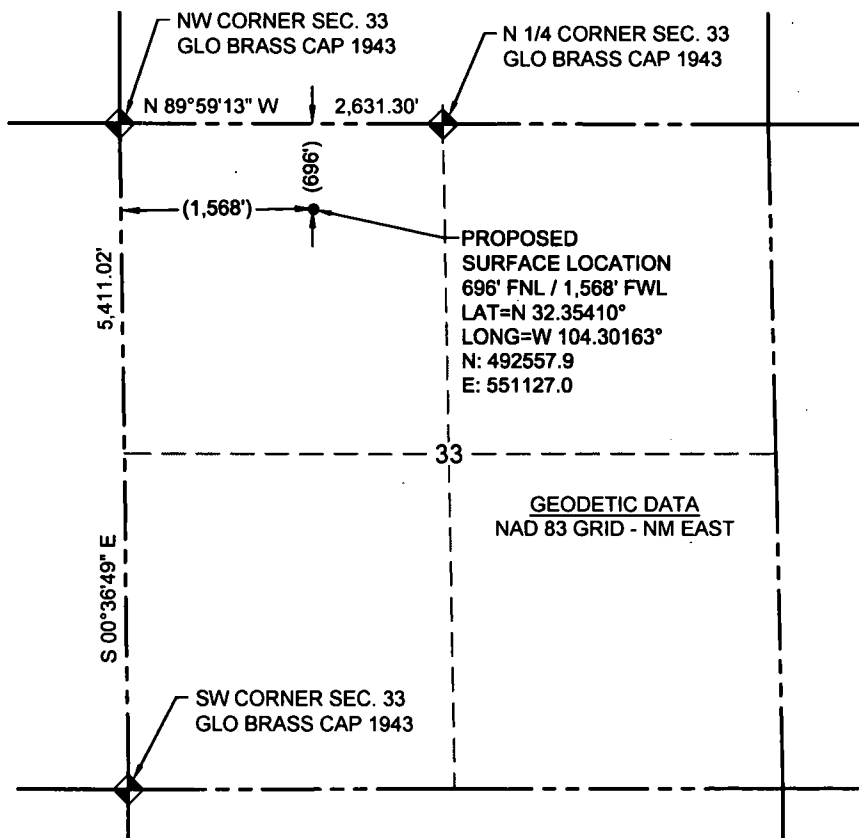
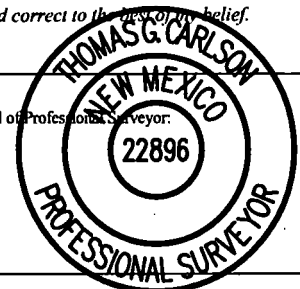
6/07/18

Date of Survey _____

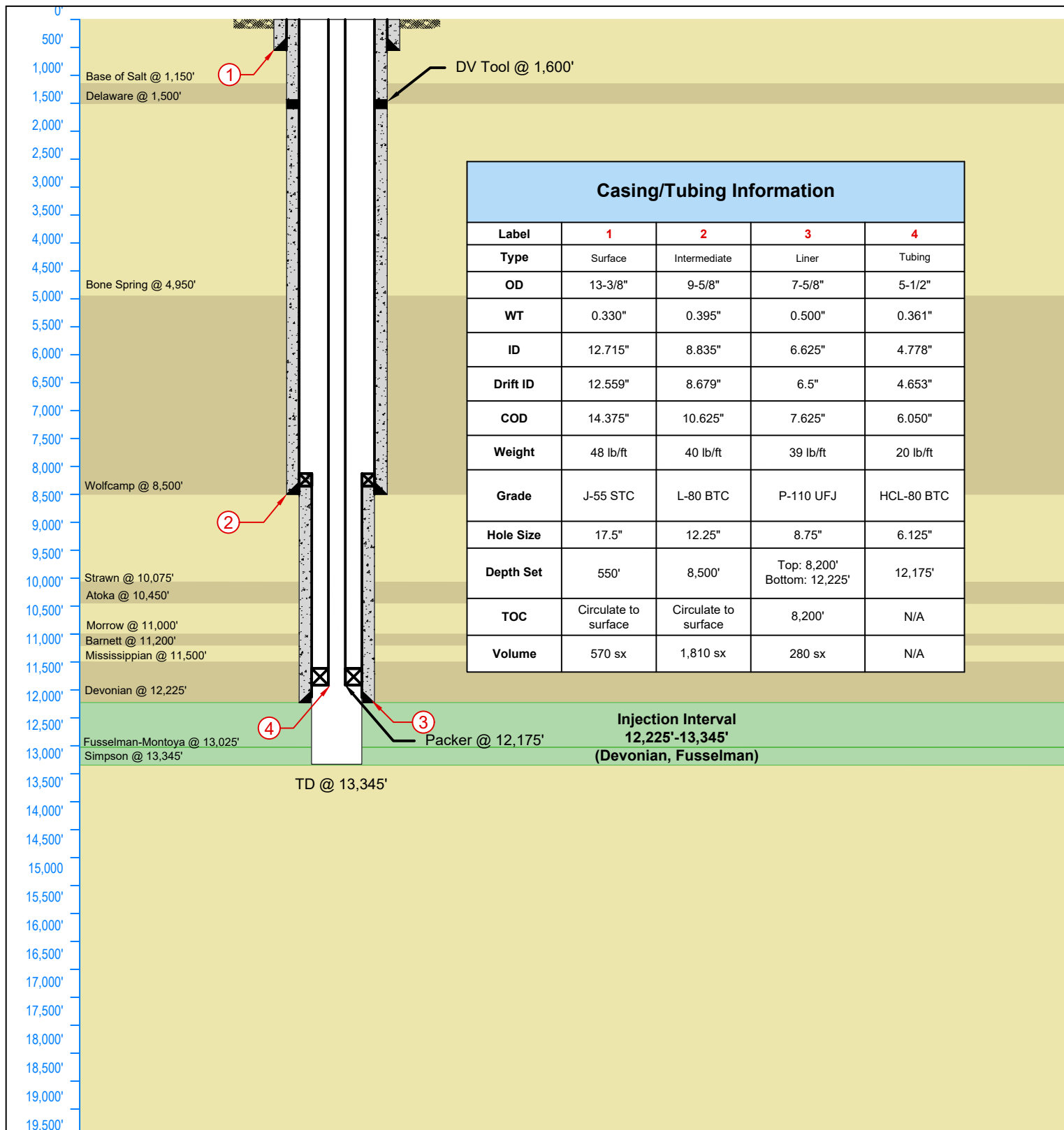
Signature and Seal of Professional Surveyor:

22896

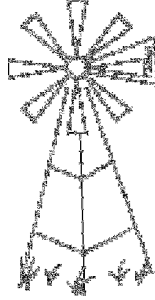
Certificate Number



Ref 8-29-18.



LONGQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS AUSTIN • HOUSTON CALGARY • WICHITA DENVER • COLLEGE STATION BATON ROUGE • EDMONTON 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.