Revised March 23, 2017

RECEIVED: 11/9/2018	REVIEWER: PTG	TYPE: IPI	APP NO: PPRG 2005846495

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: STRIKER 3 SWD #1 **API:** 30-015-44407
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.

Neel L. Duncan
Print or Type Name

Signature

9 November 2018
Date

+1 303 947 9402
Phone Number

neel.duncan@iptenergyservices.com
e-mail Address

IPT Integrated Petroleum Technologies, Inc.

NGL Water Solutions Permian, LLC.
Striker 3 SWD #1
API No. 30-015-44407

Contact Information:

Neel Duncan
Integrated Petroleum Technologies
Managing Director
neel.duncan@iptenergyservices.com
(303) 947-9402

Step Rate Test Report for Striker #3 SWD (Devonian). Summary:

NGL requests an increase in the maximum allowable injection pressure from 2780 psig to **3600 psig** based on a step rate test showing that the minimum frac gradient of the formation and or confining layers is 0.629 psi/foot, equating to a surface injection pressure of 4414 psig.

November 8, 2018

November 8, 2018

Mr. Philip Goetze
State of New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
Engineering Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: **Surface Injection Pressure Increase to 3600 psig**
NGL Water Solutions Permian, LLC.
Striker 3 SWD #1
API No. 30-015-44407
Siluro-Devonian Formation
Eddy County, New Mexico

Dear Mr. Goetze,

NGL Water Solutions Permian, LLC. (OGRID 372338) respectfully requests an increase in the Surface Injection Pressure for the Striker 3 SWD #1 to 3600 psig. This request is made based on the results of a recent Step Rate Test (SRT) performed on October 24, 2018 which shows formation and/or confining layer competency to 4414 psig. This pressure increase will increase the injection rate without fracturing the formation or confining strata. The well history and a chronological order of permit limits is listed below:

08/25/2018	UIC Permit set operating limits to no more than 2780 psi
10/24/2018	Second Step Rate Test indicated fracture gradient of 0.629 psi/ft

The initial wellhead pressure prior to performing the SRT was 609 psig. The SRT conducted on October 24, 2018 pumped a series of 8 steps consisting of 1, 2, 4, 8, 16, 24, 32 & 40 BPM, pumped for a duration of 30 minutes each step using 9.8 ppg (1.175 specific gravity) produced water from the NGL Water Solutions Permian facility. The weight of the fluid was measured using a Fann Mud Balance calibrated with fresh water. A digital quartz pressure gauge was used to monitor surface pressure at the wellhead for the duration of the SRT and the Colebrook iterative solution was used to calculate friction for bottom hole pressure. The gauge information is provided below:

Manufacture	Model No.	Serial No.	Calibration Date
Spartek Systems	SS6100	10063	June 7, 2018

The SRT identified a fracture gradient of 0.629 psi/ft with a surface pressure of 4414 psig. The surface pressure is dominated by friction The Instantaneous Shut-In Pressure (ISIP) was 1819 psig, 5-minutes after ISIP was 1706 psig, 10-minutes after ISIP was 1620 psig and 15-minutes after ISIP was 1531 psig. Pressure at the top of the open hole interval was identified using the recorded surface pressures, Colebrook iterative solution to determine tubular friction pressures and hydrostatic pressure calculations. Once the appropriate bottom hole pressure was identified, the fracture pressure and fracture gradient were determined.

The parameters used to determine friction and bottom hole pressures are provided in the tables below:

Pressure Calculations at 32.0 BPM			
Tubing Friction Pressure Calculations			
Outside Diameter, (inch)	Inside Diameter, (inch)	Length, (feet)	Friction Pressure, (psig)
5-1/5"	4.892"	9,277'	1164
4-1/2"	4.000"	4,652'	1574
Combined Friction Pressure, (psig)			**2739**

Hydrostatic Pressure Calculations	
Gauge Recorded Surface Pressure, (psig)	4414'
Depth of Injection Liner Shoe, (feet)	13,978'
Specific Gravity of Fluid, (unitless)	1.175
Hydrostatic Pressure at Top of Open Hole, (psi)	**7123**

The calculation to determine bottom hole pressure at top of the injection interval (fracture pressure):

Surface Pressure	-	Friction Pressure	+	Hydrostatic Pressure	=	Bottom Hole Pressure at Top of Injection Interval (Fracture Pressure)
4414 psi		2739 psi		7123 psi		8798 psi

The calculation to determine fracture gradient at 32.0 BPM using 9.8 ppg (1.175 specific gravity) produced fluid:

Bottom Hole Pressure at Top of Injection Interval (Fracture Pressure)	÷	Depth to Top of Open Hole	=	Fracture Gradient
8798 psi		13,978'		0.629 psi/ft

Striker 3 SWD #1 - Step Rate Test Percentages, Rates and Pressure Results				
Step	Percent of Max Rate, (%)	Rate (BPM)	Step Duration, (min)	Recorded Surface Pressure, (psig)
Step 1	2.5	1.0*	30	670
Step 2	5	2.0	30	607
Step 3	10	4.0	30	667
Step 4	20	8.0	30	965
Step 5	40	16.0	30	1846
Step 6	60	24.0	30	2991
Step 7	80	32.0	30	4414
Step 8	100	40.0	30	5945
*A 1.0 BPM rate step was used to establish injection prior to conducting the SRT.				

NGL Water Solutions Permian, LLC. respectfully requests an 820 psi pressure increase from the current Surface Injection Pressure to 3600 psi. This rate increase is for the approved open hole injection interval between 13,978' and 15,069' (1091' injection interval). The fracture pressure was identified at 4414 psi; however, a Surface Injection Pressure of 3600 psi is requested due to horsepower constraints at this facility.

Please feel free to contact me at 303-947-9402 to discuss the request.

Sincerely,

Neel Duncan
Managing Director

Attached: *Current Completion Wellbore Diagram*
Table of Step Rate Test Analysis Calculations
Graph Summary of Step Rate Test Analysis
Graph Summary of Pressure Versus Injection Rate with Interpretation
Copy of the Order Authorizing the Injection into the Well
Surface Gauge Pressure Data (Excel File Attachment)

WELLBORE DIAGRAM

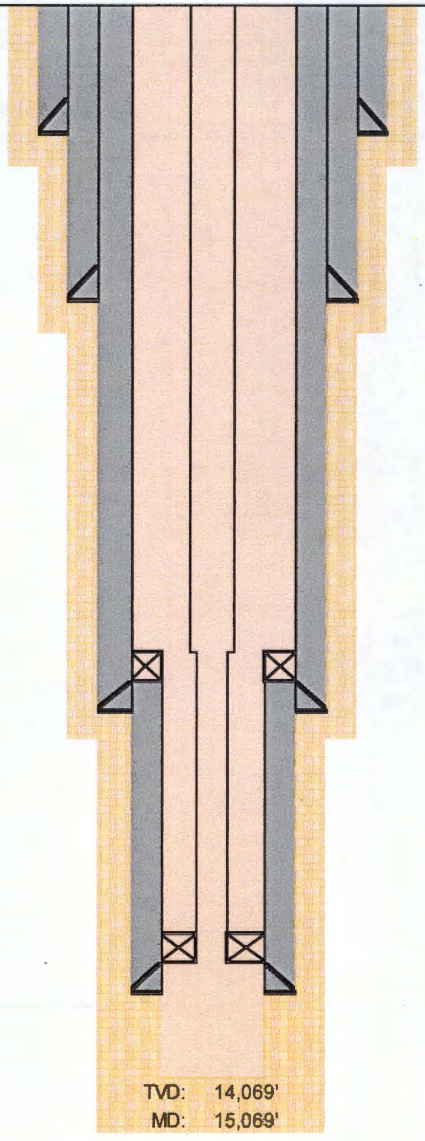
Operator:	**NGL Water Solutions Permian**
Well:	**Striker 3 SWD #1**
Sec-Twp-Rng:	**Sec. 33-T23S-R28E**
SHL:	**472' FSL & 897' FEL**
Lat/Long:	32.255543, -104.086765
County / State:	Eddy County, NM
API #:	30-015-44407

Notes: Acid & SRT Performed 02/09/2018
Acid & SRT Performed 10/24/2018

Spud date: 11/17/2017

Updated
Date: 11/1/2018
Initials: PL

K.B.= 3,097'
G.L.= 3,069'
28'



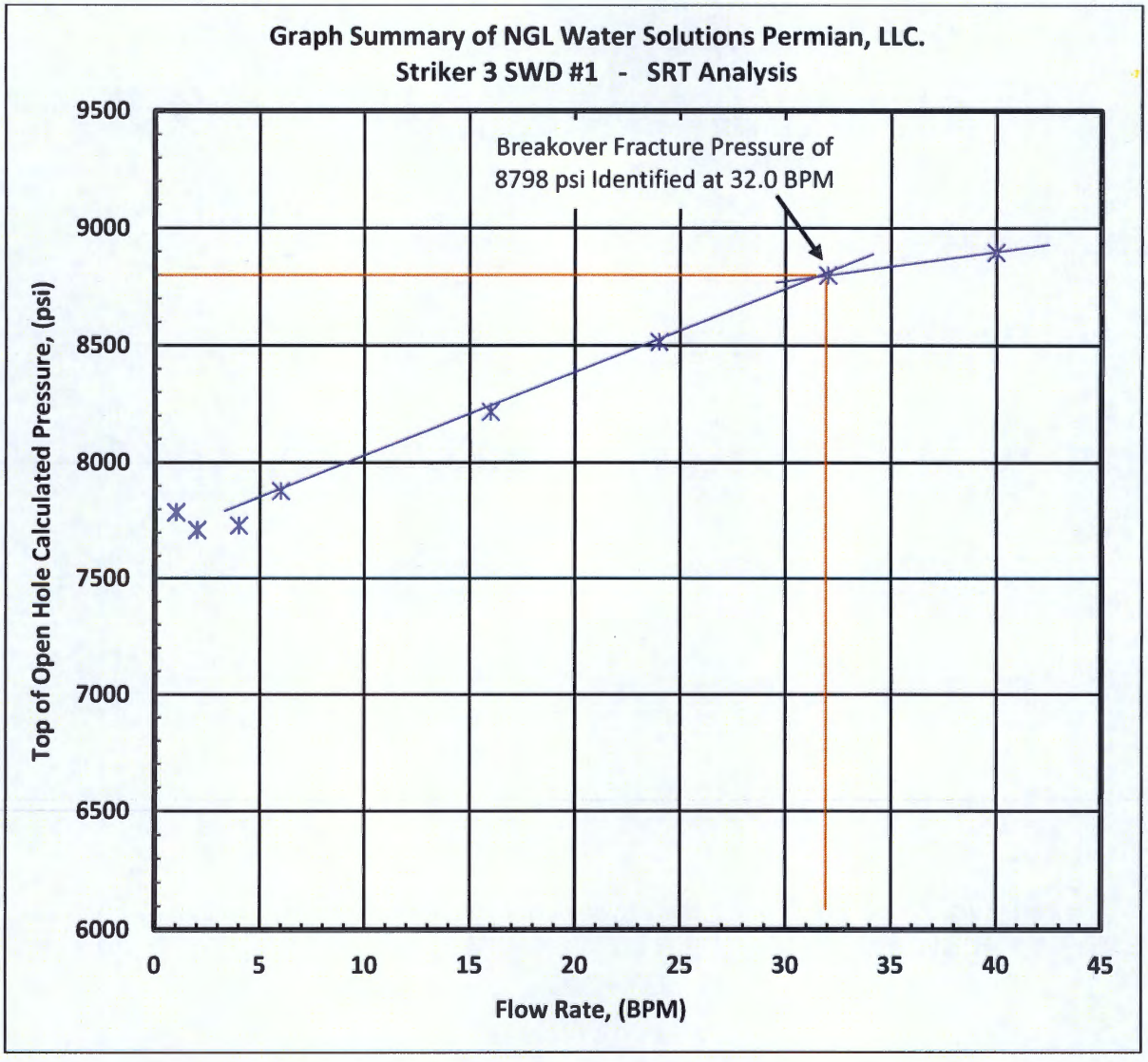
542' 20" 94# Surface Casing

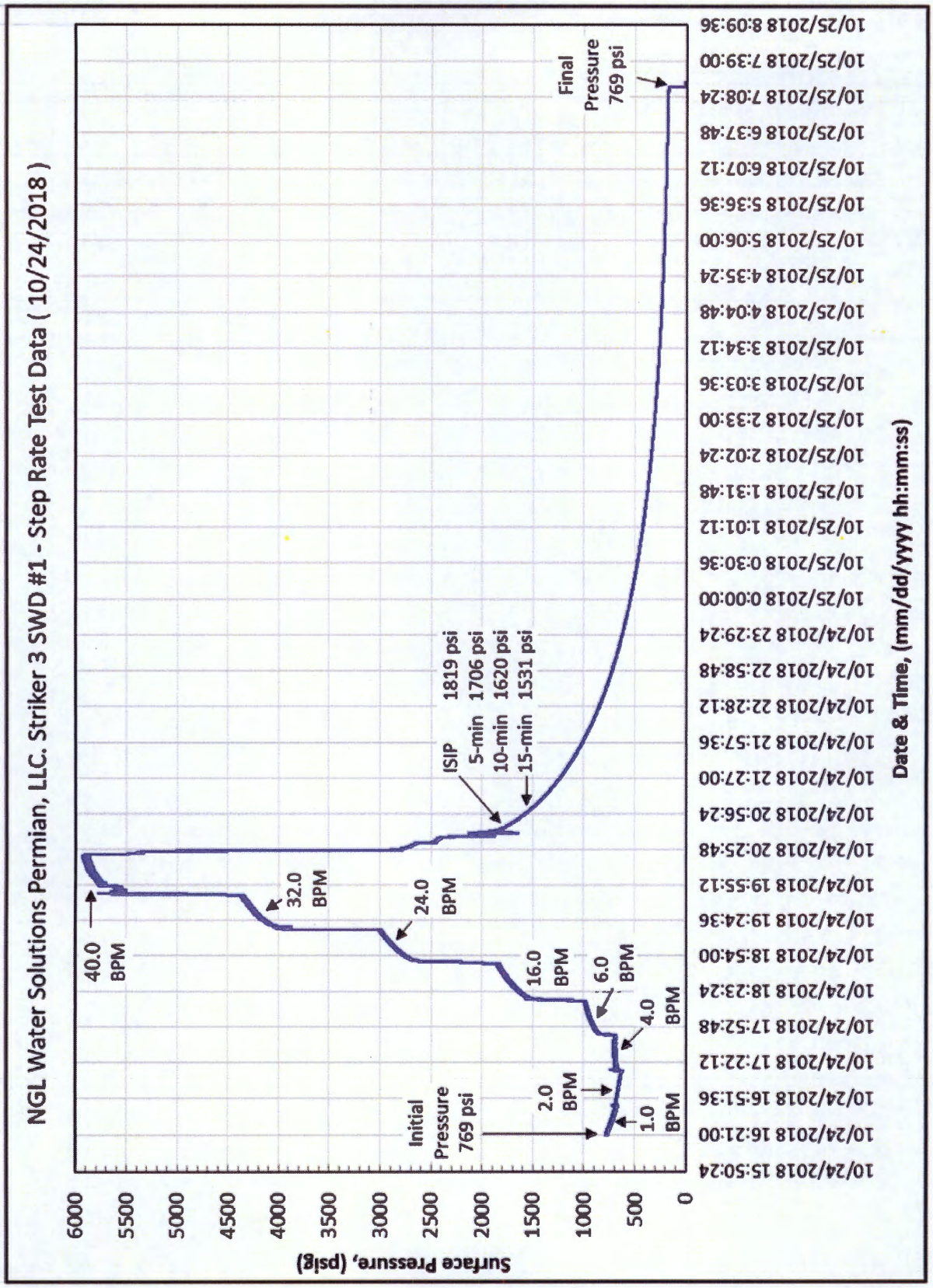
2,662' 13-3/8" 68# Intermediate Casing #1

9,279' 5-1/2" 17# Coated Injection Tubing w/ 4-1/2" XO
9,325' 7" 29# Liner Top PBR
9,542' 9-5/8" 47# Intermediate Casing #2

13,928' 4-1/2" 11.6# Coated Injection Tubing
13,929' Permanent Packer with Seal Assembly
13,978' 7" 29# Liner
13,978' Top of Open Hole Injection Zone
1,091' Open Hole Injection Interval
15,069' Bottom of Open Hole Injection Zone

NGL Water Solutions Permian - Striker 3 SWD #1 Table of Step Rate Test Analysis Calculations							
Step	Rate	Time	Vol. Per Step	Cumulative Volume	Tubing Friction	Surface Pressure	Bottom Hole Pressure at the Top of Injection Interval
Seq.	BPM	Min.	BBL	BBL	psi	psig	psig
1	1	30	30	30	5	670	**7788**
2	2	30	60	90	17	607	**7713**
3	4	30	120	210	59	667	**7731**
4	8	30	240	450	210	965	**7878**
5	16	30	480	930	753	1846	**8216**
6	24	30	720	1650	1599	2991	**8515**
7	**32**	**30**	**960**	**2610**	**2739**	**4414**	**8798**
8	40	30	1200	3810	4173	5945	**8895**




NGL Water Solutions Permian, LLC. Striker 3 SWD #1 - Step Rate Test Data (10/24/2018)
Surface Pressure, (psig)
Date & Time, (mm/dd/yyyy hh:mm:ss)
Initial Pressure 769 psi
Final Pressure 769 psi
ISIP 1819 psi
5-min 1706 psi
10-min 1620 psi
15-min 1531 psi
40.0 BPM
32.0 BPM
24.0 BPM
16.0 BPM
6.0 BPM
4.0 BPM
2.0 BPM
1.0 BPM

State of New Mexico
Energy, Minerals and Natural Resources Department

Administrative Order SWD-1690
August 25, 2017

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Pursuant to the provisions of Division Rule 19.15.26.8 B NMAC, NGL Water Solutions Permian, LLC (the "operator") seeks an administrative order for its Striker 3 SWD Well No. 1 ("proposed well") with a location of 472 feet from the South line and 897 from the East line, Unit P of Section 33, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for the purpose of commercial disposal of produced water.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Division Rule 19.15.26.8B. NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Rule 19.15.5.9 NMAC.

IT IS THEREFORE ORDERED THAT:

The applicant, NGL Water Solution Permian, LLC (OGRID 372338), is hereby authorized to utilize its Striker 3 SWD Well No. 1 (API 30-015-44407) with a location of 472 feet from the South line and 897 from the East line, Unit P of Section 33, Township 23 South, Range 28 East, NMPM, Eddy County, for disposal of oil field produced water (UIC Class II only) through an open hole interval consisting of the Devonian and Silurian formations from 13900 feet to approximately 15200 feet.

Injection will occur through either an internally-coated, 5-1/2-inch or smaller tubing inside the surface and intermediate casings, and a 4-1/2-inch or smaller tubing inside the liner. Further, a packer shall be set within 100 feet of the uppermost perforation.

This permit does not allow disposal into the Ellenburger formation (lower Ordovician) or lost circulation intervals directly on top and obviously connected to this formation.

Prior to commencing disposal, the operator shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Bureau Engineering office, showing evidence agreeable that only the permitted formation is open for disposal including a summary of

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3441 • Fax (505) 476-3462 • email: www.emnrd.state.nm.us/ocd

Administrative Order SWD-1690
NGL Water Solutions Permian, LLC
August 25, 2017
Page 2 of 3

depths (picks) for contacts of the formations which the Division shall use to amend this order for a final description of the depth for the injection interval.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the completion and construction of the well as proposed in the application and, if necessary, as modified by the District Supervisor.

The operator shall circulate the cement behind the casing to surface for all surface and intermediate casings.

The operator shall run a CBL (or equivalent) across the 7-5/8-inch liner from 500 feet above the top of liner to the bottom of the liner to demonstrate a good cement across the 7-5/8-inch liner, and good bond between the liner and the 9-5/8-inch casing.

Within two years after commencing disposal, the operator shall conduct an injection survey, consisting of a temperature log or equivalent, over the entire injection interval using representative disposal rates. Copies of the survey results shall be provided to the Division's District I office and Santa Fe Engineering Bureau office.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 2780 psi,** but may be modified by the Division Director following the completion of the initial Step-Rate Test. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well. The operator shall install and maintain a chart recorder showing casing and tubing pressures during disposal operations.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formations. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's District II office of the date and

time of the installation of disposal equipment and of any MIT so that the same may be inspected nd witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District II office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The disposal authority granted herein shall terminate two (2) years after the effective date of this Order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

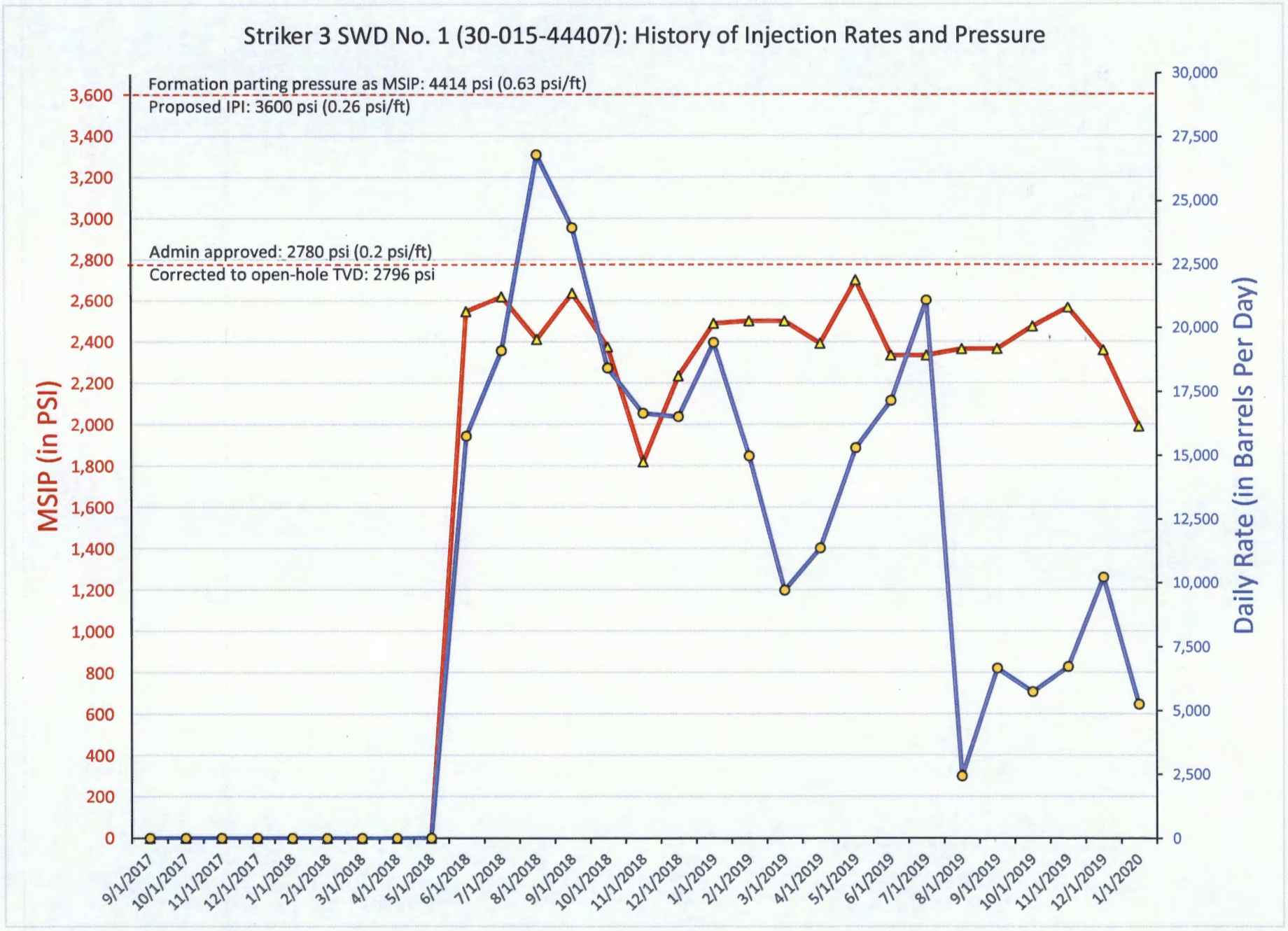
Compliance with this Order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

DAVID R. CATANACH
Director

DRC/mam

cc: Oil Conservation Division – Artesia District Office
Administrative application – pMAM1721954147


Striker 3 SWD No. 1 (30-015-44407): History of Injection Rates and Pressure
Formation parting pressure as MSIP: 4414 psi (0.63 psi/ft)
Proposed IPI: 3600 psi (0.26 psi/ft)
Admin approved: 2780 psi (0.2 psi/ft)
Corrected to open-hole TVD: 2796 psi
MSIP (in PSI)
Daily Rate (in Barrels Per Day)
3,600
3,400
3,200
3,000
2,800
2,600
2,400
2,200
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
30,000
27,500
25,000
22,500
20,000
17,500
15,000
12,500
10,000
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11/1/2018
12/1/2018
1/1/2019
2/1/2019
3/1/2019
4/1/2019
5/1/2019
6/1/2019
7/1/2019
8/1/2019
9/1/2019
10/1/2019
11/1/2019
12/1/2019
1/1/2020

Goetze, Phillip, EMNRD

From: Neel Duncan <neel.duncan@iptenergyservices.com>
Sent: Wednesday, May 8, 2019 10:50 AM
To: Goetze, Phillip, EMNRD
Subject: [EXT] Striker 3 SRT
Attachments: Surface Injection Pressure Increase Request Letter.pdf

Hi Phillip,

Per my voice mail I thought I would put this on the top of your inbox. Thanks.

Neel

Neel L. Duncan
C: +1 303 947 9402
www.iptenergyservices.com

Goetze, Phillip, EMNRD

From: Neel Duncan <neel.duncan@iptenergyservices.com>
Sent: Friday, March 8, 2019 2:07 PM
To: Goetze, Phillip, EMNRD
Cc: Wade, Gabriel, EMNRD; Jones, William V, EMNRD; Bratcher, Mike, EMNRD
Subject: [EXT] RE: Recent Issues with NGL Well Completions
Attachments: 20190308 Integrity summary table.docx

Hi Phillip,

As you are aware, NGL Water Solutions Permian LLC ("NGL") operates or drills, under OCD authorization, the following Devonian salt-water disposal wells:

Striker 6	(API # 030-025-44291)
Striker 3	(API# 030-015-44407)
Striker 2	(API # 030-015-44416)
Striker 1	(API # 030-015-44406)
Alpha	(API # 030-015-44530)
Red Road	(API # 030-015-45235)
Sidewinder	(API # 030-025-45427)

In your email below, you have notified IPT that some of the above wells may be out of compliance with certain pressure test requirements found at NMAC 19.15.16. Consistent with NMAC 19.15.26.9, NGL employs various measures to case its wells with safe and adequate casing or tubing so as to prevent leakage, and set and cement the casing or tubing to prevent the movement of formation or injected fluid from the injection zone into another zone or to the surface around the outside of a casing string.

Specifically, NGL cements all casing strings via the pump and plug method and circulates cement to surface to ensure groundwater is protected. Additionally, with each subsequent casing string in the well construction, NGL circulates cement to surface, thereby protecting the previous casing string with cement on both sides. This approach creates a permanent protective barrier for groundwater and protects and isolates each successive casing string from pressure.

NGL tests 9 5/8" and 7 5/8" casing by applying pressure to the annulus between the injection tubing and the 9 5/8 casing string and 7 5/8" liner. Isolation on bottom is provided by the injection packer set at the bottom of the 7 5/8" liner. I believe all of these annular pressure tests have thus far been witnessed by inspectors and if any need to be repeated due to any lingering concerns we are happy to do so.

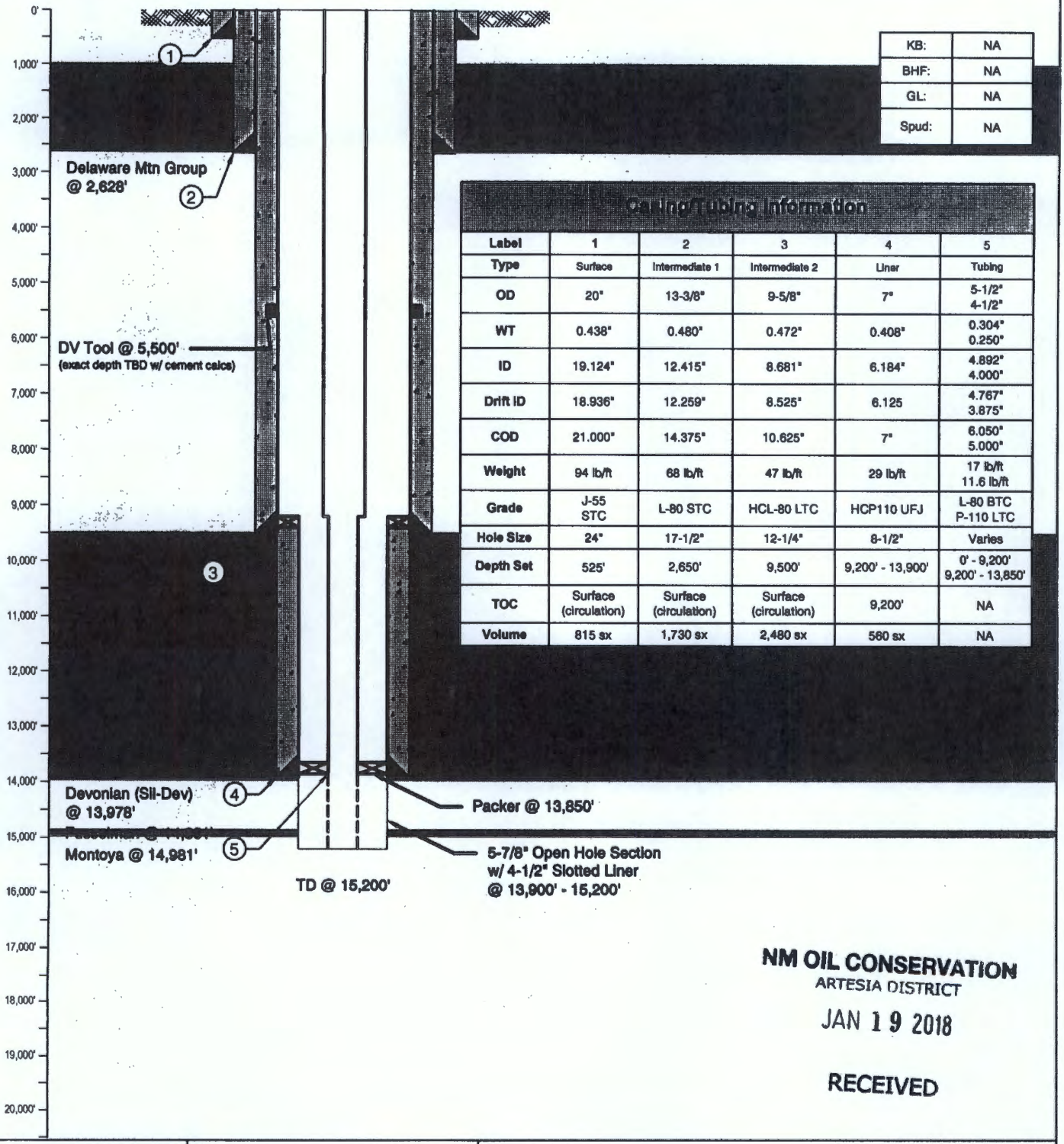
Operating in this manner has ensured compliance with NMAC 19.15.26. However, your email has created some uncertainty at IPT and NGL regarding applicable drilling and testing requirements. Concerning the drilling, casing, operation, and testing of its injection wells, NGL has operated under and in compliance with NMAC 19.15.26. Is it the OCD's position that the drilling and testing requirements applicable to oil and gas wells under 19.15.16 are also applicable to injection wells?

Summarized in the attached table are the integrity measures taken by NGL in its drilling and completion program. By circulating cement and confirming cement with cement bond logs, including CBLs of the 13-3/8" casing strings, we believe we are protecting groundwater, providing sufficient isolation of injection fluids, and ensuring long term wellbore integrity.

NGL is committed to operating in compliance with OCD regulations and appreciates your efforts to help clarify this issue. IPT and NGL representatives are available, at your convenience, to meet to discuss this matter. I could visit your office as soon as the 13th if you are still available.

The lack of a successful casing test on the 20-inch surface casing for the Red Road SWD No. 1 (30-015-45235) is of particular concern since this is the "water protection" string. Please review your protocols for well completions and inform your personnel that the casing tests must be conducted according to rule. Failure to perform the proper casing tests on these wells may jeopardize the approved status of the SWD order (UIC permit) which relies on these tests for validation of the well's mechanical integrity. Meanwhile, we should have a discussion as to how to address the lack of proper testing for the C-103s already submitted along with other issues related to NGL operations. Please contact me with any questions regarding the content of this email at your convenience. PRG

Phillip Goetze, PG
Engineering Bureau, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive, Santa Fe, NM 87505
Direct: 505.476.3466
E-mail: phillip.goetze@state.nm.us



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

Casing/Tubing Information

Label	1	2	3	4	5
Type	Surface	Intermediate 1	Intermediate 2	Liner	Tubing
OD	20"	13-3/8"	9-5/8"	7"	5-1/2" 4-1/2"
WT	0.438"	0.480"	0.472"	0.408"	0.304" 0.250"
ID	19.124"	12.415"	8.681"	6.184"	4.892" 4.000"
Drift ID	18.936"	12.259"	8.525"	6.125	4.767" 3.875"
COD	21.000"	14.375"	10.625"	7"	6.050" 5.000"
Weight	94 lb/ft	68 lb/ft	47 lb/ft	29 lb/ft	17 lb/ft 11.6 lb/ft
Grade	J-55 STC	L-80 STC	HCL-80 LTC	HCP110 UFJ	L-80 BTC P-110 LTC
Hole Size	24"	17-1/2"	12-1/4"	8-1/2"	Varies
Depth Set	525'	2,650'	9,500'	9,200' - 13,900'	0' - 9,200' 9,200' - 13,850'
TOC	Surface (circulation)	Surface (circulation)	Surface (circulation)	9,200'	NA
Volume	815 sx	1,730 sx	2,480 sx	560 sx	NA

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 19 2018
RECEIVED

LONQUIST
FIELD SERVICE
AUSTIN | WICHITA
HOUSTON | CALGARY

Texas License F-9147

3345 Bee Cave Road, Suite 201
Austin, Texas 78746
Tel: 512.732.9812
Fax: 512.732.9816

NGL Water Solutions Permian LLC	Striker 3 SWD No. 1	
Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy
Location:	**Site:**	**Survey/STR:**
API No:	**Field:**	**Well Type/Status:** SWD
State ID No:	**Project No:** 1469	**Date:** 5/13/17
Drawn: WHG	**Reviewed:** CW	**Approved:** CW
Rev No: 1	**Notes:**	

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
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-103
Revised July 18, 2013

WELL API NO.
30-015-44407

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

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
STRIKER 3 SWD

1. Type of Well: Oil Well ☐ Gas Well ☐ Other SWD

8. Well Number 1

2. Name of Operator
NGL WATER SOLUTIONS PERMIAN, LLC

9. OGRID Number
372338

3. Address of Operator
1509 W WALL ST, STE 306 // MIDLAND, TX 79701

10. Pool name or Wildcat
SWD; SILURIAN-DEVONIAN

4. Well Location
Unit Letter P : 472 feet from the SOUTH line and 897 feet from the EAST line
Section 33 Township 23S Range 28E NMPM County LEA

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3,069' GL

12. 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.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:	☐		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- The proposed wellbore design has changed as follows:
  - Plans to run a 7" Liner rather than a 7-5/8" Liner
  - Plans to run a slotted 4-1/2" liner inside the open hole completion
- Please see attached wellbore diagram reflecting changes and updated cement vols

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 19 2018
RECEIVED

Spud Date: Rig Release Date:

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

SIGNATURE [signature] TITLE Consulting Engineer DATE 11/15/2017

Type or print name Chris Weyand E-mail address: chris@lonquist.com PHONE: (512) 600-1764

For State Use Only

APPROVED BY: [signature] TITLE Geologist DATE 1-22-2018
Conditions of Approval (if any):