Initial Application Part I

Received: **08/08/2019**

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

Received by OCD: 8/8/2019 9:08:38 PM

Revised March 23, 2017

RECEIVED: 08/08/2019	REVIEWER:	TYPE: SWD	APP NO: pMAM1922138275

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: AWR Disposal LLC **OGRID Number:** 328805
Well Name: LTD SWD #1 **API:**
Pool: Proposed: SWD, Devonian, Fusselman, Montoya **Pool Code:** 97869

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

SWD-2232

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

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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.

Randy Hicks (agent)
Print or Type Name

Signature

08/08/2019
Date

505 238 9515
Phone Number

r@rthicksconsult.com
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	[6]Well Number
	LTD SWD	#1

[7]OGRID No.	[8]Operator Name	[9]Elevation
328805	AWR DISPOSAL, LLC	3421'

[10]Surface Location

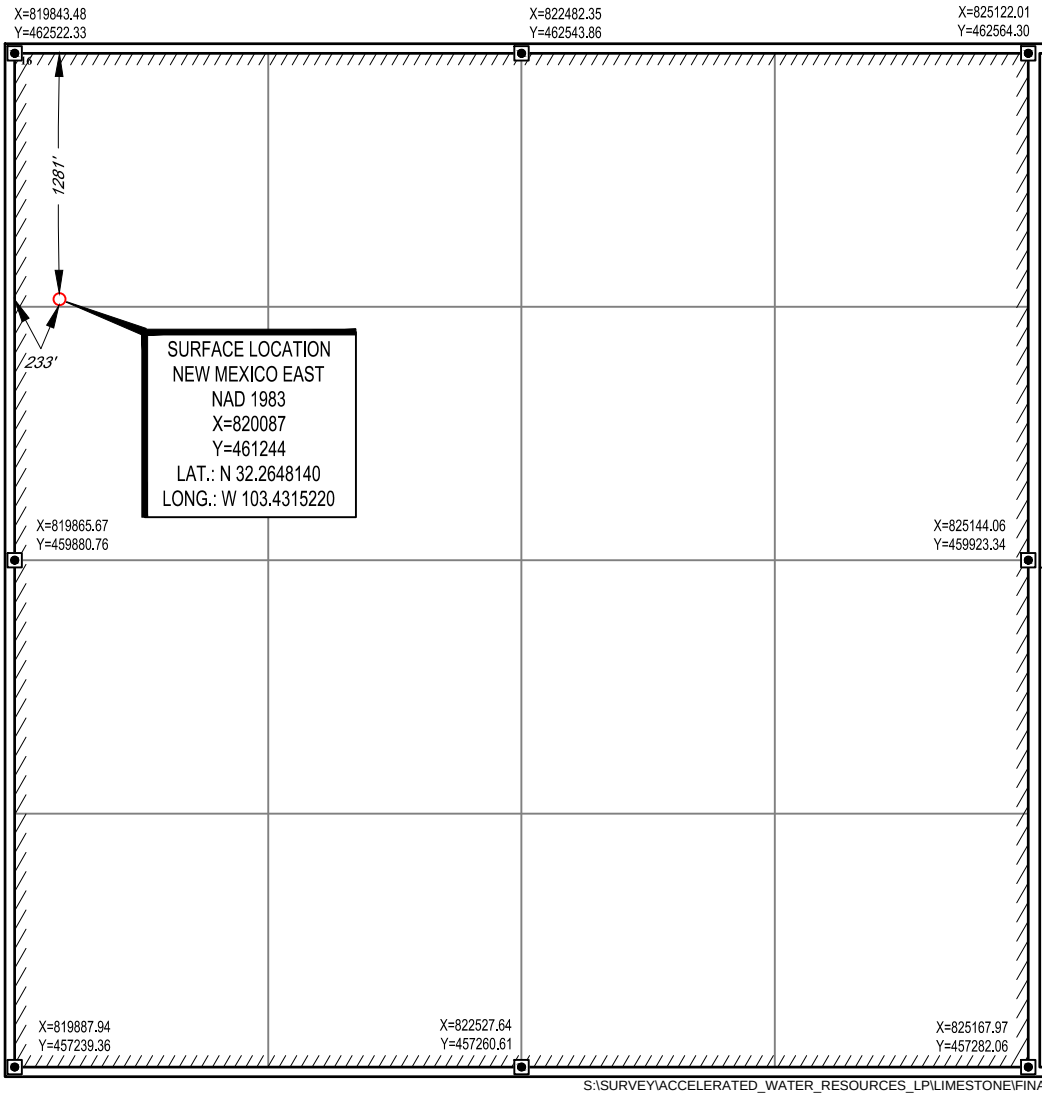
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	36	23-S	34-E	-	1281'	NORTH	233'	WEST	LEA

[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.



[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.

Signature Date

Printed Name

E-mail Address

[18]SURVEYOR CERTIFICATION

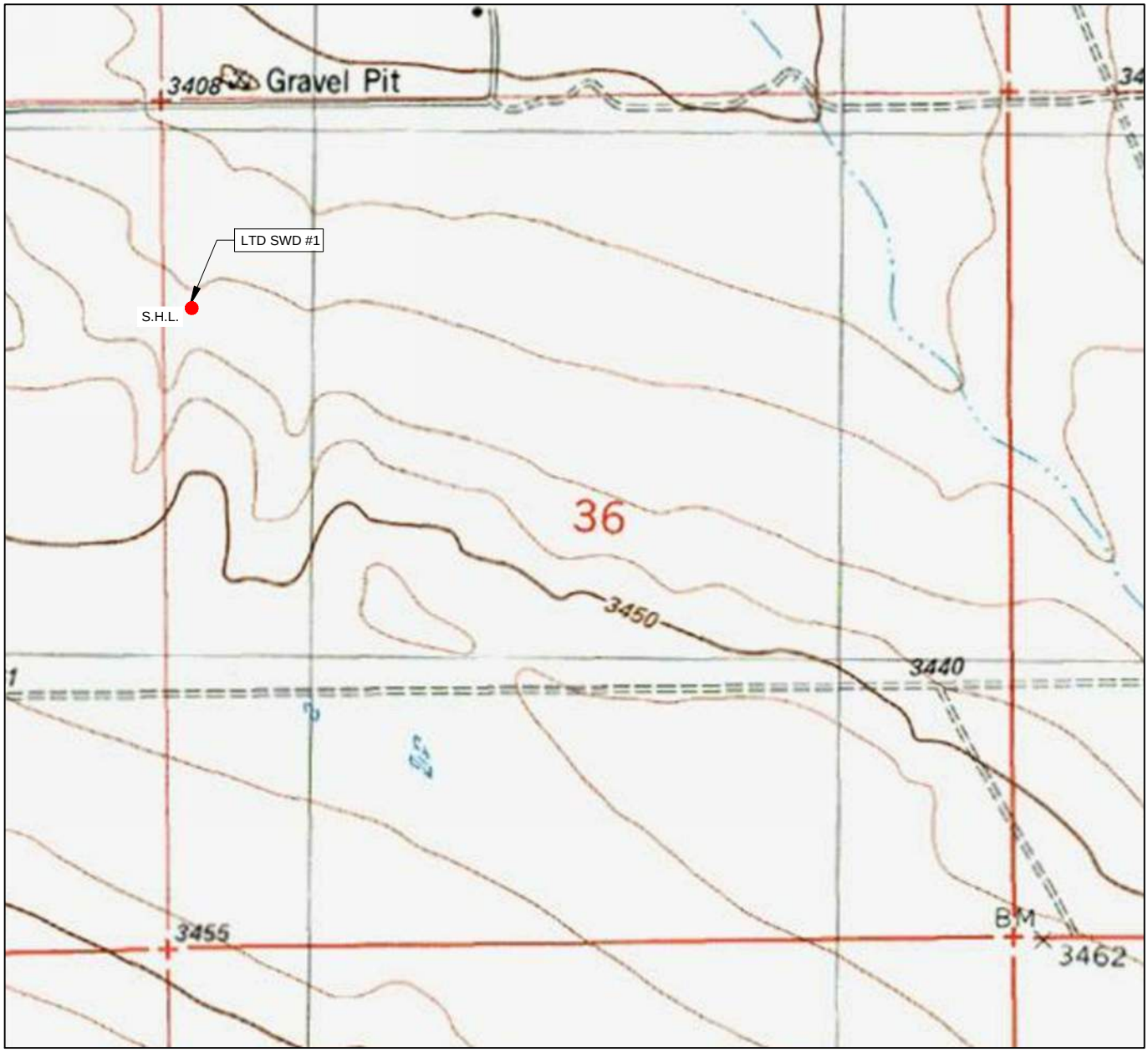
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

07/13/2019
Date of Survey
Signature and Seal of Professional Surveyor

JOHN R. CARNEGIE
NEW MEXICO
11401
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number

LOCATION & ELEVATION VERIFICATION MAP

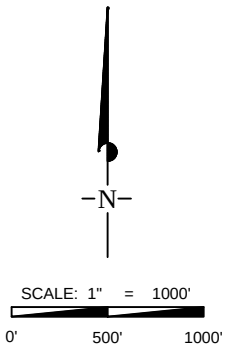


AWR DISPOSAL, LLC

LEASE NAME & WELL NO.: LTD SWD #1

SECTION 36 TWP 23-S RGE 34-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3421'
DESCRIPTION 1281' FNL & 233' FWL

LATITUDE N 32.2648140 LONGITUDE W 103.4315220



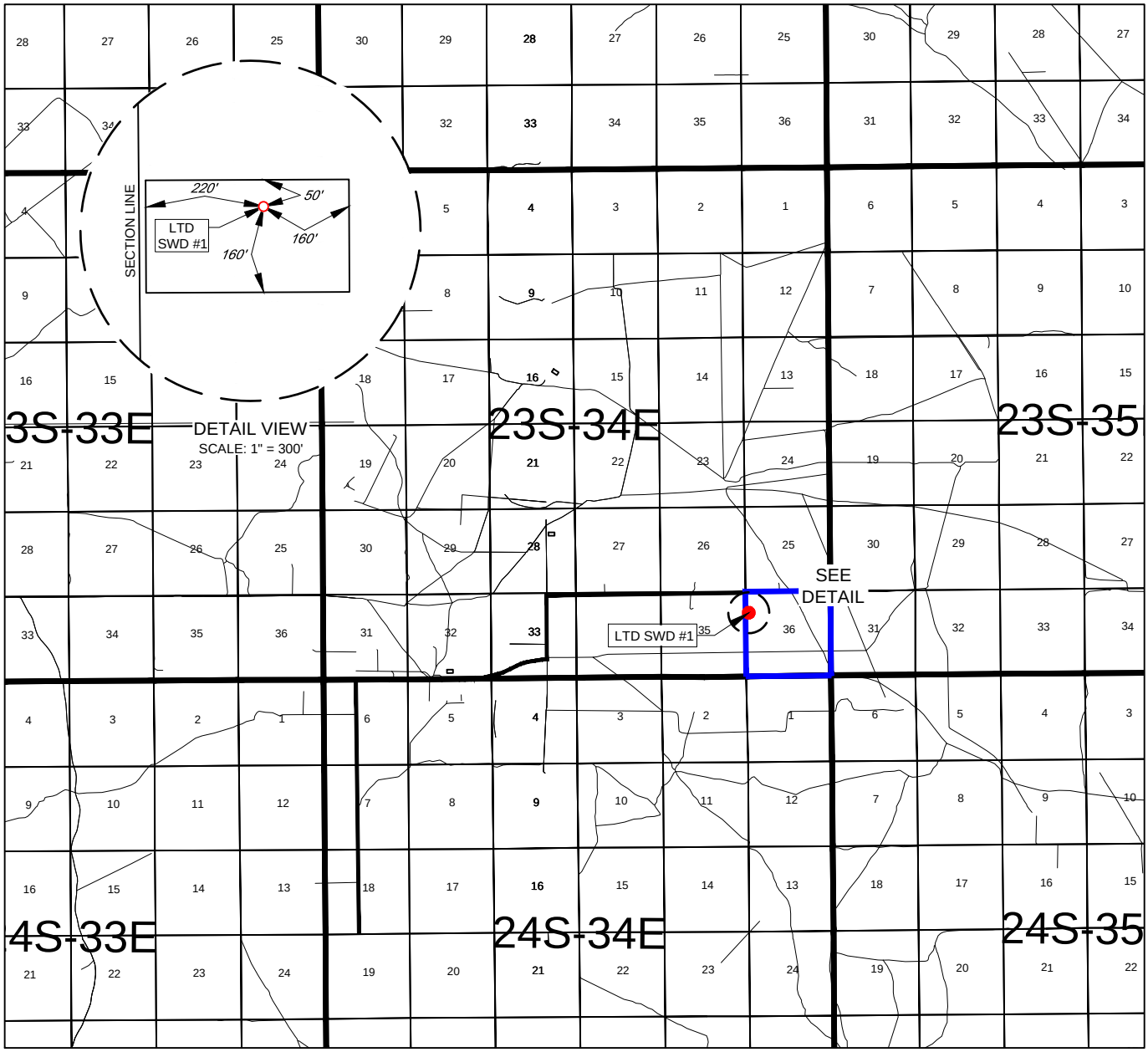
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY AWR DISPOSAL, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS 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 OF 1983, EAST ZONE, U.S. SURVEY FEET.

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

EXHIBIT 2

VICINITY MAP

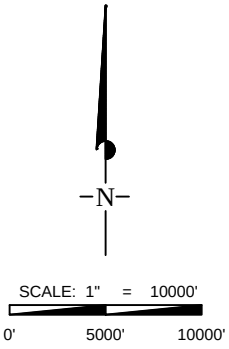


AWR DISPOSAL, LLC

LEASE NAME & WELL NO.: LTD SWD #1

SECTION 36 TWP 23-S RGE 34-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 1281' FNL & 233' FWL

DISTANCE & DIRECTION
FROM INT. OF NM-128 & DELAWARE BASIN RD., GO NORTH ON DELAWARE BASIN RD. ±3.0 MILES, THENCE GO EAST (RIGHT) ON COUNTY RD. 21 ±2.3 MILES, THENCE NORTH (LEFT) ON ANTELOPE RD. ±0.7 MILES, THENCE EAST (RIGHT) ON FIELD RD. ±2.4 MILES TO A POINT ±1,245 FEET NORTH OF THE LOCATION.



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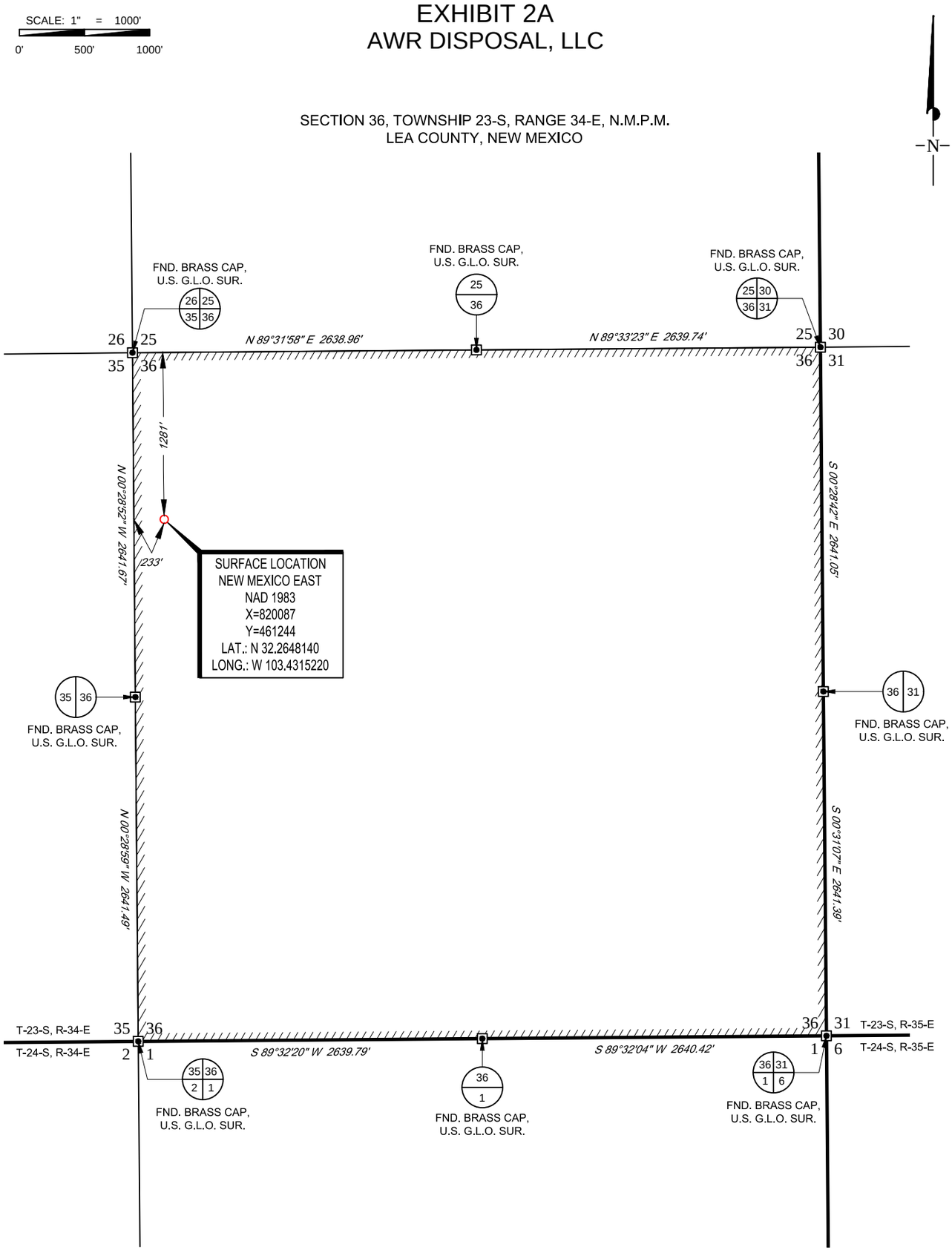
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

EXHIBIT 2A
AWR DISPOSAL, LLC

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 36, TOWNSHIP 23-S, RANGE 34-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: LTD SWD #1

SECTION 36 TWP 23-S RGE 34-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 1281' FNL & 233' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-128 & DELAWARE BASIN RD., GO NORTH ON DELAWARE BASIN RD. ±3.0 MILES, THENCE GO EAST (RIGHT) ON COUNTY RD. 21 ±2.3 MILES, THENCE NORTH (LEFT) ON ANTELOPE RD. ±0.7 MILES, THENCE EAST (RIGHT) ON FIELD RD. ±2.4 MILES TO A POINT ±1,245 FEET NORTH OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, 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
NEW MEXICO
11401
REGISTERED PROFESSIONAL SURVEYOR

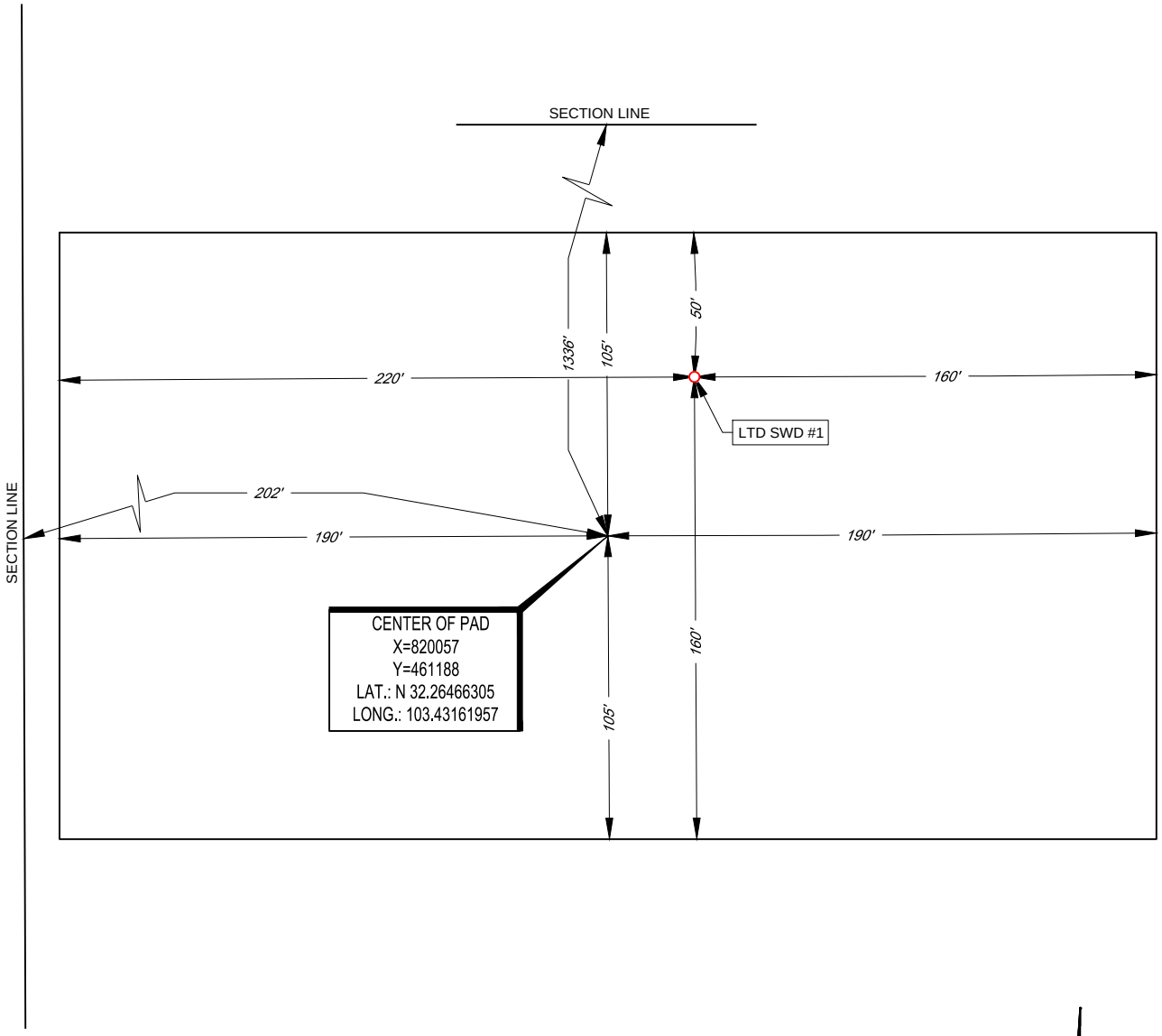
John Trevor Carnegie, P.S. No. 11401
JULY 31, 2019

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

EXHIBIT 2B

AWR DISPOSAL, LLC

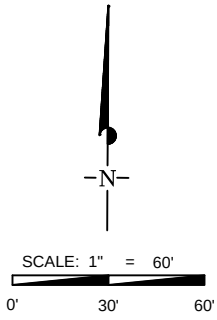
SECTION 36, TOWNSHIP 23-S, RANGE 34-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: LTD SWD #1

#1 LATITUDE N 32.2648140 #1 LONGITUDE W 103.4315220

CENTER OF PAD IS 1336' FNL & 202' FWL



ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, 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.

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TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ____X____Disposal _____Storage
Application qualifies for administrative approval? __X_____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 ____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: _____Randall Hicks_____TITLE: _____Agent_____

SIGNATURE: _  _____ _____DATE: __08/08/2019_____

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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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: _LTD SWD #1_____

WELL LOCATION: _____1,281’ FNL & 233’ FWL_____D_____36_____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*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Intermediate Casing

Hole Size: _____ Casing Size:_____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: _____ Casing Size:_____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Total Depth: _____

Injection Interval

_____feet to_____

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: _____See attachments_____Lining Material: _____

Type of Packer: _____

Packer Setting Depth: _____

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: _____

3. Name of Field or Pool (if applicable): _Proposed: SWD, Devonian, Fusselman, Montoya_____

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_____

   _____

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

   _____

   _____

   _____

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

AWR DISPOSAL, LLC

LTD SWD #1

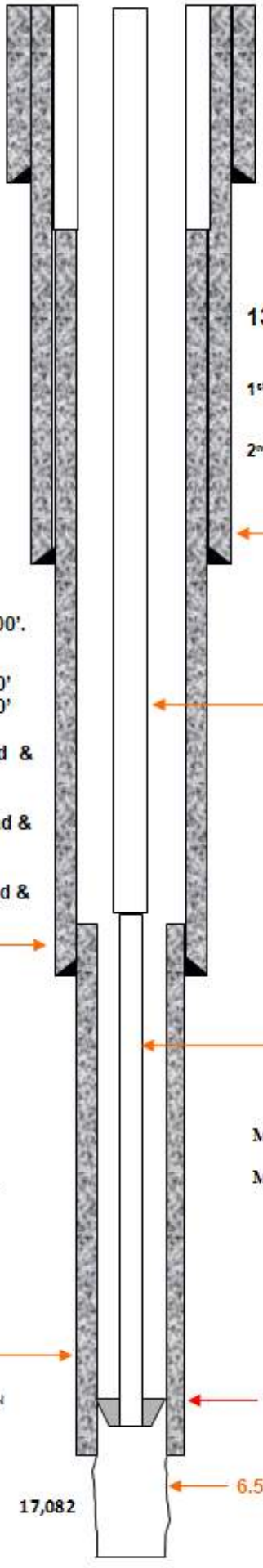
Unit Letter D, Sec 36, T23S R34E
1,281' FNL, 233' FWL
Lea County, NM

Latitude 32°15'53.33"N, Longitude 103°25'53.48"W

Directions

From Carlsbad:

Date Spudded: TBD



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 @ 11,000'.

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 @ 15,085'.
Cmt w/ 230 sks 11.9 ppg Class C

Injection Interval: 8.5" Hole

15,085	-	16,248	DEVONIAN
16,248	-	16,748	FSLM
16,748	-	17,082	MNTY

Packer set @ 14,985

6.5" Openhole

TD: 17,082

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: LTD SWD #1
Unit Letter D, Section 36, T23S R34E, 1,281' FNL, 233' FWL

Limestone Basin Prop Ranch LLC 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 LTD SWD #1 were established by Geologist Herb Wacker TBPG license #4517. The type log for the LTD SWD #1 is the Shell oil Antelope Ridge Unit #1 with a total depth of 17,895 feet (30-025-20444). This well is 2.5 miles west-southwest of the proposed SWD.

Shallow picks were made using the log from the Amoco Production Co. State "FQ" Gas Com with a total depth of 13,910 feet (30-025- 24955). This well, which penetrates the Mississippian strata, is 0.7 miles northwest of the proposed SWD.

AWR 211 LTD Sec 36 Twp 23S Rge 34E		
	GL	3420
Geologist	KB	3450
H. Wacker	MD	SS
Dockum	226	3224
Santa Rosa	247	3203
Dewey Lake	464	2986
Rustler	825	2625
Salt	1222	2228
Castile	3330	120
Capitan Reef	4799	-1349
Delaware	5238	-1788
Bell Canyon	5290	-1840
Cherry Canyon	6143	-2693
Brushy Canyon	7459	-4009
Bone Spring	8634	-5184
Avalon	9115	-5665
1st Bone Spring	9832	-6382
2nd Bone Spring	10369	-6919
3rd Bone Spring	11332	-7882
Wolfcamp	11716	-8266
Strawn	12111	-8661
Atoka	12306	-8856
Morrow	13268	-9818
Barnett	13995	-10545
Miss Limestone	14485	-11035
Woodford	14855	-11405
Devonian	15055	-11605
Fusselman	16248	-12798
Montoya	16748	-13298
Simpson	17112	-13662
Top of Interval	15085'	Devonian +30'
Bottom of Interval	17082'	Simpson -30'
TD	17082'	
Thickness of Injection Interval = 1997'		

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 14,985'.

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 14,985'.

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 intervals include the Devonian, Fusselman and Montoya 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 15,085-17,082 (1,997 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 3,420'):

Bone Spring	8634
Avalon	9115
1st Bone Spring	9832
2nd Bone Spring	10369
3rd Bone Spring	11332
Wolfcamp	11716
Strawn	12111
Atoka	12306
Morrow	13268

Underlying Oil & Gas Zones:

Devonian	17124

One well, the ANTELOPE RIDGE UNIT No. 003 (30-025-21082) penetrated the Devonian and found gas. This well remains active but produces only from the Morrow. More information on this well is provided in this submission.

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, leassors/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 1 shows that there two wells penetrate the proposed injection zone. As shown below, Antelope Ridge Unit #1 is plugged and abandoned. Antelope Ridge Unit #3 is an active well producing gas from the Morrow with the Devonian plugged off as shown in the attached documents.

30-025-08486	BOLD ENERGY, L.P.	G	P	ANTELOPE RIDGE UNIT #001	N-27-23S-34E	14832
30-025-21082	OXY USA INC	G	A	ANTELOPE RIDGE UNIT #003	K-34-23S-34E	14695

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 Spring, 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 15,055 and 17,112 respectively. The depth interval of the injection interval is 15,085-17,082 (1,997 feet), 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.

The Rustler Formation and the Chinle Formation yield water to supply wells in southeastern Eddy County and southwestern Lea County. In the immediate area of the LTD SWD #1, the closest mapped water well (well USGS-15046) is not located where plotted. Rather, this well is associated with a stock tank and corrals; about 1.5 miles to the north of the LTD SWD #1 site (Plate 3a) and is at the same location as Misc-42 and USGS-15045. The depth to water at well Misc-42 was 232.9 in 2013 as measured by Hicks Consultants.

In this area of Lea County, the Chinle/Santa Rosayields water to wells from 100-300 feet below the ground surface (bgs) to a depth of about 600 feet. Wells completed in the Alluvium in Antelope Wash about 2.5 miles to the southwest have USGS-measured depth to water measurements less than 100 feet. The upper portion of the Rustler Formation yields fresh water to wells in Eddy County and in the area of the LTD SWD #1, the depth interval of this potential source of fresh water is about -825-1000 feet. 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. The location of nearby mapped surface water bodies are shown in Plate 4.

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. In this area, 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 and no such faults are mapped in the area of the proposed LTD SWD #1[1]
- The Texas Bureau of Economic Geology has mapped older faults (e.g. basement and Woodford) in New Mexico and the closest mapped basement/Woodfordfault is about 2.5 miles to the west[2]
- 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); Woodord Faults (Comer 1991, plate 1). Http://www.beg.utexas.edu/resprog/permianbasin/gis.htm

Data From OCD On Line For All Wells Of Public Record Within The Area Of Review Which Penetrate The Proposed Injection Zone.

Antelope Ridge Unit 01 – Final Plugging and Abandonment Record and Diagram
Antelope Ridge Unit 01 – Casing Data

Antelope Ridge Unit 03 –Diagram and Data for Plug Back
Antelope Ridge Unit 03 – DST data
Antelope Ridge Unit 03 – Additional Data on Plug back

OCD-HOBBS

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OM B No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160 - 3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5. Lease Serial No.
LC 071949

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
Antelope Ridge Unit NM68299D

1. Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

8. Well Name and No.
1

2. Name of Operator
BOLD ENERGY, LP

9. API Well No.
30-025-08486

3a. Address
415 W. Wall, Suite 500 Midland, Texas 79701

3b. Phone No. *(include area code)*
432-686-1100

10. Field and Pool, or Exploratory Area
Antelope Ridge (Atoka)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
660' FSL & 1980' FWL Unit Letter "N"
Section 27 - T23S - R34E

11. County or Parish, State
Lea County, New Mexico

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☑ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

On 10/12/06 completed P&A operations as follows:

1. **Set CIBP on WL at 6700', circulated hole w/ 10 PPG - 40 vis mud and spotted 30 sk cement plug (14.8 PPG) on top of CIBP. Estimated top of plug is at 6550'.**
2. **With tbg @ 5148', set 40 sk cement plug (14.8 PPG w/ 2% CaCl) across 10 3/4" intermediate shoe at 5098'; WOC and tagged top of plug 4949'.**
3. **With tbg @ 1600', set 40 sk cement plug (14.8 PPG) from 1600' to 1400'. TOC is estimated, tag not required by NMOCD.**
4. **Perfed 9 squeeze holes in 7 5/8" casing at 375' (50' below 16" surface casing shoe @ 325'). Set cement retainer @ 350' and circulated cement into the 10 3/4" x 7 5/8" annulus from 375' to surface. Pumped +/- 100 sx (14.8 PPG) & circ'd estimated 21 sx good cement to pit. Closed retainer and circ'd inside of 7 5/8" casing from 350' - 0' with +/- 85 sx cement.**

On 10/13/06, cut casings and WH's to 3' below ground level and installed regulation Dry Hole Marker.

Operator will file Final Abandonment Notice when location is ready for final inspection.

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Shannon Klier Title **Operations Engineering Manager / BOLD ENERGY, LP**

Signature SKlier Date 10/17/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Office

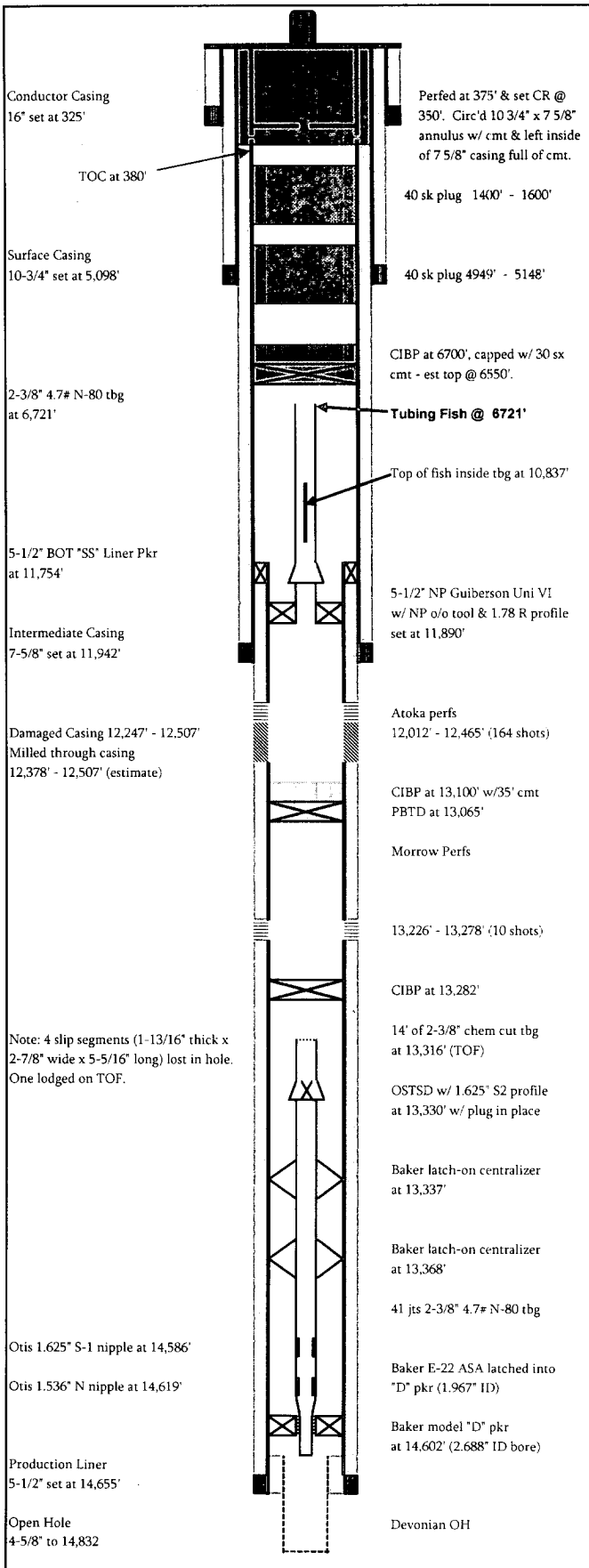
ACCEPTED FOR RECORD
OCT 23 2006
FREDERICK WRIGHT
PETROLEUM ENGINEER

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GWW

Final P&A



BOLD ENERGY, LP — Antelope Ridge Unit #1

WI: 50.0% **NRI:** 42.5%
Elevation: 3,465 **API:** 30-025-08486
KB: 19' **Surface Location** 660' FSL & 1980' FWL
Meas. TD: 14,832' **Legal Description** Section 27 - T23S - R34E
TVD: 14,832' **Field:** Antelope Ridge
PBD: 13,065' (CIBP w/cmt) **County:** Lea County
Zone: Morrow **State:** New Mexico

Casing	Hole	Weight	Grade	Depth	Burst	80% Burst	TOC
16"	20"	65#		325'			Surface (circ.)
10-3/4"	13-3/4"	45.5/51#		5,098'			Surface (circ.)
7-5/8"	9-7/8"	26.4/33.7#		11,942'			380' (TS)
5-1/2"	6-5/8"	20#		14,655'			11,754' (liner top)
OH	4-5/8"			14,832			

Date	Event
12/26/1961	Spud
7/29/1962	TD
12/1/1964	Completed as OH Devonian Producer. Produced 5.07 bcf + 113.7 MBO from Devonian (14,655' - 14,832')
12/1/1966	Set CIBP at 13,282' and recompleted to Morrow from 13,226' - 13,278. Produced 23.4 bcf + 221.7 mbo + 154.6 mbw Morrow "D" perfs: 13,226'; 13,232'; 13,241'; 13,277'; 13,278' (10 shots) Morrow "D" last produced at 500 mcfd + 5 bopd + 15 bwpd in February of 1983 Note: DCA EUR = 30.0 bcf. P/Z EUR = 29.7 bcf. Volumetric AOI = 970 acres.
2/1/1983	Set CIBP at 13,100' and recompleted to Atoka with 56 shots over 372' gross: "A" from 12,093' - 12,096' "B" from 12,141' - 12,148'; 12,161' - 12,166'; 12,171' - 12,174' "D" from 12,461' - 12,465' all with 1-11/16" gun at 2 spf Acidized with 7,000 gals 15% energized acid at 4.2 bpm. Tested Atoka at 800 mcfd + 37 bopd + 28 bwpd
4/1/1983	Added Atoka perfs with 98 shots over 225 ft gross: "C" from 12,223' - 12,237 "B" from 12,166' - 12,179' "A" from 12,012' - 12,022'; 12,032' - 12,038'; 12,052' - 12,058' all with 1-11/16" gun at 2 spf Acidized with 8,000 gals 15% energized acid at 7 bpm. Followed by 40,000 gals acid with 20% CO2 at 9 bpm. Tested Atoka at 400 mcfd + 11 bcpd + 7 bwpd
10/1/1989	Attempted to get back to Morrow "D". While milling through tight spot in casing cut through casing and got outside pipe. Abandoned Morrow recompletion attempt and put Atoka back on. Atoka cum. As of May 2005 is 0.293 bcf + 19.3 mbo. Currently at 2-3 mcfd from Atoka. P/Z estimate 3,250 psi. P/Z EUR = 0.52 bcf. Volumetric AOI = 48 acres (18 ft net pay).
11/8/1997	Attempted to run flowing gradient survey and lost tools in hole. All wireline recovered after dropping cutter bar. Notes on milling operation resulting in cutting through casing: 4-5/8" MT bit - wash and rotate 12,263 - 12,278' recovering scale. Wash and rotate12,278' - 12,371' recovering pkr junk and scale. Lost 2 cones - no recovery with magnet - DP plugged w/scale. 4-5/8" Blade bit - tagged at 12,247'. Wash and ream to 12,252' Stuck bit at 12,252'. Work free and POOH. 4-1/4" Cone Buster mill - tagged at 12,247'. Reamed through tight spot to 12,253'. Recovered junk iron, scale & csg shavings. Wash and rotate to 12,298'. Rotated to 12,360' (no pump). DP plugged. POOH. 4-1/4" Cone Buster mill - tagged at 12,240'. Tight to 12,242' & 12,258' - 12,259'. Wash and rotate to 12,375'. DP plugged. Wash and rotate to 12,375' - 12,378' (hard). Wash and ream 12,378' - 12,414' (85% scale, 15% formation, w/ some cement) Wash and ream 12,414' - 12,422' (95% formation & 5% scale + rock bit bearings) Washed down 12,422' - 12,475'. Wash and ream to 12,480' - POOH bit worn smooth. 4-1/4" Cone Buster mill - tag at 12,480'. Wash and rotate to 12,506' - recovering larg amount of formation with metal shavings. 12,506' - 12,507' 99% formation with very little metal cuttings. POOH and abandon attempt to get back to Morrow "D". POOH with mill. Run tubing and packer to produce Atoka.
10/6/2006	Attempted to unset packer and POOH for Atoka Bank recompletion. Parted joing 6,721 ft from surface. Layed down tubing. Joints showing severe corrosion. The following morning well had 580 psi on tubing. Blew down and RIH w/ WL to tag inside tubing. Could not get below 5,990'.
10/12/2006	Set CIBP @ 6700', loaded hole w/ mud & capped CIBP w/ 30 sx cmt. Set 40 sk plug @ 5098', WOC & WOC & tagged top of plug @ 4949' (covering 10 3/4" intermediate shoe @ 5048'). Set 40 sk plug from 1600' - 1400'. Perfed 7 5/8" casing @ 375', set CR @ 350' & circ'd 10 3/4" x 7 5/8" annulus with +/- 100 sx. Closed retainer & circ'd inside 7 5/8" casing from 350' - 0' with approx 85 sx cmt.
10/13/2006	Cut casings & WH's 3-' below GL & isntalled dry hole marker.

Form 9-330

R-34-E

			Section 27				T 23 S
	x						

LOCATE WELL CORRECTLY

Budget Bureau No. 42-R-355.3.
Approval expires 12-31-55.

U. S. LAND OFFICE New Mexico
SERIAL NUMBER LC-071949
LEASE OR PERMIT TO PROSPECT -

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CONFIDENTIAL

LOG OF OIL OR GAS WELL

Company Shell Oil Company Address P. O. Box 1858, Roswell, New Mexico
Lessor or Tract Harris-Federal Field Wildcat State New Mexico
Well No. 1 Sec. 27 T. 23S R. 34E Meridian NMPM County Lea
Location 660 ft. N./~~S.~~ of S Line and 1980 ft. E./~~W.~~ of W Line of Section 27 Elevation 3483' (Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed R. A. Lowery Original Signed By R. A. LOWERY

Date August 21, 1962 Title District Exploitation Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling December 26, 1961. Finished drilling July 28, 1962.

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 14,655' to 14,832' (G) No. 4, from to
No. 2, from to No. 5, from to
No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

No. 1, from to No. 3, from to
No. 2, from to No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
16"	65#	8rd	National	300					Surface
10 3/4"	[illegible]	8rd	[illegible]	[illegible]	Guide				Intermediate
7 5/8"	29.7# & 33.7#	[illegible]	National	[illegible]	Float				
5 1/2"	19.81#	8rd	Youngstown	2990					Oil

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
16"	325'	400	Pump & Plug	Cemented to surface	
10 3/4"	5098'	2475	Pump & Plug	Cemented to surface	
7 5/8"	11942'	1100	Pump & Plug		
5 1/2"	14655'	300	Pump & Plug	Circulated behind liner	

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set
Adapters—Material Size

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 775 feet to 14,832 feet, and from feet to feet
Cable tools were used from 0 feet to 775 feet, and from feet to feet

DATES

August 21, 1962 Put to producing August 9, 1962

The production for the first 24 hours was 65 barrels of fluid of which 92% was oil; -% emulsion; 8% water; and -% sediment. Gravity, °Bé. Oil 56 deg. Gas 0.695

If gas well, cu. ft. per 24 hours 41 Million Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in.

EMPLOYEES

, Driller , Driller
, Driller , Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	250	250	Surface sands
250	852	602	Red Beds
852	5025	4173	Salt, Anhydrite, Shale
5025	5095	70	Limestone
5095	8556	3461	Sand, Shale, Limestone
8556	14655	6099	Sand, Shale, Limestone, Chert
14655	14832	177	Dolomite

LOG TOPS:

Base Red Beds	852' (+2631')
Delaware Limestone	5025' (-1542')
Delaware Sand	5095' (-1612')
Bone Spring	8556' (-5073')
Wolfcamp	11388' (-7905')
Pennsylvanian	11740' (-8257')
Des Moines	11801' (-8318')
Atoka	11973' (-8490')
Mississippian	13961' (-10478')
Mississippian Limestone	14068' (-10585')
Woodford	14424' (-10941')
Silurian	14641' (-11158')

[OVER] 16—43094-6

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

16—43094-2 U. S. GOVERNMENT PRINTING OFFICE

HISTORY OF OIL OR GAS WELL

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or baling.

See Attachment

Submit To Appropriate District Office
State Lease - 6 copies
Fee Lease - 5 copies
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-105
Revised March 25, 1999

WELL API NO.
30-025-21082

5. Indicate Type of Lease
STATE FEE X

State Oil & Gas Lease No. E-8078

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

1. Lease Name or Unit Agreement Name
Antelope Ridge Unit

2. Name of Operator: Citation Oil & Gas Corp.

8. Well No. 3

3. Address of Operator: P.O. Box 690688, Houston, TX 77269-0688

9. Pool name or Wildcat
Morrow

4. Well Location
Unit Letter K : 1980' Feet From The South Line and 1650 Feet From The West Line
Section 34 Township 23S Range 34E NMPM Lea County

10. Date Spudded	11. Date T.D. Reached	12. Date Compl. (Ready to Prod.)	13. Elevations (DF& RKB, RT, GR, etc.)	14. Elev. Casinghead
4/8/1964	9/2/1964	5/11/1997 (Morrow)	3468' GR	

15. Total Depth	16. Plug Back T.D.	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By	Rotary Tools	Cable Tools
14,940'	13,708' CIBP				

19. Producing Interval(s), of this completion - Top, Bottom, Name
12,838' – 12,959' Morrow

20. Was Directional Survey Made

21. Type Electric and Other Logs Run
None

22. Was Well Cored

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	61# - 72#	5076'	17-1/2"	5880 sx	None
9-5/8"	43.5# / 47#	11906'	12-1/4"	1800 sx	None

24. LINER RECORD					25. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
7"	6023'	14095'	1110 sx		2-7/8"	12711'	12725'
4-1/2"	13714'	14935'	135 sx				

26. Perforation record (interval, size, and number)
12,838' – 12,959'; 2 spf; 56 holes

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
12,838' – 959'	3000 gals 15% HCl w/40% methanol

28 PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)
5/1/97	Flowing	Producint

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
5/21/1997	24	24/64"		-0-	121	131	N/A

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas – MCF	Water - Bbl.	Oil Gravity - API - (Corr.)
70	0		-0-	121	131	N/A

29. Disposition of Gas (Sold, used for fuel, vented, etc.)
Sold

Test Witnessed By

30. List Attachments
Corrected C-104 with wellbore schematic

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature Debra Harris Printed Name Debra Harris Title Prod/Reg Coordinator Date 4/10/2001

JC

Citation Oil & Gas Corp.

General Purpose Worksheet

PAGE NO: 1 OF: 1

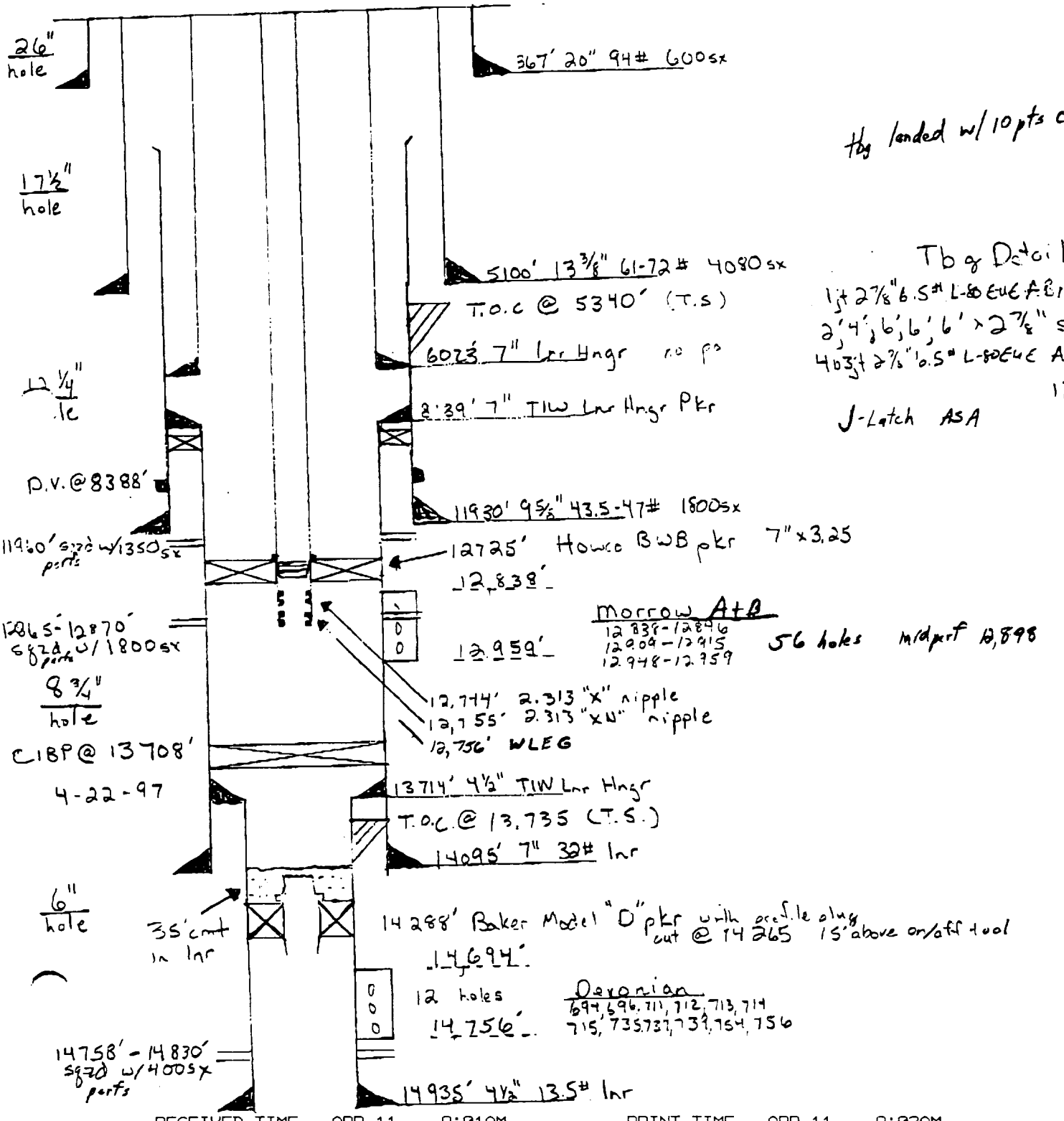
SUBJECT: ARU #3 Leo 11M

FILE: Antelope Ridge - ~~Devonian~~ Sec 34 T23S, R34E

BY: AWR

DATE: 6-17-98

KB to GL = 23'



Tbg Detail
1 jt 2⅞" 6.5# L-80 EUE A-Bmod
2', 4', 6', 6', 6' x 2⅞" subs
403 jt 2⅞" 6.5# L-80 EUE AB mod
12725'
J-Latch ASA

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV

New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-140
Originated 11/1/95

Submit Original
Plus 2 Copies
to appropriate
District Office

H-0310 5/3

APPLICATION FOR QUALIFICATION OF WELL WORKOVER PROJECT AND CERTIFICATION OF APPROVAL

THREE COPIES OF THIS APPLICATION AND ALL ATTACHMENTS MUST BE FILED WITH THE APPROPRIATE DISTRICT OFFICE OF THE OIL CONSERVATION DIVISION.

I. Operator: Citation Oil & Gas Corp. OGRID #: 004537

Address: 8223 Willow Place South, Suite 250, Houston, Texas 77070-5623

Contact Party: Debra Harris Phone: (281) 469-9664

II. Name of Well: Antelope Ridge #3 API #: 30-025-21082
Location of Well: Unit Letter K, 1980 Feet from the South line and 1650 feet from the West line,
Section 34, Township 23S, Range 34E, NMPM, Lea County

III. Date Workover Procedures Commenced: 4/15/97
Date Workover Procedures were Completed: 5/1/97

IV. Attach a description of the Workover Procedures undertaken to increase the projection from the Well.
(From C-103 Attached)

V. Attach an estimate of the production rate of the Well (a production decline curve or other acceptable method, and table showing monthly oil and/or gas Project Production) based on at least twelve (12) months of established production which shows the future rate of production based on well performance prior to performing Workover.

VI. Pool(s) on which Production Projection is based:

Morrow - 12,838' - 12,959'

VII. AFFIDAVIT:

State of Texas)
) ss.
County of Harris)

Debra Harris, being first duly sworn, upon oath states:

1. I am the Operator or authorized representative of the Operator of the above referenced Well.

2. I have made, or caused to be made, a diligent search of the production records which are reasonably available and contain information relevant to the production history of this Well.

3. To the best of my knowledge, the data used to prepare the Production Projection for this Well is complete and accurate and this projection was prepared using sound petroleum engineering principles.

Debra Harris
(Name) Debra Harris

Regulatory Analyst
(Title)

SUBSCRIBED AND SWORN TO before me this 22nd day of May, 1997

Renee Harrell

Notary Public

RENEE HARRELL
Notary Public, State of Texas
My Commission Expires March 2, 1999

My Commission expires: 3-2-99

FOR OIL CONSERVATION DIVISION USE ONLY:

VIII. CERTIFICATION OF APPROVAL:

This Application for Qualification of Well Workover Project is hereby approved and the above referenced Well is designated as a Well Workover Project pursuant to the "Natural Gas and Crude Oil Production Incentive Act" (Laws 1995, Chapter 15, Sections 1 through 8). The Oil Conservation Division hereby verifies the Production Projection for the Well Workover Project attached to this application. By copy of this Application and Certification of Approval, the Division notifies the Secretary of the Taxation and Revenue Department of this Approval and certifies that this Well Workover Project has been completed as of 5-1-97 19__.

District Supervisor, District 1
Oil Conservation Division

Date: 7 Oct 97

IX. DATE OF NOTIFICATION TO THE SECRETARY OF THE TAXATION AND REVENUE DEPARTMENT.

DATE: _____

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1/1/89

OIL CONSERVATION DIVISION

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

2040 Pacheco St.
Santa Fe, NM 87505

WELL API NO.
30-025-21082

5. Indicate Type of Lease STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
E-8078

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Antelope Ridge Unit

1. Type of Well: OIL WELL ☐ GAS WELL ☒ OTHER

2. Name of Operator
Citation Oil & Gas Corp.

8. Well No.
3

3. Address of Operator
8223 Willow Place South, Suite 250, Houston, Texas 77070-5623

9. Pool name or Wildcat
Antelope Ridge Devonian

4. Well Location
Unit Letter K : 1980' Feet From The South Line and 1650' Feet From The West Line

Section 34 Township 23S Range 34E NMPM Lea County

10. Elevation *(Show whether DF, RKB, RT, GR, etc)*
3490' DF

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☒	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐			CASING TEST AND CEMENT JOB	☐		
OTHER:	☐			OTHER:			☐

12. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

4/15/97, bled off csg/tbg, pmp'd 4 BW dn tbg, 300 BW dn ann. ND 11"10M WHF & tree/NU 5M# BOP. Ran freept, RIH, cut tbg @14,265'. POH w/ 2-7/8" tbg & 8 GLV's to 3070'. Dmp'd 35' "H" cmt 14,230'-265' in 4-1/2" lnr. RIH w/6" bit & 6 4-1/8" DC's on 431 jts 2-7/8" tbg to 13,714' TOL. Set CIPB @13,708', RIH w/7" pkr & SN on tbg; pkr @6009', tst'd 7" lnr surf - 6009' (600#); pkr @8211', tst'd 7" lnr 8211' - 13709' CIBP to 700#; loaded ann, pkr @8211, PIR w/3 bpm @150# - sg; pkr @13,660', tst'd CIBP @13,708' to 3000#. Circ'd hole, w/pkr @12,966' w'/275 gals R-2264, 25 gals clay stab, 10 gals defoam; spot'd 350 gals 10% acid 12,735'-966'. POH to 12,714', RIH with 4-1/2" WL entry guide, "XN" nipple, tbg sub, "X" nipple, 5-1/2" mill-out ext & 7" BWB pkr on WL; pkr @12,725' (top), "X" nipple @12,744', "XN" nipple @#12,755' & re-entry guide btm'd @12,756'. RIH w/muleshoe guide, seal assy & 4" J-latch loc sub on 404 jts 2-7/8" tbg to 12,711'; tst'd tbg to 7500#. ND BOP; spaced out, instl'd 10M# tree on tbg. Instl'd wrap-around in WH; latched into pkr @12,725'. Landed tree; NU 11"10M flange; flowline & swab'd FL dn tbg, surf - 3700'. Perf'd Morrow "A" & "B": 12,838'-846'; 12,090'-915' & 12,948'-959'. Swabd - SFL 3000'; FFL 11,200'. Loaded tbg w/3% KCl wtr; loaded ann & 13-3/8" csg (via ann) w/50 BW. Press'd to 500#; PIR w/0.5 bpm @4900# w/3% KCl wtr. ISITP 4900#; 5 min 4450#. Swab'd perfs: SFL-surf; FFL 4500'. RU 1-1/4" CT & acid pmps. Acidized w/3000 gals 15% HCl w/40% meth; 1st stage: 1500 gals dn CT @12,959'; flushed acid dn 2-7/8" x 1-1/4" ann to top perf. 2nd stage - flush 2-7/8" tbg w/1500 gals w/3% KCl to 12,959'; Max P - 5600#; Min P - 5370#; AIR 2.3 bpm; ISIP 4731#; 15 min SIP 4345#. Selling to plant 5/1/97. 5/10/97 prod: 121 MCFPD; TP 70; 24/64" ck.

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

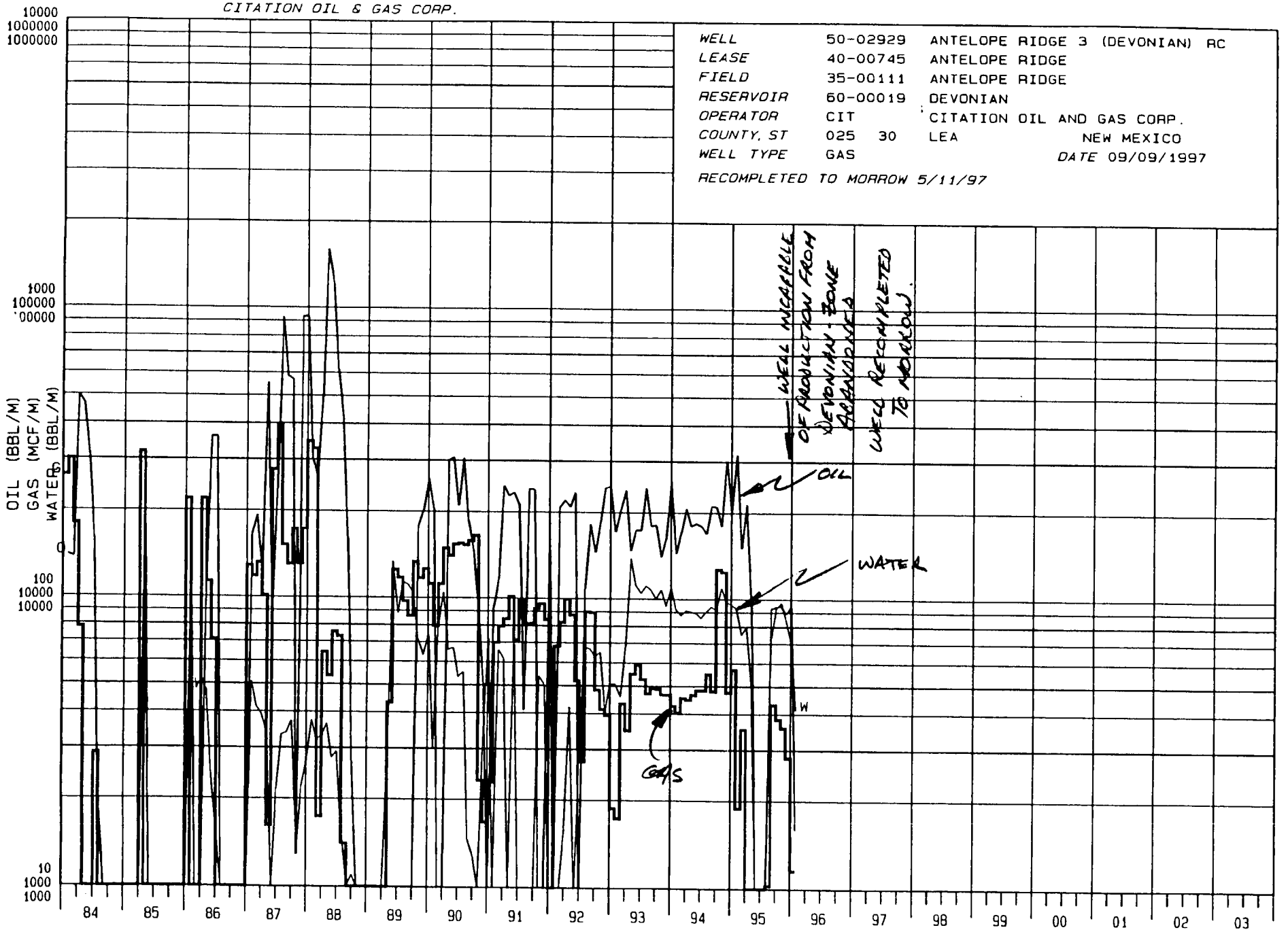
SIGNATURE Debra Harris TITLE Regulatory Analyst DATE 5/21/97

TYPE OR PRINT NAME Debra Harris TELEPHONE NO. (281) 469-9664

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:


CITATION OIL & GAS CORP.
WELL 50-02929 ANTELOPE RIDGE 3 (DEVONIAN) RC
LEASE 40-00745 ANTELOPE RIDGE
FIELD 35-00111 ANTELOPE RIDGE
RESERVOIR 60-00019 DEVONIAN
OPERATOR CIT CITATION OIL AND GAS CORP.
COUNTY, ST 025 30 LEA NEW MEXICO
WELL TYPE GAS DATE 09/09/1997
RECOMPLETED TO MORROW 5/11/97
WELL INCREASE OF PRODUCTION FROM DEVONIAN ZONE ABANDONED
WELL RECOMPLETED TO MORROW
OIL
WATER
GAS
OIL (BBL/M)
GAS (MCF/M)
WATER (BBL/M)
84
85
86
87
88
89
90
91
92
93
94
95
96
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01
02
03

ATTACHMENT TO C-105
SHELL OIL COMPANY
ANTELOPE RIDGE UNIT 34-1

DST #1: 11,930'-12,243' (313' Atoka) packer set in casing at 11,880'. Tool open 1 hour 40 minutes thru 5/8" BC. Recovered 700' (4.6 barrels) Drilling Mud. 60 MISIBHP 2115 psi, FBHP 328-427 psi, 135 MFSIBHP 2403 psi. HMP In/Out 8234/8169 psi. Pit mud titrated 2000 ppm Cl^-. Recovered mud 2000 ppm Cl^-. Conclusive test (HOWCO).

DST #2: 11,930'-12,351' (set packer in casing at 11,875') (421' Atoka). Tool open 1 1/2 hours with fair blow continued throughout. GTS 23 minutes, TSTM. Used 2000' water blanket. Recovered 2000' Heavily Gas Cut water blanket + 1473' (21 barrels) Very Heavily Gas Cut Mud. 3 Hour 10 Minute FSIBHP 3910 psi (increasing). HMP 8170-8138 psi. BHT 162 degrees F. Recovered and pit mud titrated 2000 ppm Cl^-. Conclusive test (HOWCO).

DST #3: 11,930'-12,450' (520' Atoka) packer set in casing at 11,860', used 3000' water blanket. Tool open 1 hour 35 minutes thru 5/8" BC x 1/8" TC x 4 1/2" DP, opened with fair blow. GTS 26 minutes. Flowed at rate 20 to 40 MCFPD. Recovered 7300' GAS + 3000' Heavily Gas Cut water blanket + 1500' (13 barrels) Heavily Gas Cut mud. BHT 168 degrees F. 60 MISIBHP 6058 psi, FBHP 2404-2532 psi, 60 MFSIBHP 5321 psi, HMP In/Out 8042/8010 psi. Recovered mud titrated 2500 ppm Cl^-. Pit mud titrated 8000 ppm Cl^-. Conclusive test (HOWCO).

DST #4: 12,840'-13,006' (166' Atoka). Used 3000' N_2 blanket pressured to 1700 psi at surface. Tool open 4 hours thru 5/8" BC x 5/8" TC x 4 1/2" with strong blow. GTS 10 minutes. Flowed at stabilized rate for 1 hour at 3.6 MMCFPD thru 5/8" choke. FTP 710 psi. Last 30 minutes increased to 3.68 MMCFPD, FTP 735 psi. Recovered 530' (5.2 barrels) Heavily Gas Cut Mud. BHT 174 degrees F. 75 MISIBHP 8851 psi, FBHP 2586-1468 psi. 210 MFSIBHP 8191 (increasing) psi. HMP In/Out 9907/9841 psi. Conclusive test (HOWCO).

DST #5: 13,039'-13,397' (358' Morrow). Tool open 1 1/2 hours (used 4000' N_2 blanket pressure to 2000 psi) thru 5/8" BC x 5/8" TC x 4 1/2" DP with no blow. No gas to surface. Recovered 300' (1.5 barrels) mud with no shows. 60 MISIBHP 3365 psi (increasing sharply). FBHP 2724-2756 psi. 120 MFSIBHP 3653 psi (increasing sharply). HMP 10,219 psi. Temperature 186 degrees F. Recovered mud titrated 1800 ppm Cl^-. Pit mud titrated 1500 ppm Cl^-. Conclusive test (HOWCO).

DST #6: 8242'-14,057' (DST tool set at 8232' in 7" liner.). Tool open 60 minutes. 5 MIF. 40 MISIBHP 695 psi. FBHP 652-652 psi. 30 MFSIBHP 652 psi. HMP 6296-6258 psi (HOWCO).

DST #7: 30 MISIBHP 8818 psi, FBHP 3504-1666 psi, 390 MFSIBHP 6168 psi (increasing). HMP In/Out 10,236/10,302 psi. Recovered mud and water titrated 3900 ppm Cl^-. Pit mud titrated 600 ppm Cl^-. Conclusive test (HOWCO).

DST #8: (to test top of liner) Set packer at 8169'. Tool open 3 hours thru 5/8" BC x 5/8" TC x 4 1/2" DP. GTS 13 minutes. Initial rate 300 MCFPD at 180 psi FSP. After 1 hour gas rate 125 MCF/day. During second hour flowed 2 barrels greenish-brown distillate, 50.5° API Gravity. During third hour flowed 5 barrels mud and water. Gas rate at end of test: 40 MCFPD with 60 psi FSP. Reversed out 41 1/2 barrels mud and water with no shows. 30 MISIBHP 3520 psi, FBHP 577-462 psi, 1 hour FSIBHP 1545 psi, HMH 3543-3542 psi. Recovered gas was sweet with gravity of 0.680. Conclusive test (HALLIBURTON).

DST #9: 14,845'-14,931' (86' Silurian). Tool open 2 1/2 hours thru 5/8" BC, 3/8" and 3/4" TC, 4 1/2" DP. Tool opened with strong blow. GTS 3 minutes. Flowed 1 hour 12 minutes on 3/8" choke; initial rate 958 MCF/day at 330 psi, final rate 780 MCFPD at 250 psi. Then flowed 1 hour 18 minutes thru 3/4" choke; initial rate 1275 MCFPD at 2000 psi, final rate 390 MCFPD at 75 psi. Recovered 780' (3.7 barrels) Gas Cut sulphur water. 90 MISIBHP 4647 psi (increasing). FBHP 690-230 psi. 180 MFSIBHP 2403 psi (increasing). HMH 7178-7178 psi. Maximum temperature 201 degrees F. Recovered water titrated 2500 ppm Cl^-. Pit mud titrated 500 ppm Cl^-. Conclusive test (HOWCO).