# BW - \_\_\_\_8

# ANNUAL REPORTS (2)

# Chavez, Carl J, EMNRD

| From:        | Ayarbe, John <jayarbe@geo-logic.com></jayarbe@geo-logic.com>                         |
|--------------|--|
| Sent:        | Friday, May 3, 2019 12:13 PM   |
| То:          | Chavez, Carl J, EMNRD  |
| Cc:          | 'Pieter Bergstein (pieter@bergsteinenterprises.com)'; 'susan@thestandardenergy.com'; |
|              | Zbrozek, Michael   |
| Subject:     | [EXT] 2018 Annual Class III Well Report - Salty Dog Brine Station                    |
| Attachments: | Salty Dog 2018 Annual Report_5-03-2019.pdf   |

Hi Carl,

Attached is an electronic copy of the 2018 Annual Class III Well Report for the Salty Dog brine station. The report was prepared in accordance with the requirements of discharge permit (DP) BW-8.

Please let me know if you have questions.

Thanks,

John P. Ayarbe Senior Hydrogeologist

### Daniel B. Stephens & Associates, Inc.

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# 2018 Annual Class III Well Report Salty Dog Brine Station DP BW-8, API No. 30-025-26307 Lea County, New Mexico

**Prepared for** 

New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division

May 3, 2019



Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 • Albuquerque, New Mexico 87109



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# 2018 Annual Class III Well Report Salty Dog Brine Station DP BW-8, API No. 30-025-26307 Lea County, New Mexico

# 1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this annual Class III well report for submission to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (OCD) Environmental Bureau on behalf of PAB Services, Inc. (PAB) for the operation of a brine well (Brine Supply Well #1 [API No. 30-025-26307]) at the Salty Dog Brine Station (the site). The site is located in Lea County, New Mexico, approximately 11 miles west of Hobbs, New Mexico along U.S. Highway 62/180 (US 62/80) (Figure 1). This report summarizes operational and monitoring activities conducted at the site in 2018, and was prepared in accordance with the requirements of discharge permit (DP) BW-8, last renewed on November 8, 2013 (NMEMNRD, 2013). The submittal of this report meets Condition 2.J of the permit.

Appendix A provides an annual certification signed by Mr. Pieter Bergstein stating that continued salt solution mining will not cause cavern collapse, surface subsidence, property damage, or otherwise threaten public health and the environment based on geologic and engineering data.

Salty Dog is a brine water production and loading station, consisting of fresh water supply wells, a brine production well, and a concrete truck loading pad with two brine filling stations. Fresh water is stored in two 1,000-barrel (bbl) aboveground storage tanks (ASTs). Produced brine is pumped from the brine well to a bermed tank battery consisting of six 750-bbl ASTs, where the brine is stored for sale. The brine well is located approximately 0.5 mile southwest of the brine filling station (Figure 1). Figure 2 presents a November 2017 aerial photograph of the brine station showing the layout of the current facility infrastructure.



Brine is produced from the in situ extraction of salt at the brine well, a UIC Class III well (Brine Supply Well #1 [API No. 30-025-26307]). The brine well is approximately 3,000 feet deep and has been in operation since the early 1980s. The Salty Dog brine well is configured for reverse circulation brine recovery, where fresh water is circulated down the casing annulus into the Salado Formation—a Permian Age sedimentary rock unit composed of halite (salt) and other evaporative beds. Fresh water dissolves the salt, and the brine is extracted through the center tubing of the well. Figure 3 provides a generalized schematic of the brine well showing its construction, current tubing depth, and the penetrated geologic units.

The physical location of the brine well is 1,980 feet from south line (FSL) and 1,980 feet from east line (FEL) (NW/4 SE/4, Unit Letter J) in Section 5, Township 19 South, Range 36 East, New Mexico Principal Meridian (NMPM). The brine well was installed in June 1979. The original discharge permit for the brine well (GWB-2) appears to have been issued on December 18, 1982 (OCD, 1994). The discharge permit was last renewed on November 8, 2013 (NMEMNRD, 2013). A permit renewal application was submitted to OCD in July 2018 (DBS&A, 2018c). OCD deemed the application administrative complete on October 11, 2018 (OCD, 2018).

Injection water used in brine production is obtained from the Ogallala Aquifer by pumping from two fresh water supply wells (FWS-1 and FWS-2) and groundwater remediation well RW-2. Well FWS-1 is the main fresh water supply well. Well FWS-2, located near the brine well, is used as an auxiliary fresh water well during periods of high brine demand. Well RW-2 is used to remove and provide hydraulic containment of chloride-impacted groundwater in the brine well area; groundwater extracted from this well is used for brine production. Chloride-impacted groundwater in the former brine pond area is contained and removed by pumping from FWS-1. Depth to regional groundwater is approximately 60 feet below ground surface (bgs). Figure 4 shows the locations of the wells.

# 2. Brine Well Operational Activities

The following subsections report fluid injection and brine production volumes and well maintenance activities.



# 2.1 Fluid Injection and Brine Production

Except for an approximately 2-year shutdown between 2011 and 2013 and temporary interruptions for routine maintenance and testing (e.g., February 2009 sonar survey [SOCON, 2009]), the brine well has been in continuous operation since 1980, producing an average of approximately 10,500 barrels per month (bbl/mo) of brine between 1980 and 2009. This production rate is based on 1987, 1996–1999, and 2009 brine production and sales records (Salty Dog, 1988, 1999, and Undated).

Both fluid injection and brine production volumes are metered, and daily volumes are recorded on monthly fresh and brine water report forms (Appendix B). Table 1 summarizes monthly injection and production volumes for the reporting period. Injection water for the brine well comes from two fresh water wells (FWS-1 and FWS-2) and a groundwater remediation well (RW-2) (Figure 4). In 2018, monthly ratios of injected water to produced brine ranged from 0.93 to 1.30.

|              | Volu            | me (bbl)         | Ratio                  |
|--------------|-----------------|------------------|------------------------|
| Month        | Water Injection | Brine Production | (injection:production) |
| January      | _               | —                | —                      |
| February     | 15,753          | 12,125           | 1.30                   |
| March        | 36,001          | 35,715           | 1.01                   |
| April        | 15,840          | 16,120           | 0.98                   |
| Мау          | 16,765          | 15,925           | 1.05                   |
| June         | 22,045          | 21,555           | 1.02                   |
| July         | _               | 28,520           | —                      |
| August       | 37,310          | 36,805           | 1.01                   |
| September    | 20,300          | 20,025           | 1.01                   |
| October      | 16,769          | 17,192           | 0.98                   |
| November     | 24,745          | 26,605           | 0.93                   |
| December     | 28,082          | 28,556           | 0.98                   |
| Annual total | 233,610         | 259,143          | —                      |

 Table 1. Monthly Water Injection and Brine Production Volumes, 2018

bbl = Barrels



Based on the data reported in Table 1 and previously reported production records (Salty Dog, 1988, 1999, and Undated; DBS&A, 2014), the estimated cumulative volume of brine production is 6,355,938 bbl.

In 2018, brine production activities at the site dissolved an estimated 32,541 bbl of Salado Formation. This estimate is based on the brine production data reported in Table 1, the average total dissolved solids (TDS) concentrations of the produced brine and injection water reported in Table 2, and an assumed density of the Salado Formation of 2.17 grams per cubic centimeter (g/cm<sup>3</sup>). Based on the historical and current brine production data, the total estimated size of the brine solution cavern is approximately 915,845 bbl. In 2012, OCD estimated a volume of 1,022,196 bbl for the Salty Dog solution cavern (NMEMNRD, 2012).

|                                | Average Concentration (mg/L <sup>a</sup> ) |                |  |  |
|--------------------------------|--|----------------|--|--|
| Constituent                    | Injection Water                            | Produced Brine |  |  |
| pH (s.u.)                      | 7.86                                       | 7.11           |  |  |
| Specific gravity<br>(unitless) | 0.9972                                     | 1.179          |  |  |
| Chloride                       | 415  | 190,000        |  |  |
| Sodium                         | NM   | 71,500         |  |  |
| TDS                            | 1,011                                      | 273,500        |  |  |

# Table 2. Injection Water and Produced Brine Chemical and<br/>Physical Characteristics

<sup>a</sup> Unless otherwise noted

mg/L = milligram per liter

NM = Not measured

s.u. = Standard units TDS = Total dissolved solids

# 2.2 Injection Pressure

Pressure is monitored on the well tubing and on the annulus between the inner tubing and outer casing. These measurements are recorded on the monthly fresh and brine water report forms (Appendix B). In 2018, recorded daily tubing pressure was 100 pounds per square inch (psi), while annulus pressure ranged from 325 to 375 psi.



# 2.3 Chemical and Physical Analyses

Condition 2.A of DP BW-8 requires quarterly monitoring of the chemical and physical characteristics of the injection water and produced brine, including pH, density, and TDS and chloride concentrations. The permit also requires that the sodium concentration of the produced brine be analyzed. Since DP BW-8 was issued, PAB requested that the monitoring frequency be reduced from quarterly to semiannually. In consultation with OCD, PAB initiated semiannual monitoring in 2017.

Table 2 reports average constituent concentrations calculated from the 2018 semiannual monitoring data. Samples of the injection water and produced brine were collected in June and November 2018. Dissolution of the Salado Formation increases the constituent concentrations and specific gravity of the produced brine relative to the injection water. The average TDS concentration and average specific gravity of the injection water are 1,011 milligrams per liter (mg/L) and 0.9972, respectively, while the same properties of the produced brine are 273,500 mg/L and 1.179, respectively. Appendix C provides the laboratory analytical reports associated with the semiannual monitoring events.

Historical water quality analyses show TDS concentrations of the fresh water and produced brine to be approximately 600 mg/L and 320,000 to 350,000 mg/L, respectively (Martin, 1982; Unichem, 1987).

# 2.4 Deviations from Normal Operations

In December 2017, the brine well was damaged because anhydrite had collapsed the well tubing, stopping brine production (Sayre, 2017). Between December 2017 and February 2018, PAB had the well repaired. The existing well, which was originally drilled to 2,958 feet bgs, was redrilled and cleaned out to 2,791 feet bgs. New tubing was then installed to a depth of 2,610 feet bgs. The tubing was perforated with 0.20-inch-diameter holes from 2,590 to 2,592 feet bgs (Figure 3). A drilling and repair log and C-103 forms were submitted to OCD (DBS&A, 2018a). The brine well was operational again in February 2018.



In October 2018, PAB stopped pumping fresh water from wells FWS-2 and RW-2, as they replaced the pumps at the two wells. During this period, fresh water for injection was supplied by pumping from FWS-1 exclusively.

# 2.5 Leaks and Spills

There were no leaks or spills in 2018.

# 2.6 Area of Review

Condition 3.L of DP BW-8 requires Salty Dog to report within 72 hours the discovery of any new wells, conduits, or other devices that are both within a 1-mile radius and may penetrate to the injection zone of the brine well.

The brine station is located on private property in rural southeastern New Mexico, approximately 11 miles west of Hobbs. The majority of the area surrounding the site is undeveloped and owned by the State of New Mexico.

On February 28, 2019, DBS&A conducted an area of review evaluation using the OCD online oil and gas maps application. This application is accessible through the OCD website (http://www.emnrd.state.nm.us/OCD/ocdgis.html). Appendix D provides a map produced from the area of review evaluation. The map shows that there are no new brine wells or other penetrations within a 1-mile radius of the site that may penetrate into the injection zone of the Salty Dog brine well.

# 2.7 Mechanical Integrity Test

In December 2017, the brine well was damaged because anhydrite had collapsed the well tubing. The well was subsequently repaired and operational again in February 2018 (see Section 2.4). On February 9, 2018, before placing the well back in operation, PAB conducted a mechanical integrity test (MIT) on the well; it passed the test. Gary Robinson of OCD was present during the MIT. A record of the MIT was provided in the 2017 annual Class III well report (DBS&A, 2018a).



Prior to the February 2018 MIT, the last MIT was performed on October 31, 2013, when Salty Dog conducted a Bradenhead test on the brine well. The test showed no problems with the integrity of the well casing. Results of this test were reported to OCD on November 15, 2013.

Pursuant to 20.6.2.5204 New Mexico Administrative Code (NMAC), PAB is required to demonstrate mechanical integrity of the brine well at least once every five years.

# 3. Other Facility Activities

In March 2018, PAB services contracted Peterson Drilling and Testing, Inc. and DBS&A to install a new monitor well and five subsidence survey monitoring points at the site (DBS&A, 2018b). As requested by OCD, the new monitor well, designated DBS-10, was installed in the brine well area, approximately 300 feet downgradient of existing monitor well MW-5. In accordance with the existing groundwater monitoring program, DBS-10 is monitored semiannually, and the monitoring reported in the semiannual groundwater monitoring points include three points located approximately 200 feet from the brine well, one point located approximately 60 feet from the brine well, and one point that is a metal tab welded to the brine well casing (Figure 5). Construction and placement of the monitoring points were conducted in accordance with DBS&A (2014). The monitoring points are surveyed semiannually, and the results are reported in the annual Class III well reports.

During the second semiannual groundwater monitoring event in November 2018, DBS&A discovered that the totalizer flow meter at well FWS-1 was broken. PAB replaced the flow meter in December 2018.

PAB has had difficulty maintaining pumping in the brine well area. In October 2018, the 3-horsepower pump at RW-2 burned out and was subsequently replaced with a bladder pump. PAB installed a bladder pump in an effort to prevent pump burnout.



# 4. Subsidence Monitoring and Cavern Characterization

Condition 2.B.1 of DP BW-08 requires Salty Dog to monitor for potential land subsidence in the area of the brine well (OCD, 2013). In March 2018, five subsidence survey monitoring points were installed to meet this condition (Figure 5). Basin Surveys of Hobbs, New Mexico surveyed the monitoring points after their installation (Appendix E). The initial survey was conducted on March 23, 2018 using the nearest U.S. Geological Survey (USGS) benchmark referenced to NMSPCE (NAD 83).

In accordance with Condition 2.B.1 of DP BW-8, Salty Dog has each monitoring point surveyed semiannually to at least the nearest 0.10 foot (OCD, 2013). Basin Surveys conducted the 2018 semiannual surveys on June 19 and December 15, 2018. The survey data are reported in Table 3 and show no indication of land subsidence. The semiannually surveyed elevations are within  $\pm 0.02$  foot of the initial survey. Appendix E provides the survey reports.

|                            | Elevation (feet msl) |                               |                                 |  |  |
|----------------------------|----------------------|-------------------------------|---------------------------------|--|--|
| Survey Monitoring<br>Point | Initial<br>3/23/2018 | First Semiannual<br>6/19/2018 | Second Semiannual<br>12/15/2018 |  |  |
| SMP-01                     | 3,810.11             | 3,810.10                      | 3,810.10                        |  |  |
| SMP-02                     | 3,809.01             | 3,809.02                      | 3,809.00                        |  |  |
| SMP-03                     | 3,808.80             | 3,808.82                      | 3,808.81                        |  |  |
| SMP-04                     | 3,806.32             | 3,806.33                      | 3,806.32                        |  |  |
| SMP-05 (brine well)        | 3,811.72             | 3,811.71                      | 3,811.72                        |  |  |

 Table 3. Semiannual Surface Subsidence Monitoring, 2018

msl = Above mean sea level

Condition 2.B.2 of DP BW-08 requires solution cavern characterization using geophysical methods to estimate the size and shape of the solution cavern. During a December 9, 2016 phone call between DBS&A (on behalf of PAB) and OCD (Jim Griswold and Carl Chavez), it was agreed that solution cavern characterization using geophysical methods would be conducted only if surface subsidence was detected during semiannual surveying of the monitoring points. Section 2.1 of this report presents an estimated size for the solution cavern.



# 5. Groundwater Conditions

Salty Dog is addressing groundwater impacts resulting from releases at the brine well and a former brine pond. A hole in the casing of the brine well at 250 feet bgs was discovered in 1999 (Salty Dog, 1999). The hole released brine, impacting groundwater, and was repaired in August 1999 by installing a casing liner (Salty Dog, 1999). In October 2008, the brine pond was removed and impacted soil was excavated and disposed of (DBS&A, 2008). The area of the former brine pond is shown in Figures 1 and 2.

Two chloride plumes currently exist at the site: one in the area of the brine station (i.e., the former brine pond area) and a second near the brine well. In 2009, PAB initiated groundwater extraction to remove and provide hydraulic containment of brine-impacted groundwater at the brine station and near the brine well (DBS&A, 2009). Groundwater abatement and monitoring activities are being conducted to satisfy an administrative compliance order issued by OCD (ACO 2008-02) and settlement agreement and stipulated revised final order (NM-OCD 2008-2A) between OCD and Mr. Bergstein.

Groundwater monitoring and extraction data are reported and evaluated in reports submitted to OCD (DBS&A, 2019). The data include water levels and water quality at the site monitor wells. Site monitor wells are shown in Figure 4.

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Figures





S.IPROJECTSIES08.0118\_SALTY\_DOG\_2018(GISMXDJANNUAL\_2018)FIG02\_SITE\_2018\_AERIAL\_PHOTO.MXD

Figure 2



JN ES08.0118

5-1-19

Figure 3





S:\Projects\ES08.0118\_Salty\_Dog\_2018\GIS\MXD\Annual\_2018\Fig5\_Lttr\_Report.mxd

Appendix A

**Annual Certification** 

# **Annual Certification**

PAB Services, Inc. certifies that continued salt solution mining will not cause cavern collapse, surface subsidence, property damage, or otherwise threaten public health and the environment based on geologic and engineering data.

METER Name

Provoden +

Title

4/2/19

Signature

Date

Appendix B

2018 Monthly Fresh and Brine Water Report Forms

### **Terry Payton**

From: Sent: To: Subject: Patsy Hunt <patsy@thestandardenergy.com> Wednesday, February 14, 2018 3:24 PM terry@thestandardenergy.com RE: MONTHLY SWD REPORTS 2-8-18

I asked Jim about this and he said no that there was nothing to report. It was down all month long.

AN 2018 REPORT NO

From: Terry Payton [mailto:terry@thestandardenergy.com] Sent: Wednesday, February 14, 2018 12:00 PM To: patsy@thestandardenergy.com; Jim Sayre Subject: RE: MONTHLY SWD REPORTS 2-8-18

Did you do a report for Salty Dog for January? Daniel B Stephens needs copies of these monthly reports for Salty Dog, and I haven't seen one for January.

Thanks!

Terry Payton Financial Officer Bergstein Enterprises, Ltd. PO Box 191 Lubbock, TX 79408 Office: 806-741-1080 Fax: 806-741-1301

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From: Patsy Hunt [mailto:patsy@thestandardenergy.com] Sent: Thursday, February 8, 2018 10:06 AM To: terry@thestandardenergy.com Subject: MONTHLY SWD REPORTS 2-8-18

Patsy Hunt patsy@thestandardenergy.com Billing Clerk - Hobbs Yard Standard Energy Services PO Box 513 Hobbs, NM 88241 Ph. 575-393-8352 Fax 575-393-8353

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|       | MONTH/YEAR                                   | eb 2018                                 | 1                         |                           |       |
|-------|--|---|---------------------------|---------------------------|-------|
|       | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRES  |
| Date  | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOL   |
| 1     | D  | 0                                       |                           |                           |       |
| 2     | ð  | 0                                       |                           |                           |       |
| 3     | Q  | 0                                       |                           |                           |       |
| 4     | U U  | 2                                       |                           |                           |       |
| 5     | 4  | 0                                       |                           |                           |       |
| 6     | U  | 0                                       |                           |                           |       |
| 7     | l  | Q                                       |                           | :                         |       |
| 8     | 0  | R                                       |                           |                           |       |
| 9     | D  | 0                                       |                           |                           |       |
| 10    | 0  | 0                                       |                           |                           |       |
| 11    | 590  | 570                                     | 100                       | 350                       |       |
| 12    | 620  | 590                                     | 100                       | 356                       |       |
| 13    | 440  | 400                                     | 100                       | 350                       |       |
| 14    | 1010   | 990                                     | 100                       | 350                       |       |
| 15    | 410  | 380                                     | 100                       | 350                       |       |
| 16    | 300  | 250                                     | 100                       | 350                       |       |
| 17    | 0  | 0                                       | 100                       | 350                       |       |
| 18    | 320  | 295                                     | 100                       | 350                       |       |
| 19    | 50   | 20                                      | 100                       | 356                       | -     |
| 20    | 720  | 690                                     | 100                       | 350                       |       |
| 21    | 320  | 290                                     | 100                       | 350                       |       |
| 22    | 230  | 200                                     | 100                       | 350                       |       |
| 23    | 1800   | 1725                                    | 100                       | 350                       |       |
| 24    | 1275   | 1200                                    | 100                       | 350                       |       |
| 25    | 0.0.00                                       |   |                           |                           |       |
| 26    | 23.80  | 2343                                    | 100                       | 365                       |       |
| 27    |  | 680                                     | 100                       | 365                       |       |
| 28    | 1560   | 1500 200                                | 100                       | 365                       |       |
| 29    |  |   |                           |                           |       |
| 30    |  |   |                           |                           |       |
| 31    |  |   |                           |                           |       |
| JIALS |  | 12,145                                  |                           |                           |       |
| ate   | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authoriz             | ed by |

C:\Documents and Settings\Jim\Local Settings\Temporary Internet Files\OLK6A\Monthly FW-BW Report - Original

28,000

| · Line and the second | FACILITY/ OCATIO   | SALLA D                                 | 10                        |                           |   |
|-----------------------|--|---|---------------------------|---------------------------|---|
|                       | FACILITY/LOCATION  | N SHLFY D                               | 09                        |                           |   |
|                       | MONTH/YEAR   | 1ARCH 201                               | 8                         |                           |   |
|                       | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE             | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRESH<br>WATER                          |
| Date                  | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOLD                                    |
| T1                    | 3375   | 3300                                    | 100                       | 350                       |   |
| F2                    | 950  | 920                                     | 100                       | 350                       |   |
| 33                    | 840  | 820                                     | 100                       | 356                       | -                                       |
| 54                    | 1000   | 980                                     | 100                       | 356                       | _                                       |
| M 5                   | 4590   | 4545                                    | 100                       | 356                       |   |
| 76                    | 1445   | 1400                                    | 100                       | 350                       |   |
| W7                    | 750  | 720                                     | 100                       | 375                       |   |
| T 8                   | 520  | 500                                     | 100                       | 375                       |   |
| F9                    | 1626   | 1700                                    | 100                       | 375                       |   |
| 5 10                  | 695  | 680                                     | 100                       | 375                       |   |
| 5 11                  | 200  | 190                                     | 100                       | 350                       |   |
| 7 12                  | 390  | 380                                     | 100                       | 356                       |   |
| 7 13                  | 450  | 468                                     | 100                       | 356                       |   |
| 14                    | 600  | 590                                     | 100                       | 358                       |   |
| T15                   | 3400   | 3436                                    | 100                       | 350                       |   |
| F16                   | 1560   | 1550                                    | 100                       | 375                       |   |
| 5 17                  | 510  | 500                                     | 100                       | 375                       |   |
| 518                   | 250  | 220                                     | 100                       | 375                       | 1                                       |
| y 19                  | 310  | 366                                     | 100                       | 350                       |   |
| 720                   | \$70   | 863                                     | 100                       | 350                       | 1                                       |
| 121                   | 1200   | 1180                                    | 100                       | 350                       | 1                                       |
| 122                   | 6.217  | 110 610                                 | 100                       | 350                       |   |
| 123                   | 100  | 100 100                                 | 100                       | 250                       | -                                       |
| 5 24                  | 700  | 100                                     | 100                       | 350                       |   |
| 4 25                  | 310  | 200 300                                 | 100                       | 330                       | -                                       |
| 126                   | 10110  |   | 100                       | 372                       |   |
| 27                    | 1475   | 10.30                                   | 100                       | 3/3                       |   |
| 1 28                  | 1115   | 146/                                    | 100                       | - 5/5                     |   |
| 120                   | 185  | 2170                                    | 100                       | 3/5                       |   |
| 30                    | 705  | _ 780                                   | 100                       | 375                       |   |
| 531                   | 2950   | 2940                                    | 100                       | 313                       |   |
| TOTALS                | 15/5   | 1510                                    | 100                       | 3/5                       |   |
| TALO                  | The Area March 19 - 20 - 20 - 20 - 20 - 20 - 20 - 20 - 2 | 35,709                                  |                           |                           | 14 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| Date                  | Company<br>Performing<br>Work/Repairs                    | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authoriz             | zed by                                  |

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|        | MONTH/YEAR                                   | Port 12                                 | 4                         |                           |        |
|--------|--|---|---------------------------|---------------------------|--------|
|        |  | A A A A A A A A A A A A A A A A A A A   |                           |                           |        |
|        | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRESH  |
| Date   | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOLD   |
| 1      | Ð  | 0                                       | 100                       | 375                       | (      |
| 2      | 450  | 440                                     | 100                       | 375                       |        |
| 3      | -0-  | 200                                     | 100                       | 375                       |        |
| 4      | -0   | 30                                      | 100                       | 375                       |        |
| 5      | 265  | 250                                     | 100                       | 375                       |        |
| 6      | 285  | 280                                     | 100                       | 375                       |        |
| 7      | 1455   | 1445                                    | 100                       | 375                       |        |
| 8      | -0-  | 55 55                                   | 100                       | 375                       |        |
| 9      | 780  | 710                                     | 100                       | 375                       |        |
| 10     | 1040   | 1030                                    | 100                       | 375                       |        |
| 11     | 1260   | 1250                                    | 100                       | 375                       |        |
| 12     | 110  | 100                                     | · [00                     | 375                       |        |
| 13     | 170  | 160                                     | 100                       | 375                       |        |
| 14     | 920  | 910                                     | 100                       | 375                       | . /    |
| 15     | 680  | 670                                     | 100                       | 375                       |        |
| 16     | 290  | 280                                     | 100                       | 375                       |        |
| 17     | 700  | 690                                     | 100                       | 375                       |        |
| 18     | 400  | 380 380                                 | 100                       | 375                       |        |
| 19     | 555  | 550                                     | 100                       | 375                       |        |
| 20     | 895  | 890                                     | (00                       | 375                       |        |
| 21     | Ð  | 120                                     | 100                       | 375                       |        |
| 22     | ø  | 100 -                                   | 100                       | 375                       |        |
| 23     | 1390   | 1370                                    | 100                       | 375                       |        |
| 24     | 190  | 140                                     | 100                       | 375                       |        |
| 25     | 700  | 680                                     | 100                       | 375                       |        |
| 26     | 1330   | 1310                                    | 100                       | 375                       |        |
| 27     | 950  | 920                                     | 100                       | 375                       | 1      |
| 28     | : 565  | 550 ++++                                | 100                       | 375                       | 1      |
| 29     | -0   | 120                                     | 100                       | 375                       |        |
| 30     | 460  | 430                                     | 100                       | 375                       | /      |
| 31     |  |   |                           |                           | (      |
| TOTALS | 15840  |   |                           |                           | (      |
|        | R AND A STREET                               | EPAIRS AND/O                            | REXPENSES                 | The second second second  |        |
| Date   | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authoria             | zed by |

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|        | FACILITY/LOCATIO                             | N SALLY DO                              | 9                         |                               | in the second |
|--------|--|---|---------------------------|-------------------------------|---|
| 1700 C | MONTH/YEAR                                   | MAY ZOIS                                |                           |                               |   |
|        |  |   |                           |                               | STANDAL DA  |
|        | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES     | FRESH   |
| Date   | BBLS   | BBLS SOLD                               | PSI                       | PSI                           | SOLD  |
| 1      | 340  | 330                                     | 100                       | 375                           | 1   |
| 2      | Ø  | 120                                     | 100                       | 375                           |   |
| 3      | 5  | 100                                     | 100                       | 375                           |   |
| 4      | 370  | 360                                     | 100                       | 375                           |   |
| 5      | 410  | 400                                     | 100                       | 375                           |   |
| 6      | 205  | 200                                     | 100                       | 375                           |   |
| 7      | 375  | 365                                     | 100                       | 375                           |   |
| 8      | 245  | 240                                     | 100                       | 375                           |   |
| 9      | 775  | 270                                     | 100                       | 375                           |   |
| 10     | 310  | 300                                     | 100                       | 375                           |   |
| 11     | 600  | 585 110                                 | 100                       | 375                           |   |
| 12     | 1090   | 1070                                    | 100                       | 375                           |   |
| 13     | 90   | 80                                      | 100                       | 375                           |   |
| 14     | 400  | 390                                     | 100                       | 325                           |   |
| 15     | -0-  | 140                                     | 100                       | 375                           |   |
| 16     | 345  | 340                                     | 100                       | 375                           | -   |
| 17     | 820  | 810                                     | 100                       | 375                           |   |
| 18     | 915  | 900                                     | 100                       | 375                           |   |
| 19     | 390  | 380                                     | 100                       | 375                           |   |
| 20     | 650  | 640                                     | 100                       | 375                           |   |
| 21     | 245  | 240                                     | 100                       | 375                           |   |
| 22     | 670  | :650                                    | 100                       | 325                           |   |
| 23     | 1020   | 1005                                    | 100                       | 375                           |   |
| 24     | 1200   | 1190                                    | 100                       | 325                           |   |
| 25     | 1225   | 1200                                    | 100                       | 375                           |   |
| 26     | 1085   | 1080                                    | 100                       | 375                           |   |
| 27     | -0   | 10                                      | 100                       | 375                           |   |
| 28     | 210  | 200                                     | 100                       | 375                           |   |
| 29     | 2000   | 1090                                    | 100                       | 375                           |   |
| 30     | 550  | 540 100                                 | 100                       | 325                           |   |
| 31     | 2.30   | 210                                     | 100                       | 375                           |   |
| TOTALS |  | Party.                                  |                           |                               |   |
|        |  | REPAIRS AND/O                           | REXPENSES                 |                               |   |
| Date   | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authoriz                 | zed by  |
|        |  |   |                           |                               |   |
|        |  | 010                                     |                           | target Files OI KEAMonthly FW | BW Report Ori-  |

|      | FACILITY/LOCATIO                             | N SALTY DO                              | 9   |                                | and the state of |
|------|--|---|---|--------------------------------|------------------|
|      | MONTH/YEAR TU                                | NP. ZOIX                                |   |                                |                  |
|      | INCITIVIEAR SU                               |   | ·<br>全省市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市 | Staffer and Provident Designed |                  |
|      | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES                   | DAILY CASING<br>PRESSURES      | FRES             |
| Date | BBLS   | BBLS SOLD                               | PSI   | PSI                            | SOL              |
| 1    | 470  | 460                                     | 100   | 375                            | (                |
| 2    | Ø  | Ð                                       | 100   | 375                            |                  |
| 3    | 490  | 470                                     | 100   | 375                            |                  |
| 4    | 630  | 625                                     | 100   | 375                            |                  |
| 5    | 1170   | 1155                                    | 100   | 375                            |                  |
| 6    | 430  | 420                                     | 100   | 375                            |                  |
| 7    | 900  | 890                                     | 100   | 375                            |                  |
| 8    | 635  | 620                                     | 100   | 375                            | 1                |
| 9    | 325  | 310                                     | 100   | 375                            |                  |
| 10   | 0  | to                                      | 100   | 375                            |                  |
| 11   | ø  | t                                       | 100   | 375                            | 1                |
| 12   | 150  | 145 145                                 | 100   | 375                            |                  |
| 13   | 215  | 200                                     | 100   | 375                            |                  |
| 14   | 14.0   | 150                                     | 100   | 375                            |                  |
| 15   | t  | 45                                      | 100   | 375                            |                  |
| 16   | N  | A                                       | 100   | 375                            |                  |
| 17   | 175  | 210                                     | 100   | 375                            |                  |
| 18   | 12.85  | 1.55                                    | 100   | 375                            |                  |
| 19   | 1470   | 1455                                    | 100   | 375                            |                  |
| 20   | 455  | 440                                     | (00)  | 325                            |                  |
| 21   | 185  | 625                                     | 100   | 225                            |                  |
| 22   | 2 800  | 1900                                    | 100   | 3/3                            |                  |
| 23   | 2100   | 950                                     | 100   | 3/5                            |                  |
| 24   | 515  | 150                                     | 100   | 375                            |                  |
| 25   | 900  | 076 420                                 | 100   | 3/3                            |                  |
| 26   | 0.46   | 935 4                                   | 100   | 3/3                            |                  |
| 27   | 100  | 900                                     | 100   | 3/3                            |                  |
| 20   | 200  | (16)                                    | 100   | 375                            |                  |
| 20   | 2110   | 2120                                    | 100   | 350                            |                  |
| 29   | 1300   | 1270                                    | 100   | 350                            |                  |
| 30   | 200  | 100                                     | 100   | 375                            | -                |
| TALC | 10   | 11                                      |   |                                |                  |
| TALS | 22045  | 21,555                                  |   |                                | 1                |
| ate  | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost                              | Work Authoriz                  | ed by            |

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|  | MONTHNEAD                                    | JIY                                     | 7014                      |                           |        |
|--|--|---|---------------------------|---------------------------|--------|
| 1. 12. 12. 24. 14. 14. 14. 14. 14. 14. 14. 14. 14. 1 |  | UT T                                    | AUID                      |                           |        |
|  | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRE    |
| Date   | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SO     |
| 1  |  | 200                                     | 100                       | 350                       | 1      |
| 2  |  | 870                                     | 100                       | 350                       |        |
| 3  |  | 900                                     | 100                       | 350                       |        |
| 4  |  | 1145                                    | 100                       | 350                       |        |
| 5  |  | 270                                     | 100                       | 350                       |        |
| 6  |  | 335                                     | (00                       | 350                       |        |
| 7  |  | 250                                     | 100                       | 350                       | 1      |
| 8  |  | 300                                     | 100                       | 350                       |        |
| 9  |  | 590                                     | 100                       | 350                       |        |
| 10   |  | 790 530                                 | 100                       | 350                       |        |
| 11   |  | 1570                                    | 100                       | 350                       | 175    |
| 12   |  | 380                                     | 100                       | 350                       |        |
| 13   |  |   |                           | 5                         |        |
| 14   |  | 1.360                                   | 100                       | 350                       |        |
| 15   |  | 1510                                    | 100                       | 350                       | 1      |
| 16   |  | 560                                     | 100                       | 350                       |        |
| 17   |  | 1960                                    | 100                       | 350                       | 120    |
| 18   |  | 1120                                    | 100                       | 350                       | 280    |
| 19   |  | 2140                                    | 100                       | 350                       | 91     |
| 20   |  | 1745                                    | 100                       | 350                       | 120    |
| 21   |  | 740                                     | 100                       | 350                       |        |
| 22   |  | 100                                     | 100                       | 350                       |        |
| 23   |  | 1370                                    | 100                       | 350                       |        |
| 24   |  | 13.85                                   | 100                       | 350                       |        |
| 25   |  | 800                                     | 100                       | 3.50                      |        |
| 26   |  | 2190 000                                | 100                       | 350                       | 140    |
| 27   |  | 1100 200                                | 100                       | 350                       | 1 40-  |
| 28   | !  | 61.0 660                                |                           |                           | 25     |
| 29   |  | 950 100                                 |                           |                           | 130    |
| 30   |  | 1920                                    |                           |                           | 140    |
| 31   |  | 120                                     |                           |                           | Inv    |
| TOTALS   |  | 28,330                                  |                           |                           |        |
|  |  | REPAIRS AND/OF                          | REXPENSES                 |                           |        |
| Date   | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authori              | zed by |
|  |  |   |                           |                           |        |

|     |                | FACILITY/LOCATION                            | SALL D                                  |                           |                           | A. Martin  |
|-----|----------------|--|---|---------------------------|---------------------------|--|
|     |                | 09   |   |                           |                           |  |
|     | MONTH/YEAR Hug |  |   |                           |                           |  |
| 2   |                | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRESH  |
|     | Date           | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOLD   |
|     | 1              | 1,590  | _ 1560_                                 | 100                       | 350                       |  |
|     | 2              | 2290   | 2260                                    | 100                       | 350                       | 240  |
|     | 3              | 2120   | 2090                                    | 100                       | 350                       |  |
|     | 4              | 1085   | 1050                                    | 100                       | 356                       |  |
| 150 | 5              | 10 50  | 1020                                    | 100                       | 350                       |  |
|     | 6              | 350  | 330                                     | 100                       | 350                       | 130  |
|     | 7              | 880  | 810                                     | 100                       | 350                       | 130  |
|     | 8              | 740  | 230                                     | 100                       | 350                       |  |
|     | 9              | 720  | 700                                     | 100                       | 350                       | 100  |
|     | 10             | 700  | 695                                     | 100                       | 550                       | 2  |
|     | 11             | 590  | 970                                     | 100                       | 350                       |  |
|     | 12             | 820  | 800                                     | 100                       | 350                       |  |
|     | 13             | 600  | 5.90                                    | 100                       | 350                       | 240  |
|     | 14             | 1700   | 1690                                    | 100                       | 350                       | 25   |
|     | 15             | 1520   | 1510                                    | 1100                      | 350                       |  |
|     | 16             | 540  | 520                                     | 100                       | 350                       |  |
|     | 17             | 1250   | 1240                                    | 100                       | 350                       |  |
| 0   | 18             | 2030   | 1020                                    | 100                       | 350                       |  |
| 1   | 19             | 1120   | 1100                                    | 100                       | 350                       |  |
| E   | 20             | 210  | 200                                     | 100                       | 350                       | 217  |
| Γ   | 21             | 470  | HILS                                    | 100                       | 354                       | 190  |
| Г   | 22             | 2010   | 1000                                    | 100                       | 356                       |  |
| Г   | 23             | 1865   | 1855                                    | 100                       | 350                       |  |
|     | 24             | 955  | 945                                     | 100                       | 350                       | in   |
| F   | 25             | 650  | 100                                     | 100                       | 350                       | 160  |
|     | 26             | 1675   | 1115                                    | 100                       | 350                       |  |
| 855 | 27             | 1360   | 1250                                    | 100                       | 250                       |  |
| -   | 28             | : 1670                                       | 1125 1                                  | 100                       | 350                       |  |
| F   | 29             | 1210   | 1000                                    | 100                       | 390                       | 110  |
| F   | 30             | 1730   | -2310                                   | 100                       | 350                       |  |
| F   | 31             | 700  | 1700                                    | 100                       | 700                       |  |
| F   | TOTALS         |  | DAINE                                   | 100                       | 250                       |  |
|     |                | D  | EDAIDS AND/OD                           | ENDENCEC                  | -                         | 10 802 N 20 10 10 10 10 10 10 10 10 10 10 10 10 10 |
|     | Date           | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authorized by        |  |

|         | FACILITY/LOCATIO                             | VSALTY,                                 | Dog                       |                           |        |  |
|---------|--|---|---------------------------|---------------------------|--------|--|
|         | MONTH/YEAR SEP 2015                          |   |                           |                           |        |  |
|         | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRESH  |  |
| Date    | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOLD   |  |
| 1       | 440  | 430                                     | 100                       | 350                       |        |  |
| 2       | 0  | 0                                       | 100                       | 350                       |        |  |
| 3       | 0  | Ð                                       | 100                       | 375                       |        |  |
| 4       | D  | 0                                       | 100                       | 375                       |        |  |
| 5       | 0  | Ø                                       | 100                       | 375                       |        |  |
| 6       | D  | 0                                       | 100                       | 375                       |        |  |
| 7       | 0  | 0                                       | 100                       | 375                       | 120    |  |
| 8       | 0  | D                                       | 100                       | 375                       |        |  |
| 9       | D  | D                                       | 100                       | 375                       |        |  |
| 10      | 140  | 135                                     | 100                       | 350                       |        |  |
| 11      | 1190   | 1175                                    | 100                       | 350                       |        |  |
| 12      | 740  | 730                                     | 100                       | .350                      | 130    |  |
| 13      | 1235   | 1220                                    | 100                       | 350                       | 75     |  |
| 14      | 570  | 560                                     | (00)                      | 350                       |        |  |
| 15      | 670  | 650                                     | 100                       | 350                       |        |  |
| 16      | 350  | 300                                     | 120                       | 350                       |        |  |
| 17      | 350  | 330                                     | 100                       | 350                       |        |  |
| 18      | 965  | QUD                                     | 100                       | 350                       | 40     |  |
| 19      | 1605   | 1.590                                   | 100                       | 350                       | 25     |  |
| 20      | 1540   | 1520                                    | 100                       | 350                       | 310    |  |
| 21      | 2220   | 2755                                    | 100                       | 325                       | 11     |  |
| 22      | 950  | 980 900                                 | 100                       | 350                       |        |  |
| 23      | A I  | - CAU                                   | 1 10                      | 350                       |        |  |
| 24      | 330  | 370 220                                 | ,00                       | 750                       |        |  |
| 25      | 115  | 010 "                                   | 100                       | 250                       | -      |  |
| 26      | 11100  | 1500                                    | 100                       | 350                       |        |  |
| 27      | 1970   | 1980_                                   | 120                       | 750                       |        |  |
| 28      | 121-   | 1300                                    | 100                       | 250                       |        |  |
| 20      | 1190   | 1000                                    | 100                       | 350                       |        |  |
| 30      | PZS  | - 110                                   | 100                       | 750                       |        |  |
| 31      | 7.3.3  | 310                                     | 100                       | 000                       |        |  |
| OTALS   |  | 10 015                                  |                           |                           |        |  |
| JAY 201 | Concernent Advances of                       | EDAIDS ANDIO                            | DEXDENSES                 |                           |        |  |
| Date    | Company<br>Performing<br>Work/Repairs        | Descritpion of<br>Work/Repairs          | Estimated Cost            | Work Authoria             | zed by |  |

| AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE         DAILY TUBING<br>PRESSURES         DAILY CASING<br>PRESSURES         FRESH<br>WATER<br>PRESSURES           BBLS SOLD         PSI         PSI         SOLD           1070         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         0           400         100         3,50         10           400         100         3,50         120           130         100         3,50         120           130         100         3,50         120           130         100         3,50         120           130         100         3,50         195           100         3,50         195           <   |          | FACILITY/LOCATION SALTS Dog  |   |                             |                           |       |  |  |
|---|----------|--|---|-----------------------------|---------------------------|-------|--|--|
| AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE         DAILY TUBING<br>PRESSURES         DAILY CASING<br>PRESSURES         FRESS<br>WATER<br>PRESSURES           BBLS SOLD         PSI         PSI         SOLD           107 0         100         3.56         0           107 0         100         3.56         0           100         100         3.56         0           100         100         3.56         0           100         100         3.56         0           100         100         3.57         0           100         100         3.57         0           100         100         3.50         0           100         100         3.50         120           100         100         3.50         120           130         100         3.50         120           0         100         3.50         120           0         100         3.50         120           0         100         3.50         120           0         100         3.50         120           0         100         3.50         195           100         3.50         100         3.50 <th></th> <th colspan="6">MONTH/YEAR Det 2018</th>   |          | MONTH/YEAR Det 2018  |   |                             |                           |       |  |  |
| BBLS SOLD         PSI         PSI         SOLD           1070         100         3.56         0           850         100         3.56         0           400         100         3.56         0           400         100         3.56         0           400         100         3.56         0           400         100         3.56         0           400         100         3.57         0           400         100         3.57         0           400         100         3.57         0           400         100         3.50         4           400         100         3.50         4           100         100         3.50         120           0         100         3.50         120           0         100         3.50         120           0         100         3.50         120           0         100         3.50         140           350         100         3.50         140           350         100         3.50         150           165         100         3.50         150 <th></th> <th>AMOUNT OF FRESH<br/>WATER PUMPED<br/>DOWN HOLE</th> <th>AMOUNT OF<br/>BRINE WATER<br/>OUT OF HOLE</th> <th>DAILY TUBING<br/>PRESSURES</th> <th>DAILY CASING<br/>PRESSURES</th> <th>FRESH</th>  |          | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE   | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES   | DAILY CASING<br>PRESSURES | FRESH |  |  |
| IO70 $IO0$ $3.50$ $9$ $850$ $IO0$ $350$ $9$ $400$ $IO0$ $350$ $9$ $400$ $IO0$ $350$ $9$ $200$ $IO0$ $350$ $9$ $-9$ $IO0$ $350$ $9$ $ID0$ $IO0$ $350$ $9$ $II0$ $I00$ $350$ $45$ $II0$ $I00$ $350$ $45$ $I30$ $I00$ $350$ $45$ $340$ $I00$ $350$ $45$ $340$ $I00$ $350$ $120$ $0$ $I00$ $350$ $120$ $0$ $I00$ $350$ $195$ $905$ $I00$ $350$ $195$ $905$ $I00$ $350$ $180$ $350$ $I00$ $350$ $180$ $350$ $I00$ $350$ $180$ $350$ $I00$ $350$ $180$ $325$ $I00$ $325$ $150$  | Date     | BBLS   | BBLS SOLD                               | PSI                         | PSI                       | SOLD  |  |  |
| 85D $100$ $35D$ $0$ $400$ $100$ $356$ $0$ $200$ $100$ $356$ $0$ $200$ $100$ $356$ $0$ $200$ $100$ $3576$ $0$ $100$ $100$ $3570$ $0$ $100$ $100$ $3570$ $0$ $100$ $100$ $3570$ $0$ $110$ $100$ $3570$ $0$ $110$ $100$ $3570$ $10$ $340$ $100$ $3570$ $10$ $340$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $195$ $100$ $350$ $100$ $350$ $150$ $100$ $350$ $180$ $100$ $350$ $100$ $350$ $275$ $100$ $350$ $150$ $330$ $100$  | 1        | 1090   | 1070                                    | 100                         | 350                       | Ð     |  |  |
| 40b $100$ $3.5b$ $0$ $400$ $100$ $3.5b$ $0$ $400$ $100$ $3.5b$ $0$ $400$ $100$ $3.5b$ $0$ $400$ $100$ $3.50$ $0$ $400$ $100$ $3.50$ $0$ $100$ $100$ $3.50$ $0$ $130$ $100$ $3.50$ $0$ $130$ $100$ $3.50$ $0$ $340$ $106$ $3.50$ $100$ $340$ $106$ $3.50$ $120$ $0$ $100$ $3.50$ $120$ $0$ $100$ $3.50$ $195$ $905$ $100$ $3.50$ $195$ $150$ $100$ $3.50$ $180$ $430$ $100$ $3.50$ $180$ $350$ $100$ $3.50$ $180$ $350$ $100$ $3.50$ $180$ $330$ $100$ $3.50$ $150$ $325$ $100$ $32.5$   | 2        | 870  | 850                                     | 100                         | 350                       | 0     |  |  |
| 600 $100$ $356$ $e$ $200$ $100$ $356$ $e$ $-e$ $100$ $356$ $e$ $100$ $100$ $350$ $e$ $100$ $100$ $350$ $e$ $110$ $100$ $350$ $e$ $130$ $100$ $350$ $e$ $130$ $100$ $350$ $e$ $340$ $106$ $350$ $e$ $340$ $106$ $350$ $e$ $920$ $106$ $350$ $120$ $0$ $100$ $350$ $195$ $905$ $100$ $350$ $195$ $905$ $100$ $350$ $195$ $150$ $100$ $350$ $140$ $350$ $100$ $350$ $140$ $310$ $100$ $350$ $150$ $275$ $100$ $325$ $155$ $1050$ $100$   | 3        | 410  | 400                                     | 100                         | 350                       | 0     |  |  |
| 200 $100$ $356$ $e$ $-P$ $100$ $356$ $e$ $100$ $100$ $350$ $e$ $100$ $100$ $350$ $a$ $130$ $100$ $350$ $a$ $130$ $100$ $350$ $a$ $340$ $100$ $350$ $120$ $340$ $106$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $195$ $905$ $100$ $350$ $195$ $905$ $100$ $350$ $195$ $100$ $350$ $190$ $350$ $150$ $100$ $350$ $190$ $350$ $100$ $350$ $190$ $350$ $190$ $350$ $190$ $330$ $100$ $350$ $150$ $100$ $325$ $105$ $100$ $325$ $155$  | 4        | 615  | 600                                     | 100                         | 356                       | 0     |  |  |
| $-\Phi$ 100         3 56 $\sigma$ 100         100         3 50 $AS$ 130         100         3 50 $AS$ 130         100         3 50 $AS$ 130         100         3 50 $AS$ 340         100         3 50 $AS$ 340         100         3 50 $AS$ 340         106         3 50 $AS$ 920         106         3 50 $120$ 0         100         3 50 $120$ 0         100         3 50 $195$ 350         100         3 50 $195$ 905         100         3 50 $110$ 105         100         3 50 $190$ 150         100         3 50 $180$ 330         100         3 50 $180$ 330         100         3 50 $180$ 330         100         3 50 $180$ 1050         100         3 2 5 $105$ 1050   | 5        | 210  | 200                                     | 100                         | 356                       | e     |  |  |
| IOO $IOO$ $IOO$ $IOO$ $IOO$ $IOO$ $IOO$ $IIO$ $IOO$   | 6        | -0   | Ð                                       | 100                         | 350                       | Ø     |  |  |
| 110 $100$ $350$ $45$ $130$ $100$ $350$ $45$ $295$ $100$ $350$ $40$ $295$ $100$ $350$ $120$ $920$ $106$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $195$ $905$ $100$ $350$ $195$ $905$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $165$ $100$ $350$ $180$ $270$ $100$ $350$ $180$ $360$ $100$ $350$ $180$ $325$ $100$ $350$ $180$ $330$ $100$ $3550$ $150$ $1050$ $100$ $325$ $1650$ $1050$ $100$ $325$ $155$ $1020$ $100$ $325$   | 7        | 100  | 100                                     | 100                         | 350                       | 0     |  |  |
| 130 $100$ $350$ $140$ $295$ $10h$ $350$ $350$ $120$ $360$ $106$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $195$ $350$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $165$ $100$ $350$ $160$ $320$ $100$ $350$ $180$ $330$ $100$ $350$ $180$ $330$ $100$ $350$ $180$ $330$ $100$ $350$ $180$ $1050$ $100$ $325$ $150$ $1050$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1020$ $225$   | 8        | 110  | 110 110                                 | 100                         | 350                       | 25    |  |  |
| 295 $10h$ $350$ $360$ $106$ $350$ $920$ $106$ $350$ $920$ $100$ $350$ $100$ $100$ $350$ $100$ $100$ $350$ $350$ $100$ $350$ $350$ $100$ $350$ $150$ $100$ $350$ $150$ $100$ $350$ $150$ $100$ $350$ $150$ $100$ $350$ $270$ $100$ $350$ $320$ $100$ $350$ $320$ $100$ $350$ $325$ $100$ $350$ $330$ $100$ $350$ $1050$ $100$ $325$ $1050$ $100$ $325$ $1020$ $100$ $325$ $1020$ $100$ $325$ $1020$ $100$ $325$ $1020$ $100$ $325$ $1080$ $100$ $325$ $1080$ $100$   | 9        | 133  | 130                                     | 100                         | 350                       | 14    |  |  |
| 360 $106$ $350$ $120$ $0$ $100$ $350$ $120$ $0$ $100$ $350$ $120$ $100$ $100$ $350$ $195$ $905$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $430$ $100$ $350$ $180$ $270$ $100$ $350$ $180$ $360$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $360$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $330$ $100$ $350$ $350$ $275$ $100$ $355$ $1050$ $100$ $325$ $1020$ $100$ $325$ $1020$ $100$ $325$ $1080$ $100$ $325$ $1080$ $100$ $325$ $1770$ $100$ $325$   | 10       | 300  | 295                                     | 100                         | 350                       |       |  |  |
| 920 $106$ $350$ $120$ $0$ $100$ $350$ $350$ $350$ $100$ $350$ $195$ $905$ $100$ $350$ $110$ $105$ $100$ $350$ $110$ $105$ $100$ $350$ $110$ $150$ $100$ $350$ $160$ $270$ $100$ $350$ $180$ $270$ $100$ $350$ $180$ $360$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $330$ $100$ $350$ $350$ $330$ $100$ $350$ $350$ $1050$ $100$ $325$ $105$ $1020$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1080$ $100$ $325$ $155$ $1170$ $100$ $325$ $155$ $10,192$ REPAIRS AND/OR EXPENSES       Wo  | 11       | 360  | 360                                     | 100                         | 350                       |       |  |  |
| 0         100         350 $100$ $350$ $350$ $350$ $100$ $350$ $905$ $100$ $350$ $165$ $100$ $350$ $180$ $100$ $350$ $430$ $100$ $350$ $430$ $100$ $350$ $270$ $100$ $350$ $270$ $100$ $350$ $270$ $100$ $350$ $345$ $100$ $350$ $345$ $100$ $350$ $330$ $100$ $350$ $330$ $100$ $350$ $275$ $100$ $350$ $1050$ $100$ $325$ $1050$ $100$ $325$ $1020$ $100$ $325$ $1080$ $100$ $325$ $1080$ $100$ $325$ $1770$ $100$ $325$ $1770$ $100$ $32.5$ <t< td=""><td>12</td><td>325</td><td>920</td><td>106</td><td>350</td><td>120</td></t<>  | 12       | 325  | 920                                     | 106                         | 350                       | 120   |  |  |
| 100 $100$ $350$ $195$ $905$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $180$ $100$ $350$ $160$ $230$ $100$ $350$ $160$ $270$ $100$ $350$ $180$ $270$ $100$ $350$ $180$ $270$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $330$ $100$ $350$ $350$ $275$ $100$ $350$ $350$ $275$ $100$ $325$ $102$ $1050$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1170$ $100$ $325$ $155$ $170$ $100$ $325$ $155$ $170$ $100$ $325$   | 13       | 0  | 0                                       | 100                         | 350                       |       |  |  |
| 350 $100$ $350$ $195$ $905$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $165$ $100$ $350$ $110$ $180$ $100$ $350$ $160$ $270$ $100$ $350$ $160$ $270$ $100$ $350$ $160$ $360$ $100$ $350$ $180$ $345$ $100$ $350$ $180$ $330$ $100$ $350$ $350$ $275$ $100$ $350$ $350$ $1050$ $100$ $325$ $350$ $1050$ $100$ $325$ $100$ $1020$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1020$ $325$ $155$ $155$ $1020$ $325$ $155$ $155$ $1020$ $325$ $155$ $155$ $1770$ $100$ $325$ $155$ $1792$ REPAIRS AND/OR EXPENSES <td>14</td> <td>100</td> <td>100</td> <td>100</td> <td>350</td> <td></td>  | 14       | 100  | 100                                     | 100                         | 350                       |       |  |  |
| 905 $100$ $350$ $110$ $165$ $100$ $350$ $110$ $150$ $100$ $350$ $430$ $430$ $100$ $350$ $160$ $270$ $100$ $350$ $160$ $360$ $100$ $350$ $160$ $360$ $100$ $350$ $160$ $360$ $100$ $350$ $160$ $345$ $100$ $350$ $180$ $330$ $100$ $350$ $350$ $330$ $100$ $350$ $350$ $1050$ $100$ $325$ $350$ $1050$ $100$ $325$ $325$ $1020$ $100$ $325$ $155$ $1020$ $100$ $325$ $155$ $1080$ $100$ $325$ $155$ $1770$ $100$ $325$ $155$ $1770$ $100$ $325$ $155$ $1770$ $100$ $325$ $155$ $1770$ $100$ $325$ <  | 15       | 351  | 350                                     | 100                         | 350                       | 195   |  |  |
| 105       100       350         180       100       350         430       100       350         270       100       350         360       100       350         360       100       350         360       100       350         360       100       350         370       100       350         330       100       350         330       100       350         325       100       350         1050       100       325         1050       100       325         1050       100       325         1050       100       325         1050       100       325         1080       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         17792       100       325         REPAIRS AND/OR EXPENSES  | 16       | 910  | 905                                     | 100                         | 350                       | 110   |  |  |
| 180 $100$ $350$ $430$ $100$ $350$ $160$ $270$ $100$ $350$ $160$ $360$ $100$ $350$ $160$ $360$ $100$ $350$ $160$ $345$ $100$ $350$ $350$ $330$ $100$ $350$ $350$ $275$ $100$ $350$ $350$ $1050$ $100$ $325$ $350$ $1050$ $100$ $325$ $325$ $1650$ $100$ $325$ $325$ $1020$ $100$ $325$ $325$ $1020$ $100$ $325$ $155$ $1080$ $100$ $325$ $155$ $1770$ $100$ $325$ $155$ $1770$ $100$ $325$ $155$ $1792$ $100$ $325$ $155$ $1792$ $100$ $325$ $155$ $1792$ $100$ $325$ $155$ Descritpion of $850$ $850$   | 17       | 105  | 105                                     | 100                         | 350                       |       |  |  |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$  | 18       | 185  | 180                                     | 100                         | 350                       |       |  |  |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$   | 19       | 635  | 630                                     | 100                         | 350                       | 1     |  |  |
| 360       100       350         845       100       350         330       100       350         275       100       350         1050       100       325         1650       100       325         1650       100       325         1650       100       325         1650       100       325         1020       325       100         1080       100       325         1080       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1792       100       325         REPAIRS AND/OR EXPENSES   | 20       | 275  | 270                                     | 100                         | 350                       | 180   |  |  |
| 845         100         350           330         100         350           275         100         350           1050         100         325           1050         100         325           1050         100         325           1050         100         325           1050         100         325           1020         100         325           1020         100         325           1080         100         325           1080         100         325           1770         100         325           1770         100         325           1770         100         325           1770         100         325           1770         100         325           17,192         100         325           REPAIRS AND/OR EXPENSES           Work Authorized by   | 21       | 365  | 360                                     | 100                         | 350                       |       |  |  |
| 330       100       350         275       100       350         1050       100       325         1650       100       325         1020       100       325         1020       100       325         1020       100       325         1020       100       325         1080       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         17,192       8       8         Descritpion of Work/Repairs         Work Authorized by  | 22       | 850  | 845 100                                 | 100                         | 350                       |       |  |  |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$   | 23       | 340  | 330                                     | 100                         | 350                       | No.   |  |  |
| 1050 $100$ $325$ $1650$ $100$ $325$ $1020$ $100$ $325$ $1020$ $100$ $325$ $460$ $100$ $325$ $460$ $100$ $325$ $1080$ $100$ $325$ $1080$ $100$ $325$ $1770$ $100$ $325$ $1770$ $100$ $325$ $1770$ $100$ $325$ $1770$ $100$ $325$ $17,192$ $8$ $8$ Descritpion of Work/Repairs         Work Authorized by   | 24       | 280  | 275                                     | 100                         | 350                       |       |  |  |
| 1650       100       325         1020       100       325         460       100       325         1080       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         1770       100       325         17,192       REPAIRS AND/OR EXPENSES       Bescritpion of Work/Repairs         Descritpion of       Estimated Cost       Work Authorized by  | 25       | 1055   | 1050                                    | 100                         | 32.5                      |       |  |  |
| 1020         100         325           460         100         325           1080         100         325           1770         100         325           770         100         325           17,192         100         325           REPAIRS AND/OR EXPENSES         Work Authorized by  | 26       | 1660   | 1650                                    | 100                         | 325                       |       |  |  |
| 460         100         325           1080         100         325         155           1770         100         325         155           1770         100         325         155           1770         100         325         155           1792         100         325         155           17,192         100         325         155           REPAIRS AND/OR EXPENSES           Descritpion of<br>Work/Repairs         Estimated Cost         Work Authorized by  | 27       | 1025   | 1020                                    | 100                         | 325                       |       |  |  |
| 1080         100         325         155           1770         100         325         155           770         100         325         170           10,192         Image: state s | 28       | 465  | 460                                     | 100                         | 325                       |       |  |  |
| 1777     100     32.5       770     100     32.5       17,192     32.5       REPAIRS AND/OR EXPENSES       Descritpion of<br>Work/Repairs     Estimated Cost     Work Authorized by   | 29       | 1085   | 1080                                    | 100                         | 325                       | 155   |  |  |
| 325       170     100     325       1792     REPAIRS AND/OR EXPENSES       Descritpion of<br>Work/Repairs     Estimated Cost     Work Authorized by   | 30       | 1780   | 1777                                    | 100                         | 325                       |       |  |  |
| Image: Construction of Work/Repairs     Estimated Cost     Work Authorized by   | 31       | 780  | 770                                     | 100                         | 325                       |       |  |  |
| REPAIRS AND/OR EXPENSES         Descritpion of         Work/Repairs         Estimated         Cost         Work Authorized by   | OTALS    | the state of the s | 17.192                                  |                             |                           |       |  |  |
| Descritpion of<br>Work/Repairs Estimated Cost Work Authorized by  | 14 1 2 1 | R  | EPAIRS AND/OF                           | REXPENSES                   |                           |       |  |  |
|   | Date     | Company<br>Performing<br>Work/Repairs  | Descritpion of<br>Work/Repairs          | Estimated Cost              | Work Authorized by        |       |  |  |
|   | Date     | Performing<br>Work/Repairs   | Descritpion of<br>Work/Repairs          | Estimated Cost Work Authori |                           |       |  |  |

|       | FACILITY OCATION SALLY A                     |   |                           |                           |  |  |
|-------|--|---|---------------------------|---------------------------|--|--|
|       | FACILITY/LOCATION SHLFY Dog                  |   |                           |                           |  |  |
|       | MONTH/YEAR                                   | NOO                                     | 0                         | A STATE OF STATE          |  |  |
|       | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRESH<br>WATER   |  |
| Date  | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOLD   |  |
| 1     | 280  | 273                                     | 100                       | 325                       | 60   |  |
| 2     | 600  | 590                                     | 100                       | 325                       | 5  |  |
| 3     | 205  | 200                                     | 100                       | 325                       |  |  |
| 4     | 335  | 330                                     | 100                       | 325                       | 10   |  |
| 5     | 895  | 885                                     | 100                       | 325                       | 25   |  |
| 6     | 880  | 865                                     | 100                       | 325                       | 130  |  |
| 7     | 202.00                                       | 2010                                    | 100                       | 325                       |  |  |
| 8     | 615  | 600                                     | 100                       | 325                       | 40   |  |
| 9     | 965  | 850                                     | 100                       | 325                       | 250  |  |
| 10    | 1395   | 1385                                    | 100                       | 325                       |  |  |
| 11    | 2120   | 2110                                    | ,00                       | 325                       | 1  |  |
| 12    | 3210   | 3195                                    | 100                       | 325                       | 40   |  |
| 13    | 1700   | 1695                                    | 100                       | 325                       |  |  |
| 14    | 1720   | 1710                                    | 106                       | 325                       | 260  |  |
| 15    | 1345   | 1350 1350                               | 100                       | 325                       | 300  |  |
| 16    | 1810   | 1297                                    | 100                       | 325                       |  |  |
| 17    | 825  | 855 -58                                 | 100                       | 325                       | 120  |  |
| /18   | A  | 100                                     | 100                       | 325                       | - 620  |  |
| 19    | 950  | 930 920                                 | 100                       | 225                       |  |  |
| 20    | 275  | 310                                     | 100                       | 325                       | 40   |  |
| 21    | 3/0  | 1.20                                    | 100                       | 225                       | 70   |  |
| 22    |  | 180                                     | 100                       | 325                       |  |  |
| 22    | 220  | 700                                     | 100                       | 225                       |  |  |
| 20    | 310  | 260                                     | 100                       | 343                       |  |  |
| 24    |  | 0                                       | 100                       | 325                       |  |  |
| 20    | 310  | 200                                     | 100                       | 325                       |  |  |
| 20    | 805  | 190                                     | 100                       | 315                       |  |  |
| 2/    | 510  | 500                                     | 100                       | 345                       |  |  |
| 28    | 630  | 615                                     | 100                       | 325                       | 100  |  |
| 29    | 80   | 70 10                                   | 100                       | 325                       | 130  |  |
| 30    | 1425   | 1410                                    | 100                       | 325                       | ×  |  |
| 31    |  |   |                           |                           | and the second s |  |
| OTALS |  | 25740                                   | Second states             |                           |  |  |
|       | Company<br>Performing                        | Descritpion of                          | REXPENSES                 |                           |  |  |
| Date  | Work/Repairs                                 | Work/Repairs                            | Estimated Cost            | Work Authorized by        |  |  |
|       |  |   | 70                        |                           |  |  |
| 0             | FACILITY/LOCATION                            | 1 SALLY DO                              | 9                         |                           |        |
|---------------|--|---|---------------------------|---------------------------|--------|
|               | MONTH/YEAR                                   | ecen ber                                | 2018                      | MARK BALLING, BARRING     |        |
|               | AMOUNT OF FRESH<br>WATER PUMPED<br>DOWN HOLE | AMOUNT OF<br>BRINE WATER<br>OUT OF HOLE | DAILY TUBING<br>PRESSURES | DAILY CASING<br>PRESSURES | FRESH  |
| Date          | BBLS   | BBLS SOLD                               | PSI                       | PSI                       | SOLD   |
| 1             | 3650   | 3600                                    | 100                       | 325                       | (      |
| 2             | 1700   | 16.30 878                               | 100                       | 325                       | 5      |
| 3             | 1320   | 1370                                    | 100                       | 325                       | 1      |
| 4             | 2420   | 2400 10 138                             | 100                       | 325                       |        |
| 5             | 190  | 180                                     | 100                       | 325                       | 5      |
| 6             | xcop   | 1085855                                 | 100                       | 325                       | r      |
| 7             | 442  | 440 440                                 | 100                       | 325                       |        |
| 8             | ð  | \$                                      | 100                       | 325                       |        |
| 9             | Ð  | 100                                     | 100                       | 325                       |        |
| 10            | Ø  | 110                                     | 100                       | 325                       |        |
| 11            | 680  | 660                                     | 100                       | 325                       |        |
| 12            | 1020   | 1010                                    | 100                       | 325                       |        |
| 13            | 1040   | 1034                                    | 100                       | 325                       |        |
| 14            | 1035   | 1030                                    | 100                       | 325                       |        |
| 15            | 5  | Ð                                       | 100                       | 325                       |        |
| 16            | 285  | 280                                     | 100                       | 325                       |        |
| 17            | 755  | 742                                     | 100                       | 325                       |        |
| 18            | 2900   | 2870                                    | 100                       | 325                       |        |
| 19            | 1000   | 996 990                                 | 100                       | 350                       |        |
| 20            | 830  | 800 500                                 | 100                       | 350                       | - 10   |
| 21            | 14.50  | 1620                                    | 100                       | 2512                      | . 1    |
| 22            | 310  | 320                                     | 100                       | 3.50                      |        |
| 23            | 1740   | 1720                                    | 100                       | 350                       |        |
| 24            | A  | y yat the                               | 100                       | 356                       | -      |
| 25            | 210  | \$ 200                                  | 100                       | 356                       | 183    |
| 36 26         | 760  | 755 ++25                                | 100                       | 350                       |        |
| 27            | 1040   | 1020 900                                | 100                       | 350                       |        |
| 28            | : 1920                                       | 1900                                    | 100                       | 350                       |        |
| 29            | 0  | ø                                       | 100                       | 350                       |        |
| 30            | 215  | 700                                     | 100                       | 350                       |        |
| 31            | ð  | K                                       | 100                       | 350                       | 1      |
| TOTAL         | S  |   |                           |                           |        |
| No. of States |  | REPAIRS AND/OF                          | REXPENSES                 | <b>斯坦王 基本</b> 在 教授        |        |
| Date          | Company<br>Performing<br>Work/Repairs        | Descritpion of                          | Estimated Cost            | Work Authori              | rod by |

C:Documents and Settings\Jim\Local Settings\Temporary Internet Files\OLK6A\Monthly FW-BW Report - Original

Appendix C

Laboratory Analytical Reports



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

July 05, 2018

John Ayarbe Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109 TEL: FAX

OrderNo.: 1806C36

RE: Salty Dog

Dear John Ayarbe:

Hall Environmental Analysis Laboratory received 14 sample(s) on 6/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Hall Environmental Analysis Laboratory, Inc. |  |     | Date Reported: 7/5/2018 |          |                      |        |  |  |  |
|--|--|-----|-------------------------|----------|----------------------|--------|--|--|--|
| CLIENT: Daniel B. Stephens & Assoc.          | Client Sample ID: DBS-5                              |     |                         |          |                      |        |  |  |  |
| <b>Project:</b> Salty Dog                    |  | С   | <b>Collection Dat</b>   | e: 6/18/ | /2018 5:00:00 PM     |        |  |  |  |
| Lab ID: 1806C36-001                          | Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM |     |                         |          |                      |        |  |  |  |
| Analyses                                     | Result   | PQL | Qual Units              | DF I     | Date Analyzed        | Batch  |  |  |  |
| EPA METHOD 300.0: ANIONS                     |  |     |                         |          | Analyst              | MRA    |  |  |  |
| Chloride                                     | 180  | 5.0 | mg/L                    | 10       | 6/26/2018 2:07:17 PM | R52265 |  |  |  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis         | .C.            | Date Reported: 7/5/2018 |               |                   |                   |        |  |
|-------------------------------------|----------------|-------------------------|---------------|-------------------|-------------------|--------|--|
| CLIENT: Daniel B. Stephens & Assoc. |                | Cli                     | ent Sample II | D:DBS-3           |                   |        |  |
| <b>Project:</b> Salty Dog           |                | С                       | ollection Dat | <b>e:</b> 6/18/20 | 18 5:20:00 PM     |        |  |
| Lab ID: 1806C36-002                 | Matrix: AQUEOU | 5 I                     | Received Dat  | <b>e:</b> 6/20/20 | 18 11:26:00 AM    |        |  |
| Analyses                            | Result         | PQL                     | Qual Units    | DF Date           | e Analyzed        | Batch  |  |
| EPA METHOD 300.0: ANIONS            |                |                         |               |                   | Analyst           | MRA    |  |
| Chloride                            | 47             | 5.0                     | mg/L          | 10 6/26           | 3/2018 3:24:25 PM | R52265 |  |

| Qualifiers: |
|-------------|
|-------------|

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Analytical Report |  |
|-------------------|--|
| Lab Order 1806C36 |  |

| Hall Environmental Analysis Laboratory, Inc. |                   |  |       | Date Reported: 7/5/2018 |        |                      |          |  |  |  |
|--|-------------------|--|-------|-------------------------|--------|----------------------|----------|--|--|--|
| CLIENT: Daniel B.                            | Stephens & Assoc. | Client Sample ID: DBS-2                              |       |                         |        |                      |          |  |  |  |
| Project: Salty Dog                           |                   |  | С     | ollection Dat           | e: 6/1 | 8/2018 5:45:00 PM    |          |  |  |  |
| Lab ID: 1806C36-                             | 003               | Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM |       |                         |        |                      |          |  |  |  |
| Analyses                                     |                   | Result   | PQL ( | Qual Units              | DF     | Date Analyzed        | Batch    |  |  |  |
| EPA METHOD 300.                              | ): ANIONS         |  |       |                         |        | Analy                | vst: MRA |  |  |  |
| Chloride                                     |                   | 47   | 5.0   | mg/L                    | 10     | 6/26/2018 3:50:09 PI | M R52265 |  |  |  |

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis Laboratory, Inc. |                 |  | Date Reported: 7/5/2018 |               |                      |        |  |  |  |  |
|--|-----------------|--|-------------------------|---------------|----------------------|--------|--|--|--|--|
| CLIENT: Daniel B. Stephens & Assoc           | 2.              | Client Sample ID: DBS-4                              |                         |               |                      |        |  |  |  |  |
| <b>Project:</b> Salty Dog                    |                 | Coll   | lection Dat             | <b>e:</b> 6/1 | 9/2018 9:40:00 AM    |        |  |  |  |  |
| Lab ID: 1806C36-004                          | Matrix: AQUEOUS | Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM |                         |               |                      |        |  |  |  |  |
| Analyses                                     | Result          | PQL Qu   | ual Units               | DF            | Date Analyzed        | Batch  |  |  |  |  |
| EPA METHOD 300.0: ANIONS                     |                 |  |                         |               | Analys               | t: MRA |  |  |  |  |
| Chloride                                     | 39              | 5.0  | mg/L                    | 10            | 6/26/2018 4:15:52 PM | R52265 |  |  |  |  |

| Qualifiers: |
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|-------------|

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis Laboratory, Inc. |                             |  |     | Date Reported: 7/5/2018 |        |                                |   |  |  |
|--|-----------------------------|--|-----|-------------------------|--------|--------------------------------|---|--|--|
| CLIENT:                                      | Daniel B. Stephens & Assoc. |  | Cl  | ient Sa                 | mple I | <b>D:</b> DBS-9                | Ξ |  |  |
| Project:                                     | Salty Dog                   | Collection Date: 6/19/2018 10:05:00 AM               |     |                         |        |                                |   |  |  |
| Lab ID:                                      | 1806C36-005                 | Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM |     |                         |        |                                |   |  |  |
| Analyses                                     |                             | Result   | PQL | Qual                    | Units  | DF Date Analyzed Batch         |   |  |  |
| EPA MET                                      | HOD 300.0: ANIONS           |  |     |                         |        | Analyst: MRA                   |   |  |  |
| Chloride                                     |                             | 260  | 50  | *                       | mg/L   | 100 6/26/2018 4:54:26 PM R5226 | 5 |  |  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis         | .C.             | Date Reported: 7/5/2018 |              |                          |        |  |  |
|-------------------------------------|-----------------|-------------------------|--------------|--------------------------|--------|--|--|
| CLIENT: Daniel B. Stephens & Assoc. |                 | Clier                   | nt Sample II | <b>D:</b> DBS-8          |        |  |  |
| <b>Project:</b> Salty Dog           |                 | Co                      | llection Dat | e: 6/19/2018 10:45:00 AM |        |  |  |
| Lab ID: 1806C36-006                 | Matrix: AQUEOUS | S R                     | eceived Dat  | e: 6/20/2018 11:26:00 AM |        |  |  |
| Analyses                            | Result          | PQL Q                   | Qual Units   | DF Date Analyzed         | Batch  |  |  |
| EPA METHOD 300.0: ANIONS            |                 |                         |              | Analys                   | t: MRA |  |  |
| Chloride                            | 33              | 5.0                     | mg/L         | 10 6/26/2018 5:33:01 PM  | R52265 |  |  |

| Qualifiers: |  |
|-------------|--|
|-------------|--|

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysi          | s Laboratory, In | IC. | Date Reported: 7/5/2018 |         |                          |        |  |  |
|-------------------------------------|------------------|-----|-------------------------|---------|--------------------------|--------|--|--|
| CLIENT: Daniel B. Stephens & Assoc. |                  | Cl  | ient Sa                 | ample I | <b>D:</b> DBS-10         |        |  |  |
| <b>Project:</b> Salty Dog           |                  | (   | Collect                 | ion Dat | e: 6/19/2018 11:15:00 AM |        |  |  |
| Lab ID: 1806C36-007                 | Matrix: AQUEOU   | S   | Recei                   | ved Dat | e: 6/20/2018 11:26:00 AM |        |  |  |
| Analyses                            | Result           | PQL | Qual                    | Units   | DF Date Analyzed         | Batch  |  |  |
| EPA METHOD 300.0: ANIONS            |                  |     |                         |         | Analyst                  | t: MRA |  |  |
| Chloride                            | 690              | 50  | *                       | mg/L    | 100 6/26/2018 6:11:36 PM | R52265 |  |  |

| Qualifiers: |
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|-------------|

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis         | s Laboratory, In                                     | .c.   | Date Reported: 7/5/2018 |                          |         |  |  |
|-------------------------------------|--|-------|-------------------------|--------------------------|---------|--|--|
| CLIENT: Daniel B. Stephens & Assoc. |  | Clie  | nt Sample II            | <b>D:</b> DBS-6          |         |  |  |
| <b>Project:</b> Salty Dog           | Collection Date: 6/19/2018 11:45:00 AM               |       |                         |                          |         |  |  |
| Lab ID: 1806C36-008                 | Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM |       |                         |                          |         |  |  |
| Analyses                            | Result   | PQL ( | Qual Units              | DF Date Analyzed         | Batch   |  |  |
| EPA METHOD 300.0: ANIONS            |  |       |                         | Analys                   | st: MRA |  |  |
| Chloride                            | 210  | 50    | mg/L                    | 100 6/26/2018 6:37:19 PM | R52265  |  |  |

| Qualifiers: |  |
|-------------|--|
|-------------|--|

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis Laboratory, Inc. |                           |                                       |     |         | Date Reported: 7/5/2018 |                          |        |  |  |  |
|--|---------------------------|---------------------------------------|-----|---------|-------------------------|--------------------------|--------|--|--|--|
| CLIENT: Dat                                  | niel B. Stephens & Assoc. |                                       | Cl  | ient Sa | mple II                 | <b>D:</b> MW-5           |        |  |  |  |
| Project: Sal                                 | ty Dog                    | Collection Date: 6/19/2018 1:25:00 PM |     |         |                         |                          |        |  |  |  |
| Lab ID: 180                                  | 06C36-009                 | Matrix: AQUEOUS                       |     | Receiv  | ved Dat                 | e: 6/20/2018 11:26:00 AM |        |  |  |  |
| Analyses                                     |                           | Result                                | PQL | Qual    | Units                   | DF Date Analyzed         | Batch  |  |  |  |
| EPA METHO                                    | D 300.0: ANIONS           |                                       |     |         |                         | Analyst:                 | MRA    |  |  |  |
| Chloride                                     |                           | 840                                   | 50  | *       | mg/L                    | 100 6/26/2018 7:03:02 PM | R52265 |  |  |  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

...

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis         | IC.                    | Date Reported: 7/5/2018 |             |                            |         |  |  |  |
|-------------------------------------|------------------------|-------------------------|-------------|----------------------------|---------|--|--|--|
| CLIENT: Daniel B. Stephens & Assoc. | Client Sample ID: MW-3 |                         |             |                            |         |  |  |  |
| <b>Project:</b> Salty Dog           |                        | Со                      | llection Da | ate: 6/19/2018 2:05:00 PM  |         |  |  |  |
| Lab ID: 1806C36-010                 | Matrix: AQUEOU         | S R                     | eceived Da  | ate: 6/20/2018 11:26:00 AM | [       |  |  |  |
| Analyses                            | Result                 | PQL Q                   | Qual Units  | S DF Date Analyzed         | Batch   |  |  |  |
| EPA METHOD 300.0: ANIONS            |                        |                         |             | Analys                     | st: MRA |  |  |  |
| Chloride                            | 7300                   | 500                     | * mg/L      | 1E 7/2/2018 10:41:16 PM    | R52405  |  |  |  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environmental Analysis         | IC.  | Date Reported: 7/5/2018 |              |                          |        |  |
|-------------------------------------|--|-------------------------|--------------|--------------------------|--------|--|
| CLIENT: Daniel B. Stephens & Assoc. |  | Clie                    | nt Sample II | D:DBS-1R                 |        |  |
| <b>Project:</b> Salty Dog           | Collection Date: 6/19/2018 2:35:00 PM                |                         |              |                          |        |  |
| Lab ID: 1806C36-011                 | Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM |                         |              |                          |        |  |
| Analyses                            | Result   | PQL C                   | Qual Units   | DF Date Analyzed         | Batch  |  |
| EPA METHOD 300.0: ANIONS            |  |                         |              | Analys                   | t: MRA |  |
| Chloride                            | 190  | 50                      | mg/L         | 100 6/26/2018 8:20:12 PM | R52265 |  |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

...

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limitsPage 11 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Er  | nvironmental Analysis | с.                      | Date Reported: 7/5/2018 |         |         |               |                      |          |
|----------|-----------------------|-------------------------|-------------------------|---------|---------|---------------|----------------------|----------|
| CLIENT:  | Cl                    | Client Sample ID: PMW-1 |                         |         |         |               |                      |          |
| Project: | Salty Dog             |                         | (                       | Collect | ion Dat | <b>e:</b> 6/1 | 9/2018 3:20:00 PM    |          |
| Lab ID:  | 1806C36-012           | Matrix: AQUEOUS         |                         | Receiv  | ved Dat | <b>e:</b> 6/2 | .0/2018 11:26:00 AN  | 1        |
| Analyses |                       | Result                  | PQL                     | Qual    | Units   | DF            | Date Analyzed        | Batch    |
| EPA MET  | HOD 300.0: ANIONS     |                         |                         |         |         |               | Analy                | st: MRA  |
| Chloride |                       | 9600                    | 500                     | *       | mg/L    | 1E            | 7/2/2018 10:53:41 PM | A R52405 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 12 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 7/5/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: Brine **Project:** Salty Dog Collection Date: 6/19/2018 2:40:00 PM Lab ID: 1806C36-013 Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch SPECIFIC GRAVITY Analyst: JRR 0 6/26/2018 11:53:00 AM R52241 Specific Gravity 1.163 1 **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride 170000 5000 \* mg/L 1E 6/26/2018 9:11:39 PM R52265 SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: KS **Total Dissolved Solids** 238000 2000 \*D 6/26/2018 7:58:00 PM 38867 mg/L 1 SM4500-H+B / 9040C: PH Analyst: JRR 6/21/2018 12:10:03 PM R52161 pН 6.76 Н pH units 1 **EPA 6010B: TOTAL RECOVERABLE METALS** Analyst: MED Sodium 61000 1000 mg/L 1E 6/29/2018 6:03:12 PM 38878

| Qualifiers: |
|-------------|
|-------------|

- \* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limit Page 13 of 18 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Date Reported: 7/5/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Injection **Project:** Salty Dog Collection Date: 6/19/2018 2:55:00 PM Lab ID: 1806C36-014 Matrix: AQUEOUS Received Date: 6/20/2018 11:26:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch SPECIFIC GRAVITY Analyst: JRR 0 6/26/2018 11:53:00 AM R52241 Specific Gravity 0.9954 1 **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride 460 50 mg/L 100 6/26/2018 10:03:05 PM R52265 SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: KS **Total Dissolved Solids** 1040 20.0 6/26/2018 7:58:00 PM 38867 mg/L 1 SM4500-H+B / 9040C: PH Analyst: JRR pН 7.96 н pH units 1 6/21/2018 12:14:20 PM R52161

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 14 of 18
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Client:<br>Project: |      | Daniel B. Stephe<br>Salty Dog | ns & A    | SSOC.       |               |                 |           |               |      |          |      |
|---------------------|------|-------------------------------|-----------|-------------|---------------|-----------------|-----------|---------------|------|----------|------|
|                     |      |                               |           |             |               |                 |           |               |      |          |      |
| Sample ID           | ΜВ   | San                           | ip I ype: | MBLK        | les           | tCode: E        | PA Method | 300.0: Anions | 5    |          |      |
| Client ID:          | PBW  | Ba                            | tch ID:   | R52265      | F             | RunNo: <b>!</b> | 52265     |               |      |          |      |
| Prep Date:          |      | Analysi                       | s Date:   | 6/26/2018   | Ş             | SeqNo: 1        | 1712501   | Units: mg/L   |      |          |      |
| Analyte             |      | Resul                         | : PG      | QL SPK valu | e SPK Ref Val | %REC            | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |      | NE                            | 0.0.      | .50         |               |                 |           |               |      |          |      |
| Sample ID           | LCS  | San                           | рТуре:    | LCS         | Tes           | tCode: E        | PA Method | 300.0: Anions | 5    |          |      |
| Client ID:          | LCSW | Ba                            | tch ID:   | R52265      | F             | RunNo: <b>!</b> | 52265     |               |      |          |      |
| Prep Date:          |      | Analysi                       | s Date:   | 6/26/2018   | Ş             | SeqNo: 1        | 1712502   | Units: mg/L   |      |          |      |
| Analyte             |      | Resul                         | : PG      | L SPK valu  | e SPK Ref Val | %REC            | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |      | 5.1                           | 0.        | .50 5.00    | 0 0           | 103             | 90        | 110           |      |          |      |
| Sample ID           | MB   | San                           | рТуре:    | mblk        | Tes           | tCode: E        | PA Method | 300.0: Anions | 5    |          |      |
| Client ID:          | PBW  | Ba                            | tch ID:   | R52405      | F             | RunNo: <b>!</b> | 52405     |               |      |          |      |
| Prep Date:          |      | Analysi                       | s Date:   | 7/2/2018    | \$            | SeqNo: 1        | 1719515   | Units: mg/L   |      |          |      |
| Analyte             |      | Resul                         | : PG      | L SPK valu  | e SPK Ref Val | %REC            | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |      | NE                            | 0.        | .50         |               |                 |           |               |      |          |      |
| Sample ID           | LCS  | San                           | pType:    | lcs         | Tes           | tCode: E        | PA Method | 300.0: Anions | 5    |          |      |
| Client ID:          | LCSW | Ва                            | tch ID:   | R52405      | F             | RunNo: 🚦        | 52405     |               |      |          |      |
| Prep Date:          |      | Analysi                       | s Date:   | 7/2/2018    | \$            | SeqNo: 1        | 1719516   | Units: mg/L   |      |          |      |
| Analyte             |      | Resul                         | PC        | L SPK valu  | e SPK Ref Val | %REC            | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |      | 4.7                           | · 0.      | .50 5.00    | 0 0           | 94.4            | 90        | 110           |      |          |      |

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Page | 15 | of | 18 |
|------|----|----|----|
|      |    |    |    |

| Client:<br>Project: | Daniel I<br>Salty D | B. Stephens &<br>og | k Asso       | юс.       |             |           |           |                    |            |          |      |
|---------------------|---------------------|---------------------|--------------|-----------|-------------|-----------|-----------|--------------------|------------|----------|------|
| Sample ID           | MB-38878            | SampTy              | pe: <b>M</b> | BLK       | Test        | tCode: El | PA 6010B: | Total Recove       | able Meta  | als      |      |
| Client ID:          | PBW                 | Batch               | ID: 38       | 878       | R           | unNo: 5   | 2388      |                    |            |          |      |
| Prep Date:          | 6/25/2018           | Analysis Da         | ite: 6/      | 29/2018   | S           | eqNo: 1   | 716681    | Units: <b>mg/L</b> |            |          |      |
| Analyte             |                     | Result              | PQL          | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD       | RPDLimit | Qual |
| Sodium              |                     | ND                  | 1.0          |           |             |           |           |                    |            |          |      |
| Sample ID           | LCS-38878           | SampTy              | pe: LC       | s         | Test        | tCode: El | PA 6010B: | Total Recove       | rable Meta | als      |      |
| Client ID:          | LCSW                | Batch               | ID: 38       | 878       | R           | tunNo: 5  | 2388      |                    |            |          |      |
| Prep Date:          | 6/25/2018           | Analysis Da         | ite: 6/      | 29/2018   | S           | eqNo: 1   | 716683    | Units: <b>mg/L</b> |            |          |      |
| Analyte             |                     | Result              | PQL          | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD       | RPDLimit | Qual |
| Sodium              |                     | 51                  | 1.0          | 50.00     | 0           | 101       | 80        | 120                |            |          |      |

### **Qualifiers:**

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#### Dama 16

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Daniel B. Stephens & Assoc.

WO#: **1806C36** *05-Jul-18* 

| Project:         | Salty Dog       |                |              |                 |                |           |       |          |      |
|------------------|-----------------|----------------|--------------|-----------------|----------------|-----------|-------|----------|------|
| Sample ID        | 1806C36-013ADUP | SampType       | DUP          | TestCode        | : Specific Gra | vity      |       |          |      |
| Client ID:       | Brine           | Batch ID:      | R52241       | RunNo           | : 52241        |           |       |          |      |
| Prep Date:       |                 | Analysis Date: | 6/26/2018    | SeqNo           | : 1711825      | Units:    |       |          |      |
| Analyte          |                 | Result P       | QL SPK value | SPK Ref Val %RE | EC LowLimit    | HighLimit | %RPD  | RPDLimit | Qual |
| Specific Gravity | у               | 1.160          | 0            |                 |                |           | 0.207 | 20       |      |

### **Qualifiers:**

**Client:** 

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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| Client:<br>Project: | Danie<br>Salty | el B. Stephens<br>Dog | & Asso   | с.        |             |           |           |                    |           |          |      |
|---------------------|----------------|-----------------------|----------|-----------|-------------|-----------|-----------|--------------------|-----------|----------|------|
| Sample ID           | MB-38867       | SampT                 | ype: ME  | BLK       | Tes         | tCode: SI | W2540C MC | DD: Total Dis      | solved So | lids     |      |
| Client ID:          | PBW            | Batch                 | n ID: 38 | 867       | R           | RunNo: 5  | 2256      |                    |           |          |      |
| Prep Date:          | 6/25/2018      | Analysis D            | ate: 6/  | 26/2018   | S           | SeqNo: 1  | 712029    | Units: <b>mg/L</b> |           |          |      |
| Analyte             |                | Result                | PQL      | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD      | RPDLimit | Qual |
| Total Dissolved     | l Solids       | ND                    | 20.0     |           |             |           |           |                    |           |          |      |
| Sample ID           | LCS-38867      | SampT                 | ype: LC  | S         | Tes         | tCode: SI | M2540C MC | DD: Total Dis      | solved So | lids     |      |
| Client ID:          | LCSW           | Batch                 | n ID: 38 | 867       | R           | RunNo: 5  | 2256      |                    |           |          |      |
| Prep Date:          | 6/25/2018      | Analysis D            | ate: 6/  | 26/2018   | S           | SeqNo: 1  | 712030    | Units: <b>mg/L</b> |           |          |      |
| Analyte             |                | Result                | PQL      | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD      | RPDLimit | Qual |
| Total Dissolved     | l Solids       | 1010                  | 20.0     | 1000      | 0           | 101       | 80        | 120                |           |          |      |

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
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- P Sample pH Not In Range
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- W Sample container temperature is out of limit as specified

### Page 18 of 18

| HALL<br>ENVIRONMENTAL<br>ANALYSIS<br>LABORATORY  | Hall Environmental Analysis Labo<br>4901 Hawk<br>Albuquerque, NM<br>TEL: 505-345-3975 FAX: 505-34.<br>Website: www.hallenvironment | oratory<br>ins NE<br>87109 Sam<br>5-4107<br>al.com | ple Log-In Check I | List      |
|--|--|--|--------------------|-----------|
| Client Name: DBS   | Work Order Number: 1806C36   |  | RcptNo: 1          |           |
| Received By: Michelle Garcia 6/2   | 20/2018 11:26:00 AM  | Mirul Gp   | une                | ,         |
| Completed By: Ashley Gallegos 6/   | 20/2018 1:19:28 PM   | AJ   | TAR                | achalls   |
| Reviewed By: 20 6 (*   | La   | belec  | 1 by: JAD          | 00/24/10  |
| Chain of Custody   |  |  |                    |           |
| 1. Is Chain of Custody complete?   | Yes 🔽  | No 🗌   | Not Present        |           |
| 2. How was the sample delivered?   | <u>Client</u>  |  |                    |           |
| Log In<br>3. Was an attempt made to cool the samples?  | Yes 🗹  | No 🗌   |                    |           |
| 4. Were all samples received at a temperature of >   | 0° C to 6.0°C Yes 🗹  | No 🗌   |                    |           |
| 5. Sample(s) in proper container(s)?   | Yes 🔽  | No 🗌   |                    |           |
| 6. Sufficient sample volume for indicated test(s)?   | Yes 🔽  | No 🗌   |                    |           |
| 7. Are samples (except VOA and ONG) properly pre   | served? Yes 🔽  | No 🗔   |                    |           |
| 8. Was preservative added to bottles?  | Yes  | No 🔽   | NA 🗌               |           |
| 9. VOA vials have zero headspace?  | Yes  | No 🗌   | No VOA Vials 🗹     |           |
| 10. Were any sample containers received broken?  | Yes 🗀  | No 🗹 🗌   | # of preserved     |           |
| 11 Does paperwork match bottle labels?   | Vec 🖌  | No 🗔   | bottles checked    |           |
| (Note discrepancies on chain of custody)   | 103 🖂  |  | (<2 or >12 unless  | i noted)  |
| 12. Are matrices correctly identified on Chain of Custo  | ody? Yes 🗹   | No 🗌   | Adjusted?          |           |
| 13. Is it clear what analyses were requested?  | Yes 🗹  |  | Checked by: SR     |           |
| (If no, notify customer for authorization.)  | Tes 💌  |  |                    |           |
| Special Handling (if applicable)   |  |  |                    |           |
| 15. Was client notified of all discrepancies with this c   | order? Yes   | No 🗌   |                    |           |
| Person Notified:   | Date   |  |                    |           |
| By Whom:   | Via: 🗌 eMail 🗌   | Phone Sax [  | In Person          |           |
| Regarding:   |  |  |                    |           |
|  | ·····  | ^  | <u>6.7 11.43</u>   |           |
| 16. Additional remarks: Hator 3005   | analysis: Added  | appior. 0  | "- MC HNUS to 1    | UISIS lot |
| 17. <u>Cooler Information</u> VOT PRETENCE PH.<br><u>Cooler No Temp °C Condition</u> Seal In<br>1 3.4 Not Good | Held for ZY how<br>tact Seal No Seal Date  | rs prior to<br>Signed By                           | analysis           |           |

|               |              |             | aunenta.com<br>mercine NM 87109 |             | s Rennest  |                   | \$,E                 | 104                         | 082          | / 80<br>/ 80<br>/ 7  | o Y<br>(0/          | (AOV) 810m<br>3260B (VOA)<br>7-im92) 0528<br>7-im92) 0528<br>7-im92) 0528 |           |           |       |           |       |       |        |       |          |      |        |           |                         |  |
|---------------|--------------|-------------|---------------------------------|-------------|------------|-------------------|----------------------|-----------------------------|--------------|----------------------|---------------------|---|-----------|-----------|-------|-----------|-------|-------|--------|-------|----------|------|--------|-----------|-------------------------|--|
|               | HALL EN      |             | vition - Albur                  | 345-3975 Ea | Analys     |                   | (                    | SWI                         | s 0.         | 728                  |                     | DB (Method<br>0158) 2'HAC<br>1028) 2'HAC<br>1028) 2'HAC                   |           |           |       | ×         |       |       |        | ×     |          |      |        | <u> </u>  | -                       |  |
|               |              |             | 4901 Haw                        | Tel 505-    |            | (C<br>(۸)         | MB(121)              | )8) 8<br>89)<br>101         | NB.          | IT +<br>IT +<br>( O5 | 4 4.<br>(GE<br>3E - | BTEX + MTE<br>BTEX + MTE<br>TPH 8015B (<br>TPH (Method<br>101             |           |           |       |           |       |       |        |       |          |      |        |           | Remarks:                |  |
|               |              |             | 6                               |             | 90         |                   | _                    |                             | LK<br>K      |                      | X.L                 | HEAL NO.  | - 00-     | -002      | -003  | -004      | 500-  | 900-  | -00-   | -008  | -000-    | 010  | 110-   | -012      | Date Time F             | V Daţte ≿ Time   |
| d Time:       | d 🗆 Rush     |             | Ity Do                          |             | 2110       | ager:             | o que                |                             | 7. Zh (07    | Tres                 | Iperature;          | Preservative<br>Type  | WA        | ¢         |       |           |       |       |        |       |          |      |        |           | Am                      |  |
| Turn-Around   | (C) Standard | Project Nam | б<br>Л                          | Project #:  | ESD8       | Project Man       | JJ. AVG              |                             | Sampler: 🖉   | On Ice:              | Sample Tem          | Container<br>Type and #   | Yloct     | -7<br>- ¥ |       |           |       |       |        |       |          |      |        |           | Received by:            | Kecelved by:   |
| ustody Record |              |             | O Academr Rd NE                 |             | aopp-e     | LO Geotlogic. com | teregeoriogic. com   | □ Level 4 (Full Validation) |              | er                   |                     | Sample Request ID   | D35-5     | DB5-3     | DBS-2 | DBS-4     | DBS-9 | DB5-8 | DBS-10 | 035-6 | MW-5     | MW-3 | DB5-1R | FMW-X-WWZ | ed by:                  | in the second seco |
| ain-of-C      | 13.5 & A     | <br> <br>   | Iress: 602                      |             | 68-50      | # Daya co         | <b>MEDIO</b><br>age: |                             | u            | Dth                  | oe)                 | ne Matrix   | 00 GW     | [ az      | 15    | 06        | 2     | S     | ~      | ~     | <u>د</u> | 2    | 35     | 0         | Relinquish              | Keinuqua   |
| Chê           | Client:      |             | Mailing Add                     | ABG         | Phone #: 5 | email or Fay      | QA/QC Pack           | <b>Sandard</b>              | Accreditatio |                      | 🗆 EDD (Tyl          | Date  | 18.18 171 | E         |       | .19.18 09 | 13    | 501   |        | 114   | 132      | 140  | :71    | 1 152     | Date: Time:<br>20765/12 |  |

| Chain-of-Custody Record  | Turn-Around Time:   |  |
|--|---|--|
| nt DBS A   | 🗗 Standard 🛛 Rush   |  |
|  | Project Name:   |  |
| ng Address: 6020 A cademy RD NG                                    | & SALTY DOG   | 4901 Hawkins NE - Albuquerque, NM 87109  |
|  | Project #:  | Tel. 505-345-3975 Fax 505-345-4107   |
| 1e # 505-822-9400  | ESD8.0118.06  | Analysis Request   |
| Il or Fax#. JAyarbe @ geo-logie. Co                                | d Project Manager:  | ()<br>()<br>()<br>()<br>()<br>()   |
| IC Package: MEbrozen Orgeo-logic. 50                               | The second  | 1051<br>(MF  |
| tandard  | 0. Marbe  | 8) s<br>(Od<br>(Od<br>(Od<br>(Od)<br>(Od<br>(Od)<br>(Od)<br>(Od)<br>(Od  |
| editation<br>FI AP Dthar   | Sampler. M. ZbcoZck   | N)<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social<br>Social |
|  |   | E + E + E + E + E + E + E + E - E - E -  |
|  | sample riemperature   | 1181<br>1181<br>1181<br>100<br>100<br>100<br>100<br>100<br>100<br>1  |
| te Time Matrix Sample Request ID                                   | Container Preservative HEAL No.<br>Type and # Type (SDL0C3 U)             | Aric Bubble<br>BTEX + M<br>BTEX + M<br>BTEX + M<br>TPH 8015<br>TPH (Meth<br>B0B (Met   |
| 3 1440 6U BC:NE  | 3 MW 1 HUG -013   |  |
| 81855 GU Injection   | 2 PUL NA DIA  |  |
| 5  |   |  |
|  |   |  |
|  |   |  |
|  |   |  |
|  |   |  |
|  |   |  |
|  |   |  |
|  |   |  |
| /  |   |  |
|  |   |  |
| 8 1136 Relinquished by   | Received by: - Date Time  | Remarks:   |
| Time: Relargarished by   | Received by: Date / Time  |  |
| If necessary, samples submitted to Hall Environmental may be subco | contracted to other accredited laboratories. This serves as notice of thi | s possibility. Any sub-contracted data will be clearly notated on the analytical report.   |



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

November 27, 2018

John Ayarbe Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109 TEL: (505) 822-9400 FAX (505) 822-8877

RE: Salty Dog

OrderNo.: 1811579

Dear John Ayarbe:

Hall Environmental Analysis Laboratory received 13 sample(s) on 11/9/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** 

Lab Order: 1811579

Page 1 of 8

| Hall Environ              | imental Analysis Lat                     | oratory, | Inc. |         |         | Date Reported: 11/2         | 27/2018                            |
|---------------------------|--|----------|------|---------|---------|-----------------------------|------------------------------------|
| CLIENT:<br>Project:       | Daniel B. Stephens & Assoc.<br>Salty Dog |          |      |         | Ι       | Lab Order: 1811             | 579                                |
| Lab ID:                   | 1811579-001                              |          | С    | ollecti | on Date | e: 11/8/2018 10:00:00       | AM                                 |
| <b>Client Sample ID:</b>  | DBS-8                                    |          |      |         | Matrix  | : AQUEOUS                   |                                    |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF Date Analyzed            | Batch ID                           |
| EPA METHOD 30<br>Chloride | 0.0: ANIONS                              | 30       | 5.0  |         | mg/L    | Ar<br>10 11/13/2018 12:34   | alyst: <b>smb</b><br>:44 PM R55635 |
| Lab ID:                   | 1811579-002                              |          | C    | ollecti | on Date | e: 11/8/2018 10:30:00       | AM                                 |
| <b>Client Sample ID:</b>  | DBS-10                                   |          |      |         | Matrix  | : AQUEOUS                   |                                    |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF Date Analyzed            | Batch ID                           |
| EPA METHOD 30<br>Chloride | 0.0: ANIONS                              | 590      | 50   | *       | mg/L    | Ar<br>100 11/13/2018 1:13:1 | alyst: <b>smb</b><br>8 PM R55635   |
| Lab ID:                   | 1811579-003                              |          | С    | ollecti | on Date | e: 11/8/2018 11:10:00       | AM                                 |
| <b>Client Sample ID:</b>  | DBS-6                                    |          |      |         | Matrix  | : AQUEOUS                   |                                    |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF Date Analyzed            | Batch ID                           |
| EPA METHOD 30             | 0.0: ANIONS                              |          |      |         |         | Ar                          | alyst: <b>smb</b>                  |
| Chloride                  |  | 190      | 50   |         | mg/L    | 100 11/13/2018 1:39:0       | 01 PM R55635                       |
| Lab ID:                   | 1811579-004                              |          | С    | ollecti | on Date | e: 11/8/2018 11:40:00       | АМ                                 |
| Client Sample ID:         | MW-5                                     |          |      |         | Matrix  | : AQUEOUS                   |                                    |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF Date Analyzed            | Batch ID                           |
| EPA METHOD 30<br>Chloride | 0.0: ANIONS                              | 680      | 50   | *       | mg/L    | Ar<br>100 11/13/2018 2:04:4 | alyst: <b>smb</b><br>I5 PM R55635  |
| Lab ID:                   | 1811579-005                              |          | С    | ollecti | on Date | e: 11/8/2018 12:30:00       | PM                                 |
| <b>Client Sample ID:</b>  | MW-3                                     |          |      |         | Matrix  | : AQUEOUS                   |                                    |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF Date Analyzed            | Batch ID                           |
| EPA METHOD 30             | 0.0: ANIONS                              |          |      |         |         | Ar                          | alyst: <b>smb</b>                  |
| Chloride                  |  | 8000     | 500  | *       | mg/L    | 1E 11/19/2018 2:05:5        | 58 PM R55763                       |

Hall Environmental Analysis I aboratory Inc

| Qualifiers: | *   | Value exceeds Maximum Contaminant Level.           | В  | Analyte detected in the associated Method I | Blank |
|-------------|-----|--|----|---|-------|
|             | D   | Sample Diluted Due to Matrix                       | E  | Value above quantitation range              |       |
|             | Н   | Holding times for preparation or analysis exceeded | J  | Analyte detected below quantitation limits  | Pa    |
|             | ND  | Not Detected at the Reporting Limit                | Р  | Sample pH Not In Range                      | I a   |
|             | PQL | Practical Quanitative Limit                        | RL | Reporting Detection Limit                   |       |

**Analytical Report** 

Lab Order: 1811579

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| Hall Environ              | imental Analysis Lat                     | oratory, | Inc. |         |         | Ι            | Date Reported: 1 | 1/27/20            | 18                     |
|---------------------------|--|----------|------|---------|---------|--------------|------------------|--------------------|------------------------|
| CLIENT:<br>Project:       | Daniel B. Stephens & Assoc.<br>Salty Dog |          |      |         | Ι       | Lab C        | <b>)rder:</b> 18 | 11579              |                        |
| Lab ID:                   | 1811579-006                              |          | C    | ollecti | on Date | e: 11        | /8/2018 1:10:00  | ) PM               |                        |
| Client Sample ID:         | DBS-3                                    |          |      |         | Matrix  | <b>k:</b> A( | QUEOUS           |                    |                        |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF           | Date Analyze     | d Ba               | atch ID                |
| EPA METHOD 30<br>Chloride | 0.0: ANIONS                              | 46       | 5.0  |         | mg/L    | 10           | 11/13/2018 3:0   | Analyst<br>9:03 PM | : <b>smb</b><br>R55635 |
| Lab ID:                   | 1811579-007                              |          | C    | ollecti | on Date | <b>e:</b> 11 | /8/2018 1:45:00  | ) PM               |                        |
| Client Sample ID:         | DBS-4                                    |          |      |         | Matrix  | <b>:</b> A(  | QUEOUS           |                    |                        |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF           | Date Analyze     | d Ba               | atch ID                |
| EPA METHOD 30<br>Chloride | 0.0: ANIONS                              | 35       | 5.0  |         | mg/L    | 10           | 11/13/2018 4:0   | Analyst<br>):29 PM | : <b>smb</b><br>R55635 |
| Lab ID:                   | 1811579-008                              |          | C    | ollecti | on Date | <b>e:</b> 11 | /8/2018 1:55:00  | ) PM               |                        |
| Client Sample ID:         | DBS-2                                    |          |      |         | Matrix  | <b>:</b> A(  | QUEOUS           |                    |                        |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF           | Date Analyze     | d Ba               | atch ID                |
| EPA METHOD 30             | 0.0: ANIONS                              |          |      |         |         |              |                  | Analyst            | : smb                  |
| Chloride                  |  | 47       | 5.0  |         | mg/L    | 10           | 11/13/2018 4:2   | 5:13 PM            | R55635                 |
| Lab ID:                   | 1811579-009                              |          | C    | ollecti | on Date | <b>e:</b> 11 | /8/2018 2:15:00  | ) PM               |                        |
| Client Sample ID:         | DBS-5                                    |          |      |         | Matrix  | <b>k:</b> A( | QUEOUS           |                    |                        |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF           | Date Analyze     | d Ba               | atch ID                |
| EPA METHOD 30<br>Chloride | 0.0: ANIONS                              | 170      | 5.0  |         | mg/L    | 10           | 11/13/2018 5:1   | Analyst<br>7:39 PM | : <b>smb</b><br>R55635 |
| Lab ID:                   | 1811579-010                              |          | C    | ollecti | on Date | e: 11        | /8/2018 2:35:00  | ) PM               |                        |
| <b>Client Sample ID:</b>  | DBS-1R                                   |          |      |         | Matrix  | <b>:</b> A(  | QUEOUS           |                    |                        |
| Analyses                  |  | Result   | PQL  | Qual    | Units   | DF           | Date Analyze     | d Ba               | atch ID                |
| EPA METHOD 30             | 0.0: ANIONS                              |          |      | _       |         |              |                  | Analyst            | : smb                  |
| Chloride                  |  | 180      | 5.0  |         | mg/L    | 10           | 11/13/2018 6:0   | 9:06 PM            | R55635                 |

Hall Environmental Analysis I aboratory Inc

| Qualifiers: | *   | Value exceeds Maximum Contaminant Level.           | В  | Analyte detected in the associated Method H | Blank |
|-------------|-----|--|----|---|-------|
|             | D   | Sample Diluted Due to Matrix                       | Е  | Value above quantitation range              |       |
|             | Н   | Holding times for preparation or analysis exceeded | J  | Analyte detected below quantitation limits  | Pa    |
|             | ND  | Not Detected at the Reporting Limit                | Р  | Sample pH Not In Range                      | I a   |
|             | PQL | Practical Quanitative Limit                        | RL | Reporting Detection Limit                   |       |

Analytical Report

Lab Order: 1811579

Date Reported: 11/27/2018

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| CLIENT:<br>Project:     | Daniel B. Stephens & Assoc.<br>Salty Dog |        |       |         | L        | ab O | order: 1       | 811579     |          |
|-------------------------|--|--------|-------|---------|----------|------|----------------|------------|----------|
| Lab ID:                 | 1811579-011                              |        | C     | ollecti | on Date: | 11,  | /8/2018 2:50:  | 00 PM      |          |
| Client Sample ID        | : Injection                              |        |       |         | Matrix:  | AQ   | QUEOUS         |            |          |
| Analyses                |  | Result | PQL   | Qual    | Units    | DF   | Date Analyz    | zed Ba     | atch ID  |
| SPECIFIC GRAV           | ΊΤΥ                                      |        |       |         |          |      |                | Analyst    | : JRR    |
| Specific Gravity        |  | 0.9989 | 0     |         |          | 1    | 11/16/2018 1   | :26:00 PM  | R55711   |
| EPA METHOD 3            | 00.0: ANIONS                             |        |       |         |          |      |                | Analyst    | : smb    |
| Chloride                |  | 370    | 50    | *       | mg/L     | 100  | 0 11/13/2018 6 | :47:41 PM  | R55635   |
| SM2540C MOD:            | TOTAL DISSOLVED SOLIDS                   |        |       |         |          |      |                | Analyst    | KS       |
| Total Dissolved S       | Solids                                   | 981    | 20.0  | *       | mg/L     | 1    | 11/19/2018 4   | :51:00 PM  | 41562    |
| SM4500-H+B / 9          | 040C: PH                                 |        |       |         |          |      |                | Analyst    | JRR      |
| рН                      |  | 7.75   |       | Н       | pH units | 1    | 11/15/2018 1   | 1:52:16 Al | M R55698 |
| Lab ID:                 | 1811579-012                              |        | C     | ollecti | on Date: | 11/  | /8/2018 3:30:  | 00 PM      |          |
| <b>Client Sample ID</b> | <b>PMW-1</b>                             |        |       |         | Matrix:  | AQ   | QUEOUS         |            |          |
| Analyses                |  | Result | PQL   | Qual    | Units    | DF   | Date Analyz    | zed Ba     | atch ID  |
| EPA METHOD 3            | 00.0: ANIONS                             |        |       |         |          |      |                | Analyst    | : smb    |
| Chloride                |  | 10000  | 500   | *       | mg/L     | 1E   | 11/13/2018 7   | :13:23 PM  | R55635   |
| Lab ID:                 | 1811579-013                              |        | C     | ollecti | on Date: | 11/  | /8/2018 4:10:  | 00 PM      |          |
| <b>Client Sample ID</b> | : Brine                                  |        |       |         | Matrix:  | AQ   | QUEOUS         |            |          |
| Analyses                |  | Result | PQL   | Qual    | Units    | DF   | Date Analyz    | zed Ba     | atch ID  |
| SPECIFIC GRAV           | /ITY                                     |        |       |         |          |      |                | Analyst    | JRR      |
| Specific Gravity        |  | 1.195  | 0     |         |          | 1    | 11/16/2018 1   | :26:00 PM  | R55711   |
| EPA METHOD 3            | 00.0: ANIONS                             |        |       |         |          |      |                | Analyst    | MRA      |
| Chloride                |  | 210000 | 10000 | *       | mg/L     | 2E   | 11/14/2018 6   | :22:42 PM  | R55641   |
| SM2540C MOD:            | TOTAL DISSOLVED SOLIDS                   |        |       |         |          |      |                | Analyst    | KS       |
| Total Dissolved S       | Solids                                   | 309000 | 2000  | *D      | mg/L     | 1    | 11/19/2018 4   | :51:00 PM  | 41562    |
| SM4500-H+B / 9          | 040C: PH                                 |        |       |         |          |      |                | Analyst    | JRR      |
| pН                      |  | 7.46   |       | Н       | pH units | 1    | 11/15/2018 1   | 1:56:49 Al | M R55698 |
| EPA METHOD 20           | 00.7: METALS                             |        |       |         |          |      |                | Analyst    | : pmf    |
| Sodium                  |  | 82000  | 1000  |         | ma/L     | 1E   | 11/19/2018 4   | :03:44 PM  | 41554    |

Hall Environmental Analysis Laboratory, Inc.

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:** \* Value exceeds Maximum Contaminant Level. В Analyte detected in the associated Method Blank D Sample Diluted Due to Matrix Е Value above quantitation range Н Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit Р Sample pH Not In Range PQL Practical Quanitative Limit RL Reporting Detection Limit

| Client:    | Daniel B.   | Stephens   | & Asso          | DC.       |             |          |           |               |      |          |      |
|------------|-------------|------------|-----------------|-----------|-------------|----------|-----------|---------------|------|----------|------|
| Project:   | Salty Dog   | Ş          |                 |           |             |          |           |               |      |          |      |
| Sample ID  | MB-41554    | SampT      | ype: MI         | BLK       | Tes         | tCode: E | PA Method | 200.7: Metals |      |          |      |
| Client ID: | PBW         | Batch      | n ID: <b>41</b> | 554       | R           | RunNo: 5 | 5720      |               |      |          |      |
| Prep Date: | 11/15/2018  | Analysis D | ate: 1          | 1/16/2018 | S           | SeqNo: 1 | 856689    | Units: mg/L   |      |          |      |
| Analyte    |             | Result     | PQL             | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Sodium     |             | ND         | 1.0             |           |             |          |           |               |      |          |      |
| Sample ID  | LLLCS-41554 | SampT      | ype: LC         | SLL       | Tes         | tCode: E | PA Method | 200.7: Metals |      |          |      |
| Client ID: | BatchQC     | Batch      | n ID: <b>41</b> | 554       | R           | lunNo: 5 | 5720      |               |      |          |      |
| Prep Date: | 11/15/2018  | Analysis D | ate: 1          | 1/16/2018 | S           | SeqNo: 1 | 856690    | Units: mg/L   |      |          |      |
| Analyte    |             | Result     | PQL             | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Sodium     |             | ND         | 1.0             | 0.5000    | 0           | 150      | 50        | 150           |      |          |      |
| Sample ID  | LCS-41554   | SampT      | ype: LC         | s         | Tes         | tCode: E | PA Method | 200.7: Metals |      |          |      |
| Client ID: | LCSW        | Batch      | n ID: 41        | 554       | R           | unNo: 5  | 5720      |               |      |          |      |
| Prep Date: | 11/15/2018  | Analysis D | ate: 1          | 1/16/2018 | S           | SeqNo: 1 | 856691    | Units: mg/L   |      |          |      |
| Analyte    |             | Result     | PQL             | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Sodium     |             | 51         | 1.0             | 50.00     | 0           | 103      | 85        | 115           |      |          |      |

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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| Client:<br>Project: | Daniel B.<br>Salty Dog | Stephens<br>g | & Asso           | DC.       |             |           |           |                    |      |          |      |
|---------------------|------------------------|---------------|------------------|-----------|-------------|-----------|-----------|--------------------|------|----------|------|
| Sample ID           | 1811579-006AMS         | SampT         | Type: M          | S         | Tes         | tCode: El | PA Method | 300.0: Anions      | 6    |          |      |
| Client ID:          | DBS-3                  | Batcl         | h ID: R          | 55635     | F           | RunNo: 5  | 5635      |                    |      |          |      |
| Prep Date:          |                        | Analysis D    | Date: 1          | 1/13/2018 | S           | SeqNo: 1  | 853450    | Units: mg/L        |      |          |      |
| Analyte             |                        | Result        | PQL              | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual |
| Chloride            |                        | 95            | 5.0              | 50.00     | 45.70       | 99.0      | 77.5      | 116                |      |          |      |
| Sample ID           | 1811579-006AMSE        | ) Samp1       | Гуре: М          | SD        | Tes         | tCode: El | PA Method | 300.0: Anions      | 6    |          |      |
| Client ID:          | DBS-3                  | Batcl         | h ID: R          | 55635     | F           | RunNo: 5  | 5635      |                    |      |          |      |
| Prep Date:          |                        | Analysis D    | Date: 1          | 1/13/2018 | S           | SeqNo: 1  | 853451    | Units: mg/L        |      |          |      |
| Analyte             |                        | Result        | PQL              | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual |
| Chloride            |                        | 93            | 5.0              | 50.00     | 45.70       | 94.7      | 77.5      | 116                | 2.30 | 20       |      |
| Sample ID           | МВ                     | SampT         | Гуре: М          | BLK       | Tes         | tCode: El | PA Method | 300.0: Anions      | 6    |          |      |
| Client ID:          | PBW                    | Batcl         | h ID: <b>R</b> ! | 55635     | F           | RunNo: 5  | 5635      |                    |      |          |      |
| Prep Date:          |                        | Analysis D    | Date: 1          | 1/13/2018 | S           | SeqNo: 1  | 853461    | Units: mg/L        |      |          |      |
| Analyte             |                        | Result        | PQL              | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual |
| Chloride            |                        | ND            | 0.50             |           |             |           |           |                    |      |          |      |
| Sample ID           | LCS                    | SampT         | Гуре: Ц          | cs        | Tes         | tCode: El | PA Method | 300.0: Anions      | 5    |          |      |
| Client ID:          | LCSW                   | Batcl         | h ID: R          | 55635     | F           | RunNo: 5  | 5635      |                    |      |          |      |
| Prep Date:          |                        | Analysis D    | Date: 1          | 1/13/2018 | 5           | SeqNo: 1  | 853462    | Units: <b>mg/L</b> |      |          |      |
| Analyte             |                        | Result        | PQL              | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual |
| Chloride            |                        | 4.9           | 0.50             | 5.000     | 0           | 97.6      | 90        | 110                |      |          |      |
| Sample ID           | МВ                     | SampT         | Гуре: <b>т</b>   | blk       | Tes         | tCode: El | PA Method | 300.0: Anions      | 6    |          |      |
| Client ID:          | PBW                    | Batcl         | h ID: R          | 55641     | F           | RunNo: 5  | 5641      |                    |      |          |      |
| Prep Date:          |                        | Analysis D    | Date: 1          | 1/14/2018 | 5           | SeqNo: 1  | 853987    | Units: mg/L        |      |          |      |
| Analyte             |                        | Result        | PQL              | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual |
| Chloride            |                        | ND            | 0.50             |           |             |           |           |                    |      |          |      |
| Sample ID           | LCS                    | SampT         | Type: Ic         | s         | Tes         | tCode: El | PA Method | 300.0: Anions      | 6    |          |      |
| Client ID:          | LCSW                   | Batcl         | h ID: R          | 55641     | F           | RunNo: 5  | 5641      |                    |      |          |      |
| Prep Date:          |                        | Analysis D    | Date: 1          | 1/14/2018 | S           | SeqNo: 1  | 853988    | Units: mg/L        |      |          |      |
| Analyte             |                        | Result        | PQL              | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual |
| Chloride            |                        | 4.8           | 0.50             | 5.000     | 0           | 96.6      | 90        | 110                |      |          |      |

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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| Client:<br>Project: |      | Daniel B. Stephens<br>Salty Dog | & Asso          | ж.        |             |           |           |               |      |          |      |
|---------------------|------|---------------------------------|-----------------|-----------|-------------|-----------|-----------|---------------|------|----------|------|
| Sample ID           | MB   | Samp                            | Гуре: М         | BLK       | Tes         | tCode: EF | PA Method | 300.0: Anions | ;    |          |      |
| Client ID:          | PBW  | Bato                            | h ID: R         | 55763     | F           | RunNo: 55 | 5763      |               |      |          |      |
| Prep Date:          |      | Analysis I                      | Date: 1         | 1/19/2018 | S           | SeqNo: 18 | 358894    | Units: mg/L   |      |          |      |
| Analyte             |      | Result                          | PQL             | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |      | ND                              | 0.50            |           |             |           |           |               |      |          |      |
| Sample ID           | LCS  | Samp                            | Гуре: <b>L(</b> | s         | Tes         | tCode: EF | PA Method | 300.0: Anions | 6    |          |      |
| Client ID:          | LCSW | Bato                            | h ID: R         | 55763     | F           | RunNo: 55 | 5763      |               |      |          |      |
| Prep Date:          |      | Analysis I                      | Date: 1         | 1/19/2018 | 5           | SeqNo: 18 | 358896    | Units: mg/L   |      |          |      |
| Analyte             |      | Result                          | PQL             | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |      | 4.7                             | 0.50            | 5.000     | 0           | 93.6      | 90        | 110           |      |          |      |

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
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- E Value above quantitation range
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- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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| Client:          | Daniel B.       | Stephens   | & Asso   | oc.       |             |                 |              |           |       |          |      |
|------------------|-----------------|------------|----------|-----------|-------------|-----------------|--------------|-----------|-------|----------|------|
| Project:         | Salty Dog       | 5          |          |           |             |                 |              |           |       |          |      |
| Sample ID        | 1811579-011ADUF | • SampT    | ype: DL  | JP        | Tes         | tCode: <b>S</b> | pecific Grav | vity      |       |          |      |
| Client ID:       | Injection       | Batch      | n ID: R5 | 5711      | R           | RunNo: 5        | 5711         |           |       |          |      |
| Prep Date:       |                 | Analysis D | Date: 1  | 1/16/2018 | S           | SeqNo: 1        | 856564       | Units:    |       |          |      |
| Analyte          |                 | Result     | PQL      | SPK value | SPK Ref Val | %REC            | LowLimit     | HighLimit | %RPD  | RPDLimit | Qual |
| Specific Gravity | ý               | 0.9950     | 0        |           |             |                 |              |           | 0.391 | 20       |      |

**Qualifiers:** 

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Client:<br>Project:     | Daniel<br>Salty I | B. Stephens    | & Asso                           | юс.        |             |                       |                   |                    |           |          |      |
|-------------------------|-------------------|----------------|----------------------------------|------------|-------------|-----------------------|-------------------|--------------------|-----------|----------|------|
| Sample ID<br>Client ID: | MB-41562<br>PBW   | SampT<br>Batcl | ype: <b>Mi</b><br>DID: <b>41</b> | 3LK<br>562 | Tes         | tCode: SI<br>RunNo: 5 | M2540C MC<br>5750 | DD: Total Dis      | solved So | lids     |      |
| Prep Date:              | 11/15/2018        | Analysis D     | ate: 1                           | 1/19/2018  | S           | SeqNo: 1              | 857855            | Units: <b>mg/L</b> |           |          |      |
| Analyte                 |                   | Result         | PQL                              | SPK value  | SPK Ref Val | %REC                  | LowLimit          | HighLimit          | %RPD      | RPDLimit | Qual |
| Total Dissolved         | d Solids          | ND             | 20.0                             |            |             |                       |                   |                    |           |          |      |
| Sample ID               | LCS-41562         | SampT          | ype: LC                          | s          | Tes         | tCode: SI             | M2540C MC         | DD: Total Dis      | solved So | lids     |      |
| Client ID:              | LCSW              | Batch          | n ID: <b>41</b>                  | 562        | R           | RunNo: 5              | 5750              |                    |           |          |      |
| Prep Date:              | 11/15/2018        | Analysis D     | ate: 1                           | 1/19/2018  | S           | SeqNo: 1              | 857856            | Units: <b>mg/L</b> |           |          |      |
| Analyte                 |                   | Result         | PQL                              | SPK value  | SPK Ref Val | %REC                  | LowLimit          | HighLimit          | %RPD      | RPDLimit | Qual |
| Total Dissolved         | d Solids          | 1020           | 20.0                             | 1000       | 0           | 102                   | 80                | 120                |           |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1811579 27-Nov-18

| ANALYSIS<br>LABORATORY                                      | FAL                             | TEL: 503<br>Websu | Alfingi<br>Alfingi<br>A45-3975 F.<br>e. www.balle | 1901 H<br>1901 H<br>Rerique,<br>1X: 503<br>Invironi | Laboratory<br>awkins NE<br>NA 87109<br>-345-4107<br>wental.com | Sar      | mple Log-In Che | eck List      |
|---|---------------------------------|-------------------|---|---|--|----------|-----------------|---------------|
| Client Name: DBS  |                                 | Work Order        | Number 1  | 81157   | 9  |          | ReptNo: 1       |               |
| Received By Ashley G  | allegos                         | 11/9/2018 8:4     | 6:00 AM   |   | st   | 67       |                 |               |
| Completed By Ashley C                                       | allegos                         | 11/12/2018 9      | 49:32 AM  |   | A  |          |                 |               |
| Reviewed By ENK   | 1                               | 11/12/1           | 8   |   |  | . 0      |                 |               |
| Chain of Custody  | 11/12/08                        |                   |   |   |  |          |                 |               |
| 1. Is Chain of Custody com                                  | plete?                          |                   | Y   | 'es 🗹   | 1. 1   | No 🗌     | Not Present     |               |
| 2. How was the sample del                                   | vered?                          |                   | C   | lient   |  |          |                 |               |
| Log In  |                                 |                   |   |   |  |          |                 |               |
| <ol><li>Was an attempt made to</li></ol>                    | cool the samples?               |                   | Y   | es 🗸  | 1  | No 🗌     | NA 🗌            |               |
| 4. Were all samples receive                                 | d at a temperature :            | of >0° C to 8.0'  | C Y   | es 🗌  |  | No 🗹     | NA              |               |
|   |                                 |                   | A   | parov   | ed by clien  | t.       |                 |               |
| 5. Sample(s) in proper cont.                                | a ner(s)7                       |                   | Y   | es 🔽  | - d  | n ol     |                 |               |
| 6, Sufficient sample volume                                 | for indicated test(s)           | 7                 | Y   | as 🗸  | N  | 0        |                 |               |
| 7 Are samples lexcept VOA                                   | and ONG) properly               | preserved?        | Y   | s 🖌   | N  | lo 🔲     |                 |               |
| 8. Was preservative added t                                 | a bottles?                      |                   | Y   | 95 _  | N  | io 🗹     | NA 🗌            |               |
| 9. VOA vials have zero nead                                 | space?                          |                   | Y   | es 🗍  | N  | la 🗌     | No VOA Vials V  |               |
| 10. Were any sample contain                                 | ers received broker             | 7                 | Y   | es 🗆  | 1  | 10 1     | # of preserved  |               |
| 11 Does paperwork match be<br>(Note discrepancies on ch     | offie labels?                   |                   | Y   | <b>v</b>  | N  | la 🗐     | for pH (Dor >12 | Inless noted) |
| 2 Are matrices correctly ide                                | ntified on Chain of C           | Suboteu:          | Ye  | s V   | N  | αΠ       | Adjusted? ()    | 0             |
| 3. Is it clear what analyses v                              | are requested?                  |                   | Ye  | s V   | N  |          |                 |               |
| 4. Were all holding times ab<br>(If no, notify customer for | e to be mel?<br>authorization ) |                   |   | s 🗸   | N  |          | Checked by JO   | 1/12/18       |
| pecial Handling (if ap                                      | plicable)                       |                   |   |   |  |          |                 |               |
| 15. Was client notified of all o                            | liscrepancies with ti           | nis order?        | Y   | es 🗹  | ,  | lo 🗌     | NA 🗆            |               |
| Person Notified:  | Mike Z                          |                   | Date:   |   | 11/1   | 2/2018   |                 |               |
| By Whom:  | Ashley Gallegos/Is              | aiah Orti         | Via: 🔲 u  | Mail  | Phone  | Fax      | V In Person     |               |
| Regarding.  | High temp. No san               | ple for DBS-11    | received sa                                       | ample i   | DBS-6 not I  | isted on | chain.          |               |
| Client Instructions:  | Proceed with analy              | sis Chage san     | ple DBS-11  | to rea  | d DBS-6  |          |                 |               |
| 16 Additional remarks:                                      |                                 | To al             | 1.0   |   |  |          |                 |               |
| 17. Cooler Information<br>Cooler No Temp *C                 | Condition Se                    | ai Intact   Seal  | No Sea  | Date  | Signe  | d By     |                 |               |

| WISH         WISH         Constraint         Constraint         Constraint         Constraint         Project (Constraint)         Proje  | and Thomas The                           |             | 1             | Ē            | ALL         | N N     | Ro           | NMENT   | AL' L |
|---|--|-------------|---------------|--------------|-------------|---------|--------------|---------|-------|
| Mailing Acdress:         Project Proje  | CONSIGNATION DI MUSIT                    |             | t             | AI           | VIALY       | STS     | 1 AF         | SORATO  | NAV   |
| Mailing Acdress:     Mailing Acdress:       Phone #: SOS - & 2.2 -9 YO D       email or Fax#: M7 ExoTe Nog vor log %c, tem Proje       covidC Pack#ge:       I Standard       I Standard </th <th>Project Name:</th> <th></th> <th></th> <th></th> <th>collect www</th> <th>vironm</th> <th>antal oc</th> <th></th> <th></th>   | Project Name:                            |             |               |              | collect www | vironm  | antal oc     |         |       |
| Phone #: SoS - § 22 - 9 YO T         Project Rose / SoS - § 22 - 9 YO T           email or Fax#. <i>M7E KOZ e YO TO</i> email or Fax#. <i>M7E KOZ e YO TO</i> OA/OC Packages.         I Level 4 (Full Validation)           Accreditation:         I Az Compliance           Accreditation:         I Az Compliance           I Standard         I Level 4 (Full Validation)           Accreditation:         I Az Compliance           I NELAC         I Other           I NELAC         I Level 4 (Full Validation)           Accreditation:         I Az Compliance           I NELAC         I Cother           I NELAC         D I D S5 - R           I NU         D I S5 - N Lo           I NU         D I S5 - N Lo           I NW - S         N W - S           I NW - S         D S5 - Y           I NW - S         D S5 - Y           I SSS         D S5 - Y           I SSS         D S5 - S <td< td=""><td>SALTYDOG</td><td></td><td>4901</td><td>Hawkin</td><td>NE - P</td><td>Ibuquer</td><td>due. N</td><td>M 87109</td><td></td></td<>  | SALTYDOG                                 |             | 4901          | Hawkin       | NE - P      | Ibuquer | due. N       | M 87109 |       |
| Phone #: $SoS - & Z2 - 9 VOD$ email or Fax# $M7E_{IO} = VOD$ email or Fax# $M7E_{IO} = VOD$ OAVOC Package:       Calloc Pack       Data:       Time       Matrix       Data:       Time       Matrix       Sample Name       I/1/0       Data:       I/1/10  | Project #;                               |             | Tel.          | 505-345      | 3975        | Fax 5(  | 05-345       | 4107    |       |
| email or Fax# <i>M7 Levo 2 et A</i> (Full Validation)<br>OAVOC Package:<br>CAVOC Package:<br>CAVOC Package:<br>Accreditation: D Az Compliance<br>Control<br>Accreditation: D Az Compliance<br>Control<br>Accreditation: D Az Compliance<br>Control<br>Accreditation: D Az Compliance<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Control<br>Co | ES08,0118,18                             |             |               |              | Ans         | lysis R | equest       |         |       |
| OAUCC Package:     I Level 4 (Full Validation)       Chandard     I Standard       Conditation:     I Az Compliance       Contractination:     I Az Compliance       I NELAC     I Other       I NELAC     Other       I NELAC     I Other       I Nell     I Diss       I Rill     I Diss       I N     I Diss   <   | comproject Manager.                      |             | (0)           |              | -0:         | -       | (14          | 1.      |       |
| Accreditation:     In Az Compliancie     Sam       In NELAC     In Az Compliancie     Diter       In NELAC     In Cuther     Diter       In NELAC     Other     Diter       In NELAC     Other     Diter       In NELAC     Other     Diter       In Nelaci     Matrix     Sample Name       In Poiso     Diter     Diter       In Poiso     Diter     Anu-S       In Poiso     Diter     Anu-S       In Poiso     Diter     Anu-S       In Poiso     Diter     Diter   | on) J. Apachec                           |             | 208) s'       | sana         | S Ud        |         | eedA\tr      | Kv,en   |       |
| In NELAC     Include     Other     Other       In EDD (Type)     # of       Ins     Matrix     Sample Name     # of       Ins     Inne     Matrix     Sample Name     Type       Ins     Io50 $Gwl$ $Di5 - 8$ $1 \frac{1}{7}$ Ins     Io50 $Gwl$ $Di5 - 8$ $1 \frac{1}{7}$ Inv $Di5 - 10$ $Di5 - 10$ $Type$ Inv $Di5 - 10$ $Di1 \frac{1}{7}$ Inv $Di5 - 10$ $Type$ Inv $Di5 - 10$ <td>Sampler M. The rotch</td> <td></td> <td>amt<br/>ad \</td> <td>(1.1</td> <td>"ON</td> <td></td> <td>lesel<br/>(</td> <td>9</td> <td>_</td>   | Sampler M. The rotch                     |             | amt<br>ad \   | (1.1         | "ON         |         | lesel<br>(   | 9       | _     |
| Data         Time         Matrix         Sample Name         Mone           Data         Time         Matrix         Sample Name         Cont           I/8.18         I Doc         Gwl         DB5-8         1 p           I/10         DB5-N         Le         I p           I/10         DB5-S         MwS         I p           I/17         DB5-S         DB5-S         I p           I/17   | Unice: Aves D                            | 0           | BRC<br>13     | 09           | sli         |         | d) (         | )ac     | _     |
| Data         Time         Matrix         Sample Name         Cont           //8.18         / DOD         (5w)         DB5-8         1 / 2/2           //8.18         / DOD         (5w)         DB5-8         1 / 2/2           //10         //11/0         // DB5-8         1 / 2/2           //11/0         // DB5-10         // 1 / 2/2           //11/0         // DB5-Nu         // / 1/1           //11/0         // DB5-Nu         // / 1/1           //11/0         // DB5-Nu         // / 1/1           //11/0         // DB5-3         // / 1/1           //11/0         // DB5-3         // / 1/1           //11/0         // DB5-3         // / / 1/1           //11/0         // DB5-3         // / / 1/1           //11/0         // DB5-3         // / / 1/1           //11/0         // DB5-3         / / / / 1/1           //11/0         // DB5-3         / / / / 1/1           //11/1         // DB5-3         / / / / 1/1           ///11/1         // DB5-3         / / / / 1/1           ///11/1         // DB5-1         / / / / 1/1           // / D1/15         / DB5-1         / / / / / 1/1           // D1/15         / / / 1/1   | # of Coolers: / L+ T+ /-                 | 0           | D(G           | pou          | NC<br>PHC   | ()      | 111C         | 5       | _     |
| Date         Time         Matrix         Sample Name         Cont           Image         Image         Matrix         Sample Name         Type           Image         Image         Image         Image         Type           Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image         Image           Image  | Cooler Lemplinousing CPI:                |             | 1910<br>W /   | nse-<br>IteM | N 8 W       | AOV.    | ne2<br>Jilo2 | Hd      |       |
| Ille     Desc-8     19       110     050     0155-10       1110     0155-10       1110     0155-10       1110     0155-10       1110     0155-10       1110     0155-10       1110     0155-10       1110     0155-3       1310     0155-3       1310     0155-3       1310     0155-3       1315     0155-3       1415     0155-3       1415     0155-3       1415     0155-3       1415     0155-3       1415     0155-3       1415     0155-3       1415     0155-3       1555     0155-18       1555     0155-18       1555     0155-18       1555     0155-18       1555     0155-18   | Container Preservative (<                | HEAL No.    | ХЭТА<br>8.НЯТ |              | RCRA        | 0928    | 0/28         | 'sau    |       |
| 1030         125-10           1110         125-10           1140         1140           1140         MW-S           1140         MW-S           1140         MW-S           1140         MW-S           1140         MW-S           1140         MW-S           1130         1265-3           1310         1265-3           1310         1265-3           1310         1855-5           1415         1855-5           1415         1855-5           1415         1855-5           1415         1855-5           1415         1855-5           1415         1855-18           1530         7005-18   | 1 pol f                                  | 100-        |               |              | X           |         |              |         |       |
| III0     D65-N Le -ights       IIYO     MW-S       IIYO     MW-S       I310     MW-3       I310     D65-3       I310     D65-3       I315     D65-4       I355     D85-3       I415     D85-3       I415     D85-3       I415     D85-1R       I435     D85-1R       I530     Thickling   |  | -002        |               | þ            | ×           |         |              |         |       |
| II40     MW-S       n30     MW-S       n30     MW-S       n30     MW-S       n30     DB5-3       1310     DB5-3       1415     DB5-3       1415     DB5-3       1415     DB5-3       1415     DB5-1       1435     DB5-1       1435     DB5-1       1530     Th544107   | le l | 203         |               |              | ×           |         |              |         |       |
| P30         MW-3           1310         DB5-3           1310         DB5-3           1310         DB5-3           1415         DB5-3           1415         DB5-5           1415         DB5-5           1415         DB5-18           1435         DB5-18           1530         Th5-18           1530         Th5-18  |  | -1007-      |               |              | ×           |         | 11           |         |       |
| 1310 DR5-3<br>1345 DB5-4<br>1355 DB5-2<br>1415 DB5-5<br>1415 DB5-18<br>1435 DB5-18<br>1435 DB5-18<br>1435 DB5-18  |  | 500-        |               |              | X           |         |              |         |       |
| 1345 205-4<br>1355 2055-2<br>1415 2085-5<br>1435 2085-18<br>1435 2085-18<br>1435 2085-18<br>1435 2085-18  |  | 900-        |               |              | X           | -       |              |         |       |
| 1355 DBS-2<br>1415 DBS-5<br>1415 DBS-5<br>1435 MS-18<br>1435 MS Theodor   |  | 100-        |               |              | X           |         |              |         |       |
| 1415 DBS-5<br>1415 DBS-18<br>1435 1450 Theoretica<br>1530 Pinush  |  | - 008       |               |              | ×           | ,       |              |         |       |
| 1435 DR5-1R<br>1935 MISS DR5-1R<br>1530 TINESCIEN   |  | -003        |               |              | ¥           |         |              |         |       |
| 1530 Print  |  | 010         |               |              | ×           |         |              |         |       |
| 1 1530 / PMWA   |  | 110-        |               |              | ×           |         |              | ×       |       |
|   |  | 610-        | -             |              | ~           |         |              |         |       |
| Date: Time: Relinquished by Recei   | Received by: Vai CDO                     | Date Time   | Remarks:      | Ĺ            | ŀ           |         |              | 0000    |       |
| 13. 19 0846 14/2/1/ 1/2/1/  | A A A                                    | 80 810      | 40            |              | 2D          | 2       | daz          | INACOL  |       |
| Date: Time Réling/Sheftby Reco  | Received by:                             | Date / Time |               |              | A           |         |              |         |       |

| Maling Address:     Freject Name:       Maling Address:     SAL4Y Deg       Maling Address:     SAL4Y Deg       Maling Address:     SAL4Y Deg       Phone #: So5- 8-12-9100     Project #:       Project #:     Freject Manage:       CANC Package:     D. A You Ibc       Acceditation:     D. A You Ibc       Date     Intel Matrix       Date     Matrix       Date     Matrix       Matrix     Sample Name       Container     Preservative       Hatrix     Sample Name       Matrix     Sample Name   | ABLES LABORATOR       www.hallenvironmental.com       www.hallenvironmental.com       www.hallenvironmental.com       A901 Hawkins NE - Albuquerque, NM 87109       4901 Hawkins NE - Albuquerque, NM 87109       Tel. 505-345-3975     Fax 505-345-4107       RS PCB's     Analysis Request       PO     Analysis Request       PO     Analysis Request   |
|---|--|
| Maling Address     SAL+Y Dog       Phone #: So5- & S-2-91105     Project #:       Phone #: So5- & S-2-91105     Project #:       Phone #: So5- & S-2-91105     Project #:       Proint Manager     C50 & OI (7, 18)       Beal or Fax#/M72b to-7et kgogeo-logite.(CM)     Project #:       CAOC Package     Date Kander       Acceditation:     DA Compliance       Acceditation:     DA Compliance       Sampler M. ZLOPFER     No       Acceditation:     Date Kander       I Null     King       King     Lu       Matrix     Sample Name       I Null     Reservative       I Null     Prosecrution       I Null     Prosecrution   | Participation         Application           17.13         4901 Hawkins NE - Albuquerque, NM 87109           17.13         749.5-345-3975         Fax 505-345-4107           17.13         7607 MR0         601/Absent           18/5 (8021)         0,0         601/Absent   |
| Phone #: SS- &22-91100     Project #:       embilior Exx#: MTL Lote Korges-log1e.tCM     Project #:       embilior Exx#: MTL Lote Korges-log1e.tCM     Project #:       OAOC Package:     Direct Korges-log1e.tCM       Acceditation:     Direct Korges-log1e.tCM       Acceditation:     Direct Korges-log1e.tCM       Acceditation:     Direct Korges       Acceditation: | Igentify     Tel. 505-345-3975     Fax 505-345-4107       Igentify     Fax 505-345-4107       Igentify     Fax 505-345-4107       Igentify     Po.4, So.4  |
| Phone #: Sos-822-9100     ESO 8.0118.18       embil or Fax#:///Zb10-te1kgoge0-log1e.(CMA)     ESO 8.0118.18       embil or Fax#:///Zb10-te1kgoge0-log1e.(CMA)     Drintert Manager       CAOC Package:     D Lavel 4 (Full Validation)     J. Ara.1be       Accreditation:     D Az Compliance     Sampler M. 21.07 eA       Accreditation:     D Az Compliance     D nice:     Preservative       D NELAC     Other     Bance     Conteiner     Preservative       In EDD (Type)     Matrix     Sample Name     Container     Preservative       I/1.8.18     Kro     U     Brine     April Do       I/1.8.18     Kro     D     Brine     Preservative       I/1.8.18     Kro     D     Brine     Proj   | A. 1<br>A. 1<br>A. 1<br>A. 1<br>A. 1<br>A. 1<br>A. 1<br>A. 1   |
| email or Fax#: M Z hote Kogeo-logic.ce/     Project Manager:       CANCC Package:     CANCC Package:       CANCC Package:     J. Aroube       CANCC Package:     J. Aroube       Accreditation:     J Az Compliance        | Potent)  |
| CALOC Package:     D. Level 4 (Full Validation)     J. A Par be       Accreditation:     D Az Compliance     Sampler M. ZLIDFeK       Accreditation:     D Az Compliance     Sampler M. ZLIDFeK       D NELAC     D Netar     D No       D NELAC     D Netar     Bancher Matrix       D NELAC     D Netar     Bancher Matrix       D NELAC     D Netar     Bancher Matrix       D Netar     Bancher Matrix     Bancher Matrix       Date     Time     Matrix       Date     Matrix     Sample Name       Date     Matrix     Sample Name       Matrix     Sample Name     Type and #       Matrix     Sample Name     Type and #       Matrix     Sample Name     D Matrix  | 802 (802<br>802 (802<br>802 (803<br>90 ( 10<br>90 ( 10<br>90) ( 10<br>90 ( 10) ( 10<br>90 ( 10<br>90 ( 10) ( 10<br>90 ( 10<br>90 ( 10) ( 10) ( 10<br>90 ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) ( 10) |
| Accreditation:     DAC Compliance     Sampler:     M. ZLICHEN       D NELAC     Cother     Differ     Arrow       D NELAC     Cother     Preservative     HEALNO       D EDD (Type)     # of Coolers:     T Set 2 HU       Date     Time     Matrix     Sample Name       Matrix     Sample Name     Type and # Type     HEALNO       Matrix     Sample Name     Preservative     HEALNO       Matrix     Sample Name     Preservative     HEALNO   |  |
| Instac     Conter     R-Ves     Ino       In EDD (Type)     # of Coolerts:     Inc     # of Coolerts:     Inc       Inte     Matrix     Sample Name     # of Coolerts:     Inc     Inc       Inte     Matrix     Sample Name     Container     Preservative     HEAL No.       Inte     Matrix     Sample Name     Rype and #     Type     Inc       Inte     Matrix     Sample Name     Rype     Inc     Inc       Inte     Matrix     Sample Name     Rype     Inc     Inc  |  |
| Tripol (Type)     # of Coolers: (*)     C = H, U       Date     Time     Matrix     Sample Name     Cooler Tempinasing cf::     T.S.       Date     Time     Matrix     Sample Name     Container     Preservative     HEAL No.       II. 8.18     Kro     V     Bris     Type and #     Type     Col3       II. 8.18     Kro     V     Bris     Preservative     HEAL No.       II. 8.18     Kro     V     Bris     Preservative     HEAL No.  | No<br>8/2<br>8/2<br>8/2<br>8/2<br>8/2<br>8/2<br>8/2<br>8/2<br>8/2<br>8/2   |
| Date     Time     Matrix     Sample Name     Container     Preservative     HEAL No.       //.8.18     //.8.18     //.9     //     3     3     4     10       //.8.18     //.9     //     3     3     4     10     3  | CF1 H U BE (GH 200 5 10 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10   |
| Date     Time     Matrix     Sample Name     Container     Preservative     HEAL No.       //.8./8     //.8./6     //     Jointon     Jointon     Jointon     Jointon   | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2   |
| 11.8.18/610 W Bring HNOS -013   |  |
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| 19,18 846 19 19 Received Via Date Time  | 1 100/15 DS41 TEMIS approved   |
| Date Time: Refindusting by Date Time Time   | Date Time  |
Appendix D

**Area of Review Evaluation** 

## CCD Well Locations



Well Locations - Large Scale

- 0 Miscellaneous
- ¥ co₂Active
- ⋇ CO2Cancelled
- ⋇ CO2Nevv
- ₩. CO2, Plugged
- ⋇ CO2; Temporaily Abandoned
- 泶 Gas Active
- 茶 Gas, Cancelled, Never Drilled
- ☆ Gas, Nevv
- 杂 Gas, Plugged
- Gas, Temporarily Abandoned 🛕 杂
- ø Injection, Active
- ø Injection, Cancelled

🄎 Injection, Nevv

- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, Nevv
- ٠ Oil, Plugged
- ٠ Oil, Temporarily Abondoned
- Salt Water Injection, Active Δ
- Δ Salt Water Injection, Cancelled
- Δ
- Salt Water Injection, Plugged
- Salt Water InjectionTemporarily Abandoned

- Water, Active
- Water, Cancelled
- Water, Nevv
- Water, Plugged
- Water, Temporarily Abandoned ٠
- Well Locations Small Scale
  - Active
- Nevv

★

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- Plugged
- Temporarily Abandoned
- OCD District Offices
- PLSS First Division



OCD, Source: Esti, DigitalGlobe, GeoEye, Earthstar Geographics, ONES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, BLM

New Nexico Oil Conservation Division

NVOCD Oil and Gas Map. http://memrcl.maps.arcgis.com/apps/vebappviever/. Nev/Mexico Oil Conservation Division

- Salt Water Injection, Nevv
- Δ
- Cancelled
- 🚺 OCD Districts

Appendix E

2018 Survey Data for Land Surface Subsidence Monitoring







|            |                       |            |            |                | (               |                         |                        |
|------------|-----------------------|------------|------------|----------------|-----------------|-------------------------|------------------------|
| NAME       | SECTION CALLS         | NORTHING   | EASTING    | LA TI TUDE     | LONGITUDE       | ELEVATION<br>TOP CASING | ELEVA TION<br>CONCRETE |
| SMP-1      | 2153' FSL & 2020' FEL | 615475.977 | 836301.437 | N32°41'17.960" | W103°22'28.520" | 3810.11'                | 3810.37 <b>'</b>       |
| SMP-2      | 2032' FSL & 2058' FEL | 615354.850 | 836264.338 | N32°41'16.795" | W103°22'28.966" | 3809.01'                | 3809.39'               |
| SMP-3      | 2350' FSL & 2089' FEL | 615673.004 | 836230.083 | N32°41'19.945" | W103°22'29.334" | 3808.80'                | <i>3809.17'</i>        |
| SMP-4      | 2291' FSL & 1776' FEL | 615615.830 | 836543.487 | N32°41'19.352" | W103°22'25.673" | 3806.32'                | 3806.73'               |
| SMP-5      | 2216' FSL & 1972' FEL | 615539.029 | 836348.733 | N32*41'18.609" | W103°22'27.960" | 3811.72 <b>'</b>        |                        |
| DBS-9      | 2520' FSL & 1831' FEL | 615844.539 | 836485.906 | N32°41'21.593" | W103°22'26.317" |                         |                        |
| DBS-10     | 1389' FSL & 1060' FEL | 614720.368 | 837270.028 | N32°41'10.428" | W103°22'17.269" | 3807.48'                | 3805.44'               |
| BENCH MARK |                       | 615608.14  | 836310.07  | N32°41'19.27"  | W103°22'28.40"  |                         |                        |
|            | •                     |            |            | •              |                 |                         |                        |

## ALL COORDINATES ARE BASED ON NMSPCE (NAD83)

\_\_\_\_\_ DBS-10

| I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED  | 200 0 200 400 FEET  |
|---|---|
| MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND<br>SURVEYS AS SPECIFIED BY THIS STATE.   | DANIEL B. STEPHENS & ASSOCIATES, INC  |
|   | REF: SALTY DOG BRINE FACILITY   |
| GARY L. JONES V.M. P.S. No. 7977<br>No. 5074  | MONITOR WELLS AND SUSTENANCE MONITORING POINTS<br>LOCATED IN SECTION 5, TOWNSHIP 19 SOUTH, RANGE 36 EAST, |
| focused on excellence<br>in the oilfield P.O. Box 1786 (575) 393-7316 - Offic<br>1120 N. West County Rd. (575) 392-2206 - Fax<br>Hobbs, New Mexico 88241 basinsurveys.com | N.M.P.M., LEA COUNTY, NEW MEXICO.   |
| W.O. Number: 33610 Drawn By: K. GOAD Date: 03-  | 29-2018 Survey Date: 03-23-2018 Sheet 1 of 1 Sheets   |



|            |                       |            |            |                | · · ·           |                         |                        |
|------------|-----------------------|------------|------------|----------------|-----------------|-------------------------|------------------------|
| NAME       | SECTION CALLS         | NORTHING   | EASTING    | LATITUDE       | LONGITUDE       | ELEVATION<br>TOP CASING | ELEVA TION<br>CONCRETE |
| SMP-1      | 2153' FSL & 2020' FEL | 615475.977 | 836301.437 | N32°41'17.960" | W103°22'28.520" | 3810.11'                | 3810.37'               |
| SMP-2      | 2032' FSL & 2058' FEL | 615354.850 | 836264.338 | N32*41'16.795" | W103°22'28.966" | 3809.01'                | 3809.39'               |
| SMP-3      | 2350' FSL & 2089' FEL | 615673.004 | 836230.083 | N32°41'19.945" | W103°22'29.334" | 3808.80'                | 3809.17'               |
| SMP-4      | 2291' FSL & 1776' FEL | 615615.830 | 836543.487 | N32°41'19.352" | W103°22'25.673" | 3806.32'                | 3806.73'               |
| SMP-5      | 2216' FSL & 1972' FEL | 615539.029 | 836348.733 | N32*41'18.609" | W103°22'27.960" | 3811.72'                |                        |
| DBS-9      | 2520' FSL & 1831' FEL | 615844.539 | 836485.906 | N32°41'21.593" | W103°22'26.317" |                         |                        |
| DBS-10     | 1389' FSL & 1060' FEL | 614720.368 | 837270.028 | N32°41'10.428" | W103°22'17.269" | 3807.48'                | 3805.44'               |
| BENCH MARK |                       | 615608.14  | 836310.07  | N32*41'19.27"  | W103°22'28.40"  |                         |                        |

## ALL COORDINATES ARE BASED ON NMSPCE (NAD83)

| I HEREBY CERTIC THAT THIS PLAT WAS PREPARED  | 200 0 200 400 FEET  |
|--|---|
| MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND<br>SURVEYS AS SPECIFIED BY THIS STATE.  | DANIEL B. STEPHENS & ASSOCIATES, INC  |
|  | REF: SALTY DOG BRINE FACILITY   |
| GARY L. JONES C.M. P.S. No. 7977<br>No. 5074   | MONITOR WELLS AND SUSTENANCE MONITORING POINTS<br>LOCATED IN SECTION 5, TOWNSHIP 19 SOUTH, RANGE 36 EAST, |
| focused on excellence<br>in the oilfield P.O. Box 1786 (575) 393-7316 - Office<br>1120 N. West County Rd. (575) 392-2206 - Fax<br>Hobbs, New Mexico 88241 basinsurveys.com | N.M.P.M., LEA COUNTY, NEW MEXICO.   |
| W.O. Number: 33610 Drawn By: K. GOAD Date: 03-2  | 29-2018 Survey Date: 03-23-2018 Sheet 1 of 1 Sheets   |



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\_\_\_\_\_ DBS-10





|            |                       | ALL        | COORDINATES | ARE BASED ON N | MSPCE (NAD83)   |                         |                        |
|------------|-----------------------|------------|-------------|----------------|-----------------|-------------------------|------------------------|
| NAME       | SECTION CALLS         | NORTHING   | EASTING     | LA TI TUDE     | LONGITUDE       | ELEVATION<br>TOP CASING | ELEVA TION<br>CONCRETE |
| SMP-1      | 2153' FSL & 2020' FEL | 615475.977 | 836301.437  | N32°41'17.960" | W103°22'28.520" | 3810.10 <b>'</b>        | 3810.37 <b>'</b>       |
| SMP-2      | 2032' FSL & 2058' FEL | 615354.850 | 836264.338  | N32°41'16.795" | W103°22'28.966" | 3809.02'                | 3809.39'               |
| SMP-3      | 2350' FSL & 2089' FEL | 615673.004 | 836230.083  | N32°41'19.945" | W103°22'29.334" | 3808.82'                | 3809.17'               |
| SMP-4      | 2291' FSL & 1776' FEL | 615615.830 | 836543.487  | N32°41'19.352" | W103°22'25.673" | 3806.33'                | 3806.73 <b>'</b>       |
| SMP-5      | 2216' FSL & 1972' FEL | 615539.029 | 836348.733  | N32*41'18.609" | W103°22'27.960" | 3811.71 <b>'</b>        |                        |
| DBS-9      | 2520' FSL & 1831' FEL | 615844.539 | 836485.906  | N32°41'21.593" | W103°22'26.317" |                         |                        |
| DBS-10     | 1389' FSL & 1060' FEL | 614720.368 | 837270.028  | N32°41'10.428" | W103°22'17.269" | 3807.48'                | 3805.44'               |
| BENCH MARK |                       | 615608.14  | 836310.07   | N32°41'19.27"  | W103°22'28.40"  |                         |                        |
|            |                       |            |             | •              |                 |                         |                        |

| I HEREBY CERTIFY THIS PLAN WAS PREPARED  | 200 0 200 400 FEET<br>Еннин — — — — — — — — — — — — — — — — — —   |
|--|---|
| MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND<br>SURVEYS AS SPECIFIED BY THIS STATE.  | DANIEL B. STEPHENS & ASSOCIATES, INC  |
|  | REF: SALTY DOG BRINE FACILITY   |
| GARY L. JONES M.M. P.S. No. 7977<br>No. 5074   | MONITOR WELLS AND SUSTENANCE MONITORING POINTS<br>LOCATED IN SECTION 5, TOWNSHIP 19 SOUTH, RANGE 36 EAST, |
| focused on excellence<br>in the oilfield<br>Focused on excellence<br>in the oilfield<br>Focused on excellence<br>in the oilfield<br>Focused on excellence<br>Hobbs, New Mexico 88241<br>Focused on excellence<br>Hobbs, New Mexico 88241<br>Focused on excellence<br>Focused Focused<br>Focused Focused<br>Focused Focused<br>Focused Focused<br>Focused Focused<br>Focused Focused<br>Focused Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focused<br>Focu | N.M.P.M., LEA COUNTY, NEW MEXICO.   |
| W.O. Number: 33811 Drawn By: K. GOAD Date: 06-   | 19-2018 Survey Date: 06-15-2018 Sheet 1 of 1 Sheets   |







|            |                       | ALL        | COORDINATES | ARE BASED ON N | MSPCE (NAD83)   |                         |                        |
|------------|-----------------------|------------|-------------|----------------|-----------------|-------------------------|------------------------|
| NAME       | SECTION CALLS         | NORTHING   | EASTING     | LATITUDE       | LONGITUDE       | ELEVATION<br>TOP CASING | ELEVA TION<br>CONCRETE |
| SMP-1      | 2153' FSL & 2020' FEL | 615475.977 | 836301.437  | N32°41'17.960" | W103°22'28.520" | 3810.10'                | 3810.38'               |
| SMP-2      | 2032' FSL & 2058' FEL | 615354.850 | 836264.338  | N32°41'16.795" | W103°22'28.966" | 3809.00'                | <i>3809.41'</i>        |
| SMP-3      | 2350' FSL & 2089' FEL | 615673.004 | 836230.083  | N32°41'19.945" | W103°22'29.334" | 3808.81'                | 3809.18'               |
| SMP-4      | 2291' FSL & 1776' FEL | 615615.830 | 836543.487  | N32°41'19.352" | W103°22'25.673" | 3806.32'                | 3806.72 <b>'</b>       |
| SMP-5      | 2216' FSL & 1972' FEL | 615539.029 | 836348.733  | N32°41'18.609" | W103°22'27.960" | 3811.72'                |                        |
| DBS-9      | 2520' FSL & 1831' FEL | 615844.539 | 836485.906  | N32*41'21.593" | W103°22'26.317" |                         |                        |
| DBS-10     | 1389' FSL & 1060' FEL | 614720.368 | 837270.028  | N32°41'10.428" | W103°22'17.269" | 3807.48'                | 3805.44'               |
| BENCH MARK |                       | 615608.14  | 836310.07   | N32°41'19.27"  | W103°22'28.40"  | 3808.62'                |                        |
|            |                       |            |             |                |                 |                         |                        |

|          |                           |              |            |                |                 |           | i -      |
|----------|---------------------------|--------------|------------|----------------|-----------------|-----------|----------|
| S—9      | 2520' FSL & 1831' FEL     | 615844.539   | 836485.906 | N32*41'21.593" | W103°22'26.317" |           |          |
| S—10     | 1389' FSL & 1060' FEL     | 614720.368   | 837270.028 | N32°41'10.428" | W103°22'17.269" | 3807.48'  | 3805.44  |
| VCH MARK |                           | 615608.14    | 836310.07  | N32°41'19.27"  | W103°22'28.40"  | 3808.62'  |          |
|          |                           |              |            |                |                 |           |          |
|          |                           |              |            |                |                 |           |          |
|          | et L. JOAn                |              | 20         | 0 (            | 20              | 00        | 400 FEET |
| I HEREBI | CERTIFY THAT THIS PLAY W  | AS PREPARED  | E          |                |                 |           |          |
| MEETS O  | R EXCEEDS AL REQUERMENT   | ITS FOR LAND |            | 1NIFI R STI    | FPHENS & A      | SSOCIATE  | S INC    |
| SURVEIS  | AS DELAILIEN BY THIS STAT |              |            |                |                 | CCCCIAIL. | <i></i>  |

٧o. 7977

No. 5074

GARY L.

W.O.

ence

REF: SALTY DOG BRINE FACILITY

MONITOR WELLS AND SUSTENANCE MONITORING POINTS LOCATED IN SECTION 5, TOWNSHIP 19 SOUTH, RANGE 36 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

\_\_\_\_\_ DBS−10



|            | ALE COORDINATES ARE DASED ON TIMISTOE (TADOS) |            |            |                |                 |                         |                        |
|------------|---|------------|------------|----------------|-----------------|-------------------------|------------------------|
| NAME       | SECTION CALLS                                 | NORTHING   | EASTING    | LA TI TUDE     | LONGITUDE       | ELEVATION<br>TOP CASING | ELEVA TION<br>CONCRETE |
| SMP-1      | 2153' FSL & 2020' FEL                         | 615475.977 | 836301.437 | N32°41'17.960" | W103°22'28.520" | 3810.10 <b>'</b>        | 3810.38'               |
| SMP-2      | 2032' FSL & 2058' FEL                         | 615354.850 | 836264.338 | N32°41'16.795" | W103°22'28.966" | 3809.00'                | 3809.41'               |
| SMP-3      | 2350' FSL & 2089' FEL                         | 615673.004 | 836230.083 | N32°41'19.945" | W103°22'29.334" | 3808.81'                | 3809.18'               |
| SMP-4      | 2291' FSL & 1776' FEL                         | 615615.830 | 836543.487 | N32°41'19.352" | W103°22'25.673" | 3806.32'                | 3806.72 <b>'</b>       |
| SMP-5      | 2216' FSL & 1972' FEL                         | 615539.029 | 836348.733 | N32°41'18.609" | W103°22'27.960" | 3811.72'                |                        |
| DBS-9      | 2520' FSL & 1831' FEL                         | 615844.539 | 836485.906 | N32*41'21.593" | W103°22'26.317" |                         |                        |
| DBS-10     | 1389' FSL & 1060' FEL                         | 614720.368 | 837270.028 | N32°41'10.428" | W103°22'17.269" | 3807.48'                | 3805.44'               |
| BENCH MARK |   | 615608.14  | 836310.07  | N32°41'19.27"  | W103°22'28.40"  | 3808.62'                |                        |
|            |   |            |            |                |                 |                         |                        |

## ALL COORDINATES ARE BASED ON NMSPCE (NAD83)

| I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED   | 200 0 200 400 FEET   |
|--|--|
| MEETS OR EXCEEDS ALL REQUIPEMENTS FOR LAND<br>SURVEYS AS SPECIFIED BY THIS STATE.  | DANIEL B. STEPHENS & ASSOCIATES, INC   |
|  | REF: SALTY DOG BRINE FACILITY  |
| GARY L. JONES V.M. P.S. No. 7977<br>No. 5074<br>SURVEYS<br>P.O. Box 1786 (575) 393-7316 - Office                               | MONITOR WELLS AND SUSTENANCE MONITORING POINTS<br>LOCATED IN SECTION 5, TOWNSHIP 19 SOUTH, RANGE 36 EAST,<br>N.M.P.M., LEA COUNTY, NEW MEXICO. |
| focused on excellence 1120 N. West County Rd. (575) 392-2206 - Fax<br>in the oilfield Hobbs, New Mexico 88241 basinsurveys.com |  |
| W.O. Number: 34246 Drawn By: K. GOAD Date: 12-2  | 24-2018 Survey Date: 12-15-2018 Sheet 1 of 1 Sheets  |