

Submit a 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

Form C-103  
Revised July 18, 2013

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. 30-025-44144
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name DOODLE BUG STATE SWD
8. Well Number 1
9. OGRID Number 372603
10. Pool name or Wildcat SWD; DEVONIAN-SILURIAN (97869)

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.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/> SWD	
2. Name of Operator 3BEAR FIELD SERVICES, LLC	
3. Address of Operator 1512 LARIMER ST., SUITE 540 DENVER, CO 80202	
4. Well Location Unit Letter G : 1,498 feet from the NORTH line and 2,390 feet from the EAST line Section 16 Township 22S Range 33E NMPM County LEA	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,554.5 FEET	

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

<p><b>NOTICE OF INTENTION TO:</b></p> <p>PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/></p> <p>TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/></p> <p>PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/></p> <p>DOWNHOLE COMMINGLE <input type="checkbox"/></p> <p>CLOSED-LOOP SYSTEM <input type="checkbox"/></p> <p>OTHER: <input type="checkbox"/></p>	<p><b>SUBSEQUENT REPORT OF:</b></p> <p>REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/></p> <p>COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/></p> <p>CASING/CEMENT JOB <input type="checkbox"/></p> <p>OTHER: Evaluation of step-rate and fall-off testing <input checked="" type="checkbox"/></p>
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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.

**Evaluation of Step-Rate Injection Test and Reservoir Pressure Fall-Off Test for Doodle Bug State SWD #1**

Geolex and MHA (a Sproule company) have evaluated the results of step-rate injection testing and reservoir pressure fall-off testing completed between January 5 through 13, 2021 for the Doodle Bug State SWD #1 Well. The results of this evaluation are included as an attachment (Attachment 1) to this submittal. Step-rate injection testing was completed on January 5, 2021 and included progressively increasing injection rates from approximately 5 barrels per minute (bpm) to 30 bpm. Evaluation of the injection test data did not identify any breakover point that would indicate formation fraction pressure had been exceeded. Upon completion of injection tests, reservoir pressure fall-off was monitored with a bottom-hole pressure recorder for approximately eight (8) days. From the fall-off testing, the static formation pressure was determined to be 7,620 psia and the average permeability (relative to water) was 22.4 mD.

Spud Date:

10/30/2020

Rig Release Date:

12/27/2020

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

SIGNATURE David A. White TITLE Consultant to 3Bear Field Services, LLC DATE 03/24/2021

Type or print name David A. White E-mail address: dwhite@geolex.com PHONE: (505)842-8000

**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any):

# **ATTACHMENT 1**

## **EVALUATION OF STEP-RATE TEST & PRESSURE FALL-OFF TEST**

(Completed by MHA – Sproule)

**DOODLE BUG STATE SWD #1  
(API: 30-025-44144)**

# Sproule



**3BEAR ENERGY LLC  
DOODLE BUG STATE SWD 1  
API #30-025-44144  
STEP RATE TEST  
AND FALLOFF TEST REPORT**

**SUBMITTED TO:  
GEOLEX, INCORPORATED  
FEBRUARY 2021**

5001 California Ave., Suite 110  
Bakersfield, CA 93309  
661-325-0038

[sproule.com](http://sproule.com)



February 22, 2021

David A. White, M.S.  
Geolex, Incorporated  
500 Marquette Avenue, NW  
Suite 1350  
Albuquerque, NM 87102

Subject: 3Bear Energy LLC  
Doodle Bug State SWD 1  
API #30-025-44144  
Step Rate Test and Falloff Test Report

Dear David:

Per your request, Sproule Incorporated (Sproule) analyzed the Step Rate Test (SRT) and Falloff Test (FOT) conducted on the Doodle Bug State Saltwater Disposal #1 (SWD1) well during January 5 – 13, 2021. The test was conducted, and the pump rates and surface pressures were recorded by CUDD Pumping Services (CUDD) on behalf of 3Bear Energy Company (3Bear), Denver, Colorado.

The Doodle Bug State SWD 1 well is located approximately 20 miles southwest of Oil Center in Lea County, New Mexico (Township 22S, Range 33E, Section 16). The purpose of the SRT was to establish the maximum injection pressure for the anticipated disposal rates (14,000 – 18,000 barrels per day) in the well. The disposal fluid is expected to be produced oilfield water from the active oil and gas wells in the surrounding area.

The Doodle Bug State SWD1 is drilled and completed in the Devonian-Silurian formation as an open-hole wellbore completion from 16,687' – 17,707' KB. The ground level elevation datum is 3,555 ft and the KB is 29 feet above ground level. The open-hole interval has a gross thickness of 1,020' and an estimated net thickness of 915' (16,695' – 17,610' KB).

Pressure data were recorded both at the surface (CUDD) and bottomhole (Precision Pressure Data) for the SRT test procedure. The tandem downhole pressure gauges were hung at 16,568'. The well was full of fresh water (0.433 psi/ft) at the start of the test and fresh water was used to conduct most of the SRT. The 3Bear representative reported that brine water was on site during the SRT and was used in the test as early as step 3. At the end of the SRT, the hydrostatic head is a heavier fluid column (0.443 psi/ft) consistent with a brine water solution.



## Test Results

The SRT test results are summarized as follows:

1. The test was initiated with a hydrostatic gradient of the injection fluid (7,178 psi) and 364 psig of wellhead pressure.
2. The SRT started at 08:31:16 and ended at 11:30:18 on 1-05-2021.
3. The SRT consisted of six (6) +/- 30-minute steps with rates of 5.4, 10.0, 14.6, 20.7, 24.9 and 28.9 barrels per minute (bpm), respectively.
4. The test had to be terminated after the 6<sup>th</sup> step because all the available injection fluid was consumed.
5. The maximum well head injection pressure was 1,701 psig for the rate of 28.9 bpm at the end of the test.
6. The cumulative water injection was 4,791.1 barrels.
7. The maximum bottomhole pressure at the end of the test was 7,806 psia.
8. The formation did not breakdown (fracture) during the SRT.
9. There were several missteps during the SRT (surface tank leak, two brief shutdowns, water tank swap miscommunication and two different injectates) that adversely impacted the quality of the test data and made the analysis more difficult.

After the SRT, supplementary brine water was obtained, and an additional injection step was conducted at 29-35 bpm for a total of 53 minutes with a final wellhead pressure of 2,788 psig (at 32.8 bpm). This additional rate is not considered as part of the initial SRT because the well was shut-in over an hour between the end of the initial SRT and the next injection step. Also, the wellbore friction was more than predicted for this higher injection rate. After this last injection step, the well was shut-in for an extended pressure FOT period.

The FOT test results are summarized as follows:

1. The FOT period started at 1/05/2021 13:35:28 and ended on 1/13/2021 12:01:31 for a total shut-in time of 190.4 hours.
2. The falloff data were analyzed for flow capacity, average formation permeability, skin factor, radius of investigation, and static formation pressure.
3. The flow capacity of the formation is 20,515 millidarcy-feet and the average permeability (relative to water) is 22.4 millidarcies (md).
4. The skin factor is -3.6. The high negative skin is indicative of a 'stimulated' completion. This is believed to be related to the presence of natural fractures and dissolution porosity which is common to the Silurian – Devonian fields in this area.
5. The calculated radius of investigation of the pressure fall-off is 6,300 feet.
6. The static formation pressure is 7,563 psia at the gauge depth of 16,568', or 7,620 psia at the top of the open hole completion (16,700').



Attached to this report are the following supporting figures and tables:

- Exhibit 1** – Step Rate Test Event Log
- Exhibit 2** – CUDD Pumping Services Treatment Report-corrected
- Exhibit 3** – Chart of the SRT surface treating pressures and rates
- Exhibit 4** – Precision Pressure Data information sheet and pressure plot
- Exhibit 5** – Surface Injection Treating Pressure vs. Pump Rate
- Exhibit 6** – Bottomhole Injection Pressure vs. Pump Rate
- Exhibit 7** – Fall-off Test Analysis Results and plots
- Exhibit 8** – Schlumberger Triple Combo wireline log (2"=100')
- Exhibit 9** – Pressure Gradient Survey
- Exhibit 10** – Wellbore Completion Diagram

### Conclusions

The results of the SRT conducted for the Doodle Bug State SWD 1 showed that for the permitted average water disposal volume of 14,000 to 18,000 barrels per day (10 – 13 bpm), the surface disposal pressure is expected to be 500-700 psig. In addition, the SRT showed that the fracture gradient was not exceeded for water injection rates up to 29 bpm (42,000 barrels per day). The anticipated surface pressure at 29 bpm is 1,700 – 2,000 psig for the 5-1/2" tubing string used in the test.

From the FOT, the average permeability (relative to water) was 22.4 md and skin factor was -3.6. The static formation pressure determined from the test was 7,620 psia at 16,700' (top of the open hole completion).

Thank you for the opportunity to prepare this report. If you have any questions or wish to discuss this report in more detail, please feel free to contact us.

Very truly yours,

**SPROULE INCORPORATED**

A handwritten signature in black ink that reads "Alan A. Burzlaff". The signature is fluid and cursive.

Alan A. Burzlaff, P.E.

Senior Manager – Engineering

[alan.burzlaff@sproule.com](mailto:alan.burzlaff@sproule.com)

661-325-0038

# EXHIBITS

**STEP RATE TEST EVENT LOG****DOODLE BUG STATE SWD 1****CHISHOLM ENERGY****LEA COUNTY, NM****DEVONIAN-SILURIAN FORMATION (16,687' - 17,707')****JANUARY 5 - 13, 2021**16,568 Gauge Depth, ft7,178 Initial Hydrostatic head, psi**SURFACE TEST DATA FROM CUDD PUMPING SERVICES REPORT & DATAFILE**

Step	TIME	Delta time, H-MM-SS	Step, minutes	Step Inj Rate, bpm	WHP at start of step, psig	WHP at end of step, psig	WHP at end of step, psia	Step, bbls	Cum Water Injection, bbls	Est Incremental Friction, psi	Est Total Friction, psi	BHP at end of step, psia	Gradient psi/ft
1/5/2021	8:31:16		-	-	364.0	364.0	378.0	0.2	0.2		-	7,556.3	0.433
1	8:31:20	0:29:53	29.9	5.42	452.0	486.0	500.0	162.2	162.4	88.0	88.0	7,590.5	
2	9:01:13	0:28:18	28.3	10.05	600.0	470.0	484.0	284.5	446.9	114.0	202.0	7,626.2	
3	9:29:31	0:31:36	31.6	14.63	621.0	499.0	513.0	462.3	909.2	151.0	353.0	7,627.0	
4	10:01:07	0:28:56	28.9	20.66	632.0	1,006.0	1,020.0	597.0	1,506.2	133.0	486.0	7,662.7	
5	10:30:03	0:24:30	24.5	24.91	1,304.0	1,333.0	1,347.0	610.3	2,116.5	298.0	784.0	7,698.8	
6	10:54:33	0:35:45	35.8	28.91	1,633.0	1,701.0	1,715.0	1,034.8	3,151.3	300.0	1,084.0	7,806.0	
ISIP	11:30:18			-	316.0	316.0	330.0	-	3,151.3			7,717.7	0.446
5 min SI	11:34:51			-	301.0	301.0	315.0	-	3,151.3			7,662.2	0.443
10 min SI	11:40:01			-	288.0	288.0	302.0	-	3,151.3			7,639.9	0.443
15 min SI	11:45:06			-	283.0	283.0	297.0	-	3,151.3			7,629.0	0.443
	12:42:43			-	268.0	268.0	282.0	-	3,151.3		-	7,593.7	0.441
7	12:42:48	0:21:14	21.2	28.72	2,611.0	3,022.0	3,036.0	608.8	3,760.1	2,343.0	2,343.0	7,872.5	
8	13:04:02	0:31:26	31.4	32.83	2,774.0	2,788.0	2,802.0	1,031.0	4,791.1	(248.0)	2,095.0	7,915.5	
Start Falloff	13:35:28				396.0	396.0	410.0		4,791.1			7,780.0	0.445
3 min SI	13:38:40				371.0	371.0	385.0		4,791.1			7,720.0	0.443
End Falloff													
1/13/2021	12:01:31				383.0	383.0	397.0		4,791.1			7,563.5	0.433
TOTAL		3:51:38	231.6					4,791.1					



# CPS Treatment Report

Page 1

<b>Customer:</b>	3 Bears Operating	<b>ESO#:</b>	JAD4BWXS9J
<b>Well Name &amp; No.:</b>	Doodle Bug State SWD 001	<b>Formation:</b>	
<b>County:</b>	LEA	<b>Date:</b>	January 5, 2021
<b>State:</b>	NM	<b>Well type:</b>	Disposal / New / Non-Stim.

## Customer Information

<b>Address:</b>	1512 LARIMER ST SUITE 540
<b>City, State:</b>	DENVER, CO
<b>Zip Code:</b>	80202
<b>CUSTOMER REP.</b>	ALLY HOWARD



## Remarks

## OPEN HOLE

<b>Arrive on Location:</b>	6:00 AM
<b>Depart Location:</b>	3:00 PM
<b>Total Hours:</b>	9.00

	Depth	O.D	Weight	I.D	Volume	
<b>Tubing 1 length ft.:</b>		2 7/8	6.5	2.441	0.00 BBLS.	0.00579
<b>Tubing 2 length ft.:</b>		2 3/8	4.7	1.995	0.00 BBLS.	0.00387
<b>Casing 1 length ft.:</b>	16,605	5 1/2	15.5	4.892	352.03 BBLS.	0.02120
<b>Casing 2 length ft.:</b>		4 1/2	11.6	4.000	0.00 BBLS.	0.01554
<b>OPEN HOLE</b>		N/A	N/A	4.125	0.00 BBLS.	0.01653
<b>Total Depth ft.:</b>					<b>Annular Vol.:</b> 0.00 BBLS.	0.01580

<b>TOP PERF:</b>	OH		<b>Maximum Pressure:</b>	3024	<b>ISIP:</b>	314
<b>BOTTOM PERF:</b>	OH		<b>Average Pressure:</b>	1146	<b>5 min:</b>	301
<b>Number of Perfs:</b>	OH		<b>Maximum Rate:</b>	35.2	<b>10 min:</b>	288
<b>Perf Size:</b>		in.	<b>Average Rate:</b>	19.7	<b>15 min:</b>	283
<b>Packer Depth:</b>	16,605	ft.	<b>Fluid to Recover:</b>	4791.0	<b>TOTAL SALT</b>	0

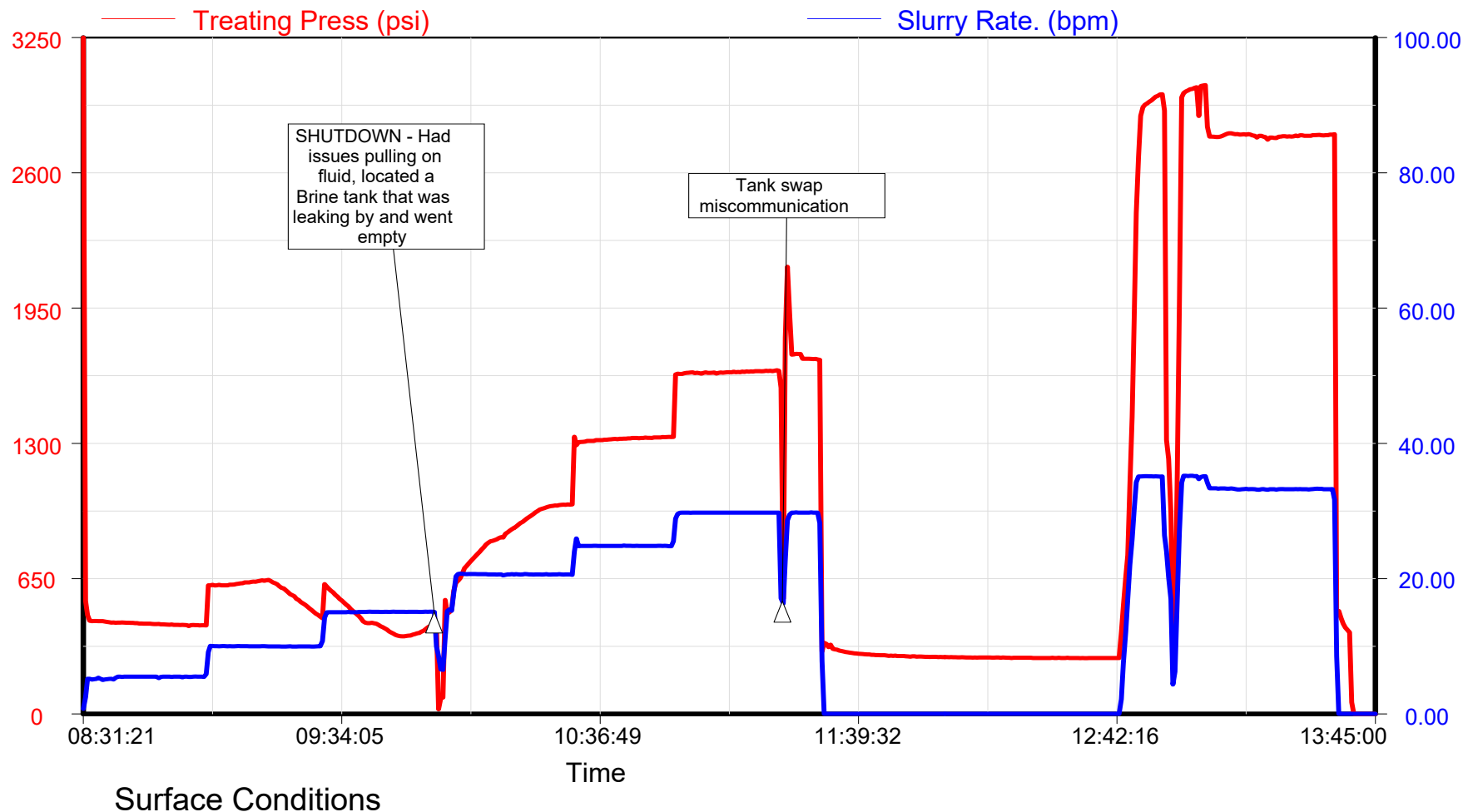
Time	Pressure 1	Pressure 3	Rate	Stage	Total	
7:25 AM	0				0.0	Prime
7:36 AM	5000				0.0	Test/Set PRV
7:41 AM	0				0.0	Safety Meeting
					0.0	
8:30 AM	365	0	0.0	0.0	0.0	Open Well
8:31 AM	409	0	0.0	0.0	0.0	Establish Injection
8:32 AM	542	0	5.0	160.0	160.0	5 BPM injection
9:01 AM	614	0	10.0	290.0	450.0	10 BPM injection
9:31 AM	601	0	15.0	452.0	902.0	15 BPM injection
10:02 AM	625	0	20.0	602.0	1504.0	20 BPM injection
10:30 AM	1462	0	25.0	619.0	2123.0	25 BPM injection
10:55 AM	1633	0	30.0	1028.0	3151.0	30 BPM injection
11:30 AM	314	0	0.0	0.0	3151.0	Shut Down
11:06 AM — 11:35 AM	301	0	0.0	0.0	3151.0	5 min
11:16 AM — 11:40 AM	288	0	0.0	0.0	3151.0	10 min
11:16 AM — 11:45 AM	283	0	0.0	0.0	3151.0	15 min
					3151.0	Wait on water
12:43 PM	311	0	0.0	0.0	3151.0	Establish Injection Rate
12:47 PM	2677	0	35.0	1640.0	4791.0	35 BPM Injection
1:36 PM	396	0	0.0	0.0	4791.0	Shut Down

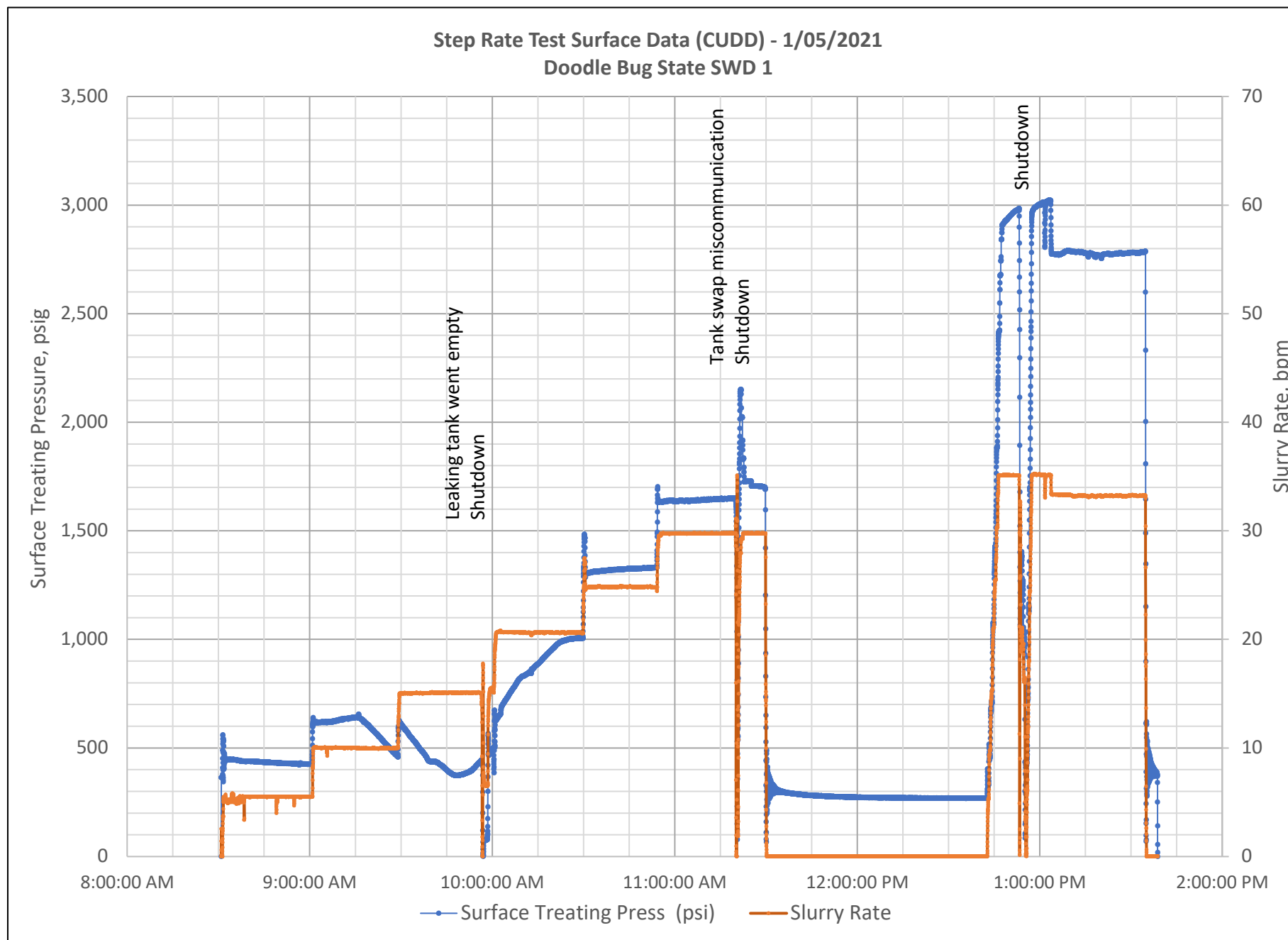
EXHIBIT 2

# Fracpro 2019 Hydraulic Fracture Analysis

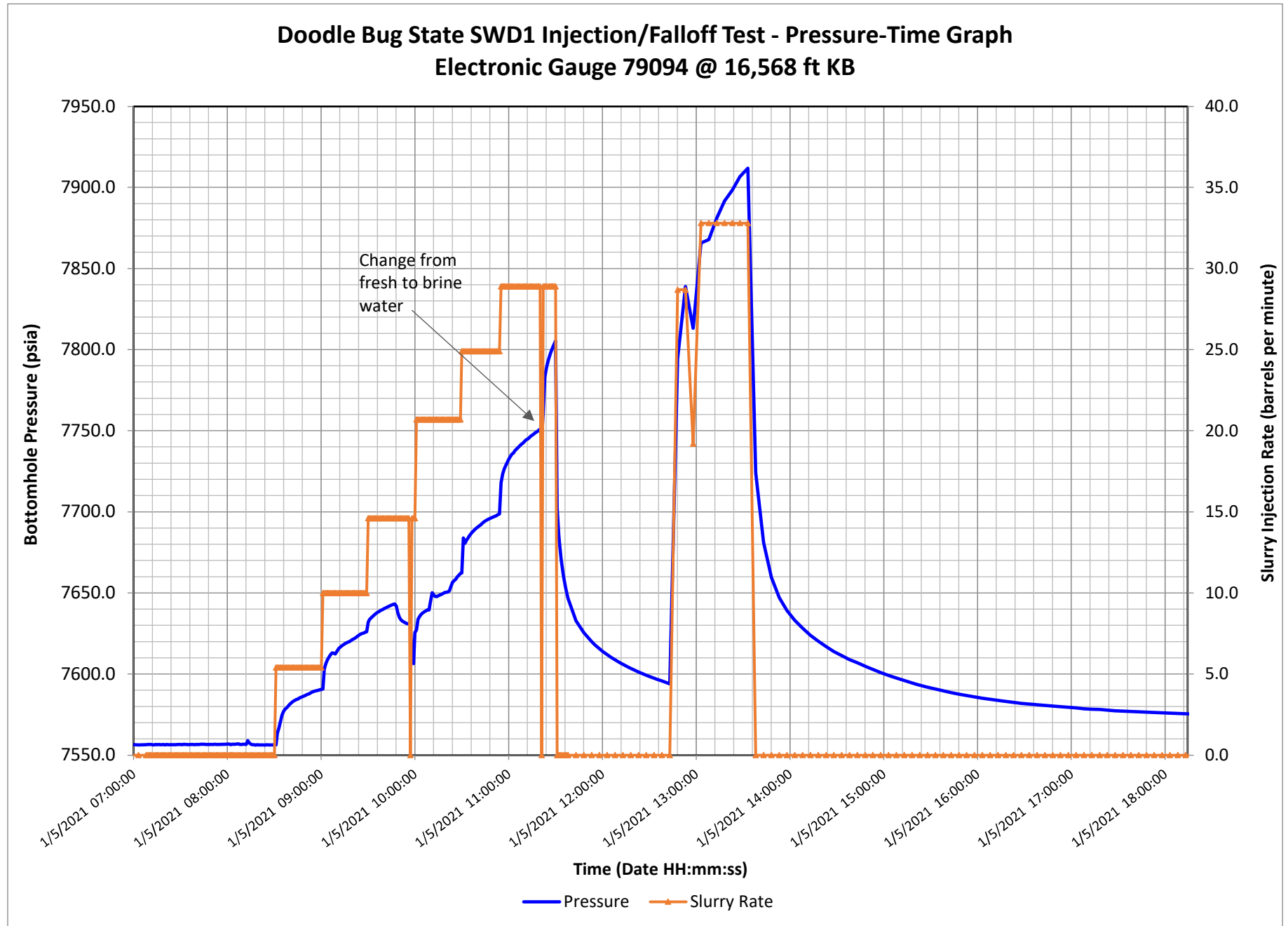


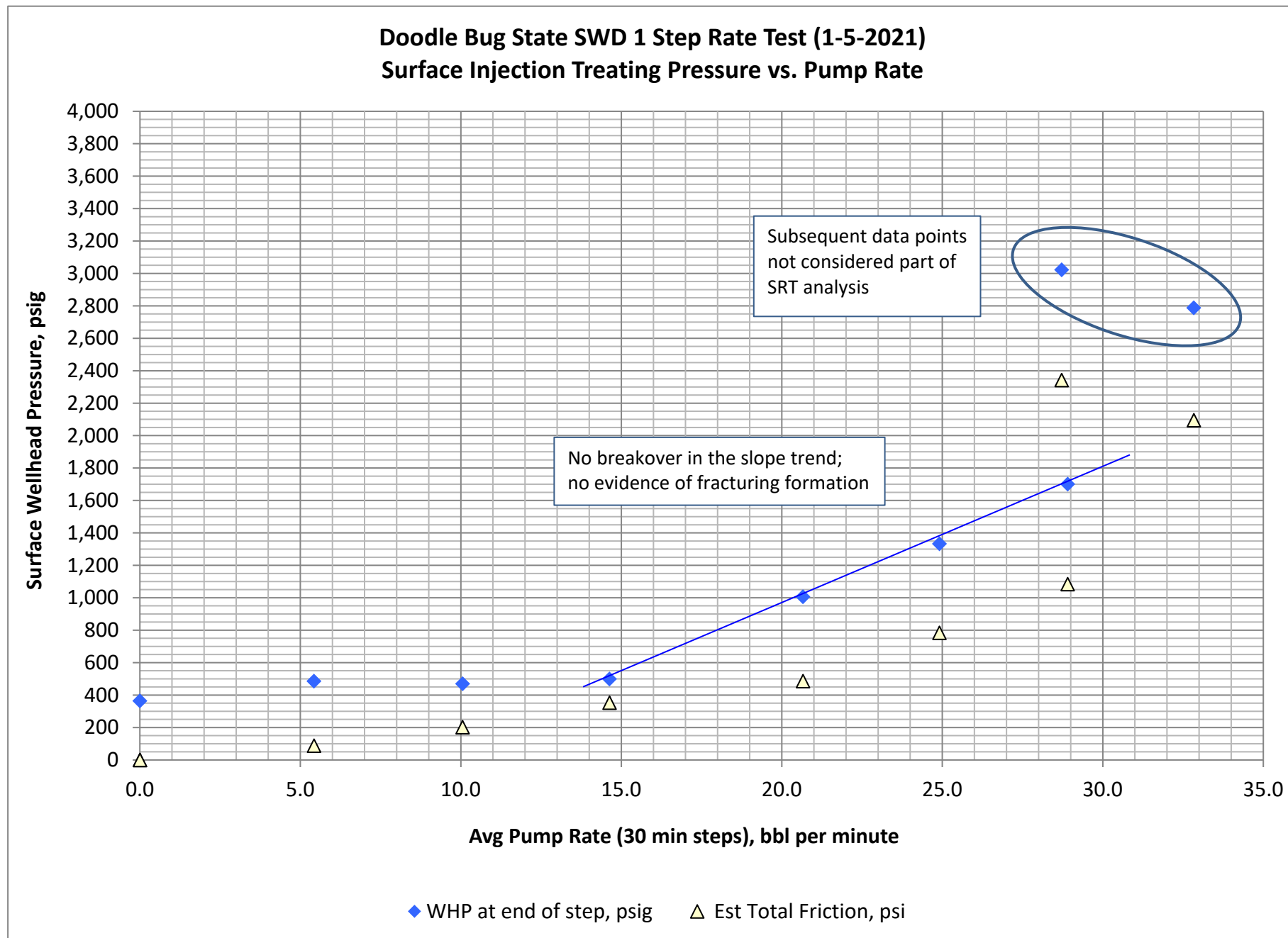
## 3 Bears Delaware Operating Doodle Bug State SWD 001 Step Rate Test EXTENDED

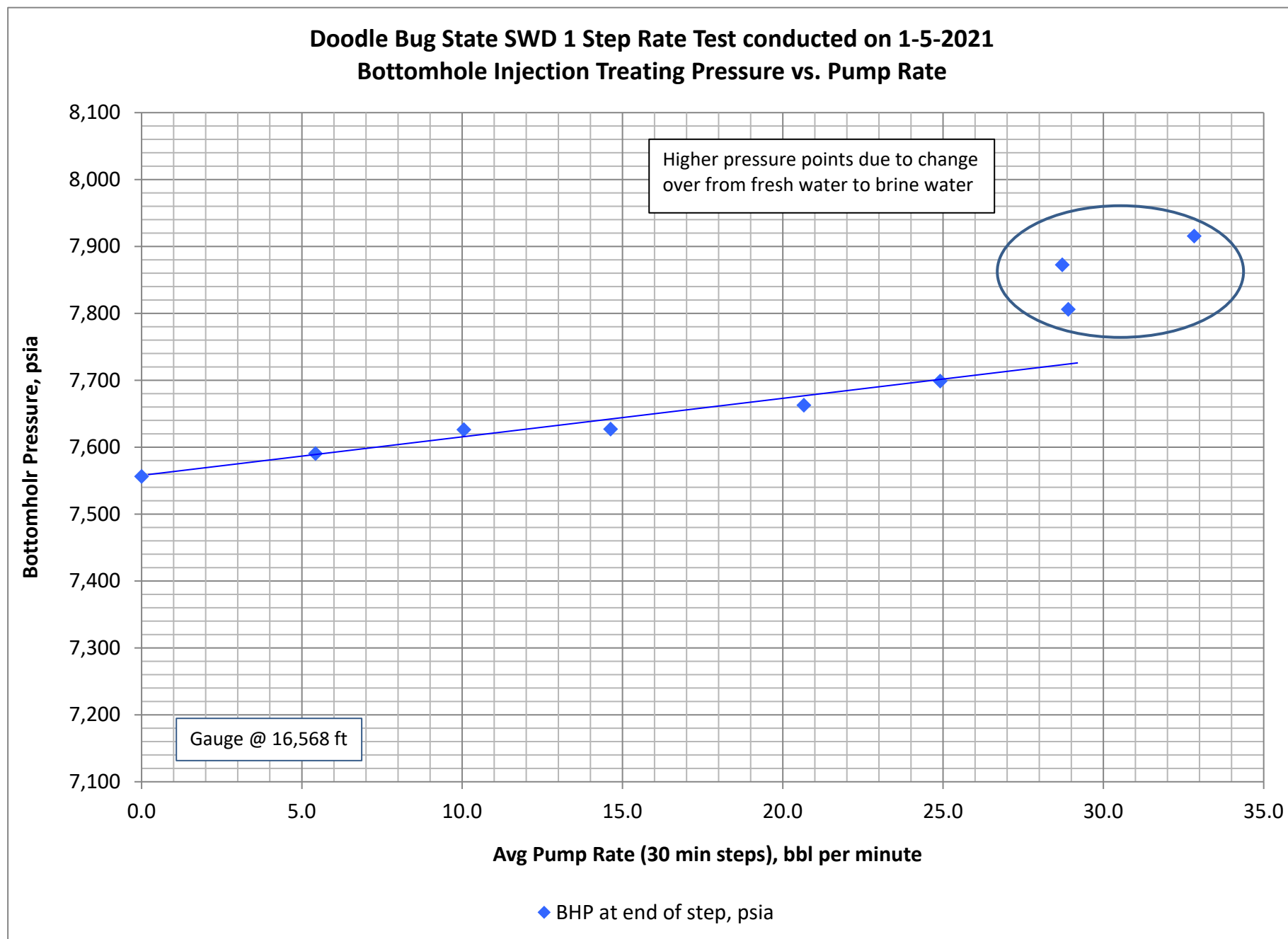




JO B I N F O R M A T I O N S H E E T		PRECISION PRESSURE DATA, INC.	
<b>Company Information</b>			
Company:	CHISHOLM ENERGY (3 BEAR)		
Address:			
<b>Well Information</b>			
Well Name:	DOODLE BUG STATE SWD #1		
Location:	LEA COUNTY, NEW MEXICO		
Field:			
Status:			
<b>Test Information</b>			
Type Of Test:	9 DAY BOTTOM HOLE PRESSURE OBSERVATION W/STEP RATE TEST		
Gauge Depth:	16,568'		
On Bottom Time:	1/4/21 @ 16:28:49	Central Time	
Off Bottom Time:	1/13/21 @ 13:01:31	Central Time	
Tubing Pressure:			
Casing Pressure:			
Open Well To Flow			
Shut In Time:			
Temp @ Run Depth:	165.63 F		
<b>BHP Gauge Information</b>			
	Top Recorder	Bottom Recorder	
Serial Number:	79970 ELECTRONIC	79094 ELECTRONIC	
<b>SP Gauge Information</b>			
Serial Number:			
<b>Comments</b>			
1/4/21 @ 16:28:49 (1.345278) - Tandem electronic pressure instruments were placed in shock resistant gauge carrier then rih and placed on 5.5" - 3.5" change over w/3.800" gauge ring at 16,568'; Start bottom hole pressure observation			
1/5/21 from approximately 09:00 - 18:00 - Chisholm Energy conducted step rate test			
1/13/21 @ 13:01:31 (213.890278) - POOH w/instruments making static gradient stops to surface; End of test			







## Water Well Test - Falloff

### Radial Flow Analysis

#### Analysis Results

Flow Capacity (kh)	20515.5275 md.ft	Total Skin (s')	-3.611
Effective Permeability (k)	22.4213 md	Skin Due to Damage (s <sub>d</sub> )	-3.611
Effective Gas Permeability (k <sub>g</sub> )	md	Skin Due To Inclination (s <sub>inc</sub> )	
Effective Oil Permeability (k <sub>o</sub> )	md	Skin Due To Partial Penetration (s <sub>pp</sub> )	
Effective Water Permeability (k <sub>w</sub> )	22.4213 md	Pressure Drop Due to Total Skin (Δp <sub>skin</sub> )	psi(a)
Total Fluid Rate (in situ) ((qβ) <sub>i</sub> )	-48276.8 rbbl/d	Damage Ratio (DR)	0.509
Total Mobility ((k/μ) <sub>i</sub> )	79.77 md/cP	Flow Efficiency (FE)	1.964
Total Transmissivity ((kh/μ) <sub>i</sub> )	72989.30 mdft/cP		
Slope (m)	107.55 psi/cycle		

#### Reservoir Parameters

Net Pay (h)	915.000 ft
Total Porosity (φ <sub>t</sub> )	4.00 %
Gas Saturation (S <sub>g</sub> )	0.00 %
Oil Saturation (S <sub>o</sub> )	0.00 %
Water Saturation (S <sub>w</sub> )	100.00 %
Formation Compressibility (c <sub>f</sub> )	7.1119e-06 1/psi
Total Compressibility (c <sub>t</sub> )	9.8829e-06 1/psi
Wellbore Radius (r <sub>w</sub> )	0.255 ft

#### Pressures

Extrapolated Pressure (p*)	7562.7 psi(a)
Final Flowing Pressure (p <sub>wfo</sub> )	7915.2 psi(a)
Final Measured Pressure (p <sub>last</sub> )	7563.5 psi(a)

#### Fluid Properties

Reservoir Temperature (T <sub>resv</sub> )	226.0 °F
Reservoir Pressure (p <sub>resv</sub> )	7565.0 psi(a)
Water Specific Gravity (γ <sub>w</sub> )	1.000
Water Viscosity (μ <sub>w</sub> )	0.2811 cP
Water Compressibility (c <sub>w</sub> )	2.77e-06 1/psi
Water Formation Volume Factor (B <sub>w</sub> )	1.024 bbl/stb
Solution Gas Ratio (R <sub>sw</sub> )	0.0 scf/bbl

#### Production and Times

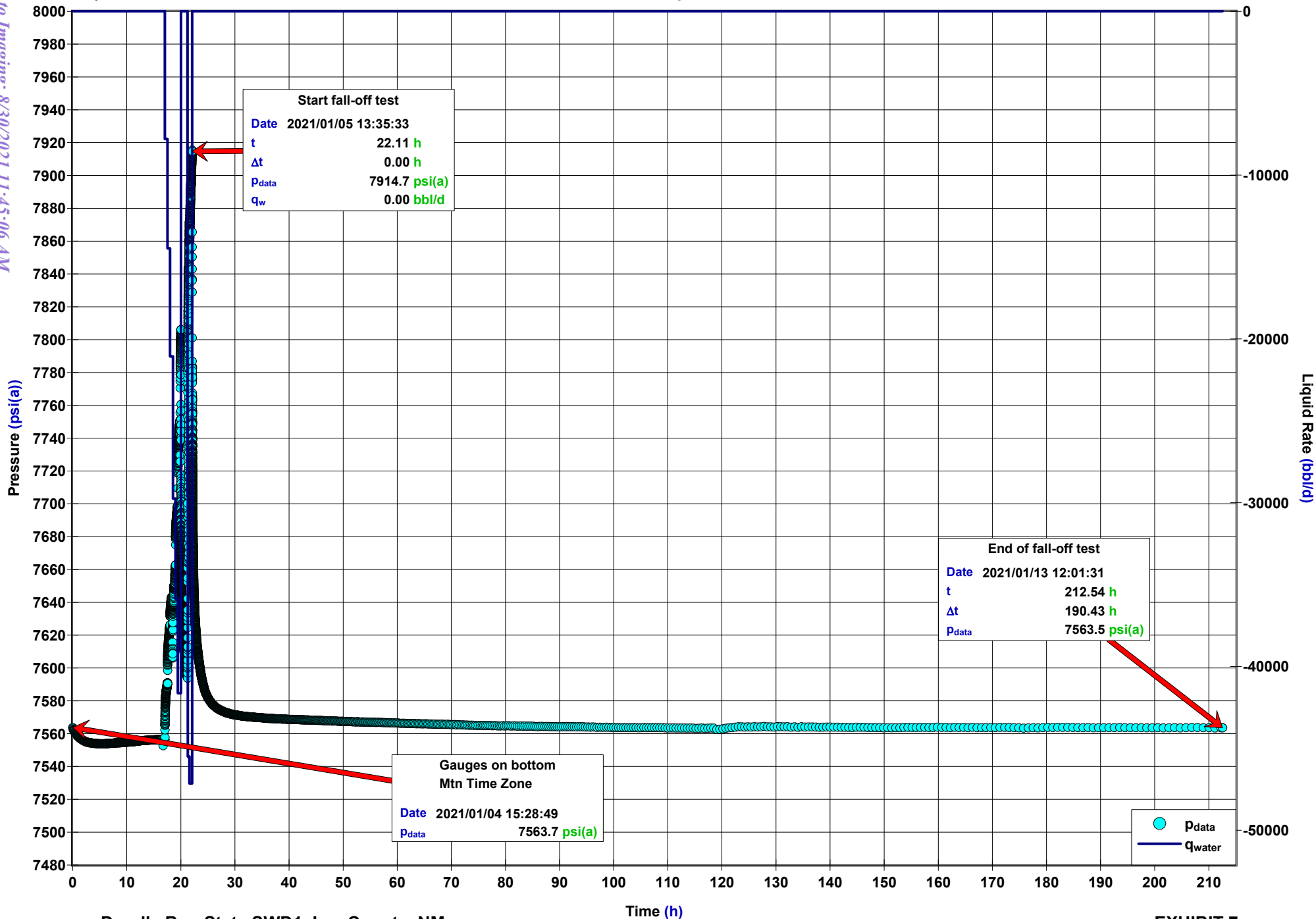
Corrected Time (t <sub>c</sub> )	2.44 h
Total Cumulative Production Water (Cum <sub>water</sub> )	-4.79 Mbbl
Final Water Rate (q <sub>w final</sub> )	-47140.0 bbl/d



3Bear Energy  
Doodle Bug State SWD 1  
Test Date: January 5, 2021  
Step Rate Test / Fall-off Test

# Total Test History

Gauge 79094  
Gauge Depth: 16,568 ft  
Open Hole 16,687'-17,707'  
Filtered Data



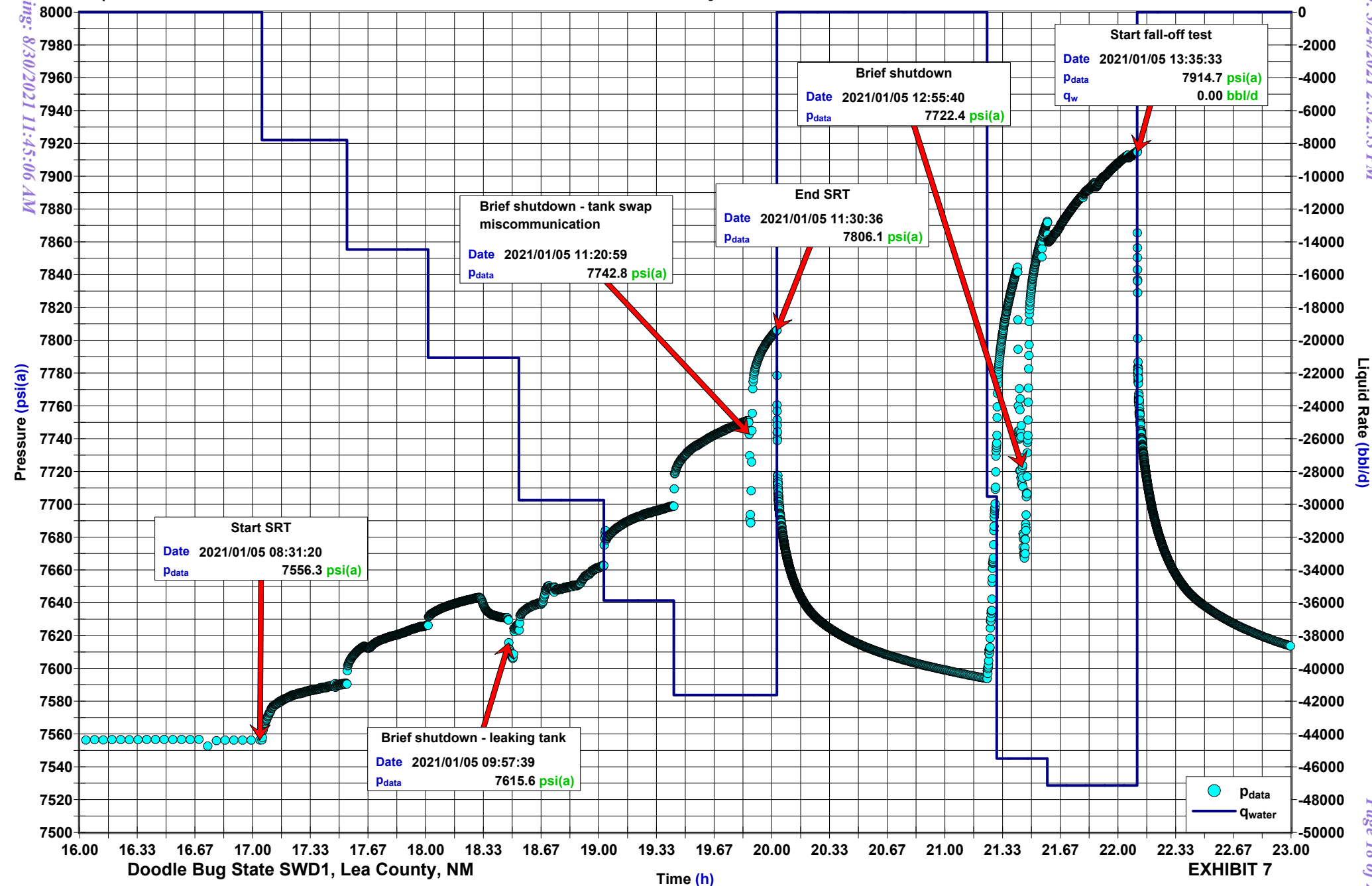
Doodle Bug State SWD1, Lea County, NM

EXHIBIT 7

3Bear Energy  
Doodle Bug State SWD 1  
Test Date: January 5, 2021  
Step Rate Test / Fall-off Test

# Step Rate Test History

Gauge 79094  
Gauge Depth: 16,568 ft  
Open Hole 16,687'-17,707'  
Filtered Data



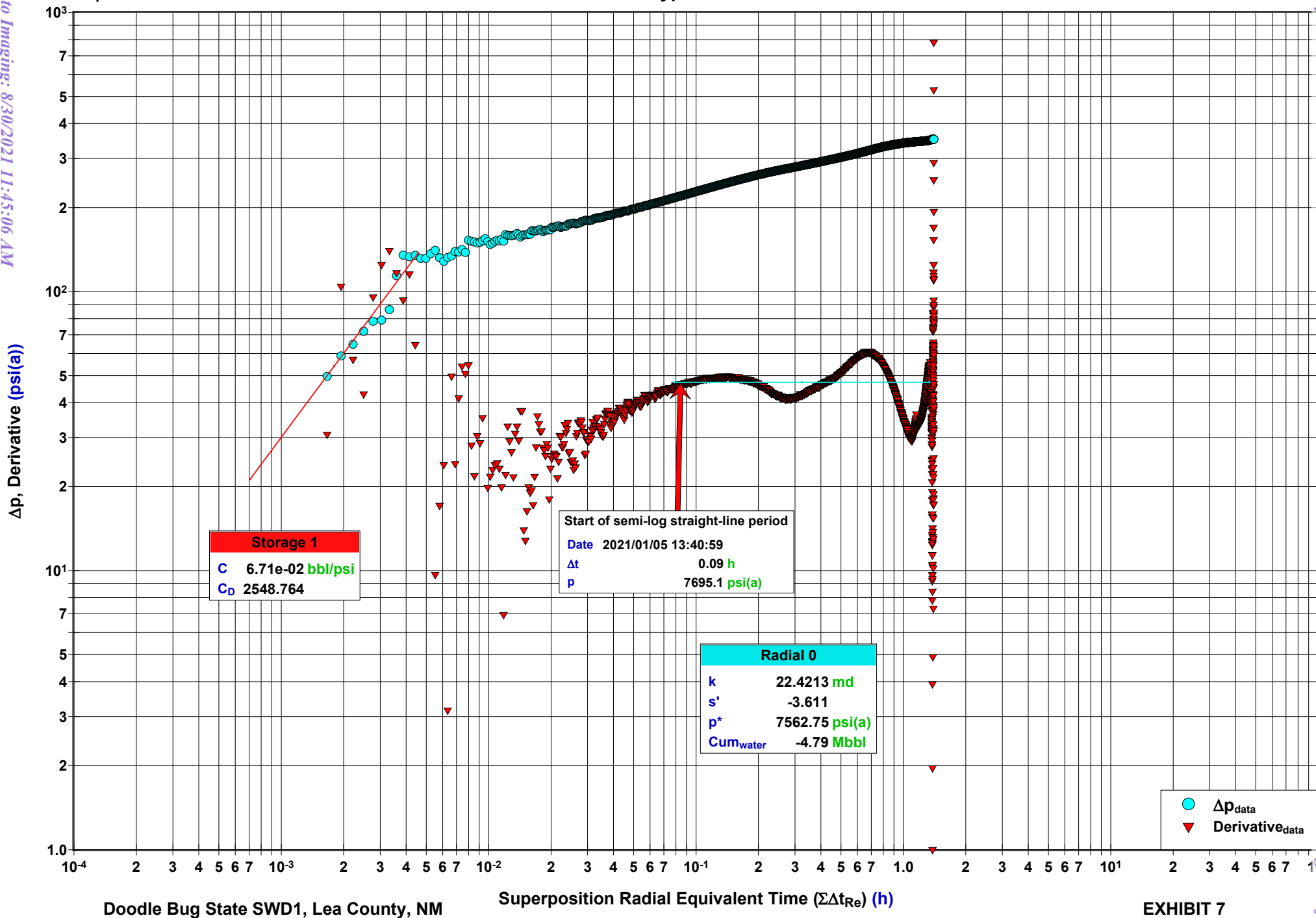
Liquid Rate (bbl/d)

EXHIBIT 7

3Bear Energy  
Doodle Bug State SWD 1  
Test Date: January 5, 2021  
Step Rate Test / Fall-off Test

## Diagnostic Analysis - Falloff Period Typecurve

Gauge 79094  
Gauge Depth: 16,568 ft  
Open Hole 16,687'-17,707'  
Filtered Data



Doodle Bug State SWD1, Lea County, NM

Superposition Radial Equivalent Time ( $\Sigma \Delta t_{Re}$ ) (h)

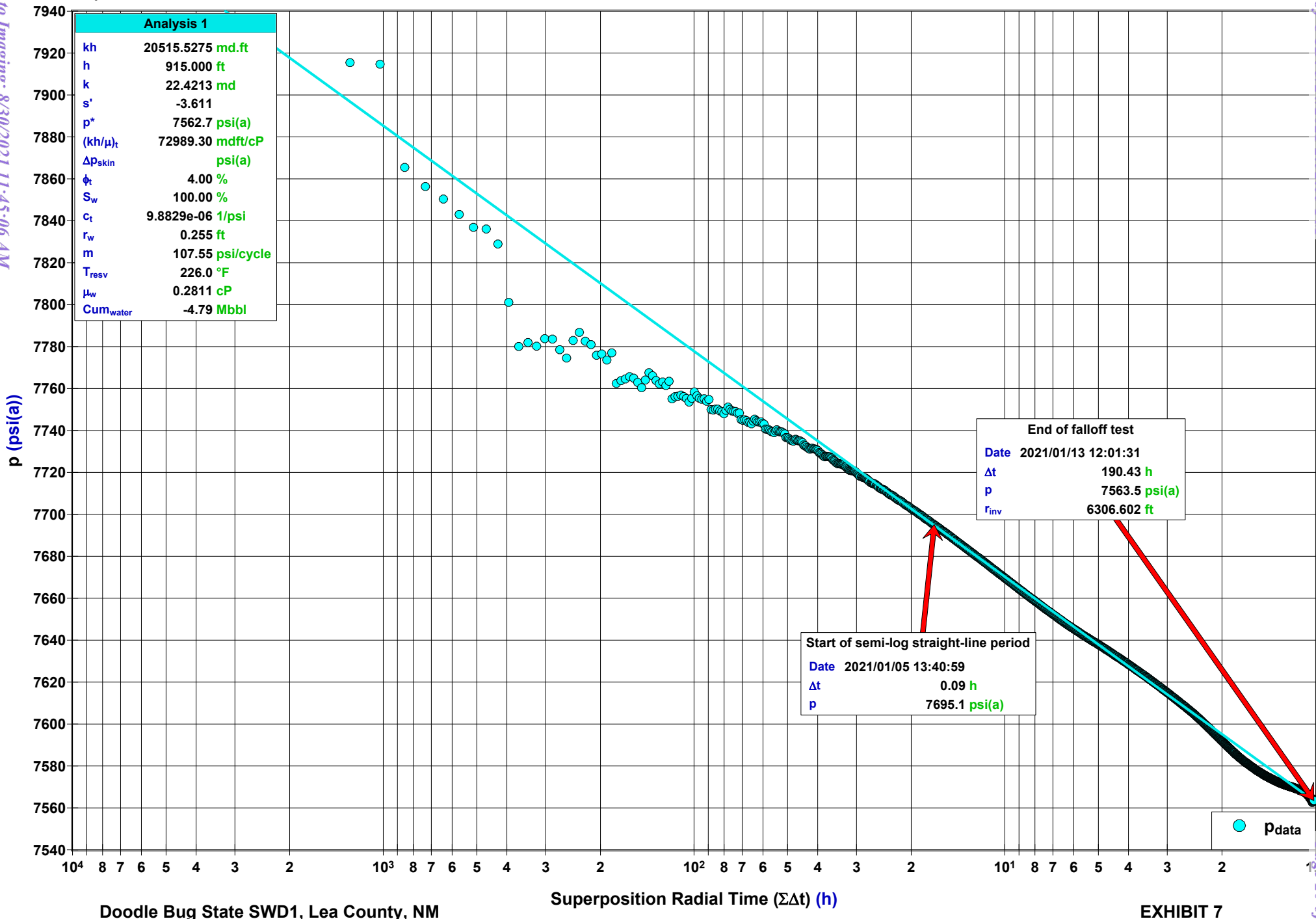
EXHIBIT 7

3Bear Energy  
Doodle Bug State SWD 1  
Test Date: January 5, 2021  
Step Rate Test / Fall-off Test

# Diagnostic Analysis - Falloff Period

Radial

Gauge 79094  
Gauge Depth: 16,568 ft  
Open Hole 16,687'-17,707'  
Filtered Data



Doodle Bug State SWD1, Lea County, NM

Superposition Radial Time (ΣΔt) (h)

EXHIBIT 7

Company: 3Bear Energy, LLC

Well: Doodle Bug State SWD #1

Field: SWD, Devonian-Silurian

County: Lea State: New Mexico

County: Lea  
Field: SWD; Devonian-Silurian  
Location: 1498' FNL & 2390' FEL  
Well: Doodle Bug State SWD #1  
Company: 3Bear Energy, LLC

TCOM

1498' FNL & 2390' FEL	Elev.: K.B. 3584.00 ft
SEC: 16 ; TWP: 22S ; RGE: 33E	G.L. 3555.00 ft
32.394931, -103.576597 NAD83	D.F.
Permanent Datum:	Ground Level
Log Measured From:	Kelly Bushing
Drilling Measured From:	Kelly Bushing
API Serial No.	Section: 16
30-025-44144	Township: 22S
	Range: 33E

Logging Date 20-Dec-2020

Run Number ONE

Depth Driller 17700.00 ft

Schlumberger Depth 17707.00 ft

Bottom Log Interval 17706.00 ft

Top Log Interval 16691.00 ft

Casing Driller Size @ Depth 7.625 in @ 16686.00 ft

Casing Schlumberger 16691 ft

Bit Size 6.125 in

Type Fluid In Hole Cut Brine

Density 8.7 lbm/gal

Viscosity 28 s

PH 9

Source of Sample Active Tank

@ Meas Temp 0.21 ohm.m @ 75 degF

@ Meas Temp 0.15 ohm.m @ 75 degF

@ Meas Temp 0.26 ohm.m @ 68 degF

Service RMF RMC Calculated

@ BHT 0.07 @ 230 0.05 @ 230

Recorded Temperatures 234 degF

Circulation Stopped 19-Dec-2020 17:00:00

Log on Bottom 20-Dec-2020 08:00:00

U-Number 9112 Midland

Recorded By M. Van Gaal/J. Flores

Witnessed By Charles Ramsey

## Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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EXHIBIT 8

Log Sequence	First Log In the Well	Schlumberger depth control procedures followed	Page 22 of 29
Rig Up Length At Surface		IDW used as primary depth control system	
Rig Up Length At Bottom		Z-Chart used as secondary depth control system	
Rig Up Length Correction			
Stretch Correction	19.50 ft		
Tool Zero Check At Surface			

## ONE

Main Pass 2" = 100'

### Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE_UP_PASS	229.24	ft3
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	57.49	ft3

### Software Version

Acquisition System	Version
Maxwell 2020.1	10.1.205256.3100
Application Patch	Wireline_Hotfix-Mandatory-2020.1_10.1.209000

### Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	16617.70 ft	17734.29 ft	20-Dec-2020 7:56:52 AM	20-Dec-2020 8:39:11 AM	ON	19.31 ft	Yes

All depths are referenced to toolstring zero

### Log

Company:3Bear Energy, LLC Well:Doodle Bug State SWD #1

ONE: Log[3]:Up:S036

Description: Triple Combo standard resolution template for Platform Express Format: Log ( TCOM 2in ) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Dec-2020 12:01:48

Channel	Source	Sampling
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
DSOZ	HDRS-H:HRMS-H:HRGD-H	2in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA	HDRS-H:HRMS-H:HRGD-H	2in
ICV	Borehole	6in - RT
IHV	Borehole	6in - RT
MRES	HRLT-B:HRLS-B:HRLS-B	2in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
PXND	PEQL	6in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA4	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in
RSOZ	HDRS-H:HRMS-H:HRGD-H	2in
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-H:HGNS-H:HGNS-H	6in

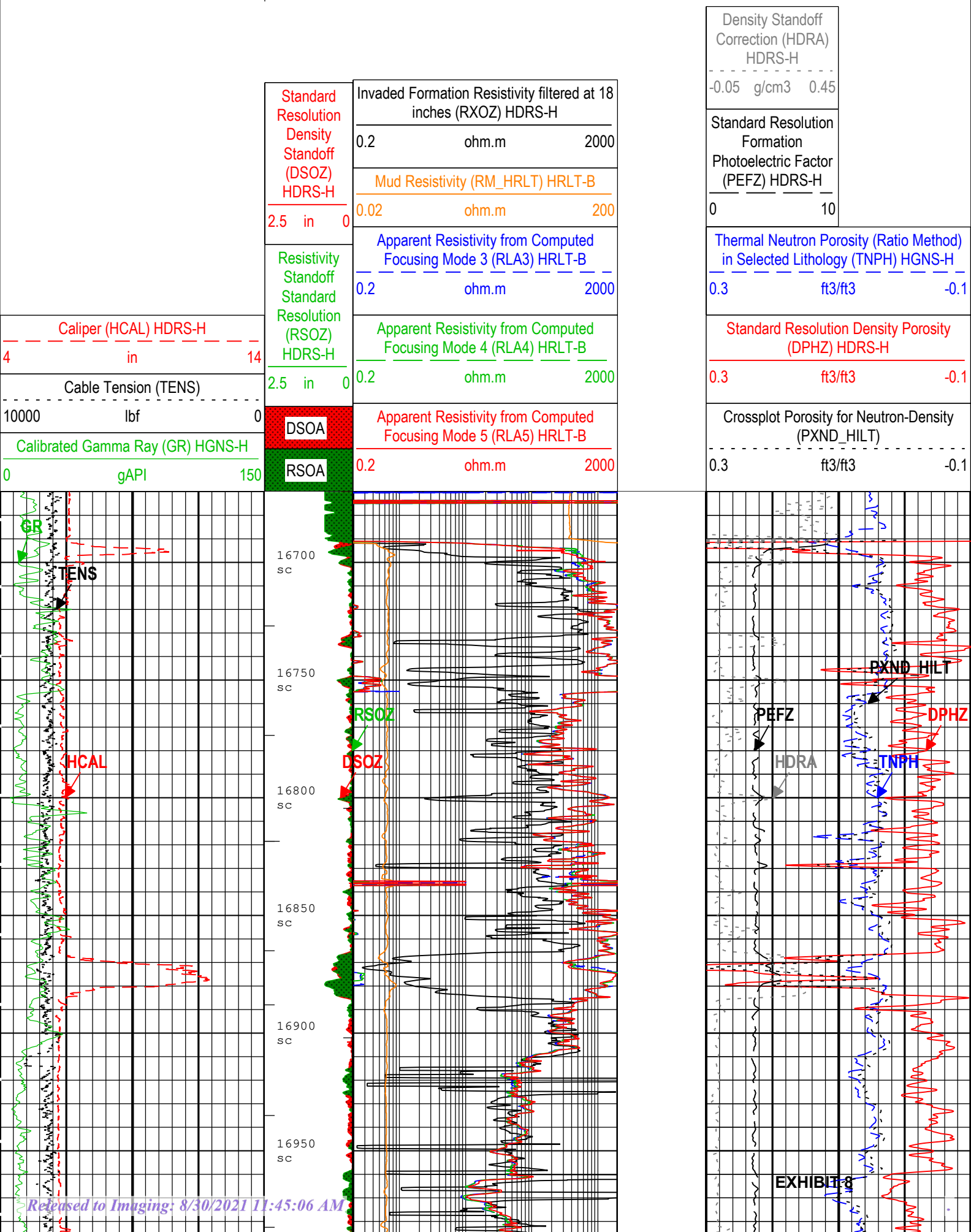
— IHV - Integrated Hole Volume every 100.00 (ft3)

EXHIBIT 8

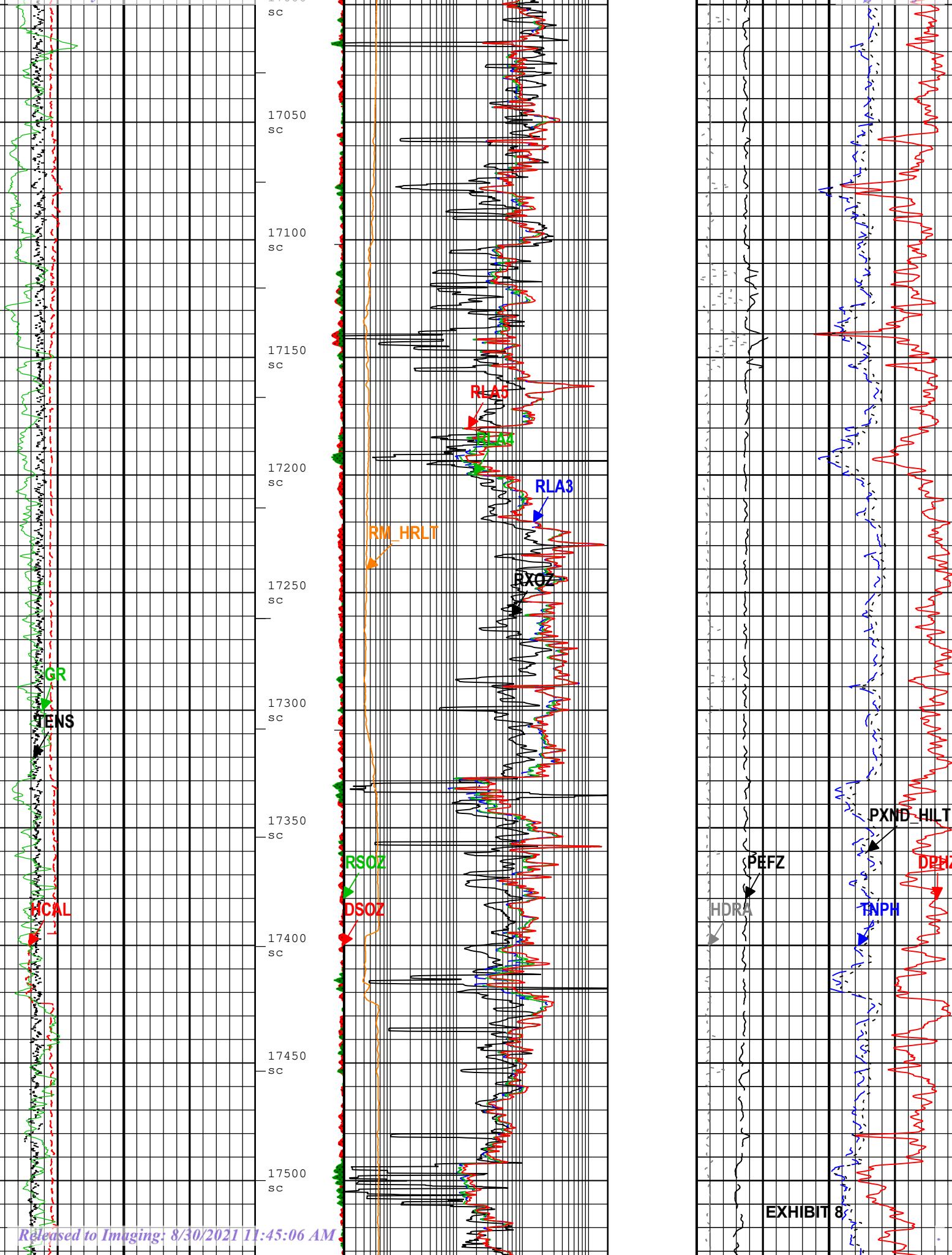
TIME\_1900 - Time Marked every 60.00 (s)

— ICV - Integrated Cement Volume every 10.00 (ft3)

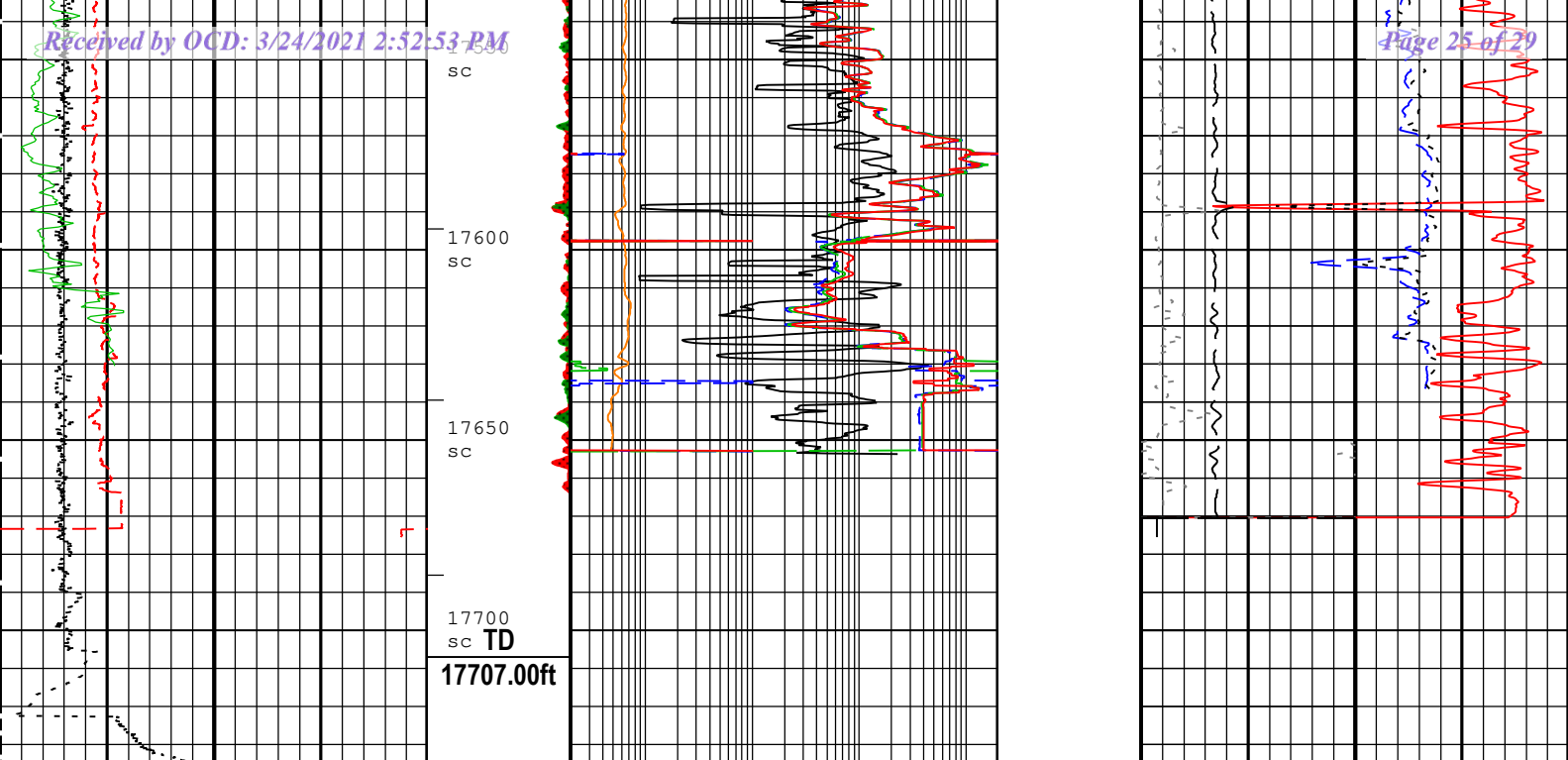
IHV - Integrated Hole Volume every 10.00 (ft3)











Caliper (HCAL) HDRS-H 4 in 14	Standard Resolution Density Standoff (DSOZ) HDRS-H 2.5 in 0	Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H 0.2 ohm.m 2000	Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H 0.3 ft3/ft3 -0.1
Cable Tension (TENS) 10000 lbf 0		Mud Resistivity (RM_HRLT) HRLT-B 0.02 ohm.m 200	Standard Resolution Density Porosity (DPHZ) HDRS-H 0.3 ft3/ft3 -0.1
Calibrated Gamma Ray (GR) HGNS-H 0 gAPI 150	Resistivity Standoff Standard Resolution (RSOZ) HDRS-H 2.5 in 0	Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B 0.2 ohm.m 2000	Crossplot Porosity for Neutron-Density (PXND_HILT) 0.3 ft3/ft3 -0.1
		Apparent Resistivity from Computed Focusing Mode 4 (RLA4) HRLT-B 0.2 ohm.m 2000	Density Standoff Correction (HDRA) HDRS-H -0.05 g/cm3 0.45
	DSOA	Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B 0.2 ohm.m 2000	Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H 0 10
	RSOA		

— IHV - Integrated Hole Volume every 10.00 (ft3)

— ICV - Integrated Cement Volume every 100.00 (ft3)

— ICV - Integrated Cement Volume every 10.00 (ft3)

TIME\_1900 - Time Marked every 60.00 (s)

— IHV - Integrated Hole Volume every 100.00 (ft3)

Description: Triple Combo standard resolution template for Platform Express Format: Log ( TCOM 2in ) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Dec-2020 12:01:48

ONE

Main Pass 5" = 100'

## Integration Summary

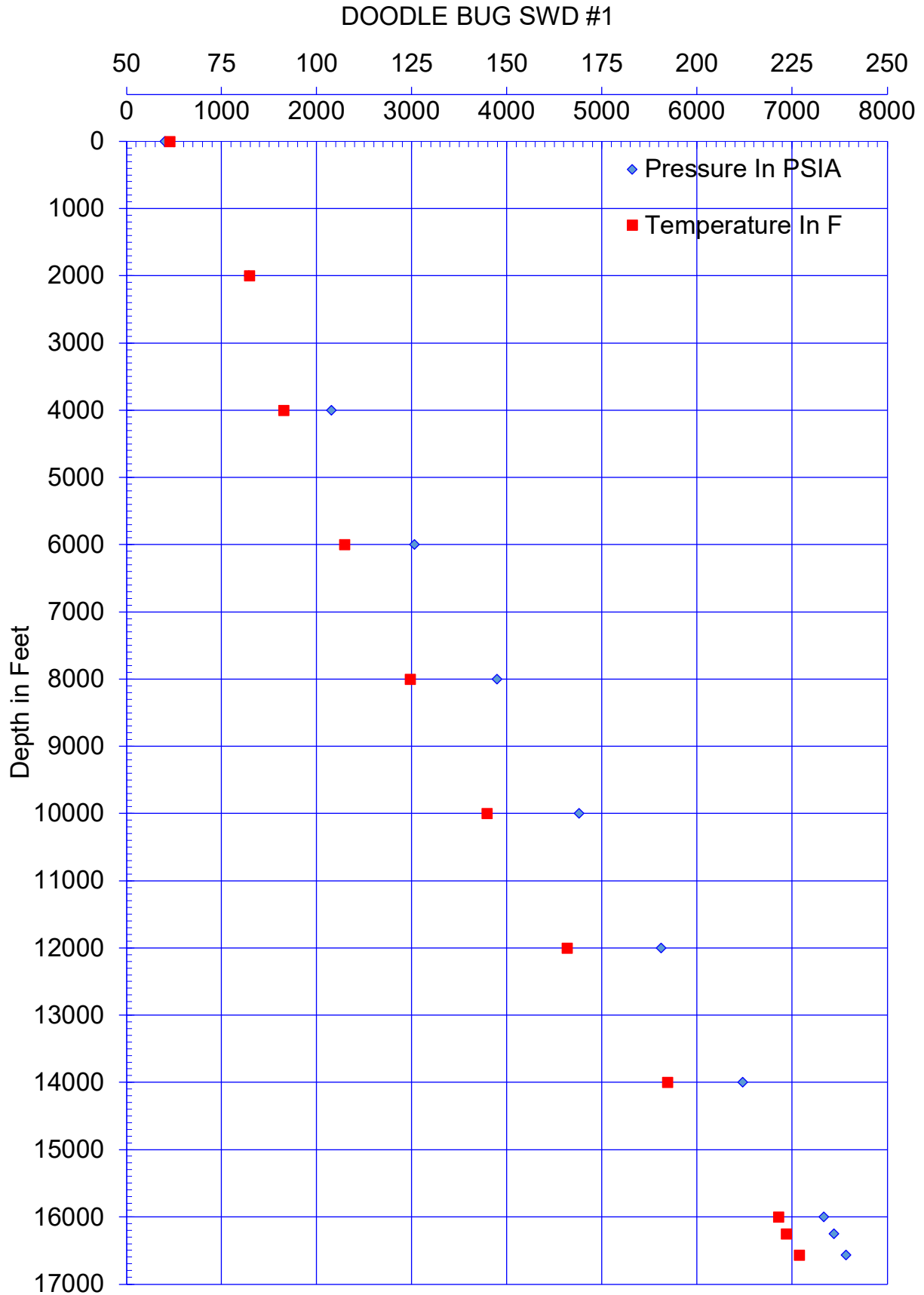
EXHIBIT 8

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
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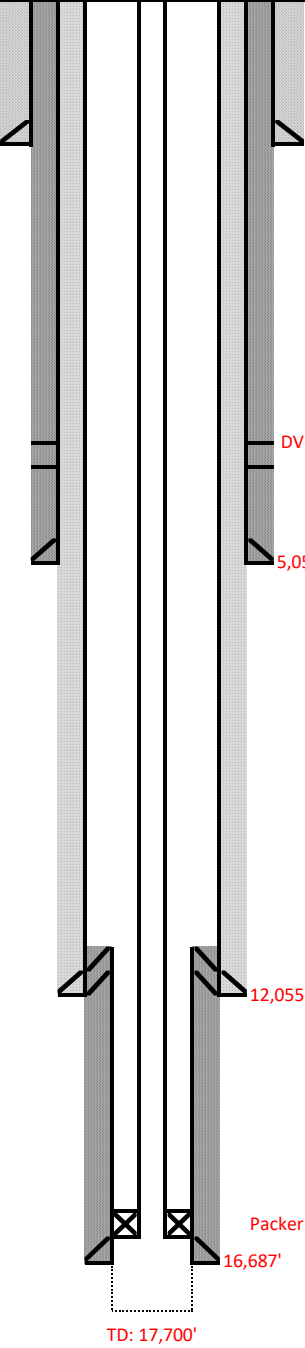
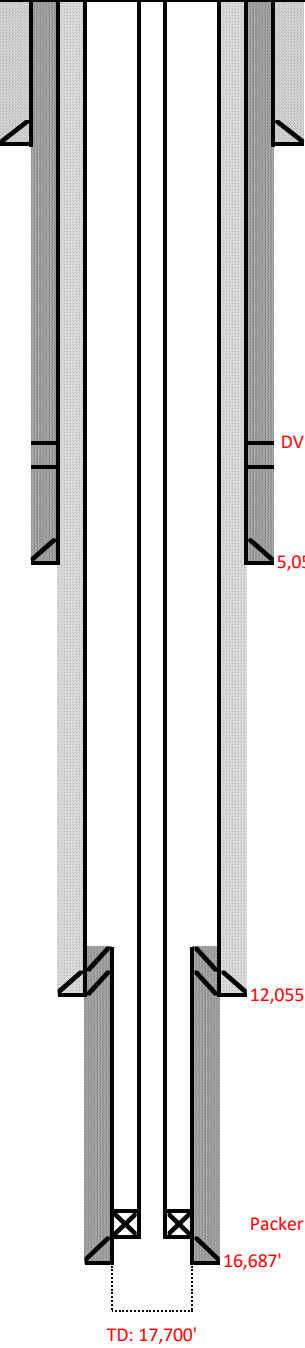
## PRECISION PRESSURE DATA, INC.

COMPANY	CHISHOLM ENERGY	LEASE	DOODLE BUG STATE SWD	WELL #	1
FIELD		COUNTY	LEA	STATE	NM
TEST DATE	1/13/2021	TIME	13:01	WELL STATUS	

	VALVE DEPTH IN FT.	DEPTH IN FT	PRESSURE LBS. SQ. IN.	TEMPERATURE IN F	GRADIENT LBS. / FT.
Pressure Datum					
Perforations		0	397.01	61.23	
Formation		2000	1283.38	82.13	0.443
Tubing Size	5.5	4000	2151.89	91.24	0.434
Tubing Depth	16587	6000	3021.23	107.21	0.435
Packer Depth	16593	8000	3889.72	124.50	0.434
Nipple Size	2.81 XN	10000	4756.13	144.60	0.433
Nipple Depth	16604	12000	5619.38	165.74	0.432
Casing Size		14000	6478.35	192.13	0.429
Total Depth		16000	7331.39	221.34	0.427
Tubing Pressure	397.01 PSIA	16250	7437.60	223.35	0.425
Casing Pressure		16568	7563.41	226.78	0.396
Hours Shut In					
Top Of Fluid	SURFACE				
Top Of Water	SURFACE				
BHP Last Test					
BHP This Test	7563.41 AT 16568 FT				
Temperature	226.78° F AT 16568 FT				
Instrument #	79094 ELECTRONIC				
Ran By	C. HORN				
Calculated By	D. WEST				
Comments					

**PRECISION PRESSURE DATA, INC.**

API # 30-025-44144  
Revised: 12/29/2020

TVD ft-RKB	Geological Tops	Wellbore Sketch	Hole Size	Casing	Drilling Fluids	Cement	OH Logs/Evaluation
1,000'	1,075 Rustler		26"	Surface: 20" 94.0# J55 BTC 1,129'	FW Spud Mud 8.5 - 9.2 ppg 32 - 38 FV 4-6 PV 2-5 YP	Top of Lead: Surface 13.5 ppg 1.79 cuft/sk 1,010 sks Top of Tail: 600' 14.8 ppg 1.33 cuft/sk 1,135 sks (100% Excess) 230 bbls cmt to surface	Gama Ray
2,000'			17-1/2"	Intermediate 1: 13-3/8" 68# J55 BTC 5,058'	Saturated Brine 10.0 - 10.3 ppg 28 - 32 FV	Stage 1 - 100% Excess Top of Lead: 3,700' 11.9 ppg 2.57 cuft/sk 450 sks Top of Tail: 4,525' 14.8 ppg 1.33 cuft/sk 525 sks 148 bbls cmt to surface	Gama Ray
3,000'						Stage 2 - 200% Excess Top of Cement: Surface 11.9 ppg 2.57 cuft/sk 3,085 sks 578 bbls cmt to surface	
4,000'	3,823 Castile		12-1/4"	Intermediate: 9-5/8" 40# HCL80 BTC 12,055'	Cut Brine/WBM 9.0 - 9.5 ppg 15 - 20 PV 8 - 12 YP	Top of Lead: Surface 11.5 ppg 2.54 cuft/sk 1,320 sks Top of Tail: 8,500' 14.8 ppg 1.19 cuft/sk 1,405 sks (50% Excess in OH) 140 bbls cmt to surface	Gama Ray
	4,980 Delaware Sands						
6,000'	5,788 Cherry Canyon						
	7,048 Brushy Canyon		8-3/4"	Liner: 7-5/8" 39# P110 Flush Joint 11,750' - 16,687'	Saturated Brine 10.0 - 11.0 ppg 36 - 38 Viscosity 10 - 18 PV 8 - 12 YP 6 - 8 API Filtrate	Top of Tail: 11,800' 14.5 ppg 1.28 cuft/sk 410 sks (10% Excess) 9 bbls cmt to surface	Gama Ray
8,000'	8,755 Bone Spring						
10,000'			6-1/8"	OH Completion 5-1/2" Tubing 16,620'	Cut Brine/WBM 8.9 - 9.2 ppg 15 - 20 PV 8 - 12 YP		Spectral GR / DLL-MLL / N-D Porosityt / PE/ Rho8 / Array Sonic / FMI / CBL
12,000'	12,010 Wolfcamp						
	12,970 Penn Shale						
	13,545 Strawn						
14,000'	14,360 Morrow						
	15,746 Miss Lime						
16,000'	16,346 Woodford						
	16,529 Devonian						
	17,161 Silurian						
	17,645 Fusselman						
18,000'							
		TD: 17,700'					

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**District II**  
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**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 21854

CONDITIONS

Operator: 3BEAR FIELD SERVICES, LLC 1512 Larimer St, Suite 540 Denver, CO 80202	OGRID: 372603
	Action Number: 21854
	Action Type: [C-103] Sub. General Sundry (C-103Z)

CONDITIONS

Created By	Condition	Condition Date
blamkin	Well will be limited to 36,000 BPD of injection and still governed by the administrative 0.2 psi/ft injection pressure limitation	8/30/2021