

Initial Application Part I

Received: 08/20/2019

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

RECEIVED: 08/20/2019	REVIEWER:	TYPE: SWD	APP NO: pMAM1923259195
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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: _____ OGRID Number: _____
 Well Name: _____ API: _____
 Pool: _____ Pool Code: 97869

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

SWD-2249

- 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

FOR OCD ONLY
<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.

_____ Date

Print or Type Name

Signature

_____ Phone Number

_____ e-mail Address

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

¹ API Number		² Pool Code		³ Pool Name		
⁴ Property Code		⁵ Property Name PAPPYS SWD			⁶ Well Number #1	
⁷ OGRID No. 328805		⁸ Operator Name AWR DISPOSAL, LLC			⁹ Elevation 3361'	

¹⁰ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	1	23-S	34E	-	221'	SOUTH	410'	EAST	LEA

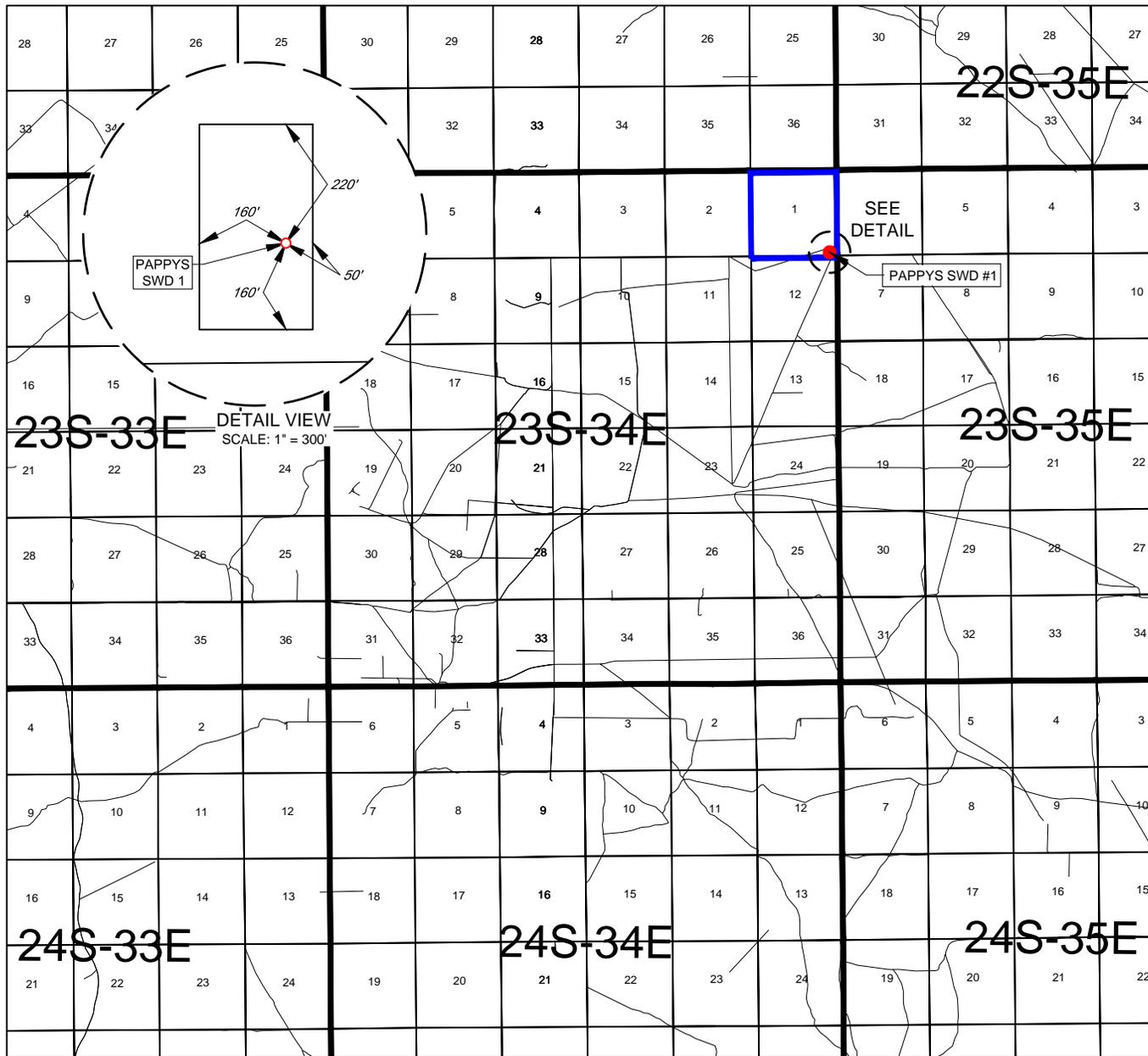
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

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

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

	<p>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.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p>
	<p>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 to the best of my belief.</p> <p>Date of Survey <u>06/14/2019</u> Signature and Seal of Professional Surveyor</p> <p></p> <p>Certificate Number _____</p>

EXHIBIT 2
VICINITY MAP



AWR DISPOSAL, LLC

LEASE NAME & WELL NO.: PAPPYS SWD #1

SECTION 1 TWP 23-S RGE 34E SURVEY N.M.P.M.
 COUNTY LEA STATE NM
 DESCRIPTION 221' FSL & 410' FEL

DISTANCE & DIRECTION

FROM INT. OF NM-128 & DELAWARE BASIN RD., GO NORTH ON DELAWARE BASIN RD. ±8.0 MILES, THENCE BEAR EAST (LEFT) ON DELAWARE BASIN RD. ROAD ± 5.5 MILES TO A POINT ±220 FEET SOUTH OF THE LOCATION.



SCALE: 1" = 10000'
 0' 5000' 10000'



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
 WWW.TOPOGRAPHIC.COM

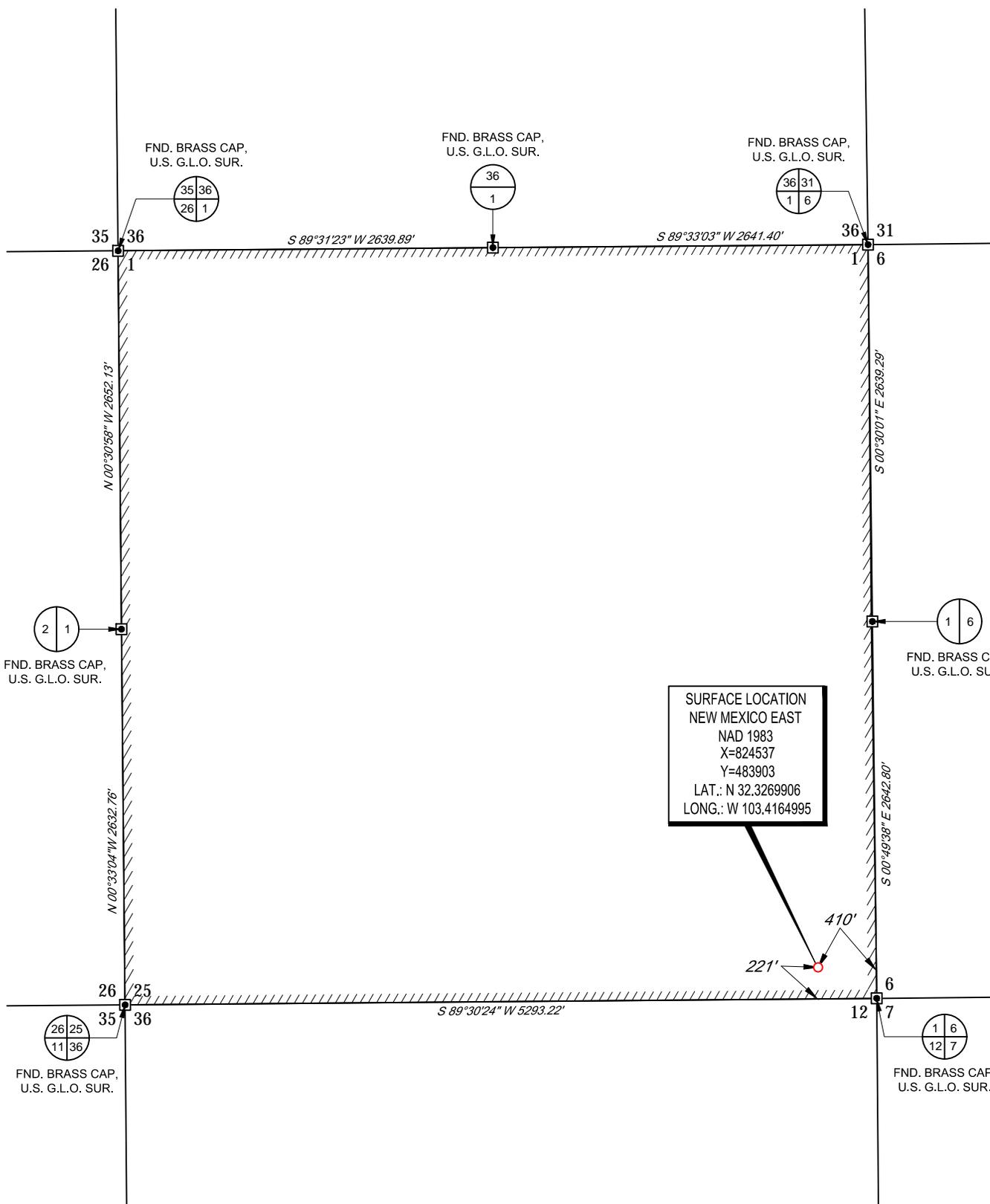
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY AWR DISPOSAL, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET.

SCALE: 1" = 1000'
 0' 500' 1000'

EXHIBIT 2A AWR DISPOSAL, LLC

SECTION 1, TOWNSHIP 23-S, RANGE 34E, N.M.P.M.
 LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: _____ PAPPYS SWD #1

SECTION 1 TWP 23-S RGE 34E SURVEY N.M.P.M.
 COUNTY LEA STATE NM
 DESCRIPTION 221' FSL & 410' FEL

DISTANCE & DIRECTION
FROM INT. OF NM-128 & DELAWARE BASIN RD., GO NORTH ON DELAWARE
BASIN RD. ±8.0 MILES, THENCE BEAR EAST (LEFT) ON DELAWARE BASIN RD.
ROAD ±5.5 MILES TO A POINT ±220 FEET SOUTH OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID
 BASED UPON THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE OF THE NORTH
 AMERICAN DATUM 1983, U.S. SURVEY FEET

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND
 UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF
 SURVEY, AND DATA PROVIDED BY AWR DISPOSAL, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO
 THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS
 SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



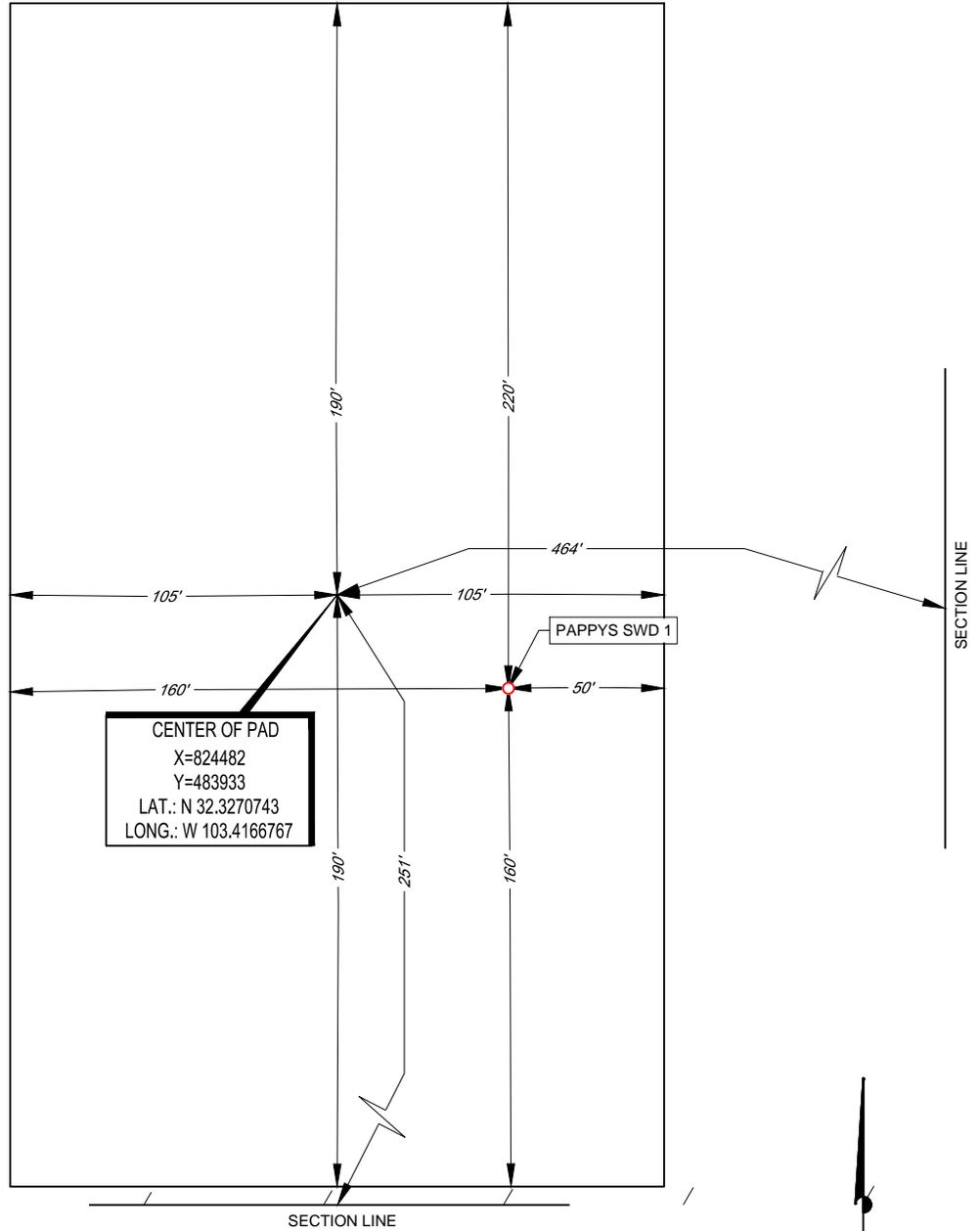
John Trevor Carnegie, P.S. No. 11401
 JULY 31, 2019



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
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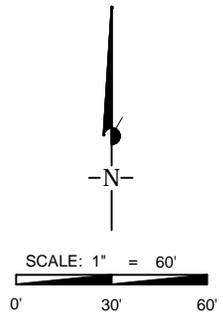
EXHIBIT 2B AWR DISPOSAL, LLC

SECTION 1, TOWNSHIP 23-S, RANGE 34E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: PAPPYS SWD #1
 #1 LATITUDE N 32.3269906 #1 LONGITUDE W 103.4164995

CENTER OF PAD IS 251' FSL & 464' FEL



ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY AWR DISPOSAL, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY
 1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
 WWW.TOPOGRAPHIC.COM

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance Disposal _____ Storage
Application qualifies for administrative approval? Yes _____ No
- II. OPERATOR: _____ AWR Disposal, LLC _____
ADDRESS: _____ 3300 N. A Street, Ste 220, Midland, Texas 79705 _____
CONTACT PARTY: _____ Randall Hicks (agent) _____ PHONE: _____ 505 238 9515 _____
- 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: _____ Randall Hicks _____ TITLE: _____ Agent _____
SIGNATURE:  _____ DATE: _____ 08/20/2019 _____
E-MAIL ADDRESS: _____ r@rthicksconsult.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: AWR Disposal, LLC.

WELL NAME & NUMBER: PAPPYS SWD #1

WELL LOCATION: 221' FSL & 410' FEL P 1 23S 34E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: See attachments Casing Size: _____

Cemented with: _____ sx. **or** _____ ft³

Top of Cement: _____ Method Determined: _____

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. **or** _____ ft³

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. **or** _____ ft³

Top of Cement: _____ Method Determined: _____

Total Depth: _____

Injection Interval

_____ feet to _____

(Perforated or Open Hole; indicate which)

Attachments to C-108

Copy of well bore diagram

Section III-XII Written descriptions to supplement C-108

Plates referenced in written descriptions

Tables referenced in written descriptions

OSE well logs referenced in written descriptions

Section XIII Proof of Notice

Directions to the Pappys SWD #1

Date Spudded: TBD

AWR Disposal LLC

Lease Name: Pappys SWD #1

Unit Letter P, Sec. 1, T23S R34E

221' FSL, 410' FEL

Lea County, NM

Latitude + N32° 19' 37.16", Longitude W 103° 24' 59.39"

From Carlsbad:

20", 133#, J-55 casing @ 1,050'.

Cmt w/ 450 sks, 13.7 lead and 450 sks, 14.8 tail

24" Hole

13-3/8", 68# L-80 EZ-GO FJ3 casing @ 4,550'.

DV Tool w/ 10' pkr at 4,000'

1st Stg Cmt w/ 1000 sks 11.8 ppg lead & 400 sks 13.2 ppg tail.

2nd Stg Cmt w/ 1000 sks 11.8 ppg lead & 380 sks 13.2 ppg tail.

17.5" Hole

9-5/8", 35.5#, HCP-110 BTC casing @ 11,750'.

Upper DV Tool w/ 10' pkr at 7,000'
Lower DV Tool w/ 10' pkr at 9,000'

1st Stg Cmt w/ 600 sks 11.8 ppg lead & 400 sks 13.2 ppg tail.

2nd Stg Cmt w/ 600 sks 11.8 ppg lead & 380 sks 13.2 ppg tail.

3rd Stg Cmt w/ 600 sks 11.8 ppg lead & 380 sks 13.2 ppg tail.

12.25" Hole

5.5" Tubing

5" Tubing

Maximum Proposed Injection Rate: 40,000 BBLs PER DAY

Maximum Proposed Injections Pressure: 3,000 psi

7-5/8" Liner, 39#, P-110 casing @ 15,027'.

Cmt w/ 230 sks 11.9 ppg Class C

Injection Interval:

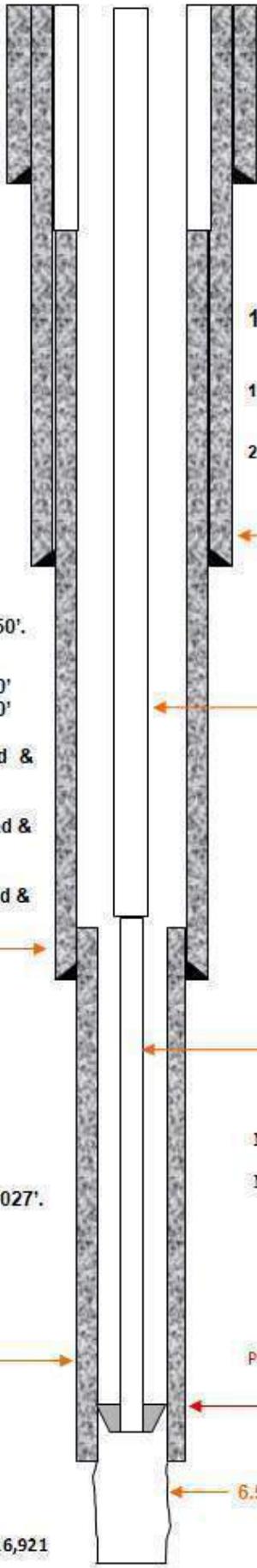
8.5" Hole

Packer set @ 14,927

15,027	-	15,982	DVNN
15,982	-	16,574	FSLM
16,574	-	16,921	MNTY

6.5" Openhole

TD : 16,921



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

Lease Name: Pappys SWD #1

Unit Letter P, Section 1, T23S R34E, 221' FSL, 410' FEL

The State of New Mexico owns the surface upon which the SWD is located.

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

The attached Wellbore Data Sheet provides all of the design specifics required and a tabulation of these data are shown on the diagram.

The formation tops for the Pappys SWD #1 were established by Geologist Herb Wacker TBPG license #4517.

The Enron O&G Rock Lake "6" Federal #1 (API 30-025-30190) was used for picking the shallow formation tops. It has a total depth of 14,205-feet in the Morrow Limestone. This well is about 0.9 miles northeast of the Pappys State SWD #1 location.

The deep log for identifying tops for the Pappys State SWD #1 is the Amerada Hess Bell Lake North Fed #3 (API 30-025-33077), about 5-miles west of the Pappys SWD #1 location. It was completed at a depth of 17,540 feet in the Ellenberger Formation.

AWR 208 Pappys Sec 1 Twp 23S Rge 34E		
	GL	3360
Geologist	KB	3390
H. Wacker	MD	SS
Dockum	1008	2382
Santa Rosa	1453	1937
Dewey Lake	2047	1343
Rustler	2497	893
Capitan Reef	4345	-955
Delaware	5338	-1948
Bell Canyon	5360	-1970
Cherry Canyon	6067	-2677
Brushy Canyon	7341	-3951
Bone Spring	8706	-5316
Avalon	9116	-5726
1st Bone Spring	9752	-6362
2nd Bone Spring	10244	-6854
3rd Bone Spring	11354	-7964
Wolfcamp	11619	-8229
Strawn	12093	-8703
Atoka	12337	-8947
Morrow	13059	-9669
Barnett	13924	-10534
Miss Limestone	14412	-11022
Woodford	14812	-11422
Devonian	14997	-11607
Fusselman	15982	-12592
Montoya	16574	-13184
Simpson	16951	-13561
Top of Interval	15027'	Devonian +30'
Bottom of Interval	16921'	Simpson -30'
TD	16921'	
Thickness of Injection Interval = 1894'		

3. A description of the tubing to be used including its size, lining material, and setting depth

5-1/2" (20#) internal plastic coated tubing swaged down to 5" (18#) with setting depth of 14,927'.

4. The name, model, and setting depth of the packer used or a description of any other seal system or assembly used

Tryton Tools, 7" Arrow Set 1-X Nickel Plated Injection Packer will be set at 14,927'.

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

The proposed injection interval includes the Devonian, Fusselman and Montoya Formations in an open-hole interval.

(2) The injection interval and whether it is perforated or open-hole.

The depth interval of the open-hole injection interval is 15,027 - 16,921 (1,894 feet).

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

The well will be drilled for disposal.

(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

There are no perforated intervals, only the open-hole completion described above.

(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.

Overlying Oil & Gas Zone (Using GL of 3360'):

Bone Spring	8706
Avalon	9116
1st Bone Spring	9752
2nd Bone Spring	10244
3rd Bone Spring	11354
Wolfcamp	11619
Strawn	12093
Atoka	12337
Morrow	13059

Underlying Oil & Gas Zones:

Devonian	14997
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IV. Is this an expansion of an existing project

No.

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

Plate 1a identifies all OCD listed wells and API numbers and shows circles with radii of 0.5, 1.0, and 2.0 miles. Note that where numerous wells are closely spaced, the API number may not be labeled for clarity. New wells, active wells, plugged wells, and canceled wells have color-coded symbols. Plate 1b shows only new and active wells and circles with radii of 0.5 and 1.0 miles.

Plate 2 identifies the leases within 2-miles of the proposed SWD as well as leases within the 1-mile area of review.

- Plate 2a presents the lease numbers for the SLO and BLM oil and gas leases. Also shown is mineral rights owned by the U.S. that are unleased at this time.
- Plate 2b presents land ownership for the same area and identifies the oil and gas mineral rights ownership.

Table 1 and Table 2 identify all affected persons within the 1 mile area of review

- Table 1 lists all of the Oil and Gas Well Operators shown on Plate 1a within the circle having a 1.0 mile radius.
- Table 2 lists all leasees, lessors/mineral interests and surface owners (affected persons) within the 1-mile AOR presented on Plate 2a.

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

Table I shows a well, the Pre-Ongard Well #001 (API 30-025-30190) completed at a similar depth (14,250-feet) about 0.95 miles northeast of the Pappys SWD #1 location. Table 1 does not specify what formation this well was completed within. NMOCD documents show that it was completed within the Morrow Formation. As it was a dry hole, the well was plugged. OCD reports are attached as documentation.

API	Ogrid	Ogrid Name	ULSTR	Well Type	Status	Well Name
30-025-30190	214263	PRE-ONGARD WELL OPERATOR	3-06-23S-35E	O	P	PRE-ONGARD WELL #001

Date Drilled	Plug Date	Total Depth	Pool ID
Mar. 19, 1988	Mar. 13, 1988	14205	Wildcat Morrow

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected

Proposed Maximum Injection Rate: 40,000 bbl/day
 Proposed Average Injection Rate: 30,000 bbl/day

2. Whether the system is open or closed

This is will be an open system. All AWR Disposal, LLC SWDs may receive produced water from recycling storage facilities, such as in-ground containments or above-ground steel-walled containments, which are registered or permitted under Rule 34.

3. Proposed average and maximum injection pressure

Proposed Maximum Injection Pressure: 3,000 psi
 Proposed Average Injection Rate: 2,000 psi

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water

The attached Table 3 "Produced Water Chemistry of Nearby Wells" provides the requisite analyses. The Delaware and Bone Spring Formations are the subjects of the analyses. These formations and the Wolfcamp will provide most of the produced water to the proposed SWD. At the time of writing, we are unaware of any problems associated with disposal of produced water derived from any Formations into the Devonian, Fusselman and Montoya injection zone.

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.).

Table 4 presents formational water quality data from the Go-Tech site for Devonian-Fusselman-Montoya producing wells. As stated above, we are unaware of any problems associated with disposal of produced water derived from the Delaware, Avalon, Bone Springs, and Wolfcamp Formations into the Devonian, Fusselman and Montoya injection zone.

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth.

The proposed injection intervals include the Devonian, Fusselman and Montoya in an open-hole interval. The proposed injection intervals in the Pre-Mississippian Carbonates are well cemented and will provide the necessary open hole integrity while allowing salt water to be injected. Because of the competency of the rock, the open hole section has very little chance of collapsing.

As indicated in Section III.A.2, the approximate depths to the top of the Devonian and the base of the Montoya are 14,997 and 16,951 respectively. The injection interval of 15,027 - 16,921 (1,894 feet) is contained within the Devonian, Fusselman and Montoya Formations.

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.

In the immediate area of the Pappys SWD #1, the closest water well, the Wood Well (MISC-34), is associated with a stock tank, about 0.15 miles to the northeast of the Pappys SWD #1 site (Plate 3a). In November of 1977, a depth to water of 141-feet was measured.

Two USGS wells are mapped about 0.25 miles south of the Pappys SWD #1 location and just south of a corral complex on the south side of Delaware Basin Road (CR 21). The wells are USGS 15285 and USGS-15275. They had measured depths to water of 137-feet (Nov. 1953) and 135-feet (Mar. 1986) respectively. No other wells are reported within 2-miles of the Pappys SWD #1 location.

In southwestern Lea County and southeastern Eddy County, the Chinle yields water to wells from 100-200 feet below the ground surface (bgs) to a depth of about 600 feet and the upper portion of the Rustler Formation is a potential source of fresh water at depths of about 1300 to 1400 feet.

However, about a mile southwest of the Pappys SWD #1 location, the axis of the San Simon Swale runs from northwest to southeast. The far southwestern edge of this feature is about another 1.5 miles to the southwest of the axis. This basin feature lowers the bottom of the Santa Rosa Formation as much as 1,800 feet compared to the area southwest of the San Simon Swale. As such, the top of the Rustler Formation is found about 2,500 feet below ground surface in the Pappys SWD #1 location.

Based upon the depths to water in the wells (<150-feet) nearest the Pappys SWD #1 location and that the surface is mapped as older alluvium, the ground water is most probably within reworked Ogallala basin fill material on top of the Dockum Formation.

The OSE database contains no well information (e.g. driller's logs) for nearby wells.

The locations of all water supply wells listed in public databases are shown in Plate 3b. As can be seen, the shallow wells near the Pappys SWD #1 location are the only active water supply wells within the San Simon Swale structural feature.

The location of nearby mapped surface water bodies are shown in Plate 4. These consist of lake/ponds more than a mile to the south at the San Simon Sink, the topographic low point of the San Simon Swale. More than two miles to the northeast are additional lake/ponds in valley features paralleling the San Simon Swale axis. No mapped surface water exists within one mile of the Pappys SWD #1 location.

IX. Describe the proposed stimulation program, if any

A cleanup acid job may be used to remove mud and drill cuttings from the formation. However, no other formation stimulation is currently planned.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted)

Logs will be submitted to OCD upon completion of the well.

*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

No active water supply wells with water chemistry data were identified within one mile of the proposed SWD. Data from various sources permit a conclusion that groundwater within the Chinle Formation is potable. Groundwater in the underlying Rustler formation may be relatively brackish.

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

Randall T. Hicks, a Professional Geologist with decades of experience in hydrogeology, affirms, on behalf of AWR Disposal, LLC, that

- The USGS has mapped quaternary faults in New Mexico. The closest faults are about 3 and 5 miles west of the proposed Pappys SWD #1¹
- The Texas Bureau of Economic Geology has mapped older faults (e.g. basement and Woodford) in New Mexico. The closest mapped fault is about 2-miles to the west running north-northwest to south-southeast. There is a fault parallel to this more than 6 miles to the east²
- With respect to migration of produced water from the injection zone to underground sources of drinking water via faults or other natural conduits, the following conditions were considered
 - The lowest underground source of drinking water is the middle and upper Rustler Formation.
 - More than 10,000 feet of sedimentary rock separates the bottom of the Rustler Formation and the top of the injection zone. Many of the formations that lie between the injection zone and the lowermost aquifer are permeable and contain oil, gas or water at various pressures. Any excursion of injected fluids from the Devonian disposal zone would undoubtedly enter these permeable formations prior to moving into the Rustler Formation.
 - There is no evidence that the pressure regime in the oil and gas reservoirs is sufficient to cause the upward migration of formation water through the bedded salt and into the Rustler or Chinle aquifers.
- There is no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water

¹ <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>

² Bureau of Economic Geology (Accessed April 2019). University of Texas at Austin. Basement Faults (Ewing 1990, Tectonic Map of Texas); Precambrian Faults (Frenzel et al. 1988, Figure 6); Woodford Faults (Comer 1991, plate 1). <http://www.beg.utexas.edu/resprog/permianbasin/gis.htm>

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
P.O. BOX 1980
MUSKOGEE, NEW MEXICO

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Dry-Hole		5. LEASE DESIGNATION AND SERIAL NO. NM 62237																				
2. NAME OF OPERATOR Enron Oil & Gas Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME																				
3. ADDRESS OF OPERATOR P. O. Box 2267, Midland, Texas 79702		7. UNIT AGREEMENT NAME																				
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 660' FNL & 1980' FWL		8. FARM OR LEASE NAME Rock Lake 6 Federal																				
14. PERMIT NO. -	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 3380.2' GR	9. WELL NO. 1																				
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data		10. FIELD AND POOL, OR WILDCAT Wildcat Morrow																				
<table border="0"> <tr> <td colspan="2">NOTICE OF INTENTION TO:</td> <td colspan="2">SUBSEQUENT REPORT OF: 2/24/88</td> </tr> <tr> <td>TEST WATER SHUT-OFF <input type="checkbox"/></td> <td>PULL OR ALTER CASING <input type="checkbox"/></td> <td>WATER SHUT-OFF <input type="checkbox"/></td> <td>REPAIRING WELL <input type="checkbox"/></td> </tr> <tr> <td>FRACTURE TREAT <input type="checkbox"/></td> <td>MULTIPLE COMPLETE <input type="checkbox"/></td> <td>FRACTURE TREATMENT <input type="checkbox"/></td> <td>ALTERING CASING <input type="checkbox"/></td> </tr> <tr> <td>SHOOT OR ACIDIZE <input type="checkbox"/></td> <td>ABANDON* <input type="checkbox"/></td> <td>SHOOTING OR ACIDIZING <input type="checkbox"/></td> <td>ABANDONMENT* <input checked="" type="checkbox"/></td> </tr> <tr> <td>REPAIR WELL <input type="checkbox"/></td> <td>CHANGE PLANS <input type="checkbox"/></td> <td>(Other) <input type="checkbox"/></td> <td></td> </tr> </table>		NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF: 2/24/88		TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>	FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>	SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>	REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 6, T23S, R35E
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF: 2/24/88																				
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>																			
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>																			
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>																			
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>																				
		12. COUNTY OR PARISH Lea																				
		13. STATE NM																				

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

P&A as per verbal approval of Shannon Shaw 3/16/88.

Set 7" cement retainer at 11,309' - spot 60 sack plug; 40 sx below retainer & 20 sx above. tagged cement at 11,219'.

Cut & recovered 6580' of 7" casing.

60 sacks at 6680' - tagged cmt at 6450'

60 sacks at 5505' - tagged at 5375'

40 sacks at 1140'

20 sacks at 60' to surface.

Cut off wellhead; installed dry hole marker & cleaned pits. P&A 3-19-88.

(OVER)

18. I hereby certify that the foregoing is true and correct

SIGNED Betty Gildon Betty Gildon TITLE Regulatory Analyst DATE 3/22/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Approved as to plugging of the well bore.
Liability under bond is retained until
surface restoration is completed.

*See Instructions on Reverse Side

APR 2 8 1988

SJS

CASING RECORD AFTER PLUGGING

Size	Wt#/ft.	Put in Well (ft.)	Left in Well (ft.)	Hole Size (in.)
13-3/8"	48#	1090'	1090'	17-1/2"
9-5/8"	40# & 36#	5430'	5430'	12-1/4"
7"	26#	11439'	4859'	8-3/4"

RECEIVED
 MAR 31 1988
 G.C.D.
 HOBBS OFFICE

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. Other _____

2. NAME OF OPERATOR
Enron Oil & Gas Company

3. ADDRESS OF OPERATOR
P. O. Box 2267, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 660' FNL & 1980' FWL
At top prod. interval reported below
At total depth Same

14. PERMIT NO. _____ DATE ISSUED 12-28-87

5. LEASE DESIGNATION AND SERIAL NO.
NM 62237

6. IF INDIAN, ALLOTTEE OR TRIBAL NAME _____

7. UNIT AGREEMENT NAME _____

8. FARM OR LEASE NAME
Rock Lake 6 Federal

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat Morrow

11. SEC. T. R. M., OR BLOCK AND SURVEY OR AREA
Sec. 6, T23S, R35E

12. COUNTY OR PARISH
Lea

13. STATE
NM

15. DATE SPUDDED 1-16-88 16. DATE T.D. REACHED 3-13-88 17. DATE COMPL. (Ready to prod.) Dry Hole 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 3380.2' GR 19. ELEV. CASINOHEAD 3380.2'

20. TOTAL DEPTH, MD & TVD 14,205 21. PLUG, BACK T.D., MD & TVD _____ 22. IF MULTIPLE COMPL., HOW MANY* _____ 23. INTERVALS DRILLED BY _____ ROTARY TOOLS X CABLE TOOLS _____

24. PRODUCING INTERVAL(S). OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
NA

25. WAS DIRECTIONAL SURVEY MADE
No

26. TYPE ELECTRIC AND OTHER LOGS RUN
CNL/LDT, BHC, DLL/MSFL

27. WAS WELL CORED
No

28. CASING RECORD (Report all strings set in well)

CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	48#	1090'	17-1/2	800 HLW & 300 CI C	Circulated
9-5/8	40 & 36	5430	12-1/4	2500 gal flocheck, 2300 s /HLW & 600 CI C	Circulated
7"	26"	11439	8-3/4	425 HLW & 425 CI H	6580'

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
NA				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
NA		

31. PERFORATION RECORD (Interval, size and number)
None

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) P&A 3/19/88

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASINO PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORE.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) _____ TEST WITNESSED BY _____

35. LIST OF ATTACHMENTS
Logs & P&A report (Form 3160-5)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Betty Gildon Betty Gildon, TITLE Regulatory Analyst DATE 3/22/88

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS	
				NAME	TOP MEAS. DEPTH TRUE VERT. DEPTH
	0	1090	Red Bed, Sand & Gravel	Delaware Mtn Group	5810
	1090	2037	Anhydrite	Cherry Canyon Mkr	6408
	2037	4253	Salt & Anhy	Brushy Canyon Sd	7402
	4253	4906	Anhy & Dolomite	Bone Spring LS	8712
	4906	5570	Dolomite	3rd Bone Spring Sd	11206
	5570	6259	Dolo & Sand	Wolfcamp	11354
	6259	7100	Lime	Strawn LS	12150
	7100	9329	Lime, Shale, Sand	Atoka Clastics	12407
	9329	9700	Lm, Chert	Atoka LS	12602
	9700	11963	Lm, Sh, Sd	Morrow LS	12865
	11963	12528	Lm, Ch, Sh	Morrow Clastics	13096
	12528	12890	Lm, Sh	Middle Morrow SH	13528
	12890	13270	Lm, Ch, Sh	Lower Morrow	13928
	13270	13690	Lm, Sh, Sd		
	13690	13971	Shale		
	13971	14205	Sh, Sd, Lm		
	TD	14205	100% Shale		
<u>Drill-Stem Test</u>					
2-11-88 9385 to 9170 feet					
Wtr Cushion-15 gal A10 corrosion inhibitor					
Tool Open: 11:10 pm 2-11-88					
Description of test: 10 min IF, 12 oz max,					
60 min ISI, 120 min FF, 12 oz max @ 5					
min, dec to 6½ oz @ 7.0 min, steady @					
6.5 oz, 240 min FSI, rec 185' or 35					
gal slightly 0 cut fl, 15 gal was A10.					
Pressures: Top Chart Btm Chart					
ISIP 61 min 431 478					
IFP 11 min 86.3 174					
FSIP 241 min 431 565					
FFP 120 min 86.3 195					
IHP 4135 4495					
FHP 4135 4495					
Btm Hole Temp: 138°					
Sample Chamber Rec: No fl					
Sample Chamber Press: 70 psi @ 542 ft 3 gas					
Chl in Pit: 110,000					

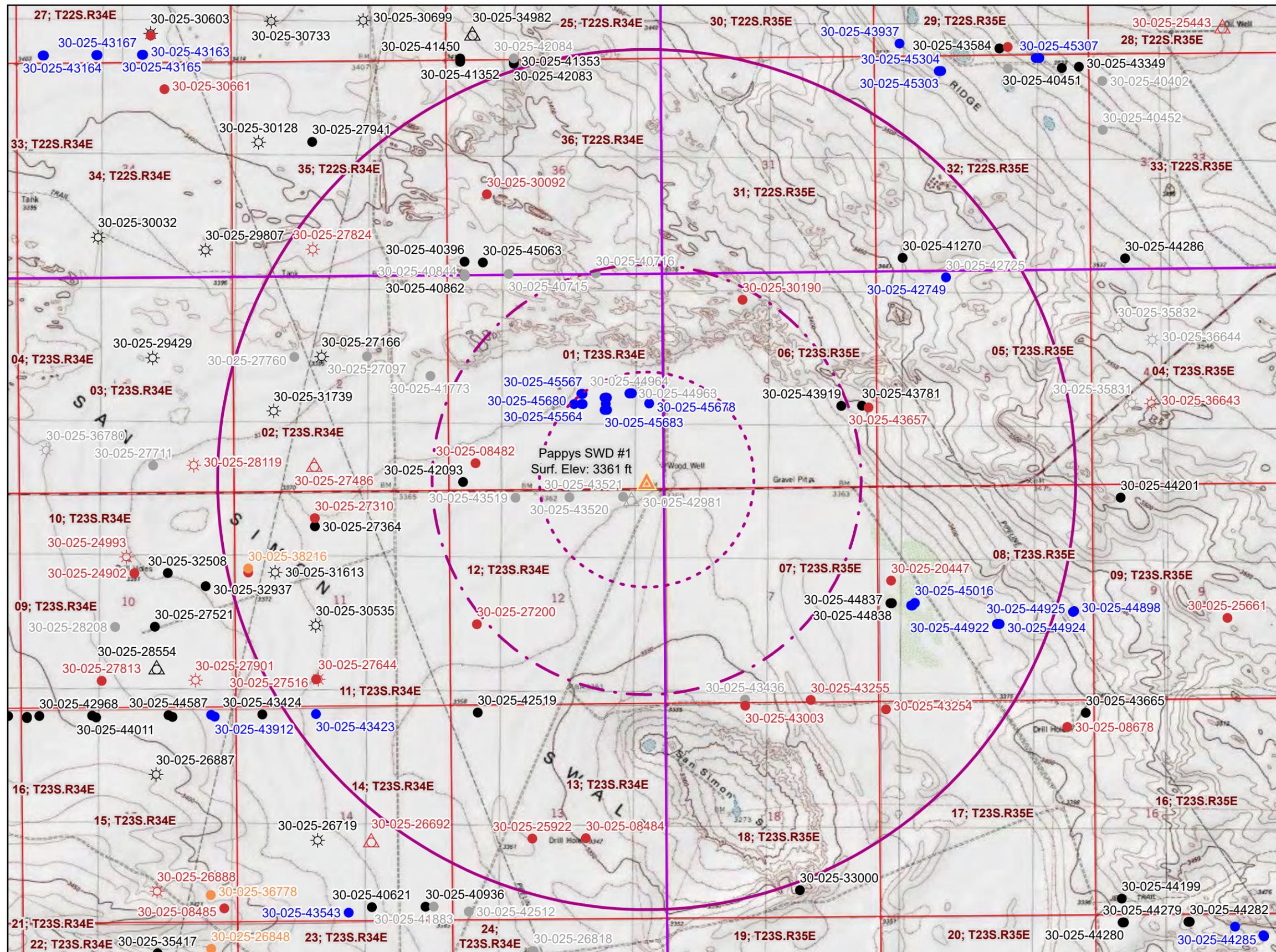
38. GEOLOGIC MARKERS

Plates

Plates 1	OCD wells within the area of review
Plate 1a	Oil and Gas Wells within 2 Miles
Plate 1b	Oil and Gas Wells within 1 mile (active and new only)
Plates 2	Mineral leases within the area of review
Plate 2a	Oil and Gas Leases with Mineral Ownership within 2 miles
Plate 2b	Surface and Mineral Ownership within 2 Miles
Plates 3	Water supply wells within the area of review
Plate 3a	Water Wells with Potentiometric and Geology
Plate 3b	Nearby OSE Water Wells
Plate 4	Surface water within the area of review

Legend

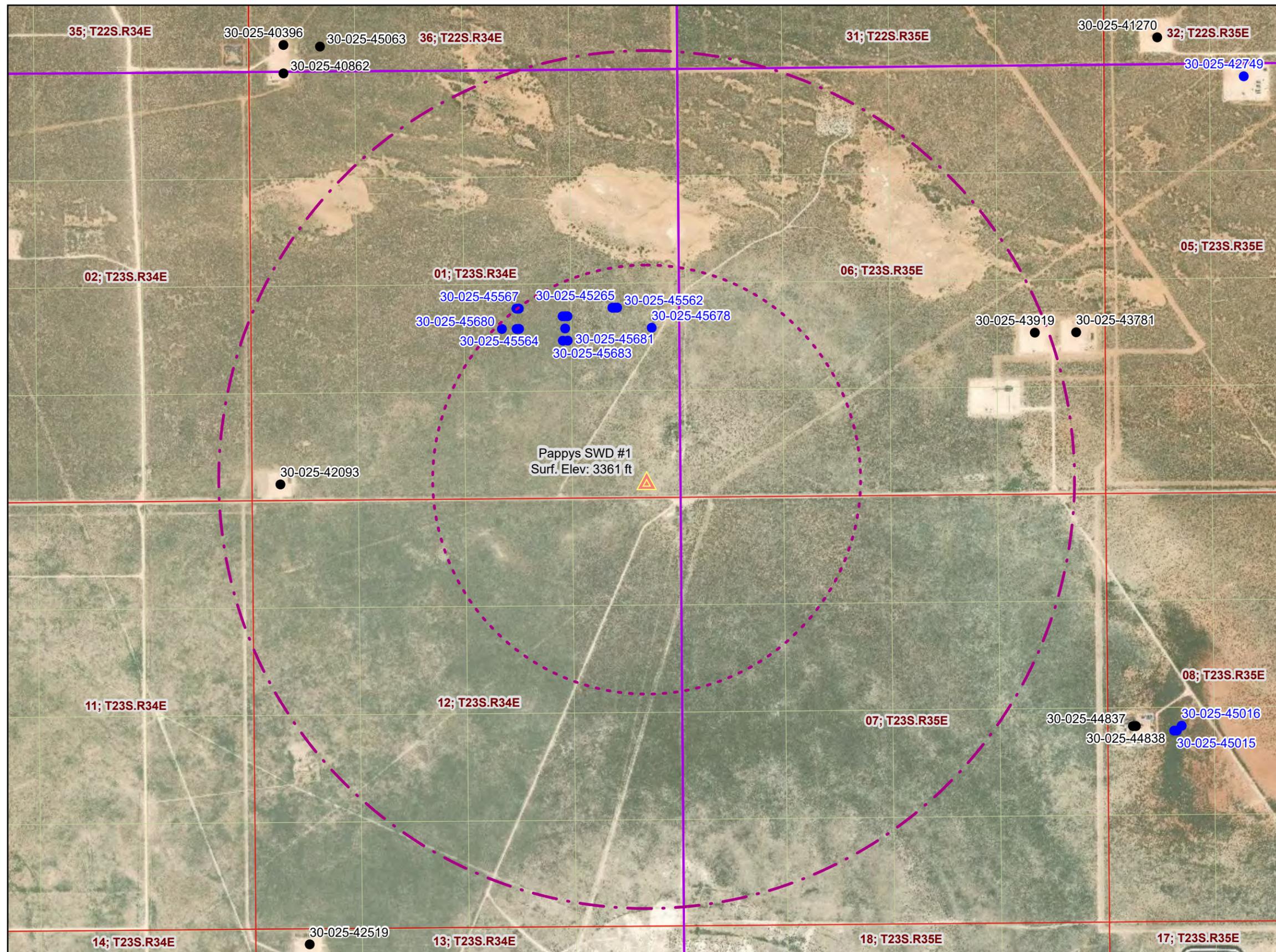
- SWD
- Distance (miles)
 - 0.5
 - 1
 - 2
- Oil and Gas (NMOCD)
 - Gas, Active
 - Gas, Cancelled
 - Gas, Plugged
 - Oil, Active
 - Oil, Cancelled
 - Oil, New
 - Oil, Plugged
 - Oil, Temporarily Abandoned
 - Salt Water Injection, Active
 - Salt Water Injection, Cancelled
 - Salt Water Injection, Plugged
- Township Range Section
 - Township Range
 - Section



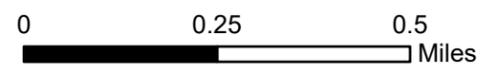
R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Oil and Gas Wells Within 2-Miles
AWR Disposal, LLC
Pappys SWD #1

Plate 1a
August 2019



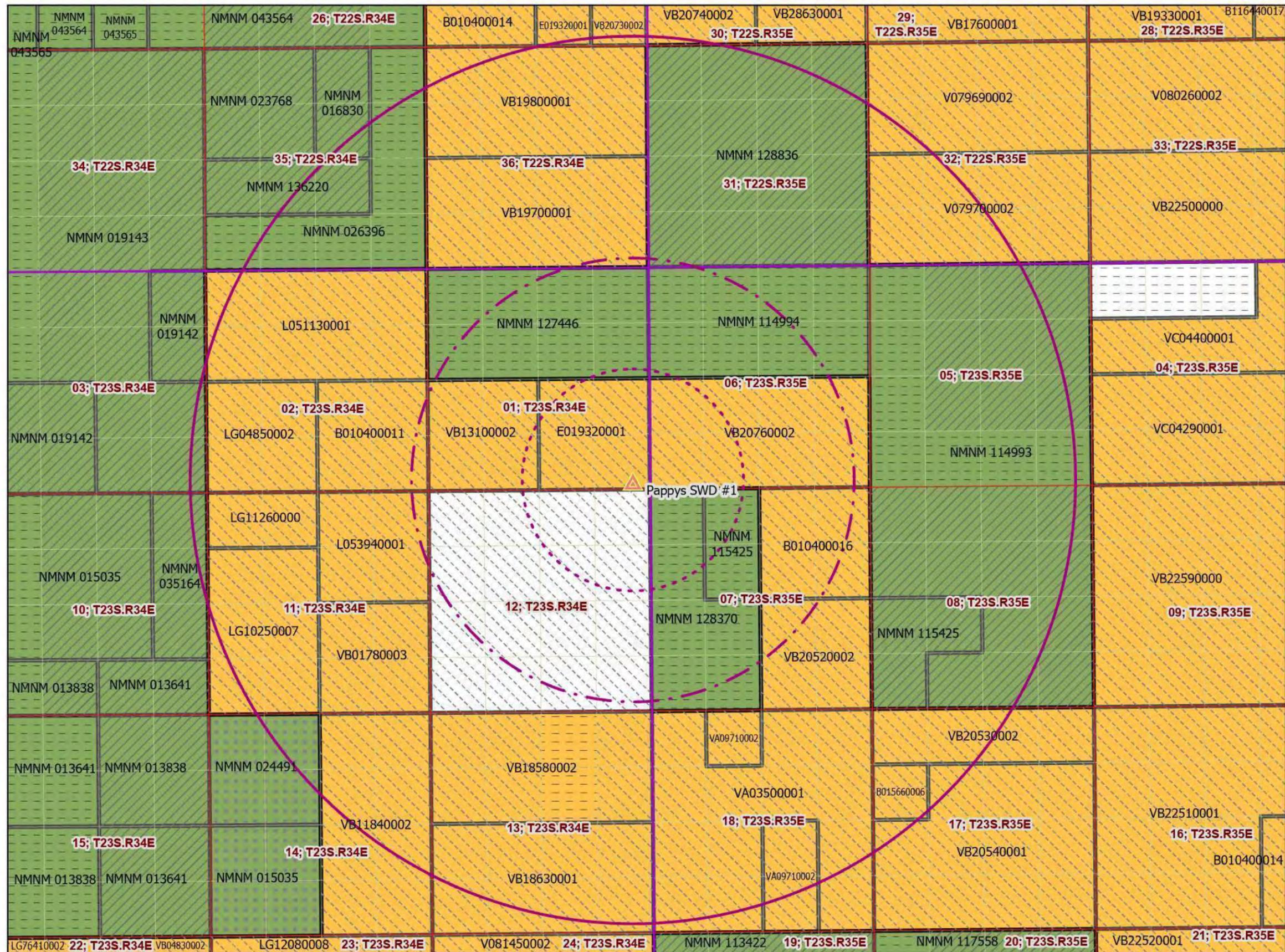
	SWD
Distance (miles)	
	0.5
	1
	2
Oil and Gas (NMOCD)	
	Gas, Active
	Oil, Active
	Oil, New
Township Range Section	
	Township Range
	Section
	UL (qq)



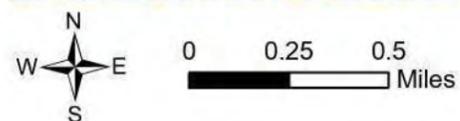
R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Oil and Gas Wells Within 1-Mile
 (Active Only)
 AWR Disposal, LLC
 Pappys SWD #1

Plate 1b
 August 2019



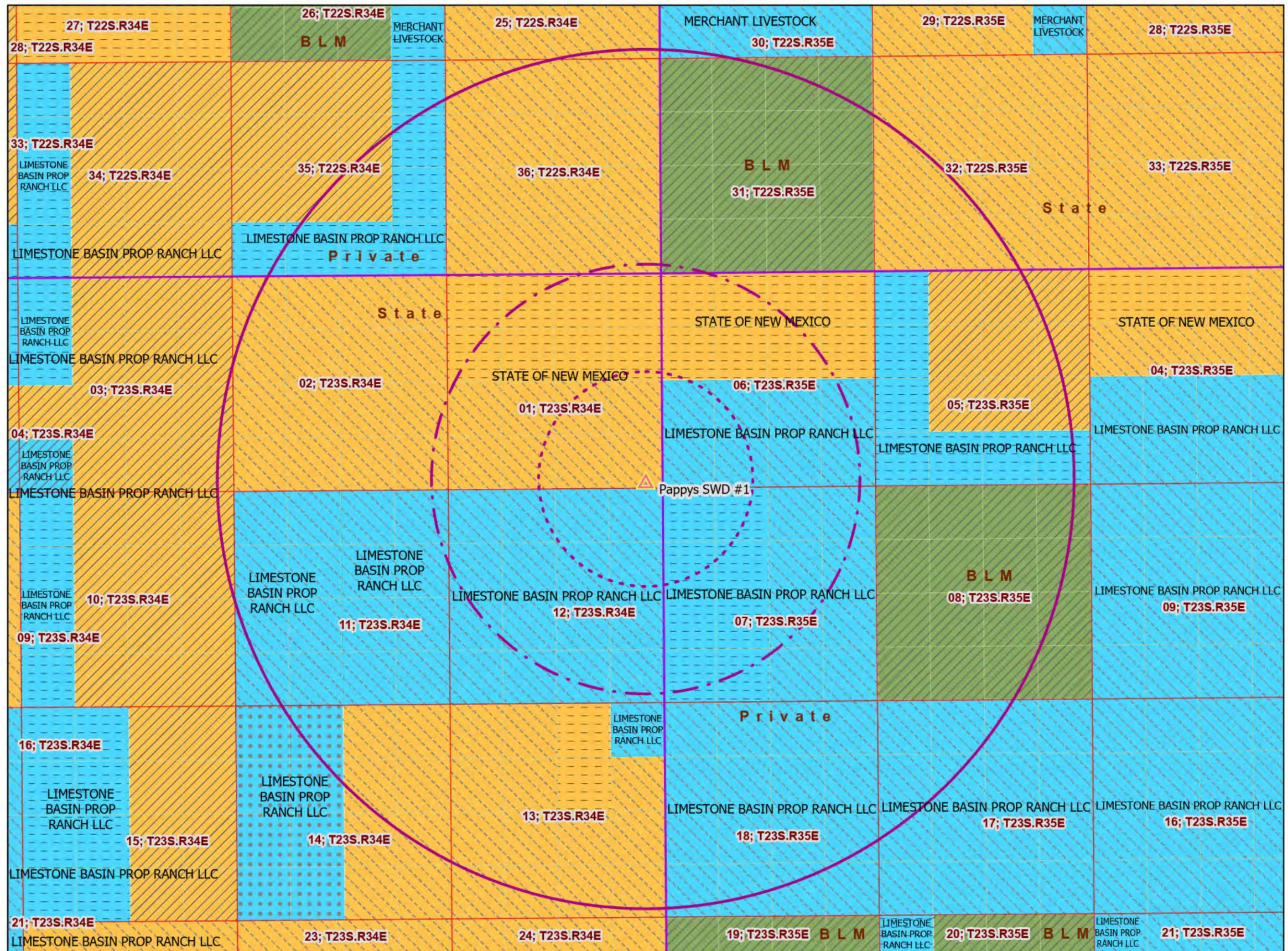
SWD
 Distance (miles)
 0.5
 1
 2
 Oil and Gas Leases
 SLO Leases
 BLM Leases
 Mineral Ownership (BLM Dataset)
 All minerals are owned by the U.S. (BLM)
 No minerals are owned by the U.S. (BLM)
 Other minerals are owned by the U.S. (BLM)
 Only oil and gas are owned by the U.S. (BLM)
 Township Range Section
 Township Range
 Section
 UL (qq)



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Oil and Gas Leases with Mineral Ownership
 Within 2-Miles
 AWR Disposal, LLC
 Pappys SWD #1

Plate 2a
 August 2019



▲ SWD

Distance (miles)

0.5

1

2

NM Land Ownership

BLM

State

Private

Mineral Ownership (BLM Dataset)

All minerals are owned by the U.S. (BLM)

No minerals are owned by the U.S. (BLM)

Other minerals are owned by the U.S. (BLM)

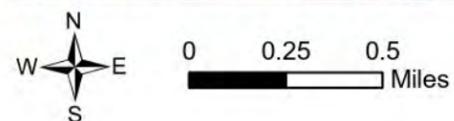
Only oil and gas are owned by the U.S. (BLM)

Township Range Section

Township Range

Section

UL (qq)



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Surface and Mineral Ownership Within 2-Miles

AWR Disposal, LLC
 Pappys SWD #1

Plate 2b

August 2019

▲ SWD

Potentiometric Surface (ft msl)

— Isocontour

USGS Gauging Station (DTW, Date)

Aquifer Code, Well Status

- ▲ Alluvium/Bolsom
- ▲ Ogallala
- ▲ Ogallala, Nearby site that taps the same aquifer had been pumped recently.
- ▲ Chinle
- ▲ Santa Rosa
- ▲ Not Defined

Misc. Water Wells (Well ID, DTW)

Well Depth (ft)

- No Data
- > 500

OSE Water Wells (DTW/Date)

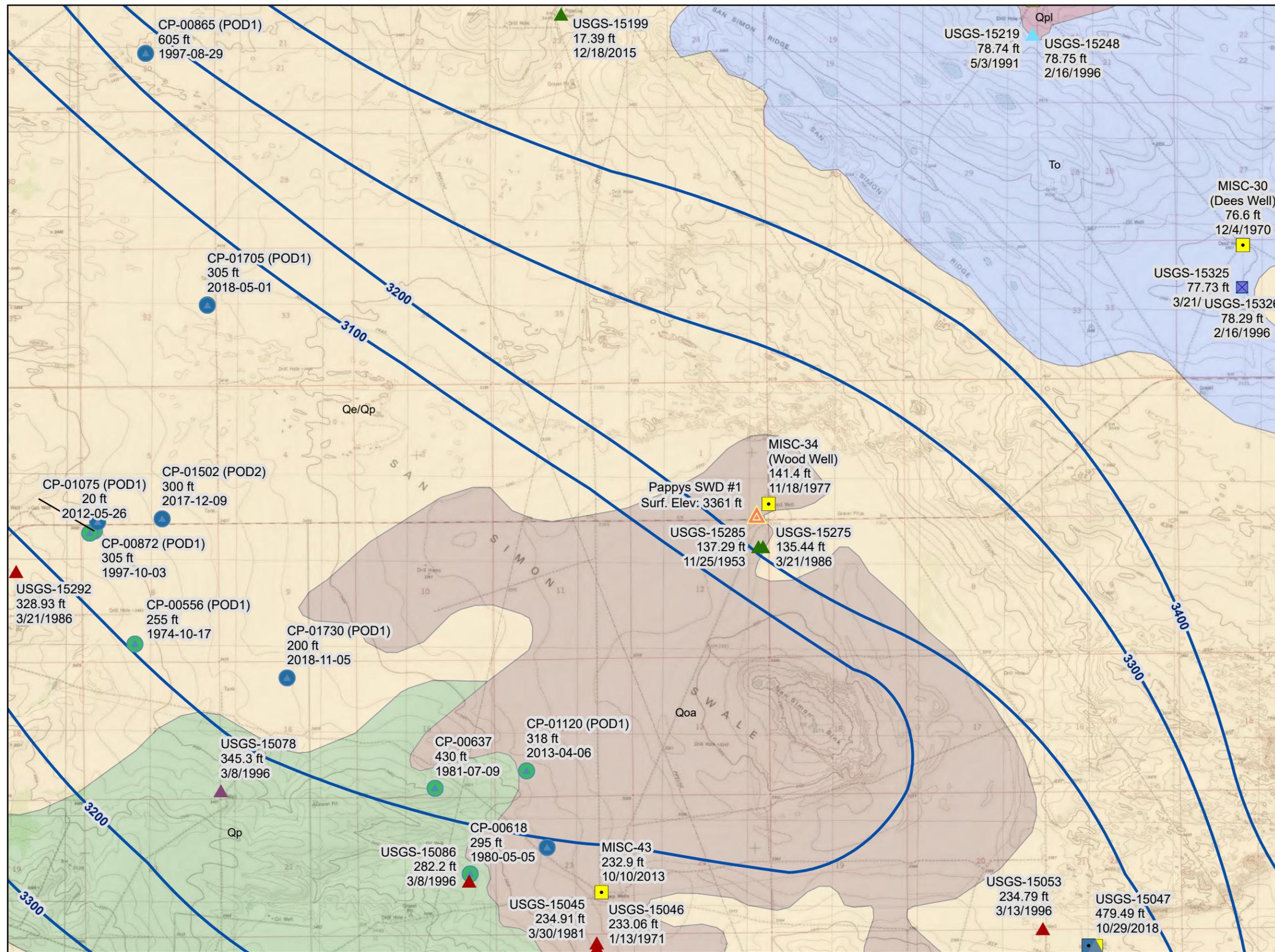
Well Depth (ft)

- 351-500
- 501-1000

NM Geology

Map Unit,Description

- Qe/Qp, Quaternary-Eolian Piedmont Deposits
- Qoa, Quaternary-Older Alluvial Deposits, Qoa, Quaternary-Older Alluvial Deposits
- Qp, Quaternary-Piedmont Alluvial Deposits, Qp, Quaternary-Piedmont Alluvial Deposits
- Qpl, Quaternary-Lacustrine and Playa Deposits, Qpl, Quaternary-Lacustrine and Playa Deposits
- To, Tertiary-Ogallala Formation, To, Tertiary-Ogallala Formation



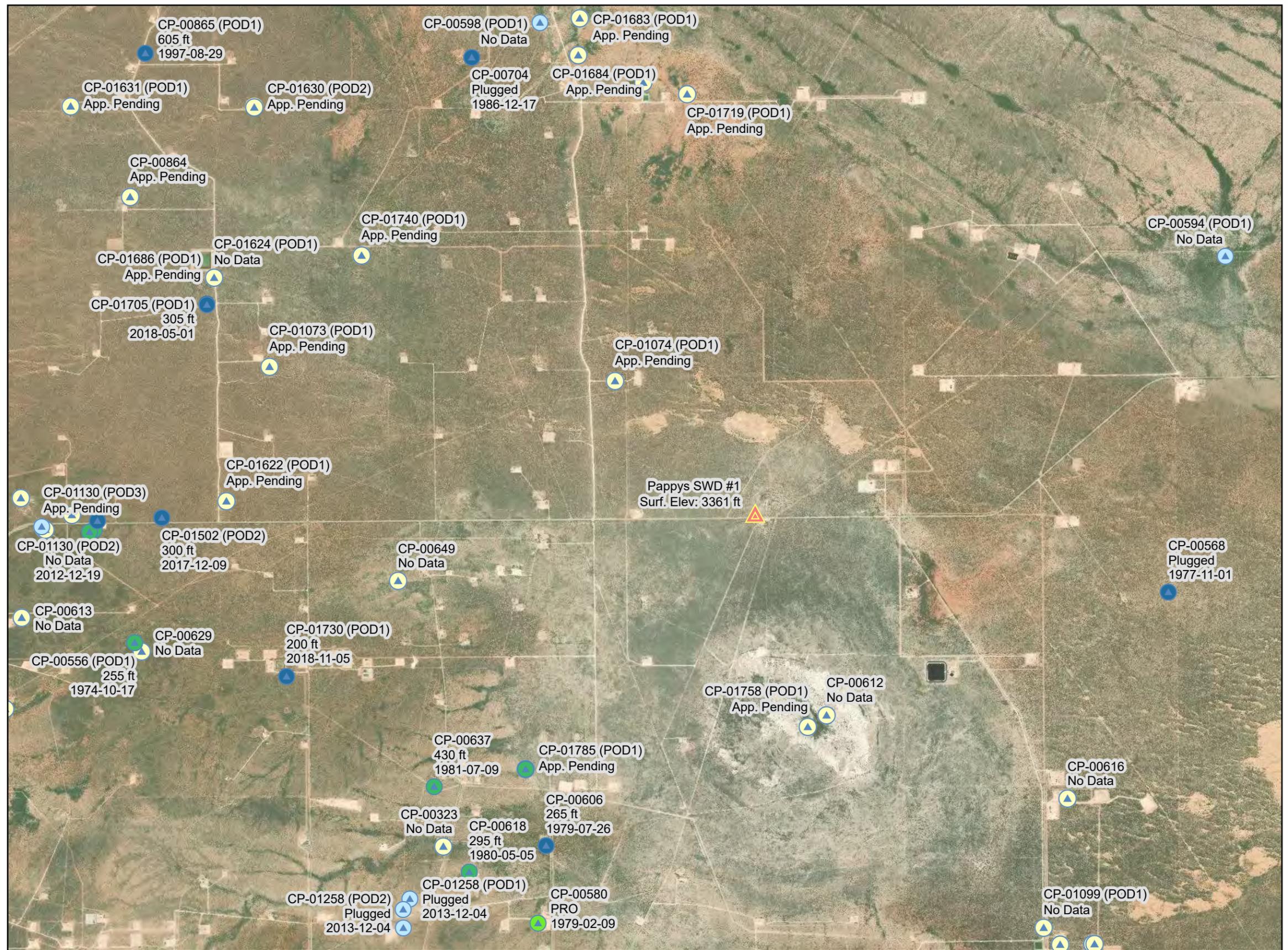
R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Depth to water and Potentiometric Surface

AWR Disposal, LLC
 Pappys SWD #1

Plate 3a

August 2019



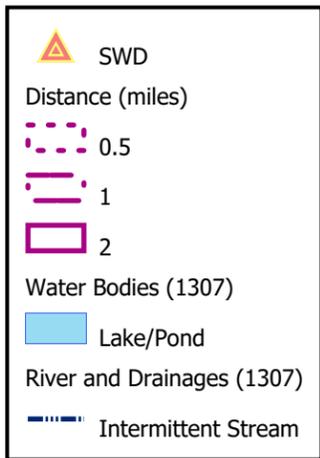
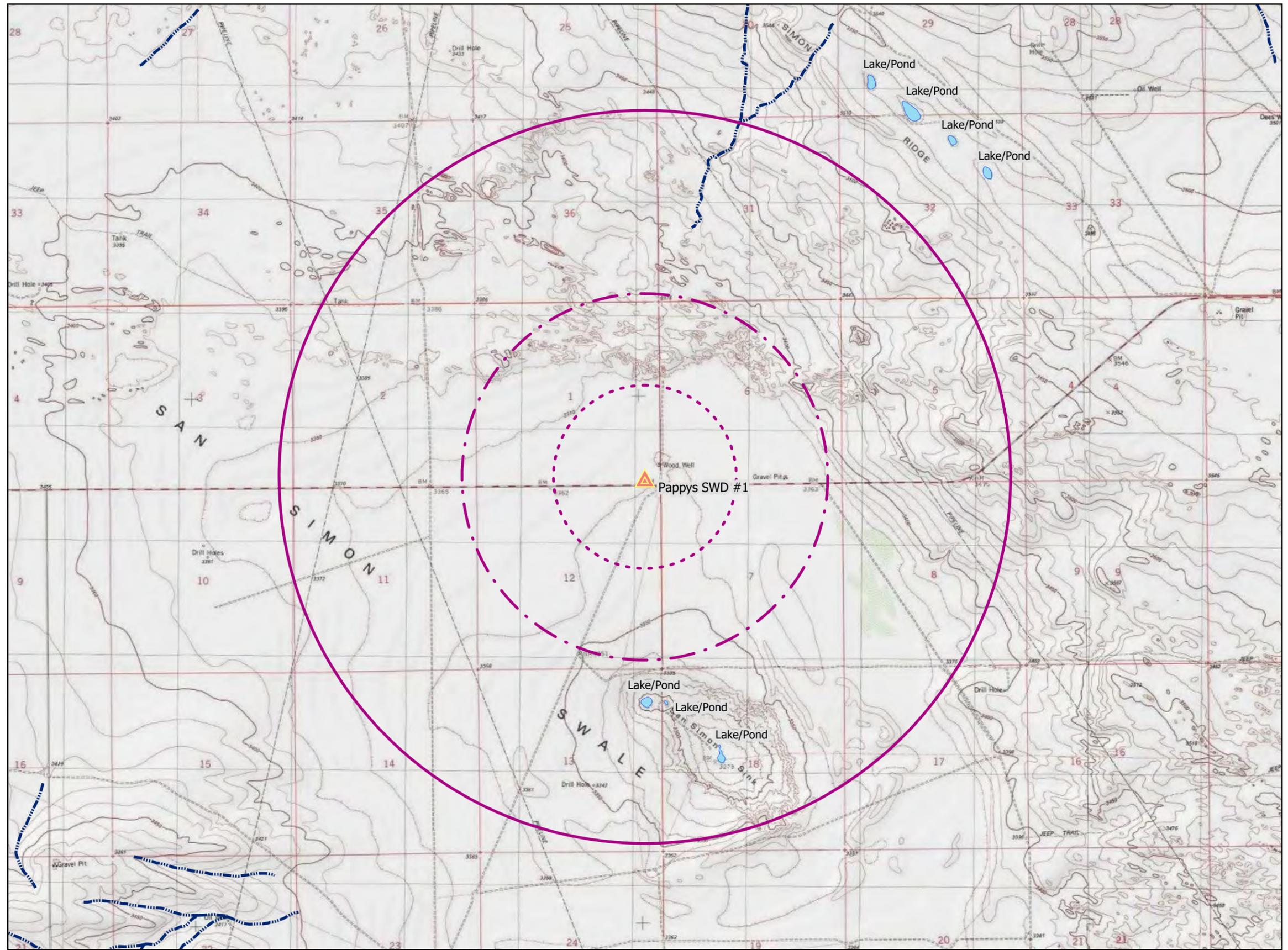
SWD
 OSE Water Wells (DTW/Date)
 Well Depth (ft)
 <=150
 151-350
 351-500
 501-1000
 Other



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Nearby OSE Water Wells
 AWR Disposal, LLC
 Pappys SWD #1

Plate 3b
 August 2019



R.T. Hicks Consultants, Ltd
 901 Rio Grande Blvd NW Suite F-142
 Albuquerque, NM 87104
 Ph: 505.266.5004

Nearby Surface Water
 AWR Disposal, LLC
 Pappys SWD #1

Plate 4
 August 2019