

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

**NM OIL CONSERVATION** Form C-101  
ARTESIA DISTRICT Revised July 18, 2013  
NOV 01 2017  
AMENDED REPORT  
RECEIVED

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

1. Operator Name and Address ALPHA SWD OPERATING LLC 4436 STERLING LN PLANO, TX 75093		2. OGRID Number 372180
3. Property Code 317792		4. Property Name ALPHA SWD
5. API Number 30-015-TBD-44530		6. Well No. 2

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
C	18	23S	28E		353	NORTH	2,398	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; Silurian-Devonian	Pool Code 96101
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**Additional Well Information**

11. Work Type N	12. Well Type SWD	13. Cable/Rotary R	14. Lease Type Private	15. Ground Level Elevation 3,051'
16. Multiple N	17. Proposed Depth 14,465'	18. Formation Siluro-Devonian	19. Contractor TBD	20. Spud Date ASAP
Depth to Ground water 60'		Distance from nearest fresh water well 862'		Distance to nearest surface water >1 mile

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

**21. Proposed Casing and Cement Program**

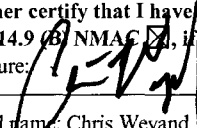
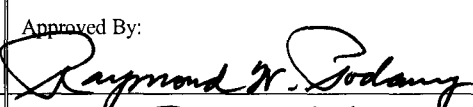
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26"	20"	94 lb/ft	450'	1,145	Surface
Intermediate 1	17.5"	13.375"	68 lb/ft	2,450'	1,410	Surface
Intermediate 2	12.25"	9.625"	47 lb/ft	9,500'	1,935	Surface
Production	8.5"	7.625"	39 lb/ft	13,275'	1,600	Surface
Tubing	N/A	5.5"	17 lb/ft	13,225'	N/A	N/A

**Casing/Cement Program: Additional Comments**

See attached schematic.

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	5,000 psi	8,000 psi	TBD - Schaffer/Cameron

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 type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> , if applicable. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Chris Weyand		Approved By: 	
Title: Consulting Engineer		Title: Geologist	
E-mail Address: chris@lonquist.com		Approved Date: 11-6-17 Expiration Date: 11-6-19	
Date: 10/27/2017	Phone: 512-600-1764	Conditions of Approval Attached APPROVED C.108	



# LONQUIST & CO. LLC

PETROLEUM  
ENGINEERS

ENERGY  
ADVISORS

AUSTIN HOUSTON WICHITA DENVER CALGARY

NM OIL CONSERVATION  
ARTESIA DISTRICT

NOV 01 2017

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October 27, 2017

New Mexico Energy, Minerals, and Natural Resources Department  
Oil Conservation Division District II  
811 S. First St.  
Artesia, New Mexico 88210  
(575) 748-1283

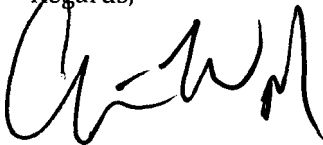
**RE: ALPHA SWD NO. 2 AUTHORIZATION TO INJECT**

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for Alpha SWD Operating LLC's Alpha SWD No. 2. In addition, Forms C-101 and C-102 have also been included with this package. Notices have been sent to offset leaseholders and the surface owner. Proof of notice will be sent to the OCD upon receipt.

Any questions should be directed towards Alpha SWD Operating LLC's agent Lonquist & Co., LLC.

Regards,



Christopher B. Weyand  
Staff Engineer  
Lonquist & Co., LLC

(512) 600-1764  
[chris@lonquist.com](mailto:chris@lonquist.com)

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

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



**NM OIL CONSERVATION**  
 ARTESIA DISTRICT  
 NOV 01 2017

**ADMINISTRATIVE APPLICATION CHECKLIST**

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

**Application Acronyms:**

**[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]  
 [A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]  
 [B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
- [D] Other: Specify \_\_\_\_\_
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply  
 [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☒ Offset Operators, Leaseholders or Surface Owner
- [C] ☒ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached
- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

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

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

Chris Weyand  
 Print or Type Name

Signature

Consulting Engineer  
 Title

10/27/2017  
 Date

chris@lonquist.com  
 e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? X Yes No

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

II. OPERATOR: ALPHA SWD OPERATING LLC

NOV 01 2017

ADDRESS: 4436 STERLING LN // PLANO, TX 75093

CONTACT PARTY: KURT KNEWITZ PHONE: (214) 418-1177

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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 X 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: Christopher B. Weyand

TITLE: Consulting Engineer

SIGNATURE: 

DATE: 10/29/2017

E-MAIL ADDRESS: chris@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: ALPHA SWD OPERATING LLCWELL NAME & NUMBER: ALPHA SWD #2WELL LOCATION: 353' FNL & 2,398' FWL  
FOOTAGE LOCATIONC  
UNIT LETTER18  
SECTION23S  
TOWNSHIP28E  
RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 26.000"Casing Size: 20.000"Cemented with: 1,145 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulation1<sup>st</sup> Intermediate CasingHole Size: 17.500"Casing Size: 13.375"Cemented with: 1,410 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulation2<sup>nd</sup> Intermediate CasingHole Size: 12.250"Casing Size: 9.625"Cemented with: 1,935 sx.*or* \_\_\_\_\_ ft<sup>3</sup>Top of Cement: surfaceMethod Determined: circulation

Production Casing

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 1,600 sx.

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

Top of Cement: surface

Method Determined: circulation

Total Depth: 14,465'

Injection Interval

13,275 feet to 14,465 feet

(Open Hole)



**INJECTION WELL DATA SHEET**

Tubing Size: 5.500", 17 lb/ft, P-110 UFJ from 0'-13,225'

Lining Material: Duoline

Type of Packer: D&L Oil Tools 7.625" Permapack Packer – Single Bore

Packer Setting Depth: 13,225'

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? N/A

2. Name of the Injection Formation: Devonian, Silurian, Fusselman and Montoya (Top 100')

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

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: 2,440'

Bone Spring: 5,956'

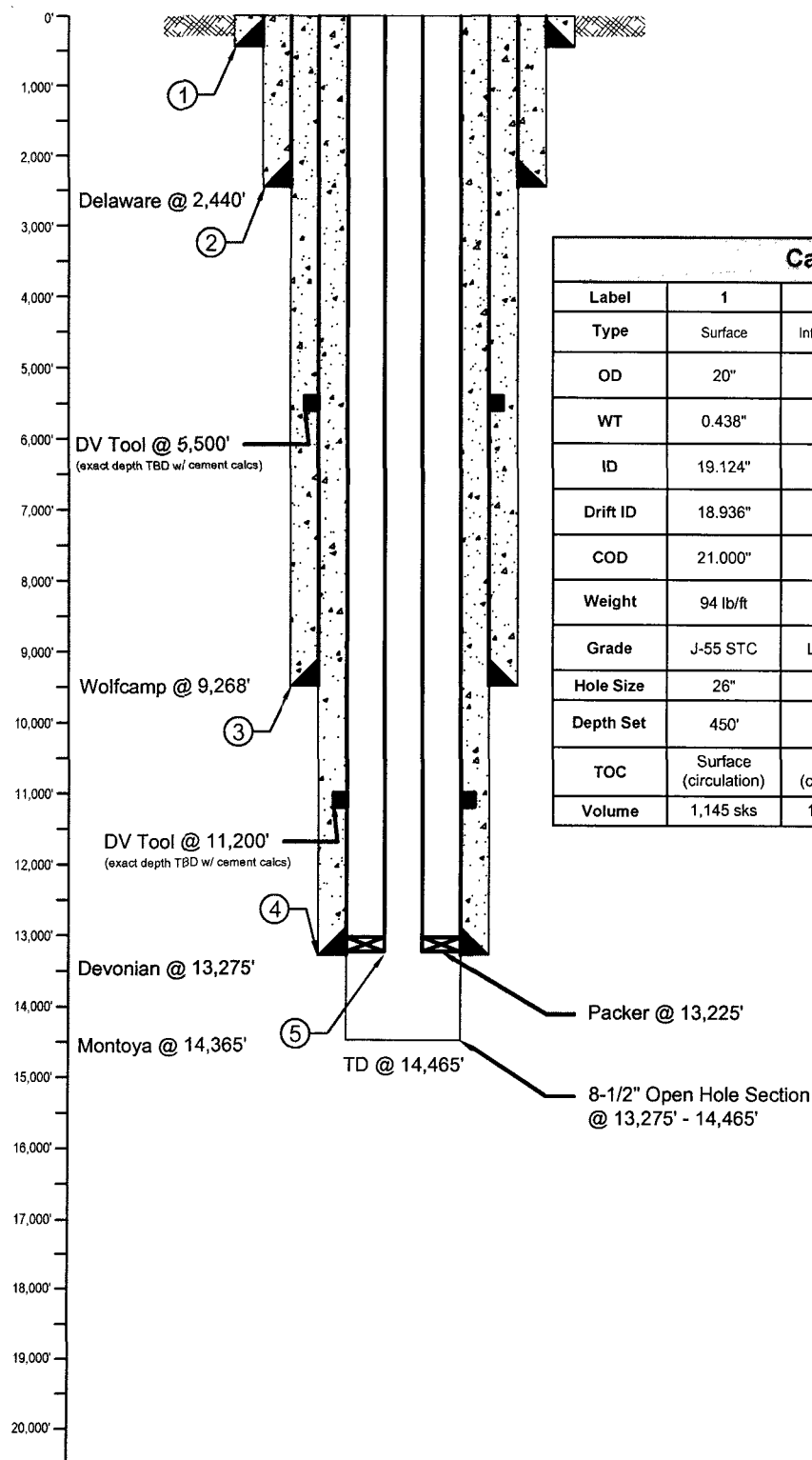
Wolfcamp: 9,268'

Atoka: 11,096'


Morrow: 11,921'

KB:	NA
BHF:	NA
GL:	NA
Spud:	NA

Casing/Tubing Information					
Label	1	2	3	4	5
Type	Surface	Intermediate 1	Intermediate 2	Production	Tubing
OD	20"	13-3/8"	9-5/8"	7-5/8"	5-1/2"
WT	0.438"	0.480"	0.472"	0.5"	0.304"
ID	19.124"	12.415"	8.681"	6.625"	4.892"
Drift ID	18.936"	12.259"	8.525"	6.5"	4.767"
COD	21.000"	14.375"	10.625"	7.625"	5.860"
Weight	94 lb/ft	68 lb/ft	47 lb/ft	39 lb/ft	17 lb/ft
Grade	J-55 STC	L-80 STC	HCL-80 LTC	P-110	P-110 UFJ
Hole Size	26"	17-1/2"	12-1/4"	8-1/2"	N/A
Depth Set	450'	2,450'	9,500'	13,275'	0'-13,225'
TOC	Surface (circulation)	Surface (circulation)	Surface (circulation)	Surface	NA
Volume	1,145 sks	1,410 sks	1,935 sks	1,600 sks	NA



Injection Interval:  
13,275'-14,465'

<b>LONQUIST</b> <b>FIELD SERVICE</b>  Texas License F-9147 3345 Bee Cave Road, Suite 201 Austin, Texas 78746 Tel: 512.732.9812 Fax: 512.732.9816	Alpha SWD		Alpha SWD No. 2	
	Country: USA	State/Province: New Mexico	County/Parish: Eddy	
	Location:	Site:	Survey/STR: 18-23S-28E	
	API No:	Field:	Well Type/Status: SWD	
	State ID No:	Project No:	Date: 10/24/2017	
	Drawn: CJG	Reviewed: CBW	Approved: SLP	
	Rev No: 1	Notes:		

**Alpha SWD Operating LLC**

**Alpha SWD No. 2**

**FORM C-108 Supplemental Information**

**III. Well Data**

**A. Wellbore Information**

1.

Well information	
Lease Name	Alpha SWD
Well No.	2
Location	S-18 T-23S R-28E
Footage Location	353' FNL & 2,398' FWL

2.

**a. Wellbore Description**

Casing Information				
Type	Surface	Intermediate 1	Intermediate 2	Production
OD	20"	13.375"	9.625"	7.625"
WT	0.438"	0.480"	0.472"	0.500"
ID	19.124"	12.415"	8.681"	6.625"
Drift ID	18.936"	12.259"	8.525"	6.500"
COD	21.00"	14.375"	10.625"	7.625"
Weight	94 lb/ft	68 lb/ft	47 lb/ft	39 lb/ft
Grade	J-55	L-80	HCL-80	P-110
Hole Size	26"	17.5"	12.25"	8.5"
Depth Set	450'	2,450'	9,500'	13,275'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate 1	Intermediate 2	Production
Lead Cement	C	C	C	H
Lead Cement Volume	1,145 sx	1,145 sx	Stage 1: 615 sx Stage 2: 920 sx	Stage 1: 250 sx Stage 2: 1,350 sx
Tail Cement		C	H	
Tail Cement Volume		265 sx	Stage 1: 400 sx	
Cement Excess	100%	25%	50%	50%
TOC	Surface	Surface	Surface	Surface
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Circulate to Surface

3. Tubing Description

Tubing Information	
OD	5.5"
WT	0.304"
ID	4.892"
Drift ID	4.767"
COD	5.500"
Weight	17 lb/ft
Grade	P-110 UFJ
Depth Set	13,225'

Tubing will be lined with Duoline.

4. Packer Description

D&L Oil Tools 7.625" Permapack Packer – Single Bore

## B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman, Montoya (Top 100')
2. Gross Injection Interval: 13,275' – 14,465'

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
Delaware	2,440'
Bone Spring	5,956'
Wolfcamp	9,268'
Atoka	11,096'
Morrow	11,921'

## 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: 25,000 BPD  
Maximum Volume: 32,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 1,800 PSI (surface pressure)  
Maximum Injection Pressure: 2,655 PSI (surface pressure)

4. The injection fluid is to be locally produced water. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware, Bone Spring, Wolfcamp, Atoka, and Morrow formations.
5. The disposal interval is non-productive. No water samples are available from the surrounding area.

## VIII. Geological Data

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.

### A. Injection Zone: Siluro-Devonian Formation

Formation	Depth
Rustler	Eroded, not present
Salado	175'
Delaware	2,440'
Bone Spring	5,956'
Wolfcamp	9,268'
Strawn	10,804'
Atoka	11,096'
Morrow	11,921'
Mississippian Lime	12,835'
Woodford	13,170'
Devonian	13,275'

### B. Underground Sources of Drinking Water

Within 1-mile of the proposed Alpha SWD #2 location water wells range in depth from 30' to 220'. Reported depths to fresh water range from 14' to 217' (60' on average). This is not a known fresh water aquifer, but rather represents a sporadic alluvial source.

IX. Proposed Stimulation Program

No proposed stimulation program.

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

Cardinal Laboratories in Hobbs, New Mexico has been contracted to obtain water samples from fresh water wells within 1 mile and provide chemical analysis of the samples. When analysis is complete, the report will be provided to the OCD.

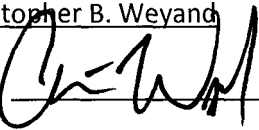
XII. Affirmative Statement of Examination of Geologic and Engineering Data

Based on the available engineering and geologic data we find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

NAME: Christopher B. Weyand

TITLE: Consulting Engineer

SIGNATURE: \_\_\_\_\_



DATE: 10/27/2017

T22S R28E

33

34

T23S R28E

05

04

03

22204

36

31

01

06

0111

T22S R27E

T23S R27E

34

35

03

02

10

11

44433

43147  
01113 44443  
44235

09

10

15

14

**Alpha SWD #2**  
**Offset Oil & Gas Wells**  
Eddy County, NM  
Alpha SWD Operating LLC

Projection: NAD 1983 State Plane NM East FIPS 3001

Drawn by: SAH Date: 10/23/2017 Approved by: NLB

**LONQUIST & CO LLC**

**PETROLEUM  
ENGINEERS ENERGY  
ADVISORS**

AUSTIN HOUSTON WICHITA DENVER CALGARY

● Alpha SWD #2

☀ Gas Well (26)

○ Permitted Gas Well (6)

⊗ Plugged Gas Well (4)

☀ TA Gas Well (1)

● Oil Well (5)

○ Permitted Oil Well (3)

○ Plugged Oil Well (26)

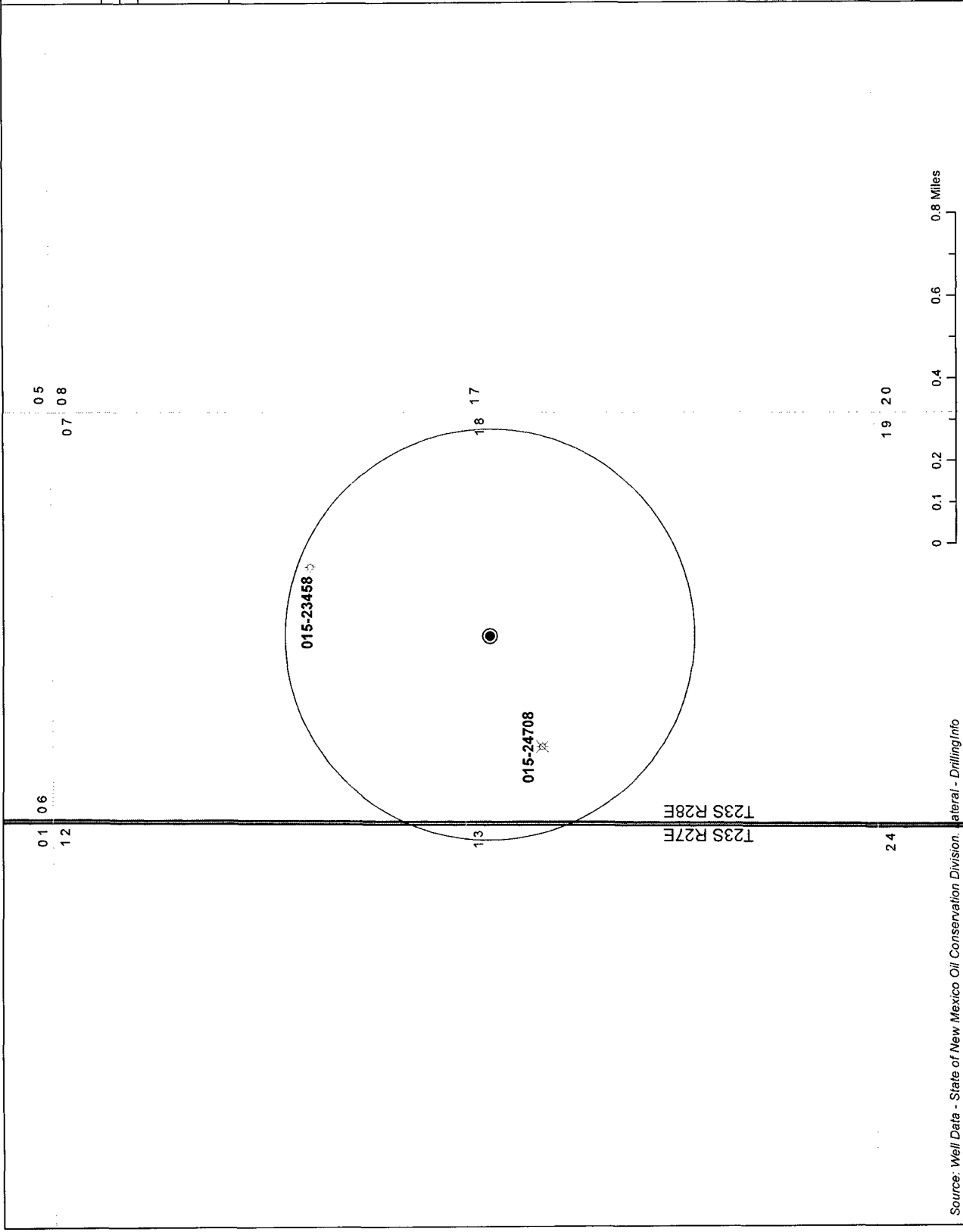
○ WD Well (3)

○ Plugged SWD Well (2)

○ WD Well (1)

'S





Alpha SWD #2

1/2 mile Area of Review

Eddy County, NM

Alpha SWD Operating LLC

Projection: NAD 1983 State Plane NM East FIPS 3001

Drawn by: SAH | Date: 10/23/2017 | Approved by: NLB

LONGQUIST & CO. LLC

ENGINEERS

ADVISORS

AUSTIN HOUSTON WICHITA DENVER CALGARY

Alpha SWD #2

Gas Well

Plugged Gas Well

1/2 mile Radius

Section Boundary

New Mexico

Texas

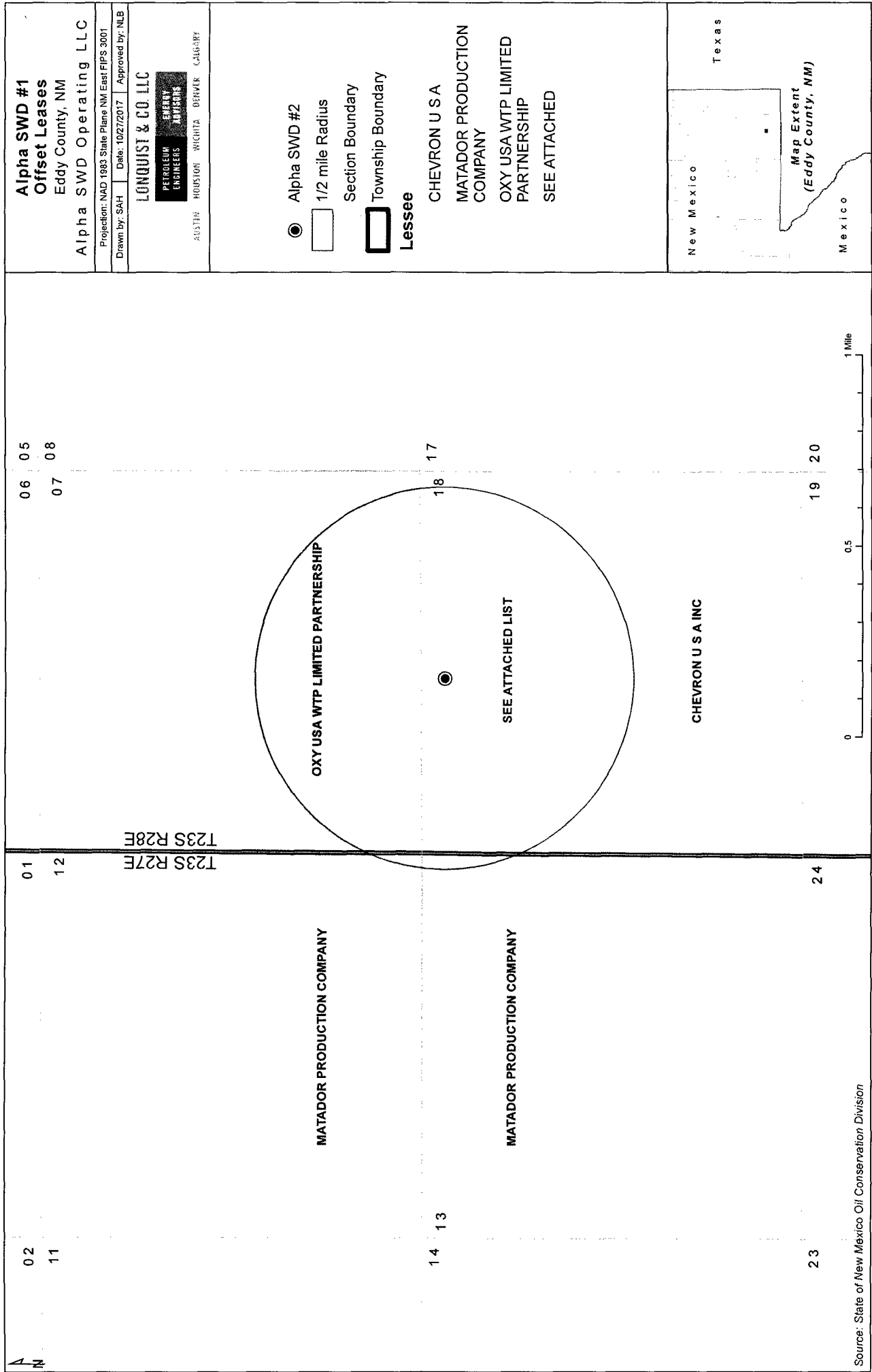
Mexico

Map Extent  
(Eddy County, NM)

Source: Well Data - State of New Mexico Oil Conservation Division. Lateral - Drilling Info

Half-Mile AOR  
Alpha SWD #2

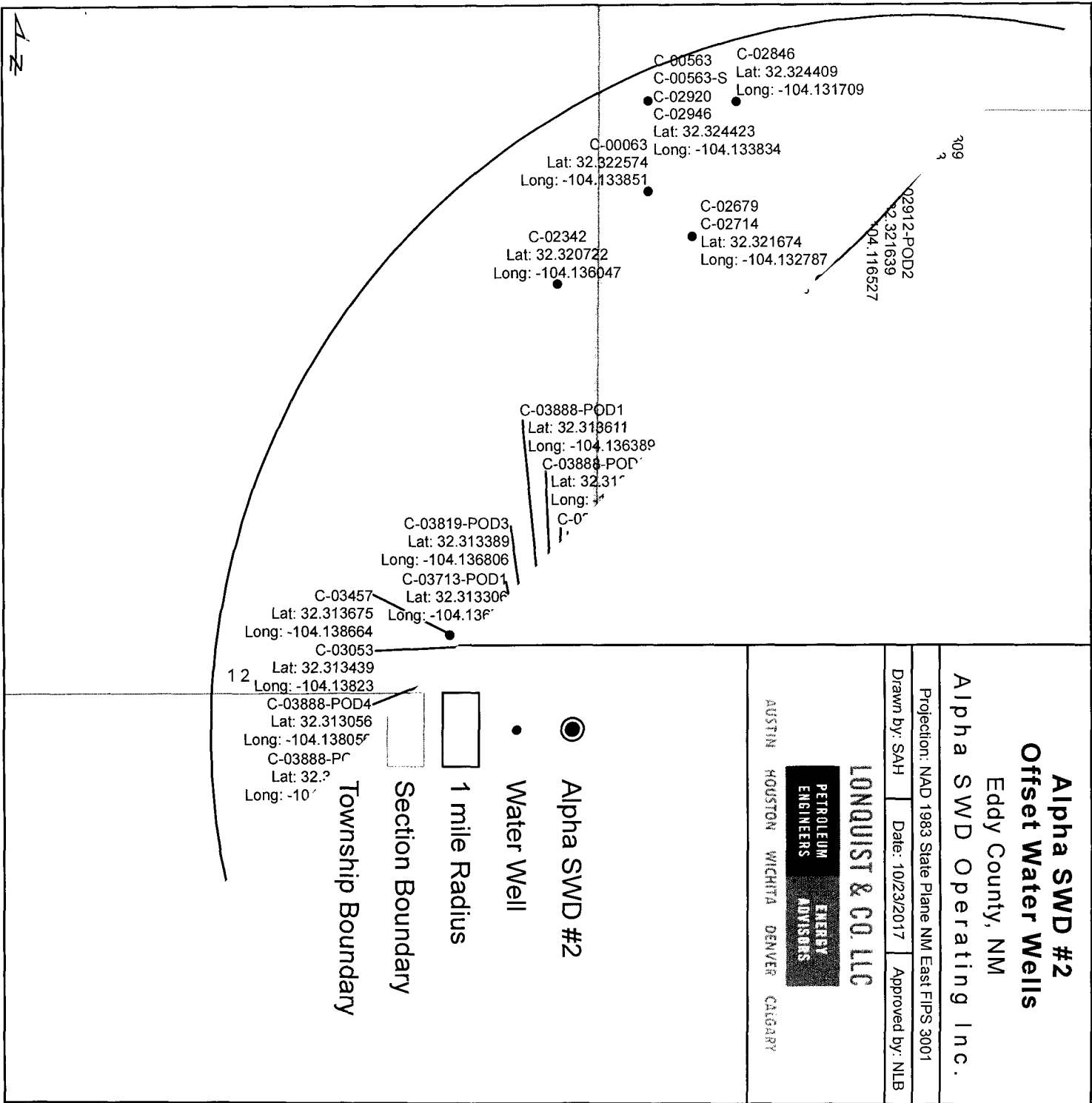
API (30-015-)	Well Name	Well Type	Status	Operator	TD (TVD)	Location	Date Drilled
23458	BRANTLEY A COM #001	Gas	Active	OXY USA WTP LIMITED PARTNERSHIP	12,545	J-07-23S-28E	1/20/1997
24708	CARRASCO 18 #001	Gas	Plugged	CHEVRON U S A INC	12,650	1-18-23S-28E	8/30/2006



Alpha SWD No. 2 Notice List			
Notice	Address	Phone Number	Date Noticed
Oil Conservation Division District IV	1220 South St. Francis Drive, Santa Fe, NM 87505	(505) 476-3440	
Oil Conservation Division District II	811 S. First St., Artesia, NM 8821C	(575) 748-1283	
Surface Owner			
POLK LAND & MINERALS LP	C/O GLEN WEBB PC, 3300 S. 14th, Suite 206, ABILENE, TX 79605	(325) 201-1738	
Leasehold Operators - 1/2 Mile			
MATADOR PRODUCTION COMPANY	ONE LINCOLN CENTER, 5400 LBJ FREEWAY STE 1500, DALLAS, TX 7524C	(972) 371-5200	
CHEVRON U S A INC	6301 DEAUVILLE BLVD, MIDLAND, TX 7970E	(866) 212-1212	
OXY USA WTP LIMITED PARTNERSHIP	PO BOX 4294, HOUSTON, TX 7721C	(713) 366-5716	
Leaseholders and Mineral Owners - N/2 of Sec. 18-23S-28E			
Tap Rock Resources, LLC	602 Park Point Drive, Suite 200, Golden, CO 80401	(720) 772-5090	
Snow Oil & Gas	818 E Broadway St, Andrews, TX 79714	(432) 524-2371	
Crown Oil Partners V, LP	P.O. Box 50820, Midland, TX 79710-0820		
Crump Energy Partners II, LLC	P.O. Box 50820, Midland, TX 79710-0820		
Nadel & Gussman Delaware, LLC	15 East 5th Street, Suite 3300, Tulsa, OK 74103-434C	(918) 583-3333	
Marathon Oil Permian, LLC	5555 San Felipe Street, Houston, TX 77056	(713) 629-6600	
Sally Carter Ballard	3616 133rd Street, Lubbock, TX 79423		
Peter R. Carter	9320 Stratford Way, Dallas, TX 75220	(214) 902-9225	
Barbara Carter	24 Condesa Road, Santa Fe, NM 87508	(505) 820-9331	
Jeri Alexander Mangum, fka Jeri Alexander Lott and First Financial Trust and Asset Management Co., N.A., as Trustees of the Carol Gibson Trust and Cynthia Rhodes Trust	P.O. Box 701, Abilene, TX 79604		
Caki Family Limited Partnership	3721 Pallos Verdas, Dallas, TX 75229		
Catherine Gall Parker and Craig Parker Exempt Trust	3721 Pallos Verdas, Dallas, TX 75229		
Caren Gall Lucas Exempt Trust	P.O. Box 90621, Austin, TX 78709-0621		
JMA Oil Properties, Ltd, Whose General Partner is JMA Management, LLC	P.O. Box 58, Abilene, TX 79604		
Emma U. Carrasco	P.O. Box 26, Loving, NM 88256		
The Emilio R. Villa Revocable Trust	1206 Bryan Circle, Carlsbad, NM 88220		
Edmund T. Anderson, IV	2521 Humble, Midland, TX 79705	(432) 684-4560	
Edmund T. Anderson, IV, Trustee for the Mary Anderson Boll Family Trust	2521 Humble, Midland, TX 79705	(432) 684-4560	
Guitar Land & Cattle, LP	P.O. Box 2213, Abilene, TX 79604		
The Earl B. Guitar and Margaret Ann Guitar Revocable Trust	P.O. Box 748, Abilene, TX 79604		
CrownRock Minerals, L.P.	P.O. Box 51933, Midland, TX 79710		
Truchas Peaks, LLC	110 Louisiana, Suite 500, Midland, TX 79701		
Honey's Heritage LP	P.O. Box 833206, Richardson, TX 75083-3206		
The Mary Guitar Polk Estate Limited Partnership	15250 Prestonwood Blvd., #441, Dallas, TX 75248	(972) 388-1144	
Ruth Ann Polk Caudle	15250 Prestonwood Blvd., #441, Dallas, TX 75248	(972) 388-1144	
JPH Holdings, LP	4400 Arcady, Dallas, TX 75205		
POLK LAND & MINERALS LP	C/O GLEN WEBB PC, 3300 S. 14th, Suite 206, ABILENE, TX 79605	(325) 201-1738	

Alpha SWD #2: Offset Produced Water Analysis

wellname	epi	latitude	longitude	section	township	range	county	state	formation	ph	tds_mg_l	resistivity_ohm_cm	sodium_mg_l	calcium_mg_l	iron_mg_l	magnesium_mg_l	manganese_mg_l	chloride_mg_l	bicarbonate_mg_l	sulfate_mg_l	co2_mg_l
WILLIAMS GAS COM #001	3001522686	32.282032	-104.0429916	25 235	28E	28E	EDDY	NM	ATOKA	8.2	236539							138000	2370		3950
WILLIAMS GAS COM #001	3001522686	32.282032	-104.0429916	25 235	28E	28E	EDDY	NM	ATOKA	7.9	217050							138000	1030		3300
LONE RANGER 33 STATE #002H	3001541240	32.2592392	-104.1868896	33 235	27E	27E	EDDY	NM	BONE SPRING 2ND SAND	6.7	201244	0.05376	67243.9	9225	40.4	1171.5	1.35	121289	61	0	
LONE RANGER 33 STATE #002H	3001541240	32.2592392	-104.1868896	33 235	27E	27E	EDDY	NM	BONE SPRING 2ND SAND	6.1	138166.5		46409	9044	44	2706	2.5	78243	110	0	
GOMEZ #001	3001522595	32.3358838	-104.1125488	5 235	28E	28E	EDDY	NM	DELAWARE	6.4	133440							80500	303	2100	
KIM #001	3001524589	32.297123	-104.0955887	21 235	28E	28E	EDDY	NM	DELAWARE	4.9	202807		60019.2	20577.5	2.84	4029.39		143136	38.624	213.568	
AMOCO FEDERAL 11 #006	3001526496	32.3256542	-104.0546036	11 235	28E	28E	EDDY	NM	DELAWARE-BRUSHY CANYON	5.38	307701		96916.8	34317.6	46.8	5392.8		228593	26.4	505.2	
AMOCO FEDERAL 11 #005	3001526527	32.3219872	-104.0537567	11 235	28E	28E	EDDY	NM	DELAWARE-BRUSHY CANYON	6.03	297557		90601.8	35088.6	63.017	4688.23		218632	49.938	619.469	
VILLA A.COM #001	3001522886	32.3171425	-104.1116333	8 235	28E	28E	EDDY	NM	MORROW	5.08	27040.2		8664.21	1173.13	553.382	128.646		16623.9	39.819	147.024	
VILLA A.COM #001	3001522886	32.3171425	-104.1116333	8 235	28E	28E	EDDY	NM	MORROW	6.32	6803.65		2064.35	329.289	154.071	39.273		3593.38	56.392	209.456	
VILLA A.COM #001	3001522886	32.3171425	-104.1116333	8 235	28E	28E	EDDY	NM	MORROW	6.7	7560.18		1292.43	422.1	1059.27	56.28		4157.68	303.51	8.04	
BRANTLEY #001	3001522677	32.2886353	-104.0770493	22 235	28E	28E	EDDY	NM	MORROW	6.5	7960.18							166000	78	3400	
HABANERO 17 FEDERAL COM #001H	3001536108	32.2218475	-104.2065168	17 245	27E	27E	EDDY	NM	WOLF CAMP	6.5	108205	0.07392	35110.8	4480.2	28.5	627.9	0.61	65927.2	146	0	300
SERRANO 29 FEDERAL #001H	3001537763	32.1898842	-104.2062149	29 245	27E	27E	EDDY	NM	WOLF CAMP	6.9	102136.2	0.07961	30415.1	5311.5	40.2	643.7	1.47	67812.7	183	0	350
SERRANO 29 FEDERAL #001H	3001537763	32.1898842	-104.2062149	29 245	27E	27E	EDDY	NM	WOLF CAMP	6.5	100994.9		28702.1	5341.9	46.2	619.5	1.46	63450.1	268	0	350



**Alpha SWD #2  
Offset Water Wells**

Eddy County, NM  
Alpha SWD Operating Inc.

Projection: NAD 1983 State Plane NM East FIPS 3001

Drawn by: SAH	Date: 10/23/2017	Approved by: NLB
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**LONQUIST & CO. LLC**

**PETROLEUM  
ENGINEERS  
ENERGY  
ADVISORS**

AUSTIN HOUSTON WICHITA DENVER CALGARY

● Alpha SWD #2

• Water Well

□ 1 mile Radius

□ Section Boundary

□ Township Boundary

1 2

C-03457  
Lat: 32.313675  
Long: -104.138664  
C-03053  
Lat: 32.313439  
Long: -104.13823  
C-03888-POD4  
Lat: 32.313056  
Long: -104.13805  
C-03888-PO  
Lat: 32.3  
Long: -104.13805

C-03819-POD3  
Lat: 32.313389  
Long: -104.136806  
C-03713-POD1  
Lat: 32.313306  
Long: -104.136806

C-03888-POD1  
Lat: 32.313611  
Long: -104.136389  
C-03888-POD  
Lat: 32.31  
Long: -104.136389  
C-03888-POD  
Lat: 32.31  
Long: -104.136389

C-02342  
Lat: 32.320722  
Long: -104.136047

C-00063  
Lat: 32.322574  
Long: -104.133851  
C-02946  
Lat: 32.324423  
Long: -104.133834

C-00563  
C-00563-S  
C-02920  
C-02846  
Lat: 32.324409  
Long: -104.131709

C-02679  
C-02714  
Lat: 32.321674  
Long: -104.132787

C-02912-POD2  
Lat: 32.321639  
Long: -104.116527