# ANNUAL REPORTS

# HRC, INC.

P. O. Box 5102 Hobbs, NM 88241-5102 Phone # (575) 393-6662 Fax # (575) 393-6662

January 21, 2020

Jim Griswold Senior Hydrologist ENMRD/Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Ref: 2019 Annual Report B-31 Schubert 7 – Well #1

Dear Mr. Griswold,

Enclosed please find the monthly freshwater injection and brine production numbers for the Hobbs facility for the year of 2019.

Included also are Cardinal Laboratories' results of analyses for samples for the month of June 2019 and December, 2019 and the production amounts for January 2019 through December 2019 for your reference.

Thank you,

Sincerely,

Gary M. Schubert

GMS/br

Enclosure

# ANNUAL CLASS III WELL REPORT H.R.C., INC.

YEARLY REPORT (BW-031)

API 30-025-36781

February 6, 2020

**DAVID ALVARADO** 

(ACTING AGENT FOR H.R.C., INC.)

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YEARLY REPORT (BW-031)

API 30-025-36781

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(ACTING AGENT FOR H.R.C., INC.)

# 20.6.2.3107 NMAC MONITORING, REPORTING, AND OTHER REQUIERMENTS

#### **SUMMARY OF CLASS III OPERATIONS 2019**

Schubert 7 Well # 1 had a great year during the operations in 2019 no leaks occurred nor did the fresh water freeze all meters and valves were and still are in good working conditions.

Two 750 ball valves were replaced as a preventive maintenance scheduled plan. This will continue as a safe operating condition it will continue in 2020 if needed. Connections are changed out when the first sign of salt is seen behind the threaded end.

During 2019 the transfer pump that transports brine to the sales tanks had the mechanical seals replaced due to the abrasion of the 9.98 PPG brine. In replacing the seals fresh water was used to clean out the lines and valves were shut in allowing the connecting unions to be broken to prevent any impact to the ground within the pump shop where the pump resides.

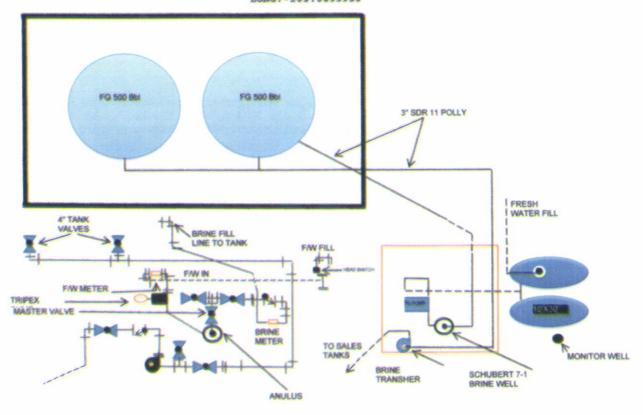
Daily inspections of all lines and connections are visually looked at during a walk around of the facility tanks. All lines are each walked and visually inspected that lead to the pump house. Readings on pressure gauges are recorded with the reading of the brine output meter and the injection of fresh water also are recorded on the day to month logs. Safety shut off mechanisms are tested to insure if high or low pressures were to occur all systems would shut down.

A total of 284,882 Bbl. brine was extracted and weighed at an average of 9.89 PPG an increase of over 84% of the 241,010 Bbl. extracted in 2018.

H.R.C., Inc. plans on replacing the triplex pump with a VFD pump in doing so, the pump will run with a smoother injection rate without the harmonics that the triplex pump emits.

Please find on page 3 a schematic of the facility operations of equipment on the BW-31

H.R.C., INC SHUBERT 7 WELL No. 1 NW/4,SE/4-SEC.7-T198-R39E LEA COUNTY, NM API 30-025-36781 LAT:32.6738815 LONG:-103.0835953



# **2019 FLUID INJECTION & BRINE PRODUCTION VOLUME**

| MONTH      | BRIINE  | FRESH WATER |  |
|------------|---------|-------------|--|
| JANUARY    | 30,031  | 29719       |  |
| FEBRUARY   | 28,726  | 28,492      |  |
| MARCH      | 27,971  | 27,860      |  |
| APRIL      | 16,717  | 16,621      |  |
| MAY        | 18,123  | 13,967      |  |
| JUNE       | 27,630  | 27,447      |  |
| JULY       | 23,990  | 23,812      |  |
| AUGUST     | 25,102  | 24,981      |  |
| SEPTEMBER  | 18,188  | 18,031      |  |
| OCTOBER    | 28,826  | 28,683      |  |
| NOVEMBER   | 17,112  | 17,007      |  |
| DECEMBER   | 22,466  | 22,340      |  |
| YEAR TOTAL | 284,882 | 278,960     |  |

# **YEARLY TOTALS BRINE & FRESH**

| TOTAL | 2,019,044 | 1,988,553 |  |
|-------|-----------|-----------|--|
| 2019  | 284,882   | 278,960   |  |
| 2018  | 241,010   | 238,627   |  |
| 2017  | 303,502   | 282,445   |  |
| 2016  | 283,741   | 276,593   |  |
| 2015  | 291,205   | 289,656   |  |
| 2014  | 310,568   | 316,007   |  |
| 2013  | 304,136   | 306,265   |  |
| YEAR  | BRINE     | FRESH     |  |

# **Semi-Annual Monitor Well Analytical Data Results**

Monitor well for the BW-31 for 2019 is on record with OCD, Cardinal Laboratories performed and sampled water from the monitor well on December 31, 2019 for your review. Cardinal Laboratories is accredited through Texas NELAP under certificate number T10470439-18-11.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Please find the Table below comparison of the June sample and December sample for Inorganic Compounds and Total Recovery Metals by ICP (E200.7) full detail of the Analytical results are attached at the end of this report for your viewing.

| Analyte | Result | MDL | Reporting | Units | Analyzed | Method |
|---------|--------|-----|-----------|-------|----------|--------|
|         |        |     | Limit     |       | Date     |        |

| Alkalinity,  |       |      |          |         |           |
|--------------|-------|------|----------|---------|-----------|
| Bicarbonate  | 215   | 5.0  | mg/L     | 6-12-19 | 310.1     |
| Alkalinity   |       |      |          |         |           |
| Carbonate    | <1.00 | 1.00 | mg/L     | 6-12-19 | 310.1     |
| Chloride     | 76.0  | 4.0  | mg/L     | 6-13-19 | 4500-C1-B |
| Conductivity | 660   | 1.00 | uS/cm    | 6-12-19 | 120.1     |
| рН           | 7.94  | 0.1  | pH Units | 6-12-19 | 150.1     |
| Sulfate      | 60.8  | 10.0 | mg/L     | 6-11-19 | 375.4     |
| TDS          | 435   | 5.0  | mg/L     | 6-13-19 | 160.1     |
| Alkalinity   |       |      |          |         |           |
| Total        | 176   | 4.00 | mg/L     | 6-12-19 | 310.1     |

# Continued Report for June 2019

| Analyte   | Result | MDL   | Reporting<br>Limit | Units | Analyzed<br>Date | Method   |
|-----------|--------|-------|--------------------|-------|------------------|----------|
| Calcium   | 55.1   |       | 0.500              | mg/L  | 6-18-19          | EPA200.7 |
| Magnesium | 17     |       | 0.500              | mg/L  | 6-18-19          | EPA200.7 |
| Potassium | 2.27   | 0.339 | 5.00               | mg/L  | 6-18-19          | EPA200.7 |
| Sodium    | 69.0   |       | 5.00               | mg/L  | 6-18-19          | EPA200.7 |

#### **DECEMBER 2019 RESULTS**

| Analyte | Result | MDL | Reporting | Units | Analyzed | Method |
|---------|--------|-----|-----------|-------|----------|--------|
|         |        |     | Limit     |       | Date     |        |

#### **INORGANIC COMPOUNDS**

| Alkalinity,<br>Bicarbonate | 210   | 5.0   | mg/L     | 12-20-19 | 310.1     |
|----------------------------|-------|-------|----------|----------|-----------|
| Alkalinity<br>Carbonate    | <1.00 | 1.00  | mg/L     | 12-20-19 | 310.1     |
| Chloride                   | 68.0  | 4.0   | mg/L     | 12-19-19 | 4500-C1-B |
| Conductivity               | 674   | 1.00  | uS/cm    | 12-20-19 | 120.1     |
| рН                         | 8.02  | 0.100 | pH Units | 12-20-19 | 150.1     |
| Sulfate                    | 63.9  | 10.0  | mg/L     | 12-20-19 | 150.1     |
| TDS                        | 392   | 5.00  | mg/L     | 12-23-19 | 160.1     |
| Alkalinity                 |       |       |          |          |           |
| Total                      | 172   | 4.0   | mg/L     | 12-20-19 | 310.1     |

# **TOTAL RECOVERABLE METALS by ICP (E220.7)**

| Calcium   | 54.2 |       | 0.500 | mg/L | 12-31-19 | EPA200.7 |
|-----------|------|-------|-------|------|----------|----------|
| Magnesium | 16.9 |       | 0.500 | mg/L | 12-31-19 | EPA200.7 |
| Potassium | 1.95 | 0.339 | 5.00  | mg/L | 12-31-19 | EPA200.7 |
| Sodium    | 64.9 |       | 5.0   | mg/L | 12-31-19 | EPA200.7 |

In comparison from June 2019 to December 2019 the Quality of the Monitor water has improved showing a total of 0.95% reduction in Inorganic Compounds and Total Recoverable Metals from the June testing of the water. The sulfate test showed an increase of 0.95% increase from June 2019 testing of the water.

#### INJECTION PRESSURE

Injection pressure still runs the same the annulus average is 200 PSIG and the tubing average is at 28 PSIG. The lease operator checks the pressure daily and records it on his daily logs.

#### PIPE LINE HYDROSTATIC TEST RESULTS

Lines that lead to the storage tanks from the wellhead have a hydrostatic pressure of 8.3 pounds of pressure at the base of the line at the fill tank when idle. The operating static pressure average is 19 psi respectively. The operating pressure is at around 28 psig. Discharge line is of 4" SDR 11 with a max operating pressure of 160 PSI.

Brine Water transfer line from storage tanks at the Schubert 7 well # 1 facility to the sales point at the ANITZ sales facility located 0.8 miles east of WHY 18 on Nadine Rd. (P-26-19S-38E) is constructed of 4" SDR 11 Polyethylene Line with a max pressure of 160 psi the line enters into the west 16' tank holding tank at the top and has a hydrostatic pressure at the base of the line of 8.3 pounds of pressure at the base of the line. In operation transferring fluid from the BW-31 it takes 140 pounds to move 175 GPM through the 4" line. The line is tested periodically by closing the valve at the sales holding tank and line is then pressured at the transfer pump to 150 psi and held for 15 min with the valve closed at the pump. Line has shown no leaks showing good continuity.

# **Visual Leak Inspections Monitoring**

H.R.C., Inc. Operation personnel walks each line that is above ground and inspects all connecting points for any sign of leaks or sweating of threads on connections daily.

The Lease Operator drives out the lines that are underground and below frost level for any signs of compromised line integrity. This is done up to twice a day.

# **Quarterly Chemical Analyses**

Cardinal Laboratories is accredited through Texas NELAP under certificate number T10470439-18-11.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Depicted below is Cardinals Analytical Results for Brine and Fresh water at the BW-31.

With this reports is attached the Cardinals results for your viewing.

#### **BRINE ANALYTICAL RESULTS: JUNE 2019**

| Analyte | Result | MDL | Reporting | Units | Analyzed | Method |
|---------|--------|-----|-----------|-------|----------|--------|
|         |        |     | Limit     |       | Date     |        |

| Alkalinity,<br>Bicarbonate | 83.0   | 5.0   | mg/L     | 6-12-19 | 310.1     |
|----------------------------|--------|-------|----------|---------|-----------|
| Alkalinity                 |        |       | <u> </u> |         |           |
| Carbonate                  | <1.00  | 1.00  | mg/L     | 6-12-19 | 310.1     |
| Chloride                   | 196000 | 4.00  | mg/L     | 6-13-19 | 4500-C1-B |
| Conductivity               | 253000 | 1.00  | uS/cm    | 6-12-19 | 120.1     |
| рН                         | 6.94   | 0.100 | pH Units | 6-12-19 | 150.1     |
| Sulfate                    | 4140   | 833   | mg/L     | 6-11-19 | 375.4     |
| TDS                        | 314000 | 5.00  | mg/L     | 6-13-19 | 160.1     |
| Alkalinity                 |        |       |          |         |           |
| Total                      | 68.00  | 4.0   | mg/L     | 6-12-19 | 310.1     |

# Continued Brine Report for June 2019

| Analyte   | Result | MDL  | Reporting<br>Limit | Units | Analyzed<br>Date | Method   |
|-----------|--------|------|--------------------|-------|------------------|----------|
| Calcium   | 1570   |      | 20.0               | mg/L  | 6-18-19          | EPA200.7 |
| Magnesium | 433    |      | 20.0               | mg/L  | 6-18-19          | EPA200.7 |
| Potassium | 238    | 13.5 | 200                | mg/L  | 6-18-19          | EPA200.7 |
| Sodium    | 141000 |      | 1000               | mg/L  | 6-19-19          | EPA200.7 |

# **BRINE ANALYTICAL RESULTS: DECEMBER 2019**

| Analyte | Result | MDL | Reporting | Units | Analyzed | Method |
|---------|--------|-----|-----------|-------|----------|--------|
|         |        |     | Limit     |       | Date     |        |

| Alkalinity,<br>Bicarbonate | 73.0   | 5.0   | mg/L     | 12-20-19 | 310.1     |
|----------------------------|--------|-------|----------|----------|-----------|
| Alkalinity                 |        |       |          |          |           |
| Carbonate                  | <1.00  | 1.00  | mg/L     | 12-20-19 | 310.1     |
| Chloride                   | 172000 | 4.00  | mg/L     | 12-19-19 | 4500-C1-B |
| Conductivity               | 28000  | 1.00  | uS/cm    | 12-20-19 | 120.1     |
| pH                         | 7.03   | 0.100 | pH Units | 12-20-19 | 150.1     |
| Sulfate                    | 3780   | 500   | mg/L     | 12-23-19 | 375.4     |
| TDS                        | 319000 | 5.00  | mg/L     | 12-23-19 | 160.1     |
| Alkalinity                 |        |       |          |          |           |
| Total                      | 60.0   | 4.0   | mg/L     | 12-20-19 | 310.1     |

# **Continued Brine Report for December 2019**

| Analyte   | Result | MDL         | Reporting<br>Limit | Units | Analyzed<br>Date | Method   |
|-----------|--------|-------------|--------------------|-------|------------------|----------|
| Calcium   | 1440   |             | 50.0               | mg/L  | 12-31-19         | EPA200.7 |
| Magnesium | 362    |             | 50.0               | mg/L  | 12-31-19         | EPA200.7 |
| Potassium | 90.9   | 33.9        | 500                | mg/L  | 12-31-19         | EPA200.7 |
| - 1       |        | <del></del> | 500                | mg/L  | 12-31-19         | EPA200.7 |

# FRESH WATER ANALYTICAL RESULTS: JUNE 2019

| Analyte | Result | MDL | Reporting | Units | Analyzed | Method |
|---------|--------|-----|-----------|-------|----------|--------|
|         |        |     | Limit     | i     | Date     |        |

| Alkalinity,  |       |       |          |         |           |
|--------------|-------|-------|----------|---------|-----------|
| Bicarbonate  | 220   | 5.00  | mg/L     | 6-12-19 | 310.1     |
| Alkalinity   |       |       |          |         |           |
| Carbonate    | <1.00 | 1.00  | mg/L     | 6-12-19 | 310.1     |
| Chloride     | 136   | 4.00  | mg/L     | 6-13-19 | 4500-C1-B |
| Conductivity | 1040  | 1.00  | uS/cm    | 6-12-19 | 120.1     |
| рН           | 7.81  | .100  | pH Units | 6-12-19 | 150.1     |
| Sulfate      | 196   | 25.00 | mg/L     | 6-11-19 | 375.4     |
| TDS          | 674   | 5.00  | mg/L     | 6-13-19 | 160.1     |
| Alkalinity   |       |       |          |         |           |
| Total        | 180   | 4.00  | mg/L     | 6-12-19 | 310.1     |

# Continued F/W Report for June 2019

| Analyte   | Result | MDL   | Reporting<br>Limit | Units | Analyzed<br>Date | Method   |
|-----------|--------|-------|--------------------|-------|------------------|----------|
| Calcium   | 101    |       | 0.500              | mg/L  | 6-19-19          | EPA200.7 |
| Magnesium | 27.9   |       | 0.500              | mg/L  | 6-19-19          | EPA200.7 |
| Potassium | 3.78   | 0.339 | 5.00               | mg/L  | 6-19-19          | EPA200.7 |
| Sodium    | 97.8   |       | 5.00               | mg/L  | 6-19-19          | EPA200.7 |

# FRESH WATER ANALYTICAL RESULTS: DECEMBER 2019

| Analyte | Result | MDL | Reporting | Units | Analyzed | Method |
|---------|--------|-----|-----------|-------|----------|--------|
| ·       |        |     | Limit     |       | Date     |        |

| Alkalinity,<br>Bicarbonate | 303   | 5.00  | mg/L     | 12-20-19 | 310.1     |
|----------------------------|-------|-------|----------|----------|-----------|
| Alkalinity<br>Carbonate    | <1.00 | 1.00  | mg/L     | 12-20-19 | 310.1     |
| Chloride                   | 232   | 4.00  | mg/L     | 12-20-13 | 4500-C1-B |
| Conductivity               | 1510  | 1.00  | uS/cm    | 12-20-19 | 120.1     |
| pH                         | 7.73  | 0.100 | pH Units | 12-20-19 | 150.1     |
| Sulfate                    | 159   | 25.0  | mg/L     | 12-23-19 | 375.4     |
| TDS                        | 896   | 5.00  | mg/L     | 12-23-19 | 160.1     |
| Alkalinity                 |       |       |          |          |           |
| Total                      | 248   | 4.00  | mg/L     | 12-20-19 | 310.1     |

# Continued F/W Report for December 2019

| Analyte   | Result | MDL   | Reporting<br>Limit | Units | Analyzed<br>Date | Method   |
|-----------|--------|-------|--------------------|-------|------------------|----------|
| Calcium   | 145    |       | 0.500              | mg/L  | 12-31-19         | EPA200.7 |
| Magnesium | 24.0   |       | 0.500              | mg/L  | 12-31-19         | EPA200.7 |
| Potassium | 17.7   | 0.339 | 5.00               | mg/L  | 12-31-19         | EPA200.7 |
| Sodium    | 147    |       | 5.00               | mg/L  | 12-31-19         | EPA200.7 |

#### MECHANICAL INTEGRITY TEST CHART

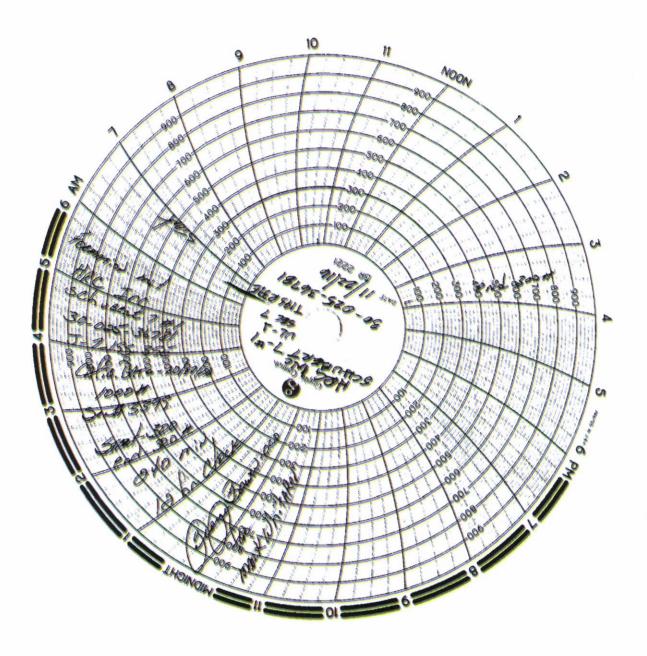
A formation mechanical test was performed on 11/20/16 on the BW-31. Formation Salado was pressured up to 300 psi and was witnessed the chart recorder start by Mark Whitaker at 8:15 AM for a duration of 4 hours test ended at 12:15PM where the casing valve was closed in it was witnessed by George Bowen. Formation Salado held 300 psi for the duration of the test.

Recorder was removed and well was bled back to tanks. Nipple up connections and placed well back into operation producing brine at 200 psi. Please find the subsequent report C-103 and the Chart below for your viewing.

Next formation integrity test will be November 2021.

| Office District   ~ (375) 393-6161 Energy, Minerals and Natural Resources   625 N. French Dr., Hobbs, NM/88240   District    ~ (375) 748-1283   Sit S. French St., Antesia, NM/88210   OIL CONSERVATION DIVISION     S. Indicate Type of Lease   | C-103      |
|--|------------|
| District 1 = (375) 393-6161  Energy, Minerals and Natural Resources  WELL API NO. 30-025-36781  Struct II = (379) 748-1283  OIL CONSERVATION DIVISION  Subject II = (379) 748-1283  Indicate Type of Lease   | 18, 2013   |
| District II - (375) 748-1283 811 S First St., Artesia, NM 88810 OIL CONSERVATION DIVISION S Indicate Type of Lease   |            |
|  |            |
|  |            |
| 1000 Rio Brazos Rd., Azieo, NM 87410  Pistrice IV - (505) 436-3460  Santa Fe, NM 87505  6. State Oil & Gas Lease No.   |            |
| 1230 S. St. Francis Dr., Santa D., NM  |            |
| SUNTRY NOTICES AND REPORTS ON WELLS 7. Lease Name or Unit Agreement  | Name       |
| ODO NOT USE THIS FORM HOS MOPOSALS TO DRILL OR TO DEEPEN ON PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C. 101) FOR SUCH SCHUBERT   |            |
| PROPOSALS.)  1. Type of Well: Oil Well   Gas Well   Other (Brine Supply)  8. Well Number 1   |            |
| 2. Name of Operator 9. OGRID Number  | -          |
| H.R.C., Inc. 131632  | -          |
| 3. Address of Operator P. O. Box 5102, Hobbs, NM 88241 BSW-Saldo   |            |
| 4. Well Location   |            |
|  | line       |
| Section 7 Township 19S Range 39E NMPM County_Lea   |            |
| 11. Elevation (Show whether DR. RKB, RT. GR, etc.)   |            |
| 3585 GL  |            |
| 12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data   |            |
|  |            |
| NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:  | INO E      |
| PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK ALTERING CAS TEMPORARILY ABANDON CHANGE PLANS COMMENCE DRILLING OPNS. PAND A  | D          |
| PULL OR ALTER CASING   MULTIPLE COMPL   CASING/CEMENT JOB  |            |
| DOWNHOLE COMMINGLE   |            |
| CLOSED-LOOP SYSTEM   | FR         |
| OTHER: MIT TEST  13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimate the state of t | mated date |
| of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram  | of         |
| proposed completion or recompletion.   |            |
| 11/20/16 PRESSURE FORMATION TO 300 PSI SHUT IN E   | P.M.       |
| 11/21/16 SHUT IN 11/22/16 RIG UP CHART RECORDER; OPEN CSG. TO CHART  |            |
| 11/22/16 RIA UP CHART RECORDED OF THE  |            |
| PECORDER & 300 PSI ( 8:15 AM; WITNESS: MALE  |            |
| WHITAKER; & HR. TEST CLOSE CSA. @ 12:15 PM   |            |
| WINTERE GRADER RAWEN - HELD @ 300 PSI.   |            |
| 1:00 PM - OPEN WELL TO TANKS BLEED PRESSURE  | to zeop    |
| 7:00 PM - PRODUCE BRIME @ 200 PSI  |            |
|  |            |
| Spud Date: Rig Release Date:   |            |
|  |            |
| Lhough contile that the individual is a second of the seco |            |
| I hereby certify that the information above is true and complete to the best of my knowledge and belief.   |            |
|  |            |
| Con use GAA A  |            |
| SIGNATURE COLU. SALLA TITLE President DATE 11-16-2016  |            |
|  |            |
| SIGNATURE TITLE President DATE _11-16-2016  Type or print name Gary M. Schubert E-mail address: garymschubert@gmail.com PHONE: 575-393-3194  For State Use Only  |            |
| Type or print name Gary M. Schubert E-mail address: garymschubert@gmail.com PHONE: 575-393-3194  |            |

# MIT BW-31 CHART 11-20-16



#### **DEVIATIONS FROM THE NORMAL OPERATIONS**

No deviations occurred in 2019 from the normal operations at the Schubert 7 Well # 1 BW-31.

# **LEAKS, SPILL CORRECTIVE ACTION REPORTS**

No leaks or spills occurred in 2019 for the Schubert 7 Well # 1 and facility.

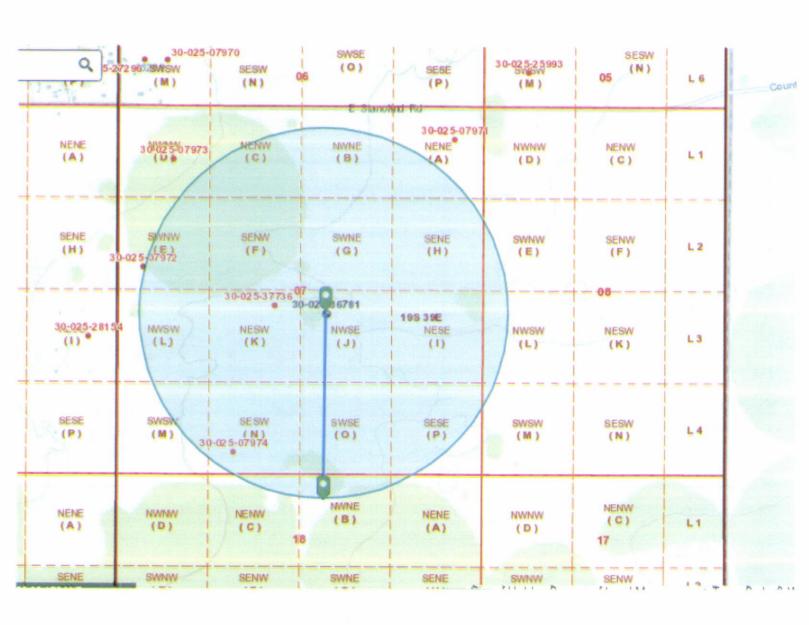
#### AREA OF REVIEW UPDATE SUMMARY

H.R.C., Inc. has updated the AOR for the Schubert 7 Well # 1 (BW-31) showing no new permits have been plotted on the NM OCD GIS program. H.R.C., Inc. will give notice to the Department if any future staking transpires within the AOR.

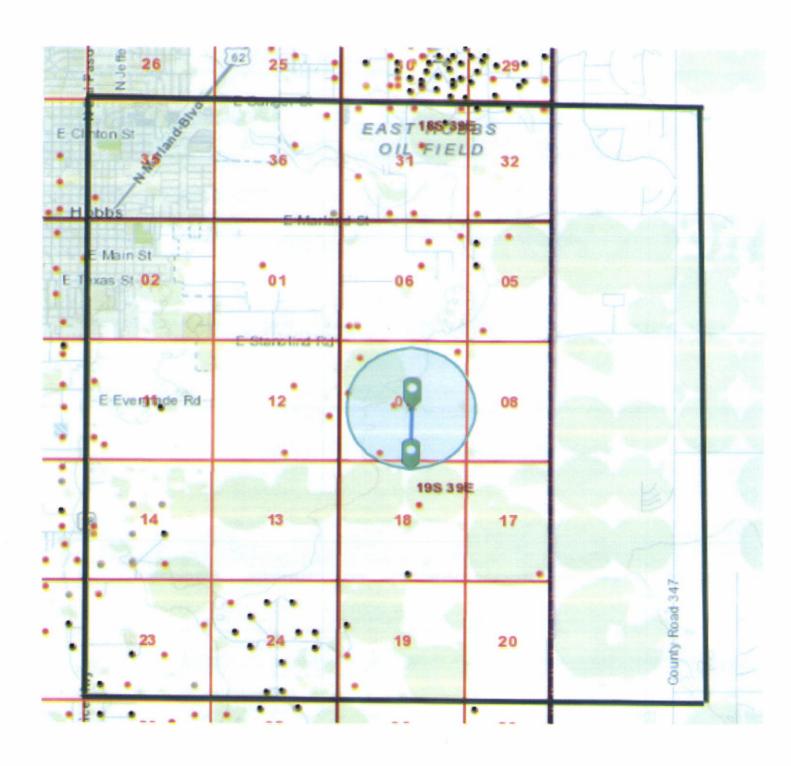
Please find on page 16 a half mile AOR review showing no new permits nor has there been any new wells drilled at this point.

Please find on page 17 a two mile AOR review showing no new permits nor has there been any new wells drilled at this point.

# HALF MILE AOR SCHUBERT 7 WELL # 1 (BW-31)



# TWO MILE AOR SCHUBERT 7 WELL # 1 (BW-31)



# MITs, SURFACE SUBSIDENCE SURVEYS, CAVERN SIZE AND SHAPE AND VOLUME

Please see page 13 & 14 for last MIT conducted on 11-20-16 held 300 psi and passed with OCD witnesses.

Surface Subsidence Surveys were conducted by Basin Surveys certified by Gary L. Jones. Four Elevation markers are in place. Please find below where the EM markers are located for BW-31.

#### **NEW MEXICO STATE PLANE COORDINATES (NAD83)**

| WELL | NORTHING  | EASTING   | LATITUDE     | LONGITUDE     | ELEVATION |
|------|-----------|-----------|--------------|---------------|-----------|
| EM-1 | 611304.81 | 925484.92 | 32°40′27.52″ | 103°05′05.71″ | 3591.65   |
| EM-2 | 611100.65 | 925800.11 | 32°40′25.46″ | 103°04′59.79″ | 3586.37   |
| EM-3 | 611248.41 | 925991.42 | 32°40′26.90″ | 103°05′04.86″ | 3586.23   |
| EM-4 | 610926.15 | 925561.84 | 32°40′23.76″ | 103°05′04.86″ | 3586.94   |

Three Surveys were conducted by Basin Surveys during the 2019 period with the description where no change in elevations has occurred also one that was conducted in January 2020. H.R.C., Inc. has depicted the 2019 reports of the surveys for your review below. Please find the plats of the Surveys at the end of this report for your viewing.

| REVISION # | DATE             | DESCRIPTION                      |
|------------|------------------|----------------------------------|
| 12         | January 15,2019  | Resurvey-No Change in Elevations |
| 13         | May 7, 2019      | Resurvey-No Change in Elevations |
| 14         | October 14, 2019 | Resurvey-No Change in Elevations |
| 15         | January 31, 2019 | Resurvey-No Change in Elevations |

#### **Cavern Characterization**

BW-31 has extracted an estimated total of 6,204,579 ft.<sup>3</sup> of Halite from the Salado formation from 2006 to December 31, 2019. This calculates to 496,366,322 lbs. of Halite that has produced 4,064,046 Bbl. of brine within this period stated above.

The Sonic log shown on page 20 has approximately 252' of good Halite net pay less than 5 units on the Gama ray side of the log.

Without a true means of running a log that would allow us to see a true picture behind the anhydrite rock would be questionable. The characterization of the cavern can be mathematically calculated using  $V=\Pi R^2h/3$  where  $[V=(3.14159*153.335^2)*(252')/3]$ 

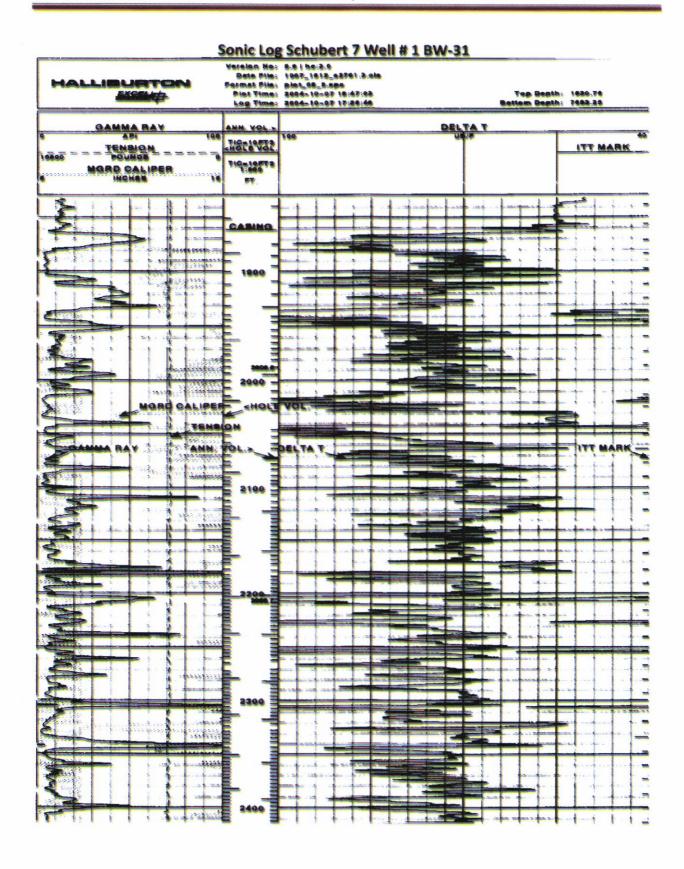
V = 6,204,571 ft.<sup>3</sup> of Halite has been extracted to date. This amount of volume calculated correlates with the total of brine produced from 2006 through December 31, 2019 of 4,064,046 Bbl.

It takes 122.136 Lbs. of salt to produce one barrel of quality brine yielding a Specific Gravity of 1.1959. Multiplying salt ratio to total fluid bbl. total of 4,064,046 (extracted fluid bbl.) equals 496,366,322 Lbs. of salt mined from 2006 to the end of December 31, 2019.

Taking the amount of Halite mined of 496,366,322 Lbs. and dividing the amount by 80 (Lbs. salt per ft. $^3$ ) will equal 6,204,579 ft. $^3$ . In respect to the cavern safety factor of 0.45 % the Schubert 7 Well No. 1 (BW-31) has a factor value of (306.68' W / 1865 H) = 0.1644 well below the States warning factor. New horizons below 2312' will yield greater opportunities.

H.R.C., Inc. plans for the completed remedial work will drill 338' deeper contributing 246' of net Halite pay as per approved C-103 Intent.

BW-31 has a lot of life to continue mining for Halite that is used throughout our needs for the oil industry in Southeastern New Mexico.



# SUMMARY RATIO INJECTION VS. EXTRACTION

# 2019 FLUID INJECTION & BRINE PRODUCTION VOLUME RATIO %

| MONTH     | BRIINE | PSI     | FRESH  | PSI   | RATIO       | RATIO |
|-----------|--------|---------|--------|-------|-------------|-------|
|           |        |         | WATER  |       |             | %     |
| JANUARY   | 30,031 | 195-200 | 29719  | 25-30 | 30031:29719 | 101.0 |
| FEBRUARY  | 28,726 | 195-200 | 28,492 | 25-30 | 14363:14246 | 100.8 |
| MARCH     | 27,971 | 195-200 | 27,860 | 25-30 | 27971:27860 | 100.4 |
| APRIL     | 16,717 | 195-200 | 16,621 | 25-30 | 16717:16621 | 100.6 |
| MAY       | 18,123 | 195-200 | 13,967 | 25-30 | 18123:13967 | 129.8 |
| JUNE      | 27,630 | 195-200 | 27,447 | 25-30 | 9210:9149   | 100.7 |
| JULY      | 23,990 | 195-200 | 23,812 | 25-30 | 11995:11906 | 104.9 |
| AUGUST    | 25,102 | 195-200 | 24,981 | 25-30 | 2282:2271   | 100.5 |
| SEPTEMBER | 18,188 | 195-200 | 18,031 | 25-30 | 18188:18031 | 100.9 |
| OCTOBER   | 28,826 | 195-200 | 28,683 | 25-30 | 28826:28683 | 100.9 |
| NOVEMBER  | 17,112 | 195-200 | 17,007 | 25-30 | 5704:5669   | 100.6 |
| DECEMBER  | 22,466 | 195-200 | 22,340 | 25-30 | 11233:11170 | 100.6 |

# **MAJOR FACILITY ACTIVITY OR EVENTS**

No major activities or events have taken place during 2019 on location.

H.R.C., Inc. completed the 180 day report after permit was renewed in 2019.

#### SURFACE SUBSIDENCE MONITORING PLAN

Surface Subsidence Surveys were conducted by Basin Surveys certified by Gary L. Jones. Four Elevation markers are in place. Please find below where the EM markers are located for BW-31.

#### **NEW MEXICO STATE PLANE COORDINATES (NAD83)**

| WELL | NORTHING  | EASTING   | LATITUDE     | LONGITUDE     | ELEVATION |
|------|-----------|-----------|--------------|---------------|-----------|
| EM-1 | 611304.81 | 925484.92 | 32°40′27.52″ | 103°05'05.71" | 3591.65   |
| EM-2 | 611100.65 | 925800.11 | 32°40′25.46″ | 103°04′59.79″ | 3586.37   |
| EM-3 | 611248.41 | 925991.42 | 32°40′26.90″ | 103°05′04.86″ | 3586.23   |
| EM-4 | 610926.15 | 925561.84 | 32°40′23.76″ | 103°05'04.86" | 3586.94   |

Three Surveys were conducted by Basin Surveys during the 2019 period with the description where no change in elevations has occurred also one that was conducted in January 2020. H.R.C., Inc. has depicted the 2019 reports of the surveys for your review below. Please find the plats of the Surveys at the end of this report for your viewing.

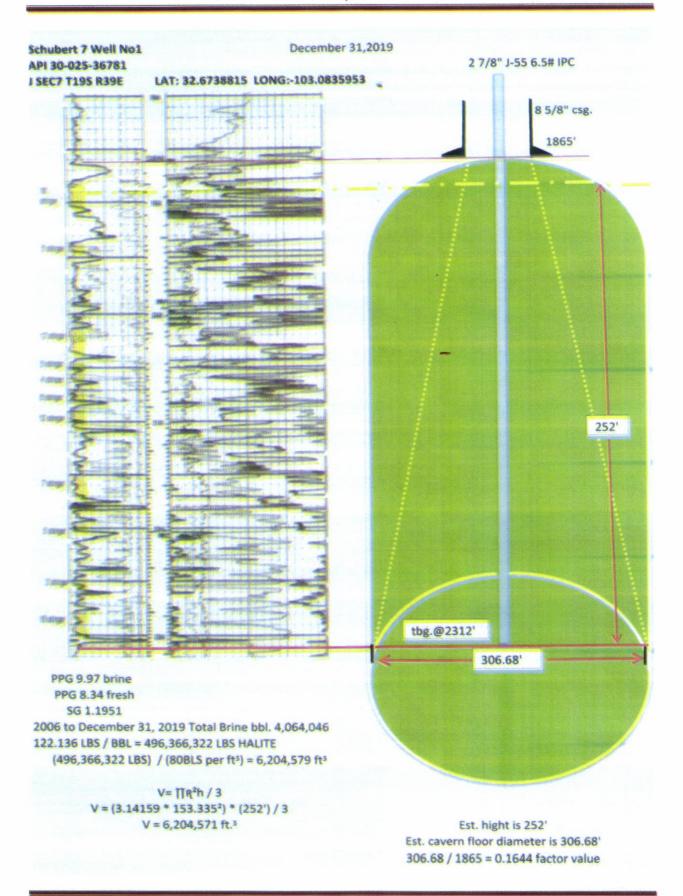
| REVISION # | DATE             | DESCRIPTION                      |
|------------|------------------|----------------------------------|
| 12         | January 15,2019  | Resurvey-No Change in Elevations |
| 13         | May 7, 2019      | Resurvey-No Change in Elevations |
| 14         | October 14, 2019 | Resurvey-No Change in Elevations |
| 15         | January 31, 2019 | Resurvey-No Change in Elevations |

# **CAVERN CHARACTERIZATION DATA RESULTS.**

Please refer to page 19 and page 20 for data results.

Page 24; Please find the characterization of the Schubert 7 Well No. 1 (BW-31)

We have attached a copy for your viewing at the end of this yearly report.



**BW - 31** 

# SCHUBERT 7 - WELL # 1

# Year 2019

| MONTH     | BRINE<br>PRODUCTION<br>(BY Meter) | FRESH WATER INJECTED (By Meter) |  |
|-----------|-----------------------------------|---------------------------------|--|
| January   | 30,031                            | 29,719                          |  |
| February  | 28,726                            | 28,492                          |  |
| March     | 27,971                            | 27,860                          |  |
| April     | 16,717                            | 16,621                          |  |
| May       | 18,123                            | 13,967                          |  |
| June      | 27,630                            | 27,447                          |  |
| July      | 23,990                            | 23,812                          |  |
| August    | 25,102                            | 24,981                          |  |
| September | 18,188                            | 18,031                          |  |
| October   | 28,826                            | 28,683                          |  |
| November  | 17,112                            | 17,007                          |  |
| December  | 22,466                            | 22,340                          |  |

**BW 31** 

|                 |           |   | SCHIO       | SCHUBERT 7 - WELL # 1 | #1         |                      |  |        |
|-----------------|-----------|---|-------------|-----------------------|------------|----------------------|--|--------|
| 2019            | ETZ BRINE | PATE BRINE                              | TOTAL BRINE | FRESH WATER           | DATE FRESH | FRESH WATER          | FRESH  | TOTAL  |
|                 | WATER     | WATER                                   | WATER       | INJECTED              | WATER      | <b>METER READING</b> | WATER  | FRESH  |
|                 | BBLS      | BBLS                                    | BBLS        | BBLS                  | METER READ | BY GALLONS           | USED BY  | WATER  |
|                 |           |   |             |                       |            | (X 100)              | GALLONS<br>(X 100)   | BBIS   |
| JANUARY, 2019   | 30,031    |   | 30,031      | 29,719                | 01/31/19   | 1,297,613            | 12,482   | 29,719 |
| FEBRUARY, 2019  | 28,726    |   | 28,726      | 28,492                | 02/28/19   | 1,309,580            | 11,967   | 28,492 |
| MARCH, 2019     | 27,971    |   | 27,971      | 27,860                | 03/30/19   | 1,321,281            | 11,701   | 27,860 |
| APRIL, 2019     | 16,717    |   | 16,717      | 16,621                | 04/30/19   | 1,328,262            | 6,981  | 16,621 |
| MAY, 2019       | 18,123    |   | 18,123      | 13,967                | 05/31/19   | 1,335,808            | 7,546  | 13,967 |
| JUNE, 2019      | 27,630    |   | 27,630      | 27,447                | 06/30/19   | 1,347,336            | 11,528   | 27,447 |
| JULY, 2019      | 23,990    |   | 23,990      | 23,812                | 07/31/19   | 1,357,337            | 10,001   | 23,812 |
| AUGUST, 2019    | 25,102    |   | 25,102      | 24,981                | 08/31/19   | 1,367,829            | 10,492   | 24,981 |
| SEPTEMBER, 2019 | 18,188    |   | 18,188      | 18,031                | 09/30/19   | 1,375,402            | 7,573  | 18,031 |
| OCTOBER, 2019   | 28,826    |   | 28,826      | 28,683                | 10/31/19   | 1,387,449            | 12,047   | 28,683 |
| NOVEMBER, 2019  | 17,112    |   | 17,112      | 17,007                | 11/30/19   | 1,394,592            | 7,143  | 17,007 |
| DECEMBER, 2019  | 22,466    |   | 22,466      | 22,340                | 12/31/19   | 1,403,975            | 9,383  | 22,340 |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      | The second secon |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           | 110000000000000000000000000000000000000 |             | 1000                  |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |
|                 |           |   |             |                       |            |                      |  |        |



June 24, 2019

**GARY SCHUBERT** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: SCHUBERT** 

Enclosed are the results of analyses for samples received by the laboratory on 06/10/19 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accredited certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Celeg D. Keine

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B

Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2

Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Reported:

24-Jun-19 12:00



#### Analytical Results For:

**ETZ WATER STATION** 

HOBBS NM, 88241

PO BOX 6056

Project: SCHUBERT

Project Number: SCHUBERT #7 WELL

Project Manager: GARY SCHUBERT

Fax To:

| The second secon |               |        |                 |                 |
|--|---------------|--------|-----------------|-----------------|
| Sample ID  | Laboratory ID | Matrix | Date Sampled    | Date Received   |
| BRINE WATER  | H902012-01    | Water  | 10-Jun-19 09:45 | 10-Jun-19 15:45 |
| MONITOR WELL   | H902012-02    | Water  | 10-Jun-19 09:47 | 10-Jun-19 15:45 |
| FRESH WATER  | H902012-03    | Water  | 10-Jun-19 09:50 | 10-Jun-19 15:45 |

Cardinal Laboratories

\*=Accredited Analyte

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Colory D. France

Celey D. Keene, Lab Director/Quality Manager



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: SCHUBERT #7 WELL

Project Manager: GARY SCHUBERT

Fax To:

Reported:

24-Jun-19 12:00

# BRINE WATER H902012-01 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes                          |
|-----------------------------|--------------|-----|--------------------|--------------|-----------|---------|---------|-----------|-----------|--------------------------------|
|                             |              |     | Cardin             | al Laborat   | ories     |         |         |           |           |                                |
| Inorganic Compounds         |              |     |                    |              |           |         |         |           |           |                                |
| Alkalinity, Bicarbonate     | 83.0         |     | 5.00               | mg/L         | 1         | 9060311 | AC      | 12-Jun-19 | 310.1     | THE PERSON NAMED IN COLUMN TWO |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L         | 1         | 9060311 | AC      | 12-Jun-19 | 310.1     |                                |
| Chloride*                   | 196000       |     | 4.00               | mg/L         | 1         | 9060719 | AC      | 13-Jun-19 | 4500-CI-B |                                |
| Conductivity*               | 253000       |     | 1.00               | uS/cm        | 1         | 9061112 | AC      | 12-Jun-19 | 120.1     |                                |
| pH*                         | 6.94         |     | 0.100              | pH Units     | 1         | 9061112 | AC      | 12-Jun-19 | 150.1     |                                |
| Sulfate*                    | 4140         |     | 833                | mg/L         | 83.33     | 9061107 | AC      | 11-Jun-19 | 375.4     |                                |
| TDS*                        | 314000       |     | 5.00               | mg/L         | 1         | 9060701 | AC      | 13-Jun-19 | 160.1     |                                |
| Alkalinity, Total*          | 68.0         |     | 4.00               | mg/L         | 1         | 9060311 | AC      | 12-Jun-19 | 310.1     |                                |
|                             |              |     |                    |              |           |         |         |           |           |                                |
|                             |              |     | Green Ana          | lytical Labo | oratories |         |         |           |           |                                |
| Total Recoverable Metals by | ICP (E200 7) |     |                    |              |           |         |         |           |           |                                |

| Total Recoverable Metals by | ICP (E200.7) |      |      |      |      |         |     |           |          |
|-----------------------------|--------------|------|------|------|------|---------|-----|-----------|----------|
| Calcium*                    | 1570         |      | 20.0 | mg/L | 200  | B906139 | AES | 18-Jun-19 | EPA200.7 |
| Magnesium*                  | 433          |      | 20.0 | mg/L | 200  | B906139 | AES | 18-Jun-19 | EPA200.7 |
| Potassium*                  | 238          | 13.5 | 200  | mg/L | 200  | B906139 | AES | 18-Jun-19 | EPA200.7 |
| Sodium*                     | 141000       |      | 1000 | mg/L | 1000 | B906139 | AES | 19-Jun-19 | EPA200.7 |

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\*=Accredited Analyte

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**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: SCHUBERT #7 WELL

Reported: 24-Jun-19 12:00

Project Manager: GARY SCHUBERT

Fax To:

# MONITOR WELL H902012-02 (Water)

| Analyte                       | Result       | MDL   | Reporting<br>Limit          | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-------------------------------|--------------|-------|-----------------------------|--------------|-----------|---------|---------|-----------|-----------|-------|
|                               |              |       | Cardin                      | al Laborate  | ories     |         |         |           |           |       |
| Inorganic Compounds           |              |       |                             |              |           |         |         |           |           |       |
| Alkalinity, Bicarbonate       | 215          |       | 5.00                        | mg/L         | 1         | 9060311 | AC      | 12-Jun-19 | 310.1     |       |
| Alkalinity, Carbonate         | <1.00        |       | 1.00                        | mg/L         | 1         | 9060311 | AC      | 12-Jun-19 | 310.1     |       |
| Chloride*                     | 76.0         |       | 4.00                        | mg/L         | 1         | 9060719 | AC      | 13-Jun-19 | 4500-CI-B |       |
| Conductivity*                 | 660          |       | 1.00                        | uS/cm        | 1         | 9061112 | AC      | 12-Jun-19 | 120.1     |       |
| pH*                           | 7.94         |       | 0.100                       | pH Units     | 1         | 9061112 | AC      | 12-Jun-19 | 150.1     |       |
| Sulfate*                      | 60.8         |       | 10.0                        | mg/L         | 1         | 9061107 | AC      | 11-Jun-19 | 375.4     |       |
| TDS*                          | 435          |       | 5.00                        | mg/L         | 1         | 9060701 | AC      | 13-Jun-19 | 160.1     |       |
| Alkalinity, Total*            | 176          |       | 4.00                        | mg/L         | 1         | 9060311 | AC      | 12-Jun-19 | 310.1     |       |
|                               |              |       |                             |              |           |         |         |           |           |       |
|                               |              |       | Green Ana                   | lytical Labo | oratories |         |         |           |           |       |
| Total Recoverable Metals by l | ICP (E200.7) |       | Contract to the property of |              |           |         |         |           |           |       |
| Calcium <sup>ė</sup>          | 55.1         |       | 0.500                       | mg/L         | 5         | B906139 | AES     | 18-Jun-19 | EPA200.7  |       |
| Magnesium*                    | 17.0         |       | 0.500                       | mg/L         | 5         | B906139 | AES     | 18-Jun-19 | EPA200.7  |       |
| Potassium*                    | 2.27         | 0.339 | 5.00                        | mg/L         | 5         | B906139 | AES     | 18-Jun-19 | EPA200.7  | J     |
| Sedium*                       | 69.0         |       | 5.00                        | mg/L         | 5         | B906139 | AES     | 18-Jun-19 | EPA200.7  |       |

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**ETZ WATER STATION** 

PO BOX 6056

Project: SCHUBERT

Reported: 24-Jun-19 12:00

HOBBS NM, 88241

Project Number: SCHUBERT #7 WELL

Project Manager: GARY SCHUBERT

Fax To:

# FRESH WATER H902012-03 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units        | Dilution   | Batch   | Analyst | Analyzed  | Method   | Notes  |
|-----------------------------|--------------|-----|--------------------|--------------|------------|---------|---------|-----------|--|--|
|                             |              |     | Cardin             | nal Laborat  | ories      |         |         |           | AND THE PERSON NAMED IN COLUMN TAXABLE PROPERTY AND ADDRESS OF TAXABLE PARTY AND ADDRESS OF TAXABLE PAR | and the second   |
| Inorganic Compounds         |              |     |                    |              |            |         |         |           |  |  |
| Alkalinity, Bicarbonate     | 220          |     | 5.00               | mg/L         | 1          | 9060311 | AC      | 12-Jun-19 | 310.1  |  |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L         | 1          | 9060311 | AC      | 12-Jun-19 | 310.1  |  |
| Chloride*                   | 136          |     | 4.00               | mg/L         | 1          | 9060719 | AC      | 13-Jun-19 | 4500-CI-B  |  |
| Conductivity*               | 1040         |     | 1.00               | uS/cm        | 1          | 9061112 | AC      | 12-Jun-19 | 120.1  |  |
| pH*                         | 7.81         |     | 0.100              | pH Units     | 1          | 9061112 | AC      | 12-Jun-19 | 150.1  |  |
| Sulfate*                    | 196          |     | 25.0               | mg/L         | 2.5        | 9061107 | AC      | 11-Jun-19 | 375.4  |  |
| TDS*                        | 674          |     | 5.00               | mg/L         | 1          | 9060701 | AC      | 13-Jun-19 | 160.1  |  |
| Alkalinity, Total*          | 180          |     | 4.00               | mg/L         | 1          | 9060311 | AC      | 12-Jun-19 | 310.1  |  |
|                             |              |     | Green Ana          | lytical Labo | oratories  |         |         |           |  |  |
| Total Recoverable Metals by | ICP (E200.7) |     | Grych Ana          | iyilcal Dabi | or atories |         |         |           |  |  |
| Calcium*                    | 101          |     | 0.500              | mg/L         | 5          | B906147 | AES     | 19-Jun-19 | EPA200.7   | Marie Salara |

| Total Recoverable Metals I | VICT (E200.7) | PERSONAL PROPERTY AND PERSONS IN COLUMN | AND DESIGNATION OF THE PERSON NAMED IN | AND ADDRESS OF THE PERSON NAMED IN | personal and a second |         |     |           |          |   |
|----------------------------|---------------|---|--|------------------------------------|-----------------------|---------|-----|-----------|----------|---|
| Calcium®                   | 101           |   | 0.500                                  | mg/L                               | 5                     | B906147 | AES | 19-Jun-19 | EPA200.7 |   |
| Magnesium*                 | 27.9          |   | 0.500                                  | mg/L                               | 5                     | B906147 | AES | 19-Jun-19 | EPA200.7 |   |
| Potassium*                 | 3.78          | 0.339                                   | 5.00                                   | mg/L                               | 5                     | B906147 | AES | 19-Jun-19 | EPA200.7 | J |
| Sodium*                    | 97.8          |   | 5.00                                   | mg/L                               | 5                     | B906147 | AES | 19-Jun-19 | EPA200.7 |   |

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\*=Accredited Analyte

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**ETZ WATER STATION** PO BOX 6056 HOBBS NM, 88241

Project: SCHUBERT

Reported: 24-Jun-19 12:00

Project Number: SCHUBERT #7 WELL

Project Manager: GARY SCHUBERT

Fax To:

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units                                      | Spike<br>Level | Source<br>Result | %REC          | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---|--------|--------------------|--|----------------|------------------|---------------|----------------|------|--------------|-------|
| Batch 9060311 - General Prep - Wet Chem |        |                    |  |                |                  |               |                |      |              |       |
| Blank (9060311-BLK1)                    |        |                    |  | Prepared &     | k Analyzed:      | 04-Jun-19     |                |      |              |       |
| Alkalinity, Carbonate                   | ND     | 1.00               | mg/L                                       |                |                  |               |                |      |              |       |
| Alkalinity, Bicarbonate                 | 5.00   | 5.00               | mg/L                                       |                |                  |               |                |      |              |       |
| Alkalinity, Total                       | 4.00   | 4.00               | mg/L                                       |                |                  |               |                |      |              |       |
| LCS (9060311-BS1)                       |        |                    |  | Prepared 8     | k Analyzed:      | 04-Jun-19     |                |      |              |       |
| Alkalinity, Carbonate                   | ND     | 2.50               | mg/L                                       |                |                  |               | 80-120         |      |              |       |
| Alkalinity, Bicarbonate                 | 305    | 12.5               | mg/L                                       |                |                  |               | 80-120         |      |              |       |
| Alkalinity, Total                       | 250    | 10.0               | mg/L                                       | 250            |                  | 100           | 80-120         |      |              |       |
| LCS Dup (9060311-BSD1)                  |        |                    |  | Prepared &     | & Analyzed:      | 04-Jun-19     |                |      |              |       |
| Alkalinity, Carbonate                   | ND     | 2.50               | mg/L                                       |                |                  |               | 80-120         |      | 20           |       |
| Alkalinity, Bicarbonate                 | 330    | 12.5               | mg/L                                       |                |                  |               | 80-120         | 7.87 | 20           |       |
| Alkalinity, Total                       | 270    | 10.0               | mg/L                                       | 250            |                  | 108           | 80-120         | 7.69 | 20           |       |
| Batch 9060701 - Filtration              |        |                    |  |                |                  |               |                |      |              |       |
| Blank (9060701-BLK1)                    |        |                    |  | Prepared:      | 07-Jun-19 A      | nalyzed: 1    | l-Jun-19       |      |              |       |
| TDS                                     | ND     | 5.00               | mg/L                                       | 700            |                  |               |                |      |              |       |
| LCS (9060701-BS1)                       |        |                    |  | Prepared:      | 07-Jun-19 A      | nalyzed: 1    | l-Jun-19       |      |              |       |
| TDS                                     | 525    |                    | mg/L                                       | 527            |                  | 99.6          | 80-120         |      |              |       |
| Duplicate (9060701-DUP1)                | Sou    | rce: H901974       | -01  | Prepared:      | 07-Jun-19 A      | nalyzed: 1    | l-Jun-19       |      |              |       |
| TDS                                     | 430    | 5.00               | mg/L                                       |                | 388              | -             |                | 10.3 | 20           |       |
| Batch 9060719 - General Prep - Wet Chem |        |                    | 22-13-13-13-13-13-13-13-13-13-13-13-13-13- |                |                  | S Description |                |      |              |       |
| Blank (9060719-BLK1)                    |        |                    |  | Prepared:      | 07-Jun-19 A      | nalyzed: 10   | )-Jun-19       |      |              |       |
| Chloride                                | ND     | 4.00               | mg/L                                       |                |                  |               |                |      |              |       |

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\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: SCHUBERT #7 WELL

Project Manager: GARY SCHUBERT

Fax To:

Reported: 24-Jun-19 12:00

### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result   | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---|--|--------------------|----------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch 9060719 - General Prep - Wet Chem | -  |                    |          |                |                  | 74100       | Dillito        | MD    | Lime         | Notes |
| LCS (9060719-BS1)                       | Control of the Contro |                    |          | Prepared: 0    | 7-Jun-19 A       | nalyzed: 10 | )-Jun-19       |       |              | -     |
| Chloride                                | 96.0   | 4.00               | mg/L     | 100            |                  | 96.0        | 80-120         |       |              |       |
| LCS Dup (9060719-BSD1)                  |  |                    |          | Prepared: 0    | 7-Jun-19 A       | malyzed: 10 | )-Jun-19       |       |              |       |
| Chloride                                | 100  | 4.00               | mg/L     | 100            |                  | 100         | 80-120         | 4.08  | 20           |       |
| Batch 9061107 - General Prep - Wet Chem |  |                    |          |                |                  |             |                |       |              |       |
| Blank (9061107-BLK1)                    |  |                    |          | Prepared &     | Analyzed:        | 11-Jun-19   |                |       |              |       |
| Sulfate                                 | ND   | 10.0               | mg/L     |                |                  |             |                |       |              |       |
| LCS (9061107-BS1)                       |  |                    |          | Prepared &     | Analyzed:        | 11-Jun-19   |                |       |              |       |
| Sulfate                                 | 21.6   | 10.0               | mg/L     | 20.0           |                  | 108         | 80-120         |       |              |       |
| LCS Dup (9061107-BSD1)                  |  |                    |          | Prepared &     | Analyzed:        | 11-Jun-19   |                |       |              |       |
| Sulfate                                 | 21.3   | 10.0               | mg/L     | 20.0           |                  | 106         | 80-120         | 1.54  | 20           |       |
| Batch 9061112 - General Prep - Wet Chem |  |                    |          |                |                  |             |                |       |              |       |
| LCS (9061112-BS1)                       |  |                    |          | Prepared: 1    | 1-Jun-19 A       | nalyzed: 12 | 2-Jun-19       |       |              |       |
| Conductivity                            | 91900  |                    | uS/cm    | 100000         |                  | 91.9        | 80-120         |       |              |       |
| pH                                      | 7.09   |                    | pH Units | 7.00           |                  | 101         | 90-110         |       |              |       |
| Duplicate (9061112-DUP1)                | Sou  | rce: H902003       | -01      | Prepared: 1    | 1-Jun-19 A       | nalyzed: 12 | 2-Jun-19       |       |              |       |
| pH                                      | 9.01   | 0.100              | pH Units |                | 8.98             |             |                | 0.334 | 20           |       |
| Conductivity                            | 11000  | 1.00               | uS/cm    |                | 11000            | 18          |                | 0.273 | 20           |       |

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ETZ WATER STATION PO BOX 6056 Project: SCHUBERT

Project Number: SCHUBERT #7 WELL

Reported: 24-Jun-19 12:00

HOBBS NM, 88241

Project Manager: GARY SCHUBERT

Fax To:

### Total Recoverable Metals by ICP (E200.7) - Quality Control

### **Green Analytical Laboratories**

| Analyte                             | Result    | Reporting<br>Limit | Units                     | Spike<br>Level | Source<br>Result | %REC         | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|-------------------------------------|-----------|--------------------|---------------------------|----------------|------------------|--------------|----------------|-------|--------------|-------|
| Batch B906139 - Total Rec. 200.7/20 | 0.8/200.2 |                    |                           |                |                  |              |                |       |              |       |
| Blank (B906139-BLK1)                |           |                    |                           | Prepared:      | 14-Jun-19 A      | nalyzed: 18  | 8-Jun-19       |       |              |       |
| Sodium                              | ND        | 1.00               | mg/L                      |                |                  |              |                |       |              |       |
| Calcium                             | ND        | 0.100              | mg/L                      |                |                  |              |                |       |              |       |
| Magnesium                           | ND        | 0.100              | mg/L                      |                |                  |              |                |       |              |       |
| Potassium                           | 0.121     | 1.00               | mg/L                      |                |                  |              |                |       |              |       |
| LCS (B906139-BS1)                   |           |                    |                           | Prepared:      | 14-Jun-19 A      | analyzed: 13 | 8-Jun-19       |       |              |       |
| Sodium                              | 3.56      | 1.00               | mg/L                      | 3.24           |                  | 110          | 85-115         |       |              |       |
| Calcium                             | 4.19      | 0.100              | mg/L                      | 4.00           |                  | 105          | 85-115         |       |              |       |
| Potassium                           | 8.47      | 1.00               | mg/L                      | 8.00           |                  | 106          | 85-115         |       |              |       |
| Magnesium                           | 20.5      | 0.100              | mg/L                      | 20.0           |                  | 103          | 85-115         |       |              |       |
| LCS Dup (B906139-BSD1)              |           |                    |                           | Prepared:      | 14-Jun-19 A      | nalyzed: 1   | 8-Jun-19       |       |              |       |
| Potassium                           | 8.49      | 1.00               | mg/L                      | 8.00           |                  | 106          | 85-115         | 0.168 | 20           |       |
| Calcium                             | 4.18      | 0.100              | mg/L                      | 4.00           |                  | 105          | 85-115         | 0.250 | 20           |       |
| Magnesium                           | 20.6      | 0.100              | mg/L                      | 20.0           |                  | 103          | 85-115         | 0.406 | 20           |       |
| Sodium                              | 3.49      | 1.00               | mg/L                      | 3.24           |                  | 108          | 85-115         | 2.06  | 20           |       |
| Batch B906147 - Total Rec. 200.7/20 | 0.8/200.2 |                    | inducation and the second |                |                  |              |                |       |              |       |
| Blank (B906147-BLK1)                |           |                    |                           | Prepared:      | 17-Jun-19 A      | analyzed: 1  | 9-Jun-19       |       |              |       |
| Sodium                              | ND        | 1.00               | mg/L                      |                |                  |              |                |       |              |       |
| Calcium                             | ND        | 0.100              | mg/L                      |                |                  |              |                |       |              |       |
| Potassium                           | 0.222     | 1.00               | mg/L                      |                |                  |              |                |       |              |       |
| Magnesium                           | ND        | 0.100              | mg/L                      |                |                  |              |                |       |              |       |
| LCS (B906147-BS1)                   |           |                    |                           | Prepared:      | 17-Jun-19 A      | analyzed: 1  | 9-Jun-19       |       |              |       |
| Sodium                              | 3.63      | 1.00               | mg/L                      | 3.24           |                  | 112          | 85-115         |       |              |       |
| Potassium                           | 8.34      | 1.00               | mg/L                      | 8.00           |                  | 104          | 85-115         |       |              |       |
| Magnesium                           | 20.2      | 0.100              | mg/L                      | 20.0           |                  | 101          | 85-115         |       |              |       |
| Calcium                             | 4.15      | 0.100              | mg/L                      | 4.00           |                  | 104          | 85-115         |       |              |       |

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Celey D. Keene, Lab Director/Quality Manager

%REC

Limits

RPD



### Analytical Results For:

**ETZ WATER STATION** 

PO BOX 6056 **HOBBS NM, 88241** 

Analyte

Project: SCHUBERT

Project Number: SCHUBERT #7 WELL

Level

Source

Result

%REC

Project Manager: GARY SCHUBERT

Fax To:

Reported:

24-Jun-19 12:00

RPD

### Total Recoverable Metals by ICP (E200.7) - Quality Control

### **Green Analytical Laboratories**

Units

Reporting

Limit

Result

|                                     | Result    | Limit | Units                            | Level       | Result     | %REC        | Limits   | RPD  | Limit           | Notes |
|-------------------------------------|-----------|-------|----------------------------------|-------------|------------|-------------|----------|------|-----------------|-------|
| Batch B906147 - Total Rec. 200.7/20 | 0.8/200.2 |       |                                  |             |            |             |          |      | Marian Property | -     |
| LCS Dup (B906147-BSD1)              |           |       | and accounty given to brand with | Prepared: 1 | 7-Jun-19 A | nalvzed: 19 | )-Inn-19 |      |                 |       |
| Potassium                           | 8.19      | 1.00  | mg/L                             | 8.00        |            | 102         | 85-115   | 1.81 | 20              |       |
| Magnesium                           | 19.9      | 0.100 | mg/L                             | 20.0        |            | 99.3        | 85-115   | 1.67 | 20              |       |
| Sodium<br>Calcium                   | 3.48      | 1.00  | mg/L                             | 3.24        |            | 107         | 85-115   | 4.43 | 20              |       |
| Calcium                             | 4.04      | 0.100 | mg/L                             | 4.00        |            | 101         | 85-115   | 2.61 | 20              |       |

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College D. Krong



### **Notes and Definitions**

| J   | Estimated conentration. Analyte concentration between MDL and RL.               |
|-----|---|
| ND  | Analyte NOT DETECTED at or above the reporting limit                            |
| RPD | Relative Percent Difference   |
| **  | Samples not received at proper temperature of 6°C or below.                     |
| *** | Insufficient time to reach temperature.   |
| •   | Chloride by SM4500Cl-B does not require samples be received at or below 6°C     |
|     | Samples reported on an as received basis (wet) unless otherwise noted on report |

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Colog D. Trung



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Nam            | Company Name: Ord Coar Starton  |                                    |                 |   |                           | 01-11/6                               |             | ANALYSIS REDIRET | 13         |          |
|------------------------|---|------------------------------------|-----------------|---|---------------------------|---------------------------------------|-------------|------------------|------------|----------|
| Project Manag          | Project Manager: Gold School  |                                    |                 | D.  | P.O. 举                    |                                       |             | 1                |            | T        |
| Address: P.O. Dex      | S. Box 5102   |                                    |                 | ပိ  | Company:                  |                                       |             |                  |            |          |
| City: Actobs           | State: Nim Zip:   |                                    | 88.74<br>88.74  | A   | Attn:                     |                                       | -           |                  |            |          |
| Phone # W/             | Phone # 12 12 02 02 Pax #:  |                                    |                 | Ā   | Address:                  |                                       |             |                  |            |          |
| Project #:             | Project Owner:  |                                    |                 | ت   | City:                     |                                       | 3           |                  |            | m( 10 3) |
| Project Name:          | braker Samples  |                                    |                 | St  | State:                    | Zib:                                  | 120         |                  |            | and Jane |
| Project Location       | Project Location: Schulles to the live !!   | -                                  |                 | ā.  | Phone #:                  |                                       | n           |                  |            |          |
| Sampler Name:          | Esen Denahure   |                                    |                 | H.  | 事が、                       |                                       |             |                  |            | Amus     |
| FOR LAB USE ONLY       |   |                                    | MATRIX          | X   | PRESERV.                  | SAMPLING                              | 7           |                  | F are to a |          |
| Lab I.D.               | Sample I.D.   | B OR (C)OMP.<br>TAINERS<br>NUMATER | яэтаwэ          | The second second   | OOF<br>PASE:              |                                       | in the same |                  |            |          |
| HABIOIL                |   | # CON                              | TSAW            | OTHEI<br>OTHEI<br>OIL   | ACID/E<br>OTHER           | DATE TIME                             | 27          |                  |            |          |
|                        | Brice Water   | A -                                |                 |   |                           | Chora girka                           | >           |                  |            |          |
| N                      | Morty lack  | \<br>\<br>\                        |                 |   |                           | というなからい                               |             |                  |            |          |
| (c)                    | Fresh Japan   |                                    |                 |   |                           | GIO MATSON                            | 7           |                  |            |          |
|                        |   | +                                  |                 |   |                           |                                       |             |                  |            |          |
|                        |   |                                    |                 |   |                           |                                       |             |                  |            |          |
|                        |   |                                    |                 |   |                           |                                       |             |                  |            |          |
|                        |   |                                    |                 | 1   |                           |                                       |             |                  |            |          |
|                        |   |                                    |                 |   |                           |                                       |             |                  |            |          |
| EASE NOTE: Lability at | IEASE NOTE: Lisbilly and Danages. Cardinal's Jabilly and clear's exclusive remedy for any claim arising whether based in control or but, shallbe finded to the amount paid by the clear for the | cloim arising wh                   | other based in  | contract or fort  | shall be limited to       | the amount paid by the client for the | Je.         |                  |            |          |
| STATE COLUMN INC. UCH. | ng mose for negligence and any other couse whatsoever shape as  | Service Search Service Printer     | and or mande in | Management of the last of the | The state of the state of |                                       |             |                  |            |          |

ice. In no event shalf Cardinal De litable for incidental or consequental demages, including without instalben, business interruptions, lass of use, or loss of profits incurred by clem, its subdicties,

gardinschubed agmail. even ☐ Yes ☐ No AddTPhone#: email (1832. Hs to CHECKED BY: (Initials) Sample Condition Cool Intact O'ale Han Collolia Transport Time: Sampler - OPS - Bus - Other: Definered By: (Circle One) telimopaished By: Rejingaished



January 06, 2020

BEN DONAHUE

ETZ WATER STATION

PO BOX 6056

HOBBS, NM 88241

RE: SCHUBERT

Enclosed are the results of analyses for samples received by the laboratory on 12/18/19 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B

Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2

Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

alex D. Keine

Celey D. Keene

Lab Director/Quality Manager



ETZ WATER STATION

Project: SCHUBERT

Reported:

PO BOX 6056 HOBBS NM, 88241

Project Number: SHUBERT #7 WATER SAMPLES

06-Jan-20 11:28

Project Manager: BEN DONAHUE

Fax To:

| Sample ID          | Laboratory ID | Matrix | Date Sampled    | Date Received                      |
|--------------------|---------------|--------|-----------------|------------------------------------|
| #7 BRINE           | H904229-01    | Water  | 18-Dec-19 13:13 |                                    |
| #7 MONITOR WELL,   | H904229-02    | Water  | 18-Dec-19 13:15 | 18-Dec-19 16:00                    |
| #7 FRESH INJECTION | H904229-03    | Water  | 18-Dec-19 13:13 | 18-Dec-19 16:00<br>18-Dec-19 16:00 |

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\*=Accredited Analyte

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**ETZ WATER STATION** PO BOX 6056 HOBBS NM, 88241

Project: SCHUBERT

Project Number: SHUBERT #7 WATER SAMPLES

Reported: 06-Jan-20 11:28

Project Manager: BEN DONAHUE

Fax To:

### **#7 BRINE** H904229-01 (Water)

|                              | Control of the last of the las | NAME AND POST OF THE PARTY OF T | WITH START MARKET STREET, STREET, STREET, SAN THE STREET, SAN | The same of the sa |          |         |  |           |           |                    |
|------------------------------|--|--|---|--|----------|---------|--|-----------|-----------|--------------------|
| Analyte                      | Result   | MDL  | Reporting<br>Limit  | Units  | Dilution | Batch   | Analyst  | Analyzed  | Method    | No                 |
|                              |  |  | Cardin  | al Laborat   | ories    |         | The same of the sa |           |           | THE REAL PROPERTY. |
| norganic Compounds           |  |  |   |  |          |         |  |           |           |                    |
| Alkalinity, Bicarbonate      | 73.0   | THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.   | 5.00  | mg/L   | 1        | 9112607 | 1.0  |           |           |                    |
| Alkalinity, Carbonate        | <1.00  |  | 1.00  | mg/L   |          | 9112607 | AC   | 20-Dec-19 | 310.1     |                    |
| Chloride*                    | 172000   |  | 4.00  | mg/L   | 1        |         | AC   | 20-Dec-19 | 310.1     |                    |
| Conductivity*                | 280000   |  | 1.00  | uS/cm  | 1        | 9121721 | AC   | 19-Dcc-19 | 4500-CI-B |                    |
| H*                           | 7.03   |  | 0.100   |  | 1        | 9121907 | AC   | 20-Dec-19 | 120.1     |                    |
| ulfate*                      | 3780   |  |   | pH Units   | 1        | 9121907 | AC   | 20-Dec-19 | 150.1     |                    |
| 'DS*                         | 319000   |  | 500   | mg/L   | 50       | 9122301 | AC   | 23-Dec-19 | 375.4     |                    |
| lkalinity, Total*            | 60.0   |  | 5.00  | mg/L   | 1        | 9121717 | AC   | 23-Dec-19 | 160.1     |                    |
|                              | 00.0   |  | 4.00  | mg/L   | 1        | 9112607 | AC   | 20-Dec-19 | 310.1     |                    |
|                              |  |  | Green Anal  | ytical Labo  | ratories |         |  |           |           |                    |
| otal Recoverable Metals by I | CP (E200.7)  |  |   |  |          |         |  |           |           |                    |
| alcium*                      | 1440   |  | 50.0  | mg/L   | 500      | P012222 | 100  |           |           | -                  |
| agnesium*                    | 362  |  | 50.0  | mg/L   | 500      | B912223 | AES  | 31-Dec-19 | EPA200.7  |                    |
| otassium#                    | 90.9   | 33.9   | 500   | mg/L   |          | B912223 | AES  | 31-Dec-19 | EPA200.7  |                    |
| odium*                       | 112000   | 53.7   | 500   | -  | 500      | B912223 | AES  | 31-Dec-19 | EPA200.7  |                    |
|                              | 4000   |  | 300   | mg/L   | 500      | B912223 | AES  | 31-Dec-19 | EPA200.7  |                    |

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\*=Accredited Analyte

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Celley D. Krena

Celey D. Keene, Lab Director/Quality Manager



ETZ WATER STATION

PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: SHUBERT #7 WATER SAMPLES

Project Manager: BEN DONAHUE

Fax To:

Reported:

06-Jan-20 11:28

### **#7 MONITOR WELL**

H904229-02 (Water)

| Cardinal Laboratories   Compounds   Compounds  |                               |             | -     | 11704              | 449-04 (Wa  | ter)     |         |         |           |  |  |
|--|-------------------------------|-------------|-------|--------------------|-------------|----------|---------|---------|-----------|--|--|
| Alkalinity, Bicarbonate   210   5.00   mg/L   1   9112607   AC   20-Dec-19   310.1   | Analyte                       | Result      | MDL   | Reporting<br>Limit | Units       | Dilution | Batch   | Analyst | Analyzed  | Method   | Notes  |
| Alkalinity, Bicarbonate 210 5.00 mg/L 1 9112607 AC 20-Dec-19 310.1  Alkalinity, Carbonate <1.00 1.00 mg/L 1 9112607 AC 20-Dec-19 310.1  Chloride* 68.0 4.00 mg/L 1 9121721 AC 19-Dec-19 4500-Cl-B  Conductivity* 674 1.00 uS/cm 1 9121907 AC 20-Dec-19 120.1  DH* 8.02 0.100 pH Units 1 9121907 AC 20-Dec-19 150.1  Sulfate* 63.9 10.0 mg/L 1 9122301 AC 23-Dec-19 375.4  TDS* 392 5.00 mg/L 1 9121717 AC 23-Dec-19 375.4  Alkalinity, Total* 172 4.00 mg/L 1 9112607 AC 20-Dec-19 310.1  Creen Analytical Laboratories  Cotal Recoverable Metals by ICP (E200.7)  Calcium* 54.2 0.500 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  Alganesium* 16.9 0.500 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  John St.   |                               |             |       | Cardin             | ıal Laborat | ories    |         |         |           | The second second second second second   | ACT AND DESCRIPTION OF THE PARTY OF  |
| Alkalinity, Carbonate <1.00  | Inorganic Compounds           |             |       |                    |             |          |         |         |           |  |  |
| Chloride   | Alkalinity, Bicarbonate       | 210         |       | 5.00               | mg/L        | 1        | 9112607 | AC      | 20 D 10   | ACCOUNT OF FREE PARKS AND ADDRESS OF THE PARKS | ACCOMMON TO SERVE AND ADDRESS OF THE PARTY O |
| Chloride* 68.0 4.00 mg/L 1 9121721 AC 19-Dec-19 4500-Cl-B  10-Dec-19 120.1  10-Dec-19 120.1  10-Dec-19 120.1  10-Dec-19 120.1  10-Dec-19 120.1  10-Dec-19 150.1  10-Dec-19 160.1  10-Dec-19 160.1  10-Dec-19 160.1  10-Dec-19 160.1  10-Dec-19 10-Dec-1 |                               | <1.00       |       |                    |             | 1        |         |         |           |  |  |
| Conductivity* 674 1.00 uS/cm 1 9121907 AC 20-Dec-19 120.1  Bulfate* 8.02 0.100 pH Units 1 9121907 AC 20-Dec-19 150.1  Sulfate* 63.9 10.0 mg/L 1 9122301 AC 23-Dec-19 375.4  Alkalinity, Total* 172 4.00 mg/L 1 9112607 AC 20-Dec-19 160.1  Green Analytical Laboratories  Cotal Recoverable Metals by ICP (E200.7)  Calcium* 54.2 0.500 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  Gotassium* 1.95 0.339 5.00 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  Sodiassium* 1.95 0.339 5.00 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  Sodiassium* 1.95 0.339 5.00 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  Sodiassium* 5.00 mg/L 5 B912223 AES 31-Dec-19 EPA200.7  Sodiassium* 64.9 5.00 mg/L 5 B912223 AES 31-Dec-19 EPA200.7   | Chloride*                     | 68.0        |       | 4.00               | _           | 1        |         |         |           |  |  |
| Sulfate   Sulf   |                               | 674         |       |                    |             | 1        |         |         |           |  |  |
| Comparison   Content   C   | pH*                           | 8.02        |       |                    |             | 1        |         |         |           |  |  |
| Second   S   | Sulfate*                      | 63.9        |       |                    |             | 1        |         |         |           |  |  |
| Cotal Recoverable Metals by ICP (E200.7)   Calcium*   1.95   0.339   5.00   mg/L   5   B912223   AES   31-Dec-19   EPA200.7  | ΓDS*                          | 392         |       |                    |             | 1        |         |         |           | 375.4  |  |
| Green Analytical Laboratories   Green Analytical Laboratories  | Alkalinity, Total*            |             |       |                    | 150         | 1        |         |         | 23-Dec-19 | 160.1  |  |
| Cotal Recoverable Metals by ICP (E200.7)         S4.2         0.500         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           Independent of the control of the co  |                               | -14         |       | 4.00               | mg/L        | 1        | 9112607 | AC      | 20-Dec-19 | 310.1  |  |
| Cotal Recoverable Metals by ICP (E200.7)         S4.2         0.500         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           Independent of the control of the co  |                               |             |       | Green Anal         | ytical Labo | ratories |         |         |           |  |  |
| Calcium <sup>d</sup> 54.2         0.500         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           dagnesium <sup>±</sup> 16.9         0.500         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           odassium <sup>±</sup> 1.95         0.339         5.00         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           odium <sup>±</sup> 64.9         5.00         mg/L         5         B912223         AES         31-Dec-19         EPA200.7   | Total Recoverable Metals by I | CP (E200.7) |       |                    |             |          |         |         |           |  |  |
| Agnesium*         16.9         0.500         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           otassium*         1.95         0.339         5.00         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           odium*         64.9         5.00         mg/L         5         B912223         AES         31-Dec-19         EPA200.7  | Calcium*                      |             |       | 0.500              | mg/I        | 5        | D012222 | 1 120   |           | The state of the s | -  |
| odium*         1.95         0.339         5.00         mg/L         5         B912223         AES         31-Dec-19         EPA200.7           odium*         64.9         5.00         mg/L         5         B912223         AES         31-Dec-19         EPA200.7  | Aagnesium*                    |             |       |                    |             |          |         |         |           | EPA200.7   |  |
| odium* 64.9 5.00 mg/L 5 P012223 AES 31-Dec-19 EPA200.7   | otassium*                     |             | 0.339 |                    | A. de C     |          |         |         |           | EPA200.7   |  |
|  | odium*                        |             | 0.339 |                    | 24.5        |          |         |         | 31-Dec-19 | EPA200.7   | J  |
|  |                               | 04.5        |       | 5.00               | mg/L        | 5        | B912223 | AES     | 31-Dec-19 | EPA200.7   |  |

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\*=Accredited Analyte

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ETZ WATER STATION

PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: SHUBERT #7 WATER SAMPLES

Project Manager: BEN DONAHUE

Fax To:

Reported:

06-Jan-20 11:28

### **#7 FRESH INJECTION**

H904229-03 (Water)

|                            | All the second s | And the second second second | Designation of the last of the | 243403 (Wa  | iter)    |         |         |  |  |  |
|----------------------------|--|------------------------------|--|-------------|----------|---------|---------|--|--|--|
| Analyte                    | Result   | MDL                          | Reporting<br>Limit   | Units       | Dilution | Batch   | Analyst | Analyzed   | Method   | Not  |
|                            |  |                              | Cardin   | ial Laborat | ories    |         |         |  |  | The Party of the Local Division in the Local |
| norganic Compounds         |  |                              |  |             |          |         |         |  |  |  |
| Alkalinity, Bicarbonate    | 303  |                              | 5.00   | mg/L        | 1        | 0110607 |         | Control of the last of the las |  | mainto error parec   |
| Akalinity, Carbonate       | <1.00  |                              | 1.00   | mg/L        | 1        | 9112607 | AC      | 20-Dec-19  | 310.1  |  |
| Chloride*                  | 232  |                              | 4.00   |             | 1        | 9112607 | AC      | 20-Dec-19  | 310.1  |  |
| onductivity*               | 1510   |                              | 1.00   | mg/L        | 1        | 9121721 | AC      | 19-Dec-19  | 4500-CI-B  |  |
| H <sup>‡</sup>             | 7.73   |                              |  | uS/cm       | 1        | 9121907 | AC      | 20-Dec-19  | 120.1  |  |
| ulfate*                    | 159  |                              | 0.100  | pH Units    | 1        | 9121907 | AC      | 20-Dec-19  | 150.1  |  |
| DS*                        | 896  |                              | 25.0   | mg/L        | 2.5      | 9122301 | AC      | 23-Dec-19  | 375.4  |  |
| lkalinity, Total*          |  |                              | 5.00   | mg/L        | 1        | 9121717 | AC      | 23-Dec-19  | 160.1  |  |
|                            | 248  |                              | 4.00   | mg/L        | 1        | 9112607 | AC      | 20-Dec-19  | 310.1  |  |
|                            |  |                              | Green Anal   | ytical Labo | ratories |         |         |  |  |  |
| otal Recoverable Metals by | ICP (E200.7)   |                              |  |             |          |         |         |  |  |  |
| alcium*                    | 145  |                              | 0.500  | mg/L        | 5        | B912223 | AES     | 21 D. 10   | The same of the sa |  |
| agnesium*                  | 24.0   |                              | 0.500  | mg/L        | 5        | B912223 | AES     | 31-Dec-19  | EPA200.7   |  |
| tassium"                   | 17.7   | 0.339                        | 5.00   | mg/L        | 5        | B912223 |         | 31-Dec-19  | EPA200.7   |  |
| dium*                      | 147  |                              | 5.00   | mg/L        | 5        | B912223 | AES     | 31-Dec-19  | EPA200.7   |  |
|                            |  |                              | -1-4   |             | ,        | 1314443 | AES     | 31-Dec-19  | EPA200.7   |  |

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Celey D. Keene, Lab Director/Quality Manager



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241

Project: SCHUBERT

Project Number: SHUBERT #7 WATER SAMPLES

Reported: 06-Jan-20 11:28

Project Manager: BEN DONAHUE

Fax To:

### Inorganic Compounds - Quality Control

### **Cardinal Laboratories**

| Analyte                                 | Result   | Reporting<br>Limit   | Units                                      | Spike<br>Level | Source<br>Result   | %REC   | %REC<br>Limits   | RPD  | RPD<br>Limit | Notes |
|---|--|--|--|----------------|--|--|--|--|--------------|-------|
| Batch 9112607 - General Prep - Wet Chem |  |  |  |                |  | William Control of the Control of th |  | Maria Open mana para   |              | rotes |
| Blank (9112607-BLK1)                    | AND DESCRIPTION OF THE PARTY OF | THE REAL PROPERTY AND ADDRESS OF THE PARTY AND | Thick distributed when the characteristics | Dramanal 6     | A 1 1  | 00.7   | And in case of the last of the | THE STREET, ST |              |       |
| Alkalinity, Carbonate                   | ND   | 1.00   | mg/L                                       | Prepared &     | Analyzed:  | 02-Dec-19  |  |  |              |       |
| Alkalinity, Bicarbonate                 | 5.00   | 5.00   | mg/L                                       |                |  |  |  |  |              |       |
| Alkalinity, Total                       | 4.00   | 4.00   | mg/L                                       |                |  |  |  |  |              |       |
| LCS (9112607-BS1)                       |  |  |  | Duousus J. O.  |  |  |  |  |              |       |
| Alkalinity, Carbonate                   | ND   | 2.50   | mg/L                                       | Prepared &     | Analyzed:  | 02-Dec-19  |  |  |              |       |
| Alkalinity, Bicarbonate                 | 318  | 12.5   | mg/L                                       |                |  |  | 80-120   |  |              |       |
| Alkalinity, Total                       | 260  | 10.0   | -  | 250            |  |  | 80-120   |  |              |       |
| LCS Dup (9112607-BSD1)                  | 200  | 10.0   | mg/L                                       | 250            |  | 104  | 80-120   |  |              |       |
| Alkalinity, Carbonate                   |  | -  |  | Prepared &     | Analyzed: (  | 02-Dec-19  |  |  |              |       |
| Alkalinity, Bicarbonate                 | ND   | 2.50   | mg/L                                       |                |  |  | 80-120   |  | 20           |       |
| Alkalinity, Total                       | 318  | 12.5   | mg/L                                       |                |  |  | 80-120   | 0.00   | 20           |       |
|   | 260  | 10.0   | mg/L                                       | 250            |  | 104  | 80-120   | 0.00   | 20           |       |
| Batch 9121717 - Filtration              |  |  |  |                |  |  |  |  |              |       |
| Blank (9121717-BLK1)                    |  | CONTRACT AND DESCRIPTION OF STREET   |  | Drengrad, 17   | Dec 10 4   | 1 1 1  |  | -  |              | -     |
| DS                                      | ND   | 5.00   | mg/L                                       | Prepared: 17   | -Dec-19 Ar   | nalyzed: 19  | )-Dec-19   |  |              |       |
| .CS (9121717-BS1)                       |  |  | Ü  | D              |  |  |  |  |              |       |
| DS                                      | 511  |  |  | Prepared: 17   | -Dec-19 Ar   |  | -Dec-19  |  |              |       |
|   | 311  |  | mg/L                                       | 527            |  | 97.0   | 80-120   |  |              |       |
| Duplicate (9121717-DUP1)                | Sour   | ee: H904189-   | 01   | Prepared: 17   | -Dec-19 An   | alvzed: 19   | -Dec-19  |  |              |       |
| DS                                      | 125000   | 5.00   | mg/L                                       |                | 124000   | , 200, 17  | 1500-15  | 1.01   | 20           |       |
| atch 9121721 - General Prep - Wet Chem  |  |  |  |                |  |  |  |  | 20           |       |
| lank (9121721-BLK1)                     | The second second second   |  |  | D              | The state of the s |  |  |  |              |       |
| hloride                                 | NID  | <del></del>  | ->   | Prepared & A   | nalyzed: 1'  | 7-Dec-19   |  |  |              |       |
|   | ND   | 4.00   | mg/L                                       |                |  |  |  | -  |              |       |

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\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056

Project: SCHUBERT

Reported:

HOBBS NM, 88241

Project Number: SHUBERT #7 WATER SAMPLES

06-Jan-20 11:28

Project Manager: BEN DONAHUE

Fax To:

### Inorganic Compounds - Quality Control

### **Cardinal Laboratories**

| Analyte                                 | Result                                | Reporting  | **                      | Spike       | Source        |             | %REC      |  | RPD        |                     |
|---|---------------------------------------|--|-------------------------|-------------|---------------|-------------|-----------|--|------------|---------------------|
|   | Kesun                                 | Limit  | Units                   | Level       | Result        | %REC        | Limits    | RPD  | Limit      | Notes               |
| Batch 9121721 - General Prep - Wet Chem | ne ant spirite in more successive and | and the second result and the second                 |                         |             |               |             |           |  |            |                     |
| LCS (9121721-BS1)                       |                                       |  |                         | Prepared &  | Analyzed:     | 17-Dec-19   |           |  | The second | Particular services |
| Chloride                                | 100                                   | 4.00   | mg/L                    | 100         |               | 100         | 80-120    | - 1-3-3-4-1-3-A  |            |                     |
| LCS Dup (9121721-BSD1)                  |                                       |  |                         | Prepared &  | Analyzed:     | 17-Dec-19   |           |  |            |                     |
| Chloride                                | 100                                   | 4.00   | mg/L                    | 100         |               | 100         | 80-120    | 0.00   | 20         |                     |
| Batch 9121907 - General Prep - Wet Chem |                                       |  |                         |             |               |             |           |  |            |                     |
| LCS (9121907-BS1)                       | and the control of the control        |  |                         | Prepared: 1 | 9-Dec-19 A    | nalyzed: 2  | 0-Dec-10  | -  |            |                     |
| pH                                      | 7.10                                  | <del>(1)                                      </del> | pH Units                | 7.00        | 7 1500 1774   | 101         | 90-110    | PAGE THE THE PAGE TO SERVICE OF THE PAGE TO S |            | -                   |
| Conductivity                            | 98700                                 |  | uS/em                   | 100000      |               | 98.7        | 80-120    |  |            |                     |
| Duplicate (9121907-DUP1)                |                                       | Source: H904229                                      | -01                     | Prepared: 1 | 9-Dec-19 A    | nalvzed: 2  | 0 Dec 10  |  |            |                     |
| Conductivity                            | 282000                                | 1.00   | uS/cm                   | Topulou. 1  | 280000        | naryzed. Zi | 0-1060-19 | 0.640  | 20         |                     |
| pH                                      | 6.91                                  | 0.100  | pH Units                |             | 7.03          |             |           | 0.640  | 20<br>20   |                     |
| Batch 9122301 - General Prep - Wet Chem |                                       |  |                         |             |               |             |           |  |            |                     |
| Blank (9122301-BLK1)                    | A SUL PROPERTY.                       |  | The same of the same of | Prepared &  | Analyzed:     | 23-Dec-19   |           | Andrew Control of Control of Control   |            | -                   |
| Sulfate                                 | ND                                    | 10.0   | mg/L                    | 1           | - July Sedi 2 | 200 1)      |           |  |            |                     |
| LCS (9122301-BS1)                       |                                       |  |                         | Prepared &  | Analyzed: 3   | 23-Dec-10   |           |  |            |                     |
| Sulfate                                 | 20.8                                  | 10.0   | mg/L                    | 20.0        | rangeod. 2    | 104         | 80-120    |  |            | -                   |
| CS Dup (9122301-BSD1)                   |                                       |  |                         | Prepared &  | Analyzed: 3   | 3-Dec 10    |           |  |            |                     |
| Sulfate                                 | 20.7                                  | 10.0   | mg/L                    | 20.0        | ringiyzed: 2  | 103         | 80-120    | 0.434  | 20         |                     |
|   |                                       |  |                         |             |               |             |           | 0.101  | 20         |                     |

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### Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241

Project: SCHUBERT

Project Number: SHUBERT #7 WATER SAMPLES

Reported: 06-Jan-20 11:28

Project Manager: BEN DONAHUE

Fax To:

### Total Recoverable Metals by ICP (E200.7) - Quality Control

### **Green Analytical Laboratories**

| Analyte                                      | Result | Reporting<br>Limit          | Units              | Spike<br>Level | Source<br>Result         | %REC   | %REC<br>Limits                           | RPD  | RPD<br>Limit               | Notes |
|--|--------|-----------------------------|--------------------|----------------|--------------------------|--|--|--|----------------------------|-------|
| Batch B912223 - Total Rec. 200.7/200.8/200.2 |        |                             |                    |                | CONTRACTOR DE CAMPAGNICA |  |  | Managar Salam Sala |                            |       |
| Blank (B912223-BLK1)                         |        | CONTRACTOR OF THE PERSON OF | Washington and the | Prepared: 3    | 10 Dec 10 A              | nalvand. 2   | 1 D 10                                   |  | THE PERSON NAMED IN COLUMN |       |
| Sodium                                       | ND     | 1.00                        | mg/L               | . repared. 5   | 0-10-0-197               | maryzed: 3   | 1-Dec-19                                 |  |                            |       |
| Calcium                                      | ND     | 0.100                       | mg/L               |                |                          |  |  |  |                            |       |
| Magnesium                                    | ND     | 0.100                       | mg/L               |                |                          |  |  |  |                            |       |
| Potassium                                    | ND     | 1.00                        | mg/L               |                |                          |  |  |  |                            |       |
| LCS (B912223-BS1)                            |        |                             |                    | Dronous J. 2   | 0 D 10 4                 |  |  |  |                            |       |
| Magnesium                                    | 20,8   | 0.100                       |                    | Prepared: 3    | 0-Dec-19 A               |  | CANADA PROPERTY                          |  |                            |       |
| Calcium                                      | 4.25   | 0.100                       | mg/L               | 20.0           |                          | 104  | 85-115                                   |  |                            |       |
| Sodium                                       | 3.50   |                             | mg/L               | 4.00           |                          | 106  | 85-115                                   |  |                            |       |
| Potassium                                    |        | 1.00                        | mg/L               | 3.24           |                          | 108  | 85-115                                   |  |                            |       |
|  | 8.40   | 1.00                        | mg/L               | 8.00           |                          | 105  | 85-115                                   |  |                            |       |
| LCS Dup (B912223-BSD1)                       |        |                             |                    | Prepared: 3    | 0-Dec-10 A               | nolymad. 2   | I D 10                                   |  |                            |       |
| Sodium                                       | 3.38   | 1.00                        | mg/L               | 3.24           | 0-DCC-19 A               | The same of the sa | 7 20 20 20 20 20 20 20 20 20 20 20 20 20 |  |                            |       |
| Potassium                                    | 8.23   | 1.00                        |                    |                |                          | 104  | 85-115                                   | 3.52   | 20                         |       |
| Calcium                                      | 4.15   |                             | mg/L               | 8.00           |                          | 103  | 85-115                                   | 2.06   | 20                         |       |
| Magnesium                                    | 20.4   | 0.100                       | mg/L               | 4.00           |                          | 104  | 85-115                                   | 2.37   | 20                         |       |
|  | 20.4   | 0.100                       | mg/L               | 20.0           |                          | 102  | 85-115                                   | 1.80   | 20                         |       |

### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence are any other cause whatsoever shall be deemed valved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su chim is based upon any of the above stated regions or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

aleg Direct

Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

Estimated conentration. Analyte concentration between MDL and RL. ND Analyte NOT DETECTED at or above the reporting limit RPD Relative Percent Difference \*\* Samples not received at proper temperature of 6°C or below. Insufficient time to reach temperature. Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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Colog Distress

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL Laboratories 101 East Mariand, Hobbs, NW 88240

(575) 393-2326 FAX (575) 393-2476

| Company Name: 1272   | 88880000000000000000000000000000000000   |                                  |
|--|--|----------------------------------|
| Project Muruger 1  | BILL TO  | S DECINEST                       |
| direger.   | P.O.#  |                                  |
|  | Company:   |                                  |
| State: NM Zip: 898   | 7  |                                  |
| Phone # 20 you Lax #:  | Address:   |                                  |
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|  | 69   |                                  |
| " SASSIET BUILD  | Phone #:   |                                  |
| Sampler Name: Type Congress  |  |                                  |
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| 19ASE NOTE: Lability and Damages. Cardinal's liability and dilent's exclusive remety for any defini arising whether adjocated the cause with the cause with the deemed water indices.  | based in contract or fort, shall be limited to the amount paid by the client for the   |                                  |
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| TONINGOO A 3.0   |  | 10 6                             |
| i Caramei cannot accept verbal changes.  | Please email changes to celey, keene@cardinallabsnm.c  |                                  |

## BW-031

180 DAY
Report
2019

Discharge Permit (BW-31), H.R.C., Inc. UIC Class III Brine well "Shubert '7' Well No. 1 (API No. 30-025-36781) UL: J Section 7 Township 19 South, Range 39 East, 2313FSL, 2313 FEL, Lat. 33.67388°, Long. 103.08360° NMPM, Lea County, New Mexico.

### Pursuant to 20.6.2.3109A NMAC.

NM OCD approved the new discharge permit approval conditions on January 23, 2019

H.R.C., Inc. will notify the Director of any increase in the injection volume or injection pressure, or process modifications that would result in any changes in the water quality or volume of the discharge as to the Pursuant of 20.6.2.3107C NMAC.

H.R.C., Inc. Under 20.6.2.33106F will submit a discharge permit renewal application at least 120 days before this permit expires on January 23, 2024.

H.R.C., Inc. Subject to 20.6.2.3114 NMAC has submitted it's \$100.00 filing fee and the \$1.700.00 permit fee for the Shubert 7 well No. 1 (BW-31) to the Water Quality Management Fund.

### **General Provisions**

H.R.C., Inc. has not had any effluents or leachate to discharge that would directly or indirectly reach the water top of 75 feet from surface. Pursuant to the Water Quality Act and WQCC rules, 20.6.2 NMAC H.R.C., Inc. does not authorize any treatment of, or on-site disposal of, any materials, product, by-production, or oil-field waste at the Schubert 7 Well No. 1 and prohibits the injection of fluids as stated in pursuant of 20.6.2.5004A NMAC. That being:

- 1. The injection of fluids into a motor vehicle waste disposal well.
- 2. The injection of fluids into a large capacity cesspool.
- 3. The injection of any hazardous or radioactive waste into a well except as provided by 20.6.2.5004A (3) NMAC
- 4. Class IV wells are prohibited, except for wells re-injecting treated ground water into the same formation from which it was drawn as part of a removal or remedial action.
- 5. Barrier wells, Drainage wells, recharge wells, return flow wells, and motor vehicle waste disposal wells are prohibited.

H.R.C., Inc. is operating in accordance and conditions specified in this Discharge Permit and is complying with the Quality Act and the rules issued to that Act as stated in 20.6.3109C NMAC. Chemical water Analysis are taken to provide the OCD with the water chemical contents showing the standards of 20.6.2.3103 & 20.6.2.3109H(2) NMAC protecting any discharge that will cause any stream or property standards to be violated so that no discharge of any water contaminant will result in a hazard to public health as per 20.6.2.3109H(3) NMAC. Please find the water Chemical Analysis at the end of this report. H.R.C., Inc. will and complies with 20.62.1 through 20.6.2.5399 NMAC for Class III wells.

### **Modifications and Terminations:**

No modifications have been made at the Shubert 7 Well No. 1 facility and will notify the OCD Director and OCD's Environmental Bureau of any expansion or process modification as per 20.6.2.3107C NMAC. H.R.C., Inc. is aware that a Discharge Permit modification application pursuant to 20.6.2.3109E may be required by the OCD Director. H.R.C., Inc. understands that the OCD Director may require modification, or if it is determined by the OCD Director that the modification may not be adequate, may terminate this Discharge Permit for Class III well that was approved pursuant to the requirements of 20.6.2.500 – 20.6.2.5399 NMAC for the following causes as stated in the Terms 1(A) through 1(c) and 2(a) through 2(c)

### **General Facility Operations:**

H.R.C., Inc. is continuing to use both fresh water and water that comes from the treated non potable fresh water from the City of Hobbs. Both water types are tested by Cardinal Laboratories located at 101 E Marland street Hobbs, New Mexico. Please find the chemical analysis of the Fresh Water, City of Hobbs Treated Water, and the Brine Water produced by the Shubert 7 Well No. 1 (BW-031) attached at the end of this report. Daily readings of water being injected and brine water being extracted with pressure readings of the well are recorded. The average injection pressure is 200 psi and the average production pressure is 30 psi. Below are the monthly totals from January 2019 through July 2019 (Page 4). OCD has received H.R.C., Inc. 2018 yearly report that contains the totals of injected and extracted fluid totals.

### **FRESH WATER**

| Month - Date      | Fresh Water Meter<br>Reading (X 100) | F/W used by Gallons (x 100) | Total Injected BBL   |
|-------------------|--------------------------------------|-----------------------------|----------------------|
| Dec. 2018         | 1,285,131                            | Existing 2018 report        | Existing 2018 report |
| Month - Date      | Fresh Water Meter<br>Reading (X 100) | F/W used by Gallons (x 100) | Total Injected BBL   |
| January 31, 2019  | 1,297,613                            | 12,482 x 100 / 42 =         | 29,719               |
| February 28, 2019 | 1,309,580                            | 11,967 x 100 / 42 =         | 28,492               |
| March 30, 2019    | 1,321,281                            | 11,701 x 100 / 42 =         | 27,860               |
| April 30, 2019    | 1,328,262                            | 6,981 x 100 / 42 =          | 16,612               |
| May 31, 2019      | 1,335,808                            | 7,546 x 100 / 42 =          | 13,967               |
| June 30, 2019     | 1,347,336                            | 11,528 x 100 / 42 =         | 27,447               |
| July 31, 2019     | 1,357,337                            | 10,001 x 100 / 42 =         | 23,812               |

### **PRODUCED BRINE**

| December 2018 | Brine extracted BBL |
|---------------|---------------------|
| December 2016 | Dille extracted BBL |
| January 2019  | 30,031              |
| February 2019 | 28,726              |
| March 2019    | 27,971              |
| April 2019    | 16,717              |
| May 2019      | 18,123              |
| June 2019     | 27,630              |
| July 2019     | 23,990              |

As pursuant of 20.6.2.5207C.

### **Groundwater Monitor Well**

Please find at the end of this report the water analysis from the Shubert 7 Well No.1 (BW-031) Monitor well. The water analysis taken from the water monitor well at the Schubert 7 Well No. 1 location complies with EPA Quality Assurance / Control (QA/QC) and Data Quality Objectives (DQOs) and shows the following characteristics found within the water as per 20.6.2.3103.

### **Solution Cavern Monitoring Program**

H.R.C., Inc. continues the Surface Subsidence Monitoring Plan that started on 9/9/15 with 4 monuments that monitor the elevation of the monuments and the top of the well casing. Recorded data of the surveying team is entered on a plat for viewing possible surface subsidence and is tied to the nearest USGS geodetic benchmark shown on the Survey Plat with the monuments and dates of each survey performed. The Survey is conducted and recorded by Gary L. Jones with Basin Surveys located at 1120 NW County Rd, Hobbs, New Mexico. Because this is a live document H.R.C., Inc. will report to the Department of the next survey as Basin Survey completes them Please find at the end of this report the latest Survey Plat performed at the Shubert 7 Well No. 1 (BW-031). There are no change to this date of May 7, 2019.

### **Solution Cavern Characterization Program**

Reported Volumes from 2006 through 2017 had a total of 3,538,154 bbl. brine extracted from the BW-031 well. This amount had an average SG of 1.1951 producing brine at 9.97 PPG respectively. There is 252' of formation with 94 foot net pay of Halite being mined. To produce the quality brine a total of 432,135,977 lbs. of salt was used or a total volume of 5,401,700 ft.<sup>3</sup> mined. This calculated to a base of 286.14' in diameter by 252' tall.

Reported Volumes from 2006 through 2018 had a total of 3,779,164 bbl. brine extracted from the well. This amount has an average SG of 1.1951 still producing at an average of 9.97 PPG brine solution though temperature of water very it is not enough to swing a difference in the brine saline composition. A total of 461,571,974.304 lbs. of Halite was used or a total volume of 5,769,650 ft.<sup>3</sup> mined. 2018 cavern size increased by 367,950 ft.<sup>3</sup> with an increase at the base of 9.58 ft. in diameter now at 295.72′. Using the OCD cavern control factor 295.72 / 1865′

equals 0.159 %. From 2006 through July 2019 a total of 3,952,352 bbl. as been produced yielding a total of 173,188 bbl. up to July 2019. This reflects an increase of 7.92' or 264,406 ft.<sup>3</sup> of Halite mined with a calculated Cavern Control Factor of 0.163%.

Please find the Schematic drawings of the 2006 through 2018 and the 2006 through July 2019 Cavern Characterization with the formulation of data results at the end of this report.

### **Annual Certification**

H.R.C., Inc. reported its 2018 annual report to OCD Santa Fe on January 17, 20019 submitting total volumes of fresh water, brine extraction; chemical water analysis and it surface subsidence monitoring findings for 2018 as stated above under Solution Cavern Characterization program shows that the well bore holds an OCD cavern control value for July 2019 of 0.163%.

### **Contingency plan**

H.R.C., Inc. will follow NMAC 20.6.2.1203 where H.R.C., Inc.

- 1. As soon as possible after learning of such a discharge has occurred within 24 hours will orally notify the Chief of the Ground Water Quality Bureau of the department, or his counter partner in any constituent agency delegated responsibility for enforcement of these rules. H.R.C., Inc. will notify Jim Griswold or Carl Chavez in Santa Fe, District II Hobbs of any release discharge. The Plan will be immediately implemented as follows:
- a. Name, address and telephone number of the person in charge of the facility as well as the owner or operator of the facility.
- b. Name, and address of the facility.
- c. Date, and time, location and duration of the discharge.
- d. The source and cause of the discharge.
- e. A description of the discharge including its chemical composition.

- f. The estimated volume of the discharge.
- g. Any actions taken to mitigate immediate damage from the discharge.

H.R.C., Inc. within one week of a discharge will send written notification to the same department officials verifying the prior oral notification and providing any appropriate or corrections to the information contained in the prior oral notification.

The C-141 Release Notification and Correction Action form will be used. Once mitigation of the discharge is complete form C-141 will be filled out with the information of what and how the discharge was addressed within 15 days of the discharge.

H.R.C., Inc. will seek in an effort to determine the department's views as to what further corrective actions may be necessary or approved to the discharge in question.

### Closure

H.R.C., Inc. will submit as a condition of C-103 Sundry approval and for OCD approval, a facility closure plan with third party cost estimate for its well pursuant to 20.6.2.5209 NMAC as specified in the permit conditions 2.I and 5.B to address the well plugging and abandonment, land surface restoration, environmental groundwater monitoring, pipeline abandonment and a five year surface subsidence monitoring plan. A pre-closure notification will be sent to OCD's Environmental Bureau at least 30 days prior to the date that is proposed to close or to discontinue operation of the Schubert 7 Well No. 1 (BW-031) pursuant to 20.2.5005A NMAC. H.R.C., Inc. understands and will seek the approval of the Environmental Bureau of all proposed well and facility closure before implementing the closure plan and will include the required information as stated from the 17 bullets of (2. Required Information)pursuant to 20.6.2.5005B NMAC.

### **Plugging and Abandonment Plan**

A C-103 Intent form will be submitted for approval with the plugging plan with the C-103, a current wellbore diagram and a wellbore diagram of the proposed cement plugging will be sent for review and approval to the Environmental Bureau and District II in Hobbs H.R.C., Inc. will follow any changes that might be addressed and make corrections to the plan.

### **Record Keeping**

H.R.C., Inc. maintains records of daily production, inspections, surveys, water analysis as required by the discharge plan and is available for review by OCD if needed.

### **Release Reporting**

H.R.C., Inc. will follow its contingency plan as stated above with Oral notification and written Notification please see Contingency Plan in this report.

### **Other Requirements**

H.R.C., Inc. will comply with 74-6-9 NMSA and 20.6.2.3107A NMAC and welcomes any authorized representative of the OCD Director to enter the premises, inspect and copy records, inspect any treatment works, monitoring, and analytical equipment, take samples of injection fluids or produced brine and conduct various types of environmental media sampling also to use H.R.C., Inc. monitor systems and wells in order to collect groundwater samples.

### **Advance Notice**

H.R.C., Inc. will provide OCD's Environmental Bureau and the Hobbs District office at least 5 days advance notice of any environmental sampling to be performed, any well plugging, abandonment or decommissioning of any equipment associated with the BW-031.

### **Environmental Monitoring**

Cardinal Laboratory samples and records its analytical data collected as specified in 20.6.2.3107B NMAC. Cardinal Laboratory is an accredited National Environmental Laboratory Accreditation Conference (NELAC). H.R.C., Inc. will continue to use Cardinal Laboratory and submit their water analysis to the Bureau when received from Cardinal Laboratory including all raw analytical data. BW-031 has a monitor well down gradient of the well as shown on the Surface Subsidence Monitoring survey plat where Cardinal Laboratory takes water for analytical chemical composition as stated in Section 2.A.1 of the Discharge Permit.

### **Bonding or Financial Assurance**

H.R.C., Inc. pursuant to 20.6.2.5210B (17) maintains a single well bond that will cover the cost of plugging and abandonment of the BW-031 Class III well with the surface restoration, pipeline abandonment with the cost of monitoring the Monitor Fresh water well down gradient for five years. The Bond has been approved and in place with this renal permit.

### **Annual Report**

H.R.C., Inc. Mr. Shubert reported that he has sent their 2018 Report on January 17, 2019.

### **Operating Requirements**

- 1. H.R.C., Inc. is in the process of approving the AFE needed to do its remedial work on the BW-031 as stated on the approved C-103 and as stated within the permit under Brine Production Method. Once the AFE is approved H.R.C., Inc. will start to locate the needed casing, tubular pipe and downhole equipment that will be needed to complete the remedial work of the BW-031.
- 2. H.R.C., Inc. will notify the OCD's Environmental Bureau and Hobbs District Office within 24 hours if a discharge is suspected into a zone or zones other than the permitted injection zone of 1995'-2750'. The .2 factor per vertical foot of depth to the top of the stated interval of 1995'will be used as the standard to determine Maximum Surface Pressure. The maximum pressure is 399 psi at surface. Safe guards have been installed to shut down the operation if the pressure at 350 psi to assure that fracing does not occur.
- 3. Pipeline and connections will be hydro tested once the completion of the well has been done. Safety shut off devices will be installed to prevent a discharge if pressures reach above the high side of pressure or below the operating pressure. H.R.C., Inc. has a lease operator that daily inspects the lines, connections, pressures and tank levels where he records on a day to month report. H.R.C., will send OCD Environmental an updated wellhead schematic with the lines and connections that tie into the wellhead and the tubing showing where the meters, safety pressure devices are located with the hydrostatic test of the lines.

### **Injection Pressure Limits**

- 1. Well Injection Pressure Limits for the Schubert 7 Well No. 1 (BW-031) is 399 PSI at surface. A 40 pound reduction will be used as a safety limit will be used where the maximum psi of 359 psi will be set on the safety device this will assure that fracing pressure is not reached.
- 2. BW-031 is equipped with the needed devices and alarms that will shut down the injection operations if a high or low set pressure is presented while injection is in operation. If creeping pressures arise H.R.C., Inc. will reverse flow from the tubing to the annulus to melt any salt blocks that might occur this method will be used periodically to keep the well clean and used as a preventive method of damaging the formation or fracking.

### **Continuous Monitoring**

Pressure gauges will be placed at the top of the injection port and the annulus discharge port to allow a daily visual of the pressure activity on a daily visit to the well. The Lease Operator will

record each day his findings of the pressure. Daily meter readings will also be read and

recorded with the flow volume stored within the brine tank battery.

**Mechanical Integrity** 

BW-031 will undergo an MIT once the new casing is set at a depth of 100 foot below the top of the Salado where a plug (AD-1) packer will be set 20' from the casing shoe and tested to 500 psi for 30 minutes. District II and the OCD Environmental Bureau will be notified 5 days prior to conducting the MIT to allow OCD the opportunity to witness the MIT. All chart recorder

information, Chart, Calibration Certificate will be provided to OCD within 5 days of the

completion of the MIT.

Please contact me if there are any questions.

Respectfully Yours,

David H. Alvarado Acting Agent for H.R.C., Inc.

Alvarado & Sons Consulting LLC

Phone: 575-513-1238

Email: <u>davidal00136@gmail.com</u>

10

### Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Thursday, January 4, 2018 10:37 AM

'Gary Schubert' To:

Cc: Griswold, Jim, EMNRD

BWs 31 and 36 Annual Reports **Subject:** 

### Gary:

Good morning. The New Mexico Oil Conservation Division (OCD) has completed its review of the above subject Annual Reports.

Regarding injection and production data, HRC, Inc. also needs to include injection well pressure data or information. Does HRC have an explanation for the relative percent difference in injection vol. (lower vol.) vs. production (higher vol.) exceeding 10%?

Regarding the subsidence well monitoring survey submittal, HRC, Inc. also needs to include information on the elevation transect with close-out elevation for every survey, which demonstrates the accuracy of every survey is required. The table of actual monument elevations per well over time to the nearest 0.01 ft. should definitely be provided. A graph of each monument survey elevation from the table is recommended, but optional, and will assist the operator in providing the data necessary to substantiate request for a reduction in the frequency of surveys in the future.

Regarding the lack of MIT information, HRC, Inc. also needs to provide any MIT information conducted over the year.

Please take some time to review the annual report criteria, and provide a response and/or information requested above to the OCD within 60-days from the date of this message.

Please contact me if you have questions. Thank you.

Mr. Carl J. Chavez, CHMM (#13099) New Mexico Oil Conservation Division Energy Minerals and Natural Resources Department 1220 South St Francis Drive Santa Fe, New Mexico 87505

Ph. (505) 476-3490

E-mail: CarlJ.Chavez@state.nm.us

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD and see "Publications")

### HRC, INC.

P. O. Box 5102 Hobbs, NM 88241-5102 Fax # (575) 393-6662



December 05, 2017

Jim Griswold Senior Hydrologist **ENMRD/Oil Conservation Division** 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Ref: 2017 Annual Report

B-31 Schubert 7 – Well #1 (BW-31)

Dear Mr. Griswold,

Enclosed please find the monthly freshwater injection and brine production numbers for the Hobbs facility for the year of 2017. Included also are Cardinal Laboratories' results of analyses for samples for the month of May and November, 2017.

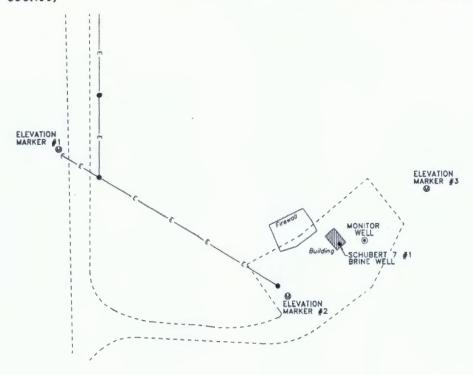
Thank you,

Sincerely,

Gary M. Schubert

GMS/br

### SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.



ELEVATION MARKER #4

> NOTE: ELEVATIONS ARE ON BLACK MARK ON NORTH SIDE OF PVC CASING.

NEW MEXICO STATE PLANE COORDINATES (NAD83)

| WELL | NORTHING  | EASTING   | LATITUDE     | LONGITUDE     | ELEVA TON |
|------|-----------|-----------|--------------|---------------|-----------|
| EM-1 | 611304.81 | 925484.92 | 32'40'27.52" | 103'05'05.71" | 3591 65   |
| EM-2 | 611100.65 | 925800.11 | 32'40'25.46" | 103'05'02.05" | 3586 37   |
| EM-3 | 611248.41 | 925991.42 | 32'40'26.90" | 103'04'59.79" | 3586 23   |
| EM-4 | 610926.15 | 925561.84 | 32'40'23.76" | 103'05'04.86" | 3586 94   |

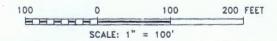
| REVISION # | DATE             | DESCRIPTION                      |
|------------|------------------|----------------------------------|
| 1          | SEPT. 9, 2015    | ORIGINAL SURVEY                  |
| 2          | DEC. 15, 2015    | RESURVEY-NO CHANGE IN ELEVATIONS |
| 3          | APRIL 12, 2016   | RESURVEY-NO CHANGE IN ELEVATIONS |
| 4          | JULY 26, 2016    | RESURVEY-NO CHANGE IN ELEVATIONS |
| 5          | OCTOBER 27, 2016 | RESURVEY-NO CHANGE IN ELEVATIONS |
| 6          | February 6, 2017 | RESURVEY-NO CHANGE IN ELEVATIONS |
| 7          | Moy 11, 2017     | RESURVEY-NO CHANGE IN ELEVATIONS |
| 8          | AUGUST 30, 2017  | RESURVEY-NO CHANGE IN ELEVATIONS |



BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 33295 Drawn By: K. GOAD

Date: 09-15-2017 Disk: KJG - SCHUBERT MW 33295



H.R.C. INC.

REF: ELEVATION MARKERS

ELEVATION MARKERS LOCATED IN

SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST,

N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 08-30-2017 | Sheet 1 of 1

Sheets



une 16, 2017

**BEN DONAHUE** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: SCHUBERT FARMS** 

Enclosed are the results of analyses for samples received by the laboratory on 05/26/17 15:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-9. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab-accred-certif.html">www.tceq.texas.gov/field/qa/lab-accred-certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B

Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2

Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

### Analytical Results For:

ETZ WATER STATION PO BOX 6056

HOBBS NM, 88241

Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL
Project Manager: BEN DONAHUE

Fax To:

Reported:

16-Jun-17 11:48

| Laboratory ID | Matrix                   | Date Sampled                         | Date Received  |
|---------------|--------------------------|--------------------------------------|--|
| H701410-01    | Water                    | 26-May-17 14:00                      | 26-May-17 15:37  |
| H701410-02    | Water                    | 26-May-17 14:00                      | 26-May-17 15:37  |
| H701410-03    | Water                    | 26-May-17 14:00                      | 26-May-17 15:37  |
|               | H701410-01<br>H701410-02 | H701410-01 Water<br>H701410-02 Water | H701410-01 Water 26-May-17 14:00<br>H701410-02 Water 26-May-17 14:00 |

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\*=Accredited Analyte

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Celeg D. Keena

Celey D. Keene, Lab Director/Quality Manager



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL

Project Manager: BEN DONAHUE

Fax To:

Reported:

16-Jun-17 11:48

### BRINE WATER H701410-01 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|--------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | al Laborat   | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |              |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 146          |     | 5.00               | mg/L         | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L         | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
| Chloride*                   | 196000       |     | 4.00               | mg/L         | 1         | 7053115 | AC      | 31-May-17 | 4500-CI-B |       |
| Conductivity*               | 497000       |     | 1.00               | uS/cm        | 1         | 7053112 | AC      | 31-May-17 | 120.1     |       |
| pH*                         | 7.00         |     | 0.100              | pH Units     | 1         | 7053112 | AC      | 31-May-17 | 150.1     |       |
| Sulfate*                    | 4120         |     | 1000               | mg/L         | 100       | 7053011 | AC      | 01-Jun-17 | 375.4     |       |
| TDS*                        | 326000       |     | 5.00               | mg/L         | 1         | 7053017 | AC      | 02-Jun-17 | 160.1     |       |
| Alkalinity, Total*          | 120          |     | 4.00               | mg/L         | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Labe | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200,7) |     |                    |              |           |         |         |           |           |       |
| Calcium*                    | 1660         |     | 10.0               | mg/L         | 100       | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Magnesium*                  | 436          |     | 10.0               | mg/L         | 100       | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Potassium*                  | 176          |     | 100                | mg/L         | 100       | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Sodium*                     | 115000       |     | 500                | mg/L         | 500       | B706035 | JLM     | 09-Jun-17 | EPA200.7  |       |

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Celey D. Keene



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL

Project Manager: BEN DONAHUE

Fax To:

Reported:

16-Jun-17 11:48

### FRESH WATER

H701410-02 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | nal Laborat | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 317          |     | 5.00               | mg/L        | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L        | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
| Chloride*                   | 256          |     | 4.00               | mg/L        | 1         | 7053115 | AC      | 31-May-17 | 4500-C1-B |       |
| Conductivity*               | 1590         |     | 1.00               | uS/cm       | 1         | 7053112 | AC      | 31-May-17 | 120.1     |       |
| pH*                         | 7.00         |     | 0.100              | pH Units    | 1         | 7053112 | AC      | 31-May-17 | 150.1     |       |
| Sulfate*                    | 195          |     | 25.0               | mg/L        | 2.5       | 7053011 | AC      | 01-Jun-17 | 375.4     |       |
| ΓDS*                        | 1080         |     | 5.00               | mg/L        | 1         | 7053017 | AC      | 02-Jun-17 | 160.1     |       |
| Alkalinity, Total*          | 260          |     | 4.00               | mg/L        | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |     |                    |             |           |         |         |           |           |       |
| Calcium*                    | 167          |     | 1.00               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Magnesium*                  | 40.0         |     | 1.00               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Potassium*                  | 11.6         |     | 10.0               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Sodium*                     | 190          |     | 10.0               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |

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Celey D. Keene



**ETZ WATER STATION** PO BOX 6056

Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL

Reported: 16-Jun-17 11:48

HOBBS NM, 88241

Project Manager: BEN DONAHUE

Fax To:

### **MONITOR WELL** H701410-03 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | al Laborat  | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 259          |     | 5.00               | mg/L        | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L        | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
| Chloride*                   | 144          |     | 4.00               | mg/L        | 1         | 7053115 | AC      | 31-May-17 | 4500-CI-B |       |
| Conductivity*               | 975          |     | 1.00               | uS/cm       | 1         | 7053112 | AC      | 31-May-17 | 120.1     |       |
| pH*                         | 7.68         |     | 0.100              | pH Units    | 1         | 7053112 | AC      | 31-May-17 | 150.1     |       |
| Sulfate*                    | 116          |     | 25.0               | mg/L        | 2.5       | 7053011 | AC      | 01-Jun-17 | 375.4     |       |
| TDS*                        | 634          |     | 5.00               | mg/L        | 1         | 7053017 | AC      | 02-Jun-17 | 160.1     |       |
| Alkalinity, Total*          | 212          |     | 4.00               | mg/L        | 1         | 7060101 | AC      | 01-Jun-17 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |     |                    |             |           |         |         |           |           |       |
| Calcium*                    | 100          |     | 1.00               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Magnesium*                  | 29.1         |     | 1.00               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Potassium*                  | <10.0        |     | 10.0               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |
| Sodium*                     | 137          |     | 10.0               | mg/L        | 10        | B706035 | JLM     | 07-Jun-17 | EPA200.7  |       |

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alexander trema

Celey D. Keene, Lab Director/Quality Manager

BW - 31

### **SCHUBERT 7 – WELL #1**

### Year 2017

| MONTH     | BRINE<br>PRODUCTION<br>(BY Meter) | FRESH WATER INJECTED (By Meter) |  |
|-----------|-----------------------------------|---------------------------------|--|
|           |                                   |                                 |  |
| January   | 27,548                            | 26,059                          |  |
| February  | 23.762                            | 23,755                          |  |
| March     | 25,595                            | 23,869                          |  |
| April     | 22,071                            | 20,562                          |  |
| May       | 19,857                            | 19,164                          |  |
| June      | 24,381                            | 22,843                          |  |
| July .    | 29,740                            | 26,581                          |  |
| August    | 27,455                            | 25,150                          |  |
| September | 28,429                            | 25,224                          |  |
| October   | 26,529                            | 24,738                          |  |
| November  | 20,445                            | 19,421                          |  |
| December  |                                   |                                 |  |



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL
Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Jun-17 11:48

### **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes  |
|---|--------|--------------------|----------|----------------|------------------|-------------|----------------|-------|--------------|--------|
|   | 110011 | 2311111            | 011110   | 2010           | 1100111          | 74120       | Zimio          |       | 2000         | 110100 |
| Batch 7053011 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |        |
| Blank (7053011-BLK1)                    |        |                    |          | Prepared:      | 31-May-17        | Analyzed: ( | )1-Jun-17      |       |              |        |
| Sulfate                                 | ND     | 10.0               | mg/L     |                |                  |             |                |       |              |        |
| LCS (7053011-BS1)                       |        |                    |          | Prepared:      | 31-May-17        | Analyzed: ( | )1-Jun-17      |       |              |        |
| Sulfate                                 | 19.9   | 10.0               | mg/L     | 20.0           |                  | 99.3        | 80-120         |       |              |        |
| LCS Dup (7053011-BSD1)                  |        |                    |          | Prepared:      | 31-May-17        | Analyzed: ( | )1-Jun-17      |       |              |        |
| Sulfate                                 | 21.9   | 10.0               | mg/L     | 20.0           |                  | 110         | 80-120         | 9.86  | 20           |        |
| Batch 7053017 - Filtration              |        |                    |          |                |                  |             |                |       |              |        |
| Blank (7053017-BLK1)                    |        |                    |          | Prepared:      | 30-May-17        | Analyzed: ( | 02-Jun-17      |       |              |        |
| TDS                                     | ND     | 5.00               | mg/L     |                |                  |             |                |       |              |        |
| LCS (7053017-BS1)                       |        |                    |          | Prepared:      | 30-May-17        | Analyzed: ( | 02-Jun-17      |       |              |        |
| TDS                                     | 234    | 5.00               | mg/L     | 213            |                  | 110         | 80-120         |       |              |        |
| Duplicate (7053017-DUP1)                | Sou    | rce: H701403       | -01      | Prepared:      | 30-May-17        | Analyzed: ( | 02-Jun-17      |       |              |        |
| TDS                                     | 950    | 5.00               | mg/L     |                | 944              |             |                | 0.634 | 20           |        |
| Batch 7053112 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |        |
| LCS (7053112-BS1)                       |        |                    |          | Prepared &     | k Analyzed:      | 31-May-1    | 7              |       |              |        |
| pH                                      | 7.14   |                    | pH Units | 7.00           |                  | 102         | 90-110         |       |              |        |
| Conductivity                            | 491    |                    | uS/cm    | 445            |                  | 110         | 80-120         |       |              |        |
| Duplicate (7053112-DUP1)                | Sou    | rce: H701410       | 0-01     | Prepared &     | k Analyzed:      | 31-May-1    | 7              |       |              |        |
| Conductivity                            | 509000 | 1.00               | uS/cm    |                | 497000           |             |                | 2.31  | 20           |        |
| pH                                      | 7.00   | 0.100              | pH Units |                | 7.00             |             |                | 0.00  | 20           |        |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL

Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Jun-17 11:48

### **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

|  |        | Reporting |       | Spike      | Source      |           | %REC   |      | RPD   |       |
|--|--------|-----------|-------|------------|-------------|-----------|--------|------|-------|-------|
| Analyte  | Result | Limit     | Units | Level      | Result      | %REC      | Limits | RPD  | Limit | Notes |
| Batch 7053115 - General Prep - Wet Chem        |        |           |       |            |             |           |        |      |       |       |
| Blank (7053115-BLK1)                           |        |           |       | Prepared & | Analyzed:   | 31-May-17 |        |      |       |       |
| Chloride                                       | ND     | 4.00      | mg/L  |            |             |           |        |      |       |       |
| LCS (7053115-BS1)                              |        |           |       | Prepared & | Analyzed:   | 31-May-17 |        |      |       |       |
| Chloride                                       | 100    | 4.00      | mg/L  | 100        |             | 100       | 80-120 |      |       |       |
| LCS Dup (7053115-BSD1)                         |        |           |       | Prepared & | Analyzed:   | 31-May-17 |        |      |       |       |
| Chloride                                       | 108    | 4.00      | mg/L  | 100        |             | 108       | 80-120 | 7.69 | 20    |       |
| Batch 7060101 - General Prep - Wet Chem        |        |           |       |            |             |           |        |      |       |       |
| Blank (7060101-BLK1)                           |        |           |       | Prepared & | 2 Analyzed: | 01-Jun-17 |        |      |       |       |
| Alkalinity, Carbonate                          | ND     | 1.00      | mg/L  |            |             |           |        |      |       |       |
| Alkalinity, Bicarbonate                        | 5.00   | 5.00      | mg/L  |            |             |           |        |      |       |       |
| Alkalinity, Total                              | 4.00   | 4.00      | mg/L  |            |             |           |        |      |       |       |
| LCS (7060101-BS1)                              |        |           |       | Prepared & | k Analyzed: | 01-Jun-17 |        |      |       |       |
| Alkalinity, Carbonate                          | ND     | 1.00      | mg/L  |            |             |           | 80-120 |      |       |       |
| Alkalinity, Bicarbonate                        | 137    | 5.00      | mg/L  |            |             |           | 80-120 |      |       |       |
| Alkalinity, Total                              | 112    | 4.00      | mg/L  | 100        |             | 112       | 80-120 |      |       |       |
| LCS Dup (7060101-BSD1)                         |        |           |       | Prepared & | k Analyzed: | 01-Jun-17 |        |      |       |       |
| 411 11 1 0 1                                   | ND     | 1.00      | mg/L  |            |             |           | 80-120 |      | 20    |       |
| Alkalinity, Carbonate                          | 1.2    |           |       |            |             |           |        |      |       |       |
| Alkalinity, Carbonate  Alkalinity, Bicarbonate | 146    | 5.00      | mg/L  |            |             |           | 80-120 | 6.36 | 20    |       |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT FARMS

Project Number: ETZ SCHUBERT 7 WELL

Reported: 16-Jun-17 11:48

Project Manager: BEN DONAHUE

Fax To:

## Total Recoverable Metals by ICP (E200.7) - Quality Control

## **Green Analytical Laboratories**

|                                     |           | Reporting |       | Spike       | Source      |            | %REC     |       | RPD   |       |
|-------------------------------------|-----------|-----------|-------|-------------|-------------|------------|----------|-------|-------|-------|
| Analyte                             | Result    | Limit     | Units | Level       | Result      | %REC       | Limits   | RPD   | Limit | Notes |
| Batch B706035 - Total Rec. 200.7/20 | 0.8/200.2 |           |       |             |             |            |          |       |       |       |
| Blank (B706035-BLK1)                |           |           |       | Prepared: ( | 06-Jun-17 A | nalyzed: 0 | 7-Jun-17 |       |       |       |
| Sodium                              | ND        | 1.00      | mg/L  |             |             |            |          |       |       |       |
| Magnesium                           | ND        | 0.100     | mg/L  |             |             |            |          |       |       |       |
| Potassium                           | ND        | 1.00      | mg/L  |             |             |            |          |       |       |       |
| Calcium                             | ND        | 0.100     | mg/L  |             |             |            |          |       |       |       |
| LCS (B706035-BS1)                   |           |           |       | Prepared: ( | 06-Jun-17 A | nalyzed: 0 | 7-Jun-17 |       |       |       |
| Calcium                             | 4.09      | 0.100     | mg/L  | 4.00        |             | 102        | 85-115   |       |       |       |
| Magnesium                           | 20.8      | 0.100     | mg/L  | 20.0        |             | 104        | 85-115   |       |       |       |
| Potassium                           | 8.16      | 1.00      | mg/L  | 8.00        |             | 102        | 85-115   |       |       |       |
| Sodium                              | 6.67      | 1.00      | mg/L  | 6.48        |             | 103        | 85-115   |       |       |       |
| LCS Dup (B706035-BSD1)              |           |           |       | Prepared: ( | 06-Jun-17 A | nalyzed: 0 | 7-Jun-17 |       |       |       |
| Magnesium                           | 20,6      | 0.100     | mg/L  | 20.0        |             | 103        | 85-115   | 1.07  | 20    | ,     |
| Potassium                           | 8.08      | 1.00      | mg/L  | 8.00        |             | 101        | 85-115   | 0.987 | 20    |       |
| Sodium                              | 6.60      | 1.00      | mg/L  | 6.48        |             | 102        | 85-115   | 1.07  | 20    |       |
| Calcium                             | 4.03      | 0.100     | mg/L  | 4.00        |             | 101        | 85-115   | 1.41  | 20    |       |
|                                     |           |           |       |             |             |            |          |       |       |       |

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Celey D. Kune



#### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name     | ETZ Water Station  |                                   |                |                             |                   |                     |               |        |            | B  | IL                | . 70                                    |   |    |        |   |  | A | NAL | YSIS | S RI        | EQU | EST |   |           |  |
|------------------|--|-----------------------------------|----------------|-----------------------------|-------------------|---------------------|---------------|--------|------------|--|-------------------|---|---|----|--------|---|--|---|-----|------|-------------|-----|-----|---|-----------|--|
| Project Manager  | : Ben Donahue  |                                   |                | and collect and the collect |                   |                     | -             | P.C    | ). #:      |  |                   |   |   | T  |        |   |  | T |     |      |             |     | T   | T |           |  |
|                  | . Box 6056   | manus mayor in part the office of |                | A                           | WWW.W. ANTHIOLOGY | ny rhana Nadah Asam | Aut many      | Co     | mpa        | ny:  |                   |   |   |    |        |   |  |   |     |      |             |     |     |   |           |  |
| City: Habbs      |  | Zip                               | : 8            | 38                          | 24                | 1                   |               | Att    | n:         |  | Land the sai      |   |   |    |        |   | and the same of th |   |     |      |             |     |     |   |           |  |
|                  | 393 3194 Fax#:   |                                   |                |                             |                   |                     | -             | Adi    | dres       | s:   |                   | Andrew Andrew Superior                  | MAKE BUT OF STUDENS AND SHOPE   |    | 2      |   |  |   |     |      |             |     |     |   | Marketine |  |
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|                  | : Schuher Twell  | - 1                               |                |                             | ***************** | Ledy-Moves. We      | V. In Control | Pho    | one        | <b>#</b> :   | er virtus Ryandes | Z                                       | e y man eth to it dissessing you disable.   | 1  | I      |   |  |   |     |      |             |     |     |   |           |  |
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| FOR LAB USE ONLY |  | T                                 | П              |                             | MA                | TRI                 | (             |        | PRE        | SER  | ٧.                | SAMPL                                   | ING   |    | 0      | - |  |   |     |      |             |     |     |   |           |  |
| Lab I.D.         | Sample I.D.  | (G)RAB OR (C)OMP                  | # CONTAINERS   | GROUNDWATER                 | SOIL              | OIL                 | SLUDGE        | OTHER: | ACID/BASE: | ICE / COOL   | Cues.             | DATE                                    | TIME  |    | (ation |   |  |   |     |      |             |     |     |   |           |  |
| 1                | Brine Water  |                                   | 1              | 1                           | /                 |                     |               |        |            | -  | 5                 | 26/17                                   | 14:0  | 0  | 1      |   |  |   |     |      |             |     | _   |   |           |  |
| 3                | Brine Water<br>Fresh Water<br>Monitor Wall                     |                                   | 1              | 1                           |                   |                     |               |        |            | State of the State |                   | Ľ                                       |   | 1. |        |   |  |   |     |      | Maria Maria |     |     |   |           |  |
|                  |  |                                   |                |                             | 100               |                     |               |        |            |  | 1                 | an market may at a lay                  |   | 1  |        |   |  |   |     |      |             |     |     |   |           |  |
|                  |  |                                   |                |                             |                   |                     |               |        |            |  | 1                 |   | A Market Company  | 1  |        |   |  |   |     |      |             |     | 1   |   |           |  |
|                  |  |                                   |                |                             |                   |                     |               |        |            |  | -                 |   |   | +  |        |   |  |   |     |      |             |     |     |   |           |  |
|                  | Demograe. Cardinals flability and client's exchance remody for |                                   |                |                             | Dispercent        |                     |               |        |            |  |                   |   |   |    |        |   |  |   |     |      |             |     |     |   |           |  |

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| Relinquished By:             | Date: 5/26/19                     | Received By:                 | Phone Result:<br>Fax Result: | ☐ Yes | □ No | Add'I Phone #: Add'I Fax #: |
|------------------------------|-----------------------------------|------------------------------|------------------------------|-------|------|-----------------------------|
| 31                           | 1331P                             |                              | REMARKS:                     | schud | 244  | Pamail.com                  |
| Relinquished By:             | Date:<br>5-26-17<br>Time:<br>3:37 | Received By: Murara Ollaber  |                              |       |      | 62                          |
| Delivered By: (Circle One)   |                                   | Sample Condition CHECKED BY: |                              |       |      |                             |
| Sampler - UPS - Bus - Other: | 5                                 | De Pres TO- #75              |                              |       |      |                             |



November 28, 2017

**BEN DONAHUE** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

RE: SCHUBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/16/17 10:19.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-9. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celeg & Keers

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



ETZ WATER STATION PO BOX 6056 Project: SCHUBERT
Project Number: #7

Reported: 28-Nov-17 18:13

HOBBS NM, 88241

Project Manager: BEN DONAHUE

Fax To:

| Sample ID    | Laboratory ID | Matrix | Date Sampled    | Date Received   |
|--------------|---------------|--------|-----------------|-----------------|
| BRINE WATER  | H703206-01    | Water  | 16-Nov-17 07:45 | 16-Nov-17 10:19 |
| MONITOR WELL | H703206-02    | Water  | 16-Nov-17 07:45 | 16-Nov-17 10:19 |
| FRESH WATER  | H703206-03    | Water  | 16-Nov-17 07:45 | 16-Nov-17 10:19 |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: #7

Project Manager: BEN DONAHUE

Fax To:

Reported: 28-Nov-17 18:13

# **BRINE WATER**

H703206-01 (Water)

| Analyte                     | Result       | MDL  | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|------|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |      | Cardin             | al Laborat  | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |      |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 195          |      | 5.00               | mg/L        | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |      | 1.00               | mg/L        | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
| Chloride*                   | 172000       |      | 4.00               | mg/L        | 1         | 7112001 | AC      | 20-Nov-17 | 4500-CI-B |       |
| Conductivity*               | 494000       |      | 1.00               | uS/cm       | 1         | 7111701 | AC      | 17-Nov-17 | 120.1     |       |
| pH*                         | 7.06         |      | 0.100              | pH Units    | 1         | 7111701 | AC      | 16-Nov-17 | 150.1     |       |
| Sulfate*                    | 3960         |      | 500                | mg/L        | 50        | 7112201 | AC      | 22-Nov-17 | 375.4     |       |
| TDS*                        | 257000       |      | 5.00               | mg/L        | 1         | 7111608 | AC      | 17-Nov-17 | 160.1     |       |
| Alkalinity, Total*          | 160          |      | 4.00               | mg/L        | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
|                             |              |      | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |      |                    |             |           |         |         |           |           |       |
| Calcium*                    | 1220         | 9.12 | 30.0               | mg/L        | 300       | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Magnesium*                  | 285          | 22.6 | 30.0               | mg/L        | 300       | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Potassium*                  | <63.0        | 63.0 | 300                | mg/L        | 300       | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Sodium*                     | 93500        | 51.4 | 300                | mg/L        | 300       | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |

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Celey D. Keine



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: #7

Project Manager: BEN DONAHUE

Fax To:

Reported:

28-Nov-17 18:13

# MONITOR WELL H703206-02 (Water)

| Analyte                     | Result       | MDL  | Reporting<br>Limit | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|------|--------------------|--------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |      | Cardin             | al Laborat   | ories     | _       |         |           |           |       |
| Inorganic Compounds         |              |      |                    |              |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 220          |      | 5.00               | mg/L         | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |      | 1.00               | mg/L         | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
| Chloride*                   | 204          |      | 4.00               | mg/L         | 1         | 7112001 | AC      | 20-Nov-17 | 4500-CI-B |       |
| Conductivity*               | 1210         |      | 1.00               | uS/cm        | 1         | 7111701 | AC      | 17-Nov-17 | 120.1     |       |
| oH*                         | 7.82         |      | 0.100              | pH Units     | 1         | 7111701 | AC      | 16-Nov-17 | 150.1     |       |
| Sulfate*                    | 170          |      | 25.0               | mg/L         | 2.5       | 7112201 | AC      | 22-Nov-17 | 375.4     |       |
| ΓDS*                        | 794          |      | 5.00               | mg/L         | 1         | 7111608 | AC      | 17-Nov-17 | 160.1     |       |
| Alkalinity, Total*          | 180          |      | 4.00               | mg/L         | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
|                             |              |      | Green Ana          | lytical Labo | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |      |                    |              |           |         |         |           |           |       |
| Calcium*                    | 92.2         | 1.52 | 5.00               | mg/L         | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Magnesium*                  | 25.1         | 3.77 | 5.00               | mg/L         | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Potassium*                  | <10.5        | 10.5 | 50.0               | mg/L         | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Sodium*                     | 123          | 8.57 | 50.0               | mg/L         | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |

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Celeg D. Keena



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: #7

Project Manager: BEN DONAHUE

Fax To:

Reported: 28-Nov-17 18:13

FRESH WATER

H703206-03 (Water)

| Analyte                     | Result       | MDL  | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|------|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |      | Cardin             | al Laborat  | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |      |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 283          |      | 5.00               | mg/L        | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |      | 1.00               | mg/L        | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
| Chloride*                   | 224          |      | 4.00               | mg/L        | 1         | 7112001 | AC      | 20-Nov-17 | 4500-C1-B |       |
| Conductivity*               | 1420         |      | 1.00               | uS/cm       | 1         | 7111701 | AC      | 17-Nov-17 | 120.1     |       |
| pH*                         | 7.98         |      | 0.100              | pH Units    | 1         | 7111701 | AC      | 16-Nov-17 | 150.1     |       |
| Sulfate*                    | 195          |      | 25.0               | mg/L        | 2.5       | 7112201 | AC      | 22-Nov-17 | 375.4     |       |
| TDS*                        | 896          |      | 5.00               | mg/L        | 1 .       | 7111608 | AC      | 17-Nov-17 | 160.1     |       |
| Alkalinity, Total*          | 232          |      | 4.00               | mg/L        | 1         | 7110705 | AC      | 17-Nov-17 | 310.1     |       |
|                             |              |      | Green Ana          | lytical Lab | oratories |         |         |           | ,         |       |
| Total Recoverable Metals by | ICP (E200.7) |      |                    |             |           |         |         |           |           |       |
| Calcium*                    | 119          | 1.52 | 5.00               | mg/L        | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Magnesium*                  | 25.6         | 3.77 | 5.00               | mg/L        | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Potassium*                  | <10.5        | 10.5 | 50.0               | mg/L        | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |
| Sodium*                     | 130          | 8.57 | 50.0               | mg/L        | 50        | B711172 | JDA     | 22-Nov-17 | EPA200.7  |       |

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Celeg D. Kreine



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: #7

Project Manager: BEN DONAHUE

Fax To:

Reported: 28-Nov-17 18:13

DEN DONANGE

## **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

|   |        | Reporting    | ** **    | Spike      | Source     | A/BEG      | %REC      | DDD  | RPD   | Materia |
|---|--------|--------------|----------|------------|------------|------------|-----------|------|-------|---------|
| Analyte                                 | Result | Limit        | Units    | Level      | Result     | %REC       | Limits    | RPD  | Limit | Notes   |
| Batch 7110705 - General Prep - Wet Chem |        |              |          |            |            |            |           |      |       |         |
| Blank (7110705-BLK1)                    |        |              |          | Prepared & | Analyzed:  | 07-Nov-17  | 1         |      |       |         |
| Alkalinity, Carbonate                   | ND     | 1.00         | mg/L     |            |            |            |           |      |       |         |
| Alkalinity, Bicarbonate                 | 5.00   | 5.00         | mg/L     |            |            |            |           |      |       |         |
| Alkalinity, Total                       | 4.00   | 4.00         | mg/L     |            |            |            |           |      |       |         |
| LCS (7110705-BS1)                       |        |              |          | Prepared & | Analyzed:  | 07-Nov-17  | 1         |      |       |         |
| Alkalinity, Carbonate                   | ND     | 2.50         | mg/L     |            |            |            | 80-120    |      |       |         |
| Alkalinity, Bicarbonate                 | 330    | 12.5         | mg/L     |            |            |            | 80-120    |      |       |         |
| Alkalinity, Total                       | 270    | 10.0         | mg/L     | 250        |            | 108        | 80-120    |      |       |         |
| LCS Dup (7110705-BSD1)                  |        |              |          | Prepared & | Analyzed:  | 07-Nov-17  | 7         |      |       |         |
| Alkalinity, Carbonate                   | ND     | 2.50         | mg/L     |            |            |            | 80-120    |      | 20    |         |
| Alkalinity, Bicarbonate                 | 355    | 12.5         | mg/L     |            |            |            | 80-120    | 7.30 | 20    |         |
| Alkalinity, Total                       | 290    | 10.0         | mg/L     | 250        |            | 116        | 80-120    | 7.14 | 20    |         |
| Batch 7111608 - Filtration              |        |              |          |            |            |            |           |      |       |         |
| Blank (7111608-BLK1)                    |        |              |          | Prepared:  | 16-Nov-17  | Analyzed:  | 7-Nov-17  |      |       |         |
| TDS                                     | ND     | 5.00         | mg/L     |            |            |            |           |      |       |         |
| LCS (7111608-BS1)                       |        |              |          | Prepared:  | 16-Nov-17  | Analyzed:  | 17-Nov-17 |      |       |         |
| TDS                                     | 228    | 5.00         | mg/L     | 213        |            | 107        | 80-120    |      |       |         |
| Duplicate (7111608-DUP1)                | Sou    | rce: H703199 | -01      | Prepared:  | 16-Nov-17  | Analyzed:  | 17-Nov-17 |      |       |         |
| TDS                                     | 9630   | 5.00         | mg/L     |            | 9890       |            |           | 2.64 | 20    |         |
| Batch 7111701 - General Prep - Wet Chem |        |              |          |            |            |            |           |      |       |         |
| LCS (7111701-BS1)                       |        |              |          | Prepared & | k Analyzed | : 16-Nov-1 | 7         |      |       |         |
| pH                                      | 6.97   |              | pH Units | 7.00       |            | 99.6       | 90-110    |      |       |         |
| Conductivity                            | 507    |              | uS/cm    | 500        |            | 101        | 80-120    |      |       |         |

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\*=Accredited Analyte

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Celeg D. Frene



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT

Project Number: #7

Project Manager: BEN DONAHUE

Fax To:

Reported:

28-Nov-17 18:13

## **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---|--------|--------------------|----------|----------------|------------------|-----------|----------------|-------|--------------|-------|
| Batch 7111701 - General Prep - Wet Chem |        |                    |          |                |                  |           |                |       |              |       |
| Duplicate (7111701-DUP1)                | Sou    | rce: H703206       | -01      | Prepared &     | Analyzed:        | 16-Nov-17 |                |       |              |       |
| рН                                      | 7.07   | 0.100              | pH Units |                | 7.06             |           |                | 0.142 | 20           |       |
| Conductivity                            | 501000 | 1.00               | uS/cm    |                | 494000           |           |                | 1.46  | 20           |       |
| Batch 7112001 - General Prep - Wet Chem |        |                    |          |                |                  |           |                |       |              |       |
| Blank (7112001-BLK1)                    |        |                    |          | Prepared &     | Analyzed:        | 20-Nov-17 |                |       |              |       |
| Chloride                                | ND     | 4.00               | mg/L     |                |                  |           |                |       |              |       |
| LCS (7112001-BS1)                       |        |                    |          | Prepared &     | k Analyzed:      | 20-Nov-17 |                |       |              |       |
| Chloride                                | 100    | 4.00               | mg/L     | 100            |                  | 100       | 80-120         |       |              |       |
| LCS Dup (7112001-BSD1)                  |        |                    |          | Prepared &     | Analyzed:        | 20-Nov-17 |                |       |              |       |
| Chloride                                | 100    | 4.00               | mg/L     | 100            |                  | 100       | 80-120         | 0.00  | 20           |       |
| Batch 7112201 - General Prep - Wet Chem |        |                    |          |                |                  |           |                |       |              |       |
| Blank (7112201-BLK1)                    |        |                    |          | Prepared &     | k Analyzed:      | 22-Nov-17 |                |       |              |       |
| Sulfate                                 | ND     | 10.0               | mg/L     |                |                  |           |                |       |              |       |
| LCS (7112201-BS1)                       |        |                    |          | Prepared &     | Analyzed:        | 22-Nov-17 |                |       |              |       |
| Sulfate                                 | 23.2   | 10.0               | mg/L     | 20.0           |                  | 116       | 80-120         |       |              |       |
| LCS Dup (7112201-BSD1)                  |        |                    |          | Prepared &     | k Analyzed:      | 22-Nov-17 |                |       |              |       |
| Sulfate                                 | 23.6   | 10.0               | mg/L     | 20.0           |                  | 118       | 80-120         | 1.79  | 20           |       |

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Kana



**ETZ WATER STATION** PO BOX 6056

Project: SCHUBERT

Project Number: #7

Reported: 28-Nov-17 18:13

HOBBS NM, 88241

Project Manager: BEN DONAHUE

Fax To:

## Total Recoverable Metals by ICP (E200.7) - Quality Control

## **Green Analytical Laboratories**

| Analyte                               | Result  | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD    | RPD<br>Limit | Notes |
|---------------------------------------|---------|--------------------|-------|----------------|------------------|-------------|----------------|--------|--------------|-------|
| Batch B711172 - Total Rec. 200.7/200. | 8/200.2 |                    |       |                |                  |             |                |        |              |       |
| Blank (B711172-BLK1)                  |         |                    |       | Prepared: 2    | 0-Nov-17         | Analyzed: 2 | 2-Nov-17       |        |              |       |
| Calcium                               | ND      | 0.100              | mg/L  |                |                  |             |                |        |              |       |
| Sodium                                | ND      | 1.00               | mg/L  |                |                  |             |                |        |              |       |
| Magnesium                             | ND      | 0.100              | mg/L  |                |                  |             |                |        |              |       |
| Potassium                             | ND      | 1.00               | mg/L  |                |                  |             |                |        |              |       |
| LCS (B711172-BS1)                     |         |                    |       | Prepared: 2    | .0-Nov-17 A      | Analyzed: 2 | 2-Nov-17       |        |              |       |
| Magnesium                             | 20.8    | 0.100              | mg/L  | 20.0           |                  | 104         | 85-115         |        |              |       |
| Potassium                             | 8.07    | 1.00               | mg/L  | 8.00           |                  | 101         | 85-115         |        |              |       |
| Sodium                                | 6.68    | 1.00               | mg/L  | 6.48           |                  | 103         | 85-115         |        |              |       |
| Calcium                               | 4.23    | 0.100              | mg/L  | 4.00           |                  | 106         | 85-115         |        |              |       |
| LCS Dup (B711172-BSD1)                |         |                    |       | Prepared: 2    | 0-Nov-17         | Analyzed: 2 | 2-Nov-17       |        |              |       |
| Potassium                             | 8.22    | 1.00               | mg/L  | 8.00           |                  | 103         | 85-115         | 1.77   | 20           |       |
| Calcium                               | 4.24    | 0.100              | mg/L  | 4.00           |                  | 106         | 85-115         | 0.215  | 20           |       |
| Sodium                                | 6.66    | 1.00               | mg/L  | 6.48           |                  | 103         | 85-115         | 0.224  | 20           |       |
| Magnesium                             | 20.8    | 0.100              | mg/L  | 20.0           |                  | 104         | 85-115         | 0.0742 | 20           |       |

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\*=Accredited Analyte

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Celeg Ditraca



#### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg to Keene



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Project Manager: Ben Darahue  Address:  City: State: Zip: Attn:  Phone #: 575 343 3174 Fax #:  Project Name: Schwarf was project Owner:  Project Name: Schwarf was project Owner:  Project Location:  Sample Name: Ben Darahue  Project Owner:  Phone #: Fax #:  Project Location:  Sample Name: Ben Darahue  Project Name: Ben Darahue  Project Name: Schwarf was project Owner:  Phone #: Fax #:  PRESERV SAMPLING  WAS SUBJECT ON BUILDING WAS DOOD BUILD | Company Name   | : ETZ Woher Station |      |                     |  |  |        |        |  | 81     | LL TO  |                     |           |                  |   | ANA        | LYS | IS F             | REQU | JEST   |   |   |                      |
|--|--|---------------------|------|---------------------|--|--|--------|--------|--|--------|--|---------------------|-----------|------------------|---|------------|-----|------------------|------|--|---|---|----------------------|
| Address:  City:  State: Zip:  Attn:  Address:  Project #:  Project Name: Schwack & 7  State: Zip:  Project Location:  Sampler Name: Ben Denone  For LAB USE ONLY  Lab I.D.  Sample I.D.  Sample I.D.  Company:  Attn:  Address:  City:  State: Zip:  Project Location:  Phone #:  Fax #:  For LAB USE ONLY  Lab I.D.  Sample I.D.  Attn:  Address:  City:  State: Zip:  MATRIX  PRESERV. SAMPLING  MATRIX  PRESERV. SAMPLING  DATE TIME  | Project Manager  | Ben Donahue         |      |                     | the same that th |  |        | P.O.   |  |        |  |                     |           |                  |   |            |     |                  | T    |  |   |   |                      |
| Phone #: 515 343 3194 Fax #:  Project #:  Project Owner:  City:  Project Name:  Schubert # 7  State: Zip:  Phone #:  Sampler Name:  Fax #:  PRILAB USE ONLY  Lab I.D.  Sample i.D.  Sample i.D.  Sample i.D.  Address:  Address:  City:  State: Zip:  Phone #:  Fax #:  MATRIX  PRESERV:  SAMPLING  MATRIX  PRESERV:  DATE TIME  |  |                     |      |                     |  |  |        | Con    | npan   | y:     |  |                     |           |                  |   |            |     |                  |      |  |   |   |                      |
| Project #: Project Owner: City: Project Name: Schedeck & 7 State: Zip: Project Location: Phone #: Sampler Name: Ben  | City:  | State:              | Zip: |                     | 34   |  |        | Attr   | E  |        |  |                     |           |                  |   | -          |     |                  |      |  |   |   |                      |
| Project Name: Schoolect & 7  State: Zip: Project Location:  Sampler Name: Ben  | Phone #: 515   | 393 3194 Fax#:      |      |                     |  |  |        | Add    | ress   | :      |  |                     | 1         |                  |   | Management |     |                  |      |  |   |   |                      |
| Project Location:  Sampler Name: Ben   | Project #:   | Project Owne        | r:   |                     |  |  |        | City   | *  |        |  |                     |           |                  |   | · ·        |     |                  |      | 1  |   |   |                      |
| Project Location:  Sampler Name: Ben   | roject Name:   | Schubert & 7        |      |                     |  |  |        |        |  |        | Zip:   |                     | 13        |                  |   |            |     |                  |      | and the same of th |   | - |                      |
| Sampler Name: Ben Bendung   Fax#:  FOR LAB USE ONLY   MATRIX   PRESERV. SAMPLING    Lab I.D.   Sample I.D.   Sample I.D.    Lab I.D.   Sample I.D.   DATE   TIME    H103246    | Project Location   | ):                  | •    | AT & 100 AT 1 THE A |  | ***********  |        | Pho    | ne #:  |        | The second secon |                     | H         |                  | - |            |     |                  |      |  |   |   |                      |
| Tab I.D. Sample I.D. Scorr CE / COOL COTHER:  ACIDIABASE: CCE / COOL OTHER: ACIDIABASE: ACIDIABA |  |                     |      |                     | No. 40 december of the control of  | CO. S. SERVI, A. L. S. |        | Fax    | #:   |        | W V 7.88887 11. 2011 11. 11. 11. 11. 11. 11. 11. 11. 11.   |                     | 1         | 1                |   |            |     |                  |      |  |   |   | _                    |
| H10396 Sample I.D. Sample I.D. Scool | FOR LAB USE ONLY   | *                   |      |                     |  | MATR   | IX     | F      | RESI   | ERV.   | SAMPLI   | NG _                |           | 1                |   |            |     |                  |      |  |   |   |                      |
|  |  |                     |      | # CONTAINERS        | GROUNDWATE WASTEWATER  | SOIL   | SLUDGE | OTHER; | ACID/BASE.   | OTHER: |  |                     | I-1 Patio |                  |   |            |     |                  |      |  |   |   |                      |
|  | The second secon | •                   |      |                     |  |  |        |        | to called calculate the second |        | *  | July We specialists |           | MA / 1,71 / 1,71 |   |            |     | NATION OF STREET |      |  | - |   | <br>No. 20. 11111111 |

<sup>+</sup> Carrifnal cannot accent workel channes Please for written channes to (575) 303-2326



# HRC, INC.

P. O. Box 5102 Hobbs, NM 88241-5102 Phone # (575) 393-6662 Fax # (575) 393-6662



May 25, 2017

Mr. Carl J. Chavez, CHMM (#13099) New Mexico Oil Conservation Division Energy Minerals and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Ref: 2016 Annual Report

B-31 Schubert 7 – Well #1

Dear Mr. Chavez,

Enclosed please find the monthly freshwater injection and brine production numbers for the Hobbs facility for the year 2016. Included also are Cardinal Laboratories' results of analyses for samples for the month of February, May, and December, 2016.

Thank you,

Sincerely,

Gary M. Schubert

GMS/br

# **BW-31**

# ANNUAL REPORT

# SCHUBERT 7 - WELL # 1

- Summary of Class III well operations for year: 2016 Schubert 7 #1 (BW-31)
   Well HRC Schubert 7 #1 Brine Well was operated over the past year to produce saturated brine for applications in oilfield services. No remedial or major work was undertaken during the year.
- 2. Monthly fluid injection and brine production volume: See attached.
- 3. Injection pressure data;
  - 230 psi pumps pressure.
- 4. Quarterly chemical analyses with data summary and all QA/QC information; See attached reports (Cardinal Laboratory)
- 5. Copy of any mechanical integrity test chart, including the type of test, i.e., duration guage pressure, etc; Submitted 12-01-2016
- 6. Brief explanation describing deviations from the normal operations; NA
- 7. Results of any leaks and spill reports; NA
- 8. An Area of Review (AOR) update summary;
  - HRC, Inc. knows of no new wells, conduits, or any other device that penetrates or may penetrate the injection zone within a 1-mile radius.
- A summary with interpretation of MITs, surface subsidence surveys, cavern volume and geometry measurements with conclusion (s) and recommendations (s); MIT of 11-22-2016 approved. No subsidence as per attached reports.
- 10. A summary of the ratio of the volume of injected fluids to the volume of produced brine;
  All measured flows of injected fuilds to produced brine were within guidelines.
- 11. A summary of all major Facility activities or events, which occurred during the year with any conclusions and recommendations; NA
- 12. Annual Certification in accordance with Permit Condition 2. B. 3.
  - HRC, 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.
- 13. A summary of any new discoveries of ground water contamination with all leaks, spills, and releases and corrective actions taken; NA

1. Summary of Class III well operations for the year: 2016 -- SCHUBERT 7 #1 (BW-31)

Well HRC Schubert7 #1 Brine Well was operated over the past year to produce saturated brine for applications in oilfield services. No remedial or major work was undertaken during the year.

2. Monthly fluid injection and brine production volume;

|          |                  |               | /                 |         |     | BB                                      |
|----------|------------------|---------------|-------------------|---------|-----|---|
| MAY      | Month            | Brine (bbl)   | Fresh Water (bbl) | Ratio % |     | 1 4 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| 2015 082 | 2014 July        | 26167         | 26657             | 98%     |     | p. St.                                  |
|          | August           | 25077         | 25138             | 100%    |     |   |
| 2016     | Septembe         | /22883        | 22907             | 100%    |     |   |
|          | October          | 24867         | 25436             | 98%     |     | _                                       |
|          | November         | 24267         | 24321             | 100%    | 526 | A TTACHED                               |
|          | December         | <b>2</b> 4276 | 25500*            | 95%     | 200 | <b>,</b>                                |
|          | 2015 Japuary     | 22483         | 22650             | 99%     |     |   |
| 43140    | <b>F</b> ebruary | 2084 <b>0</b> | 21043             | 99%     |     |   |
|          | March            | 25417         | 25919             | 98%     |     |   |
|          | April            | 20460         | 20441             | 100%    |     |   |
|          |                  |               |                   |         |     |   |

Note: December fresh water quantity is an estimate due to failure of the water meter.

3. Injection pressure data; 230 psi pump pressure.

4. Quarterly chemical analyses with data summary and all QA/QC information;

**Data Summary** 

Injection Fluid

pH: 6.5-8.3

Density: 8.3-8.5 lbs/gal

**T**DS: <1000 ppm

Chlorides: <250 ppm

SEE ATTACHED RESERVS

(CARDIHAL LABORATORY)

Produced Brine

pH: 6.5-7.5

Density: 9.9-10.2 lbs/gal TDS: >260,000\ppm Chlorides: >190,000 ppm Sodium: >120,000 ppm

Additional data and QA/QC results in attached appendix.

 $\checkmark$  5. Copy of any mechanical integrity test chart, including the type of test, i.e., duration, gauge pressure, etc.;

NA. Permit requires this test only once every 5 years.

SUBMITTED 12/1/2016

6. Brief explanation describing deviations from the normal operations;

The meter for injected fluids malfunctioned in December of 2014. Volumes of injected fluid for this month are estimated. N/A

√ 7. Results of any leaks and spill reports; NA

8. An Area of Review (AOR) update summary;

HRC, Inc knows of no new wells, conduits, or any other device that penetrates or may penetrate the injection zone within a 1-mile radius.

9. A summary with interpretation of MITs, surface subsidence surveys, cavern volume and geometry measurements with conclusion(s) and recommendation(s); NA NIT of NIT (APPROVED.

NO SUBSIDENCE AS PER ATTACHED REPORTS

10. A summary of the ratio of the volume of injected fluids to the volume of produced brine;
All measured flows of injected fluids to produced brine were 98% to 100%. An estimated—amount of injected fluid was reported for Dec 2014. WITHIN GUIDELIMES

- 11. A summary of all major Facility activities or events, which occurred during the year with any conclusions and recommendations; NA
- 12. Annual Certification in accordance with Permit Condition 2.B.3.

  HRC, 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.
- 13. A summary of any new discoveries of ground water contamination with all leaks, spills and releases and corrective actions taken; NA

BW – 31 SCHUBERT 7 – WELL # 1

# 2016 Report

# **Report of Fluid Injection and Production**

| MONTH     | BRINE<br>PRODUCTION<br>(BY Meter) | FRESH WATER<br>INJECTED<br>(By Meter) | Ratio<br>% |  |
|-----------|-----------------------------------|---------------------------------------|------------|--|
| January   | 24,405                            | 23,636                                | 103        |  |
| February  | 10,170                            | 10,279                                | 99         |  |
| March     | 21,995                            | 21,955                                | 103        |  |
| April     | 19,500                            | 20,240                                | 96         |  |
| May       | 27,833                            | 25,664                                | 100        |  |
| June      | 30,024                            | 28,565                                | 105        |  |
| July      | *** 24,200                        | 23,700                                | 102        |  |
| August    | 25,310                            | 24,233                                | 104        |  |
| September | 20,905                            | 21,531                                | <b>97</b>  |  |
| October   | *** 29,900                        | 28,900                                | 103        |  |
| November  | 20,024                            | 19,533                                | 103        |  |
| December  | 29,475                            | 28,357                                | 104        |  |

<sup>\*\*\*</sup>Estimated (Meter Power Failure)



February 17, 2016

**GARY SCHUBERT** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: WATER SAMPLES** 

Enclosed are the results of analyses for samples received by the laboratory on 02/05/16 13:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5) Method EPA 524.2 Total Trihalomethanes (TTHM)

Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey & Keine

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



#### Analytical Results For:

ETZ WATER STATION

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NADINE WATER #1
Project Manager: GARY SCHUBERT

Fax To:

Reported: 17-Feb-16 08:59

17-Feb-16 08:59

| Sample ID    | Laboratory ID | Matrix | Date Sampled    | Date Received   |  |
|--------------|---------------|--------|-----------------|-----------------|--|
| WATER SAMPLE | H600270-01    | Water  | 04-Feb-16 00:00 | 05-Feb-16 13:30 |  |

Cardinal Laboratories \*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

Reported: 17-Feb-16 08:59

# WATER SAMPLE H600270-01 (Water)

| Analyte                  | Result  | Repo<br>MDL Li | orting<br>imit | Units       | Dilution | Batch   | Analyst | Analyzed  | Method    | Note |
|--------------------------|---------|----------------|----------------|-------------|----------|---------|---------|-----------|-----------|------|
|                          |         | (              | Cardina        | al Laborato | ories    |         |         |           |           |      |
| norganic Compounds       |         |                |                |             |          |         |         |           |           |      |
| Alkalinity, Bicarbonate  | 414     | 5              | .00            | mg/L        | 1        | 6021206 | AP      | 15-Feb-16 | 310.1     |      |
| Alkalinity, Carbonate    | <1.00   | 1.             | .00            | mg/L        | 1        | 6021206 | AP      | 15-Feb-16 | 310.1     |      |
| Chloride*                | 86000   | 4              | .00            | mg/L        | 1        | 6021104 | AP      | 11-Feb-16 | 4500-CI-B |      |
| Conductivity*            | 171000  | 0.3            | 250            | uS/cm       | 1        | 6020902 | AP      | 08-Feb-16 | 120.1     |      |
| vitrate as N             | 3.20    | 1              | .00            | mg/L        | 1        | 6020809 | AP      | 05-Feb-16 | 353.3     |      |
| Nitrite as N             | < 0.05  | 0              | .05            | mg/L        | 1        | 6020809 | AP      | 05-Feb-16 | 354.1     |      |
| h*                       | 8.70    | 0.             | 100            | pH Units    | 1        | 6020813 | AP      | 08-Feb-16 | 150.1     |      |
| Sulfate*                 | 1340    | 5              | 00             | mg/L        | 50       | 6021105 | AP      | 11-Feb-16 | 375.4     |      |
| rds*                     | 147000  | 5              | .00            | mg/L        | 1        | 6020808 | AP      | 12-Feb-16 | 160.1     |      |
| Alkalinity, Total*       | 340     | 4              | .00            | mg/L        | i        | 6021206 | AP      | 15-Feb-16 | 310.1     |      |
| VOLATILES BY GC/MS       |         |                |                |             |          |         |         |           |           |      |
| Dichlorodifluoromethane* | < 0.001 | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Chloromethane*           | 0.002   | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Vinyl chloride*          | < 0.001 | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Bromomethane*            | < 0.001 | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Chloroethane*            | < 0.001 | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Frichlorofluoromethane*  | < 0.001 | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| 1,1-Dichloroethene*      | < 0.001 | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Carbon disulfide*        | 0.034   | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| odomethane               | <0.001  | 0.             | 001            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Acrolein*                | < 0.050 | 0.             | 050            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Methylene chloride*      | 100.0   | 0.             | .001           | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Acetone*                 | < 0.005 | 0.             | .005           | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| rans-1,2-Dichloroethene* | < 0.001 | 0.             | .001           | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Methyl t-Butyl Ether*    | < 0.001 | 0.             | 100            | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| 1,1-Dichloroethane*      | < 0.001 | 0.             | .001           | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Acrylonitrile*           | < 0.001 | 0.             | .001           | mg/L        | i        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |
| Vinyl acetate*           | < 0.005 | 0.             | .005           | mg/L        | 1        | 6020903 | MS      | 13-Feb-16 | 8260B     |      |

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ETZ WATER STATION PO BOX 6056

HOBBS NM, 88241

Project: WATER SAMPLES
Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

Reported: 17-Feb-16 08:59

# WATER SAMPLE H600270-01 (Water)

| Analyte                    | Result  | MDL | Reporting<br>Limit | Units      | Dilution | Batch   | Analyst | Analyzed  | Method | Notes |
|----------------------------|---------|-----|--------------------|------------|----------|---------|---------|-----------|--------|-------|
|                            |         |     | Cardin             | al Laborat | ories    |         |         |           |        |       |
| VOLATILES BY GC/MS         |         |     |                    |            |          |         |         |           |        |       |
| cis-1,2-Dichloroethene*    | <0.001  |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 2,2-Dichloropropane*       | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Bromochloromethane*        | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Chloroform*                | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Carbon tetrachloride*      | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,1,1-Trichloroethane*     | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,1-Dichloropropene*       | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 2-Butanone*                | < 0.250 |     | 0.250              | mg/L       | 50       | 6020903 | MS      | 15-Feb-16 | 8260B  |       |
| Benzene*                   | 1.26    |     | 0.050              | mg/L       | 50       | 6020903 | MS      | 15-Feb-16 | 8260B  |       |
| 1,2-Dichloroethane*        | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Trichloroethene*           | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Dibromomethane*            | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2-Dichloropropane*       | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Bromodichloromethane*      | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| cis-1,3-Dichloropropene*   | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Toluene*                   | 0.188   |     | 0.050              | mg/L       | 50       | 6020903 | MS      | 15-Feb-16 | 8260B  |       |
| 4-Methyl-2-pentanone*      | 0.041   |     | 0.005              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Tetrachloroethene*         | < 0.001 |     | 0.001              | mg/L       | I        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| trans-1,3-Dichloropropene* | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,1,2-Trichloroethane*     | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Dibromochloromethane*      | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,3-Dichloropropane*       | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2-Dibromoethane*         | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 2-Hexanone*                | 0.012   |     | 0.005              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Chlorobenzene*             | < 0.001 |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Ethylbenzene*              | 0.004   |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,1,1,2-Tetrachloroethane* | < 0.001 |     | 100.0              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| m+p - Xylene*              | 0.007   |     | 0.002              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| o-Xylene*                  | 0.005   |     | 0.001              | mg/L       | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |

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Reported:

17-Feb-16 08:59



## Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

# WATER SAMPLE H600270-01 (Water)

| Analyte                          | Result  | MDL | Reporting<br>Limit | Units         | Dilution | Batch   | Analyst | Analyzed  | Method | Notes |
|----------------------------------|---------|-----|--------------------|---------------|----------|---------|---------|-----------|--------|-------|
|                                  |         |     | Cardina            | ıl Laborat    | ories    |         |         |           |        |       |
| VOLATILES BY GC/MS               |         |     |                    |               |          |         |         |           |        |       |
| Total Xylenes*                   | 0.012   |     | 0.003              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Bromoform*                       | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Styrene*                         | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Isopropylbenzene*                | < 0.001 |     | 0.001              | mg/L          | ł        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Bromobenzene*                    | < 0.001 |     | 0.001              | mg/L          | ı        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| n-Propylbenzene*                 | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,1,2,2-Tetrachloroethane*       | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 2-Chlorotoluene*                 | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1.2.3-trichloropropane*          | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,3,5-Trimethylbenzene*          | < 0.001 |     | 100.0              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| trans-1,4-Dichloro-2-butene      | 0.002   |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 4-Chlorotoluene*                 | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| tert-Butylbenzene*               | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2,4-Trimethylbenzene*          | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| sec-Butylbenzene*                | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| p-Isopropyltoluene*              | < 0.001 |     | 0.001              | mg/L          | ı        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,3-Dichlorobenzene*             | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,4 Dichlorobenzene*             | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| n-Butylbenzene*                  | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2-Dichlorobenzene*             | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2-Dibromo-3-chloropropane<br>* | 0.001   |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Hexachlorobutadiene*             | < 0.001 |     | 0.001              | mg/L          | i        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2,4-Trichlorobenzene*          | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Naphthalene*                     | 0.001   |     | 0.001              | mg/L          | i        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| 1,2,3-Trichlorobenzene*          | < 0.001 |     | 0.001              | mg/L          | 1        | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Surrogate: Dibromofluoromethane  |         |     | 90.9 %             | 86.5          | -122     | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Surrogate: Toluene-d8            |         |     | 99.3 %             | <b>85</b> . 7 | -112     | 6020903 | MS      | 13-Feb-16 | 8260B  |       |
| Surrogate: 4-Bromofluorobenzene  |         |     | 108 %              | 86.3          | -117     | 6020903 | MS      | 13-Feb-16 | 8260B  |       |

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#### Analytical Results For:

**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NADINE WATER #1 Project Manager: GARY SCHUBERT

Fax To:

Reported:

17-Feb-16 08:59

#### WATER SAMPLE

H600270-01 (Water)

|         |        |     | Panaeting          |       |          |       |         |          |        |       |
|---------|--------|-----|--------------------|-------|----------|-------|---------|----------|--------|-------|
| Analyte | Result | MDL | Reporting<br>Limit | Units | Dilution | Batch | Analyst | Analyzed | Method | Notes |

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# Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1
Project Manager: GARY SCHUBERT

Reported: 17-Feb-16 08:59

Fax To:

## **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level     | Source<br>Result | %REC       | %REC<br>Limits | RPD  | RPD<br>Limit | Notes  |
|---|--------|--------------------|----------|--------------------|------------------|------------|----------------|------|--------------|--------|
| пиную                                   | Nesun  | Dunk               | Cints    | Tevel              | Vesmi            | /OKEC      | Limits         | KFD  | Cillin       | INUICS |
| Batch 6020808 - Filtration              |        |                    |          |                    |                  |            |                |      |              |        |
| Blank (6020808-BLK1)                    |        |                    |          | Prepared: (        | 08-Feb-16 A      | nalyzed: 1 | 2-Feb-16       |      |              |        |
| TDS                                     | ND     | 5.00               | mg/L     |                    |                  |            |                |      |              |        |
| LCS (6020808-BS1)                       |        |                    |          | Prepared: (        | 08-Feb-16 A      | nalyzed: I | 1-Feb-16       |      |              |        |
| TDS                                     | 556    | 5.00               | mg/L     | 527                |                  | 106        | 80-120         |      | ,            |        |
| Duplicate (6020808-DUP1)                | Sou    | rce: H600257       | -03      | Prepared: (        | 08-Feb-16 A      | nalyzed: I | 1-Feb-16       |      |              |        |
| TDS                                     | 2070   | 5.00               | mg/L     |                    | 2040             |            |                | 1.07 | 20           |        |
| Batch 6020809 - General Prep - Wet Chem |        |                    |          |                    |                  |            |                |      |              |        |
| Blank (6020809-BLK1)                    |        |                    |          | Prepared 8         | & Analyzed:      | 05-Feb-16  |                |      |              |        |
| Nitrite as N                            | ND     | 0.05               | mg/L     |                    |                  |            |                |      |              |        |
| Nitrate as N                            | ND     | 1.00               | mg/L     |                    |                  |            |                |      |              |        |
| LCS (6020809-BS1)                       |        |                    |          | Prepared &         | & Analyzed:      | 05-Feb-16  |                |      |              |        |
| Nitrate as N                            | 5.00   | 1.00               | mg/L     | 5.00               |                  | 100        | 80-120         |      |              |        |
| Nitrite as N                            | 0.19   | 0.05               | mg/L     | 0.200              |                  | 94.5       | 80-120         |      |              |        |
| Duplicate (6020809-DUP1)                | Sou    | rce: H600270       | -01      | Prepared &         | & Analyzed:      | 05-Feb-16  |                |      |              |        |
| Nitrate as N                            | 3.20   | 1.00               | mg/L     | a construction and | 3.20             |            |                | 0.00 | 20           |        |
| Nitrite as N                            | 0.003  | 0.05               | mg/L     |                    | 0.003            |            |                | 0.00 | 20           |        |
| Batch 6020813 - General Prep - Wet Chem |        |                    |          |                    |                  |            |                |      |              |        |
| LCS (6020813-BS1)                       |        |                    |          | Prepared &         | & Analyzed:      | 08-Feb-16  |                |      |              |        |
| pH                                      | 7.03   |                    | pH Units | 7.00               | - 1.2            | 100        | 90-110         |      |              |        |

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## Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1
Project Manager: GARY SCHUBERT

Reported: 17-Feb-16 08:59

Fax To:

## **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

|   |        | Reporting            |          | Spike      | Source      |                  | %REC   |       | RPD   |         |
|---|--------|----------------------|----------|------------|-------------|------------------|--------|-------|-------|---------|
| Analyte                                 | Result | Limit                | Units    | Level      | Result      | %REC             | Limits | RPD   | Limit | Notes   |
| Batch 6020813 - General Prep - Wet Chem |        |                      |          |            |             |                  |        |       |       |         |
| Duplicate (6020813-DUP1)                | Sou    | ce: H600 <b>2</b> 69 | -01      | Prepared & | : Analyzed: | 08-Feb-16        |        |       |       |         |
| рН                                      | 12.1   | 0.100                | pH Units |            | 12.1        |                  |        | 0.248 | 20    |         |
| Batch 6020902 - General Prep - Wet Chem |        |                      |          |            |             |                  |        |       |       | • • • • |
| LCS (6020902-BS1)                       |        |                      |          | Prepared & | Analyzed:   | 09-Feb-16        |        |       |       |         |
| Conductivity                            | 504    |                      | uS/cm    | 500        |             | 101              | 80-120 |       |       |         |
| Duplicate (6020902-DUP1)                | Sou    | rce: H600270         | -01      | Prepared & | Analyzed:   | 09-Feb-16        |        |       |       |         |
| Conductivity                            | 153000 | 0.250                | uS/cm    |            | 171000      |                  |        | 10.8  | 20    |         |
| Batch 6021104 - General Prep - Wet Chem |        |                      |          |            |             |                  |        |       |       |         |
| Blank (6021104-BLK1)                    |        |                      |          | Prepared & | Analyzed:   | 11-Feb-16        |        |       |       |         |
| Chloride                                | ND     | 4.00                 | mg/L     |            |             |                  |        |       |       |         |
| LCS (6021104-BS1)                       |        |                      |          | Prepared & | Analyzed:   | 11-Feb-16        |        |       |       |         |
| Chloride                                | 96.0   | 4.00                 | mg/L     | 100        |             | 96.0             | 80-120 |       |       |         |
| Cinoriae                                |        |                      |          |            |             | ,                |        |       |       |         |
|   |        |                      |          |            | ż Analyzed: |                  |        |       |       |         |
| LCS Dup (6021104-BSD1) Chloride         | 104    | 4.00                 | mg/L     |            | k Analyzed: |                  | 80-120 | 8.00  | 20    |         |
| LCS Dup (6021104-BSD1) Chloride         | 104    |                      |          | Prepared & | k Analyzed: | 11-Feb-16        | 80-120 | 8.00  | 20    |         |
| LCS Dup (6021104-BSD1)                  | 104    |                      |          | Prepared & | ż Analyzed: | 11-Feb-16<br>104 | 80-120 | 8.00  | 20    |         |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1
Project Manager: GARY SCHUBERT

NATER #1 17-Feb-16 08:59

Reported:

Fax To:

#### Inorganic Compounds - Quality Control

#### **Cardinal Laboratories**

| Applies                              | Result | Reporting<br>Limit | Units | Spike<br>Level | Source      | %REC               | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|--------------------------------------|--------|--------------------|-------|----------------|-------------|--------------------|----------------|-------|--------------|-------|
| Analyte                              | Result | Limit              | Units | Level          | Result      | %REC               | Limits         | RPD   | Limit        | Notes |
| Batch 6021105 - General Prep - Wet C | hem    |                    |       |                |             |                    |                |       |              |       |
| LCS (6021105-BS1)                    |        |                    |       | Prepared &     | Analyzed:   | 11-Feb-16          |                |       |              |       |
| Sulfate                              | 21.0   | 10.0               | mg/L  | 20.0           |             | 105                | 80-120         |       |              |       |
| LCS Dup (6021105-BSD1)               |        |                    |       | Prepared &     | k Analyzed: | 11 <b>-</b> Feb-16 |                |       |              |       |
| Sulfate                              | 20.8   | 10.0               | mg/L  | 20.0           |             | 104                | 80-120         | 0.956 | 20           |       |
| Batch 6021206 - General Prep - Wet C | hem    |                    |       |                |             |                    |                |       |              |       |
| Blank (6021206-BLK1)                 | -      |                    |       | Prepared:      | 12-Feb-16 A | nalyzed: 1         | 5-Feb-16       |       |              |       |
| Alkalinity, Carbonate                | ND     | 0.00               | mg/L  |                |             |                    |                |       |              |       |
| Alkalinity, Bicarbonate              | ND     | 5.00               | mg/L  |                |             |                    |                |       |              |       |
| Alkalinity, Total                    | ND     | 4.00               | mg/L  |                |             |                    |                |       |              |       |
| LCS (6021206-BS1)                    |        |                    |       | Prepared:      | 12-Feb-16 A | nalyzed: 1         | 5-Feb-16       |       |              |       |
| Alkalinity, Carbonate                | ND     | 0.00               | mg/L  |                |             |                    | 80-120         |       |              |       |
| Alkalinity, Bicarbonate              | 126    | 5.00               | mg/L  |                |             |                    | 80-120         |       |              |       |
| Alkalinity, Total                    | 104    | 4.00               | mg/L  | 100            |             | 104                | 80-120         |       |              |       |
| LCS Dup (6021206-BSD1)               |        |                    |       | Prepared:      | 12-Feb-16 A | nalyzed: I         | 5-Feb-16       |       |              |       |
| Alkalinity, Carbonate                | ND     | 0.00               | mg/L  |                |             |                    | 80-120         |       | 20           |       |
| Alkalinity, Bicarbonate              | 131    | 5.00               | mg/L  |                |             |                    | 80-120         | 3.89  | 20           |       |
| Alkalinity, Total                    | 108    | 4.00               | mg/L  | 100            |             | 108                | 80-120         | 3.77  | 20           |       |

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**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NADINE WATER #1

Reported: 17-Feb-16 08:59

Project Manager: GARY SCHUBERT

Fax To:

## **VOLATILES BY GC/MS - Quality Control**

#### Cardinal Laboratories

| Analyte                   | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------------------------|--------|--------------------|-------|----------------|------------------|-------------|----------------|-----|--------------|-------|
| Batch 6020903 - Volatiles |        |                    |       |                |                  |             |                |     |              |       |
| Blank (6020903-BLK1)      |        |                    |       | Prepared: (    | 09-Feb-16 A      | nalyzed: 12 | 2-Feb-16       |     |              |       |
| Dichlorodifluoromethane   | ND     | 0.001              | mg/L  | · •            |                  | ,           |                |     |              |       |
| Chloromethane             | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| √inyl chloride            | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Bromomethane              | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Chloroethane              | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| richlorofluoromethane     | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| ,1-Dichloroethene         | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Carbon disulfide          | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| odomethane                | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Acrolein                  | ND     | 0.050              | mg/L  |                |                  |             |                |     |              |       |
| Methylene chloride        | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Acetone                   | ND     | 0.005              | mg/L  |                |                  |             |                |     |              |       |
| rans-1,2-Dichloroethene   | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Nethyl t-Butyl Ether      | ND     | 0.001              | nig/L |                |                  |             |                |     |              |       |
| ,1-Dichloroethane         | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Acrylonitrile             | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| /inyl acetate             | ND     | 0.005              | mg/L  |                |                  |             |                |     |              |       |
| is-1,2-Dichloroethene     | ND     | 100.0              | nıg/L |                |                  |             |                |     |              |       |
| ,2-Dichloropropane        | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Bromochloromethane        | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Chloroform                | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Carbon tetrachloride      | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| ,1,1-Trichloroethane      | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| ,1-Dichloropropene        | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| -Butanone                 | ND     | 0.005              | mg/L  |                |                  |             |                |     |              |       |
| Benzene                   | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| ,2-Dichloroethane         | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| richloroethene            | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Dibromomethane            | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| ,2-Dichloropropane        | ND     | 100.0              | nig/L |                |                  |             |                |     |              |       |
| Bromodichloromethane      | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| sis-1,3-Dichloropropene   | ND     | 0.001              | mg/L  |                |                  |             |                |     |              |       |

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ETZ WATER STATION

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

VATER SAMPLES

Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT Fax To:

Reported:

17-Feb-16 08:59

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## **VOLATILES BY GC/MS - Quality Control**

#### **Cardinal Laboratories**

| Analyte                    | Post-It | Reporting<br>Limit | Units | Spike       | Source     | %REC        | %REC     | RPD | RPD<br>Limit | Notes |
|----------------------------|---------|--------------------|-------|-------------|------------|-------------|----------|-----|--------------|-------|
| Analyte                    | Result  | Limit              | Units | Level       | Result     | %KEC        | Limits   | KPD | Limit        | Notes |
| Batch 6020903 - Volatiles  |         | v.                 |       |             |            |             |          |     |              |       |
| Blank (6020903-BLK1)       |         |                    |       | Prepared: ( | 9-Feb-16 A | nalyzed: 12 | 2-Feb-16 |     |              |       |
| Toluene                    | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 4-Methyl-2-pentanone       | ND      | 0.005              | mg/L  |             |            |             |          |     |              |       |
| Tetrachloroethene          | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| rans-1,3-Dichloropropene   | ND      | 100.0              | mg/L  |             |            |             |          |     |              |       |
| 1,1,2-Trichloroethane      | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| Dibromochloromethane       | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 1,3-Dichloropropane        | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 1,2-Dibromoethane          | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 2-Hexanone                 | ND      | 0.005              | mg/L  |             |            |             |          |     |              |       |
| Chlorobenzene              | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| Ethylbenzene               | ND      | 100.0              | mg/L  |             |            |             |          |     |              |       |
| ,1,1,2-Tetrachloroethane   | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| n+p - Xylene               | ND      | 0.002              | mg/L  |             |            |             |          |     |              |       |
| -Xylene                    | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| otal Xylenes               | ND      | 0.003              | mg/L  |             |            |             |          |     |              |       |
| Bromoform                  | ND      | 100.0              | mg/L  |             |            |             |          |     |              |       |
| Styrene                    | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| sopropylbenzene            | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| Bromobenzene               | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| -Propylbenzene             | ND      | 100.0              | mg/L  |             |            |             |          |     |              |       |
| ,1,2,2-Tetrachloroethane   | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 2-Chlorotoluene            | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| .2.3-trichloropropane      | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| ,3,5-Trimethylbenzene      | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| rans-1,4-Dichloro-2-butene | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 4-Chlorotoluene            | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| ert-Butylbenzene           | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| ,2,4-Trimethylbenzene      | ND      | 100.0              | mg/L  |             |            |             |          |     |              |       |
| ec-Butylbenzene            | ND      | 100.0              | mg/L  |             |            |             |          |     |              |       |
| p-Isopropyltoluene         | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 1,3-Dichlorobenzene        | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |
| 1,4 Dichlorobenzene        | ND      | 0.001              | mg/L  |             |            |             |          |     |              |       |

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Reported:



## Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1
Project Manager: GARY SCHUBERT

IE WATER #1 17-Feb-16 08:59

Fax To:

## **VOLATILES BY GC/MS - Quality Control**

## **Cardinal Laboratories**

| Analyte                         | Result  | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------------------------------|---------|--------------------|-------|----------------|------------------|-------------|----------------|-----|--------------|-------|
| Batch 6020903 - Volatiles       |         |                    |       |                |                  |             |                |     |              |       |
| Blank (6020903-BLK1)            | W P L P |                    |       | Prepared: (    | )9-Feb-16 A      | nalvzed: 1  | 2-Feb-16       |     |              |       |
| n-Butylbenzene                  | ND      | 0.001              | mg/L  | Tropared.      | //-1 CO-10 /     | indiyzou. I | 2100-10        |     |              |       |
| 1,2-Dichlorobenzene             | ND      | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| 1,2-Dibromo-3-chloropropane     | ND      | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Hexachlorobutadiene             | ND      | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| 1.2.4-Trichlorobenzene          | ND      | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| Naphthalene                     | ND      | 100.0              | mg/L  |                |                  |             |                |     |              |       |
| 1,2,3-Trichlorobenzene          | ND      | 0.001              | mg/L  |                |                  |             |                |     |              |       |
| 2-Chloroethylvinyl ether        | ND      | 0.005              | mg/L  |                |                  |             |                |     |              |       |
| 1,4-Dioxane                     | ND      | 0.125              | mg/L  |                |                  |             |                |     |              |       |
| Surrogate: Dibromofluoromethane | 0.0102  |                    | mg/L  | 0.0100         |                  | 102         | 86.5-122       |     |              |       |
| Surrogate: Toluene-d8           | 0.0102  |                    | mg/L  | 0.0100         |                  | 102         | 85.7-112       |     |              |       |
| Surrogate: 4-Bromofluorobenzene | 0.00994 |                    | mg/L  | 0.0100         |                  | 99.4        | 86.3-117       |     |              |       |
| LCS (6020903-BS1)               |         |                    |       | Prepared: (    | 09-Feb-16 A      | nalvzed: 1  | 2-Feb-16       |     |              |       |
| Dichlorodifluoromethane         | 0.055   | 0.001              | mg/L  | 0.0200         |                  | 275         | 58.8-146       |     |              | В     |
| Chloromethane                   | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 90.2        | 63.7-134       |     |              |       |
| Vinyl chloride                  | 0.021   | 0.001              | mg/L  | 0.0200         |                  | 107         | 69.6-123       |     |              |       |
| Bromomethane                    | 0.026   | 0.001              | mg/L  | 0.0200         |                  | 129         | 57.9-133       |     |              |       |
| Chloroethane                    | 0.026   | 0.001              | mg/L  | 0.0200         |                  | 131         | 62.4-134       |     |              |       |
| Trichlorofluoromethane          | 0.028   | 0.001              | mg/L  | 0.0200         |                  | 142         | 62.6-142       |     |              |       |
| 1,1-Dichloroethene              | 0.019   | 0.001              | mg/L  | 0.0200         |                  | 93.4        | 65-126         |     |              |       |
| Carbon disulfide                | 0.026   | 0.001              | mg/L  | 0.0200         |                  | 129         | 65-148         |     |              |       |
| Iodomethane                     | 0.022   | 100.0              | mg/L  | 0.0200         |                  | 111         | 70.4-138       |     |              |       |
| Acrolein                        | 0.096   | 0.050              | mg/L  | 0.100          |                  | 96.2        | 2.76-187       |     |              |       |
| Methylene chloride              | 0.019   | 0.001              | mg/L  | 0.0200         |                  | 96.2        | 43.1-162       |     |              |       |
| Acetone                         | 0.021   | 0.005              | mg/L  | 0.0200         |                  | 103         | 43.2-175       |     |              |       |
| trans-1,2-Dichloroethene        | 0.019   | 100.0              | mg/L  | 0.0200         |                  | 92.8        | 76.6-122       |     |              |       |
| Methyl t-Butyl Ether            | 0.019   | 0.001              | mg/L  | 0.0200         |                  | 97.0        | 81.5-128       |     |              |       |
| 1,1-Dichloroethane              | 0.019   | 0.001              | mg/L  | 0.0200         |                  | 97.4        | 80.9-121       |     |              |       |
| Acrylonitrile                   | 0.020   | 0.001              | mg/L  | 0.0200         |                  | 102         | 44.6-163       |     |              |       |
| Vinyl acetate                   | 0.021   | 0.005              | mg/L  | 0.0200         |                  | 106         | 19.7-207       |     |              |       |
| cis-1,2-Dichloroethene          | 0.020   | 0.001              | mg/L  | 0.0200         |                  | 97.6        | 76.8-126       |     |              |       |

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ETZ WATER STATION PO BOX 6056

Project: WATER SAMPLES
Project Number: NADINE WATER #1

Reported: 17-Feb-16 08:59

HOBBS NM, 88241

Project Manager: GARY SCHUBERT

Fax To:

## **VOLATILES BY GC/MS - Quality Control**

#### Cardinal Laboratories

| Analyte                   | Result                                | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC       | %REC<br>Limits | RPD  | RPD<br>Limit | Notes  |
|---------------------------|---------------------------------------|--------------------|-------|----------------|------------------|------------|----------------|------|--------------|--------|
| , may to                  | i i i i i i i i i i i i i i i i i i i | Limit              | Omis  | Level          | Result           | /orcec     | Limita         | KI D | Limit        | 110103 |
| Batch 6020903 - Volatiles |                                       | *****              |       |                |                  |            |                |      |              |        |
| LCS (6020903-BS1)         |                                       |                    |       | Prepared: 0    | 9-Feb-16 A       | nalyzed: 1 | 2-Feb-16       |      |              |        |
| 2,2-Dichloropropane       | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 99.0       | 66.5-137       |      |              |        |
| Bromochloromethane        | 0.021                                 | 0.001              | mg/L  | 0.0200         |                  | 103        | 76.7-128       |      |              |        |
| Chloroform                | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 99.1       | 82.5-123       |      |              |        |
| Carbon tetrachloride      | 0.021                                 | 0.001              | mg/L  | 0.0200         |                  | 105        | 77.5-136       |      |              |        |
| 1,1,1-Trichloroethane     | 0.020                                 | 100.0              | mg/L  | 0.0200         |                  | 99.0       | 88.3-127       |      |              |        |
| 1,1-Dichtoropropene       | 0.021                                 | 100.0              | mg/L  | 0.0200         |                  | 105        | 82.4-122       |      |              |        |
| 2-Butanone                | 0.022                                 | 0.005              | mg/L  | 0.0200         |                  | 109        | 55.2-151       |      |              |        |
| Benzene                   | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 96.2       | 84.9-121       |      |              |        |
| 1,2-Dichtoroethane        | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 97.0       | 76.9-133       |      |              |        |
| Trichloroethene           | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 100        | 82.8-120       |      |              |        |
| Dibromomethane            | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 96.8       | 78.8-128       |      |              |        |
| 1,2-Dichloropropane       | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 99.4       | 80.2-126       |      |              |        |
| Bromodichloromethane      | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 97.0       | 84.1-130       |      |              |        |
| cis-1,3-Dichloropropene   | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 95.8       | 76.8-130       |      |              |        |
| Toluene                   | 0.018                                 | 0.001              | mg/L  | 0.0200         |                  | 88.8       | 76.1-122       |      |              |        |
| 4-Methyl-2-pentanone      | 0.021                                 | 0.005              | mg/L  | 0.0200         |                  | 106        | 54.5-143       |      |              |        |
| Tetrachloroethene         | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 97.3       | 65.3-133       |      |              |        |
| trans-1,3-Dichloropropene | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 98.7       | 80.1-132       |      |              |        |
| 1,1,2-Trichloroethane     | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 97.0       | 82.3-117       |      |              |        |
| Dibromochloromethane      | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 96.4       | 75.2-137       |      |              |        |
| 1,3-Dichloropropane       | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 99.8       | 82.9-118       |      |              |        |
| 1,2-Dibromoethane         | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 98.4       | 78.4-126       |      |              |        |
| 2-Hexanone                | 0.020                                 | 0.005              | mg/L  | 0.0200         |                  | 102        | 52.1-149       |      |              |        |
| Chlorobenzene             | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 95.4       | 76.8-125       |      |              |        |
| Ethylbenzene              | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 93.2       | 78.5-126       |      |              |        |
| 1,1,1,2-Tetrachloroethane | 0.019                                 | 0.001              | mg/L  | 0.0200         |                  | 96.3       | 78.6-127       |      |              |        |
| m+p - Xylene              | 0.038                                 | 0.002              | mg/L  | 0.0400         |                  | 94.8       | 81.1-129       |      |              |        |
| o-Xylene                  | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 98.6       | 77.5-134       |      |              |        |
| Total Xylenes             | 0.058                                 | 0.003              | mg/L  | 0.0600         |                  | 96.0       | 80.2-130       |      |              |        |
| Bromoform                 | 0.018                                 | 0.001              | mg/L  | 0.0200         |                  | 87.9       | 54.1-155       |      |              |        |
| Styrene                   | 0.020                                 | 0.001              | mg/L  | 0.0200         |                  | 98.8       | 78-122         |      |              |        |
| Isopropylbenzene          | 0.018                                 | 0.001              | mg/L  | 0.0200         |                  | 90.0       | 80.2-122       |      |              |        |

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ETZ WATER STATION PO BOX 6056

HOBBS NM, 88241

Project: WATER SAMPLES
Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

Reported: 17-Feb-16 08:59

## **VOLATILES BY GC/MS - Quality Control**

#### **Cardinal Laboratories**

| Analyte                         | Result  | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes  |
|---------------------------------|---------|--------------------|-------|----------------|------------------|-------------|----------------|------|--------------|--------|
| Analyte                         | Kesuit  | Little             | Units | Level          | Kesuit           | /BKEC       | Lillitis       | KFD  | Liiiit       | 140103 |
| Batch 6020903 - Volatiles       |         |                    |       |                |                  |             |                |      |              |        |
| LCS (6020903-BS1)               |         |                    |       | Prepared: 0    | 9-Feb-16 A       | nalyzed: 1  | 2-Feb-16       |      |              |        |
| Bromobenzene                    | 0.017   | 0.001              | mg/L  | 0.0200         |                  | 86.6        | 73.2-126       |      |              |        |
| n-Propylbenzene                 | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 88.8        | 76.8-123       |      |              |        |
| 1,1,2,2-Tetrachloroethane       | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 92.3        | 72.8-123       |      |              |        |
| 2-Chlorotoluene                 | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 90.0        | 76.6-125       |      |              |        |
| 1.2.3-trichloropropane          | 0.020   | 0.001              | mg/L  | 0.0200         |                  | 98.2        | 58.3-141       |      |              |        |
| 1,3,5-Trimethylbenzene          | 0.016   | 0.001              | mg/L  | 0.0200         |                  | 82.1        | 80.8-118       |      |              |        |
| trans-1,4-Dichloro-2-butene     | 0.024   | 0.001              | mg/L  | 0.0200         |                  | 118         | 12.5-215       |      |              |        |
| 4-Chlorotoluene                 | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 88.8        | 80.2-120       |      |              |        |
| tert-Butylbenzene               | 0.022   | 0.001              | mg/L  | 0.0200         |                  | 111         | 72-128         |      |              |        |
| 1,2,4-Trimethylbenzene          | 0.016   | 0.001              | mg/L  | 0.0200         |                  | 81.5        | 77.2-128       |      |              |        |
| sec-Butylbenzene                | 0.016   | 100.0              | mg/L  | 0.0200         |                  | 81.8        | 74.2-121       |      |              |        |
| p-lsopropyltoluene              | 0.017   | 0.001              | mg/L  | 0.0200         |                  | 82.9        | 75-122         |      |              |        |
| 1,3-Dichlorobenzene             | 0.017   | 0.001              | mg/L  | 0.0200         |                  | 87.2        | 69.5-126       |      |              |        |
| 1,4 Dichlorobenzene             | 0.017   | 0.001              | mg/L  | 0.0200         |                  | 87.2        | 71.5-122       |      |              |        |
| n-Butylbenzene                  | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 89.4        | 72.7-128       |      |              |        |
| 1,2-Dichlorobenzene             | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 88.8        | 73.9-123       |      |              |        |
| 1,2-Dibromo-3-chloropropane     | 0.018   | 100.0              | mg/L  | 0.0200         |                  | 87.6        | 53.1-145       |      |              |        |
| Hexachlorobutadiene             | 0.017   | 100.0              | mg/L  | 0.0200         |                  | 86.0        | 62.2-136       |      |              |        |
| 1,2,4-Trichlorobenzene          | 0.017   | 0.001              | mg/L  | 0.0200         |                  | 84.8        | 69.2-123       |      |              |        |
| Naphthalene                     | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 91.9        | 64.4-132       |      |              |        |
| 1,2,3-Trichlorobenzene          | 0.018   | 0.001              | mg/L  | 0.0200         |                  | 90.4        | 69.7-119       |      |              |        |
| 2-Chloroethylvinyl ether        | ND      | 0.005              | mg/L  |                |                  |             | 0-200          |      |              |        |
| 1,4-Dioxane                     | ND      | 0.125              | mg/L  |                |                  |             | 0-200          |      |              |        |
| Surrogate: Dibromofluoromethane | 0.00993 |                    | mg/L  | 0.0100         |                  | 99.3        | 86.5-122       |      |              |        |
| Surrogate: Toluene-d8           | 0.0100  |                    | mg/L  | 0.0100         |                  | 100         | 85.7-112       |      |              |        |
| Surrogate: 4-Bromofluorobenzene | 0.0108  |                    | mg/L  | 0.0100         |                  | 108         | 86.3-117       |      |              |        |
| LCS Dup (6020903-BSD1)          |         |                    |       | Prepared: (    | 09-Feb-16 A      | Analyzed: 1 | 2-Feb-16       |      |              |        |
| Dichlorodifluoromethane         | 0.050   | 0.001              | mg/L  | 0.0200         |                  | 250         | 58.8-146       | 9.48 | 24.6         | В      |
| Chloromethane                   | 0.017   | 100.0              | mg/L  | 0.0200         |                  | 87.0        | 63.7-134       | 3.67 | 20.9         |        |
| Vinyl chloride                  | 0.021   | 0.001              | mg/L  | 0.0200         |                  | 104         | 69.6-123       | 3.27 | 16.7         |        |
| Bromomethane                    | 0.025   | 0.001              | mg/L  | 0.0200         |                  | 125         | 57.9-133       | 2.95 | 33.2         |        |

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ETZ WATER STATION PO BOX 6056

HOBBS NM, 88241

Project: WATER SAMPLES
Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

Reported: 17-Feb-16 08:59

## **VOLATILES BY GC/MS - Quality Control**

#### Cardinal Laboratories

|                           |        | Reporting |       | Spike       | Source     |            | %REC     |       | RPD   |            |
|---------------------------|--------|-----------|-------|-------------|------------|------------|----------|-------|-------|------------|
| Analyte                   | Result | Limit     | Units | Level       | Result     | %REC       | Limits   | RPD   | Limit | Notes      |
| Batch 6020903 - Volatiles |        |           |       |             |            |            |          |       |       |            |
| LCS Dup (6020903-BSD1)    |        |           |       | Prepared: 0 | 9-Feb-16 A | nalyzed: 1 | 2-Feb-16 |       |       |            |
| Chloroethane              | 0.025  | 0.001     | mg/L  | 0.0200      |            | 127        | 62.4-134 | 3.52  | 29.5  |            |
| Trichlorofluoromethane    | 0.028  | 100.0     | mg/L  | 0.0200      |            | 138        | 62.6-142 | 3.43  | 24.9  |            |
| 1,1-Dichloroethene        | 0.018  | 0.001     | mg/L  | 0.0200      |            | 89.3       | 65-126   | 4.49  | 15.4  |            |
| Carbon disulfide          | 0.025  | 0.001     | mg/L  | 0.0200      |            | 124        | 65-148   | 3.44  | 22.4  |            |
| Iodomethane               | 810.0  | 100.0     | mg/L  | 0.0200      |            | 91.2       | 70.4-138 | 19.4  | 13.2  | QR-02      |
| Acrolein                  | 0.093  | 0.050     | mg/L  | 0.100       |            | 92.6       | 2.76-187 | 3.87  | 75.4  |            |
| Methylene chloride        | 0.019  | 0.001     | mg/L  | 0.0200      |            | 94.2       | 43.1-162 | 2.05  | 9.96  |            |
| Acetone                   | 0.020  | 0.005     | mg/L  | 0.0200      |            | 001        | 43.2-175 | 2.07  | 82.2  |            |
| trans-1,2-Dichloroethene  | 0.014  | 0.001     | mg/L  | 0.0200      |            | 69.4       | 76.6-122 | 28.9  | 11.5  | QR-02, BS2 |
| Methyl t-Butyl Ether      | 0.018  | 0.001     | mg/L  | 0.0200      |            | 92.4       | 81.5-128 | 4.75  | 11.7  |            |
| 1,1-Dichloroethane        | 0.019  | 0.001     | mg/L  | 0.0200      |            | 96.1       | 80.9-121 | 1.34  | 7.62  |            |
| Acrylonitrile             | 0.019  | 0.001     | mg/L  | 0.0200      |            | 96.3       | 44.6-163 | 5.41  | 59.2  |            |
| Vinyl acetate             | 0.020  | 0.005     | mg/L  | 0.0200      |            | 102        | 19.7-207 | 3.98  | 24.5  |            |
| cis-1,2-Dichloroethene    | 0.019  | 0.001     | mg/L  | 0.0200      |            | 95.6       | 76.8-126 | 2.07  | 8.74  |            |
| 2,2-Dichloropropane       | 0.019  | 0.001     | mg/L  | 0.0200      |            | 96.4       | 66.5-137 | 2.71  | 14    |            |
| Bromochloromethane        | 0.020  | 100.0     | mg/L  | 0.0200      |            | 100        | 76.7-128 | 2.85  | 8.39  |            |
| Chloroform                | 0.019  | 0.001     | mg/L  | 0.0200      |            | 94.6       | 82.5-123 | 4.59  | 8.33  |            |
| Carbon tetrachloride      | 0.020  | 0.001     | mg/L  | 0.0200      |            | 100        | 77.5-136 | 4.39  | 9.31  |            |
| 1,1,1-Trichloroethane     | 0.020  | 0.001     | mg/L  | 0.0200      |            | 97.6       | 88.3-127 | 1.47  | 7.44  |            |
| 1,1-Dichloropropene       | 0.020  | 0.001     | mg/L  | 0.0200      |            | 101        | 82.4-122 | 3.70  | 6.49  |            |
| 2-Butanone                | 0.020  | 0.005     | mg/L  | 0.0200      |            | 101        | 55.2-151 | 7.65  | 55    |            |
| Веплепе                   | 0.019  | 0.001     | mg/L  | 0.0200      |            | 94.2       | 84.9-121 | 2.10  | 7.79  |            |
| 1,2-Dichloroethane        | 0.019  | 0.001     | mg/L  | 0.0200      |            | 94.0       | 76.9-133 | 3.19  | 8.3   |            |
| Trichloroethene           | 0.019  | 0.001     | mg/L  | 0.0200      |            | 97.2       | 82.8-120 | 2.84  | 6.6   |            |
| Dibromomethane            | 0.019  | 0.001     | mg/L  | 0.0200      |            | 93.0       | 78.8-128 | 3.95  | 11.7  |            |
| 1,2-Dichloropropane       | 0.020  | 0.001     | mg/L  | 0.0200      |            | 98.2       | 80.2-126 | 1.26  | 6.21  |            |
| Bromodichloromethane      | 0.019  | 0.001     | mg/L  | 0.0200      |            | 95.5       | 84.1-130 | 1.61  | 7.88  |            |
| cis-1,3-Dichloropropene   | 0.019  | 0.001     | mg/L  | 0.0200      |            | 94.2       | 76.8-130 | 1.68  | 10.6  |            |
| Toluene                   | 810.0  | 0.001     | mg/L  | 0.0200      |            | 89.6       | 76.1-122 | 0.897 | 9.78  |            |
| 4-Methyl-2-pentanone      | 0.020  | 0.005     | mg/L  | 0.0200      |            | 102        | 54.5-143 | 3.61  | 44.3  |            |
| Tetrachloroethene         | 0.019  | 0.001     | mg/L  | 0.0200      |            | 97.3       | 65.3-133 | 0.00  | 21.1  |            |
| trans-1,3-Dichloropropene | 0.020  | 0.001     | mg/L  | 0.0200      |            | 98.8       | 80.1-132 | 0.152 | 12.4  |            |

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**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

Reported:

17-Feb-16 08:59

## **VOLATILES BY GC/MS - Quality Control**

#### Cardinal Laboratories

| Analyte                     | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result         | %REC       | %REC<br>Limits | RPD   | RPD<br>Limit | Notes  |
|-----------------------------|--------|--------------------|-------|----------------|--------------------------|------------|----------------|-------|--------------|--------|
|                             | Nosuit | Linit              | Cinta | 20101          | 1 COSUIT                 | 701120     |                |       | 2            | 1.0103 |
| Batch 6020903 - Volatiles   |        |                    |       |                |                          |            |                |       |              |        |
| LCS Dup (6020903-BSD1)      |        |                    |       | Prepared: (    | 09-Feb <del>-</del> 16 A | nalyzed: I | 2-Feb-16       |       |              |        |
| 1,1,2-Trichloroethane       | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 95.4       | 82.3-117       | 1.56  | 12.7         |        |
| Dibromochloromethane        | 0.019  | 100.0              | mg/L  | 0.0200         |                          | 94.4       | 75.2-137       | 2.10  | 10.7         |        |
| 1,3-Dichloropropane         | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 96.3       | 82.9-118       | 3.57  | 13.4         |        |
| 1,2-Dibromoethane           | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 94.7       | 78.4-126       | 3.88  | 17.5         |        |
| 2-Hexanone                  | 0.020  | 0.005              | mg/L  | 0.0200         |                          | 100        | 52.1-149       | 1.58  | 50.1         |        |
| Chlorobenzene               | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 95.5       | 76.8-125       | 0.105 | 10.9         |        |
| Ethylbenzene                | 0.018  | 0.001              | mg/L  | 0.0200         |                          | 91.8       | 78.5-126       | 1.51  | 8.74         |        |
| 1,1,1,2-Tetrachloroethane   | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 96.0       | 78.6-127       | 0.312 | 12.3         |        |
| m+p - Xylene                | 0.039  | 0.002              | mg/L  | 0.0400         |                          | 96.4       | 81.1-129       | 1.73  | 8.94         |        |
| o-Xylene                    | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 97.4       | 77.5-134       | 1.28  | 11.4         |        |
| Total Xylenes               | 0.058  | 0.003              | mg/L  | 0.0600         |                          | 96.7       | 80.2-130       | 0.709 | 9.04         |        |
| Bromoform                   | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.6       | 54.1-155       | 2.65  | 23.6         |        |
| Styrene                     | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 97.2       | 78-122         | 1.68  | 8.83         |        |
| Isopropylbenzene            | 0.018  | 100.0              | mg/L  | 0.0200         |                          | 88.7       | 80.2-122       | 1.51  | 11.3         |        |
| Bromobenzene                | 0.016  | 0.001              | mg/L  | 0.0200         |                          | 81.8       | 73.2-126       | 5.70  | 7.75         |        |
| n-Propylbenzene             | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.0       | 76.8-123       | 4.32  | 7.13         |        |
| 1,1,2,2-Tetrachloroethane   | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.0       | 72.8-123       | 8.23  | 26           |        |
| 2-Chlorotoluene             | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.4       | 76.6-125       | 5.19  | 6.49         |        |
| 1.2.3-trichloropropane      | 0.019  | 0.001              | mg/L  | 0.0200         |                          | 94.1       | 58.3-141       | 4.21  | 28.4         |        |
| 1,3,5-Trimethylbenzene      | 0.016  | 0.001              | mg/L  | 0.0200         |                          | 79.0       | 80.8-118       | 3.79  | 7.59         | В      |
| trans-1,4-Dichloro-2-butene | 0.022  | 0.001              | mg/L  | 0.0200         |                          | 112        | 12.5-215       | 5.28  | 49.1         |        |
| 4-Chlorotoluene             | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.0       | 80.2-120       | 4.38  | 6.92         |        |
| tert-Butylbenzene           | 0.021  | 0.001              | mg/L  | 0.0200         |                          | 106        | 72-128         | 5.35  | 9.03         |        |
| 1,2,4-Trimethylbenzene      | 0.016  | 0.001              | mg/L  | 0.0200         |                          | 78.8       | 77.2-128       | 3.43  | 7.81         |        |
| sec-Butylbenzene            | 0.016  | 0.001              | mg/L  | 0.0200         |                          | 78.2       | 74.2-121       | 4.50  | 9.05         |        |
| p-Isopropyltoluene          | 0.016  | 100.0              | mg/L  | 0.0200         |                          | 79.3       | 75-122         | 4.44  | 6.88         |        |
| 1,3-Dichlorobenzene         | 0.016  | 0.001              | mg/L  | 0.0200         |                          | 82.3       | 69.5-126       | 5.72  | 7.91         |        |
| I,4 Dichlorobenzene         | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 82.6       | 71.5-122       | 5.48  | 7.03         |        |
| n-Butylbenzene              | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 84.8       | 72.7-128       | 5.22  | 8.58         |        |
| 1,2-Dichlorobenzene         | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.6       | 73.9-123       | 3.61  | 9.07         |        |
| 1,2-Dibromo-3-chloropropane | 0.017  | 0.001              | mg/L  | 0.0200         |                          | 85.2       | 53.1-145       | 2.83  | 49           |        |
| Hexachlorobutadiene         | 0.016  | 0.001              | mg/L  | 0.0200         |                          | 79.8       | 62.2-136       | 7.42  | 10.3         |        |

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Reported:

17-Feb-16 08:59

## Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NADINE WATER #1

Project Manager: GARY SCHUBERT

Fax To:

VOLATILES BY GC/MS - Quality Control

#### **Cardinal Laboratories**

| Analyte                         | Result  | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC       | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---------------------------------|---------|--------------------|-------|----------------|------------------|------------|----------------|------|--------------|-------|
| Batch 6020903 - Volatiles       |         |                    | ·     |                |                  |            |                |      |              |       |
| LCS Dup (6020903-BSD1)          |         |                    |       | Prepared: 0    | 9-Feb-16 A       | nalyzed: 1 | 2-Feb-16       |      |              |       |
| 1,2,4-Trichlorobenzene          | 0.016   | 0.001              | mg/L  | 0.0200         |                  | 80.9       | 69.2-123       | 4.65 | 14           |       |
| Naphthalene                     | 0.017   | 100.0              | mg/L  | 0.0200         |                  | 86.1       | 64.4-132       | 6.52 | 26.4         |       |
| 1,2,3-Trichlorobenzene          | 0.017   | 0.001              | mg/L  | 0.0200         |                  | 84.0       | 69.7-119       | 7.45 | 15.4         |       |
| 2-Chloroethylvinyl ether        | ND      | 0.005              | mg/L  |                |                  |            | 0-200          |      | 50           |       |
| 1,4-Dioxane                     | ND      | 0.125              | mg/L  |                |                  |            | 0-200          |      | 50           |       |
| Surrogate: Dibromofluoromethane | 0.00985 |                    | mg/L  | 0.0100         |                  | 98.5       | 86.5-122       |      |              |       |
| Surrogate: Toluene-d8           | 0.0104  |                    | mg/L  | 0.0100         |                  | 104        | 85.7-112       |      |              |       |
| Surrogate: 4-Bromofluorobenzene | 0.0111  |                    | mg/L  | 0.0100         |                  | 111        | 86.3-117       |      |              |       |

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#### **Notes and Definitions**

| QR-02 | The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data. |
|-------|---|
| BS2   | Blank spike recovery below laboratory acceptance criteria. Results for analyte potentially biased low.  |
| BS1   | Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.   |
| ND    | Analyte NOT DETECTED at or above the reporting limit  |
| RPD   | Relative Percent Difference   |
| **    | Samples not received at proper temperature of 6°C or below.   |
| ***   | Insufficient time to reach temperature.   |
| •     | Chloride by SM4500Cl-B does not require samples be received at or below 6°C   |
|       | Samples reported on an as received basis (wet) unless otherwise noted on report   |

Cardinal Laboratories \*=Accredited Analyte

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aley & Kiene



Project Manager: Gary Schubert

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**ANALYSIS REQUEST** 

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

ETZ Water Station

| Address:   |  |           |              |  |  |            |  | Cor                   | npa       | ny:            |   |  | ]           |       |      | ~        |                        |                  |  |    |   |                                       |  |
|--|--|-----------|--------------|--|--|------------|--|-----------------------|-----------|----------------|---|--|-------------|-------|------|----------|------------------------|------------------|--|----|---|---------------------------------------|--|
| City:  | State:   | Zi        | p;           |  |  |            |  | Attr                  | n:        |                |   |  |             |       | 8    | AQ       | 2                      |                  |  |    |   |                                       |  |
| Phone #:   | Fax#:  |           |              |  |  |            |  | Ado                   | ires      | <b>s</b> :     |   |  | 1           |       | -    | -        | 13                     |                  |  |    |   |                                       |  |
| Project #:   | Project Ow   | ner:      |              |  |  |            |  | City                  | r:        |                |   |  | 3           |       | 5    | <u>چ</u> | 7                      |                  |  |    |   |                                       |  |
| Project Name:  | Nadine Water # :<br>Lea County, I<br>Tony Taylo  | 1         |              |  |  |            |  | Sta                   | te:       |                | Zip:                                    |  | Anion       |       |      | -        | · <u>:</u>             |                  |  |    |   |                                       |  |
| Project Location   | n: Lea County. 1   | UW        | J            |  |  |            |  | Pho                   | ne i      | <b>#</b> :     |   |  | 3           |       | ১    | V        | 1                      |                  |  |    |   |                                       |  |
| Sampler Name:  | Tony Taylo   | V         |              |  |  |            |  | Fax                   | #:        |                |   |  | ⊄           | 3260  | . 1  | -        | +                      |                  |  |    |   |                                       |  |
| FOR LAB USE ONLY   |  |           |              | L  | M  | ATRI       | X  |                       | PRE       | SERV           | SAMPL                                   | ING  |             | 7     | 3    | 8        | . 0                    |                  |  |    |   |                                       |  |
|  |  | COMP      | 1.           | ĸ  | Annual Medical   | WATER A TO | The state of the s | ł                     |           | s) married     |   |  | <u>ک</u>    | 8     | 1    | 7        | 3                      |                  |  |    |   |                                       |  |
|  |  |           | ER           | ¥<br>¥   | TER  |            |  | -                     |           |                |   |  | Cation      |       | 3    |          | رد                     |                  |  |    |   |                                       |  |
| Lab I.D.   | Sample I.D.  | 9<br>SOR  | 1A           | Š  | EW   | 7          | Ä  | 2                     | 3ASE      | 0 2            | l                                       | - A - C - C - C - C - C - C - C - C - C  | 7           | 10C   |      | 7~       | \. <del>+</del>        |                  |  |    |   |                                       |  |
| H600170  |  | (G)RAB    | # CONTAINERS | GROUNDWATER  | WASTEWATER   | SOIL       | SLUDGE   | OTHER:                | ACID/BASE | OTHER:         |   | TIME   | 2           | 7     | Z.   | 8        | Z                      |                  |  |    |   |                                       |  |
| MUULID   | 115 doc 60 100 02 -  | 9         | #            | ō  | 3  | ୍ଷ୍ଟି ଅ    | S  | 9                     | ₹ !       | ວ ¦ ວ          |   | TIME   |             |       |      |          |                        |                  | +  | +- | - |                                       |  |
|  | water sample   | - 19      | Ψ.           | +  | V  |            | 1  | 1                     |           | -              | 2/4/16                                  |  | V           |       | _    |          |                        |                  |  | +  |   |                                       |  |
| Marketon In 1181 House Co. of Array (1997)   |  |           | 1            | ╂  |  |            | +  |                       |           | - <del>-</del> | and the constitution to the time of     |  |             |       |      |          | AMERICAN CONTRACTOR OF |                  |  |    |   |                                       | of the state of th |
|  |  | +         | ╁            | ╁  | -  |            |  | 1                     | -         |                | <b>1</b>                                |  |             |       |      |          |                        |                  | +-   | 1  |   |                                       |  |
|  | en. Johns (Million) (Milli | 1         | t            | ✝  | Ħ  | +          | 1  | 1                     | 1         |                | <b>†</b>                                |  | İ           |       |      |          |                        |                  |  |    |   |                                       |  |
| The second secon |  | 1         | T            | T  |  | -          |  | T                     | 1         | i              |   |  |             |       |      |          |                        |                  |  |    |   |                                       |  |
|  |  |           | T            | T  | 40.00  |            |  | 1                     |           |                |   | -  |             |       |      |          |                        |                  |  |    |   |                                       |  |
|  | The second secon |           | Ī            | T  |  |            |  |                       |           |                |   |  |             |       |      |          |                        |                  |  |    |   |                                       |  |
| And the second s |  |           | T            | T  | 100  |            | Marie Con  | T                     |           |                |   | On the second se |             |       |      |          |                        |                  |  |    |   |                                       |  |
|  |  |           |              |  | Carried and Carrie |            | The state of   |                       |           |                |   | Victoria const   |             |       |      |          |                        |                  |  |    |   |                                       |  |
| analyses. All claims include   | nd Damages. Cardinal's liability and client's exclusive remedying those for negligence and any other cause whelsoever sha  | te deem   | ed white     | ved uni  | less mad   | e in we    | ng and s   | recatv                | ed by C   | na de mai      | ഘടന 30 days a&                          | er completion of th  | he applicat | de    |      |          |                        |                  |  |    |   |                                       |  |
| affiliates or successors arise   |  | by Cardin | d rega       | arolosa  | of wheth   |            |  |                       |           |                | profits incurred by the above stated re | asons or otherwis  | se.         |       |      |          |                        |                  |  |    |   |                                       |  |
| Relinquished By  | 1.16.17.1  | 6 R       | ogo          | ved  | Ву:  |            |  | d                     |           |                |   | Phone Res  | t:          | ☐ Yes |      |          | Add'i f<br>Add'i f     | hone #:<br>ax #: | and the same of th |    |   | A house a recommend of the real state |  |
| To   | Sala 119 30  | 6         | U.           |  | U  |            | K  | $\mu$                 | N         | 1              | OUL                                     | REMARKS  | 5:<br>014   | 4. U  | 317  |          |                        |                  |  |    |   |                                       |  |
| Relinguished 5   | /: Date:   | 8         | cei          | ved  | By:  |            |  |                       | ***       |                |   | Ton  | 766         | , 4   | J1 Z | •        |                        |                  |  |    |   |                                       |  |
|  | Time:  |           |              |  |  |            |  |                       |           |                |   | IN   | 4           |       |      |          |                        |                  |  |    |   |                                       |  |
| Delivered By:  | : (Circle One)   |           |              |  | Samp   |            |  | on                    | C         | НБСІ           | CEDÆY:                                  |  |             |       |      |          |                        |                  |  |    |   |                                       |  |
| ·  | - Bus - Other:   | 5.89      | )            | A STATE OF THE STA | Cool   | Inta       | Ct.  | was to discuss of the |           | /ghi           |   |  |             |       |      |          |                        |                  |  |    |   |                                       |  |
|  |  |           |              | 1  | $\Box$   | Vo 🗌       | No   | -                     | (         | ·Z             |   |  |             |       |      |          |                        |                  |  |    |   |                                       |  |
| t Cardinal   | cannot accept verbal changes. Plea   | se fa     | c wr         | itte   | n cha  | naes       | to (   | 576)                  | 395       | -232           | 6                                       |  |             |       |      |          |                        |                  |  |    |   |                                       |  |

BILL TO

P.O. #:



May 24, 2016

BEN DONAHUE
ETZ WATER STATION
PO BOX 6056
HOBBS, NM 88241

RE: WATER SAMPLES

Enclosed are the results of analyses for samples received by the laboratory on 05/06/16 14:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an esterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)

Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celly treme

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported:

24-May-16 15:18

#### FRESH WATER

#### H601000-03 (Water)

| Analyte                     | Result       | MDI, | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|------|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |      | Cardin             | al Laborato | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |      |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 244          |      | 5.00               | mg I        | 1         | 6042804 | 46      | 12-May-16 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |      | 1.00               | mg-L        | 1         | 6042804 | AP      | 12-May-16 | 3101      |       |
| Chloride*                   | 116          |      | 4.00               | mg.1.       | 1         | 6050906 | ĄΡ      | 10-May-16 | 4500-CI-B |       |
| Conductivity                | 992          |      | 00.1               | uS cm       | 1         | 6051218 | AP      | 12-May-16 | 120.1     |       |
| pli*                        | 8.30         |      | 0.100              | pH Units    | ł         | 6051217 | AP      | 12-May-16 | 150.1     |       |
| Sulfate*                    | 166          |      | 25.0               | mg T.       | 2.5       | 6050903 | AP      | 10-May-16 | 375.4     |       |
| TDS*                        | 728          |      | 5.00               | mg I.       | 1         | 6050403 | 46      | 17-May-16 | 160 1     |       |
| Alkalinity, Total*          | 200          |      | 4.00               | mg t.       | 1         | 6042804 | AP      | 12 May-16 | 310.1     |       |
|                             |              |      | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |      |                    |             |           |         |         |           |           |       |
| Calcium*                    | 84.9         |      | 0.020              | mg L        | 1         | B605200 | LLG     | 20-May-16 | EPA200.7  |       |
| Magnesium*                  | 25.6         |      | 0.100              | mg-L        | 1         | B605200 | 1.t.G   | 20-May-16 | EPA200 7  |       |
| Potassium*                  | 3.83         |      | 1.00               | mg·l.       | t         | B605200 | t.l G   | 20-May-16 | EPA 200 7 |       |
| Sodium*                     | 110          |      | 1.00               | mg L        | 1         | B605200 | LLG     | 20-May-16 | EPA 200 " |       |

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liabsility and Damages. Curdenals followly and client's enclosive remedy for any open arising, whether based in contact or form yields be limited to the professional or contact or contact or sold to separate or sold to separate or contact or sold to separate or sold to separate or sold to separate or contact or sold to separate or contact or sold to separate or sold t

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN
Project Manager: BEN DONAHUE

Fax To:

Reported: 24-May-16 15:18

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

| Analyte                                 | Result | Reporting<br>Limit | Units  | Spike<br>Level | Source<br>Result | %RE.         | "iREC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---|--------|--------------------|--------|----------------|------------------|--------------|-----------------|------|--------------|-------|
| Batch 6042804 - General Prep - Wet Chem |        |                    |        |                |                  |              |                 |      |              |       |
| Blank (6042804-BLK1)                    |        |                    |        | Prepared &     | Analyzed:        | 28-Api 16    |                 |      |              |       |
| Alkalinity, Carbonate                   | ND     | 1.00               | mg L   |                |                  |              |                 |      |              |       |
| Alkalmity, Bicarbonate                  | ND     | 5,00               | mg L   |                |                  |              |                 |      |              |       |
| Alkalınıty, Total                       | ND     | 4,00               | mg L   |                |                  |              |                 |      |              |       |
| LCS (6042804-BS1)                       |        |                    |        | Prepared &     | Analyzed:        | 28-Apr-16    |                 |      |              |       |
| Alkalinity, Carbonate                   | Z.D    | 1.00               | mg L   |                |                  |              | 80-120          |      |              |       |
| Alkalimity, Bigarbonate                 | 126    | 5 (0)              | mg L   |                |                  |              | 80-120          |      |              |       |
| Alkalimity, Total                       | 104    | 4 00               | mg l   | 100            |                  | 1914         | 80-120          |      |              |       |
| LCS Dup (6042804-BSD1)                  |        |                    |        | Prepared &     | : Analyzed       | 28-Apr 16    |                 |      |              |       |
| Alkalinity, Carbonate                   | ND     | 1.00               | mg k   |                |                  |              | 80-120          |      | 20           | '     |
| Alkalimty, Bicarbonate                  | 126    | 5.00               | my L   |                |                  |              | 80-120          | 0.00 | 20           |       |
| Alkalimty, Total                        | 104    | 4.00               | mg 1,  | 100            |                  | 104          | x0-120          | 0.00 | 20           |       |
| Batch 6050403 - Filtration              |        |                    |        |                | <u> </u>         |              |                 |      |              |       |
| Blank (6050403-BLK1)                    |        |                    |        | Prepared:      | 04-May-16        | Analyzed: 0  | 06-May-16       |      |              |       |
| TDS                                     | ND     | 5 00               | mg L   | • •            |                  |              |                 |      |              | •     |
| LCS (6050403-BS1)                       |        |                    |        | Prepared:      | )4-May-16        | Analyze I. ( | )6-May-16       |      |              |       |
| TDS                                     | 502    | 5 00               | mg L   | 527            |                  | <b>9</b> 5.3 | 80-120          |      |              |       |
| Duplicate (6050403-DUP1)                | Sou    | rce: H600965       | -02    | Prepared:      | 04-May-16        | Analyzed: (  | 06-May-16       |      |              |       |
| TOS                                     | 6070   | 5 00               | mg L   | ,              | 6260             |              |                 | 3 08 | 20           |       |
| Batch 6050903 - General Prep - Wet Chem |        |                    |        |                |                  |              |                 |      |              |       |
| Blank (6050903-RLK1)                    |        |                    |        | Prepared:      | 09-May-16        | Analyzed:    | 10-May-16       |      |              |       |
| Sulfate                                 | SD     | 10 0               | nig t. | •              | ·                |              | ,               |      |              |       |

#### Cardinal Laboratories

\*=Accredited Analyte

MURSE NOTE: Islaminy and Damages. Caldina's solandly and counts encounter remody for any claim among, whether based in contract or tout, plant to innered to the among 1 and its client for challeges. As claims, including those for negligence or any other cause whilesterow than to devenue would under making and incremed by Certifinal writing that to Certifinal writing that to devenue the solar country of the applicable service. In no overst shall be related for negligence or one overst shall be related for negligence and another controlled with the solar development of the services. Service in negligence or one overst shall be related for negligence and another country of the services. Service in negligence or one overst shall be related for negligence and another country of the services. Services in negligence or one overst shall be client for negligence and one overst shall be client for negligence and one overst shall be client for negligence or one overst shall be client for negligence and one of the service shall be client for negligence and one overst shall be

Charley I Ariens

Reported:

24-May-16 15:18



#### Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

# FRESH WATER H601000-03 (Water)

| Analyte                     | Result       | MDL. | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|------|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |      | Cardin             | ial Laborat | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |      |                    |             |           |         |         | ~         |           |       |
| Alkalinity, Bicarbonate     | 244          |      | 5.00               | mg/L        | 1         | 6042804 | AP      | 12-May-16 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |      | 1.00               | mg/l.       | 1         | 6042804 | AP      | 12-May-16 | 310.1     |       |
| Chloride*                   | 116          |      | 4.00               | mg/L        | 1         | 6050906 | AP      | 10-May-16 | 4500-CI-B |       |
| Conductivity                | 992          |      | 1.00               | uS-cm       | 1         | 6051218 | AP      | 12-May-16 | 120.1     |       |
| pH*                         | 8.30         |      | 0.100              | pH Units    | 1         | 6051217 | AP      | 12-May-16 | E50.1     |       |
| Sulfate*                    | 166          |      | 25.0               | mg/L        | 2.5       | 6050903 | AP      | 10-May-16 | 375.4     |       |
| TDS*                        | 728          |      | 5.00               | mg T.       | 1         | 6050403 | AP      | 17-May-16 | 160.1     |       |
| Alkalinity, Total*          | 200          |      | 4.00               | nig I.      | 1         | 6042804 | AP      | 12-May-16 | 310.1     |       |
|                             |              |      | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | 1CP (E200.7) |      |                    |             |           |         |         |           |           |       |
| Calcium*                    | 84.9         |      | 0.020              | mg/L        | l         | B605200 | Ll.G    | 20-May-16 | EPA200.7  |       |
| Magnesium*                  | 25.6         |      | 0.100              | mg/L        | I         | B605200 | LLG     | 20-May-16 | EPA200.7  |       |
| Potassium*                  | 3.83         |      | 1.00               | mg/L        | 1         | B605200 | LLG     | 20-May-16 | EPA 200.7 |       |
| Sodium*                     | 110          |      | 1.00               | mg/L        | J         | B605200 | LLG     | 20-May-16 | EPA200.7  |       |
|                             |              |      |                    |             |           |         |         |           |           |       |

#### Cardinal Laboratories

\*=Accredited Analyte

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aring & Alina



May 24, 2016

BEN DONAHUE

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: WATER SAMPLES** 

Enclosed are the results of analyses for samples received by the laboratory on 05/06/16 14:15.

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Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B

Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2

Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

Celeg Litreme

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name   | ETZ Water Station   | `                |                     |                    |                      |                    |                  |                     | Villa<br>Villa<br>Villa |              | BI                  | /// 1                        | Ю          |   | Ý.                    |            |              |          | ANA    | LYS               | IS I | REC      | UES      | ST |       |  |
|--|---|------------------|---------------------|--------------------|----------------------|--------------------|------------------|---------------------|-------------------------|--------------|---------------------|------------------------------|------------|---|-----------------------|------------|--------------|----------|--------|-------------------|------|----------|----------|----|-------|--|
| Project Manager  | Ben Donahue   |                  |                     |                    |                      |                    |                  | P                   | .O. i                   | #:           |                     |                              |            |   |                       |            | T            | Γ        | Τ      |                   |      | T        |          |    |       |  |
| Address:   |   |                  |                     |                    |                      |                    |                  | c                   | omj                     | pan          | <b>y</b> :          |                              |            |   | 1                     |            |              |          |        |                   |      |          |          |    |       |  |
| City:  | State:  | Zip              | ):                  |                    |                      |                    |                  | A                   | ttn:                    |              |                     |                              |            |   | 1                     |            |              |          |        |                   |      | - 1      |          |    |       |  |
| Phone #:   | Fax #:  |                  | PT 100              |                    |                      |                    |                  | Α                   | ddr                     | ess          | :                   |                              |            | totale street totales.                    | 1                     |            |              |          |        |                   |      |          |          |    |       |  |
| Project #:   | Project Owner   | r:               |                     |                    |                      |                    |                  | c                   | ity:                    |              |                     |                              |            |   |                       |            |              |          | İ      | İ                 | Ì    | - 1      | 1        |    |       |  |
| Project Name:  | ETZ Woder Sample  | و                |                     |                    |                      |                    |                  | s                   | tate                    | :            |                     | Zip:                         |            |   | 20                    |            |              |          |        |                   |      | - [      |          |    |       |  |
| Project Location   | 1: Monitor well, Brine  | W                | سا                  |                    |                      |                    |                  | P                   | hon                     | e #          | :                   |                              |            |   | 0,2                   |            |              |          |        |                   |      |          |          |    |       |  |
| Sampler Name:  | Ben Dorahi  |                  |                     |                    |                      |                    |                  | F                   | ax#                     | _            |                     |                              |            |   | 12.                   |            |              |          |        |                   |      |          |          |    |       |  |
| FOR LAB USE ONLY   |   |                  |                     | _                  | M                    | ATR                | XIX              | т-                  | PF                      | RES          | ERV                 | SA                           | MPL        | ING                                       | ▼                     |            |              |          |        |                   |      | - 1      |          |    |       |  |
| Lab I.D.<br>H600 000<br>H600 186                               | Sample I.D.   | (G)RAB OR (C)OMP | # CONTAINERS        | GROUNDWATER        | WASTEWATER           | SOIL<br>OIL        | Oit.             | SLUDGE<br>OTHER     | ACID/BASE:              | ICE / COO!   | OTHER:              | DA                           | ΤE         | TIME                                      | (ations               |            |              |          |        |                   |      |          |          |    |       |  |
| 1  | Maniter wey   |                  |                     |                    |                      |                    |                  |                     |                         | ļ            | <u> </u>            | 56                           | 16         | Acc P                                     | V                     |            |              |          |        |                   |      |          |          |    | <br>  |  |
| ~2   | Manifer wey<br>Brine water<br>Fresh water   | _                |                     |                    |                      | _                  | 1                | 1                   |                         | 1            |                     | 56                           | (X)        | 9:30A                                     | ~                     | ļ          | ļ            |          |        | 1                 |      |          |          |    | <br>  |  |
| 3  | Fresh Water   | 1_               | _                   | L                  |                      | _                  | -                |                     | _                       | -            | -                   | 50                           | 16         | 7:304                                     | 1                     |            |              | ļ        |        |                   |      |          |          |    | <br>  |  |
|  |   | ╁                | $\vdash$            |                    |                      | -                  |                  | -                   | +                       | -            | -                   | -                            |            |   |                       |            | +-           | -        |        |                   | -    | $\dashv$ |          |    | <br>  |  |
|  |   | $\vdash$         | $\vdash$            | -                  |                      | -                  | +                | +                   | +                       |              | -                   |                              |            | <u> </u>                                  |                       |            | -            | _        | +      | +                 | +    | $\dashv$ |          |    | <br>  |  |
|  |   | +                | ╁╴                  | -                  |                      | -                  | -                | +                   | +                       | <del> </del> | +                   | 1                            |            |   |                       | -          | <del> </del> | -        | -      | -                 | +-   | +        |          |    |       |  |
|  |   | T                | $\vdash$            |                    |                      | $\dagger$          | -                | T                   | $\dagger$               | 1            | +                   | -                            |            |   | 1                     |            | +            |          | $\top$ | 1                 |      | _        |          |    |       |  |
|  |   | Ī.,              |                     |                    |                      |                    |                  |                     | 1                       |              |                     |                              |            |   | ļ                     |            | 1            | -        |        |                   |      |          |          |    | <br>  |  |
| analyses. All claims includir<br>service. In no event shall Ca | of Damages. Cardinal's liability and client's exclusive remedy for<br>ing those for negligence and any other cause whistoever shall be<br>actinal be fiable for incidental or consequental damages, includir<br>any out of or related to the performance of services hereunder by | deeme            | id waiv<br>ut limit | ed uni<br>etion, l | ess made<br>ousiness | e in wo<br>interc  | riting<br>uption | and re-<br>ns, loss | ceived<br>of use        | by C         | ardinal<br>oss of p | within 30 d<br>profits incur | ays alte   | er completion of t<br>client, its subsidi | the applica<br>aries, | ble        |              |          |        |                   |      |          | <b>!</b> |    |       |  |
| Relinquished By  | Cate:   | Re               | cei                 | ved                | Ву:                  |                    |                  | 1 /                 |                         |              |                     |                              |            | Phone Re                                  | sult:                 | □ Y        |              | No<br>No |        | l Phon<br>l Fax # |      |          |          |    | <br>- |  |
| P  | Date:<br>516/14<br>Time: 157  | 1/               | 11                  | 9/                 | ti                   | •                  |                  | N                   | اساؤ                    | A            | Δ                   | 91                           |            | Fax Resu<br>REMARK                        |                       | <u>, 1</u> | -a L         | 140      | Aud    | ı r dx #          |      |          |          |    | <br>  |  |
| Relinquished By  | 7: Date:  | Re               | , / L               | ved                | By:                  |                    | <u> </u>         | _                   |                         |              |                     |                              | CO-4       |   |                       |            |              |          |        |                   |      |          |          |    |       |  |
|  | Time:   |                  | ,                   |                    | •                    |                    |                  |                     |                         |              |                     |                              |            |   |                       |            |              |          |        |                   |      |          |          |    |       |  |
| Delivered By:<br>Sampler - UPS                                 | 7.1   | 2                | 5                   |                    | Sampl<br>Cool        | le C<br>In<br>es [ | ond<br>tact      | itior<br>es<br>No   | 1                       | CI           | EC (IA              | KIP IV                       | <b>'</b> : |   |                       |            |              | Y        |        | ,                 | ,    |          |          |    |       |  |





# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name   | ETZ Wat  | er Stat                    | io               | n            |            |           |           | 1           |              |            | 3//    | LL TO             |                       |             |            |        |            | ANA     | LYSIS   | S RE | QUE | ST |     |      |
|--|--|----------------------------|------------------|--------------|------------|-----------|-----------|-------------|--------------|------------|--------|-------------------|-----------------------|-------------|------------|--------|------------|---------|---------|------|-----|----|-----|------|
| Project Manage   | Gary Sch   | er Stat                    |                  |              |            |           |           | P.          | O. #         |            |        |                   |                       |             |            |        |            |         |         |      |     |    |     |      |
| Address:   |  |                            |                  |              |            |           |           | C           | omp          | any        | :      |                   |                       |             |            | _      | d          |         |         |      |     |    |     |      |
| City:  |  | State: 2                   | Zip:             |              |            |           |           | At          | tn:          |            |        |                   |                       |             |            | 99     | Ag         | ١       | 1       |      |     |    |     |      |
| Phone #:   | F  | Fax #:                     |                  |              |            |           |           | A           | dre          | ess:       |        |                   |                       |             |            |        | -          | 1,3     |         |      |     |    |     |      |
| Project #:   |  | Project Owner:             |                  |              |            |           |           | Ci          | ty:          |            |        |                   |                       |             |            | 4      | S          | 1       | l       |      |     |    | 1   |      |
| Project Name:  | Vadine Wat   | e 1 1                      |                  |              |            |           |           | St          | ate:         |            |        | Zip:              |                       | . 9         |            |        | ٠.         | -       |         |      |     |    | 1   |      |
| Project Location   | : Lea Cour   | tu. NV                     | VL               |              |            |           |           | PI          | none         | e #:       |        |                   |                       | Anio        | $\bigcirc$ | 5      | 1          | 1       |         |      |     |    | ı   |      |
| Sampler Name:  | Tony   | Taylor                     |                  |              |            |           |           | Fa          | x #          |            |        |                   |                       | A           | 6          |        |            | F +     |         |      |     |    | - 1 |      |
| FOR LAB USE ONLY   |  | ' 1                        |                  | -            |            | MAT       | RIX       |             | PR           | ESE        | RV.    | SAMPL             | ING                   | ٠           | 7          | Z      | ত          | 10      |         |      |     |    | 1   | l    |
| <b>Lab I.D.</b><br>H600270   | Sample I.D   |                            | (G)RAB OR (C)OMF | # CON AINERS | WASTEWATER | SOIL      | OIL       | OTHER       | ACID/BASE:   | ICE / COOL | OTHER  | DATE              | TIME                  | Cation      | VOC 5      | Ba, Cd | The second | 2+12    |         |      |     |    |     |      |
|  | water sa   | mple.                      | 4                | 1            | V          | 1+        |           |             | <u> </u>     | -          |        | 4/4/16            |                       | V           |            | •      | •••        |         | <b></b> | ļ    |     |    |     | <br> |
| A STATE OF STREET, THE STATE O | ways as a second of the first was approximately and the second of the se |                            |                  | -            |            | 1-1       |           |             | 1-           | -          |        |                   |                       |             |            |        |            | <b></b> |         | ļ    |     |    |     | <br> |
|  | erson new or to be accompletely account to the before a page or a section country in the section   |                            |                  | -            | +-         | $\vdash$  |           |             | ┨            |            |        |                   |                       |             |            |        |            |         |         |      |     |    |     | <br> |
|  | The case is highlight Assessment Street Stre |                            | -†               | +            | +          | H         | -i-       | -           | ╁            |            |        |                   |                       |             |            |        |            |         |         |      |     |    |     |      |
|  |  |                            | +                | +            |            |           | +-        | <del></del> | T            | -          |        |                   | <del> </del>          |             |            |        |            | l       | 1       |      |     |    |     |      |
|  |  |                            | $\top$           | 1            |            |           |           |             | T            | 1          |        |                   | 1                     |             |            |        |            |         |         |      |     |    |     |      |
|  |  |                            |                  |              |            |           |           |             |              |            |        |                   |                       |             |            |        |            |         |         |      |     |    |     |      |
|  |  |                            |                  |              |            |           | .   .     | İ           | l            |            |        |                   | ļ                     |             |            |        |            |         |         |      |     |    | 1   |      |
| OLEACE NOTE: Lockies   | d Danisana Candina to tability and attack  |                            | claim -          |              | whether    | harar     | D 620**   | act or t    |              | all he i   | rited  | to the amount o   | aid by the client for | 15%         |            |        |            | <u></u> | <u></u> |      |     |    |     | <br> |
| analyses. All claims includi   | nd Damages. Cardinal's Fability and client's<br>ng those for negligence and any other caus<br>aronal be liable for incidental or conseque  | se whatsoever shall be der | emed w           | a ved        | unless n   | nade in v | writing a | and rec     | e ved l      | by Carc    | inal v | vithin 30 days at | ter completion of t   | he applicat | de         |        |            |         |         |      |     |    |     |      |
| affiliates of successors arisi   | ng out of or related to the performance of s   | services hereunder by Care | dinal, re        | gardie       | d By       | hether su | ich clai  | m is ba     | sed up       | on any     | of the | e above stated    | Phone Re              | se          | ☐ Yes      | s 🗆    | No         | Add'I   | Phone   | #:   |     |    |     |      |
|  | 9  | Tighe: 30                  | /1               |              | 1          |           |           | 1d          | 0 4          | 1.4        | Λ      | N A               | Fax Resul             | t:          | □ Yes      | s 0    | No         | Add'I   |         |      |     |    |     | <br> |
| The same   | Syla   | 7:30                       | H                | لمار         | 1          | L         |           | 14          |              | 10         | بالا   |                   | REMARKS               | 969         | 3.4        | 312    |            |         |         |      |     |    |     |      |
| Relinguished B   | L  | Date:<br>Time:             | Kec.             | eive         | d By       | :         |           |             |              |            |        |                   | Ton                   | щ           |            |        |            |         |         |      |     |    |     |      |
| Delivered By   | (Circle One)   |                            |                  | T            | San        | nple (    | Cond      | ition       |              | СН         | CK     | ED AY:            | 1                     |             |            |        |            |         |         |      |     |    |     |      |
| Sampler - UPS  | - Bus - Other:   | 5.8                        | 2                | _            | 190        | Yes<br>No | TGC!      | es<br>No    |              |            | A      |                   |                       |             |            |        |            |         |         |      |     |    |     |      |
| † Cardinal   | cannot accept verbal ch  | anges, Please              | ax v             | vritt        |            |           |           |             | <b>5</b> ) 3 | 93         | 320    | 6                 |                       |             |            |        |            |         |         |      |     |    |     |      |



December 16, 2016

**BEN DONAHUE** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: WATER SAMPLES** 

Enclosed are the results of analyses for samples received by the laboratory on 12/02/16 9:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Celeg & Keene

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B

Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2

Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### Analytical Results For:

ETZ WATER STATION PO BOX 6056

HOBBS NM, 88241

Project: WATER SAMPLES

NONE CIVEN

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Dec-16 12:24

| Sample ID    | Laboratory ID | Matrix | Date Sampled    | Date Received   |
|--------------|---------------|--------|-----------------|-----------------|
| MONITOR WELL | H602700-01    | Water  | 30-Nov-16 16:30 | 02-Dec-16 09:55 |
| FRESH WATER  | H602700-02    | Water  | 30-Nov-16 16:45 | 02-Dec-16 09:55 |
| BRINE WATER  | H602700-03    | Water  | 30-Nov-16 16:45 | 02-Dec-16 09:55 |

Cardinal Laboratories

\*=Accredited Analyte

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**ETZ WATER STATION** PO BOX 6056

Project: WATER SAMPLES

Reported:

HOBBS NM, 88241

Project Number: NONE GIVEN Project Manager: BEN DONAHUE 16-Dec-16 12:24

Fax To:

MONITOR WELL H602700-01 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|--------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | ial Laborate | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |              |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 229          |     | 5.00               | mg/L         | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L         | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
| Chloride*                   | 132          |     | 4.00               | mg/L         | 1         | 6120202 | AC      | 02-Dec-16 | 4500-CI-B |       |
| Conductivity*               | 846          |     | 1.00               | uS/cm        | 1         | 6120604 | AC      | 06-Dec-16 | 120.1     |       |
| pH*                         | 7.57         |     | 0.100              | pH Units     | 1         | 6120603 | AC      | 06-Dec-16 | 150.1     |       |
| Sulfate*                    | 69.2         |     | 10.0               | mg/L         | 1         | 6120605 | AC      | 06-Dec-16 | 375.4     |       |
| TDS*                        | 486          |     | 5.00               | mg/L         | 1         | 6112915 | AC      | 07-Dec-16 | 160.1     |       |
| Alkalinity, Total*          | 188          |     | 4.00               | mg/L         | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Labo | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |     |                    |              |           |         |         |           |           |       |
| Calcium*                    | 57.0         |     | 1.00               | mg/L         | 20        | B612089 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Magnesium*                  | 17.4         |     | 2.00               | mg/L         | 20        | B612089 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Potassium*                  | <20.0        |     | 20.0               | mg/L         | 20        | B612089 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Sodium*                     | 91.3         |     | 20.0               | mg/L         | 20        | B612089 | LLG     | 13-Dec-16 | EPA200.7  |       |

Cardinal Laboratories

\*=Accredited Analyte

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ETZ WATER STATION

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN
Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Dec-16 12:24

#### FRESH WATER H602700-02 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | al Laborat  | ries      |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 224          |     | 5.00               | mg/L        | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
| Alkalinity, Carbonate       | <1.00        |     | 1.00               | mg/L        | I         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
| Chloride*                   | 128          |     | 4.00               | mg/L        | 1         | 6120202 | AC      | 02-Dec-16 | 4500-CI-B |       |
| Conductivity*               | 962          |     | 1.00               | uS/cm       | l         | 6120604 | AC      | 06-Dec-16 | 120.1     |       |
| pH*                         | 7.55         |     | 0.100              | pH Units    | 1         | 6120603 | AC      | 06-Dec-16 | 150.1     |       |
| Sulfate*                    | 137          |     | 25.0               | mg/L        | 2.5       | 6120605 | AC      | 06-Dec-16 | 375.4     |       |
| TDS*                        | 572          |     | 5.00               | mg/L        | 1         | 6112915 | AC      | 07-Dec-16 | 160.1     |       |
| Alkalinity, Total*          | 184          |     | 4.00               | mg/L        | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |     |                    |             |           |         |         |           |           |       |
| Calcium*                    | 85.9         |     | 0.500              | mg/L        | 10        | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Magnesium*                  | 23.4         |     | 1.00               | mg/L        | 10        | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Potassium*                  | <10.0        |     | 10.0               | mg/L        | 10        | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Sodium*                     | 81.7         |     | 10.0               | mg/L        | 10        | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |

Cardinal Laboratories \*=Accredited Analyte

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**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported:

16-Dec-16 12:24

# **BRINE WATER** H602700-03 (Water)

| Analyte                        | Result      | MDL | Reporting<br>Limit | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|--------------------------------|-------------|-----|--------------------|--------------|-----------|---------|---------|-----------|-----------|-------|
|                                |             |     | Cardin             | al Laborat   | ories     |         |         |           |           |       |
| Inorganic Compounds            | ***         |     |                    |              |           |         |         |           |           |       |
| Alkalinity, Bicarbonate        | 93.0        |     | 5.00               | mg/L         | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
| Alkalinity, Carbonate          | <1.00       | •   | 1.00               | mg/L         | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
| Chloride*                      | 188000      |     | 4.00               | mg/L         | 1         | 6120202 | AC      | 02-Dec-16 | 4500-CI-B |       |
| Conductivity*                  | 490000      |     | 1.00               | uS/cm        | 1         | 6120604 | AC      | 06-Dec-16 | 120.1     |       |
| pH*                            | 6.88        |     | 0.100              | pH Units     | 1         | 6120603 | AC      | 06-Dec-16 | 150.1     |       |
| Sulfate*                       | 4440        |     | 833                | mg/L         | 83.3      | 6120605 | AC      | 06-Dec-16 | 375.4     |       |
| TDS*                           | 312000      |     | 5.00               | mg/L         | 1         | 6112915 | AC      | 07-Dec-16 | 160.1     |       |
| Alkalinity, Total*             | 76.0        |     | 4.00               | mg/L         | 1         | 6120110 | AC      | 06-Dec-16 | 310.1     |       |
|                                |             |     | Green Ana          | lytical Labo | oratories |         |         |           |           |       |
| Total Recoverable Metals by IC | CP (E200.7) |     |                    |              |           |         |         |           |           |       |
| Calcium*                       | 1800        |     | 10.0               | mg/L         | 200       | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Magnesium*                     | 459         |     | 20.0               | mg/L         | 200       | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Potassium*                     | <200        |     | 200                | mg/L         | 200       | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |
| Sodium*                        | 137000      |     | 200                | mg/L         | 200       | B612086 | LLG     | 13-Dec-16 | EPA200.7  |       |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Dec-16 12:24

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

|   |        | Reporting      |       | Spike       | Source     |             | %REC      |      | RPD   |       |
|---|--------|----------------|-------|-------------|------------|-------------|-----------|------|-------|-------|
| Analyte                                 | Result | Limit          | Units | Level       | Result     | %REC        | Limits    | RPD  | Limit | Notes |
| Batch 6112915 - Filtration              |        |                |       |             |            |             |           |      |       |       |
| Blank (6112915-BLK1)                    |        |                |       | Prepared: 2 | 29-Nov-16  | Analyzed: ( | 1-Dec-16  |      |       |       |
| rds .                                   | ND     | 5.00           | mg/L  |             |            |             |           |      |       |       |
| LCS (6112915-BS1)                       |        |                |       | Prepared: 2 | 29-Nov-16  | Analyzed: ( | )1-Dec-16 |      |       |       |
| TDS                                     | 522    |                | mg/L  | 527         |            | 99.1        | 80-120    |      |       |       |
| Duplicate (6112915-DUP1)                | Sou    | ırce: H602655- | 01    | Prepared: 2 | 29-Nov-16  | Analyzed: ( | )1-Dec-16 |      |       |       |
| rds                                     | 3890   | 5.00           | mg/L  |             | 3780       |             |           | 2.87 | 20    |       |
| Batch 6120110 - General Prep - Wet Chem |        |                |       |             |            |             |           |      |       |       |
| Blank (6120110-BLK1)                    |        |                |       | Prepared: ( | )1-Dec-16  | Analyzed: ( | 7-Dec-16  |      |       |       |
| Alkalinity, Carbonate                   | ND     | 1.00           | mg/L  |             |            |             |           |      |       |       |
| Alkalinity, Bicarbonate                 | 9.76   | 5.00           | mg/L  |             |            |             |           |      |       |       |
| Alkalinity, Total                       | 8.00   | 4.00           | ing/L |             |            |             |           |      |       |       |
| LCS (6120110-BS1)                       |        |                |       | Prepared: ( | 01-Dec-16  | Analyzed: ( | 7-Dec-16  |      |       |       |
| Alkalinity, Carbonate                   | ND     | 1.00           | mg/L  |             |            |             | 80-120    |      |       |       |
| Alkalinity, Bicarbonate                 | 137    | 5.00           | mg/L  |             |            |             | 80-120    |      |       |       |
| Alkalinity, Total                       | 112    | 4.00           | mg/L  | 100         |            | 112         | 80-120    |      |       |       |
| LCS Dup (6120110-BSD1)                  |        |                |       | Prepared: ( | 01-Dec-16  | Analyzed: ( | 7-Dec-16  |      |       |       |
| Alkalinity, Carbonate                   | ND     | 1.00           | mg/L  |             |            |             | 80-120    |      | 20    |       |
| Alkalinity, Bicarbonate                 | 132    | 5.00           | mg/L  |             |            |             | 80-120    | 3.72 | 20    |       |
| Alkalinity, Total                       | 108    | 4.00           | mg/L  | 100         |            | 108         | 80-120    | 3.64 | 20    |       |
| Batch 6120202 - General Prep - Wet Chem |        |                |       |             |            |             |           |      |       |       |
| Blank (6120202-BLK1)                    |        |                |       | Prepared &  | & Analyzed | 02-Dec-16   | 5         |      |       |       |
| Chloride                                | ND     | 4.00           | mg/L  |             |            |             |           |      |       |       |

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#### PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Dec-16 12:24

#### **Inorganic Compounds - Quality Control**

#### Cardinal Laboratories

| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---|--------|--------------------|----------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch 6120202 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| LCS (6120202-BS1)                       |        |                    |          | Prepared &     | k Analyzed:      | 02-Dec-16   |                |       |              |       |
| Chloride                                | 104    | 4.00               | mg/L     | 100            |                  | 104         | 80-120         |       |              |       |
| LCS Dup (6120202-BSD1)                  |        |                    |          | Prepared &     | k Analyzed       | 02-Dec-16   |                |       |              |       |
| Chloride                                | 104    | 4.00               | mg/L     | 100            |                  | 104         | 80-120         | 0.00  | 20           |       |
| Batch 6120603 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| LCS (6120603-BS1)                       |        |                    |          | Prepared &     | & Analyzed       | 06-Dec-16   |                |       |              |       |
| рН                                      | 7.17   |                    | pH Units | 7.00           |                  | 102         | 90-110         |       |              |       |
| Duplicate (6120603-DUP1)                | Sou    | rce: H602700       | -01      | Prepared &     | & Analyzed       | 06-Dec-16   |                |       |              |       |
| рН                                      | 7.62   | 0.100              | pH Units |                | 7.57             |             |                | 0.658 | 20           |       |
| Batch 6120604 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| LCS (6120604-BS1)                       |        |                    |          | Prepared &     | k Analyzed       | 06-Dec-16   |                |       |              |       |
| Conductivity                            | 467    |                    | uS/cm    | 500            |                  | 93.4        | 80-120         |       |              |       |
| Duplicate (6120604-DUP1)                | Sou    | rce: H602700       | )-01     | Prepared &     | & Analyzed       | : 06-Dec-16 |                |       |              |       |
| Conductivity                            | 841    | 1.00               | uS/cm    |                | 846              |             |                | 0.593 | 20           |       |
| Batch 6120605 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| Blank (6120605-BLK1)                    |        |                    |          | Prepared &     | & Analyzed       | : 06-Dec-16 |                |       |              |       |
| Sulfate                                 | ND     | 10.0               | mg/L     |                |                  |             |                |       |              |       |

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Dec-16 12:24

#### **Inorganic Compounds - Quality Control**

#### Cardinal Laboratories

| Analyte                                 | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---|--------|--------------------|-------|----------------|------------------|-----------|----------------|-------|--------------|-------|
| Batch 6120605 - General Prep - Wet Chem |        |                    |       |                |                  |           |                |       |              |       |
| LCS (6120605-BS1)                       |        |                    |       | Prepared &     | Analyzed:        | 06-Dec-16 |                |       |              |       |
| Sulfate                                 | 23.3   | 10.0               | mg/L  | 20.0           |                  | 117       | 80-120         |       |              |       |
| LCS Dup (6120605-BSD1)                  |        |                    |       | Prepared &     | Analyzed:        | 06-Dec-16 |                |       |              |       |
| Sulfate                                 | 23.2   | 10.0               | mg/L  | 20.0           |                  | 116       | 80-120         | 0.387 | 20           |       |

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**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 16-Dec-16 12:24

#### Total Recoverable Metals by ICP (E200.7) - Quality Control

#### **Green Analytical Laboratories**

|   |                 | Reporting  |       | Spike      | Source      |             | %REC     |      | RPD   |       |
|---|-----------------|------------|-------|------------|-------------|-------------|----------|------|-------|-------|
| Analyte                                 | Result          | Limit      | Units | Level      | Result      | %REC        | Limits   | RPD  | Limit | Notes |
| Batch B612086 - Total Recoverable, Dire | ct Analysis E20 | 0.7/E200.8 |       |            |             |             |          |      |       |       |
| Blank (B612086-BLK1)                    |                 |            |       | Prepared:  | 12-Dec-16 A | Analyzed: 1 | 3-Dec-16 |      |       |       |
| odium                                   | ND              | 1.00       | mg/L  |            |             |             |          |      |       |       |
| Magnesium                               | ND              | 0.100      | mg/L  |            |             |             |          |      |       |       |
| otassium                                | ND              | 1.00       | mg/L  |            |             |             |          |      |       |       |
| Calcium                                 | ND              | 0.050      | mg/L  |            |             |             |          |      |       |       |
| .CS (B612086-BS1)                       |                 |            |       | Prepared:  | 12-Dec-16 A | Analyzed: 1 | 3-Dec-16 |      |       |       |
| Calcium                                 | 5.50            | 0.050      | mg/L  | 5.00       |             | 110         | 85-115   |      |       |       |
| odium                                   | 8.83            | 1.00       | mg/L  | 8.10       |             | 109         | 85-115   |      |       |       |
| Magnesium                               | 27.5            | 0.100      | mg/L  | 25.0       |             | 110         | 85-115   |      |       |       |
| otassium                                | 10.9            | 1.00       | mg/L  | 10.0       |             | 109         | 85-115   |      |       |       |
| .CS Dup (B612086-BSD1)                  |                 |            |       | Prepared:  | 12-Dec-16 A | Analyzed: I | 3-Dec-16 |      |       |       |
| odium                                   | 7.86            | 1.00       | mg/L  | 8.10       |             | 97.0        | 85-115   | 11.6 | 20    |       |
| Calcium                                 | 4.88            | 0.050      | mg/L  | 5.00       |             | 97.6        | 85-115   | 11.9 | 20    |       |
| Potassium                               | 9.77            | 1.00       | mg/L  | 10.0       |             | 97.7        | 85-115   | 11.3 | 20    |       |
| Magnesium                               | 24.4            | 0.100      | mg/L  | 25.0       |             | 97.6        | 85-115   | 12.0 | 20    |       |
| Batch B612089 - EPA 200.2 Total Rec.    |                 |            |       |            |             |             |          |      |       |       |
| Blank (B612089-BLK1)                    |                 |            |       | Prepared & | & Analyzed: | 13-Dec-16   | ,        |      |       |       |
| Magnesium                               | ND              | 0.100      | mg/L  |            |             |             |          |      |       |       |
| otassium                                | ND              | 1.00       | mg/L  |            |             |             |          |      |       |       |
| Calcium                                 | ND              | 0.050      | mg/L  |            |             |             |          |      |       |       |
| odium                                   | ND              | 1.00       | mg/L  |            |             |             |          |      |       |       |
| CS (B612089-BS1)                        |                 |            |       | Prepared & | & Analyzed: | 13-Dec-16   | ,        |      |       |       |
| Potassium                               | 7.67            | 1.00       | mg/L  | 8.00       |             | 95.9        | 85-115   |      |       |       |
| Magnesium                               | 18.8            | 0.100      | mg/L  | 20.0       |             | 94.1        | 85-115   |      |       |       |
| Sodium                                  | 6.18            | 1.00       | mg/L  | 6.48       |             | 95.4        | 85-115   |      |       |       |
| Calcium                                 | 3.80            | 0.050      | mg/L  | 4.00       |             | 95.0        | 85-115   |      |       |       |

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### Analytical Results For:

**ETZ WATER STATION** PO BOX 6056

Project: WATER SAMPLES

Reported:

HOBBS NM, 88241

Project Number: NONE GIVEN

16-Dec-16 12:24

Project Manager: BEN DONAHUE

Fax To:

#### Total Recoverable Metals by ICP (E200.7) - Quality Control

#### **Green Analytical Laboratories**

| Analyte                              | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|--------|--------------------|-------|----------------|------------------|-----------|----------------|------|--------------|-------|
| Batch B612089 - EPA 200.2 Total Rec. |        |                    |       |                |                  |           |                |      |              |       |
| LCS Dup (B612089-BSD1)               |        |                    |       | Prepared &     | Analyzed:        | 13-Dec-16 |                |      |              |       |
| Magnesium                            | 19.4   | 0.100              | mg/L  | 20.0           |                  | 96.9      | 85-115         | 2.93 | 20           |       |
| Potassium                            | 7.94   | 1.00               | mg/L  | 8.00           |                  | 99.2      | 85-115         | 3.45 | 20           |       |
| Sodium                               | 6.34   | 1.00               | mg/L  | 6.48           |                  | 97.8      | 85-115         | 2.48 | 20           |       |
| Calcium                              | 3.93   | 0.050              | mg/L  | 4.00           |                  | 98.2      | 85-115         | 3.33 | 20           |       |

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#### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name   | ETZ Water Station  |  | BILL TO  | ANALYSIS REQUEST       |
|--|--|--|--|------------------------|
| Project Manage   | " Ben Derahue  |  | P.O. #:  |                        |
| Address:   |  |  | Company:   |                        |
| city: Hobbs  | State: NM)   | Zip: 88241   | Attn:  |                        |
| Phone #: 575   | 5393314 Fax#:  |  | Address:   |                        |
| Project #:   | Project Owne   | *:   | City:  |                        |
| Project Name:  | ETZ Water Samples  |  | State: Zip:  | ] [                    |
| Project Location   | n: Brine Wella Wester  | Station  | Phone #:   | Amior                  |
| Sampler Name:  | Ben Browne   | The term of the second  | Fax #:   | ]                      |
| FOR LAB USE ONLY   |  | MATRIX   | PRESERV. SAMPLING  | 14                     |
| Lab I.D.<br>H602700<br>1                                     | Sample I.D.  Moniter Well Fresh water Brine Water  | # CONTAINERS # CONTAINERS C GROUNDWATER WASTEWATER SOIL OIL SLUDGE   | OTHER: OT | Cation                 |
| 2  | Fresh water  | A CONTRACTOR OF THE CONTRACTOR | 4:45   |                        |
| 3  | brine water  |  | and any order of the designation of the second of the seco |                        |
|  |  | 200 pt 10 |  |                        |
|  |  |  | A STATE OF THE STA |                        |
|  |  |  | A CONTROL OF THE CONT |                        |
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| MAN 1989 - MILL MINE AND AND AND AND AND AND AND AND AND AND | A SE WINDOWS AND MILES OF SECOND   |  | The same and the s |                        |
|  | nd Damages. Cardinal's liability and client's exclusive remedy for a<br>ing those for negligence and any other cause whatsoever shall be   |  |  |                        |
| service. In no event shall C                                 | ardinal be liable for incidental or consequental damages, including<br>included of or related to the performance of services bere-pries by | y without limitation, business interruptions,<br>cardinal, remarifless of whether such claim   | these of use, or loss of profits incurred by client, its subsidile is based upon any of the above stated reasons or otherwi-   | ianes.                 |
| Relinquished B   | y: Date: Date: Date:   | Received By:  Add Milliams Street By:  | Phone Re<br>Fax Resu<br>REMARK   | esult:                 |
| -  |  |  |  | arymschibert@gmail.com |
|  | : (Circle One)<br>- Bus - Other:#75 5  | Sample Condition Cool Intact   | tion CHECKED BY:   |                        |

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

# HRC, Inc. P.O. Box 1606 Hobbs, NM 88241-6056 (575) 393-6662 (575) 393-6662 Fax

RECEIVED OCD
2017 JMM 26 P I: 00

January 20, 2012

Mr. Carl Chavez Environmental Bureau Chief Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, NM 87505

Ref: Annual Brine Well Report - BW-31

Name of Operator: HRC - Schubert

Date of Report: 1-20-2011

Mr. Chavez,

# Please see attached information:

- 1. Copies of monthly brine water production and fresh water injection for the year 2011.
- 2. Analysis of injection fluid (2011)
- 3. Analysis of brine produced (2011)
- 4. Analysis of monitor well samples. (2011)
- 5. 2011 MIT TEST CHARTS

Sincerely,

Gary M. Schubert, President

GMS/br

Enclosure

# ANNUAL BRINE WELL REPORT API# 30-025-36781 H.R.C. INC. Gary M. Schubert BW-31

January 27, 2012

BW – 31

SCHUBERT 7 – WELL # 1

YEAR 2011

| MONTH     | BRINE<br>PRODUCTION<br>(BY Meter) | FRESH WATER<br>INJECTED<br>(By Meter) |  |
|-----------|-----------------------------------|---------------------------------------|--|
| _         | -1                                |                                       |  |
| January   | 34,390                            | 37,121                                |  |
| February  | 26,653                            | 27,131                                |  |
| March     | 31,870                            | 32,821                                |  |
| April     | 35,172                            | 36,426                                |  |
| May       | 35,766                            | 36,794                                |  |
| June      | 28,147                            | 27,429                                |  |
| July      | 37,842                            | 37,155                                |  |
| August    | 28,805                            | 29,498                                |  |
| September | 34,852                            | 35,519                                |  |
| October   | 33,969                            | 36,438                                |  |
| November  | 37,140                            | 38,305                                |  |
| December  | 31,672                            | 33,800 ***                            |  |
| Total     | 396,278                           | 408,437                               |  |

<sup>\*\*\*</sup> Estimated (meter malfunction – actual reading @ 27,017 -- meter adjusted January 6, 2012)

# H. R. C., INC. SCHUBERT 7 WELL # 1 (BW - 31)

| YEAR  | BRINE PRODUCTION  | FRESH WATER INJECTED |
|---|-------------------|----------------------|
| 2006  | 42,950            | 44,800               |
| 2007  | 312,800           | 315,000              |
| 2008  | 305,990           | 316,000              |
| 2009  | 212,779           | 226,058              |
| 2010  | 341,134           | 350,887              |
| 2011  | 396,278           | 401,654              |
| Total Cumulative Product<br>(Thru 12-31-2011) | tion<br>1,611,931 | 1,654,399            |

BW 31 SCHUBERT 7 - WELL # 1

| MONTH/YEAR  | ETZ BRINE |        | TOTAL BRINE | FRESH    | DATE FRESH  | FRESH WATER |         | TOTAL FRESH |
|-------------|-----------|--------|-------------|----------|-------------|-------------|---------|-------------|
|             | WATER     |        | WATER       | WATER    | WATER METER | METER       | USED BY | WATER       |
|             | BBLS      | BBLS   | BBLS        | INJECTED | READ        | READING BY  | GALLONS | BBLS        |
|             |           |        |             | BBLS     |             | GALLONS     | (X 100) |             |
|             |           |        |             |          |             | (X 100)     |         |             |
| Jan. 2011   | 29,260    | 5,130  | 34,390      | 37,121   | 01/31/11    | 244,914     | 15,591  | 37,121      |
| Feb. 2011   | 24,660    | 1,993  | 26,653      | 27,131   | 02/28/11    | 256,039     | 11,395  | 27,131      |
| March. 2011 | 28,010    | 3,860  | 31,870      | 32,821   | 03/31/11    | 270,092     | 13,785  | 32,821      |
| April. 2011 | 31,529    | 3,643  | 35,172      | 36,426   | 04/30/11    | 285,391     | 15,299  | 36,426      |
| May. 2011   | 34,464    | 1,302  | 35,766      | 36,974   | 05/31/11    | 300,920     | 15,529  | 36,974      |
| June. 2011  | 25,590    | 2,557  | 28,147      | 27,429   | 06/30/11    | 312,440     | 11,520  | 27,429      |
| July. 2011  | 33,128    | 4,354  | 37,842      | 37,155   | 07/31/11    | 328,045     | 15,605  | 37,155      |
| Aug. 2011   | 24,560    | 4,245  | 28,805      | 29,498   | 08/31/11    | 340,434     | 12,389  | 29,498      |
| Sept. 2011  | 31,621    | 3,231  | 34,852      | 35,519   | 09/30/11    | 355,352     | 14,918  | 35,519      |
| Oct. 2011   | 25,702    | 8,267  | 33,969      | 36,438   | 10/31/11    | 370,656     | 15,304  | 36,438      |
| Nov. 2011   | 33,633    | 3,507  | 37,140      | 38,305   | 11/30/11    | 386,744     | 16,088  | 38,305      |
| Dec. 2011   | 27,029    | 4643   | 31672       | 27,017   | 12/31/2011  | 398,091     | 11,347  | 27,017      |
| 2011 Total  | 349,186   | 46,732 | 396,278     | 401,834  |             |             |         | 401,834     |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
|             |           |        |             |          |             |             |         |             |
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|             |           |        |             |          |             |             |         |             |
|             | 1         |        |             |          |             |             |         |             |



5753932476

PHONE (575) 393-2826 \* 101 E. MARLAND \* HOBBS, NM 88240

January 04, 2012

HRC

HRC

P. O. BOX 5011

HOBBS, NM 88241

RE: ETZ

Enclosed are the results of analyses for samples received by the laboratory on 12/30/11 13:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg & Kuna

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (875) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

HRC

P. O. BOX 5011 HOBBS NM, 88241 Project: ETZ

Project Number: NONE GIVEN

Project Manager: HRC

Fax To: (575) 393-6662

Reported: 04-Jan-12 15:00

| Sample ID          | Laboratory ID  | Matrix | Date Sampled    | Date Received   |
|--------------------|----------------|--------|-----------------|-----------------|
| FRESH WATER INJECT | TON H102797-01 | Water  | 30-Dec-11 13:30 | 30-Dec-11 13:55 |
| MONITOR WELL       | H102797-02     | Water  | 30-Dec-11 13:30 | 30-Dec-11 13:55 |
| BRINE FILL LINE    | H102797-03     | Water  | 30-Dec-11 13:30 | 30-Dec-11 13;55 |

Cardinal Laboratories

\*=Accredited Analyte

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### Analytical Results For:

HRC

Project: ETZ

Reported:

P. O. BOX 5011

Project Number: NONE GIVEN

04-Jan-12 15:00

HOBBS NM, 88241 Project Manager: HRC

Fax To: (575) 393-6662

# FRESH WATER INJECTION

#### H102797-01 (Water)

| Analyte                 | Rosult | Reporting<br>Limit | Units       | Dilution | Batch   | Annlyst | Anatyzed  | Method         | Notes |
|-------------------------|--------|--------------------|-------------|----------|---------|---------|-----------|----------------|-------|
|                         |        | Cardin             | il Laborati | orios    |         |         |           |                | -     |
| Inorganic Compounds     |        |                    |             | -        |         |         |           |                |       |
| Alkalinity, Bicarbonote | 239    | 5.00               | mg/f.,      | ı        | 1122802 | HM      | 02-Jan-12 | 310,1M         |       |
| Calcium                 | 119    | 1.60               | nig/L       | 1        | 1121909 | 14M     | 03-Jau-12 | SM3500Cn-<br>D |       |
| Alkalinity, Carbonatc   | ND     | 0.00               | mç/L        | 1        | 1122802 | MH      | 02-Jan-12 | 310.1M         |       |
| Chloride                | 236    | 4.00               | mg/L        | 1        | 1122711 | HM      | 02lon-12  | 4500-CI-II     |       |
| Conductivity            | 1380   | 1.00               | u\$/em      | 1        | 2010203 | НM      | 02-Jan-12 | 120.1          |       |
| Magnesium               | 21.4   | 00.1               | uit/J       | 1        | 1121909 | 11M     | 03-Inn-12 | SM3500Mg-<br>E |       |
| p.ld.                   | 7.16   | 0.100              | pti Uniss   | ı        | 2010203 | HM      | 02-Jen-12 | L50.1          |       |
| Potansium               | 10.6   | 1.00               | mg/L        | 1        | 1121909 | HM      | 03-Jan-12 | HACH 8049      |       |
| Sodium                  | 145    | 1,00               | w¢\r        | 1        | 1121909 | HM      | 03-Jan-12 | Calculation    |       |
| Sulfate                 | 179    | 10.0               | mg/L        | 1        | 2010406 | HM      | 03-Jan-12 | 375,4          |       |
| TDS                     | 948    | 5.00               | mg/l.       | ı        | 1122712 | ŀМ      | 02-Jan-12 | 160.1          |       |
| Alkalinity, Total       | 196    | 4.00               | mt/L        | ı        | 1122802 | HM      | 02-Jan-12 | 310.1M         |       |

Cardinal Laboratories

\*=Accredited Analyte

PERSENCE LIBRARY AND TRANSPORT. CONTROLS MANUALLY AND COUNTY TERRORY FOR MAY STATE AND CONTROL WHICH TRANS AND COUNTY TO COLL, SHALL DEFINED IN CO. SHALL BE FORTER IN CONTROL OF THE CONT

Celling T. Kuna-



PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

HRC

Project: ETZ

P. O. BOX 5011

Project Number: NONE GIVEN

Reported: 04-Jan-12 15:00

Project Manager: HRC HOBBS NM, 88241

Fax To: (575) 393-6662

#### MONITOR WELL H102797-02 (Water)

| Annlyce                 | Result | Reporting<br>Limit | Units      | Dilution | Batch    | Analyst | Analyzed   | Method            | Nates |
|-------------------------|--------|--------------------|------------|----------|----------|---------|------------|-------------------|-------|
|                         |        | Cardina            | il Laborat | ories    |          |         |            |                   |       |
| Inorganic Compounds     |        |                    |            |          |          |         |            |                   |       |
| Alkalinity, Bicarbonate | 210    | 5.00               | בו/קוח     | 1        | 1122602  | HM      | 02-Jan-12  | 310,1M            |       |
| Calcium                 | 160    | 1.60               | nu/L       | 1        | 1121909  | HM      | 03-Jan-12  | \$M3500Ca+<br>D   |       |
| Alkalinity, Carbonate   | ND     | 0.00               | mt/√       | 1        | 1122802  | HM      | 02<1nn=12  | 310.1M            |       |
| Chloride                | 200    | 4.00               | mg/l,      | 1        | 1122711  | HM      | 02-Jon-12  | 4500-CI-B         |       |
| Conductivity            | 2120   | 1,00               | 113/cm     | 1        | 2010203  | HM      | 02~101)-12 | 120.1             |       |
| Magnesium               | 41.8   | 1.00               | mg/l.      | ι        | 1 (21909 | HM      | 03-Jan-12  | SM3500Mg-<br>E    |       |
| рИ                      | 7.62   | 0,100              | pH Units   | 1        | 2010203  | НМ      | 02-lan-12  | 150,1             |       |
| Potassium               | 2.70   | 1.00               | mg/l       | 1        | 1121909  | HM      | 0.31m-12   | HACH <b>80</b> 49 |       |
| Sodium                  | 40.0   | 1.00               | mg/l_      | ι        | 112 (909 | нм      | 03-Jan-12  | Calculation       |       |
| Sulfate                 | 201    | 10.0               | mg/L       | ı        | 2010406  | HM      | 03-Jan-12  | 375.4             |       |
| TDS                     | 1350   | 5.00               | mg/l       | 1        | 1122712  | HM      | 02-Jan-12  | 160.1             |       |
| Alkalinity, Total       | 172    | 4,00               | mg/L       | 1        | 1122802  | HM      | 02-(nn-12  | 310.1M            |       |

Cardinal Laboratories

\*=Accredited Analyte

REGASE NOTE: Littley and Denoment. Company's Regality and commits eviction impairly for any vision animal, substitute taked in contract or 19th contract at 19t

Colony T. there-



PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 86240

#### Analytical Results For:

HRC

P. O. BOX 501.1 HOBBS NM, 88241 Project: ETZ

Project Number: NONE GIVEN

Project Manager: HRC

Fax To: (575) 393-6662

Reported: 04-Jan-12 15:00

BRINE FILL LINE H102797-03 (Water)

| Analyte                 | Result | Reporting<br>Limit | Units      | Dilution | Batch   | Analyst | Analyzed  | Method           | Notes |
|-------------------------|--------|--------------------|------------|----------|---------|---------|-----------|------------------|-------|
|                         |        | Cardins            | al Laborat | ories    |         |         |           |                  |       |
| Inorganic Compounds     |        |                    |            |          |         |         |           |                  |       |
| Alkalinity, Bicarbonate | 305    | 5.00               | mg/1_      | 1        | 1122802 | HM      | 02-fan-12 | 310.1M           |       |
| Calcium                 | 1160   | 1.60               | mÿ∕L       | 1        | 1121909 | нм      | 03-Jan-12 | SM3500Ca-<br>D   |       |
| Alkalinity, Carbonate   | ND     | 0.00               | mg/1       | 1        | 1122802 | HM      | 02-Jan-12 | 310,1M           |       |
| Chloride                | 192000 | 4.00               | mg∄.       | t        | 2010402 | HM      | 02-Jan-12 | 4500-CI-B        |       |
| Conductivity            | 551000 | 1,00               | uS/cm      | 1        | 2010203 | HM      | 02-lan-12 | 120.1            |       |
| Magnesium               | 4710   | 1.00               | mp/L       | 1        | 1121909 | НМ      | 03-Jan-12 | . 5M3500Mg-<br>E |       |
| рИ                      | 6.59   | 0.100              | pi4 Units  | 1        | 2010203 | HM      | 02-Jan-12 | 150.1            |       |
| Potassium               | 1060   | 1.00               | mg/l       | 1        | 1121909 | HM      | 03-Inn-12 | HACH 1049        |       |
| Sodium                  | 118000 | 1.00               | nıķ/L      | 1        | 1121909 | M       | 03-Jan-12 | Calculation      |       |
| Sulfite                 | 8630   | 10.0               | nig/L      | 1        | 2010406 | HМ      | 03-Jan-12 | 375.4            |       |
| TDS                     | 335000 | 5.00               | mķ/L       | t        | 2010407 | HM      | 03-tan-12 | 160.1            |       |
| Alkalinity, Total       | 250    | 4.00               | mg/l       | 1        | 1122802 | HM      | 02-Jan-12 | 310.1M           |       |

#### **Cardinal Laboratories**

\*=Accredited Analyte

PLIASE DOTS: Likely and Contents beings and clears metricus respons for also clears metricus respons for also clears metricus responses the second of the se

Colony L. Keene-



PHONE (575) 393-2326 \* 101 F. MARLAND " HOBBS, NM 88240

#### Analytical Results For:

HRC

P. O. BOX 5011 HOBBS NM, 88241 Project: ETZ

Project Number: NONE GIVEN

Project Manager: HRC

Fax To: (575) 393-6662

Reported:

04-Jan-12 15:00

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

|   |         | Reporting |        | Spike      | Source    |           | %REC   |      | מקא   |       |
|---|---------|-----------|--------|------------|-----------|-----------|--------|------|-------|-------|
| Analyte                                 | Reault  | Limit     | Units  | Levol      | Result    | %REC      | Limits | RPD  | Limit | Notes |
| atch 1121909 - *** DEFAULT PREP ***     |         |           |        |            |           |           |        |      |       |       |
| Hank (1121909-BLKI)                     |         |           |        | Prepared & | Analyzed: | 19-Dec-11 |        |      |       |       |
| inicium                                 | NÙ      | 1,60      | mg/l.  |            |           |           |        |      |       |       |
| Angrosium                               | ND      | 1.00      | mg∕l,  |            |           |           |        |      |       |       |
| milaeno                                 | ND      | 1.00      | mg/l.  |            |           |           |        |      |       |       |
| Odium                                   | úи      | 1,00      | mg/L   |            |           |           |        |      |       |       |
| CS (1121909-BS1)                        |         |           |        | Propared & | Analyzed: | 19-Doc-11 |        |      |       |       |
| alcium                                  | 22,4    |           | mg/L   | 20,0       |           | 112       | 80-120 |      |       |       |
| lagnesium                               | 51.5    |           | mg/l_  | 50.0       |           | 1.03      | 80-120 |      |       |       |
| minsento                                | 7.30    |           | nιę/L  | 8,00       |           | 91.2      | 80-120 |      |       |       |
| uplicate (1121909-DUP1)                 | Source: | r/102619- | 01     | Propercd & | Analyzed. | 19-Dec-11 |        |      |       |       |
| מוניטווו                                | 9620    | 1.60      | nig/l_ |            | 9620      |           | -      | 0,00 | 20    |       |
| lagnosium                               | 2430    | 1.00      | mg/L   |            | 2530      |           |        | 4,03 | 20    |       |
| omssium                                 | 763     | 1.00      | mg/L   |            | 676       |           |        | 12.1 | 20    |       |
| Satch 1122711 - General Prep - Wet Chem |         |           |        |            |           |           |        |      |       |       |
| llank (1122711-BLKI)                    |         |           |        | Propared & | Analyzed  | 27-Dcc-11 |        |      |       |       |
| htoride                                 | חא      | 4,00      | nig/I_ |            |           |           |        |      |       |       |
| CS (1122711-RS1)                        |         |           |        | Propared & | Analyzed; | 27-Dec-11 |        |      |       |       |
| hlorids                                 | 108     | 4,00      | mṛ/L   | 100        |           | 108       | 80-120 |      |       |       |
| CS Dup (1122711-BSD1)                   |         |           |        | Prepared & | Analyzed: | 27-Dec-11 |        |      |       |       |
| hloride                                 | 108     | 4.00      | mu/l   | 100        |           | 108       | 80-120 | 0.00 | 20    |       |
| mplicate (1122711-DUPt)                 | Source: | H102733-  | 01     | Prepared & | Analyzed: | 27-Dec-11 |        |      |       |       |
| hlorido                                 | 220     | 4.00      | nıg∕l. |            | 220       |           |        | 0.00 | 20    | ·     |

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE SIGHTS: Liability and Disproject. Comments sensity and riproject exclusive remains for madjaners and in contract or contract or contract in desirable in animate pold by creat for analyses. All claims, including think for madjaners and any miles claims of animate contract or contract or contract or contract or contract or contract or contract. In no over new Contract or contract or

Colony L. Kunn



PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

HRC

P. O. BOX 5011 HOBBS NM, 88241 Project: ETZ

Project Number: NONE GIVEN

Project Manager: HRC

Fax To: (575) 393-6662

Reported:

04-Jan-12 15:00

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

|   |                                       | Reporting            |                              | Spike      | Source    |           | <b>WREC</b>      |       | RPD   |       |
|---|---------------------------------------|----------------------|------------------------------|------------|-----------|-----------|------------------|-------|-------|-------|
| Analyte   | Result                                | Limit                | Units                        | Level      | Result    | %REC      | Limits           | RPD   | Limit | Notes |
| Ratch 1122711 - General Prep - Wet Chem   |                                       |                      |                              |            |           |           |                  |       |       |       |
| Matrix Spike (1122711-MSI)  |                                       | cc: H102733-         |                              |            | Analyzed: |           |                  |       |       |       |
| Chloride  | 328                                   | 1.00                 | mg/l_                        | 100        | 220       | 108       | R∩-120           |       |       |       |
| Batch 1122712 - Filtration  |                                       |                      |                              |            |           |           |                  |       |       |       |
| Nlank (1122712-BLK1)  |                                       |                      |                              | Prepared & | Analyzed: | 21-Dec-11 |                  |       |       |       |
| TDS   | ŃĎ                                    | 5,00                 | mg/l.                        |            |           |           |                  |       |       |       |
| LCS (11227)2-BS1)   |                                       |                      |                              | Prepared & | Annlyzed; | 21-Dec-11 |                  |       | ,     |       |
| ins   | 224                                   |                      | mṛ/l,                        | 240        |           | 93.3      | RO-120           |       |       |       |
|   | Snur                                  | ce: H102712-         | 02                           | Prepared & | Analyzed: | 21-Doc-11 |                  |       |       |       |
| Duplicate (1122712-DUPI)  |                                       |                      |                              |            |           |           |                  |       |       |       |
| Duplicate (1122712-DUPI)  | 334000                                | 5.00                 | mn/L                         |            | 332000    |           |                  | 0.601 | 20    |       |
|   |                                       |                      |                              |            | 33 2000   |           |                  | 0.601 | 20    |       |
| Batch 1122802 - General Prep - Wet Chem   |                                       | 5.00                 | m <sub>fl</sub> /L           | Prepared & | 332000    | 27-Dec-11 |                  | 0,601 | 20    |       |
| TDS   |                                       | 5.00                 |                              | Prepared & |           | 27-Dcc-11 |                  | 0,601 | 20    |       |
| ITIS<br>Batch 1122802 - General Prep - Wet Chem<br>Blank (l 122802-BLK!)  | 334000                                | 5.00                 | m <sub>fl</sub> /L           | Prepared & |           | 27-Dec-11 |                  | 0,601 | 20    |       |
| Britch 1122802 - General Prep - Wet Chem  Blank (1122802-BLK!)  Alkalinity, Carbonate  Alkalinity, Bicarbonate  | 334000<br>ND                          | 5.00                 | mp/L                         | Prepared & |           | 27-Dec-11 |                  | 0,601 | 20    |       |
| Batch 1122802 - General Prep - Wet Chem<br>Blank (1122802-BLK!)<br>Alkalinity, Carbonate  | 334000<br>ND<br>ND                    | 0,00<br>3,00<br>4,00 | mp/L<br>mp/L                 |            |           |           |                  | 0,601 | 20    |       |
| Britch 1122802 - General Prep - Wet Chem  Blank (1122802-BLK!)  Alkalinity, Carbounte  Alkalinity, Total  | 334000<br>ND<br>ND                    | 5.00<br>0,00<br>5.00 | mp/L<br>mp/L                 |            | Analyzed: |           | 80-120           | 0,601 | 20    |       |
| Batch 1122802 - General Prep - Wet Chem  Blank (1122802-BLK!)  Alkalinity, Carbonate  Alkalinity, Bicarbonate  Alkalinity, Total  LCS (1122802-BS1)   | 334000<br>ND<br>ND<br>ND              | 0,00<br>5,00<br>4,00 | mg/L<br>mg/L<br>mg/L         |            | Analyzed: |           | 80-120<br>80-120 | 0,601 | 20    |       |
| Blank (1122802 - General Prep - Wet Chem  Blank (1122802-BLK!)  Alkalinity, Carbonate  Alkalinity, Bicarbonate  Alkalinity, Total  LCS (1122802-BS1)  Alkalinity, Carbonate   | 334000<br>ND<br>ND<br>ND              | 0,00<br>3,00<br>4,00 | mg/L<br>mg/L<br>mg/L         |            | Analyzed: |           |                  | 0,601 | 20    |       |
| Blank (1122802 - General Prep - Wet Chem  Blank (1122802-BLK!)  Alkalinity, Carbonate  Alkalinity, Bicarbonate  Alkalinity, Total  LCS (1122802-BS1)  Alkalinity, Carbonate  Alkalinity, Ricarbonate  | 334000<br>ND<br>ND<br>ND<br>ND<br>137 | 0,00<br>3,00<br>4,00 | mg/L<br>mg/L<br>mg/L<br>mg/L | Prepared & | Analyzed: | 27-Dec-11 | 80-120           | 0,601 | 20    |       |
| Blank (1122802 - General Prep - Wet Chem  Blank (1122802-BLKI)  Alkalinity, Carbonate  Alkalinity, Total  LCS (1122802-BS1)  Alkalinity, Carbonate  Alkalinity, Riembonate  Alkalinity, Total   | 334000<br>ND<br>ND<br>ND<br>ND<br>137 | 0,00<br>3,00<br>4,00 | mg/L<br>mg/L<br>mg/L<br>mg/L | Prepared & | Analyzed: | 27-Dec-11 | 80-120           | 0,601 | 20    |       |
| Blank (1122802 - General Prep - Wet Chem  Blank (1122802-BLKt)  Alkalinity, Carbonate  Alkalinity, Ricarbonate  Alkalinity, Total  LCS (1122802-BS1)  Alkalinity, Carbonate  Alkalinity, Ricarbonate  Alkalinity, Total  LCS Dup (1122802-BSD1) | ND<br>ND<br>ND<br>ND<br>137           | 0,00<br>5,00<br>4,00 | mg/L<br>mg/L<br>mg/L<br>mg/L | Prepared & | Analyzed: | 27-Dec-11 | 80-120<br>80-120 | 0,601 |       |       |

Cardinal Laboratories

\*=Accredited Analyte

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College To Kanne





PHONE (575) 393-2326 \* 101 E. MARLAND \* HODBS, NM 88240

#### Analytical Results For:

HRC

Project: ETZ

Reported:

P. O. BOX 5011

Project Number: NONE GIVEN

04-Jan-12 15:00

PAGE 08/12

HOBBS NM, 88241

Project Manager: HRC

Fax To: (575) 393-6662

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

| Analyte                                 | Result | Reporting<br>Limit | Units      | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---|--------|--------------------|------------|----------------|------------------|-----------|----------------|-------|--------------|-------|
| Batch 1122802 - General Prep - Wet Chem |        |                    |            |                |                  |           |                |       |              |       |
| Duplicate (1122802-DUPI)                | Som    | rce: 11102770      | -01        | Propercd &     | Analyzed:        | 27-Dec-11 |                |       |              |       |
| Alkalinity, Carbonato                   | ND     | 0.00               | nig/L      |                | 0.00             |           | .,             |       | 20           |       |
| Alkalinity, Bicarbonate                 | 830    | 5,00               | mg/l_      |                | 830              |           |                | n,ņo  | 20           |       |
| Alkalinity, Total                       | 680    | 4.00               | ng/L       |                | 480              |           |                | 0.00  | 20           |       |
| Batch 2010203 - General Prop - Wet Chem |        |                    |            |                |                  |           |                |       |              |       |
| Blank (2010203-B).K()                   |        |                    | ,          | Prepared &     | Annlyzed:        | 02-Jan-12 |                |       |              |       |
| рH                                      | ND     | 0,100              | pH Units   |                |                  |           | *******        |       | ••••         |       |
| Conductivity                            | מא     | 1.00               | u\$/cm     |                |                  |           |                |       |              |       |
| LCS (2010203-BS1)                       |        |                    |            | Prepared &     | Analyzed:        | 02-Jnn-12 |                |       |              |       |
| pH                                      | 7.08   |                    | pf I Units | 7.00           |                  | 101       | 90-110         |       | •            |       |
| Conductivity                            | 508    |                    | 115/cm     | 500            |                  | 102       | NO-120         |       | •            |       |
| Duplicate (2010203-DUP1)                | Sour   | ce: IJ102787       | -01        | Prepared &     | Analyzed:        | 02-Jan-12 |                |       |              |       |
| pl4                                     | 8,28   | 0.100              | plf Units  |                | B.26             |           |                | 0,242 | 20           |       |
| Conductivity                            | 556000 | 1.00               | uS/cm      |                | 552000           |           |                | 0.722 | 20           |       |
| Batch 2010402 - General Prep - Wet Chem |        |                    |            |                |                  |           |                |       |              |       |
| Blank (2010402-RI_K1)                   |        |                    | ,          | Prepared &     | Analyzed:        | 02-Jan-12 |                |       |              |       |
| Chlorida                                | מא     | 4.00               | רו/קוח     |                |                  |           |                |       |              |       |
| LCS (2010402-BS1)                       |        |                    |            | Prepared &     | Analyzed:        | 02-Jan-12 |                |       |              |       |
| Chloride                                | 100    | 4,00               | mg/l_      | 100            |                  | 100       | 80-120         |       |              |       |

#### Cardinal Laboratories

\*=Accredited Analyte

TLEASE NOTE: LIMBERY MAY THRESPES. Charmen's before the clients remove for any client increas, whether haves in careins are not, their the billhold on the crimina to come for professions and short comparison of the comparison of

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PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

HRC

P. O. BOX 5011 HOBBS NM, 88241 Project: ETZ

Project Number: NONE GIVEN

Project Manager: HRC

Fax To: (575) 393-6662

Reported:

04-Jan-12 15:00

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

| Analyte                                 | Result         | Reporting<br>Limit      | Units              | Spike<br>Level      | Source<br>Result | <b>%REC</b>        | AREC<br>Limita    | RPD                     | RPD<br>Limit | Notes |
|---|----------------|-------------------------|--------------------|---------------------|------------------|--------------------|-------------------|-------------------------|--------------|-------|
| Batch 2010402 - General Prep - Wet Chem |                |                         |                    |                     |                  |                    |                   |                         |              |       |
| LCS Dup (2010402-RSD1)<br>Chloride      | 104            | 4,00                    | nig/L              | Prepared &          | Analyzed;        | 02-Jan-12<br>104   | 80-120            | 3,92                    | 20           |       |
| Duplicate (2010402-DUP1) Catorilla      | Soni<br>190000 | rce: H102797-           | 63<br>mg/L         | Propared &          | Analyzed:        | 02-Jan-12          |                   | <br>1.05                | 20           |       |
| Matrix Spike (2010402-MS1)<br>Chloride  | 5nm            | rce: [1102797-<br>4,00  |                    | Propared &          | Analyzed:        | 02-Jan-12<br>96,0  | 80-120            | m: p=115 m = 100 t = 44 |              |       |
| Batch 2010406 - General Prep - Wet Chem |                |                         |                    |                     |                  |                    |                   |                         |              |       |
| Blank (2010406-R1_K1) Sulface           | ND             | 10.0                    | mg/l.              | Propared: (         | )3-Jan-12 A      | nalyzed: 04        | -Jan-12           |                         |              |       |
| LCS (2010406-BS1)<br>Sulfate            | 20.6           | 10.0                    | mg/),              | Prepared: (<br>20.0 | )3-Jan-12 A      | nalyzed: 04<br>103 | -Jan-12<br>80-120 |                         |              |       |
| LCS Dup (2010406-BSD1) Sulfate          | 21.3           | 10.0                    | <br>nsp/l.         | Prepared &          | Anulyzed;        | 03-Jan-12<br>106   | E0-120            | 3.34                    | 20           |       |
| Duplicate (2010406-DUP1)                | Som<br>1350    | rcc: 11102766-          | <b>0</b> 1<br>m¢/L | Prepared &          | Analyzed:        | 03-Jan-12          |                   | 0,643                   | 20           |       |
| Matrix Spike (2010406-MSI)<br>Sulfate   | 2020           | ree: 11.102766-<br>10.0 | ωt\Γ<br>01         | Prepared &          | Analyzed:        | 03lan-! 2<br>NR    | 70-130            |                         |              |       |
| Batch 2010407 - Filtration              |                |                         |                    |                     |                  |                    |                   |                         |              |       |
| Blank (2010407-BLK1) TDS                | ND             | 5.00                    | mg/l.              | Prepared: (         | )2-Jan-12 ^      | nulyzed; 03        | -Jan-12           |                         |              |       |

#### Cardinal Laboratories

\*=Accredited Analyte

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PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

#### Analytical Results For:

HRC

Project: ETZ

Reported:

P. O. BOX 5011 HOBBS NM, 88241 Project Number: NONE GIVEN

04-Jan-12 15:00

Project Manager: HRC

Fax To: (575) 393-6662

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

| Analyte                    | Result         | Reporting<br>Limit     | Linita | Spike<br>Level     | Source<br>Result      | %REC        | 'AREC<br>Limits | RPD   | RFD<br>Limit | Notes |
|----------------------------|----------------|------------------------|--------|--------------------|-----------------------|-------------|-----------------|-------|--------------|-------|
| Batch 2010407 - Filtration |                |                        |        |                    |                       |             |                 |       |              | ,·    |
| LCS (2010407-BS1)          | 243            | 5.00                   | mg/L   | Prepared: (<br>240 | 02-lan-12 A           | nalyzed: 03 | 80-120          |       |              |       |
| Duplicate (2010407-DUP1)   | Sour<br>336000 | ce: 111/12797-<br>5.00 |        | Propared: (        | 02-Jan-12 ∧<br>335000 | nalyzed: 03 |                 | 0.260 | <br>20       |       |

Cardinal Laboratories

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PLEASE NOTES LINEARY SAY DEMOCES. CHERNIO INDICATE AND CONTO MALLION FOR ANY CASE INVESTIGATE AND CONTO AND THE ASSESSMENT OF A CONTO AND CONTO AN

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

#### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Samples not received at proper temperature of 6°C or below.

Insufficient dime to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

PLEACE NOTES: LABBAY and Debages. Combine points ordered combine and dieth ordered related and related and the control of the appeared shall be desired where related to the same of the property shall be desired where related to the control of the appeared service. In so more shall control on including these for representations, and related to the control of the appeared service. In so more shall control on including the property shall be desired where the state of the control of the appeared service. In so more shall control on including the service of the control of the appeared of

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101 East Marfand, Hobbs, NM 88240

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

|  | (575) 393-2326 FAX (575) 393-247                             | 6   |   |  |                       |                              |       |  |
|--|--|---|---|--|-----------------------|------------------------------|-------|--|
| Company Name:  |  |   |   |  |                       | ANALYSIS RE                  | QUEST |  |
| Project Manager  |  |   | P.O. B:   |  |                       |                              |       |  |
| Address: P.C   |  |   | Company:  |  |                       |                              |       |  |
| city: HUKE   | State: Llyn  | Zip: 5824]  | Attn:   | Anions   |                       |                              |       |  |
| Phone #:   | Fax #:   |   | Address:  |  | 1 1                   | 1 1 1                        | 1   1 |  |
| Project #:   | Project Owne   | <u>:</u>  | City:   | \·3  |                       |                              |       |  |
| Project Name:  | ETZ  |   | State: Zip:   |  | 1 1                   |                              |       |  |
| Project Location   |  |   | Phone #:  | せ  | 1 1                   |                              | 1 1 1 |  |
| Sampler Xame:  | Bill Hiser   |   | Fax 5:  |  | -                     |                              |       |  |
| Lab I.D. H102197   | Sample I.D. Fresh Woter Inj. YVignitor Well. Bring Fill Line | C (G)RAB OR (C)OMP.  I CONTAINERS  CROUNDWATER  WASTEWATER  SOIL  OIL  SLIDGE | PRESERV SAMPLI<br>OCHER<br>ICE/COOL<br>OTHER<br>OTHER           | LIME (   |                       |                              |       |  |
| retyes. At thire industrians. In no created to different or uncommon prior Relinquished By | 12 3011<br>13 3011   | dream of water benefits in walking a  | प्रच तहारों करें हैं। दे अर्थादा को होंगे <b>30</b> प्रधान करें | e camples of the appendic<br>dent to consisting,<br>campa or unavoir,<br>Phone Result: | □ Yes □ No □ Yes □ No | Add'l Phone &<br>Add'l Fax & |       |  |
| Delivered By<br>Sampler - UPS  | •  | Sample Cond<br>Cool Intact  | (initials)  |  |                       |                              |       |  |

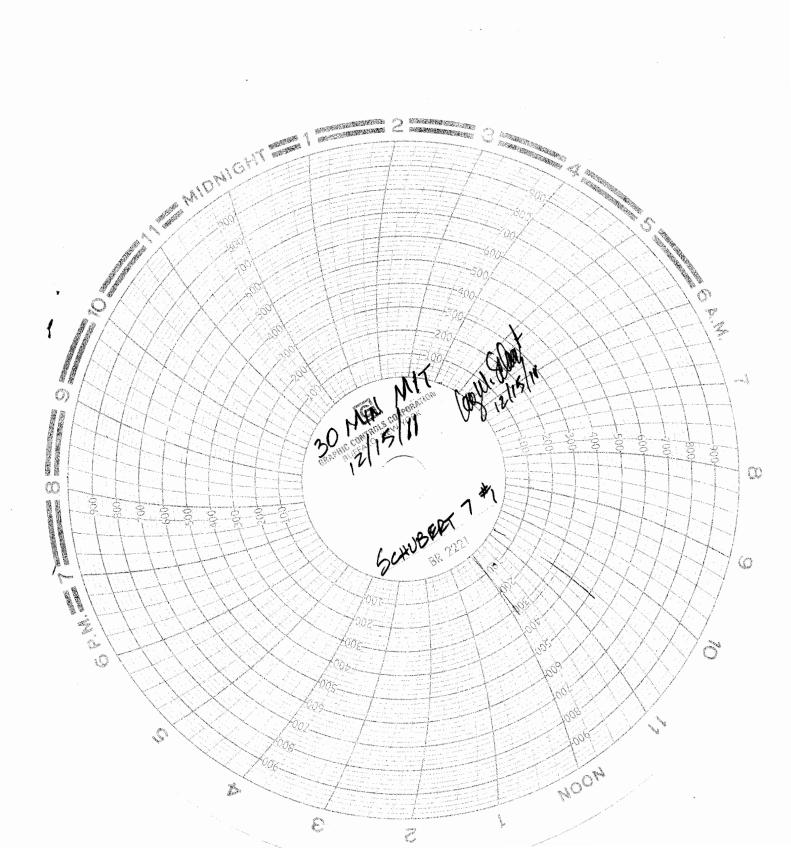
CHART RECORDER

SET @ 12 HR

PER REVOLUTION

10:30 AM TO \$\frac{2}{1:05} AM

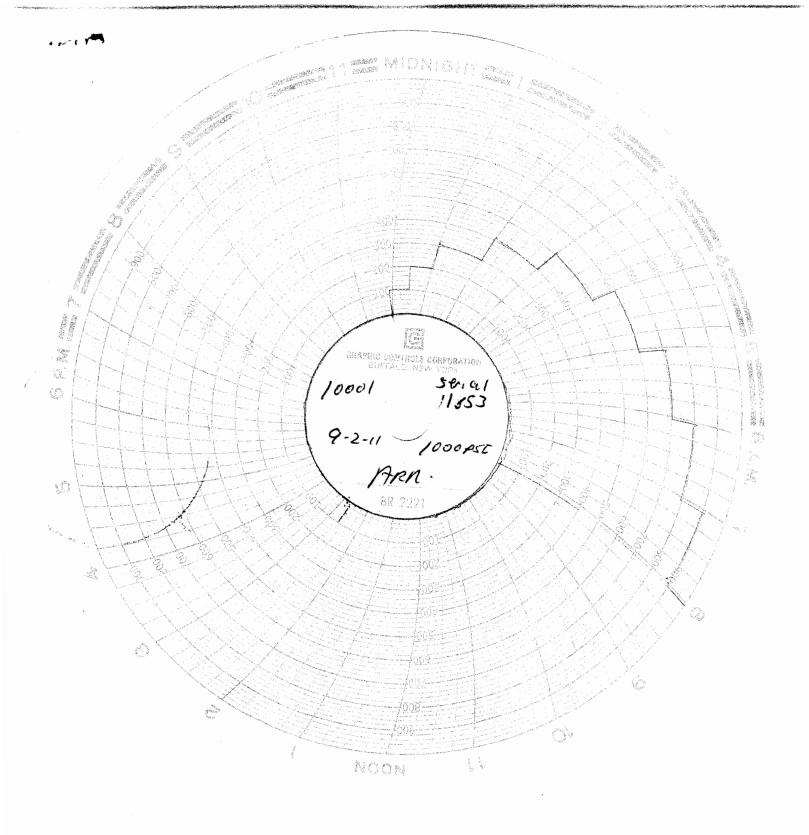
12/15/11



# MACLASKEY OILFIELD SERVICES

5900 WEST LOVINGTON HWY. HOBBS, N.M. 88240 505-3<del>93-</del>1016

|   |  |   | •                         |
|---|--|---|---------------------------|
| THIS IS TO CERTIFY THAT:  |  | DATE:                                   | 9-2-11                    |
| I, Alber 1000-50-1 METER TECHNIC SERVICES, INC. HAS CHECKED THE CALINSTRUMENT.   1000                                 | BRATION  | ON THE FOLI<br>URE RECORD<br>SERIA      | LOWING<br>ER.<br>L NUMBER |
|   |  | _//                                     | 1853                      |
| TESTED AT THESE POINTS.  PRESSURE SOO  TEST AS FOUND CORRECTED  O /00 // //00 200 // 200 300 // 200 300 // 200 500 // | PRI<br>TEST<br>Soc<br>Gov<br>Dov<br>8 ov<br>90 v | SSURE 100 AS FOUND 600 200 800 700 1000 | CORRECT                   |
| REMARKS:  |  |   |                           |
| icivitaids.   |  |   |                           |
|   |  | ` (                                     |                           |
|   |  |   |                           |
|   |  |   |                           |
| SIGNED: 19/1.   |  |   |                           |
|   |  |   |                           |



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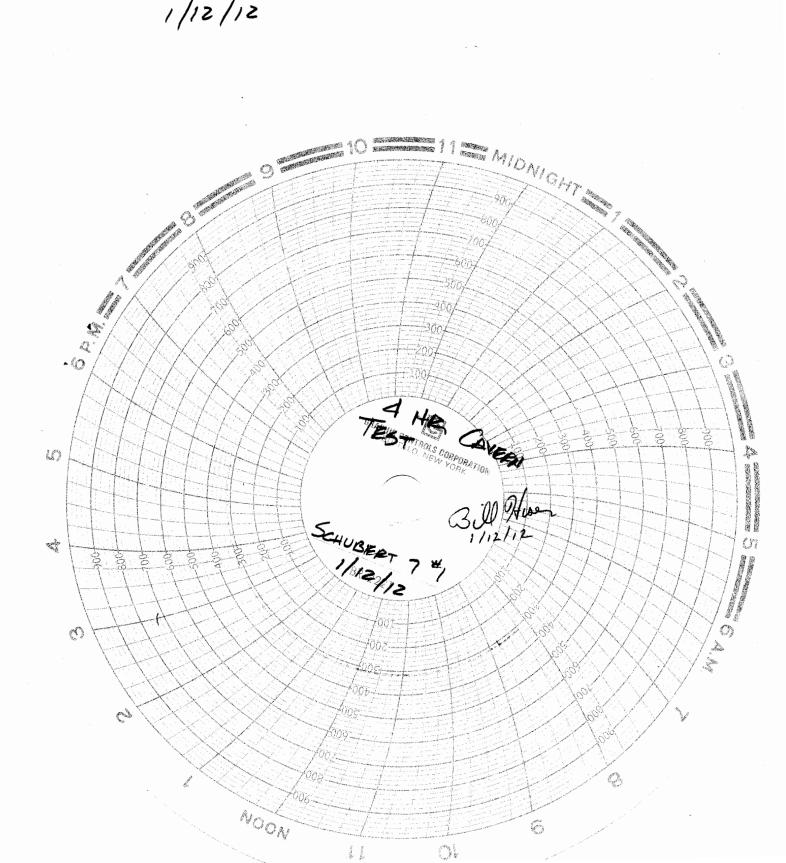
CHART RECORDER

SET @ 12 HR.

PER REVOLUTION

B:30 AM TO 12:30 PM

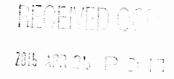
1/12/12





## HRC, INC.

P. O. Box 5102 Hobbs, NM 88241-5102 Phone # (575) 393-6662 Fax # (575) 393-6662



April 25, 2016

Jim Griswold Senior Hydrologist ENMRD/Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Ref: 2015 Annual Report B-31 Schubert 7 – Well #1

Dear Mr. Griswold,

Enclosed please find the monthly freshwater injection and brine production numbers for the Hobbs facility for the year 2015. Included also are Cardinal Laboratories' results of analyses for samples for the month of May and December, 2015.

Thank you,

Sincerely,

Say 11/Schubert
Gary M. Schubert

GMS/br

BW – 31 SCHUBERT 7 – WELL # 1

# **YEAR 2015**

| MONTH     | BRINE<br>PRODUCTION | FRESH WATER INJECTED |  |
|-----------|---------------------|----------------------|--|
|           |                     |                      |  |
| January   | 22,483              | 22,650               |  |
| February  | 20,840              | 21,043               |  |
| March     | 25,417              | 25,919               |  |
| April     | 20,460              | 20,441               |  |
| May       | 21,462              | 20,838               |  |
| June      | 24,012              | 24,640               |  |
| July      | 26,952              | 24,317               |  |
| August    | 29,071              | 29,776               |  |
| September | 25,880              | 25,327               |  |
| October   | 24,977              | 25,012               |  |
| November  | 24,792              | 24,793               |  |
| December  | 24,859              | 24,900               |  |



December 07, 2015

**BEN DONAHUE** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

RE: WATER SAMPLES

Enclosed are the results of analyses for samples received by the laboratory on 11/23/15 13:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab-accred-certif.html">www.tceq.texas.gov/field/qa/lab-accred-certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)

Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Celey & Keine

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Reported:

07-Dec-15 16:25



#### Analytical Results For:

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

| Sample ID    | Laboratory ID | Matrix | Date Sampled    | Date Received   |
|--------------|---------------|--------|-----------------|-----------------|
| BRINE WATER  | H503087-01    | Water  | 23-Nov-15 11:00 | 23-Nov-15 13:30 |
| MONITOR WELL | H503087-02    | Water  | 23-Nov-15 11:00 | 23-Nov-15 13:30 |
| FRESH WATER  | H503087-03    | Water  | 23-Nov-15 11:00 | 23-Nov-15 13:30 |

Cardinal Laboratories \*=Accredited Analyte

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Celez D. Kenne



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN
Project Manager: BEN DONAHUE

Fax To:

Reported: 07-Dec-15 16:25

#### BRINE WATER

H503087-01 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units        | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|--------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | al Laborat   | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |              |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 112          |     | 5.00               | mg/L         | 1         | 5112009 | AP      | 02-Dec-15 | 310.1     |       |
| Alkalinity, Carbonate       | < 0.00       |     | 0.00               | mg/L         | i         | 5112009 | AP      | 02-Dec-15 | 310.1     |       |
| Chloride*                   | 184000       |     | 4.00               | mg/L         | 1         | 5112001 | AP      | 25-Nov-15 | 4500-CI-B |       |
| Conductivity*               | 389000       |     | 1.00               | uS/cm        | 1         | 5120115 | AP      | 03-Dec-15 | 120.1     |       |
| pH*                         | 7.21         |     | 0.100              | pH Units     | 1         | 5120117 | AP      | 03-Dec-15 | 150.1     |       |
| Sulfate*                    | 4560         |     | 1000               | mg/L         | 100       | 5113005 | AP      | 30-Nov-15 | 375.4     |       |
| TDS*                        | 306000       |     | 5.00               | mg/L         | 1         | 5112304 | AP      | 01-Dec-15 | 160.1     |       |
| Alkalinity, Total*          | 92.0         |     | 4.00               | mg/L         | 1         | 5112009 | AP      | 02-Dec-15 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Labo | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |     |                    |              |           |         |         |           |           |       |
| Calcium*                    | 1490         |     | 2.00               | mg/L         | 100       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Magnesium*                  | 396          |     | 10.0               | mg/L         | 100       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Potassium*                  | 171          |     | 100                | mg/L         | 001       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Sodium*                     | 116000       |     | 1000               | mg/L         | 500       | B512007 | JGS     | 02-Dec-15 | EPA200.7  |       |

Cardinal Laboratories

\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 07-Dec-15 16:25

## MONITOR WELL

H503087-02 (Water)

| Analyte                     | Result       | MDL | Reporting<br>Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------|--------------|-----|--------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                             |              |     | Cardin             | al Laborat  | ories     |         |         |           |           |       |
| Inorganic Compounds         |              |     |                    |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate     | 214          |     | 5.00               | mg/L        | 1         | 5120206 | AP      | 02-Dec-15 | 310.1     |       |
| Alkalinity, Carbonate       | < 0.00       |     | 0.00               | mg/L        | i         | 5120206 | AP      | 02-Dec-15 | 310.1     |       |
| Chloride*                   | 152          |     | 4.00               | mg/L        | 1         | 5112001 | AP      | 25-Nov-15 | 4500-CI-B |       |
| Conductivity*               | 990          |     | 1.00               | uS/cm       | 1         | 5120115 | AP      | 03-Dec-15 | 120.1     |       |
| pH*                         | 8.65         |     | 0.100              | pH Units    | 1         | 5120117 | AP      | 03-Dec-15 | 150.1     |       |
| Sulfate*                    | 71.4         |     | 10.0               | mg/L        | 1         | 5120203 | AP      | 02-Dec-15 | 375.4     |       |
| TDS*                        | 452          |     | 5.00               | mg/L        | 1         | 5112304 | AP      | 01-Dec-15 | 160.1     |       |
| Alkalinity, Total*          | 176          |     | 4.00               | mg/L        | 1         | 5120206 | AP      | 02-Dec-15 | 310.1     |       |
|                             |              |     | Green Ana          | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by | ICP (E200.7) |     |                    |             |           |         |         |           |           |       |
| Calcium*                    | 58.3         |     | 0.200              | mg/L        | 10        | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Magnesium*                  | 18.4         |     | 1.00               | mg/L        | 10        | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Potassium*                  | <10.0        |     | 10.0               | mg/L        | 10        | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Sodium*                     | 143          |     | 20.0               | mg/L        | 01        | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |

Cardinal Laboratories

\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 07-Dec-15 16:25

#### FRESH WATER

H503087-03 (Water)

| Analyte                       | Result      | MDL | Reporting<br>Limit | Units        | Dilution | Batch   | Analyst | Analyzed  | Method    | Notes |
|-------------------------------|-------------|-----|--------------------|--------------|----------|---------|---------|-----------|-----------|-------|
|                               |             |     | Cardin             | al Laborate  | ries     |         |         |           |           |       |
| Inorganic Compounds           |             |     |                    |              |          |         |         |           |           |       |
| Alkalinity, Bicarbonate       | 229         |     | 5.00               | mg/L         | 1        | 5120206 | AP      | 02-Dec-15 | 310.1     |       |
| Alkalinity, Carbonate         | <0.00       |     | 0.00               | mg/L         | 1        | 5120206 | AP      | 02-Dec-15 | 310.1     |       |
| Chloride*                     | 120         |     | 4.00               | mg/L         | 1        | 5112001 | AP      | 25-Nov-15 | 4500-Cl-B |       |
| Conductivity*                 | 1070        |     | 1.00               | uS/cm        | 1        | 5120115 | AP      | 03-Dec-15 | 120.1     |       |
| pH*                           | 8.38        |     | 0.100              | pH Units     | 1        | 5120117 | AP      | 03-Dec-15 | 150.1     |       |
| Sulfate*                      | 158         |     | 25.0               | mg/L         | 2.5      | 5120203 | AP      | 02-Dec-15 | 375.4     |       |
| TDS*                          | 700         |     | 5.00               | mg/L         | 1        | 5112304 | AP      | 01-Dec-15 | 160.1     |       |
| Alkalinity, Total*            | 188         |     | 4.00               | mg/L         | 1        | 5120206 | AP      | 02-Dec-15 | 310.1     |       |
|                               |             |     | Green Ana          | lytical Labo | ratories |         |         |           |           |       |
| Total Recoverable Metals by I | CP (E200.7) |     |                    |              |          |         |         |           |           |       |
| Calcium*                      | 81.8        |     | 0.200              | mg/L         | 10       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Magnesium*                    | 25.0        |     | 1.00               | mg/L         | 10       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Potassium*                    | <10.0       |     | 10.0               | mg/L         | 10       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |
| Sodium*                       | 112         |     | 20.0               | mg/L         | 10       | B512007 | JGS     | 01-Dec-15 | EPA200.7  |       |

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\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 07-Dec-15 16:25

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result                                  | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits                          | RPD  | RPD<br>Limit | Notes |
|---|---|--------------------|-------|----------------|------------------|-------------|---|------|--------------|-------|
| Batch 5112001 - General Prep - Wet Chem | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                    |       |                |                  |             |   |      |              |       |
| Blank (5112001-BLK1)                    | ···                                     |                    |       | Prepared &     | Analyzed:        | 25-Nov-15   |   |      |              |       |
| Chloride                                | ND                                      | 4.00               | mg/L  |                |                  |             | * ************************************* |      |              |       |
| LCS (5112001-BS1)                       |   |                    |       | Prepared &     | k Analyzed:      | 25-Nov-15   |   |      |              |       |
| Chloride                                | 120                                     | 4.00               | mg/L  | 100            |                  | 120         | 80-120                                  |      |              |       |
| LCS Dup (5112001-BSD1)                  |   |                    |       | Prepared: 2    | 25-Nov-15        | Analyzed: 0 | 2-Dec-15                                |      |              |       |
| Chloride                                | 104                                     | 4.00               | mg/L  | 100            |                  | 104         | 80-120                                  | 14.3 | 20           |       |
| Batch 5112009 - General Prep - Wet Chem |   |                    |       |                |                  |             |   |      |              |       |
| Blank (5112009-BLK1)                    |   |                    |       | Prepared &     | k Analyzed:      | 25-Nov-15   |   |      |              |       |
| Alkalinity, Carbonate                   | ND                                      | 0.00               | mg/L  |                |                  |             |   |      |              |       |
| Alkalinity, Bicarbonate                 | ND                                      | 5.00               | mg/L  |                |                  |             |   |      |              |       |
| Alkalinity, Total                       | ND                                      | 4.00               | mg/L  |                |                  |             |   |      |              |       |
| LCS (5112009-BS1)                       |   |                    |       | Prepared &     | k Analyzed:      | 25-Nov-15   |   |      |              |       |
| Alkalinity, Carbonate                   | ND                                      | 0.00               | mg/L  |                |                  |             | 80-120                                  |      |              |       |
| Alkalinity, Bicarbonate                 | 126                                     | 5.00               | mg/L  |                |                  |             | 80-120                                  |      |              |       |
| Alkalinity, Total                       | 104                                     | 4.00               | mg/L  | 100            |                  | 104         | 80-120                                  |      |              |       |
| LCS Dup (5112009-BSD1)                  |   |                    |       | Prepared &     | & Analyzed:      | 25-Nov-15   |   |      |              |       |
| Alkalinity, Carbonate                   | ND                                      | 0.00               | mg/L  |                |                  |             | 80-120                                  |      | 20           |       |
| Alkalinity, Bicarbonate                 | 126                                     | 5.00               | mg/L  |                |                  |             | 80-120                                  | 0.00 | 20           |       |
| Alkalinity, Total                       | 104                                     | 4.00               | mg/L  | 100            |                  | 104         | 80-120                                  | 0.00 | 20           |       |
| Batch 5112304 - Filtration              |   |                    |       |                |                  |             |   |      |              |       |
| Blank (5112304-BLK1)                    |   |                    |       | Prepared:      | 23-Nov-15        | Analyzed: 2 | 5-Nov-15                                |      |              |       |
| TDS                                     | ND                                      | 5.00               | mg/L  |                |                  |             |   |      |              |       |

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\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 07-Dec-15 16:25

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD    | RPD<br>Limit | Notes  |
|---|--------|--------------------|----------|----------------|------------------|-------------|----------------|--------|--------------|--------|
|   | Kesun  | Laint              | Units    | LOTOI          | Reduit           | 701120      | Limits         | - 10 0 |              | 1,0103 |
| Batch 5112304 - Filtration              |        |                    |          |                |                  |             |                |        |              |        |
| LCS (5112304-BS1)                       |        |                    |          | Prepared: 2    | 23-Nov-15        | Analyzed: 2 | 5-Nov-15       |        |              |        |
| TDS                                     | 524    | 5.00               | mg/L     | 527            |                  | 99.4        | 80-120         |        |              |        |
| Duplicate (5112304-DUP1)                | Sou    | rce: H503065       | -01      | Prepared: 2    | 23-Nov-15        | Analyzed: 2 | 25-Nov-15      |        |              |        |
| TDS                                     | 1750   | 5.00               | mg/L     |                | 1780             |             |                | 1.93   | 20           |        |
| Batch 5113005 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |        |              |        |
| Blank (5113005-BLK1)                    |        |                    |          | Prepared &     | k Analyzed:      | 30-Nov-15   | 5              |        |              |        |
| Sulfate                                 | ND     | 10.0               | mg/L     |                |                  |             |                |        |              |        |
| LCS (5113005-BS1)                       |        |                    |          | Prepared &     | & Analyzed:      | 30-Nov-15   | 5              |        |              |        |
| Sulfate                                 | 23.1   | 10.0               | mg/L     | 20.0           |                  | 116         | 80-120         |        |              |        |
| LCS Dup (5113005-BSD1)                  |        |                    |          | Prepared &     | k Analyzed:      | 30-Nov-15   | 5              |        |              |        |
| Sulfate                                 | 21.3   | 10.0               | mg/L     | 20.0           |                  | 106         | 80-120         | 8.30   | 20           |        |
| Batch 5120115 - NO PREP                 |        |                    |          |                |                  |             |                |        |              |        |
| LCS (5120115-BS1)                       |        |                    |          | Prepared &     | & Analyzed:      | 03-Dec-15   |                |        |              |        |
| Conductivity                            | 511    |                    | uS/cm    | 500            | 77               | 102         | 80-120         |        |              |        |
| Duplicate (5120115-DUP1)                | Sou    | rce: H503087       | -01      | Prepared &     | & Analyzed:      | : 03-Dec-15 | ;              |        |              |        |
| Conductivity                            | 422000 | 1.00               | uS/cm    |                | 389000           |             |                | 8.14   | 20           |        |
| Batch 5120117 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |        |              |        |
| LCS (5120117-BS1)                       |        |                    |          | Prepared &     | & Analyzed       | 03-Dec-15   | ;              |        |              |        |
| рН                                      | 7.14   |                    | pH Units | 7.00           |                  | 102         | 90-110         |        |              |        |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 07-Dec-15 16:25

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---|--------|--------------------|----------|----------------|------------------|-----------|----------------|-------|--------------|-------|
| Batch 5120117 - General Prep - Wet Chem |        |                    |          |                |                  |           |                |       |              |       |
| Duplicate (5120117-DUP1)                | Sou    | rce: H503077       | -01      | Prepared &     | Analyzed:        | 03-Dec-15 |                |       |              |       |
| рН                                      | 7.37   | 0.100              | pH Units |                | 7.32             |           |                | 0.681 | 20           |       |
| Batch 5120203 - General Prep - Wet Chem |        |                    |          |                |                  |           |                |       |              |       |
| Blank (5120203-BLK1)                    |        |                    |          | Prepared &     | Analyzed:        | 02-Dec-15 |                |       |              |       |
| Sulfate                                 | ND     | 10.0               | mg/L     |                |                  |           |                |       |              |       |
| LCS (5120203-BS1)                       |        |                    |          | Prepared &     | Analyzed:        | 02-Dec-15 |                |       |              |       |
| Sulfate                                 | 20.4   | 10.0               | mg/L     | 20.0           |                  | 102       | 80-120         |       |              |       |
| LCS Dup (5120203-BSD1)                  |        |                    |          | Prepared &     | Analyzed:        | 02-Dec-15 |                |       |              |       |
| Sulfate                                 | 19.9   | 10.0               | mg/L     | 20.0           |                  | 99.6      | 80-120         | 2.68  | 20           |       |
| Batch 5120206 - General Prep - Wet Chem |        |                    |          |                |                  |           |                |       |              |       |
| Blank (5120206-BLK1)                    |        |                    |          | Prepared &     | Analyzed:        | 02-Dec-15 |                |       |              |       |
| Alkalinity, Carbonate                   | ND     | 0.00               | mg/L     |                |                  |           |                |       |              |       |
| Alkalinity, Bicarbonate                 | ND     | 5.00               | mg/L     |                |                  |           |                |       |              |       |
| Alkalinity, Total                       | ND     | 4.00               | mg/L     |                |                  |           |                |       |              |       |
| LCS (5120206-BS1)                       |        |                    |          | Prepared &     | Analyzed:        | 02-Dec-15 |                |       |              |       |
| Alkalinity, Carbonate                   | ND     | 0.00               | mg/L     |                |                  |           | 80-120         |       |              |       |
| Alkalinity, Bicarbonate                 | 126    | 5.00               | mg/L     |                |                  |           | 80-120         |       |              |       |
| Alkalinity, Total                       | 104    | 4.00               | mg/L     | 100            |                  | 104       | 80-120         |       |              |       |
| LCS Dup (5120206-BSD1)                  |        |                    |          | Prepared &     | Analyzed:        | 02-Dec-15 |                |       |              |       |
| Alkalinity, Carbonate                   | ND     | 0.00               | mg/L     |                |                  |           | 80-120         |       | 20           |       |
| Alkalinity, Bicarbonate                 | 126    | 5.00               | mg/L     |                |                  |           | 80-120         | 0.00  | 20           |       |
| Alkalinity, Total                       | 104    | 4.00               | mg/L     | 100            |                  | 104       | 80-120         | 0.00  | 20           |       |

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\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN
Project Manager: BEN DONAHUE

Fax To:

Reported:

07-Dec-15 16:25

#### Total Recoverable Metals by ICP (E200.7) - Quality Control

#### **Green Analytical Laboratories**

| Analyte                   | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD    | RPD<br>Limit | Notes |
|---------------------------|--------|--------------------|-------|----------------|------------------|-----------|----------------|--------|--------------|-------|
| Batch B512007 - EPA 200.2 |        |                    |       |                |                  |           |                |        |              |       |
| Blank (B512007-BLK1)      |        |                    |       | Prepared &     | Analyzed:        | 01-Dec-15 |                |        |              |       |
| Calcium                   | 0.035  | 0.020              | mg/L  |                |                  |           |                |        |              | Bi    |
| Magnesium                 | ND     | 0.100              | mg/L  |                |                  |           |                |        |              |       |
| Sodium                    | 1.26   | 1.00               | mg/L  |                |                  |           |                |        |              | B3    |
| Potassium                 | ND     | 1.00               | mg/L  |                |                  |           |                |        |              |       |
| LCS (B512007-BS1)         |        |                    |       | Prepared &     | Analyzed:        | 01-Dec-15 |                |        |              |       |
| Magnesium                 | 19.6   | 0.100              | mg/L  | 20.0           |                  | 97.9      | 85-115         |        |              |       |
| Sodium                    | 7.20   | 1.00               | mg/L  | 6.48           |                  | 111       | 85-115         |        |              |       |
| Potassium                 | 7.95   | 1.00               | mg/L  | 8.00           |                  | 99.3      | 85-115         |        |              |       |
| Calcium                   | 4.06   | 0.020              | mg/L  | 4.00           |                  | 102       | 85-115         |        |              |       |
| LCS Dup (B512007-BSD1)    |        |                    |       | Prepared &     | k Analyzed:      | 01-Dec-15 |                |        |              |       |
| Magnesium                 | 19.6   | 0.100              | mg/L  | 20.0           |                  | 97.8      | 85-115         | 0.0694 | 20           |       |
| Sodium                    | 6.69   | 1.00               | mg/L  | 6.48           |                  | 103       | 85-115         | 7.27   | 20           |       |
| Calcium                   | 4.08   | 0.020              | mg/L  | 4.00           |                  | 102       | 85-115         | 0.394  | 20           |       |
| Potassium                 | 7.98   | 1.00               | mg/L  | 8.00           |                  | 99.8      | 85-115         | 0.465  | 20           |       |

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Clay 2 Kine



#### **Notes and Definitions**

| 33        | Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.  |
|-----------|---|
| 31        | Target analyte detected in method blank at or above method reporting limit. Sample concentration found to be 10 times above the concentration found in the method blank or less than the reporting limit. |
| D         | Analyte NOT DETECTED at or above the reporting limit  |
| RPD       | Relative Percent Difference   |
| <b>**</b> | Samples not received at proper temperature of 6°C or below.   |
| ***       | Insufficient time to reach temperature.   |
|           | Chloride by SM4500CI-B does not require samples be received at or below 6°C   |
|           | Samples reported on an as received basis (wet) unless otherwise noted on report   |

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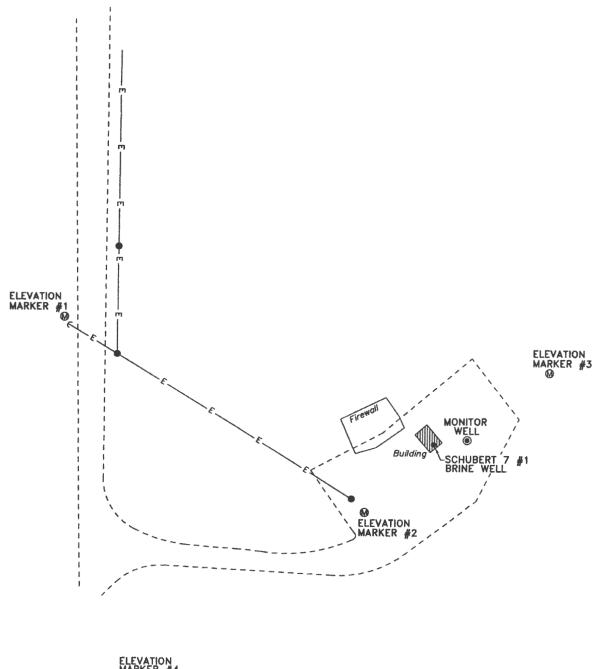


## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name   | ETZ Wate ( Stadius   | `  | BILL TO  |  | ANALYSIS REQ   | UEST       |
|--|--|--|--|--|--|------------|
| Project Manage   | 11: Ben Dirahue  |  | P.O. #:  |  |  |            |
| Address:   |  |  | Company:   |  |  |            |
| city: Hobb   | State: NM  | Zip: 93240   | Attn:  |  |  |            |
| Phone #:   | Fax #:   |  | Address:   |  |  |            |
| Project #:   | Project Owner  | :  | City:  | 3  |  |            |
| Project Name:  | Water Samples  |  | State: Zip:  | njous  |  |            |
| Project Location   | Project Location: Brie well, Munitor Well, Startum   |  |  | 7  |  |            |
| Sampler Name:  | ampler Name:   |  |  |  |  |            |
| FOR LAB LISE ONLY  |  | MATRIX   | PRESERV SAMPL  | The state of the s |  |            |
| Lab I.D.<br>H503087<br>1.<br>3.  | Sample I.D.  Brine water Monifox well Fresh water  | (G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL  | OTHER: ACID/BASE: ICE / COOL OTHER:  | TIME (Pation   |  |            |
|  |  |  |  |  |  |            |
| analyses. All claims include source. In no event shall Carlingue. In no event shall Carlingue in the Carling | addinal be Fable for incidental or consequencial diamages, including the out of or related to the performance of services inefeurated by C Date;  Time: ZOPM | teemed warved unities made in writing as<br>without limitation, business interruptions<br>ardinal regardless of whether such claim<br>Received By: | ind received by Cardwall within 30 days all is loss of use, or loss of profile incurred by in a based upon any of the above stated to Carolina Checker and Checker | er completion of the applicable client, is euclidaries, easons or cherwise.  Phone Result:   Yes Fax Result:   REMARKS:  | □ No Add'I Phone #: □ No Add'I Fax #:  gay machube + | egnasticom |

## SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST, N.M.P.M., LEA COUNTY,

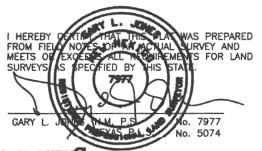


NOTE: ELEVATIONS ARE ON BLACK MARK ON NORTH SIDE OF PVC CASING.

## NEW MEXICO STATE PLANE COORDINATES (NAD83)

| WELL | NORTHING  | EASTING   | LATITUDE     | LONGITUDE     | ELEVATION |
|------|-----------|-----------|--------------|---------------|-----------|
| EM-1 | 611304.81 | 925484.92 | 32*40'27.52" | 103°05'05.71" | 3591.65   |
| EM-2 | 611100.65 | 925800.11 | 32'40'25.46" | 103'05'02.05" | 3586.37   |
| EM-3 | 611248.41 | 925991.42 | 32*40'26.90" | 103°04'59.79" | 3586.23   |
| EM-4 | 610926.15 | 925561.84 | 32*40'23.76" | 103°05'04.86" | 3586.94   |

| REVISION # | DATE          | DESCRIFTION                      |
|------------|---------------|----------------------------------|
| 1          | SEPT. 9, 2015 | ORIGINAL SURVEY                  |
| 2          | DEC. 15, 2015 | RESURVEY-NO CHANGE IN ELEVATIONS |



BASIN SURVEYS P.O. BOX 1786 -HOBBS, NEW MEXICO

Drawn By: K. GOAD W.O. Number: 31893 KJG - SCHUBERT MW 31893 Date: 12-16-2015 Disk:

100 100 200 FEET SCALE: 1" = 100'

H.R.C. INC.

REF: ELEVATION MARKERS

Survey Date: 09-09-2015

ELEVATION MARKERS LOCATED IN SECTION 7, TOWNSHIP 19 SOUTH, RANGE 39 EAST,

N.M.P.M., LEA COUNTY, NEW MEXICO.

Sheets Sheet of



May 12, 2015

**BEN DONAHUE** 

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: WATER SAMPLES** 

Enclosed are the results of analyses for samples received by the laboratory on 05/01/15 12:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab-accred-certif.html">www.tceq.texas.gov/field/qa/lab-accred-certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey & Keine

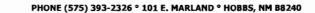
Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Reported:

12-May-15 13:25



#### Analytical Results For:

**ETZ WATER STATION** 

PO BOX 6056

HOBBS NM, 88241

Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

| Sample ID        | Laboratory ID | Matrix | Date Sampled    | Date Received   |
|------------------|---------------|--------|-----------------|-----------------|
| FRESH H20        | H501138-01    | Water  | 01-May-15 08:15 | 01-May-15 12:35 |
| BRINE H20        | H501138-02    | Water  | 01-May-15 08:15 | 01-May-15 12:35 |
| MONITOR WELL H20 | H501138-03    | Water  | 01-May-15 08:15 | 01-May-15 12:35 |

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\*=Accredited Analyte

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported:

12-May-15 13:25

#### FRESH H20 H501138-01 (Water)

| income of (mater)                 |         |     |                    |            |          |         |         |           |           |       |  |  |
|-----------------------------------|---------|-----|--------------------|------------|----------|---------|---------|-----------|-----------|-------|--|--|
| Analyte                           | Result  | MDL | Reporting<br>Limit | Units      | Dilution | Batch   | Analyst | Analyzed  | Method    | Notes |  |  |
| Cardinal Laboratories             |         |     |                    |            |          |         |         |           |           |       |  |  |
| Inorganic Compounds               |         |     |                    |            |          |         |         |           |           |       |  |  |
| Alkalinity, Bicarbonate           | 219     |     | 5.00               | mg/L       | 1        | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |
| Alkalinity, Carbonate             | ND      |     | 0.00               | mg/L       | I        | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |
| Chloride*                         | 132     |     | 4.00               | mg/L       | 1        | 5042913 | AP      | 03-May-15 | 4500-CI-B |       |  |  |
| Conductivity*                     | 1080    |     | 1.00               | uS/cm      | 1        | 5050404 | AP      | 05-May-15 | 120.1     |       |  |  |
| pH*                               | 8.20    |     | 0.100              | pH Units   | 1        | 5050403 | AP      | 05-May-15 | 150.1     |       |  |  |
| Sulfate*                          | 137     |     | 25.0               | mg/L       | 2.5      | 5042911 | AP      | 03-May-15 | 375.4     |       |  |  |
| TDS*                              | 706     |     | 5.00               | mg/L       | 1        | 5042902 | AP      | 05-May-15 | 160.1     |       |  |  |
| Alkalinity, Total*                | 180     |     | 4.00               | mg/L       | 1        | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |
|                                   |         | C   | Green Anal         | ytical Lab | ratories |         |         |           |           |       |  |  |
| Total Recoverable Metals by ICP ( | E200.7) |     |                    |            |          |         |         |           |           |       |  |  |
| Calcium*                          | 87.6    |     | 0.020              | mg/L       | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |
| Magnesium*                        | 27.7    |     | 0.100              | mg/L       | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |
| Potassium*                        | 4.28    |     | 1.00               | mg/L       | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |
| Sodium*                           | 95.1    |     | 1.00               | mg/L       | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |

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**ETZ WATER STATION** 

PO BOX 6056

HOBBS NM, 88241

Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

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Reported: 12-May-15 13:25

## BRINE H20

#### H501138-02 (Water)

| Analyte                     | Result       | Reporti<br>MDL Lin | ng<br>nit Units | Dilution   | Batch   | Analyst | Analyzed  | Method    | Notes |  |  |  |
|-----------------------------|--------------|--------------------|-----------------|------------|---------|---------|-----------|-----------|-------|--|--|--|
|                             |              | Card               | inal Labora     | tories     |         |         |           |           |       |  |  |  |
| Inorganic Compounds         |              |                    |                 |            |         |         |           |           |       |  |  |  |
| Alkalinity, Bicarbonate     | 117          | 5.0                | )() mg/L        | 1          | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |  |
| Alkalinity, Carbonate       | ND           | 0.0                | )() mg/L        | 1          | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |  |
| Chloride*                   | 212000       | 4.0                | )() mg/L        | I          | 5050301 | AP      | 03-May-15 | 4500-CI-B |       |  |  |  |
| Conductivity*               | 460000       | 1.0                | 00 uS/cm        | 1          | 5050404 | AP      | 05-May-15 | 120.1     |       |  |  |  |
| pH*                         | 6.92         | 0.10               | 00 pH Units     | I          | 5050403 | AP      | 05-May-15 | 150.1     |       |  |  |  |
| Sulfate*                    | 2650         | 100                | )0 mg/L         | 100        | 5042911 | AP      | 03-May-15 | 375.4     |       |  |  |  |
| TDS*                        | 313000       | 5.0                | )() mg/L        | 1          | 5042902 | AP      | 05-May-15 | 160.1     |       |  |  |  |
| Alkalinity, Total*          | 96.0         | 4.0                | )() mg/L        | 1          | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |  |
|                             |              | Green Ai           | nalytical Lal   | boratories |         |         |           |           |       |  |  |  |
| Total Recoverable Metals by | ICP (E200.7) |                    |                 |            |         |         |           |           |       |  |  |  |
| Calcium*                    | 1520         | 5.0                | )() mg/L        | 250        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |
| Magnesium*                  | 447          | 25                 | .0 mg/L         | 250        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |
| Potassium*                  | ND           | 2:                 | 50 mg/L         | 250        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |
| Sodium*                     | 118000       | 2:                 | 50 mg/L         | 250        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |

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PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

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12-May-15 13:25

#### MONITOR WELL H20

#### H501138-03 (Water)

| Analyte                        | Result                | MDL | Reporting<br>Limit | Units       | Dilution | Batch   | Analyst | Analyzed  | Method    | Notes |  |  |  |
|--------------------------------|-----------------------|-----|--------------------|-------------|----------|---------|---------|-----------|-----------|-------|--|--|--|
|                                | Cardinal Laboratories |     |                    |             |          |         |         |           |           |       |  |  |  |
| Inorganic Compounds            |                       |     |                    |             |          |         |         |           |           |       |  |  |  |
| Alkalinity, Bicarbonate        | 244                   |     | 5.00               | mg/L        | 1        | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |  |
| Alkalinity, Carbonate          | ND                    |     | 0.00               | mg/L        | 1        | 5050510 | AP      | 07-May-15 | 1.01      |       |  |  |  |
| Chloride*                      | 108                   |     | 4.00               | mg/L        | 1        | 5050301 | AP      | 03-May-15 | 4500-CI-B |       |  |  |  |
| Conductivity*                  | 807                   |     | 1.00               | uS/cm       | 1        | 5050404 | AP      | 05-May-15 | 120.1     |       |  |  |  |
| рН*                            | 8.25                  |     | 0.100              | pH Units    | ı        | 5050403 | AP      | 05-May-15 | 150.1     |       |  |  |  |
| Sulfate*                       | 45.8                  |     | 10.0               | mg/L        | 1        | 5042911 | AP      | 03-May-15 | 375.4     |       |  |  |  |
| TDS*                           | 528                   |     | 5.00               | mg/L        | 1        | 5042902 | AP      | 05-May-15 | 160.1     |       |  |  |  |
| Alkalinity, Total*             | 200                   |     | 4.00               | mg/L        | 1        | 5050510 | AP      | 07-May-15 | 310.1     |       |  |  |  |
|                                |                       | G   | reen Analy         | ytical Labo | ratories |         |         |           |           |       |  |  |  |
| Total Recoverable Metals by IC | CP (E200.7)           |     |                    |             |          |         |         | _         |           |       |  |  |  |
| Calcium*                       | 53.7                  |     | 0.020              | mg/L        | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |
| Magnesium*                     | 18.4                  |     | 0.100              | mg/L        | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |
| Potassium*                     | 2.96                  |     | 1.00               | mg/L        | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |
| Sodium*                        | 84.2                  |     | 1.00               | mg/L        | 1        | B505032 | JGS     | 06-May-15 | EPA200.7  |       |  |  |  |

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES
Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 12-May-15 13:25

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC       | %REC<br>Limits | RPD  | RPD<br>Limit                            | Notes |
|---|--------|--------------------|-------|----------------|------------------|------------|----------------|------|---|-------|
| Batch 5042902 - Filtration              |        |                    | 15.1  |                |                  |            |                |      |   |       |
| Blank (5042902-BLK1)                    |        |                    |       | Prepared: 2    | 29-Apr-15 A      | nalyzed: 0 | 1-May-15       |      |   |       |
| TDS                                     | ND     | 5.00               | mg/L  |                |                  |            |                |      |   |       |
| LCS (5042902-BS1)                       |        |                    |       | Prepared: 2    | 29-Apr-15 A      | nalyzed: 0 | 1-May-15       |      |   |       |
| TDS                                     | 512    | 5.00               | mg/L  | 527            |                  | 97.2       | 80-120         |      |   |       |
| Duplicate (5042902-DUP1)                | Sou    | rce: H501092-      | 02    | Prepared: 2    | 29-Apr-15 A      | nalyzed: 0 | 1-May-15       |      |   |       |
| TDS                                     | 642    | 5.00               | mg/L  |                | 628              |            |                | 2.20 | 20                                      |       |
| Batch 5042911 - General Prep - Wet Chem |        |                    | 7.7.  |                |                  |            |                |      |   |       |
| Blank (5042911-BLK1)                    |        |                    |       | Prepared &     | & Analyzed:      | 03-May-15  | 5              |      |   |       |
| Sulfate                                 | ND     | 10.0               | mg/L  |                |                  |            |                |      |   |       |
| LCS (5042911-BS1)                       |        |                    |       | Prepared &     | & Analyzed:      | 03-May-15  | 5              |      |   |       |
| Sulfate                                 | 18.9   | 10.0               | mg/L  | 20.0           |                  | 94.4       | 80-120         |      |   |       |
| LCS Dup (5042911-BSD1)                  |        |                    |       | Prepared &     | & Analyzed:      | 03-May-15  | 5              |      |   |       |
| Sulfate                                 | 19.1   | 10.0               | mg/L  | 20.0           |                  | 95.6       | 80-120         | 1.21 | 20                                      |       |
| Batch 5042913 - General Prep - Wet Chem |        |                    |       |                |                  |            |                |      |   |       |
| Blank (5042913-BLK1)                    |        |                    |       | Prepared &     | & Analyzed:      | 29-Apr-15  |                |      |   |       |
| Chloride                                | ND     | 4.00               | mg/L  |                |                  |            |                |      |   |       |
| LCS (5042913-BS1)                       |        |                    |       | Prepared &     | & Analyzed:      | 29-Apr-15  |                |      |   |       |
| Chloride                                | 108    | 4.00               | mg/L  | 100            |                  | 108        | 80-120         |      | 111111111111111111111111111111111111111 |       |

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Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

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Reported: 12-May-15 13:25

#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

|   |        | Reporting    |          | Spike      | Source      |             | %REC      |       | RPD   |       |
|---|--------|--------------|----------|------------|-------------|-------------|-----------|-------|-------|-------|
| Analyte                                 | Result | Limit        | Units    | Level      | Result      | %REC        | Limits    | RPD   | Limit | Notes |
| Batch 5042913 - General Prep - Wet Chem |        |              |          |            |             | **          |           |       |       |       |
| LCS Dup (5042913-BSD1)                  |        |              |          | Prepared & | k Analyzed: | 29-Apr-15   |           |       |       |       |
| Chloride                                | 112    | 4.00         | mg/L     | 100        |             | 112         | 80-120    | 3.64  | 20    |       |
| Batch 5050301 - General Prep - Wet Chem |        |              |          |            |             |             |           |       |       |       |
| Blank (5050301-BLK1)                    |        |              |          | Prepared & | k Analyzed: | 03-May-15   | 5         |       |       |       |
| Chloride                                | ND     | 4.00         | mg/L     |            |             |             |           |       |       |       |
| LCS (5050301-BS1)                       |        |              |          | Prepared & | k Analyzed: | 03-May-15   | 5         |       |       |       |
| Chloride                                | 100    | 4.00         | mg/L     | 100        |             | 100         | 80-120    |       |       |       |
| LCS Dup (5050301-BSD1)                  |        |              |          | Prepared & | & Analyzed: | 03-May-15   | 5         |       |       |       |
| Chloride                                | 104    | 4.00         | mg/L     | 100        |             | 104         | 80-120    | 3.92  | 20    |       |
| Batch 5050403 - General Prep - Wet Chem |        |              |          |            |             |             |           |       |       | ****  |
| LCS (5050403-BS1)                       |        |              |          | Prepared:  | 04-May-15   | Analyzed: ( | )5-May-15 |       |       |       |
| рН                                      | 7.15   |              | pH Units | 7.00       |             | 102         | 90-110    |       |       |       |
| Duplicate (5050403-DUP1)                | Sou    | rce: H501138 | -01      | Prepared:  | 04-May-15   | Analyzed: ( | )5-May-15 |       |       |       |
| рН                                      | 8.19   | 0.100        | pH Units |            | 8.20        |             |           | 0.122 | 20    |       |
| Batch 5050404 - General Prep - Wet Chem |        |              |          |            |             |             |           |       |       |       |
| LCS (5050404-BS1)                       |        |              |          | Prepared:  | 04-May-15   | Analyzed: ( | 05-May-15 |       |       |       |
| Conductivity                            | 993    | -            | uS/cm    | 1010       |             | 98.3        | 80-120    |       |       |       |

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**ETZ WATER STATION** PO BOX 6056 HOBBS NM, 88241

Project: WATER SAMPLES Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

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#### **Inorganic Compounds - Quality Control**

#### **Cardinal Laboratories**

|   |        |               |       |             | -         |             | 0/050     |       | nnn.  |       |
|---|--------|---------------|-------|-------------|-----------|-------------|-----------|-------|-------|-------|
|   |        | Reporting     |       | Spike       | Source    |             | %REC      |       | RPD   |       |
| Analyte                                 | Result | Limit         | Units | Level       | Result    | %REC        | Limits    | RPD   | Limit | Notes |
| Batch 5050404 - General Prep - Wet Chem |        |               |       |             |           |             |           |       |       |       |
| Duplicate (5050404-DUP1)                | Sou    | rce: H501116- | 03    | Prepared: ( | 04-May-15 | Analyzed: 0 | 5-May-15  |       |       |       |
| Conductivity                            | 45.1   | 1.00          | uS/cm |             | 44.6      |             |           | 1.11  | 20    |       |
| Batch 5050510 - General Prep - Wet Chem |        |               |       |             | ,         |             |           |       |       |       |
| Blank (5050510-BLK1)                    |        |               |       | Prepared: ( | 5-May-15  | Analyzed: 0 | 7-May-15  |       |       |       |
| Alkalinity, Carbonate                   | ND     | 0.00          | mg/L  |             |           |             |           |       |       |       |
| Alkalinity, Bicarbonate                 | ND     | 5.00          | mg/L  |             |           |             |           |       |       |       |
| Alkalinity, Total                       | ND     | 4.00          | mg/L  |             |           |             |           |       |       |       |
| LCS (5050510-BS1)                       |        |               |       | Prepared: ( | )5-May-15 | Analyzed: ( | )7-May-15 |       |       |       |
| Alkalinity, Carbonate                   | ND     | 0.00          | mg/L  |             |           |             | 80-120    |       |       |       |
| Alkalinity, Bicarbonate                 | 122    | 5.00          | mg/L  |             |           |             | 80-120    |       |       |       |
| Alkalinity, Total                       | 100    | 4.00          | mg/L  | 100         |           | 100         | 80-120    |       |       |       |
| LCS Dup (5050510-BSD1)                  |        |               |       | Prepared: ( | )5-May-15 | Analyzed: ( | )7-May-15 | E-IV. |       |       |
| Alkalinity, Carbonate                   | ND     | 0.00          | mg/L  |             |           |             | 80-120    |       | 20    |       |
| Alkalinity, Bicarbonate                 | 122    | 5.00          | mg/L  |             |           |             | 80-120    | 0.00  | 20    |       |
| Alkalinity, Total                       | 100    | 4.00          | mg/L  | 100         |           | 100         | 80-120    | 0.00  | 20    |       |

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**ETZ WATER STATION** 

PO BOX 6056 HOBBS NM, 88241 Project: WATER SAMPLES

Project Number: NONE GIVEN Project Manager: BEN DONAHUE

Fax To:

Reported: 12-May-15 13:25

#### Total Recoverable Metals by ICP (E200.7) - Quality Control

#### **Green Analytical Laboratories**

| Analyte                   | Result | Reporting<br>Limit | Units  | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD   | RPD<br>Limit | Notes  |
|---------------------------|--------|--------------------|--------|----------------|------------------|-----------|----------------|-------|--------------|--------|
| Analyte                   | Result | Lillit             | Oilles | Level          | Kesuit           | /OKEC     | Limits         | IA D  | Lillit       | 110165 |
| Batch B505032 - EPA 200.2 |        |                    |        |                |                  |           |                |       |              |        |
| Blank (B505032-BLK1)      |        |                    |        | Prepared &     | Analyzed:        | 06-May-15 | 5              |       |              |        |
| Sodium                    | ND     | 1.00               | ing/L  |                |                  |           |                |       |              |        |
| Magnesium                 | ND     | 0.100              | mg/L   |                |                  |           |                |       |              |        |
| Calcium                   | 0.026  | 0.020              | mg/L   |                |                  |           |                |       |              | В      |
| Potassium                 | ND     | 1.00               | mg/L   |                |                  |           |                |       |              |        |
| LCS (B505032-BS1)         |        |                    |        | Prepared &     | k Analyzed:      | 06-May-15 | 5              |       |              |        |
| Calcium                   | 4.16   | 0.020              | mg/L   | 4.00           |                  | 104       | 85-115         |       |              |        |
| Potassium                 | 8.58   | 1.00               | mg/L   | 8.00           |                  | 107       | 85-115         |       |              |        |
| Sodium                    | 7.01   | 1.00               | mg/L   | 6.48           |                  | 108       | 85-115         |       |              |        |
| Magnesium                 | 21.4   | 0.100              | mg/L   | 20.0           |                  | 107       | 85-115         |       |              |        |
| LCS Dup (B505032-BSD1)    |        |                    |        | Prepared &     | k Analyzed:      | 06-May-15 | 5              |       |              |        |
| Potassium                 | 8.40   | 1.00               | mg/L   | 8.00           |                  | 105       | 85-115         | 2.13  | 20           |        |
| Sodium                    | 6.98   | 1.00               | mg/L   | 6.48           |                  | 108       | 85-115         | 0.517 | 20           |        |
| Calcium                   | 4.13   | 0.020              | mg/L   | 4.00           |                  | 103       | 85-115         | 0.723 | 20           |        |
| Magnesium                 | 21.1   | 0.100              | mg/L   | 20.0           |                  | 106       | 85-115         | 1.48  | 20           |        |

#### Cardinal Laboratories

\*=Accredited Analyte

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#### **Notes and Definitions**

B1 Target analyte detected in method blank at or above method reporting limit. Sample concentration found to be 10 times above the concentration found in the method blank or less than the reporting limit.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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Celeg & trune



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name: ETZ Wester Staction   |  | BILL TO  | AN   | IALYSIS REQUE | ST   |
|---|--|--|--|---------------|--|
| Project Manager: Ben Down   |  | P.O. #:  |  |               |  |
| Address: P-O. Box 6056  |  | Company:   |  |               |  |
| City: Hobbs State: NM Zip   | : 88241  | Attn:  |  |               |  |
| Phone #: 575 343 3144 Fax#:   |  | Address:   |  |               |  |
| Project #: Project Owner:   | Manager Williams and Market and Market and Market and Advantage and Adva | City:  | Anton  |               |  |
| Project Name:   |  | State: Zip:  |  |               |  |
| Project Location:   | The second secon | Phone #:   | 4  |               |  |
| Sampler Name:   | To be a second to the second t | Fax #:   | 18   |               |  |
| FOR LAB USE ONLY  | MATRIX   | PRESERV SAMPLING   | 151111   |               |  |
| Lab I.D. Sample I.D. 80(0) NO 80 NO | # CONTAINERS<br>GROUNDWATER<br>WASTEWATER<br>SOIL<br>OIL   | ACID/BASE: IGE / COOL OTHER:  THER:   | lations  |               |  |
| 1 Fresh HZD G   |  | 5/1/5 8:15   |  |               | Annua Milliannon - Annua II i annua airikhinin - a annua i annua airikhinin annua airikhinin annua airikhinin a  |
| 1 Fresh HZD G<br>Z Brine HZO<br>3 Moniter Well HZO  |  |  |  |               |  |
| 3 monitor Well Hzo I  | 11/  |  |  |               |  |
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|   |  |  | 1   -     -  |               |  |
| PLEASE NOTE: Liability and Dismages. Cardinal's liability and client's exclusive remedy for any clair analyses. All claims including those for negligence and any other cause whatsoever shall be deened  |  |  |  |               |  |

service. In no event shall Cardynal to Earlie for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of use, or loss of profits included by client, its subsectiones.

| Relinquished By:   | Date: Redelived By: Time:  Received By:  HUNDON  Time:   | Phone Result: 9 Yes 10 No Add'l Phone #: Fax Result: 9 Yes 10 No Add'l Fax #: REMARKS:  Garymschubertagmail. Com |
|--|--|--|
| Delivered By: (Circle One)<br>Sampler - UPS - Bus - Other: | Sample Condition CHECKED BY: Cool Intact (Mithals) No No |  |

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to (575) 395-2326



# HRC, INC.

P. O. Box 5102

RECEIVED OCD

Hobbs, NM 88241-5102 Phone # (575) 393-6662 2014 FEB - 3 A 11: 23 Fax # (575) 393-6662

January 17, 2013

Jim Griswold Senior Hydrologist **ENMRD/Oil Conservation Division** 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Ref: 2013 Annual Report

**B-31 Schubert 7 – Well #1** 

Dear Mr. Griswold,

Enclosed please find the monthly freshwater injection and brine production numbers for the Hobbs facility for the year 2013. Included also are Cardinal Laboratories' results of analyses for samples for the month of May and November, 2013.

Thank you,

Sincerely,

Gary M. Schubert

GMS/br

BW – 31 SCHUBERT 7 – WELL # 1

# **YEAR 2013**

| MONTH     | BRINE<br>PRODUCTION<br>(BY Meter) | FRESH WATER<br>INJECTED<br>(By Meter) |  |  |  |  |
|-----------|-----------------------------------|---------------------------------------|--|--|--|--|
|           |                                   |                                       |  |  |  |  |
| January   | 19,065                            | 20,333                                |  |  |  |  |
| February  | 20,164                            | 20,714                                |  |  |  |  |
| March     | 25,141                            | 25,460                                |  |  |  |  |
| April     | 25,531                            | 26,048                                |  |  |  |  |
| May       | 23,532                            | 23,910                                |  |  |  |  |
| June      | 23,412                            | 24,733                                |  |  |  |  |
| July      | 27,890                            | 28,862                                |  |  |  |  |
| August    | 29,912                            | 30,119                                |  |  |  |  |
| September | 27,110                            | 27,919                                |  |  |  |  |
| October   | 32,134                            | 29,557~                               |  |  |  |  |
| November  | 25,865                            | 24,643                                |  |  |  |  |
| December  | 25,037                            | 25,510                                |  |  |  |  |

Total

BW 31 SCHUBERT 7 - WELL # 1

| MONTH/YEAR  | ETZ BRINE | PATE BRINE | TOTAL BRINE | FRESH    | DATE FRESH  | FRESH WATER | FRESH WATER | TOTAL FRESH |
|-------------|-----------|------------|-------------|----------|-------------|-------------|-------------|-------------|
| 2013        | WATER     | WATER      | WATER       | WATER    | WATER METER | METER       | USED BY     | WATER       |
|             | BBLS      | BBLS       | BBLS        | INJECTED | READ        | READING BY  | GALLONS     | BBLS        |
|             |           |            |             | BBLS     |             | GALLONS     | (X 100)     |             |
|             |           |            |             |          |             | (X 100)     |             |             |
|             |           |            |             |          |             |             |             |             |
| Jan. 2013   | 18,870    | 195        | 19,065      | 20,333   | 1/31/2013   | 587,861     | 8,540       | 20,333      |
| Feb. 2013   | 20,100    | 64         | 20,164      | 20,714   | 02/28/12    | 596,561     | 8,700       | 20,714      |
| March. 2012 | 24,960    | 181        | 25,141      | 25,460   | 03/31/13    | 607,254     | 10,693      | 25,460      |
| April. 2013 | 25,410    | 121        | 25,531      | 26,048   | 04/30/13    | 618,194     | 10,940      | 26,048      |
| May. 2013   | 23,530    | 2          | 23,532      | 23,910   | 05/31/13    | 628,236     | 10,042      | 23,910      |
| June. 2013  | 23,400    | 12         | 23,412      | 24,733   | 06/30/13    | 638,624     | 10,388      | 24,733      |
| July. 2013  | 27,820    | 70         | 27,890      | 28,862   | 07/31/13    | 650,746     | 12,122      | 28,862      |
| Aug. 2013   | 29,900    | 12         | 29,912      | 30,119   | 08/31/13    | 663,396     | 12,650      | 30,119      |
| Sept. 2013  | 27,110    | -          | 27,110      | 27,919   | 09/30/13    | 675,122     | 11,726      | 27,919      |
| Oct. 2013   | 32,048    | 86         | 32,134      | 29,557   | 10/31/13    | 687,536     | 12,414      | 29,557      |
| Nov. 2013   | 25,761    | 104        | 25,865      | 24,643   | 11/30/13    | 697,886     | 10,350      | 24,643      |
| Dec. 2013   | 24,714    | 323        | 25,037      | 25,510   | 12/31/13    | 708,600     | 10,714      | 25,510      |
|             |           |            |             |          |             |             |             |             |
|             |           |            |             |          |             |             |             |             |



December 19, 2013

GARY SCHUBERT
SCHUBERT CONSTRUCTION
P. O. BOX 6056
HOBBS, NM 88241

RE: WATER WELL

Enclosed are the results of analyses for samples received by the laboratory on 11/18/13 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



SCHUBERT CONSTRUCTION

Project: WATER WELL

Reported:

P. O. BOX 6056

Project Number: ETZ

19-Dec-13 11:44

HOBBS NM, 88241

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

| Sample ID    | Laboratory ID | Matrix | Date Sampled    | Date Received   |  |  |
|--------------|---------------|--------|-----------------|-----------------|--|--|
| MONITOR WELL | H302815-01    | Water  | 23-May-13 09:00 | 18-Nov-13 15:35 |  |  |
| BRINE WELL   | H302815-02    | Water  | 23-May-13 09:00 | 18-Nov-13 15:35 |  |  |
| FRESH        | H302815-03    | Water  | 23-May-13 09:00 | 18-Nov-13 15:35 |  |  |
| MONITOR WELL | H302815-04    | Water  | 18-Nov-13 09:00 | 18-Nov-13 15:35 |  |  |
| BRINE WELL   | H302815-05    | Water  | 18-Nov-13 09:00 | 18-Nov-13 15:35 |  |  |
| FRESH        | H302815-06    | Water  | 18-Nov-13 09:00 | 18-Nov-13 15:35 |  |  |

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Kune



SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Reported: 19-Dec-13 11:44

Project Number: ETZ

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

#### MONITOR WELL H302815-01 (Water)

| Analyte                        | Result     | Reporting<br>MDL Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|--------------------------------|------------|------------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
|                                |            | Cardin                 | al Laborat  | tories    |         |         |           |           |       |
| Inorganic Compounds            |            |                        |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate        | 215        | 5.00                   | mg/L        | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
| Alkalinity, Carbonate          | ND         | 0.00                   | mg/L        | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
| Chloride*                      | 409        | 4.00                   | mg/L        | 1         | 3112502 | AP      | 25-Nov-13 | 4500-CI-B | I-02  |
| Conductivity*                  | 1920       | 1.00                   | uS/cm       | 1         | 3112007 | AP      | 20-Nov-13 | 120.1     | I-02  |
| pH*                            | 7.98       | 0.100                  | pH Units    | 1         | 3112005 | AP      | 20-Nov-13 | 9045      | I-02  |
| Sulfate*                       | 181        | 25.0                   | mg/L        | 2.5       | 3112504 | AP      | 25-Nov-13 | 375.4     | 1-02  |
| TDS*                           | 1150       | 5.00                   | mg/L        | 1         | 3112508 | AP      | 25-Nov-13 | 160.1     | I-02  |
| Alkalinity, Total*             | 176        | 4.00                   | mg/L        | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
|                                |            | Green Ana              | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by IC | P (E200.7) |                        |             |           |         |         |           |           |       |
| Calcium*                       | 148        | 5.00                   | mg/L        | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | HI    |
| Magnesium*                     | 41.7       | 5.00                   | mg/L        | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | HI    |
| Potassium*                     | 7.16       | 5.00                   | mg/L        | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | H1    |
| Sodium*                        | 210        | 5.00                   | mg/L        | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | HI    |
|                                |            |                        |             |           |         |         |           |           |       |

\*=Accredited Analyte Cardinal Laboratories

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Celey D. Keine

Reported:

19-Dec-13 11:44



### Analytical Results For:

SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Project Number: ETZ

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### BRINE WELL H302815-02 (Water)

| Analyte                       | Result      | MDL Reporting | Units      | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-------------------------------|-------------|---------------|------------|-----------|---------|---------|-----------|-----------|-------|
|                               |             | Cardin        | al Laborat | ories     |         |         |           |           |       |
| Inorganic Compounds           |             |               |            |           |         |         |           |           |       |
| Alkalinity, Bicarbonate       | 159         | 5.00          | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
| Alkalinity, Carbonate         | ND          | 0.00          | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
| Chloride*                     | 186000      | 4.00          | mg/L       | 1         | 3112502 | AP      | 25-Nov-13 | 4500-CI-B | I-02  |
| Conductivity*                 | 463000      | 1.00          | uS/cm      | 1         | 3112007 | AP      | 20-Nov-13 | 120.1     | I-02  |
| pH*                           | 6.84        | 0.100         | pH Units   | 1         | 3112005 | AP      | 20-Nov-13 | 9045      | I-02  |
| Sulfate*                      | 4560        | 1000          | mg/L       | 100       | 3112504 | AP      | 25-Nov-13 | 375.4     | I-02  |
| TDS*                          | 312000      | 5.00          | mg/L       | 1         | 3112508 | AP      | 25-Nov-13 | 160.1     | I-02  |
| Alkalinity, Total*            | 130         | 4.00          | mg/L       | ı         | 3112110 | AP      | 25-Nov-13 | 310.1     | 1-02  |
|                               |             | Green Anal    | ytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by I | CP (E200.7) |               |            |           |         |         |           |           |       |
| Calcium*                      | 1530        | 200           | mg/L       | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  | HI    |
| Magnesium*                    | 514         | 200           | mg/L       | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  | HI    |
| Potassium*                    | 244         | 200           | mg/L       | 200       | B311167 | JG\$    | 17-Dec-13 | EPA200.7  | HI    |
| Sodium*                       | 118000      | 200           | mg/L       | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  | HI    |

Cardinal Laboratories \*=Accredited Analyte

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Celey & Keine



SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Project Number: ETZ Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

Reported:

19-Dec-13 11:44

### **FRESH**

### H302815-03 (Water)

| Analyte                           | Result  | MDL | Reporting<br>Limit | Units      | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-----------------------------------|---------|-----|--------------------|------------|-----------|---------|---------|-----------|-----------|-------|
| Cardinal Laboratories             |         |     |                    |            |           |         |         |           |           |       |
| Inorganic Compounds               |         |     |                    |            |           |         |         |           |           |       |
| Alkalinity, Bicarbonate           | 195     |     | 5.00               | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
| Alkalinity, Carbonate             | ND      |     | 0.00               | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
| Chloride*                         | 176     |     | 4.00               | mg/L       | 1         | 3112502 | AP      | 25-Nov-13 | 4500-CI-B | I-02  |
| Conductivity*                     | 1080    |     | 1.00               | uS/cm      | 1         | 3112007 | AP      | 20-Nov-13 | 120.1     | I-02  |
| pH*                               | 8.07    |     | 0.100              | pH Units   | 1         | 3112005 | AP      | 20-Nov-13 | 9045      | I-02  |
| Sulfate*                          | 110     |     | 25.0               | mg/L       | 2.5       | 3112504 | AP      | 25-Nov-13 | 375.4     | I-02  |
| TDS*                              | 666     |     | 5.00               | mg/L       | 1         | 3112508 | AP      | 25-Nov-13 | 160.1     | I-02  |
| Alkalinity, Total*                | 160     |     | 4.00               | mg/L       | ı         | 3112110 | AP      | 25-Nov-13 | 310.1     | I-02  |
|                                   |         | G   | reen Anal          | ytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by ICP ( | E200.7) |     |                    |            |           |         |         |           |           |       |
| Calcium*                          | 75.1    |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | HI    |
| Magnesium*                        | 17.7    |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | HI    |
| Potassium*                        | 14.4    |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | HI    |
| Sodium*                           | 124     |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  | Н1    |

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Reported: 19-Dec-13 11:44

Project Number: ETZ Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### MONITOR WELL H302815-04 (Water)

| Analyte                         | Result     | MDL R | eporting<br>Limit | Units      | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|---------------------------------|------------|-------|-------------------|------------|-----------|---------|---------|-----------|-----------|-------|
|                                 |            | •     | Cardina           | l Laborat  | ories     |         |         |           |           |       |
| Inorganic Compounds             |            |       |                   |            |           |         |         |           |           |       |
| Alkalinity, Bicarbonate         | 229        |       | 5.00              | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
| Alkalinity, Carbonate           | ND         |       | 0.00              | mg/L       | ı         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
| Chloride*                       | 240        |       | 4.00              | mg/L       | 1         | 3112502 | AP      | 25-Nov-13 | 4500-CI-B |       |
| Conductivity*                   | 1170       |       | 1.00              | uS/cm      | 1         | 3112007 | AP      | 20-Nov-13 | 120.1     |       |
| pH*                             | 8.02       |       | 0.100             | pH Units   | 1         | 3112005 | AP      | 20-Nov-13 | 9045      |       |
| Sulfate*                        | 65.6       |       | 10.0              | mg/L       | 1         | 3112504 | AP      | 25-Nov-13 | 375.4     |       |
| TDS*                            | 719        |       | 5.00              | mg/L       | 1         | 3112508 | AP      | 25-Nov-13 | 160.1     |       |
| Alkalinity, Total*              | 188        |       | 4.00              | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
|                                 |            | Gree  | en Analy          | ytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by ICF | P (E200.7) |       |                   |            |           |         |         |           |           |       |
| Calcium*                        | 75.6       |       | 5.00              | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |
| Magnesium*                      | 23.3       |       | 5.00              | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |
| Potassium*                      | ND         |       | 5.00              | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |
| Sodium*                         | 158        |       | 5.00              | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |

Cardinal Laboratories \*=Accredited Analyte

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SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

1 Nojecci 177112

Reported: 19-Dec-13 11:44

Project Number: ETZ

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### BRINE WELL H302815-05 (Water)

| Analyte                       | Result      | Reporting<br>MDL Limit | Units       | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|-------------------------------|-------------|------------------------|-------------|-----------|---------|---------|-----------|-----------|-------|
| Cardinal Laboratories         |             |                        |             |           |         |         |           |           |       |
| Inorganic Compounds           |             |                        |             |           |         |         |           |           |       |
| Alkalinity, Bicarbonate       | 117         | 5.00                   | mg/L        | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
| Alkalinity, Carbonate         | ND          | 0.00                   | mg/L        | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
| Chloride*                     | 184000      | 4.00                   | mg/L        | 1         | 3112502 | AP      | 25-Nov-13 | 4500-CI-B |       |
| Conductivity*                 | 402000      | 1.00                   | uS/cm       | 1         | 3112007 | AP      | 20-Nov-13 | 120.1     |       |
| pH*                           | 6.78        | 0.100                  | pH Units    | 1         | 3112005 | AP      | 20-Nov-13 | 9045      |       |
| Sulfate*                      | 4250        | 1000                   | mg/L        | 100       | 3112504 | AP      | 25-Nov-13 | 375.4     |       |
| TDS*                          | 312000      | 5.00                   | mg/L        | 1         | 3112508 | AP      | 25-Nov-13 | 160.1     |       |
| Alkalinity, Total*            | 96.0        | 4.00                   | mg/L        | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
|                               |             | Green Ana              | lytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by I | CP (E200.7) |                        |             |           |         |         |           |           |       |
| Calcium*                      | 1630        | 200                    | mg/L        | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  |       |
| Magnesium*                    | 547         | 200                    | mg/L        | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  |       |
| Potassium*                    | 310         | 200                    | mg/L        | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  |       |
| Sodium*                       | 126000      | 200                    | mg/L        | 200       | B311167 | JGS     | 17-Dec-13 | EPA200.7  |       |

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SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Reported: 19-Dec-13 11:44

Project Number: ETZ

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### **FRESH**

### H302815-06 (Water)

| Analyte                               | Result | MDL | Reporting<br>Limit | Units      | Dilution  | Batch   | Analyst | Analyzed  | Method    | Notes |
|---------------------------------------|--------|-----|--------------------|------------|-----------|---------|---------|-----------|-----------|-------|
| Cardinal Laboratories                 |        |     |                    |            |           |         |         |           |           |       |
| Inorganic Compounds                   |        |     | ***                |            |           |         |         |           |           |       |
| Alkalinity, Bicarbonate               | 268    |     | 5.00               | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
| Alkalinity, Carbonate                 | ND     |     | 0.00               | mg/L       | 1         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
| Chloride*                             | 240    |     | 4.00               | mg/L       | 1         | 3112502 | AP      | 25-Nov-13 | 4500-CI-B |       |
| Conductivity*                         | 1360   |     | 1.00               | uS/cm      | 1         | 3112008 | AP      | 20-Nov-13 | 120.1     |       |
| pH*                                   | 8.07   |     | 0.100              | pH Units   | 1         | 3112005 | AP      | 20-Nov-13 | 9045      |       |
| Sulfate*                              | 138    |     | 25.0               | mg/L       | 2.5       | 3112504 | AP      | 25-Nov-13 | 375.4     |       |
| TDS*                                  | 839    |     | 5.00               | mg/L       | 1         | 3112508 | AP      | 25-Nov-13 | 160.1     |       |
| Alkalinity, Total*                    | 220    |     | 4.00               | mg/L       | ı         | 3112110 | AP      | 25-Nov-13 | 310.1     |       |
|                                       |        | C   | Green Anal         | ytical Lab | oratories |         |         |           |           |       |
| Total Recoverable Metals by ICP (E200 | ).7)   |     |                    |            |           |         |         |           |           |       |
| Calcium*                              | 108    |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |
| Magnesium*                            | 23.4   |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |
| Potassium*                            | 17.5   |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |
| Sodium*                               | 153    |     | 5.00               | mg/L       | 5         | B311167 | JGS     | 21-Nov-13 | EPA200.7  |       |

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Celey D. Keine



SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Reported: 19-Dec-13 11:44

Project Number: ETZ

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

|   |        |                    |          |                | _                |             |                |       |              |       |
|---|--------|--------------------|----------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Analyte                                 | Result | Reporting<br>Limit | Units    | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
| Allalyte                                | Result | Lilling            | Cinto    |                |                  | VICEC       | - Emmis        |       |              |       |
| Batch 3112005 - NO PREP                 |        |                    |          |                |                  |             |                |       |              |       |
| LCS (3112005-BS1)                       |        |                    |          | Prepared &     | Analyzed:        | 20-Nov-13   |                |       |              |       |
| рН                                      | 7.09   |                    | pH Units | 7.00           |                  | 101         | 90-110         |       |              |       |
| Duplicate (3112005-DUP1)                | Sour   | rce: H302806       | -01      | Prepared &     | Analyzed:        | 20-Nov-13   |                |       |              |       |
| рН                                      | 7.45   | 0.100              | pH Units |                | 7.39             |             |                | 0.809 | 20           |       |
| Batch 3112007 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| LCS (3112007-BS1)                       |        |                    |          | Prepared &     | Analyzed:        | 20-Nov-13   |                |       |              |       |
| Conductivity                            | 470    |                    | uS/cm    | 500            |                  | 94.0        | 80-120         |       |              |       |
| Duplicate (3112007-DUP1)                | Sou    | rce: H302806       | -01      | Prepared &     | Analyzed:        | 20-Nov-13   |                |       |              |       |
| Conductivity                            | 4120   | 1.00               | uS/cm    |                | 4160             |             |                | 0.966 | 20           |       |
| Batch 3112008 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| LCS (3112008-BS1)                       |        |                    |          | Prepared &     | k Analyzed:      | 20-Nov-13   |                |       |              |       |
| Conductivity                            | 471    |                    | uS/cm    | 500            |                  | 94.2        | 80-120         |       |              |       |
| Duplicate (3112008-DUP1)                | Sou    | rce: H302815       | -06      | Prepared &     | k Analyzed:      | 20-Nov-13   |                |       |              |       |
| Conductivity                            | 1360   | 1.00               | uS/cm    |                | 1360             |             |                | 0.147 | 20           |       |
| Batch 3112110 - General Prep - Wet Chem |        |                    |          |                |                  |             |                |       |              |       |
| Blank (3112110-BLK1)                    |        |                    |          | Prepared &     | k Analyzed:      | : 21-Nov-13 |                |       |              |       |
| Alkalinity, Carbonate                   | ND     | 0.00               | mg/L     |                |                  | W-1         |                |       |              |       |
| Alkalinity, Bicarbonate                 | ND     | 5.00               | mg/L     |                |                  |             |                |       |              |       |
|   |        |                    |          |                |                  |             |                |       |              |       |

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SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Project Number: ETZ

Reported: 19-Dec-13 11:44

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC      | %REC<br>Limits | RPD  | RPD<br>Limit | Notes                                 |
|---|--------|--------------------|-------|----------------|------------------|-----------|----------------|------|--------------|---------------------------------------|
| Batch 3112110 - General Prep - Wet Chem |        |                    |       |                |                  | ,         |                |      |              |                                       |
| LCS (3112110-BS1)                       |        |                    |       | Prepared &     | Analyzed:        | 21-Nov-13 |                |      |              |                                       |
| Alkalinity, Carbonate                   | ND     | 0.00               | mg/L  |                |                  |           | 80-120         |      |              |                                       |
| Alkalinity, Bicarbonate                 | 122    | 5.00               | mg/L  |                |                  |           | 80-120         |      |              |                                       |
| Alkalinity, Total                       | 100    | 4.00               | mg/L  | 100            |                  | 100       | 80-120         |      |              |                                       |
| LCS Dup (3112110-BSD1)                  |        |                    |       | Prepared &     | Analyzed:        | 21-Nov-13 |                |      |              |                                       |
| Alkalinity, Carbonate                   | ND     | 0.00               | mg/L  |                |                  |           | 80-120         |      | 20           |                                       |
| Alkalinity, Bicarbonate                 | 136    | 5.00               | mg/L  |                |                  |           | 80-120         | 10.9 | 20           |                                       |
| Alkalinity, Total                       | 112    | 4.00               | mg/L  | 100            |                  | 112       | 80-120         | 11.3 | 20           |                                       |
| Batch 3112502 - General Prep - Wet Chem |        |                    |       |                |                  |           |                |      |              | · · · · · · · · · · · · · · · · · · · |
| Blank (3112502-BLK1)                    |        |                    |       | Prepared &     | Analyzed:        | 25-Nov-13 |                |      |              |                                       |
| Chloride                                | ND     | 4.00               | mg/L  |                |                  |           |                |      |              |                                       |
| LCS (3112502-BS1)                       |        |                    |       | Prepared &     | Analyzed:        | 25-Nov-13 |                |      |              |                                       |
| Chloride                                | 100    | 4.00               | mg/L  | 100            |                  | 100       | 80-120         |      |              |                                       |
| LCS Dup (3112502-BSD1)                  |        |                    |       | Prepared &     | Analyzed:        | 25-Nov-13 |                |      |              |                                       |
| Chloride                                | 100    | 4.00               | mg/L  | 100            |                  | 100       | 80-120         | 0.00 | 20           |                                       |
| Batch 3112504 - General Prep - Wet Chem |        |                    |       |                |                  |           |                |      |              |                                       |
| Blank (3112504-BLK1)                    |        |                    |       | Prepared &     | Analyzed:        | 25-Nov-13 |                |      |              |                                       |
| Sulfate                                 | ND     | 10.0               | mg/L  |                |                  |           |                |      |              |                                       |
| LCS (3112504-BS1)                       |        |                    |       | Prepared &     | Analyzed:        | 25-Nov-13 |                |      |              |                                       |
| Sulfate                                 | 19.8   | 10.0               | mg/L  | 20.0           | <del>.</del>     | 98.8      | 80-120         |      |              |                                       |

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SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Project Number: ETZ

Project Manager: GARY SCHUBERT

Reported: 19-Dec-13 11:44

Fax To: (575) 393-3194

### **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

| Analyte                                 | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD    | RPD<br>Limit | Notes |
|---|--------|--------------------|-------|----------------|------------------|-------------|----------------|--------|--------------|-------|
| Batch 3112504 - General Prep - Wet Chem |        |                    |       |                |                  |             |                |        |              |       |
| LCS Dup (3112504-BSD1)                  |        |                    |       | Prepared &     | : Analyzed:      | 25-Nov-13   |                |        |              |       |
| Sulfate                                 | 20.1   | 10.0               | mg/L  | 20.0           |                  | 101         | 80-120         | 1.86   | 20           |       |
| Batch 3112508 - Filtration              |        |                    |       |                |                  |             |                |        |              |       |
| Blank (3112508-BLK1)                    |        |                    |       | Prepared: 2    | 21-Nov-13        | Analyzed: 2 | 5-Nov-13       |        |              |       |
| TDS                                     | ND     | 5.00               | mg/L  |                |                  |             |                |        |              |       |
| LCS (3112508-BS1)                       |        |                    |       | Prepared: 2    | 21-Nov-13        | Analyzed: 2 | 5-Nov-13       |        |              |       |
| TDS                                     | 245    |                    | mg/L  | 240            |                  | 102         | 80-120         |        |              |       |
| Duplicate (3112508-DUP1)                | Sou    | rce: H302812-      | 01    | Prepared: 2    | 21-Nov-13        | Analyzed: 2 | 5-Nov-13       |        |              |       |
| TDS                                     | 2080   | 5.00               | mg/L  |                | 2080             |             |                | 0.0480 | 20           |       |

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SCHUBERT CONSTRUCTION

P. O. BOX 6056 HOBBS NM, 88241 Project: WATER WELL

Reported: 19-Dec-13 11:44

Project Number: ETZ

Project Manager: GARY SCHUBERT

Fax To: (575) 393-3194

### Total Recoverable Metals by ICP (E200.7) - Quality Control

### **Green Analytical Laboratories**

|                           |        | Reporting |       | Spike       | Source    |             | %REC     |      | RPD   |       |
|---------------------------|--------|-----------|-------|-------------|-----------|-------------|----------|------|-------|-------|
| Analyte                   | Result | Limit     | Units | Level       | Result    | %REC        | Limits   | RPD  | Limit | Notes |
| Batch B311167 - EPA 200.2 |        |           |       |             |           |             |          |      |       |       |
| Blank (B311167-BLK1)      |        |           |       | Prepared: 2 | 20-Nov-13 | Analyzed: 2 | 1-Nov-13 |      |       |       |
| Calcium                   | ND     | 1.00      | mg/L  |             |           |             |          |      |       |       |
| Potassium                 | ND     | 1.00      | mg/L  |             |           |             |          |      |       |       |
| Sodium                    | ND     | 1.00      | mg/L  |             |           |             |          |      |       |       |
| Magnesium                 | ND     | 1.00      | mg/L  |             |           |             |          |      |       |       |
| LCS (B311167-BS1)         |        |           |       | Prepared: 2 | 20-Nov-13 | Analyzed: 2 | 1-Nov-13 |      |       |       |
| Magnesium                 | 20.9   | 1.00      | mg/L  | 20.0        |           | 105         | 85-115   |      |       |       |
| Potassium                 | 7.61   | 1.00      | mg/L  | 8.00        |           | 95.1        | 85-115   |      |       |       |
| Sodium                    | 6.75   | 1.00      | mg/L  | 6.48        |           | 104         | 85-115   |      |       |       |
| Calcium                   | 4.11   | 1.00      | mg/L  | 4.00        |           | 103         | 85-115   |      |       |       |
| LCS Dup (B311167-BSD1)    |        |           |       | Prepared: 2 | 20-Nov-13 | Analyzed: 2 | 1-Nov-13 |      |       |       |
| Potassium                 | 8.48   | 1.00      | mg/L  | 8.00        |           | 106         | 85-115   | 10.8 | 20    |       |
| Magnesium                 | 21.5   | 1.00      | mg/L  | 20.0        |           | 107         | 85-115   | 2.59 | 20    |       |
| Sodium                    | 7.35   | 1.00      | mg/L  | 6.48        |           | 113         | 85-115   | 8.53 | 20    |       |
| Calcium                   | 4.22   | 1.00      | mg/L  | 4.00        |           | 105         | 85-115   | 2.60 | 20    |       |

\*=Accredited Analyte Cardinal Laboratories

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Celey D. Keine



### **Notes and Definitions**

| I-02 | This result was analyzed outside of the EPA recommended holding time.                      |
|------|--|
| H1   | Sample was received several days after collected and subsequently analyzed past hold time. |
| ND   | Analyte NOT DETECTED at or above the reporting limit                                       |
| RPD  | Relative Percent Difference  |
| **   | Samples not received at proper temperature of 6°C or below.                                |
| ***  | Insufficient time to reach temperature.  |
| -    | Chloride by SM4500Cl-B does not require samples be received at or below 6°C                |
|      | Samples reported on an as received basis (wet) unless otherwise noted on report            |

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Celey D. Keine



Company Name:

( opy

**ANALYSIS REQUEST** 

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Project Manager:   | P.O. #:  |   |
|--|--|---|
| Address: 1,0.1504 6056   | Company:   |   |
| City: HODDS State NW Zip: 68241  | Attn:  |   |
| Phone #: 393-3194 Fax #: 395-6662  | Address:   |   |
| Project #: FIZ Project Owner:  | City:  |   |
| Project Name:  | State: Zip:  | [ <del>                                    </del> |
| Project Location:  | Phone #:   | 4nxôr   |
| sampler Name: Ben Donahul  | Fax #:   |   |
| FOR LAB USE ONLY   | PRESERV. SAMPLING  |   |
| Lab I.D. Sample I.D.  H302815  1 Monitor Well GI 2 Bring Well GI 3 Fresh 4 Monitor Well GI Soir Spring Well GI 5 Bring Well GI 6 Fresh Well GI 6 Fresh Well GI   | ACIDIO OTHER:  ACIDIO | TTTT (ation                                       |
|  |  |   |
|  |  |   |
|  |  |   |
| PLEASE NOTE: Liability and Damages. Cardina's liability and client's exclusive remedy for any claim arising whether based in contr   |  |   |
| analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing is<br>service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruption   | s, loss of use, or loss of profits incurred by client, its subsidia  | nies,   |
| Relinquished By:  Relinquished By:  Relinquished By:  Date:  Time:  Delivered By: (Circle One)  Sample Cond  | Phone Res  | sult:   |
| Sampler - UPS - Bus - Other:  Sample |  | hold time.  |

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2926

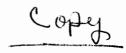


### **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

| Company Name: ETZ Showhert Const  | ruction BILL TO   | ANALYSIS REQUEST  |
|---|---|---|
| Project Manager:  | P.O. #:   |   |
| Address: 1,0.1504 6056  | Company:  |   |
| City: HOODS State NM Zip: 68  | 5241 Attn:  |   |
| Phone #: 393-3194 Fax #: 393-666  | o Z Address:  | ~   |
| Project #: FTZ Project Owner:   | City:   | $ \exists                      $                          |
| Project Name:   | State: Zip:   | 4um   |
| Project Location:   | Phone #:  |   |
| sampler Name: Ben Donahul   | rax#:   | 9   |
| FOR LAB USE ONLY  | MATRIX PRESERV. SAMPLING  | <u> </u>  |
| (C)OMP  |   | ug <sub>12</sub>  |
| Lab I.D. Sample I.D.  |   |   |
| Lab I.D. Sample I.D.  | R. SOOO   | 8   |
| # CONTAINERS GROUNDWATER GROUNDWATER GROUNDWATER  | SOIL SOIL OIL SLUDGE OTHER: CE/COOL OTHER:  | 3   |
| 1 Monitor Well GI   | 5/23/13 9:00  |   |
| 2 Bring well GI   |   |   |
| 3 Fresh 61  |   |   |
| 4 Monitor Well 61   | 11/18/13  |   |
| 5 brine well G!   | ,   |   |
| 6 Fresh Well G!   |   |   |
|   | <del>                                     </del>  |   |
|   |   | +   |
|   |   |   |
| PLEASE NOTE: Liability and Damages. Cardinal's liability and client's explusive remedy for any claim arising wheth  |   |   |
| analyses. All claims including those for negligence and any other cause whatsoever shall be deemed walved unless<br>service. In no event shall Cardinal be liable for incidental or consequental damages, including without finitation, but | iness interruptions, loss of use, or loss of profits incurred by client, its subsidiaries |   |
| affiliates or successors erising out of a related to the performance of services hereunder by Cardinal, regardless of Relinquished By:    Pale   Q   1   Regelved B   | y: Phone Resul  |   |
| HALL TO THE   | Fax Result: REMARKS:  | Yes No Add'i Fax#:  |
| Relinquished By: Date: Rejceived B  | Vi granuor  | um schubertagmach corr 1                                  |
| Time:   | 5 the FPA   |   |
|   | umple Condition   CHECKED BY: 500   | wies 1-3 past 112   |
| Delivered By: (Circle One)  | ool Intact Initiati   | hold time   |
| Sampler - UPS - Bus - Other: 5.80   | Yes Pres No No  | y m schubertagmail. com uples 1-3 past the EPA hold time. |

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2926





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**BILL TO** 

SCHUBERT CONSTRUCTION

P.O. BOX 6056

HOBBS, NEW MEXICO 88241

DATE:

12/19/2013

INVOICE NO.: H302815

LAB NUMBER:

H302815

TERMS:

**DUE UPON RECEIPT** 

**DESCRIPTION:** 

**ETZ** 

P.O. NO. :

NONE GIVEN

NO. SAMPLES:

LOG IN DATE :

11/18/2013

| QUANTITY | DESCRIPTION                                 | PER SAMPLE | TOTAL  |
|----------|---|------------|--------|
| 6        | CATION/ANION FOR SOIL/WATER(CATIONS BY ICP) | 150.00     | 900.00 |

OKE ETT

LW 02 10

SUBTOTAL:

\$900.00

**SALES TAX**: (6.8125%)

\$61.31

PLEASE PAY THIS AMOUNT:

\$961.31

NOTE- Cardinal Laboratories is now accepting credit card payments! This service is available to all of our customers for a 3.5% service charge. Please call Jodi if you would like more information.

THANK YOU FOR YOUR BUSINESS!

### Chavez, Carl J, EMNRD

From:

Chavez, Carl J. EMNRD

Sent:

Friday, February 12, 2010 2:48 PM

To:

'Gary Schubert'

Cc:

VonGonten, Glenn, EMNRD; Griswold, Jim, EMNRD

Subject:

RE: BW-31 Annual Brine Well Report (Report)

### Gary:

The OCD is in receipt of the requested information for the above subject.

The injection and production values indicate a relative percent difference (RPD) of 3%, which is good. RPDs exceeding 10% may indicate a well problem. The OCD encourages well operators to monitor injection and production values daily to determine when a well MIT problem occurs.

The ground water monitor well chloride (640 mg/L) and TDS (1440 mg/L) analytical data results seem elevated. If there is reason to believe that you may have a leak to the Ogallala fresh water aquifer at about 50 ft. bgl, please contact me. . Otherwise, OCD will revisit the water quality data next year.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

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

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a> index.htm (Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD

Sent: Thursday, January 21, 2010 4:47 PM

To: 'Gary Schubert'

Subject: FW: BW-31 Annual Brine Well Report (Report)

### Gary:

Good afternoon. The OCD appreciates your efforts to comply with the terms and conditions of your discharge permit. Your OCD discharge permit requirements are:

- 6. <u>Production/Injection Volumes/Annual Report:</u> The volumes of fluids injected (fresh water) and produced (brine) will be recorded monthly and submitted to the OCD Santa Fe Office in an annual report due on the thirty-first (31) day of January of each year.
- 7. Analysis of Injection Fluid and Brine: Provide an analysis of the injection fluid and brine with each annual report. Analysis will be for General Chemistry (Method 40 CFR 136.3) using EPA methods.

- 25. Capacity/ Cavity Configuration and Subsidence Survey: The operator shall provide information on the size and extent of the solution cavern and geologic/engineering data demonstrating that continued brine extraction will not cause surface subsidence, collapse or damage to property, or become a threat to public health and the environment. This information shall be supplied in each annual report. OCD may require the operator to perform additional well surveys, test, and install subsidence monitoring in order to demonstrate the integrity of the system. If the operator cannot demonstrate the integrity of the system to the satisfaction of the Division then the operator may be required to shut-down, close the site and properly plug and abandoned the well.
- Monitor Well: The monitor well shall be located along the local groundwater flow direction and directly down-gradient of the brine well and situated within 50 feet of the brine well. The well shall be constructed, developed, purged and samples analyzed pursuant to approved EPA methods. Except for the initial well sampling event as proposed in the discharge plan, the monitor well shall be sampled and analyzed for general chemistry twice a year with the results submitted in the annual report. Discovery of groundwater contamination shall be reported pursuant to Item #18 above.

You have addressed Item 6 above; however, the OCD requests the cumulative fresh water injection and brine production volumes to date in order help estimate the volume of your brine cavern. As I recall, the well is fairly new and was exempted from the recent OCD sonar test mandate due to this, but we do want to track total injection and production volumes. Please submit this information by 2/22/2010.

You partially addressed Item 7 above as you did not submit General Chemistry data, which need to be assayed for pH, total dissolved solids, anions and cations (fluoride, chloride, nitrate, nitrite, phosphorus, and sulfate) by Method 300, and dissolved metals (arsenic, barium, cadmium, calcium, chromium, lead, magnesium, potassium, selenium, silver, and sodium) by Method 6010. Please resubmit General Chemistry data by 2/22/2010.

You have been exempted from the sonar testing for the duration of your current discharge permit due to the age of your well; howver, you are welcome to voluntarily perform a sonar test anytime between now and the renewal of your permit. The new permit will likely require a sonar test be run on your cavern.

Please confirm in Item 26 that you have installed the monitor well, and if so, provide the information to the OCD by 2/22/2010.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a>index.htm (Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD

Sent: Thursday, January 21, 2010 3:49 PM

**To:** 'Gary Schubert'

**Subject:** BW-31 Annual Brine Well Report (Report)

Gary:

Good afternoon. OCD is in receipt of your Report. OCD will contact you if we have questions or need to discuss your well in more detail.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a> index.htm (Pollution Prevention Guidance is under "Publications")

### HRC, Inc.

RECEIVED 2010 FEB 12 PM 1 49

P.O. Box 1606

Hobbs, NM 88241-6056

(575) 393-6662

(575) 393-6662 Fax

February 8<sup>th</sup>, 2010

Mr. Carl Chavez Environmental Bureau Chief Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, NM 87505

Ref: Analysis of Injection Fluid and Brine (General Chemistry Data)

Mr. Chavez,

Please see information requested.

- 1. Total cumulative brine production and fresh water injection volumes.
- 2. Analytical lab results from brine tanks (samples 11/20/2009).
- 3. Analytical lab results from monitor well (sampled 11/20/2009). (The #20 sample is an unrelated sample)

\*The monitor well has been installed since 2006 and samples have been submitted since then (see attached well records).

Sincerely,

Gary M. Schubert, President

GMS/br

Enclosure

### H. R. C., INC. SCHUBERT 7 WELL # 1 (BW - 31)

| YEAR                    | BRINE PRODUCTION | FRESH WATER INJECTED |
|-------------------------|------------------|----------------------|
| 2006                    | 42,950           | 44,800               |
| 2007                    | 312,800          | 315,000              |
| 2008                    | 305,990          | 316,000              |
| 2009                    | 212,779          | 226,058              |
|                         |                  |                      |
| Total Cumulative Produc |                  | 224 252              |
| (Thru 12/31/2009)       | 874,519          | 901,858              |

02/01/2010 16:55



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

February 1, 2010

**Gary Schubert** 1720 N. Dal Paso Hobbs, NM 88241

Re: Water Samples

Enclosed are the results of analyses for sample number H19106, received by the laboratory on 01/20/10 at 2:00 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method SW-846 8260

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005

Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.2

Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely.

Laboratory Director



PHONE (575) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR **GARY SCHUBERT** 1720 N. DAL PASO HOBBS, NM 88241 FAX TO: (575) 393-6662

Receiving Date: 01/20/10 Reporting Date: 02/01/10 Project Number: NOT GIVEN Project Name: NOT GIVEN Project Location: NOT GIVEN Sampling Date: 01/20/10 Sample Type: WATER

Sample Condition: INTACT @ 19°C

Sample Received By: JH Analyzed By: HM

|                |  | Na              | Сa       | Mg       | К         | Conductivity     | T-Alkatinity             |
|----------------|--|-----------------|----------|----------|-----------|------------------|--------------------------|
| LAB NUMBER     | SAMPLE ID  | (m <b>g</b> /L) | (mg/L)   | (mg/l_)  | (mg/L)    | ( <i>u</i> S/cm) | (mgCaCO <sub>3</sub> /L) |
| ANALYSIS DA    | TE:  | 01/26/10        | 01/26/10 | 01/26/10 | 01/26/10  | 01/22/10         | 01/22/10                 |
| I-I19106-1     | #20 SAMPLE   | 106             | 115      | 32.0     | 3.7       | 1,300            | 160                      |
| H19106-2       | BRINE  | 124,000         | 1,810    | 692      | 229       | 354,000          | 140                      |
| I-119106-3     | MONITOR WELL   | 266             | 161      | 45.9     | 3.7       | 2,660            | 168                      |
| Quality Contro |  | 8.38            | 5.19     | 4.93     | 10,3      | 1,420            | NR                       |
| True Value QC  |  | 8 10            | 5.00     | 5.00     | 10.0      |                  | NR                       |
| % Recovery     | Annual section of the transport of the section of t | 103             | 104      | 98.6     | 103       | 100              | NR                       |
| Relative Perce | nt Difference  | 2.8             | 3.0      | 2.6      | 1.4       | 0.6              | NR                       |
| METHODS:       |  | 200.7           | 200.7    | 200.7    | <br>200.7 | 120.1            | 310.1                    |

|               |  | ÇI          | \$O₄     | $CO_3$   | HCO3     | pН       | TDS      |
|---------------|--|-------------|----------|----------|----------|----------|----------|
|               |  | (mg/L)      | (mg/L)   | (mg/L)   | (mg/L)   | (s.u.)   | (mg/L)   |
| ANALYSIS D    | ATE:   | 02/01/10    | 01/27/10 | 01/22/10 | 01/22/10 | 01/22/10 | 01/26/10 |
| H19106-1      | #20 SAMPLE   | 164         | 215      | 0        | 195      | 8.14     | 843      |
| H19106-2      | BRINE  | 188,000     | 4,420    | 0        | 171      | 7.06     | 303,000  |
| H19106-3      | MONITOR WELL   | 640         | 82.0     | 0        | 205      | 7.76     | 1,440    |
|               |  |             |          |          |          |          |          |
| Quality Contr | 0  | 510         | 37.7     | NR       | 976      | 7.02     | NR       |
| True Value Q  |  | 500         | 40.0     | NR       | 1000     | 7.00     | NR       |
| % Recovery    | and the second s | 102         | 94       | NR       | 97.6     | 100      | NR       |
|               | ent Difference   | 2.0         | 3.6      | NR       | 1.2      | < 0.1    | 8.9      |
| METHODS:      |  | SM4500-CI-B | 375.4    | 310.1    | 310.1    | 150.1    | 160.1    |

7

| A ARDINAL LABORATORIES                     |                  |     |                  |
|--|------------------|-----|------------------|
| 101 East Marland, Hobbs, NM 88240          |                  |     |                  |
| (575) 393-2326 Fax (575) 393-2476          |                  |     | Page             |
| Company Name: Gayor Sphillowt              | BILL TO          |     | ANALYSIS REQUEST |
| Ř.   | P.O. #;          |     |                  |
| Address:                                   | Сотрапу:         |     |                  |
| City: Halbs Staten'n Zip: 89941            | Attn:            |     |                  |
| Phone #: 441-0033 13.11 Holifford 393-6662 | Address:         |     |                  |
| roject Owner                               | City:            |     |                  |
| Project Name:                              | State: Zip:      | ~   |                  |
| Project Location:                          | Phone #:         | 0,1 |                  |
| Sampler Name:                              | Fax#:            | -4  |                  |
| FOR UABLISE CPLY                           | PRESERV SAMPLING | 5 S |                  |
|  |                  |     | _                |

Terms and Considerar, importantly be chapped on all scools to that the 30 days goest due at the state of 24% per annountern than the original Cate of Proximated coasts of collections, including attention these. PLESE NOTE: Libith, and Danages. Certrel's Guttly end Safe reclasive reason for unident principality the destinance of the service of the ser

No 'Add'i Phone #:

Phone Result: Fax Result: REMARKS:

Time:

441-0033 Bill Hiser

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

Lab I.D.

TIME 78

列回HTO ICE / COOL ACID/84SE ЯЗНТО €ר∩םפּב 710 TIQS

яэтАМОИООЯ МЭЗТЕМАТЕЯ # СОИТАІИЕРВ 9MO(D) AO 8/A(O)

Sample I.D.

HZO Sample

monton

1/20/04 DATE

Revised June

### STATE ENGINEER OFFICE WELL RECORD

### Section 1. GENERAL INFORMATION

| (A) Owner    | of well      | Gary Schubert |            | _         |         |             | Owner's Well      | No   |   |
|--------------|--------------|---------------|------------|-----------|---------|-------------|-------------------|--|---|
| Street       | or Post Offi | ice Address   | Stanolind  | Road      |         |             | Owner's Well      | <del></del>  | <del></del>   |
|              |              | Hobbs, New N  |            |           | - *     |             |                   |  |   |
| Well was dr  | illed under  | Permit No     | M          | onitor V  | Vell_   |             | and is located in | the:   |   |
| a            | _ 1/4        | 1/41          | /4 of Sect | tion      | _ Tov   | vnship      | Range             | N.M.P.M  |   |
| b. Tra       | et No        | of Ma         | ap No      |           | of t    | he          |                   |  | ·   |
| c. Lot       | No.          | of Block      | k No.      |           |         | of the      |                   |  |   |
| Sub          | division, n  | ecorded in    | L          | ea        |         | C           | ounty.            |  |   |
| d. X=        |              | feet, Y=      |            | feet, N   | M. C    | oordinate   | System            |  | Zone inGrant.                                       |
|              |              |               |            |           |         |             | lasspoole, Licen  |  |   |
| Address 6    | 01 West C    | ope Place, H  | obbs, New  | Mexico    | 8824    | 12-8053     |                   |  |   |
| <b></b> -    |              |               |            |           |         |             |                   |  |   |
|              |              | •             |            |           |         |             | e Size of Ho      |  |   |
| Elavation of | f land surfa | ice or        |            | at we     | ll is _ |             | ft. Total dep     | th of well <u>l</u>  | <u>77_</u> ft.                                      |
| Completed    | well is _X   | Shallow _     | Artesia    | n.        | De      | pth of wat  | er upon completi  | on of well _8  | <u>9_</u> ft.                                       |
|              |              | Section 2     | PRINCI     | PAL W     | ATEI    | R-BEARIN    | NG STRATA         |  |   |
| Depth i      | n Feet       |               | s De       | escriptio | on of ' | Water-Bea   | ring Formation    |  |   |
| From         | To           | in feet       |            |           |         |             |                   | (gallons p   | ,   |
| 89           | 177          |               | 88 Wa      | ter Sand  | i ~ M   |             | wn                |  |   |
|              | •            |               |            |           |         |             |                   |  |   |
|              | •            |               | Section 3  | RECO      | שם כ    | F CASIN     | G                 | **************************************   |   |
| Diameter     | Pounds       | Threads       |            | in Feet   |         | Length      | Type of Shoe      | Perfor   | ations  |
| (inches)     | per foot     | per inch.     | Тор        | Bott      |         | (feet)      |                   | From   | То  |
| 5-1/2"       |              | · None        | +18"       | 177'      | V       | 178' 6"     | None              | 89   |   |
| 3-1/2        | •            | MOME          | 110        | 177       | - :     | 176 0       | None              | . 67   | 177   |
|              |              |               | i          |           |         | , m, es 100 |                   |  |   |
|              |              | Section 4.    | RECORD     | OF MU     | JDDI    | NG AND      | CEMENTING         |  | ****  |
| Depth is     | n Feet       | Hole          | Sack       |           |         | oic Feet    |                   |  |   |
| From         | То           | Diameter      | of Mu      | ıd        | ot (    | Cement      | Metho             | d of Placeme   | nt  |
| 0            | 177          | 8-1/2"        | 5 sack     | S         |         |             | ;<br>;<br>;       |  |   |
|              |              | ···           | :          | ; ·       |         |             |                   | THE STREET OF TAXABLE SPECIAL SIZE ASSESSMENT ASSESSMEN | en en deux service de la constitución e del 2010 de |
|              | :            | •             |            |           |         |             | L                 |  |   |

### Section 6. RECORD OF FORMATION

| Depth in | Feet | Thickness          | Color & Type of Material Encountered |
|----------|------|--------------------|--------------------------------------|
| rom      | To   | in Feet            |                                      |
| 0        | 14 . | 14                 | Dk. Brown - Top Soil                 |
| 14       | 27   | 13                 | Lt. Brown - Caliche                  |
| 27       | 30   | 3                  | Lt. Brown/ Red – Red Sand            |
| 30       | 35   | . 5                | Lt. Brown - Rock                     |
| 35       | 45   | 10                 | Lt. Brown - Caliche                  |
| 45       | 48   | 3                  | Med. Brown/ Red - Red Sand           |
| 48       | 73   | 25                 | Med. Brown -Sand Stone/ Rock         |
| 73       | 89   | 16                 | Med. Brown - Sand Stone              |
| 89       | 124  | 35                 | Med. Brown - Water Stone             |
| 124      | 145  | 21                 | Med. Brown - Water Sand w/Red Clay   |
| 145      | 177  | 32                 | Med. Brown - Water Sand              |
|          |      |                    |                                      |
| •        |      |                    |                                      |
|          |      | ga comments of the |                                      |

Section 7. REMARKS AND ADDITIONAL INFORMATION

### HP LaserJet 3050

### Fax Call Report



GARY SCHUBERT"S OFFICE 5753936662 Feb-9-2010 14:15

| Job  | Date      | Time     | Type    | Identification | Duration | Pages | Result         |
|------|-----------|----------|---------|----------------|----------|-------|----------------|
| 3395 | 2/ 9/2010 | 14:14:33 | Receive | 5753922241     | 1:00     | 2     | Comm Error 283 |

STATE ENGINEER OFFICE
WELL RECORD
Section 1. GENERAL INFORMATION

PAGE 01

02/09/2010 02:15 5753922241

| (A)    | Owner        | of well              | Gary Schubert |                 |          |         |                 | Owner's Well                | No                    |                    |
|--------|--------------|----------------------|---------------|-----------------|----------|---------|-----------------|-----------------------------|-----------------------|--------------------|
| (///   | Street       | or Post Off          | ice Address   | Stanolind       | Road     |         |                 |                             |                       |                    |
|        | City a       | nd State             | Hobbs, New 1  | Mexico          |          |         |                 |                             |                       |                    |
|        |              |                      |               |                 |          |         |                 | and is located in           |                       |                    |
|        | a            | _ 1/4                | 1/41          | /4 of Sec       | tion _   | To      | wnship          | Range                       | _ N.M.P.M             |                    |
|        |              |                      |               |                 |          |         |                 |                             |                       | ·                  |
|        | c. Lot       | No.                  | of Block      | k No.           |          |         | of the          |                             |                       |                    |
|        | Sub          | division, n          | of Block      |                 | .ea      |         | Cc              | ounty.                      |                       |                    |
|        | d. X=<br>the |                      | _feet, Y=     |                 | _fcet, l | N.M. C  | Coordinate      | System                      |                       | Cone in<br>_Grant. |
| (B)    | Drillin      | ng Contrac           | tor_A&KW      | Vater Well      | Drillio  | ng Kr   | istopher Gl     | lasspoole, Lice             | nse No. <u>WD-1</u>   | 641                |
| Addr   | ess_6        | 01 West C            | ope Place, H  | obbs, Nev       | v Mexi   | co 882  | 242-8053        |                             |                       |                    |
| Drilli | ng beg       | an <u>11-12</u>      | 06 Complete   | ed <u>11-19</u> | 06_T     | уре То  | ols <u>Cabl</u> | eSize of Ho                 | ole <u>8-1/2"</u>     |                    |
| Elava  | ation o      | f land surfa         | ace or        |                 | at v     | vell is |                 | ft. Total dep               | oth of well <u>17</u> | <u>7_ft.</u>       |
| Comp   | pleted       | well is              | Shallow _     | Artesia         | யு.      | D       | epth of wat     | er upon complet             | ion of well _85       | La.                |
|        |              |                      | Section 2     | 2. PRINC        | IPAL V   | VATE    | R-BEARIN        | IG STRATA                   |                       |                    |
| . [    | Depth i      | n Feet               | Thicknes      |                 |          |         |                 | ring Formation              | Estimate              | d Yield            |
| F      | rom          | То                   | in feet       |                 |          |         |                 |                             | (gallons pe           | •                  |
|        | <br>89       | . 177                |               | 88 W            | nter Sa  | nd - M  | fedium Bro      | · · ·                       | 35 gpm                |                    |
|        |              |                      |               | /               |          |         |                 |                             |                       | !                  |
|        |              |                      |               |                 |          | onn.    | 00.0.00         |                             | •••••                 | * * * * *          |
| D:     | meter        | D 1                  | Threads       |                 | in Fe    |         | OF CASIN        | Type of Shoe                |                       |                    |
| -      |              |                      | per inch.     | •               |          | etom    | (feet)          | Type of Shoe                | Annual Control of     |                    |
|        | _            |                      |               | Тор             |          |         | ,               |                             | From                  | To                 |
| 5-1/   | 2"           |                      | None          | +18"            | 177      |         | 178'6"          | None                        | 89                    | 177                |
|        |              |                      |               |                 |          |         |                 |                             |                       |                    |
|        |              |                      | Section 4     | RECORD          | OF M     | (UDD    | ING AND         | CEMENTING                   |                       |                    |
| n      | epth in      | . Cast               | Hole          | Saci            |          |         | bic Feet        |                             |                       | - 1                |
|        | om           | To                   | Diameter      |                 |          |         | Cement          | Metho                       | od of Placemen        | ι                  |
| ,,     |              |                      | 0.1/20        |                 |          |         |                 |                             |                       |                    |
|        | 0            | 177                  | 8-1/2"        | 5 saci          | K.S      | !       |                 | ļ                           |                       |                    |
|        |              |                      |               |                 |          |         |                 | 1.                          |                       |                    |
|        |              |                      |               | Section         | n S. Pl  | LUGG    | ING RECO        |                             |                       |                    |
| Plugg  |              | ontractor _          |               |                 |          | -       | No.             | Depth in Feet<br>Top Botton | Cubic F               | cet                |
| Plugg  | ing M        |                      |               | *               |          | _       | <u> </u>        | TOP DOLLOR                  | <u></u>               |                    |
|        |              | lugged<br>proved by: |               |                 |          | -       | 3               |                             |                       |                    |
|        |              |                      | State Enginee | - Paraman       |          | _       | 4               |                             |                       | _                  |
| Date   | Receiv       | ed                   |               |                 |          |         | INEER ON        | ILY                         |                       | ************       |
|        |              |                      |               |                 |          |         |                 | _FWL                        | FSL                   |                    |
|        |              |                      |               |                 | `        | ·       | I postion N     |                             |                       |                    |
| £11. × | .1.          |                      |               | 11              |          |         | · martine k     |                             |                       |                    |
|        |              |                      |               |                 |          |         |                 |                             |                       |                    |
|        |              |                      |               |                 |          |         |                 |                             |                       |                    |

### Chavez, Carl J, EMNRD

From:

Chavez, Carl J. EMNRD

Sent:

Thursday, January 21, 2010 4:47 PM

To:

'Gary Schubert'

Subject:

FW: BW-31 Annual Brine Well Report (Report)

### Gary:

Good afternoon. The OCD appreciates your efforts to comply with the terms and conditions of your discharge permit. Your OCD discharge permit requirements are:

- 6. <u>Production/Injection Volumes/Annual Report:</u> The volumes of fluids injected (fresh water) and produced (brine) will be recorded monthly and submitted to the OCD Santa Fe Office in an annual report due on the thirty-first (31) day of January of each year.
- 7. Analysis of Injection Fluid and Brine: Provide an analysis of the injection fluid and brine with each annual report. Analysis will be for General Chemistry (Method 40 CFR 136.3) using EPA methods.
- 25. Capacity/ Cavity Configuration and Subsidence Survey: The operator shall provide information on the size and extent of the solution cavern and geologic/engineering data demonstrating that continued brine extraction will not cause surface subsidence, collapse or damage to property, or become a threat to public health and the environment. This information shall be supplied in each annual report. OCD may require the operator to perform additional well surveys, test, and install subsidence monitoring in order to demonstrate the integrity of the system. If the operator cannot demonstrate the integrity of the system to the satisfaction of the Division then the operator may be required to shut-down, close the site and properly plug and abandoned the well.
- 26. Monitor Well: The monitor well shall be located along the local groundwater flow direction and directly down-gradient of the brine well and situated within 50 feet of the brine well. The well shall be constructed, developed, purged and samples analyzed pursuant to approved EPA methods. Except for the initial well sampling event as proposed in the discharge plan, the monitor well shall be sampled and analyzed for general chemistry twice a year with the results submitted in the annual report. Discovery of groundwater contamination shall be reported pursuant to Item #18 above.

You have addressed Item 6 above; however, the OCD requests the cumulative fresh water injection and brine production volumes to date in order help estimate the volume of your brine cavern. As I recall, the well is fairly new and was exempted from the recent OCD sonar test mandate due to this, but we do want to track total injection and production volumes. Please submit this information by 2/22/2010.

You partially addressed Item 7 above as you did not submit General Chemistry data, which need to be assayed for pH, total dissolved solids, anions and cations (fluoride, chloride, nitrate, nitrite, phosphorus, and sulfate) by Method 300, and dissolved metals (arsenic, barium, cadmium, calcium, chromium, lead, magnesium, potassium, selenium, silver, and sodium) by Method 6010. Please resubmit General Chemistry data by 2/22/2010.

You have been exempted from the sonar testing for the duration of your current discharge permit due to the age of your well; hower, you are welcome to voluntarily perform a sonar test anytime between now and the renewal of your permit. The new permit will likely require a sonar test be run on your cavern.

Please confirm in Item 26 that you have installed the monitor well, and if so, provide the information to the OCD by 2/22/2010.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

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

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/index.htm">http://www.emnrd.state.nm.us/ocd/index.htm</a> (Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD

Sent: Thursday, January 21, 2010 3:49 PM

To: 'Gary Schubert'

Subject: BW-31 Annual Brine Well Report (Report)

### Gary:

Good afternoon. OCD is in receipt of your Report. OCD will contact you if we have questions or need to discuss your well in more detail.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a>index.htm (Pollution Prevention Guidance is under "Publications")

### RECEIVED HRC, Inc. P.O. Box 1606 2010 JAN 21 PM 2 43 Hobbs, NM 88241-6056 (575) 393-6662 (575) 393-66 (575) 393-6662 Fax

January 19, 2010

Mr. Carl Chavez Environmental Bureau Chief Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, NM 87505

Ref: Annual Brine Well Report – BW-31

Name of Operator: HRC - Schubert

Date of Report: 1-19-2010

Mr. Chavez,

### Please see attached information:

- 1. Copies of monthly brine water production and fresh water injection for the year 2009.
- 2. Analysis of injection fluid (2009)
- 3. Analysis of brine produced (2009)\*
- 4. Analysis of monitor well samples. (2009)\*

\*Although I am sending the report today, I am awaiting the lab results from the November sampling. I expect to have you that information by January 31, 2010.

Sincerely,

Gary M. Schubert, President

GMS/br

Enclosure

# ANNUAL BRINE WELL REPORT API# 30-025-36781 H.R.C. INC. Gary M. Schubert BW-31

January 19, 2010

BW – 31 SCHUBERT 7 – WELL # 1

### **YEAR 2009**

| MONTH     | BRINE<br>PRODUCTION<br>(BY Meter) | FRESH WATER INJECTED (By Meter) |  |
|-----------|-----------------------------------|---------------------------------|--|
|           |                                   |                                 |  |
| January   | 29,196                            | 30,947*                         |  |
| February  | 17,626                            | 19,038                          |  |
| March     | 8,385                             | 9,521                           |  |
| April     | 11,213                            | 10,376                          |  |
| May       | 16,182                            | 16,145                          |  |
| June      | 16,742                            | 19,045                          |  |
| July      | 24,802*                           | 26,381                          |  |
| August    | 11,679                            | 13,271                          |  |
| September | 13,182                            | 14,819                          |  |
| October   | 17,009                            | 18,590                          |  |
| November  | 16,808                            | 17,492                          |  |
| December  | <u>29,955</u>                     | 30,433                          |  |
| Total     | 212,779                           | 226,058                         |  |

<sup>\*</sup>Corrected from previous report, mathematical error.

### BW 31 SCHUBERT 7 - WELL # 1

|             |             |                    | 74          |          |             |            |           |             |
|-------------|-------------|--------------------|-------------|----------|-------------|------------|-----------|-------------|
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
|             |             |                    |             |          |             |            |           |             |
| 117,661     |             |                    |             | 226,058  | 212,779     | 70,177     | 142,602   | 2009 Total  |
|             |             |                    |             |          |             |            |           |             |
| 30,433      | 12,782      | 81,948             | 12/30/09    | 30,433   | 29,955      | 9,260      | 20,695    | Dec, 09     |
| 17,492      | 7,347       | 69,166             | 11/30/09    | 17,492   | 16,808      | 4,479      | 12,329    | Nov, 09     |
| 18,590      | 7,808       | 61,819             | 10/31/09    | 18,590   | 17,009      | 1,493      | 15,516    | Oct, 09     |
| 14,819      | 6,224       | 54,011             | 09/30/09    | 14,819   | 13,182      | 1,762      | 11,420    | Sept, 09    |
| 13,271      | 5,574       | 47,787             | 08/31/09    | 13,271   | 11,679      | 5,271      | 6,408     | Aug, 09     |
| 26,381      | 11,080      | 42,213             | 07/31/09    | 26,381   | 24,802      | 9,490      | 15,312    | July, 09    |
| 19,045      | 7,999       | 31,133             | 06/30/09    | 19,045   | 16,742      | 8,674      | 8,068     | June, 09    |
| 16,145      | 6,781       | 23,134             | 05/31/09    | 16,145   | 16,182      | 9,733      | 6,449     | May. 09     |
| 10,376      | 4,358       | 16,353             | 04/30/09    | 10,376   | 11,213      | 6,736      | 4,477     | Apr. 09     |
| 9,521       | 3,999       | 11,995             | 03/31/09    | 9,521    | 8,385       | 1,975      | 6,410     | Mar. 09     |
| 19,038      | 7,996       | 7,996              | 02/28/09    | 19,038   | 17,626      | 4,754      | 12,872    | Feb. 09     |
|             | •           | •                  | 01/03/09    | 30,947   | 29,196      | 6,550      | 22,646    | Jan. 09     |
|             | (X 100)     | GALLONS<br>(X 100) | 1           | BBLS     |             |            |           |             |
| BBLS        | GALLONS     | READING BY         | READ        | INJECTED | BBLS        | BBLS       | BBLS      |             |
| WATER       | USED BY     | METER              | WATER METER | WATER    | WATER       | WATER      | WATER     |             |
| TOTAL FRESH | FRESH WATER | FRESH WATER        | DATE ERESH  | FRESH    | TOTAL BRINE | DATE BRINE | ET7 BRINE | MONTH /VEAR |

 $\frac{\partial}{\partial t} = \frac{1}{2} \left( \frac{\partial}{\partial t} - \frac{\partial}{\partial t} \right) = \frac{\partial}{\partial t} = \frac{\partial}{\partial t}$ 



√

ANALYTICAL RESULTS FOR HRC ATTN: GARY SCHUBERT 1720 N. TURNER HOBBS, NM 88240

Receiving Date: 08/17/09 Reporting Date: 08/17/09 Project Owner: NOT GIVEN

Project Name: MAY-09 SAMPLING Project Location: NOT GIVEN

Analysis Date: 08/17/08
Sampling Date: MAY-09 
Sample Type: WATER

Sample Condition: INTACT @ 24°C

Sample Received By: AB

Analyzed By: AB

|             |                  | CI      |
|-------------|------------------|---------|
| LAB NO.     | SAMPLE ID        | (mg/L)  |
| H18014-1    | BRINE WEST TANKS | 188,000 |
| H18014-2    | BRINE EAST TANKS | 192,000 |
| H18014-3    | MONITOR WELL     | 760     |
|             |                  |         |
|             |                  |         |
| -           |                  |         |
|             |                  |         |
| Quality Con | trol             | 500     |
| True Value  | QC               | 500     |
| % Recovery  | /                | 100     |
| Relative Pe | rcent Difference | < 0.1   |

METHOD: Standard Methods 4500-CIB Samples analyzed outside the EPA recommended hold time of 28 days.

Chemiş

Date

H18014 HRC

# City of Hobbs Wastewater Reclamation Facility

## JUNCTION BOX EFFLUENT (S&H FARMS) 2009

| MONTH | FLOW (MG) | TKN (mg/l) | NO3 -N (mg/l) | TOTAL-N (mg/l) | TDS (mg/l) | CL (mg/l) |      | BOD (mg/l) | (I)     | i ii  | FECALS (cfu/100 mls) | mls)    |
|-------|-----------|------------|---------------|----------------|------------|-----------|------|------------|---------|-------|----------------------|---------|
|       |           |            |               |                |            |           | MAX  | AVG        | # TESTS | MAX   | AVG                  | # TESTS |
| JAN   | 109.563   | 3.0        | 14.60         | 17.60          | 748        | 165       | 29.6 | 24.9       | 12      | 2048  | 21.6                 | 37      |
| EB    | 89.000    | 29.6       | 0.00          | 29.60          | 874        | 280       | 36.5 | 29.9       | 12      | 864   | 52.4                 | 30      |
| MAR   | 99.997    | 32.1       | 0.01          | 32.11          | 871        | 290       | 44.7 | 24.9       | 12      | 256   | 34.5                 | 31      |
| APR   | 101.421   | 6.1        | 4.71          | 10.81          | 704        | 260       | 17.3 | 10.0       | 14      | 1196  | 32.2                 | 30      |
| MAY   | 105.744   | 1.1        | 4.80          | 5.90           | 828        | 185       | 12.5 | 7.8        | 14      | 313   | 26.4                 | 31      |
| NOS   | 112.440   | 1.4        | 4.39          | 5.79           | 750        | 270       | 8.7  | 7.2        | 13      | 648   | 17.9                 | 30      |
| JUL   | 115.930   | 1.9        | 4.34          | 6.24           | 750        | 235       | 5.9  | 4.6        | 15      | 504   | 16.8                 | 30      |
| AUG   | 113.953   | 3.2        | 1.66          | 4.86           | 718        | 235       | 6.5  | 3.7        | 12      | 83    | 14.2                 | 30      |
| SEP   | 100.438   | 1.0        | 4.97          | 5.97           | 793        | 255       | 4.4  | 3.5        | 12      | 267   | 9.7                  | 29      |
| OCT   | 96.798    | 6.0        | 6.46          | 7.36           | 734        | 245       | 4.5  | 3.3        | 14      | 216   | 3.1                  | 30      |
| NOV   | 79.614    | 9.0        | 4.41          | 5.01           | 703        | 235       | 5.0  | 3.2        | 11      | 09    | 1.8                  | 30      |
| DEC   | 85.619    | 1.4        | 3.86          | 5.26           | 665        | 220       | 3.6  | 2.9        | 15      | 220   | 7.6                  | 31      |
|       |           |            |               |                |            |           |      |            |         |       |                      |         |
| TOTAL | 1210.517  |            |               |                |            |           |      |            |         |       |                      |         |
| AVG   | 100.876   | 6.86       | 4.52          | 11.38          | 761.5      | 239.6     | 14.9 | 10.5       | 13.0    | 556.3 | 19.9                 | 31      |

ANALYSIS OF

INJECTION FLUID

2009

BW-31

### Chavez, Carl J, EMNRD

From:

Chavez, Carl J. EMNRD

Sent:

Wednesday, November 18, 2009 7:02 AM

To:

'Prather, Steve'; 'gandy2@leaco.net'; 'James Millett'; 'Clay Wilson'; 'Bob Patterson'; 'David

Pyeatt'; 'garymschubert@aol.com'; 'Gary Schubert'

Cc:

Griswold, Jim, EMNRD; VonGonten, Glenn, EMNRD; Sanchez, Daniel J., EMNRD UIC Class III Well Annual Report Schedule for Submittal & Content REMINDER- 2010

Subject: Attachments:

Annual Reports 2010.xls

### Gentlemen:

Good morning. You may recall an e-mail message from me this past Summer alerting you to the reporting provision of your current discharge permit (permit) and how the New Mexico Oil Conservation Division (OCD) is stepping up its efforts to track reporting under issued permits.

Please find attached a spreadsheet listing the dates that OCD expects to receive your Annual Reports and/or any reporting requirements from your permit. If you are an operator with limited reporting requirements based on your permit, you are welcome to follow the format and content required from more recent permit renewals issued by the OCD, which are more comprehensive and constitute a report. Any renewed permits will likely require similar content anyway.

Please plan on meeting the Annual Report submittal dates in January of 2010 as failure to submit the report will constitute a violation under the Federal Underground Injection Control (UIC) Program and reporting to the United States Environmental Protection Agency, which could result in the shut-in and/or plug and abandonment of your brine production well.

Please contact me if you have questions. Thank you in advance for your cooperation in this matter.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a> index.htm (Pollution Prevention Guidance is under "Publications")

CC: Brine Well File "Annual Reporting"

## NMOCD UIC Annual Reports

11/18/09

**Annual Report Contents** 31 of each Annual Rpt. Due Date Submitted 01/31/10 Basic Energy Operator Permit ID BW-2

L. Annual Report: All operators shall submit an annual report due on January 31 of each year. The report shall include the following information:

 $1. \ \, \text{Cover sheet marked as "Annual Brine Well Report, name of operator,} \\ \text{BW}$ 

permit #, API# of well(s), date of report, and person submitting report.

2. Brief summary of brine wells operations including description and reason for

any remedial or major work on the well. Copy of C- 103.

 Production volumes as required above in 21.6. including a running total should

be carried over to each year. The maximum and average injection pressure.

4. A copy of the chemical analysis as required above in 21.1-1.

5. A copy of any mechanical integrity test chart, including the type of test,

i.e.

open to formation or easing test.

Brief explanation describing deviations from normal production methods.

7. A copy of any leaks and spills reports.

8. If applicable, results of any groundwater monitoring.

9. Information required from cavity/subsidence 21.F. above.

10. An Area of Review (AOR) summary.

11. Sign-off requirements pursuant to WQCC Subsection G 20.6.2.5101.

BW-4 Gandy Corp. 01/31/10

L. Annual Report: All operators shall submit an annual report due on January 31 of each

year. The report shall include the following information:

Cover sheet marked as "Annual Brine Well Report, name of operator,
 W

permit #, API# of well(s), date of report, and person submitting report.

 Brief summary of brine wells operations including description and reason for

any remedial or major work on the well. Copy of C- 103.

3. Production volumes as required above in 21.6. including a running total should

be carried over to each year. The maximum and average injection pressure.

4. A copy of the chemical analysis as required above in 21.1-1.

5. A copy of any mechanical integrity test chart, including the type of test,

open to formation or easing test.

Brief explanation describing deviations from normal production methods.

7. A copy of any leaks and spills reports.

8. If applicable, results of any groundwater monitoring.

9. Information required from cavity/subsidence 21.F. above.

10. An Area of Review (AOR) summary.

Mo. w/ Qtly Rpts.

PAB- Salty Dog

**BW-8** 

11. Sign-off requirements pursuant to WQCC Subsection G 20.6.2.5101.

| L. Annual Report: All operators shall submit an annual report due on January<br>31 of<br>each year. The report shall include the following information: | <ol> <li>Cover sheet marked as "Annual Brine Well Report, name of operator, BW permit #, API# of well(s), date of report, and person submitting report.</li> <li>Brief summary of brine wells operations including description and reason for any remedial or major work on the well. Copy of C-103.</li> <li>Production volumes as required above in 21. G. including a running total should be carried over to each year. The maximum and average injection pressure.</li> <li>A copy of the chemical analysis as required above in 21.H.</li> <li>A copy of any mechanical integrity test chart, including the type of test, i.e.</li> <li>Brief explanation or casing test.</li> <li>Brief explanation describing deviations from normal production methods.</li> <li>A copy of any leaks and spills reports.</li> <li>If applicable, results of any groundwater monitoring.</li> <li>Information required from cavity/subsidence 21. F. above.</li> <li>An Area of Review (AOR) summary.</li> <li>Sign-off requirements pursuant to WQCC Subsection G 20.6.2.5101.</li> </ol> | <ol> <li>Production/Injection Volumes/Annual Report: The volumes of fluids<br/>injected (fresh water) and<br/>produced (brine) will be recorded monthly and submitted to the OCD</li> </ol> |
|---|--|---|
| 01/31/10  |  | 01/31/10  |
| Gandy Corp.   |  | Basic Energy  |
| BW-22   |  | BW-25   |

report due on the thirty-first (31) day of January of each year.

Santa Fe Office in an annual

| BW-27 | Mesquite                     | 01/01/10 | 7. Production/Injection   |
|-------|------------------------------|----------|---------------------------|
|       |                              |          | water) and produced       |
|       |                              |          | (brine) will be record    |
|       |                              |          | Office in an annual       |
|       |                              |          | report due on the fir     |
| BW-28 | BW-28 ey Ernergy Services LL | 01/31/10 | L. Annual Report: All ope |
|       |                              |          | 1 , 7 , 70                |

- 7. Production/Injection Volumes: The volumes of fluids injected (fresh water) and produced
- (brine) will be recorded monthly and submitted to the OCD Sanla Fe Office in an annual
- report due on the first day of January of each year.
- L. Annual Report: All operators shall submit an annual report due on January 31 of each
- year. The report shall include the following information:
- $1. \ \mbox{Cover sheet marked as "Annual Brine Well Report, name of operator, BW$
- permit #, API# of well(s), date of report, and person submitting report.
  - Brief summary of brine wells operations including description and reason for
- any remedial or major work on the well. Copy of C-103.
- $3.\ Production\ volumes\ as\ required\ above\ in\ 21\ .G.\ including\ a\ running\ total\ should$
- be carried over to each year. The maximum and average injection pressure.
- 4. A copy of the chemical analysis as required above in 21.H.
- 5. A copy of any mechanical integrity test chart, including the type of test, e.
- open to formation or casing test.
- Brief explanation describing deviations from normal production methods.
- 7. A copy of any leaks and spills reports.
- 8. If applicable, results of any groundwater monitoring.
- 9. Information required from cavity/subsidence 21.F. above.
- 10. An Area of Review (AOR) summary.
- 11. Sign-off requirements pursuant to WQCC Subsection G 20.6.2.5101.

| L. Annual Report: All operators shall submit an annual report due on January<br>31 of each<br>year. The report shall include the following information: | <ol> <li>Cover sheet marked as "Annual Brine Well Report, name of operator, BW permit ", API" of well(s), date of report, and person submitting report.</li> <li>Brief summary of brine wells operations including description and reason for any remedial or major work on the well. Copy of C-103.</li> <li>Production volumes as required above in 21. G. including a running total should be carried over to each year. The maximum and average injection pressure.</li> <li>A copy of the chemical analysis as required above in 21. H.</li> <li>A copy of any mechanical integrity test chart, including the type of test, i.e.         open to formation of casing test.</li> <li>Brief explanation describing deviations from normal production methods.</li> <li>A copy of any leaks and spills reports.</li> <li>I applicable, results of any groundwater monitoring.</li> <li>Information required from cavity/subsidence 21. F. above.</li> <li>Sign-off requirements pursuant to WQCC Subsection G 20.6.2.5 101.</li> </ol> | <ol> <li>Production/Injection Volumes/Annual Report: The volumes of fluids<br/>injected (fresh water)<br/>and produced (brine) will be recorded monthly and submitted to the OCD</li> </ol> |
|---|--|---|
| 01/31/10  |  | 01/31/10  |
| Liquid Resources  |  | HRC- Schubert   |
| BW-30   |  | BW-31   |

an annual report due on the thirty-first (31) day of January of each year.

Santa Fe Office in

### Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Friday, September 25, 2009 1:48 PM

Sent

'Prather, Steve'; 'gandy2@leaco.net'; 'James Millett'; 'Clay Wilson'; 'Bob Patterson'; 'Blevins,

Sam': 'David Pveatt': 'garvmschubert@aol.com'

Cc:

Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Griswold, Jim, EMNRD; Jones,

William V., EMNRD

Subject:

New Mexico Oil Conservation Division Class III Solution Mining Well Operator Notice--

**ANNUAL REPORTS** 

Gentlemen:

Re: Annual Reporting

You are receiving this message because you are currently operating a Underground Injection Control (UIC) Class III Solution Mining Well in New Mexico under an Oil Conservation Division (OCD) Discharge Permit. You may be aware of the most recent events related to OCD Class III Wells in New Mexico and can find out more by visiting the OCD's Webste at <a href="http://www.emnrd.state.nm.us/OCD/brinewells.htm">http://www.emnrd.state.nm.us/imaging/AEOrderFileView.aspx?appNo=pCJC0906359521</a>.

The OCD is writing to inform you that it will be monitoring the receipt of your "Annual Reports" under the applicable section of your OCD discharge permit. The OCD has been deficient in tracking reporting obligations in the past; however, the OCD has recently upgraded our online system to track operators who are not meeting the reporting requirements specified in OCD Discharge Permits. Please plan on submitting the report with the required information by the date required in your discharge permit.

To access your OCD Discharge Permit Online for the date of submittal and contents of the report, please go to OCD Online at <a href="http://ocdimage.emnrd.state.nm.us/imaging/AEOrderCriteria.aspx">http://ocdimage.emnrd.state.nm.us/imaging/AEOrderCriteria.aspx</a> (enter "Order Type" as BW and your "Order Number"). If you have not submitted an Annual Report (report) for your well, a historical review of your injection and production records will be required in order to provide cumulative injection and production information in this year's report.

Please contact me if you have questions or need assistance.

Thank you in advance for your cooperation in this matter.

Copy: Brine Well Files BWs 2, 4, 8, 22, 25, 27, 28, 30 & 31

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Website: <a href="http://www.emnrd.state.nm.us/ocd/index.htm">http://www.emnrd.state.nm.us/ocd/index.htm</a> (Pollution Prevention Guidance is under "Publications")