

# 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: <b>07/19/2019</b>	REVIEWER:	TYPE: <b>SWD</b>	APP NO: <b>pMAM1920034542</b>
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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: Bear Tooth SWD No. 1** \_\_\_\_\_ **API:** \_\_\_\_\_  
**Pool: SWD: SWD; Devonian-Silurian** \_\_\_\_\_ **Pool Code: 97869** \_\_\_\_\_

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

**SWD-2199**

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
- A. Location – Spacing Unit – Simultaneous Dedication  
 NSL       NSP (PROJECT AREA)       NSP (PRORATION UNIT)       SD
- B. Check one only for [ I ] or [ II ]
- [ I ] Commingling – Storage – Measurement  
 DHC    CTB    PLC    PC    OLS    OLM
- [ II ] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery  
 WFX    PMX    SWD    IPI    EOR    PPR

- 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

<b>FOR OCD ONLY</b>	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	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

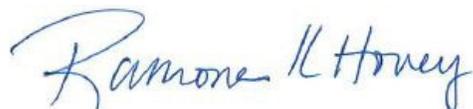
**RE: BEAR TOOTH SWD NO. 1  
FORM C-108 APPLICATION FOR AUTHORIZATION TO INJECT**

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"), Bear Tooth 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 notices will be sent to the OCD upon receipt.

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

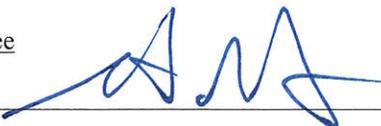
Regards,



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

(512) 600-1777  
[ramona@lonquist.com](mailto: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: Mike Solomon PHONE: 303-862-3962
- 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: steve@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.

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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: Bear Tooth SWD No. 1

WELL LOCATION: 1,104' FSL & 1,439' FWL  
FOOTAGE LOCATION

N  
UNIT LETTER

1  
SECTION

24S  
TOWNSHIP

26E  
RANGE

## WELLBORE SCHEMATIC

## WELL CONSTRUCTION DATA

### Surface Casing

Hole Size: 17.500"

Casing Size: 13.375"

Cemented with 470 sacks.

*or* \_\_ ft<sup>3</sup>

Top of Cement: surface

Method Determined: circulation

### Intermediate Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with 1,995 sacks.

*or* \_\_ ft<sup>3</sup>

Top of Cement: surface

Method Determined: circulation

### Production Liner

Hole Size: 8.750"

Casing Size: 7.625"

Cemented with 350 sacks.

*or* \_\_ ft<sup>3</sup>

Top of Cement: 8,400'

Method Determined: calculation

Total Depth: 13,785'

### Injection Interval

12,850 feet to 13,785 feet

(Open Hole)

**INJECTION WELL DATA SHEET**

Tubing Size: 5.5", 20 lb/ft, HCL-80, BTC from 0' – 12,800

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: 12,800'

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:

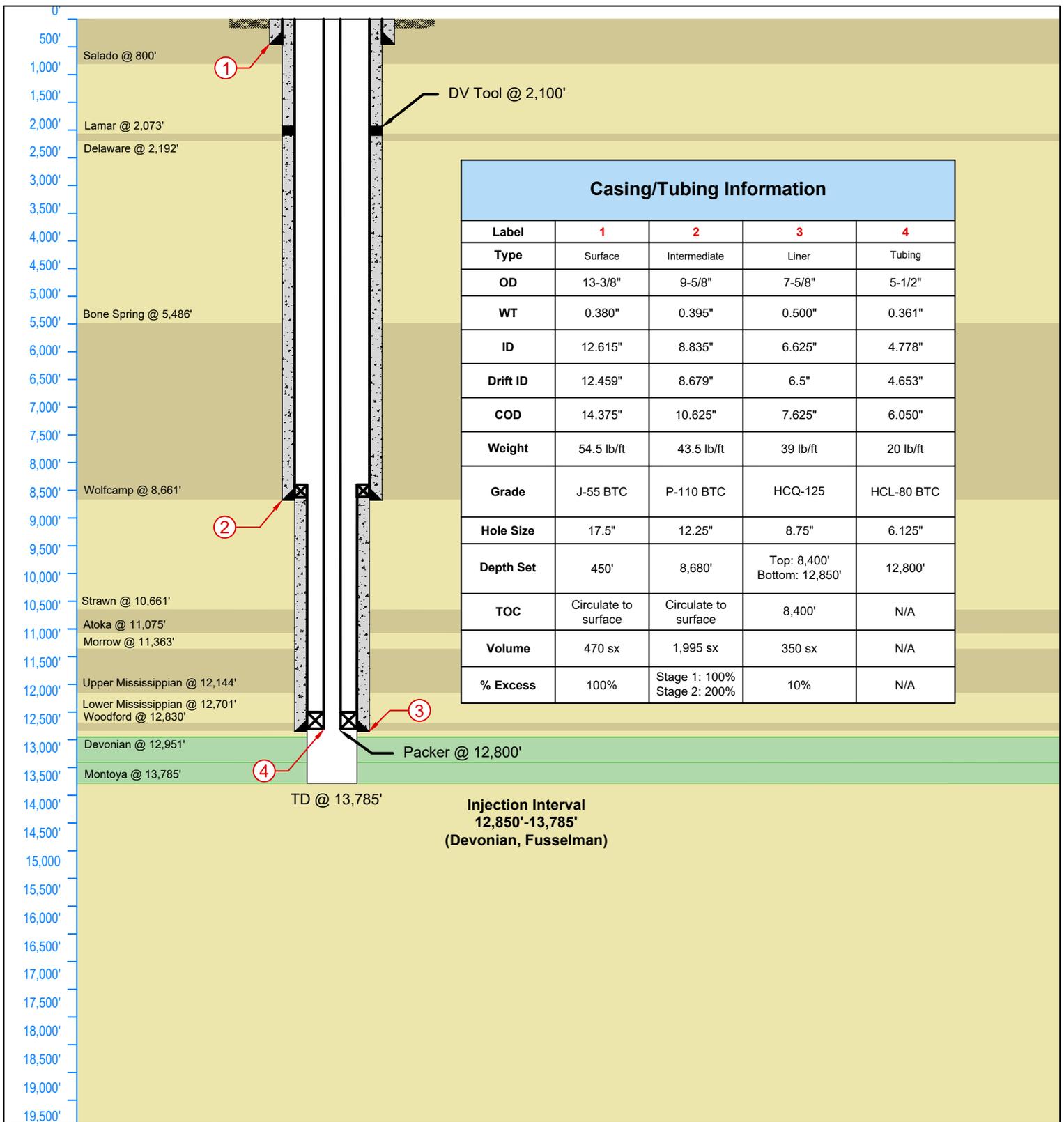
Delaware: 2,192'

Bone Spring: 5,486'

Wolfcamp: 8,661'

Strawn: 10,661'

Morrow: 11,363'



Casing/Tubing Information				
Label	1	2	3	4
Type	Surface	Intermediate	Liner	Tubing
OD	13-3/8"	9-5/8"	7-5/8"	5-1/2"
WT	0.380"	0.395"	0.500"	0.361"
ID	12.615"	8.835"	6.625"	4.778"
Drift ID	12.459"	8.679"	6.5"	4.653"
COD	14.375"	10.625"	7.625"	6.050"
Weight	54.5 lb/ft	43.5 lb/ft	39 lb/ft	20 lb/ft
Grade	J-55 BTC	P-110 BTC	HCQ-125	HCL-80 BTC
Hole Size	17.5"	12.25"	8.75"	6.125"
Depth Set	450'	8,680'	Top: 8,400' Bottom: 12,850'	12,800'
TOC	Circulate to surface	Circulate to surface	8,400'	N/A
Volume	470 sx	1,995 sx	350 sx	N/A
% Excess	100%	Stage 1: 100% Stage 2: 200%	10%	N/A

<b>LONQUIST &amp; CO. LLC</b> PETROLEUM ENGINEERS ENERGY ADVISORS <small>AUSTIN · HOUSTON · CALGARY · WICHITA</small> <small>DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON</small>	3 Bear Field Services, LLC		<b>Bear Tooth SWD No. 1</b>	
	Country: USA	State/Province: New Mexico		County/Parish: Eddy
Texas License F-9147	Location:	Site: 1,104' FSL & 1,439' FWL	Survey: S1-T24S-R26E	
12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	API No: N/A	Field: Devonian-Silurian	Well Type/Status: SWD	
	NMOCD District No: 2	Project No: 1829	Date: 07/10/2019	
	Drawn: TFM	Reviewed:	Approved:	
	Rev No: 1	Notes:		



**3Bear Field Services, LLC**

**Bear Tooth SWD No. 1**

**FORM C-108 Supplemental Information**

III. Well Data

A. Wellbore Information

1.

Well information	
<b>Lease Name</b>	Bear Tooth SWD
<b>Well No.</b>	1
<b>Location</b>	S-1 T-24S R-26E
<b>Footage Location</b>	1,104' FSL & 1,439' FWL

2.

a. Wellbore Description

Type	Surface	Intermediate	Liner
<b>OD</b>	13.375"	9.625"	7.625"
<b>WT</b>	0.380"	0.395"	0.500"
<b>ID</b>	12.615"	8.835"	6.625"
<b>Drift ID</b>	12.459"	8.679"	6.500"
<b>COD</b>	14.375"	10.625"	7.625"
<b>Weight</b>	54.5 lb/ft	43.5 lb/ft	39 lb/ft
<b>Grade</b>	J-55 BTC	P-110 BTC	HCQ-125
<b>Hole Size</b>	17-1/2"	12.25"	8.75"
<b>Depth Set</b>	450'	8,680'	8,400' – 12,850'

b. Cementing Program

<b>Casing String</b>	Surface	Production	Liner
<b>Lead Cement</b>		Class C	Class H
<b>Lead Cement Volume</b>		Stage 1: 945 sks Stage 2: 540 sks	90 sks
<b>Lead Cement Density</b>		Stage 1: 11.5 ppg Stage 2: 11.5 ppg	12.7 ppg
<b>Tail Cement</b>	Class C	Class C	Class H
<b>Tail Cement Volume</b>	470 sks	Stage 1: 510 sks	260 sks
<b>Tail Cement Density</b>	14.8 ppg	Stage 1: 14.8 ppg	14.5 ppg
<b>Cement Excess</b>	100%	Stage 1: 100% Stage: 200%	10%
<b>Total Sacks</b>	470 sks	1,995 sks	350 sks
<b>TOC</b>	Surface	Surface	8,400'
<b>Method</b>	Circulate to Surface	Circulate to Surface	Circulate to Surface

3. Tubing Description

<b>Tubing Information</b>	
<b>OD</b>	5.5"
<b>WT</b>	0.361"
<b>ID</b>	4.778"
<b>Drift ID</b>	4.653"
<b>COD</b>	6.050"
<b>Weight</b>	20 lb/ft
<b>Grade</b>	HCL-80 BTC
<b>Depth Set</b>	0-12,800'

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: 12,850' – 13,785'

Completion Type: Open Hole

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

<b>Formation</b>	<b>Depth</b>
Delaware	2,192'
Bone Spring	5,486'
Wolfcamp	8,661'
Strawn	10,661'
Morrow	11,363'

#### 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: 1,928 PSI (surface pressure)  
Maximum Injection Pressure: 2,570 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

<b>Formation</b>	<b>Depth</b>
Salado	800'
Lamar	2,073'
Delaware	2,192'
Bone Spring	5,486'
Wolfcamp	8,661'
Strawn	10,661'
Atoka	11,075'
Morrow	11,363'
Upper Mississippian	12,144'
Lower Mississippian	12,701'
Woodford	12,830'
Devonian	12,951'
Montoya	13,785'

B. Underground Sources of Drinking Water

No water wells exist within a one-mile radius of the proposed well. The water wells in the region are within the Carlsbad Basin of New Mexico. 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 450'.

IX. Proposed Stimulation Program

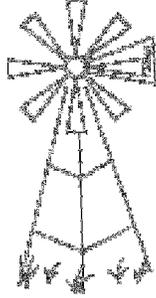
No stimulation program planned.

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

Because no water wells exist within a one-mile radius of the proposed well, chemical analysis of fresh water wells was not required at this time.



**ZEIGLER GEOLOGIC CONSULTING, LLC**

13170 Central Ave. SE, Suite B #137

Albuquerque, NM 87123

[zeiglergeo@gmail.com](mailto:zeiglergeo@gmail.com); [zeiglergeo.com](http://zeiglergeo.com)

(505) 263.5448 (575) 207.7826

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

January 28, 2019

**Re: Bear Tooth SWD #1, Eddy County, New Mexico**

With regards to the Bear Tooth SWD #1 well, located in unit letter N, section 01, T24S, R26E (NM Prime Meridian) in Eddy County, the nearest documented basement-penetrating fault is located approximately 0.5 miles east of the well's location. Available geologic and engineering data has been examined and suggest no evidence of faults in immediate 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 black ink, appearing to read "Kate Zeigler". The signature is written in a cursive, flowing style.

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

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

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name		
<sup>4</sup> Property Code		<sup>5</sup> Property Name BEAR TOOTH SWD			<sup>6</sup> Well Number	
<sup>7</sup> OGRID No.		<sup>8</sup> Operator Name 3BEAR FIELD SERVICES, LLC			<sup>9</sup> Elevation 3286'	

<sup>10</sup> Surface Location

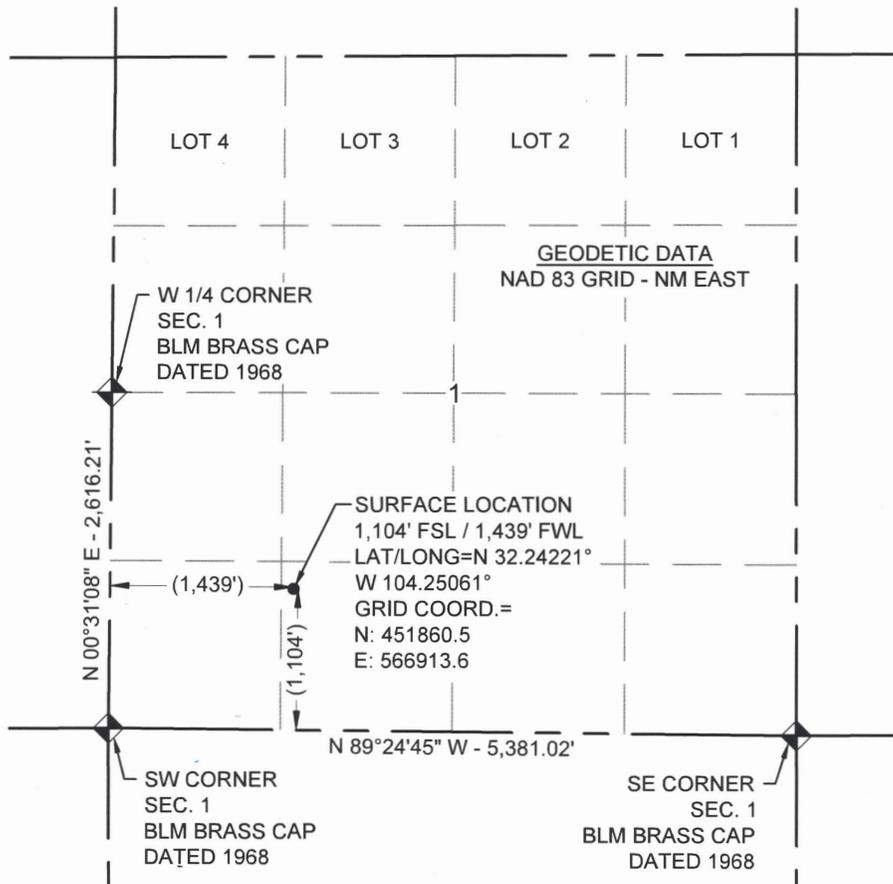
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
SW 1/4	1	24S	26E		1,104	SOUTH	1,439	WEST	EDDY

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.



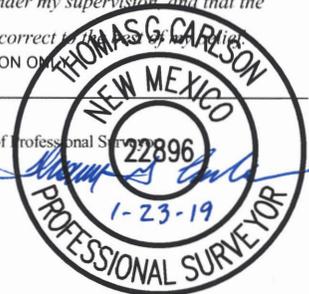
**<sup>17</sup> OPERATOR CERTIFICATION**

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.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
Printed Name \_\_\_\_\_  
E-mail Address \_\_\_\_\_

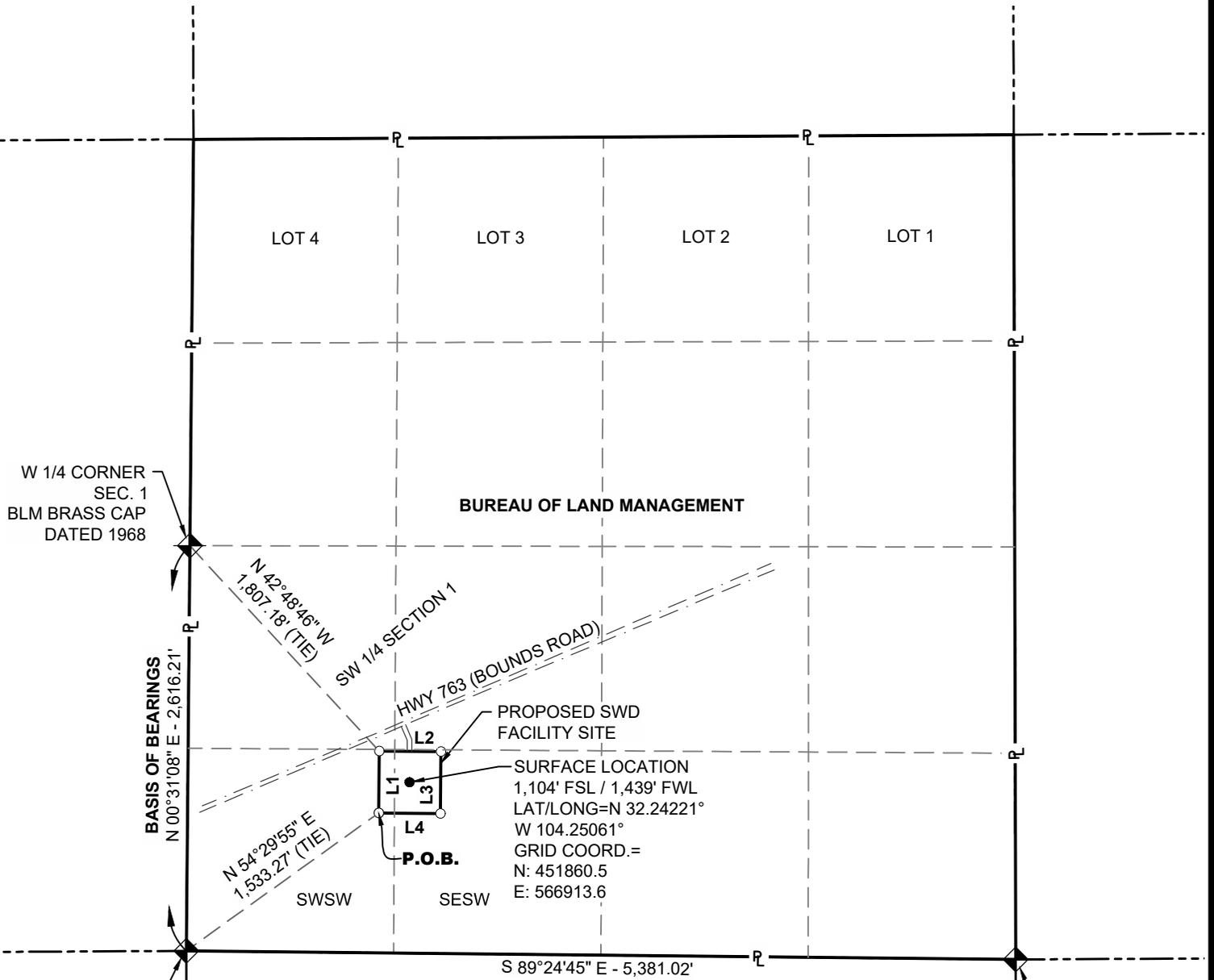
**<sup>18</sup> SURVEYOR CERTIFICATION**

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 knowledge and belief.  
SURFACE LOCATION ON PLAT  
1/21/19  
Date of Survey

Signature and Seal of Professional Surveyor  
  
22896  
Certificate Number

# EXHIBIT "A"

IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, NEW MEXICO P.M.  
EDDY COUNTY, NEW MEXICO



W 1/4 CORNER  
SEC. 1  
BLM BRASS CAP  
DATED 1968

BUREAU OF LAND MANAGEMENT

BASIS OF BEARINGS  
N 00° 31' 08" E - 2,616.21'

N 42° 48' 46" W  
1,807.18' (TIE)  
SW 1/4 SECTION 1

HWY 763 (BOUNDS ROAD)

PROPOSED SWD  
FACILITY SITE

SURFACE LOCATION  
1,104' FSL / 1,439' FWL  
LAT/LONG=N 32.24221°  
W 104.25061°  
GRID COORD.=  
N: 451860.5  
E: 566913.6

N 54° 29' 55" E  
1,533.27' (TIE)  
SWSW

SESW

S 89° 24' 45" E - 5,381.02'

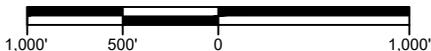
P.O.C.  
SW CORNER  
SEC. 1  
BLM BRASS CAP  
DATED 1968

SE CORNER  
SEC. 1  
BLM BRASS CAP  
DATED 1968

LINE TABLE			
NUMBER	BEARINGS	FEET	RODS
L1	N00° 31' 08"E	400.00'	24.24
L2	S89° 28' 52"E	400.00'	24.24
L3	S00° 31' 08"W	400.00'	24.24
L4	N89° 28' 52"W	400.00'	24.24

QTR/QTR	PROPOSED ACRES
SWSW	0.93
SESW	2.74

Graphic Scale in Feet



THE TOTAL AREA OF THE SWD FACILITIES AND APPURTENANCES SITE SHOWN HEREON THE BUREAU OF LAND MANAGEMENT PROPERTY IS 160,000 SQUARE FEET, OR ±3.67 ACRES.

NOTES:

1. THIS EXHIBIT AND LEGAL DESCRIPTION WERE PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND THEREFORE ENCOMPASS ENERGY SERVICES HAS NOT RESEARCHED OR SHOWN ANY OTHER EASEMENTS, RIGHTS-OF-WAY, VARIANCES AND OR AGREEMENTS OF RECORD. ALL OWNERSHIP INFORMATION WAS PROVIDED BY THE CLIENT.
2. THIS EXHIBIT AND LEGAL DESCRIPTION ARE NOT A LAND DIVISION PLAT, OR AN IMPROVEMENT SURVEY PLAT.
3. SEE ATTACHED LEGAL DESCRIPTION WHICH BY THIS REFERENCE IS MADE PART HEREOF.
4. BEARING AND DISTANCES SHOWN ARE GRID VALUES DERIVED FROM GPS OBSERVATIONS IN U.S. SURVEY FEET.

## LEGEND

- P.O.B.** POINT OF BEGINNING
- P.O.C.** POINT OF COMMENCEMENT
- FSL/FWL PERPENDICULAR DISTANCE TO NEAREST SECTION LINES
- POINT OF INTERSECTION
- ◆ SECTION CORNER
- SECTION LINE
- - - INTERIOR SECTION LINE
- · - · - EXISTING ROAD
- ▭ FACILITY SITE
- P — PROPERTY LINE

### 3 BEAR DELAWARE OPERATING - NM, LLC

#### SWD FACILITY

LANDOWNER: BUREAU OF LAND MANAGEMENT

IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH,  
RANGE 26 EAST, NEW MEXICO P.M., EDDY COUNTY, NEW MEXICO

SCALE: 1"=1,000'

DRAWN BY: JG 01/28/2019

CHECKED BY: TC 01/28/2019

REV: 0



ENCOMPASS ENERGY SERVICES  
350 INTERLOCKEN BLVD.  
SUITE 350  
BROOMFIELD, CO. 80021

DWG NO.

61551\_BEARTOOTH SWD1\_REV0

SHEET  
1 OF 2

**SURFACE SITE DESCRIPTION:**

AN AREA OF LAND FOR FACILITIES AND APPURTENANCES ON A PARCEL OF LAND OWNED BY THE BUREAU OF LAND MANAGEMENT AND IS LOCATED IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, OF THE NEW MEXICO PRINCIPAL MERIDIAN, COUNTY OF EDDY, STATE OF NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

**COMMENCING** AT THE SW CORNER OF SAID SECTION 1, (AS MONUMENTED BY A FOUND BLM BRASS CAP DATED 1968), FROM WHICH THE W 1/4 CORNER OF SAID SECTION 1, (AS MONUMENTED BY A FOUND BLM BRASS CAP DATED 1968), BEARS N 00°31'08" E, A DISTANCE OF 2,616.21 FEET, FORMING THE **BASIS OF BEARINGS** USED IN THIS DESCRIPTION;

**THENCE**, N 54°29'55" E, A DISTANCE OF 1,533.27 FEET TO THE SOUTHWESTERLY CORNER OF SAID AREA OF LAND, SAID POINT BEING THE **POINT OF BEGINNING**;

**THENCE** ALONG THE PERIMETER OF SAID AREA OF LAND, THE FOLLOWING FOUR (4) COURSES:

- 1) N 00°31'08" E, A DISTANCE OF 400.00 FEET;
- 2) S 89°28'52" E, A DISTANCE OF 400.00 FEET;
- 3) S 00°31'08" W, A DISTANCE OF 400.00 FEET;
- 4) N 89°28'52" W, A DISTANCE OF 400.00 FEET TO THE **POINT OF BEGINNING**.

THE TOTAL AREA OF THE ABOVE DESCRIBED FACILITIES AREA IS 160,000 SQUARE FEET, OR APPROXIMATELY 3.67 ACRES, MORE OR LESS.

**SURVEYOR'S STATEMENT:**

I, THOMAS G. CARLSON, A NEW MEXICO PROFESSIONAL SURVEYOR, HEREBY STATE THAT THIS LEGAL DESCRIPTION AND ACCOMPANYING EXHIBIT WERE PREPARED FROM AN ACTUAL GROUND SURVEY PERFORMED UNDER MY SUPERVISION, THAT THIS LEGAL DESCRIPTION AND EXHIBIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF AND THAT THE FIELD SURVEY ON WHICH IT IS BASED MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO AND THAT THIS LEGAL DESCRIPTION AND EXHIBIT ARE NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.



THOMAS G. CARLSON, NM PS #22896  
FOR AND ON BEHALF OF ENCOMPASS ENERGY SERVICES, LLC

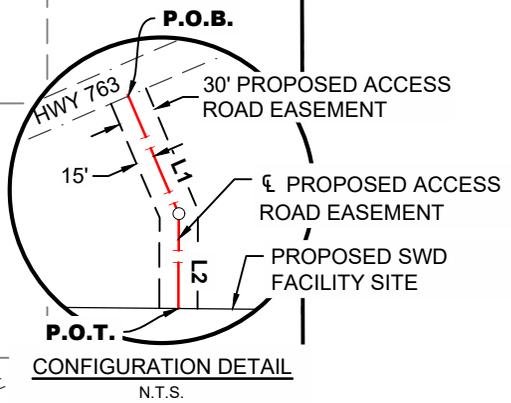
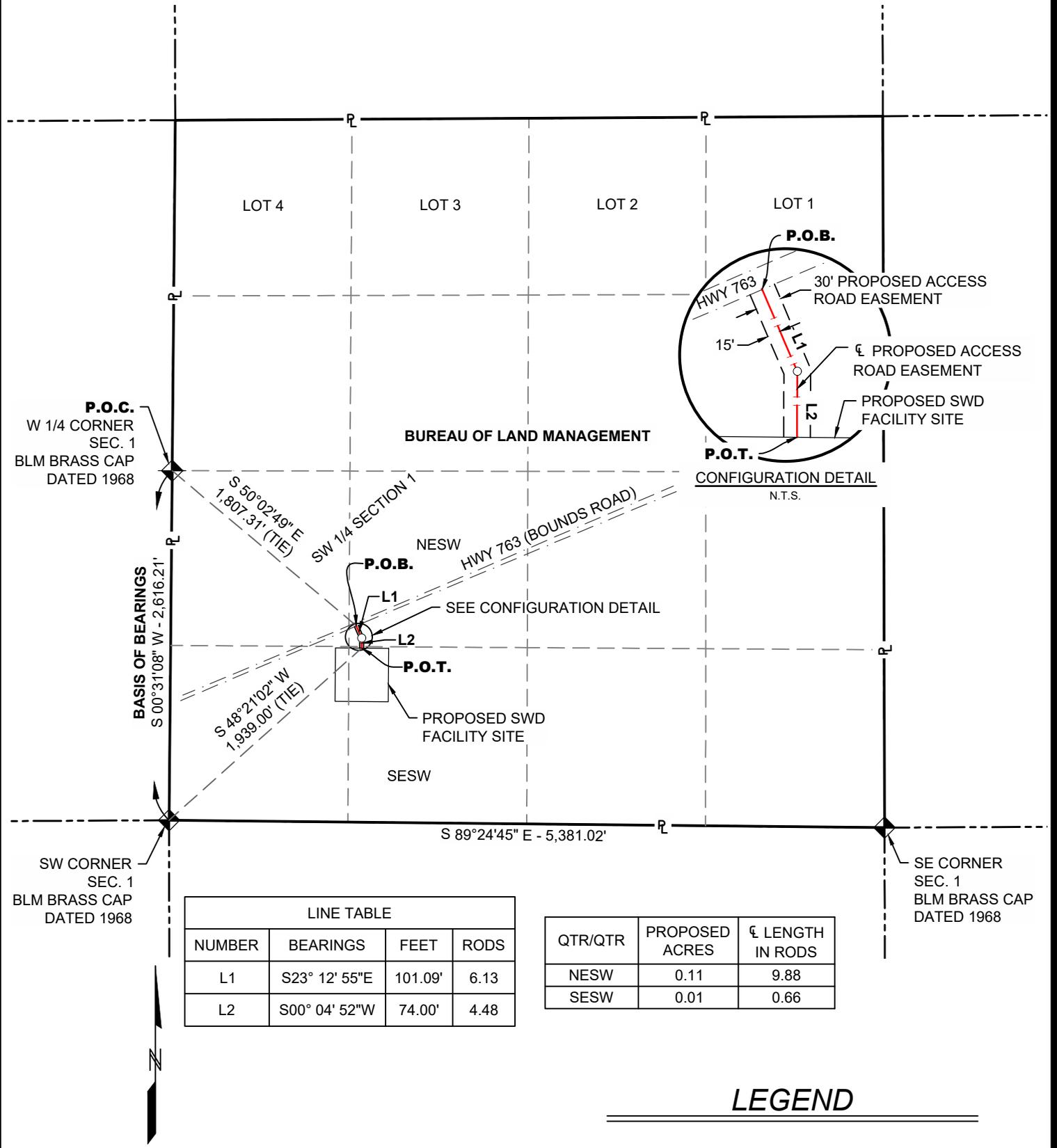
**NOTES:**

- 1. THIS LEGAL DESCRIPTION AND EXHIBIT WERE PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND THEREFORE ENCOMPASS ENERGY SERVICES HAS NOT RESEARCHED OR SHOWN ANY OTHER EASEMENTS, RIGHTS-OF-WAY, VARIANCES AND OR AGREEMENTS OF RECORD. ALL OWNERSHIP INFORMATION WAS PROVIDED BY THE CLIENT.
- 2. THIS LEGAL DESCRIPTION AND EXHIBIT ARE NOT A LAND DIVISION PLAT, OR AN IMPROVEMENT SURVEY PLAT.
- 3. SEE ATTACHED EXHIBIT WHICH BY THIS REFERENCE IS MADE PART HEREOF.
- 4. BEARING AND DISTANCES SHOWN ARE GRID VALUES DERIVED FROM GPS OBSERVATIONS IN U.S. SURVEY FEET.

<b>3 BEAR DELAWARE OPERATING - NM, LLC</b>			
<b>SWD FACILITY</b>			
LANDOWNER: BUREAU OF LAND MANAGEMENT			
IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, NEW MEXICO P.M., EDDY COUNTY, NEW MEXICO			
SCALE: NONE	DRAWN BY: JG 01/28/2019	CHECKED BY: TC 01/28/2019	REV: 0
	ENCOMPASS ENERGY SERVICES 350 INTERLOCKEN BLVD. SUITE 350 BROOMFIELD, CO. 80021		DWG NO. 61551_BEARTOOTH SWD1_REV0
			SHEET 2 OF 2

# EXHIBIT "A"

IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, NEW MEXICO P.M.  
EDDY COUNTY, NEW MEXICO



**P.O.C.**  
W 1/4 CORNER  
SEC. 1  
BLM BRASS CAP  
DATED 1968

**BASIS OF BEARINGS**  
S 00°31'08" W - 2,616.21'

S 50°02'49" E  
1,807.31' (TIE)

S 48°22'102" W  
1,939.00' (TIE)

S 89°24'45" E - 5,381.02'

SW CORNER  
SEC. 1  
BLM BRASS CAP  
DATED 1968

SE CORNER  
SEC. 1  
BLM BRASS CAP  
DATED 1968

LINE TABLE			
NUMBER	BEARINGS	FEET	RODS
L1	S23° 12' 55"E	101.09'	6.13
L2	S00° 04' 52"W	74.00'	4.48

QTR/QTR	PROPOSED ACRES	℄ LENGTH IN RODS
NESW	0.11	9.88
SESW	0.01	0.66

Graphic Scale in Feet



THE CENTERLINE LENGTH OF THE EASEMENT SHOWN HEREON BUREAU OF LAND MANAGEMENT PROPERTY IS 175 FEET (10.6 RODS).  
THE TOTAL AREA OF THE PROPOSED EASEMENT SHOWN HEREON IS 5,252 SQUARE FEET ±0.12 ACRES.

NOTES:  
1. THIS EXHIBIT AND LEGAL DESCRIPTION WERE PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND THEREFORE ENCOMPASS ENERGY SERVICES HAS NOT RESEARCHED OR SHOWN ANY OTHER EASEMENTS, RIGHTS-OF-WAY, VARIANCES AND OR AGREEMENTS OF RECORD. ALL OWNERSHIP INFORMATION WAS PROVIDED BY THE CLIENT.  
2. THIS EXHIBIT AND LEGAL DESCRIPTION ARE NOT A LAND DIVISION PLAT, OR AN IMPROVEMENT SURVEY PLAT.  
3. SEE ATTACHED LEGAL DESCRIPTION WHICH BY THIS REFERENCE IS MADE PART HEREOF.  
4. BEARING AND DISTANCES SHOWN ARE GRID VALUES DERIVED FROM GPS OBSERVATIONS IN U.S. SURVEY FEET.

## LEGEND

- P.O.B.** POINT OF BEGINNING
- P.O.C.** POINT OF COMMENCEMENT
- FSL/FWL PERPENDICULAR DISTANCE TO NEAREST SECTION LINES
- POINT OF INTERSECTION
- ◆ SECTION CORNER
- SECTION LINE
- - - INTERIOR SECTION LINE
- - - EXISTING ROAD
- FACILITY SITE
- ℄ PROPERTY LINE

## 3 BEAR DELAWARE OPERATING - NM, LLC

### ACCESS ROAD

LANDOWNER: BUREAU OF LAND MANAGEMENT

IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, NEW MEXICO P.M., EDDY COUNTY, NEW MEXICO

SCALE: 1"=1,000'	DRAWN BY: JG 01/28/2019	CHECKED BY: TC 01/28/2019	REV: 0
ENCOMPASS ENERGY SERVICES 350 INTERLOCKEN BLVD. SUITE 350 BROOMFIELD, CO. 80021		DWG NO. 61551_BEARTOOTH SWD1 ACCESS RD_REVO	SHEET 1 OF 2

**ACCESS ROAD DESCRIPTION:**

A STRIP OF LAND FOR AN ACCESS ROAD ON A PARCEL OF LAND OWNED BY THE BUREAU OF LAND MANAGEMENT AND IS LOCATED IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, OF THE NEW MEXICO PRINCIPAL MERIDIAN, COUNTY OF EDDY, STATE OF NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A 30 FEET WIDE STRIP OF LAND BEING 15 FEET ON EITHER SIDE OF THE FOLLOWING DESCRIBED CENTER LINE;

COMMENCING AT THE W 1/4 CORNER OF SAID SECTION 1, (AS MONUMENTED BY A FOUND BLM BRASS CAP DATED 1968), FROM WHICH THE SW CORNER OF SAID SECTION 1, (AS MONUMENTED BY A FOUND BLM BRASS CAP DATED 1968), BEARS S 00°31'08" W, A DISTANCE OF 2,616.21 FEET, FORMING THE **BASIS OF BEARINGS** USED IN THIS DESCRIPTION;

THENCE, S 50°02'49" E, A DISTANCE OF 1,807.31 FEET TO A POINT ON THE APPROXIMATE SOUTHERLY EDGE OF PAVEMENT FOR HIGHWAY 763 (ALSO KNOWN AS BOUNDS ROAD), SAID POINT BEING THE **POINT OF BEGINNING**;

THENCE ALONG SAID CENTERLINE THE FOLLOWING TWO (2) COURSES:

1) S 23°12'55" E, A DISTANCE OF 101.09 FEET;

2) S 00°04'52" W, A DISTANCE OF 74.00 FEET TO A POINT ON THE NORTHERLY LINE OF A PROPOSED FACILITY SITE, SAID POINT BEING THE **POINT OF TERMINUS**, FROM WHICH THE SAID SW CORNER OF SECTION 1 BEARS S 48°21'02" W, A DISTANCE OF 1,939.00 FEET.

THE SIDE LINES OF SAID STRIP OF LAND ARE LENGTHENED OR SHORTENED TO TERMINATE ON THE EXISTING EDGE OF PAVEMENT FOR HIGHWAY 763 AND AT THE PROPOSED FACILITIES SITE LINE.

THE TOTAL CENTERLINE LENGTH OF THE ABOVE DESCRIBED ACCESS ROAD IS 175 FEET(10.6 RODS) CONTAINING AN AREA OF 5,252 SQUARE FEET, OR APPROXIMATELY 0.12 ACRES, MORE OR LESS.

**SURVEYOR'S STATEMENT:**

I, THOMAS G. CARLSON, A NEW MEXICO PROFESSIONAL SURVEYOR, HEREBY STATE THAT THIS LEGAL DESCRIPTION AND ACCOMPANYING EXHIBIT WERE PREPARED FROM AN ACTUAL GROUND SURVEY PERFORMED UNDER MY SUPERVISION, THAT THIS LEGAL DESCRIPTION AND EXHIBIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF AND THAT THE FIELD SURVEY ON WHICH IT IS BASED MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO AND THAT THIS LEGAL DESCRIPTION AND EXHIBIT ARE NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.



THOMAS G. CARLSON, NM PS #22896  
FOR AND ON BEHALF OF ENCOMPASS ENERGY SERVICES, LLC

**NOTES:**

1. THIS LEGAL DESCRIPTION AND EXHIBIT WERE PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND THEREFORE ENCOMPASS ENERGY SERVICES HAS NOT RESEARCHED OR SHOWN ANY OTHER EASEMENTS, RIGHTS-OF-WAY, VARIANCES AND OR AGREEMENTS OF RECORD. ALL OWNERSHIP INFORMATION WAS PROVIDED BY THE CLIENT.

2. THIS LEGAL DESCRIPTION AND EXHIBIT ARE NOT A LAND DIVISION PLAT, OR AN IMPROVEMENT SURVEY PLAT.

3. SEE ATTACHED EXHIBIT WHICH BY THIS REFERENCE IS MADE PART HEREOF.

4. BEARING AND DISTANCES SHOWN ARE GRID VALUES DERIVED FROM GPS OBSERVATIONS IN U.S. SURVEY FEET.

**3 BEAR DELAWARE OPERATING - NM, LLC**

**ACCESS ROAD**

LANDOWNER: BUREAU OF LAND MANAGEMENT

IN A PART OF THE SW 1/4 OF SECTION 1, TOWNSHIP 24 SOUTH, RANGE 26 EAST, NEW MEXICO P.M., EDDY COUNTY, NEW MEXICO

SCALE: NONE	DRAWN BY: JG 01/28/2019	CHECKED BY: TC 01/28/2019	REV: 0
	ENCOMPASS ENERGY SERVICES 350 INTERLOCKEN BLVD. SUITE 350 BROOMFIELD, CO. 80021	DWG NO. 61551_BEARTOOTH SWD1 ACCESS RD_REVO	SHEET 2 OF 2