STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

APPLICATION OF NGL WATER SOLUTIONS PERMIAN, LLC TO APPROVE SALT WATER DISPOSAL WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 20475

APPLICATION

NGL Water Solutions Permian, LLC ("NGL"), OGRID No. 372338, through its undersigned attorneys, hereby makes this application to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Eddy County, New Mexico. In support of this application, NGL states as follows:

(1) NGL proposes to drill the Whitt 32 SWD #1 well at a surface location 219 feet from the South line and 2,395 feet from the West line of Section 32, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well.

(2) NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 15,170' to 16,312'.

(3) NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day.

(4) NGL anticipates using an average pressure of 2,276 psi for this well, and it requests that a maximum pressure of 3,034 psi be approved for the well.

(5) A proposed C-108 for the subject well is attached hereto in Attachment A.

(6) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, NGL requests that this application be set for hearing before an Examiner of the Oil Conservation Division on May 2, 2019; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

By: Deana M. Bennett

Deana Bennett
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. _____: Application of NGL Water Solutions Permian, LLC for approval of salt water disposal well in Eddy County, New Mexico. Applicant seeks an order approving disposal into the Silurian-Devonian formation through the Whitt 32 SWD #1 well at a surface location 219 feet from the South line and 2,395 feet from the West line of Section 32, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well. NGL seeks authority to inject salt water into the Silurian-Devonian formation at a depth of 15,170' to 16,312'. NGL further seeks approval of the use of 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said location is 15.8 miles South of Malaga, New Mexico.

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

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: NGL WATER SOLUTIONS PERMIAN LLC **OGRID Number:** 372338
Well Name: WHITT 32 SWD #1 **API:** TBD
Pool: SWD; DEVONIAN-SILURIAN **Pool Code:** 97869

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

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.

CHRIS WEYAND
Print or Type Name

Signature

03-18-2019
Date

512-600-1764
Phone Number

CHRIS@LONQUIST.COM
Email Address

EXHIBIT
tabbies
A

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: NGL WATER SOLUTIONS PERMIAN, LLC

ADDRESS: 1509 W WALL ST // STE 306 // MIDLAND, TX 79701

CONTACT PARTY: SARAH JORDAN PHONE: (432) 685-0005 x1989

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes ___X___No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

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

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Christopher B. Weyand TITLE: Consulting Engineer

SIGNATURE: _____ DATE: 3/18/2019

E-MAIL ADDRESS: chris@lonquist.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

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

Side 2

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.

Side I

INJECTION WELL DATA SHEET

OPERATOR: NGL WATER SOLUTIONS PERMIAN, LLC

WELL NAME & NUMBER: WHITT 32 SWD #1

WELL LOCATION: 219' FSL & 2395' FWL (FOOTAGE LOCATION) | L2 (UNIT LETTER) | 32 (SECTION) | 26S (TOWNSHIP) | 29E (RANGE)

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 24.000" Casing Size: 20.000"

Cemented with: 757 sx. *or* _____ ft^3

Top of Cement: Surface Method Determined: Circulation

1st Intermediate Casing

Hole Size: 17.500" Casing Size: 13.375"

Cemented with: 1,667 sx. *or* _____ ft^3

Top of Cement: Surface Method Determined: Circulation

2nd Intermediate Casing

Hole Size: 12.250" Casing Size: 9.625"

Cemented with: 2,848 sx. *or* _____ ft^3

Top of Cement: Surface Method Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 972 sx.

or _____ ft^3

Top of Cement: 9,200'

Method Determined: Calculation

Total Depth: 16,312'

Injection Interval

15,170 feet to 16,312 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 7", 26 lb/ft, P-110, TCPC from 0'- 9,100' and 5.500", 17 lb/ft, P-110 TCPC from 9,100' – 15,135'
Lining Material: Duoline

Type of Packer: 7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

Packer Setting Depth: 15,135'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? ___X___Yes _____No

   If no, for what purpose was the well originally drilled? N/A

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

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

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No, new drill.

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:
   Delaware: 2,690'
   Cherry Canyon: 3,594'
   Bone Spring: 6,382'
   Wolfcamp: 9,530'

NGL Energy Partners LP

Whitt 32 SWD — Eddy County NM — Vertical Injection - Devonian, Silurian, Fusselman, Montoya

AFE — Drill and Complete Cost — $9.2MM

TD — GL/KB — 16,312 — 2880'

Directions to Site - SSW of Sec 32, T26S, R29E. From Loving travel S. South on Hwy 285 19.8miles and turn East (left) on Catfish Rd. Travel 1.4miles and location will be on the left. Lat/Long - 32.00091667,-104.0075

Geologic Tops (MD ft)	Section	Problems	Bit/BHA	Mud	Casing	Logging	Cement (HOLD)	Injection String
Rustler 319' **Surface TD 500'**	**Surface** Drill 24" 0' - 520' Set and Cement 20" Casing	Loss Circulation Hole Cleaning Wellbore stability in the Red Beds	24" Mill Tooth Bit + Bit sub w/ float 17 + 17" NBS + 1X8" DC + 17" IBS + 1X8" DC + SS + 4X8" DC's + X/O +5" HWDP	Spud Mud MW< 9.0	500' of 20" 94# J55 BTC Centralizers - bottom 2 joints and every 3rd jt thereafter, Cement basket 5th jt from surface	Mud loggers on site by Drillout of Surf.	757sx of Halcem 3hr TT 50% Excess 1000psi CSD after 10hrs	9100' of 7" P110 26# TCPC
Castile 852' Delaware 2,690' **1st Int TD - 2,700'**	**1st Intermediate** Drill 1900' of 17-1/2" Hole 800' - 2700' Set and Cement 13-3/8" Casing	Seepage Losses Possible H2S Anhydrite Salt	17-1/2" Varel PDC Bit + 9-5/8"X 8" 7/8 4.0 Combo MM w/ 17" Steel NBS + 17" IBS + 2X8" DC's + SS + 4X8" DC's + 18X6" DC's + X/O + HWDP	Brine	5M A Section Casing Bowl 2700' of 13-3/8" 68# HCL80 BTC Centralizers - bottom jt, every 3rd joint in open hole and 2 jt inside the surface casing.	Gyro Survey	Halcem, 1667sx, 13.7ppg 30% Excess 1000psi CSD after 10 hrs Cement to Surface	
9-5/8" DV/ECP 2,800' Bell Canyon 2721 Cherry Canyon 3,594' Brushy Canyon 4,589' **9-5/8" DV 6,350'** Bone Springs 6,382' **TOC - Stage 1 Tail - 8,700'** **7-5/8" Liner Top 9,200'** Wolfcamp 9,530' **2nd Int TD - 9,700'**	**2nd Intermediate** Drill 6000' of 12-1/4" Hole 2700' - 9700' Set 9-5/8" Intermediate Casing and Cement in 3 Stages	Seepage to Complete Loss Water Flows Some Anhydrite H2S possible Production in the Lower Wolfcamp	12-1/4" Smith XS 716S AxeBlade PDC Bit, sub, 8" 7/8 4.0 0.16 MM w/ 12" NBS, ALS Roller Reamer DeMag , UBHO sub, ALS 12" RR/UBHO/NMDC, SS, 6 jts: 8" DC, X/O sub, 18 jts: 6" DC, X/O sub, 8" Drilling Jars HWDP + 5" DP to Surface	Cut Brine	10M B Section 9700' of 9-5/8" 53.5# HCL80 BTC **Special Drift to 8.535"** **Externally Coat 3850' Between DV Tools** **-DV/ECP tool at at 2800' (DV Tool 100' Below Previous Casing shoe)** **-DV Tool w/ no ECP placed nominally above the Bone Springs top** Centralizers - bottom jt, 100' aside of DV tool, every 3rd joint in open hole and 5 within the surface casing. ensure centralizers are 9-3/4" to fit Coated Pipe.	**12.25" Open Hole:** MWD GR Triple combo, Caliper , CBL of 13-3/8" Casing to surface **Cased Hole:** CBL/Pressure Pass to 1000 psi of 9-5/8" Casing before drillout	**Stage 3**: 10% Excess 596sx Halcem 13.7ppg 1000psi CSD after 10 hrs Cement to Surface **Stage 2**: 50% Excess 974 sx Halcem 13.7ppg 1000psi CSD after 10 hrs **Stage 1**: 1278sx Halcem 1.37ppg, 50% XS. 1000psi CSD after 10hrs	6035' of 5-1/2" P110 17# TCPC Duoline Internally Coated Injection Tubing
Strawn 12,121' Atoka 12,343' Morrow 13,008' Miss Lime 14,757' Woodford 14,997' **Injection Packer 15,135'** Devonian 15,155' **3rd Int TD 15,170'**	**3rd Intermediate Liner** Drill 5470' of 8-1/2" Hole 9700' - 15170'	Pressure in the Atoka Hard Drilling in the Atoka & Morrow	8-1/2" Smith XS 716S AxeBlade PDC Bit, sub, 6-3/4" 7/8 5.7 MM w/ 8" NBS, UBHO sub, 8" NMIBS/UBHO/NMDC, SS, 18 jts: 6" DC 6" Drilling Jars HWDP + 5" DP to Surface	Weighted WBM 11.0 ppg- 13.5 ppg (MAX)	5970' of 7-5/8" 39# HCP110 EZGO FJ3 (Gas Tight) VersaFlex Packer Hanger Centralizers on and 1 jt above shoe jt and then every 2nd jt.	**8.5" Open Hole:** MWD GR Triple combo, Caliper of 8.5" Open Hole **Cased Hole:** SCBL/Pressure Pass to 1000 psi of 7-5/8" Casing before drillout	972sx of Neocem 13.2 ppg 50% Excess 1000psi CSD after 12hrs	7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and full Inconel 925 trim
Fusselman - 15,589' **Montoya - 16,212'** **TD - 16,312'**	**Injection Interval** Drill 1142 of 6-1/2" hole 15170' - 16312'	Chert is possible Loss of Circulation and or Flows are expected BHT estimated at 280F	6-1/2" Smith U611S PDC Bit, sub, 5" 7/8 2.6 0.26 1.5FBH MM w/ 6" NBS, 6" NMIBS, UBHO/NMDC, SS, X/O sub, 24 jts: 4-3/4" HWDP + 4" DP to Surface	Brine Water - flows possible	Openhole completion	MWD GR Triple Combo with FMI and CMR Tool	Displace with clean heavy brine	

NGL Water Solutions Permian, LLC

Whitt 32 SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Whitt 32 SWD
Well No.	1
Location	S-32 T-26S R-29E
Footage Location	219' FSL & 2395' FWL

2.

a. Wellbore Description

Casing Information				
Type	Surface	Intermediate	Production	Liner
OD	20"	13.375"	9.625"	7.625"
WT	0.635"	0.480"	0.545"	0.500"
ID	19.124"	12.415"	8.535"	6.625"
Drift ID	18.936"	12.259"	8.535"	6.500"
COD	21.00"	14.375"	10.625"	7.625"
Weight	94 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55	HCL-80	HCL-80	HC-P110
Hole Size	24"	17.5"	12.25"	8.5"
Depth Set	500'	2,700'	9,700'	9,200' – 15,170'

b. Cementing Program

Cement Information				
Casing String	Surface	Intermediate	Production	Liner
Lead Cement	Extenda Cem	Halcem	Halcem	Neocem
Lead Cement Volume	161	1,667	Stage 1: 1,278 sx Stage 2: 974 sx Stage 3: 596 sx	972
Tail Cement	Halcem			
Tail Cement Volume	596			
Cement Excess	50%	30%	10%,50%,50%	50%
TOC	Surface	Surface	Surface	9,200'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Logged

3. Tubing Description

Tubing Information		
OD	7"	5.5"
WT	0.362"	0.304"
ID	6.276"	4.892"
Drift ID	7.875"	6.050"
COD	6.151"	4.653"
Weight	26 lb/ft	17 lb/ft
Grade	P-110 TCPC	P-110 TCPC
Depth Set	0'-9,100'	9,100'-15,135'

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Fusselman, Montoya (Top 100')
2. Gross Injection Interval: 15,170' – 16,312'

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

Formation	Depth
Delaware	2,690'
Cherry Canyon	3,594'
Bone Spring	6,382'
Wolfcamp	9,530'

VI. Area of Review

No wells within the area of review penetrate the proposed injection zone.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

   Average Volume: 40,000 BPD
   Maximum Volume: 50,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

   Average Injection Pressure: 2,276 PSI (surface pressure)
   Maximum Injection Pressure: 3,034 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring, Delaware, Avalon, and Wolfcamp formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the above mentioned formations.

5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Rustler Anhydrite	319
Delaware	2,690
Bone Spring	6,382
Wolfcamp	9,530
Strawn	12,121
Atoka	12,343
Morrow	13,008
Mississippian	14,757
Woodford	14,997
Devonian	15,155
Fusselman	15,589
Montoya	16,212

B. Underground Sources of Drinking Water

There are no water wells within 1-mile of the proposed Whitt 32 SWD #1 location. Water wells in the surrounding area have an average depth of 206 ft and an average water depth of 115 ft generally producing from tertiary and quaternary alluvium and the upper Rustler. All will be protected. Active Texas oil and gas wells that were within 2 miles of the proposed Whitt 32 SWD #1 location had an average groundwater protection requirement depth of 515 ft.

IX. Proposed Stimulation Program

Stimulate with up to 50,000 gallons of acid.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

There are no water wells that exist within one mile of the well location.

XII. Affirmative Statement of Examination of Geologic and Engineering Data

Based on the available engineering and geologic data we find no evidence of open faults or any other hydrologic connection between the disposal zone (in the proposed **Whitt 32 SWD #1**) and any underground sources of drinking water.

NAME: John C. Webb

TITLE: Sr. Geologist

SIGNATURE: John C. Webb

DATE: 7/23/2019

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

1. Operator Name and Address	2. OGRID Number
NGL WATER SOLUTIONS PERMIAN, LLC 1509 W WALL ST. STE 306 MIDLAND, TX 79701	372338
	3. API Number TBD

4. Property Code	5. Property Name	6. Well No.
-	WHITT 32 SWD	1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
2	32	26S	29E	N/A	219'	SOUTH	2,395'	WEST	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
-	-	-	-		-	-	-	-	-

9. Pool Information

Pool Name	Pool Code
SWD; Devonian-Silurian	97869

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	SWD	R	Private	2,880'
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	16,312'	Siluro-Devonian	TBD	ASAP

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
115'	> 1 mile	4,697', Pecos River

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	24"	20"	94 lb/ft	500'	757	Surface
Intermediate	17.5"	13.375"	68 lb/ft	2,700'	1,667	Surface
Production	12.25"	9.625"	53.5 lb/ft	9,700'	2,848	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	15,170'	972	9,200'
Tubing	N/A	7"	26 lb/ft	0' – 9,100'	N/A	N/A
Tubing	N/A	5.5"	17 lb/ft	9,100' – 15,135'	N/A	N/A

Casing/Cement Program: Additional Comments

See attached schematic.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	10,000 psi	8,000 psi	TBD – Schaffer/Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:	OIL CONSERVATION DIVISION Approved By:
Printed name: Christopher B. Weyand	Title:
Title: Consulting Engineer	Approved Date: / Expiration Date:
E-mail Address: chris@longuist.com	
Date: 03/08/2019 / Phone: (512) 600-1764	Conditions of Approval Attached

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
	97869	SWD; Devonian-Silurian

[4] Property Code	[5] Property Name	[6] Well Number
	Whitt 32 SWD	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
372338	NGL Water Solutions	2880.00±

[10] Surface Location

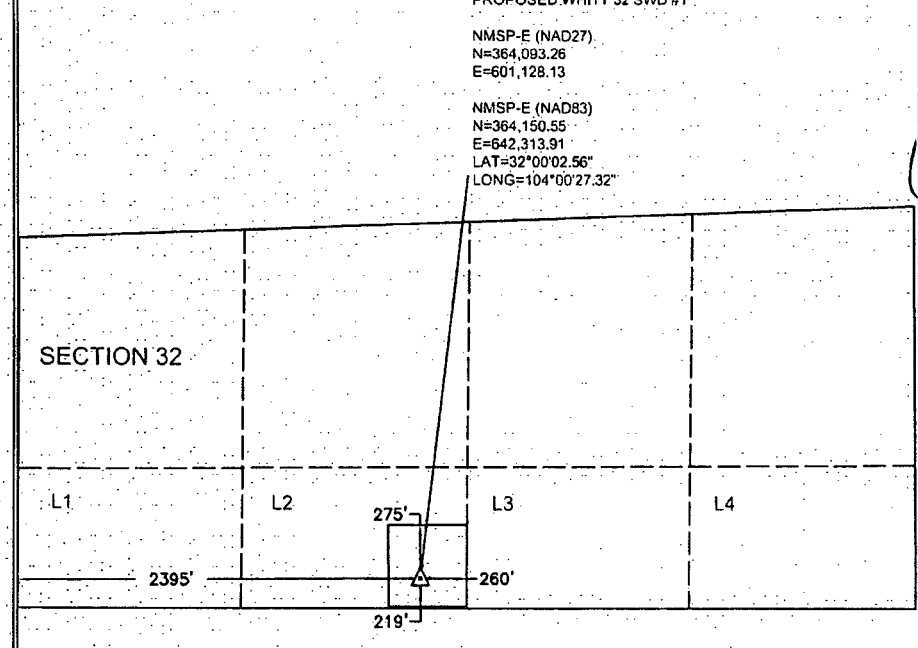
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	32	26S	29E	N/A	219'	South	2395'	West	Eddy

[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: 3/18/2019

Chris Weyand
Printed Name

chris@lonquist.com
E-mail Address

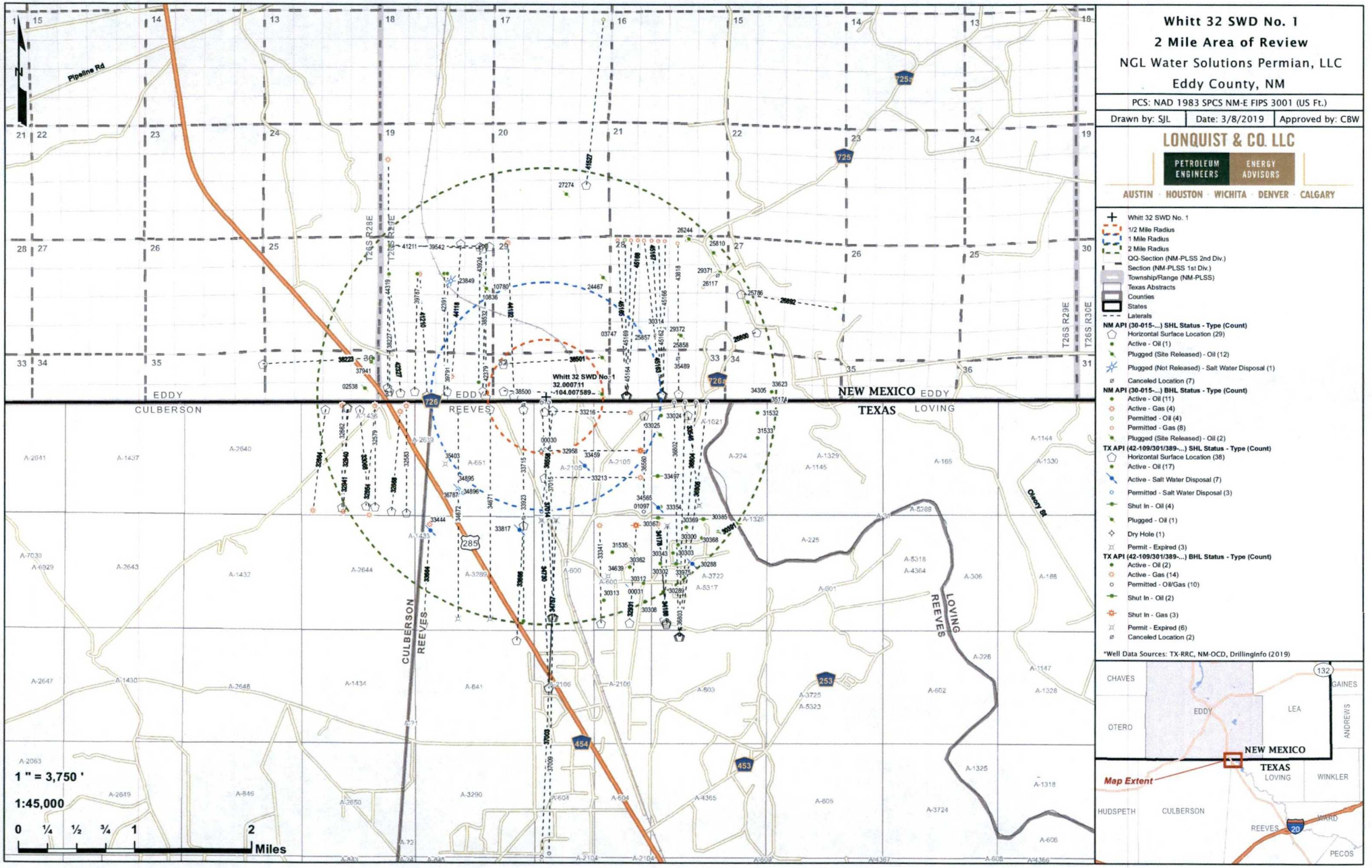
[18] SURVEYOR CERTIFICATION

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

03/07/2019
Date of Survey

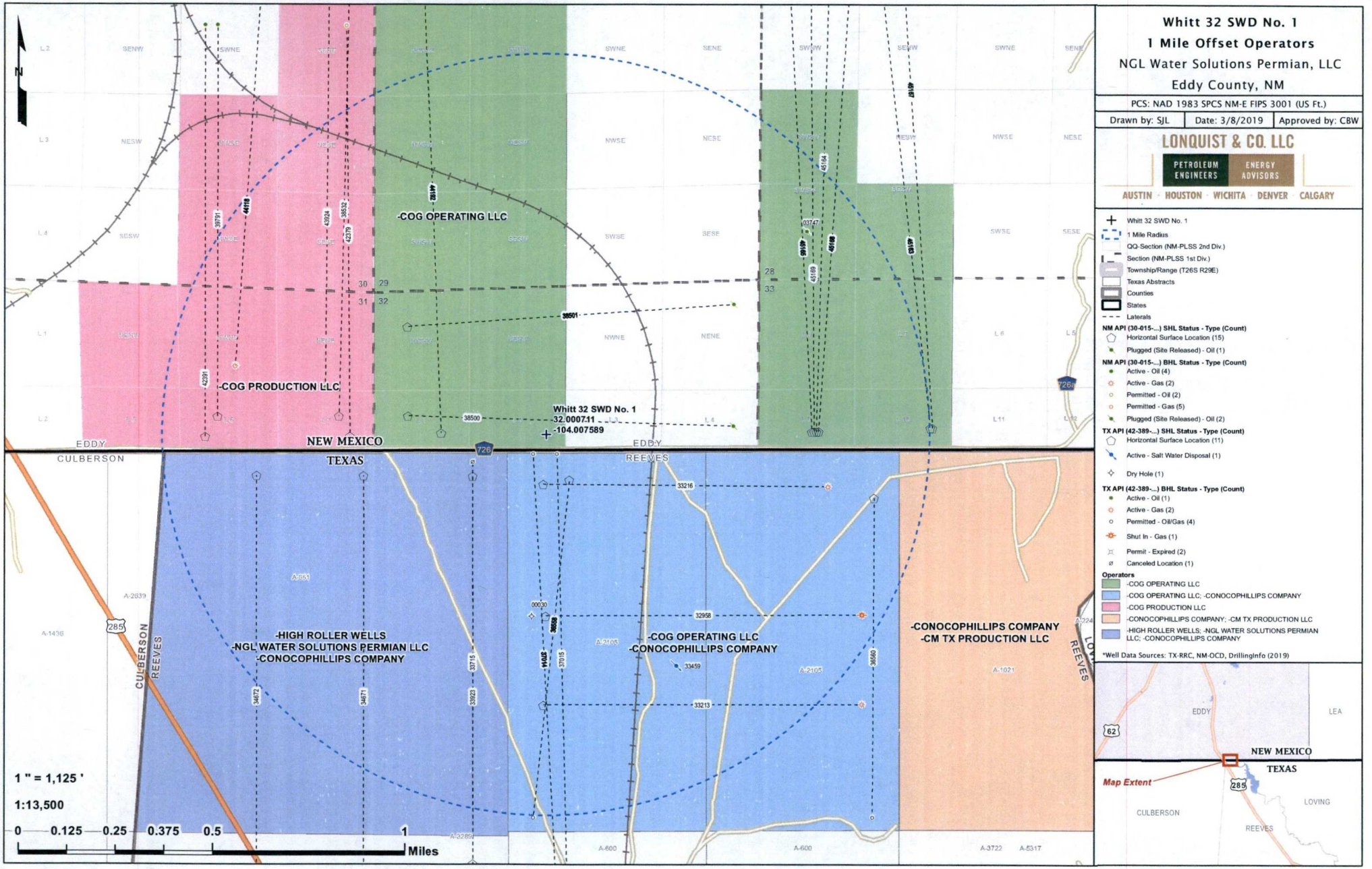
Signature and Seal of Professional Surveyor: Billy W. Barr Jr. NEW MEXICO 25114 PROFESSIONAL SURVEYOR

25114
Certificate Number


Whitt 32 SWD No. 1
2 Mile Area of Review
NGL Water Solutions Permian, LLC
Eddy County, NM
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: SJL
Date: 3/8/2019
Approved by: CBW
LONQUIST & CO. LLC
PETROLEUM ENGINEERS
ENERGY ADVISORS
AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY
Whitt 32 SWD No. 1
1/2 Mile Radius
1 Mile Radius
2 Mile Radius
QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (NM-PLSS)
Texas Abstracts
Counties
States
Laterals
NM API (30-015-...) SHL Status - Type (Count)
Horizontal Surface Location (29)
Active - Oil (1)
Plugged (Site Released) - Oil (12)
Plugged (Not Released) - Salt Water Disposal (1)
Canceled Location (7)
NM API (30-015-...) BHL Status - Type (Count)
Active - Oil (11)
Active - Gas (4)
Permitted - Oil (4)
Permitted - Gas (8)
Plugged (Site Released) - Oil (2)
TX API (42-109/301/389-...) SHL Status - Type (Count)
Horizontal Surface Location (38)
Active - Oil (17)
Active - Salt Water Disposal (7)
Permitted - Salt Water Disposal (3)
Shut In - Oil (4)
Plugged - Oil (1)
Dry Hole (1)
Permit - Expired (3)
TX API (42-109/301/389-...) BHL Status - Type (Count)
Active - Oil (2)
Active - Gas (14)
Permitted - Oil/Gas (10)
Shut In - Oil (2)
Shut In - Gas (3)
Permit - Expired (6)
Canceled Location (2)
*Well Data Sources: TX-RRC, NM-OCD, DrillingInfo (2019)
Whitt 32 SWD No. 1
32.000711
-104.007589
NEW MEXICO
TEXAS
EDDY
LOVING
CULBERSON
REEVES
Pipeline Rd
T26S R28E
T26S R29E
T26S R30E
1 " = 3,750 '
1:45,000
0 ¼ ½ ¾ 1 2 Miles
Map Extent
CHAVES
OTERO
EDDY
LEA
GAINES
ANDREWS
WINKLER
HUDSPETH
WARD
PECOS

Whitt 32 SWD No. 1
1 Mile Area of Review List

API	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	DATE DRILLED
3001503747	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	2960	32.0084267000	-103.995971700	1/1/1900
3001538500	SIDEWINDER #001H	O	P	COG PRODUCTION, LLC	9	32.0014343000	-104.013748200	6/18/2011
3001538501	SIDEWINDER #002H	O	P	COG PRODUCTION, LLC	7028	32.0052414000	-103.999687200	11/6/2011
3001538532	COPPERHEAD 31 FEDERAL COM #001H	O	A	COG PRODUCTION, LLC	6781	32.0014305000	-104.016845700	5/2/2011
3001539791	COPPERHEAD 31 FEDERAL COM #002H	O	A	COG PRODUCTION, LLC	8302	32.0014229000	-104.022201500	3/6/2012
3001542379	COPPERHEAD 31 FEDERAL COM #003H	O	N	COG PRODUCTION, LLC	13701	32.0006599000	-104.016357400	-
3001542391	RIDGE NOSE FEDERAL COM #001H	O	A	COG PRODUCTION, LLC	6377	32.0006523000	-104.022750900	2/10/2015
3001543924	COPPERHEAD 31 FEDERAL COM #003H	O	A	COG PRODUCTION, LLC	10736	32.0197870000	-104.017210000	11/3/2016
3001544118	COPPERHEAD 31 FEDERAL COM #021H	G	A	COG PRODUCTION, LLC	10759	32.0201850000	-104.020036000	5/5/2017
3001544192	SIDEWINDER FEDERAL COM #004H	G	A	COG OPERATING LLC	10757	32.0007825000	-104.012251500	6/7/2017
3001545163	LITTLEFIELD 33 FEDERAL COM #706H	G	N	COG OPERATING LLC	16944	32.0009380000	-103.990531000	-
3001545164	LITTLEFIELD 33 FEDERAL COM #707H	G	N	COG OPERATING LLC	17216	32.0008030000	-103.995580000	-
3001545165	LITTLEFIELD 33 FEDERAL COM #708H	G	N	COG OPERATING LLC	17252	32.0008030000	-103.995774000	-
3001545167	LITTLEFIELD 33 FEDERAL COM #806H	G	N	COG OPERATING LLC	16944	32.0009264000	-103.990433800	-
3001545168	LITTLEFIELD 33 FEDERAL COM #807H	G	N	COG OPERATING LLC	18053	32.0008030000	-103.995483000	-
3001545169	LITTLEFIELD 33 FEDERAL COM #808H	O	N	COG OPERATING LLC	18036	32.0007979000	-103.995677000	-
4238900030	RAMSEY, G. E. JR. "6" #1	O	D	CONTINENTAL OIL COMPANY	2825	31.9938138808	-104.008225707	NR
4238932958	JOHNNIE WALKER STATE #601H	G	S	COG OPERATING LLC	7012	31.9938081672	-104.007615325	9/3/2011
4238933213	JOHNNIE WALKER STATE #602H	G	A	CONOCOPHILLIPS COMPANY	7516	31.9904226274	-104.007722043	3/24/2012
4238933216	SCHMITT STATE #603H	G	A	CONOCOPHILLIPS COMPANY	10726	31.9988149490	-104.007699397	6/14/2012
4238933459	SCHMITT STATE #1SW	S	A	COG OPERATING LLC	4600	31.9918913637	-104.001816636	8/12/2013
4238933715	RAMSEY AA 1 #1H	O	C	CONOCOPHILLIPS COMPANY	7200	31.9843553178	-104.010865335	-
4238933923	ALL IN BS #102H	O	A	CONOCOPHILLIPS COMPANY	8333	31.9991372474	-104.010835248	11/18/2013
4238934671	ALL IN BS #103H	O	X	CONOCOPHILLIPS COMPANY	9900	31.9991619757	-104.015741200	-
4238934672	ALL IN BS #104H	O	X	CONOCOPHILLIPS COMPANY	9900	31.9991752611	-104.020502186	-
4238936558	SCHMITT STATE #628H	G	N	COG OPERATING LLC	10900	31.9989828118	-104.006539675	-
4238936560	SCHMITT STATE #621H	G	N	COG OPERATING LLC	11000	31.9982752720	-103.993027382	-
4238937014	HEAD HONCHO STATE #1H	G	N	CONOCOPHILLIPS COMPANY	9900	31.9726480860	-104.006523652	-
4238937015	HEAD HONCHO STATE #2H	G	N	CONOCOPHILLIPS COMPANY	10000	31.9726480874	-104.006416836	-



Whitt 32 SWD No. 1
1 Mile Offset Operators
NGL Water Solutions Permian, LLC
Eddy County, NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)

Drawn by: SJL	Date: 3/8/2019	Approved by: CBW

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

- Whitt 32 SWD No. 1
- 1 Mile Radius
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (T26S R29E)
- Texas Abstracts
- Counties
- States
- Laterals

NM API (30-015-...) SHL Status - Type (Count)
- Horizontal Surface Location (15)
- Plugged (Site Released) - Oil (1)

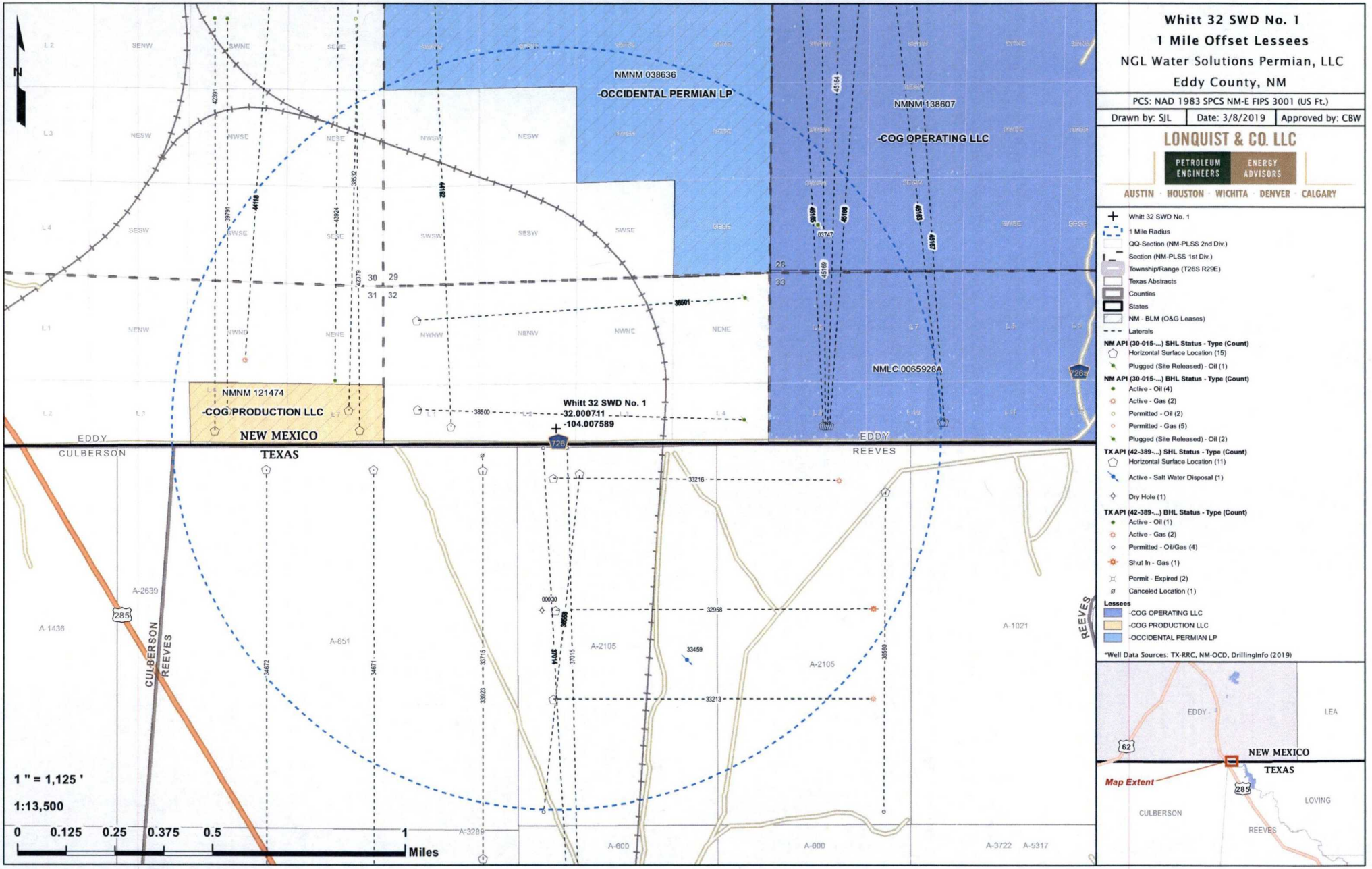
NM API (30-015-...) BHL Status - Type (Count)
- Active - Oil (4)
- Active - Gas (2)
- Permitted - Oil (2)
- Permitted - Gas (5)
- Plugged (Site Released) - Oil (2)

TX API (42-389-...) SHL Status - Type (Count)
- Horizontal Surface Location (11)
- Active - Salt Water Disposal (1)
- Dry Hole (1)

TX API (42-389-...) BHL Status - Type (Count)
- Active - Oil (1)
- Active - Gas (2)
- Permitted - Oil/Gas (4)
- Shut In - Gas (1)
- Permit - Expired (2)
- Canceled Location (1)

Operators
- -COG OPERATING LLC
- -COG OPERATING LLC; -CONOCOPHILLIPS COMPANY
- -COG PRODUCTION LLC
- -CONOCOPHILLIPS COMPANY; -CM TX PRODUCTION LLC
- -HIGH ROLLER WELLS; -NGL WATER SOLUTIONS PERMIAN LLC; -CONOCOPHILLIPS COMPANY

*Well Data Sources: TX-RRC, NM-OCD, DrillingInfo (2019)


Whitt 32 SWD No. 1
1 Mile Offset Lessees
NGL Water Solutions Permian, LLC
Eddy County, NM
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: SJL
Date: 3/8/2019
Approved by: CBW
LONQUIST & CO. LLC
PETROLEUM ENGINEERS
ENERGY ADVISORS
AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY
NMNM 038636
-OCCIDENTAL PERMIAN LP
NMNM 138607
-COG OPERATING LLC
NMNM 121474
-COG PRODUCTION LLC
NMLC 0065928A
Whitt 32 SWD No. 1
32.0007.11
-104.007589
NEW MEXICO
TEXAS
EDDY
CULBERSON
REEVES
LEA
LOVING
Whitt 32 SWD No. 1
1 Mile Radius
QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (T26S R29E)
Texas Abstracts
Counties
States
NM - BLM (O&G Leases)
Laterals
NM API (30-015-...) SHL Status - Type (Count)
Horizontal Surface Location (15)
Plugged (Site Released) - Oil (1)
NM API (30-015-...) BHL Status - Type (Count)
Active - Oil (4)
Active - Gas (2)
Permitted - Oil (2)
Permitted - Gas (5)
Plugged (Site Released) - Oil (2)
TX API (42-389-...) SHL Status - Type (Count)
Horizontal Surface Location (11)
Active - Salt Water Disposal (1)
Dry Hole (1)
TX API (42-389-...) BHL Status - Type (Count)
Active - Oil (1)
Active - Gas (2)
Permitted - Oil/Gas (4)
Shut In - Gas (1)
Permit - Expired (2)
Canceled Location (1)
Lessees
-COG OPERATING LLC
-COG PRODUCTION LLC
-OCCIDENTAL PERMIAN LP
*Well Data Sources: TX-RRC, NM-OCD, DrillingInfo (2019)
Map Extent
1 " = 1,125 '
1:13,500
0 0.125 0.25 0.375 0.5 1 Miles

Whitt 32 SWD #1: Offsetting Produced Water Analysis														
wellname	api	county	formation	ph	tds_mgL	sodium_m	calcium_m	iron_mgL	magnesium	manganese	chloride_m	bicarbonat	sulfate_mg	co2_mgL
SNAPPING 2 STATE #013H	3001542113	EDDY	BONE SPRING 3RD SAND	6.5	94965.6	31352.7	3678.6	31.7	483.6	0.83	57489.5	244	0	200
SNAPPING 2 STATE #013H	3001542113	EDDY	BONE SPRING 3RD SAND	7	94518.2	30031.5	3402.8	19.9	438.9		58782.2		355.2	200
SNAPPING 2 STATE #013H	3001542113	EDDY	BONE SPRING 3RD SAND	7.2	94863.9	30224.8	3424	14.8	444		59015.2		365	200
SNAPPING 2 STATE #014H	3001542688	EDDY	WOLFCAMP	7.3	81366.4	26319.4	2687.4	26.1	326.7		50281.2		399.7	100
SNAPPING 2 STATE #013H	3001542113	EDDY	BONE SPRING 3RD SAND	6.8	91289.1	28721.3	3440.7	16.3	437.4		56957.4		327.9	150
FED J #001	3001522471	EDDY	DELAWARE	5.7	255599						160000	24	330	
USA #001	3001504776	EDDY	DELAWARE		176882						108700	139	1332	
SNAPPING 10 FEDERAL #005H	3001540994	EDDY	BONE SPRING 2ND SAND	6.6	138161.9	44458.5	6280.8	29.7	781.3	0	84470	122	0	20
SNAPPING 10 FEDERAL #005H	3001540994	EDDY	BONE SPRING 2ND SAND	6.6	138376	44458.5	6280.8	29.7	781.3	0	84470	122	618	20
SNAPPING 10 FEDERAL #001H	3001537899	EDDY	AVALON UPPER	6.5	199638.8	68948.2	7560.4	111.2	1522.8	2.19	118195	732	0	500
SNAPPING 11 FEDERAL #001H	3001538193	EDDY	AVALON UPPER	6.1	225189.8	77010.7	8743.8	636.1	1649.2	6.75	134075	366	0	300
SNAPPING 2 STATE #003H	3001539036	EDDY	AVALON UPPER	6.1	223019	76001.7	10437.8	209.9	1922.4	4.5	131072	366	632	1100
SNAPPING 2 STATE #006H	3001539162	EDDY	AVALON UPPER	6.5	179788.5	71575.7	617.4	21.8	109.6	0	101374	3660	0	500
SNAPPING 2 STATE #006H	3001539162	EDDY	AVALON UPPER	6.5	179938	71575.7	617.4	21.8	109.6	0	101374	3660	844	500
SNAPPING 10 FEDERAL #003H	3001539866	EDDY	BONE SPRING 2ND SAND	6.5	152439.2	48495.7	6731.3	29.1	801.4	1.06	94055	244	0	100
USA #001	3001504776	EDDY	DELAWARE		156733						98120	137	616	
USA #001	3001504776	EDDY	DELAWARE		159967						97900	137	1100	
E D WHITE FEDERAL NCT 1 #003	3001505886	EDDY	DELAWARE		212112						132100	195	425	
FED J #001	3001522471	EDDY	DELAWARE	7.4	265727						158000	37	3600	
FED J #001	3001522471	EDDY	DELAWARE	7.6	255336						156000	76	790	
FED J #001	3001522471	EDDY	DELAWARE	8.5	263830						157000	78	3700	
SNAPPING 10 FEDERAL #001H	3001537899	EDDY	AVALON UPPER	7.1	209352.4	70089.5	7327	203	1557	2.5	127230	146.4	600	600
SNAPPING 11 FEDERAL #001H	3001538193	EDDY	AVALON UPPER	7	196576.7	68797.3	5059	12	1066	0.9	118943	122	872	380
SNAPPING 11 FEDERAL #001H	3001538193	EDDY	AVALON UPPER	7	203078.9	72261.4	4407	112	904	1.5	122172	1098	658	80
SNAPPING 2 STATE #001Y	3001539104	EDDY	AVALON UPPER	7	162560.1	57137	3886	42	776	0.6	97161	1403	756	70