

BW-036

**ANNUAL
REPORT**

2019

**ADDENDUM TO
2019 ANNUAL CLASS III WELL REPORT
-ANNUAL CERTIFICATION-**

H.R.C. INC.

Schubert Farms Well # 1 (BW-036)

API 30-025-37548

ANNUAL CERTIFICATION

H.R.C. Inc. certifies that continued salt solution mining of the Schubert Farms Well #1 (BW-36) will not cause cavern collapse, surface subsidence, property damage, or otherwise threaten public health and the environment, based on geologic and engineering data.

Signature Gary M. Schubert for H.R.C., Inc. Date 5/5/22
Name GARY M. SCHUBERT Title PEES

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

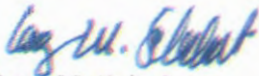
Ref: 2019 Annual Report
Schubert Farms No. 1 (API # 30-025-37548)

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-036)

API 30-025-37548

February 27, 2020

DAVID ALVARADO

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

20.6.2.3107 NMAC MONITORING, REPORTING, AND OTHER REQUIERMENTS

SUMMARY OF CLASS III OPERATIONS 2019

Schubert Farms Well # 1 operations in 2019 recorded no leaks had occurred during the year. The fresh water systems well insulated protected the fresh water from freezing. All meters and valves were well protected and are in good working conditions.

H.R.C., Inc. Preventive maintenance scheduled plan is to replace any connections or valves that could be showing wear. This will continue as a safe operating condition and it will continue in 2020 as 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 in the month of November this is a common task 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 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.

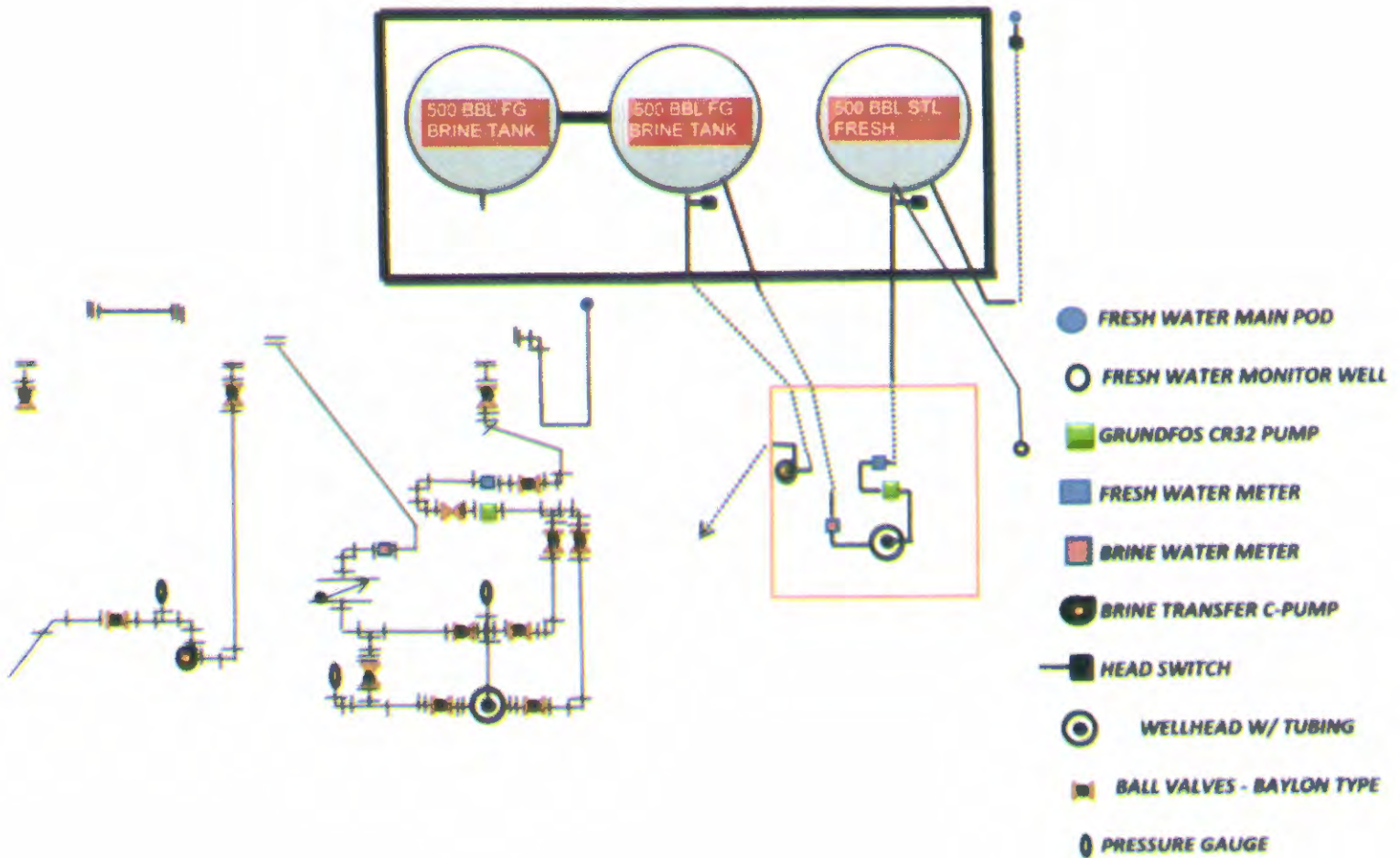
A total of 263,276 Bbl. of brine was extracted and weighed at an average of 9.89 PPG or a SG of 1.1851 in 2019. Production of brine slowed down due to demand of brine during the months of July, August and September attributed to the slight slowdown of the oil Industry. Brine sales rebounded in October and held steady at a means of 25,074 bbl. per month for the rest of 2019. Compared with the 306,806 bbl. produced in 2018.

H.R.C., Inc. Schubert Farms # 1 is an asset and continues to assist in the needs of the Industry.

Please find below a schematic of the facility operations of equipment on the BW-36

SCHUBERT FARMS No. 1
API # 30-025-37548
UL: B, SEC 25, T19S, R34E

FACILITY ISOTOPE



2019 FLUID INJECTION & BRINE PRODUCTION VOLUME

MONTH	BRINE	FRESH WATER	
JANUARY	33,307	33,197	
FEBRUARY	32,545	32,279	
MARCH	31,057	30,864	
APRIL	23,006	22,861	
MAY	22,428	22,233	
JUNE	20,388	20,252	
JULY	10,459	10,366	
AUGUST	8,009	7,924	
SEPTEMBER	6,854	6,790	
OCTOBER	25,640	25,500	
NOVEMBER	22,023	21,933	
DECEMBER	27,560	27,459	
YEAR TOTAL	263,276	261,658	

YEARLY TOTALS BRINE & FRESH

YEAR	BRINE	FRESH		
2017	153,518	148,678		
2018	306,806	303,899		
2019	263,276	261,658		
TOTAL	723,600	714,235		

Semi-Annual Monitor Well Analytical Data Results

Monitor well for the BW-36 last testing for 2018 is on record with OCD, Cardinal Laboratories performed and sampled water from the monitor well on November 21, 2018 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 2019 sample and December 2019 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 Limit	Units	Analyzed Date	Method
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INORGANIC COMPOUNDS JUNE 2019

Alkalinity, Bicarbonate	254		5.00	mg/L	6-12-19	310.1
Alkalinity Carbonate	<1.00		1.00	mg/L	6-12-19	310.1
Chloride	356		4.00	mg/L	6-13-19	4500-C1-B
Conductivity	1900		1.0	uS/cm	6-12-19	120.1
pH	7.49		0.100	pH Units	6-12-19	150.1
Sulfate	272		50.0	mg/L	6-11-19	375.4
TDS	1160		5.0	mg/L	6-13-19	160.1
Alkalinity Total	208		4.0	mg/L	6-12-19	310.1

H.R.C., Inc.

TOTAL RECOVERABLE METALS by ICP (E220.7)

Continued Report for June 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	189		0.500	mg/L	6-18-19	EPA200.7
Magnesium	49.6		0.500	mg/L	6-18-19	EPA200.7
Potassium	5.79	0.339	5.00	mg/L	6-18-19	EPA200.7
Sodium	150		5.00	mg/L	6-18-19	EPA200.7

DECEMBER 2019 RESULTS

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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INORGANIC COMPOUNDS

Alkalinity, Bicarbonate	229		5.0	mg/L	12-20-19	310.1
Alkalinity Carbonate	<1.00		1.00	mg/L	12-20-19	310.1
Chloride	404		4.0	mg/L	12-19-19	4500-C1-B
Conductivity	2140		1.00	uS/cm	12-20-19	120.1
pH	7.60		0.100	pH Units	12-20-19	150.1
Sulfate	266		50.0	mg/L	12-23-19	150.1
TDS	1250		5.00	mg/L	12-23-19	160.1
Alkalinity Total	188		4.0	mg/L	12-20-19	310.1

TOTAL RECOVERABLE METALS by ICP (E220.7)

Calcium	208		5.00	mg/L	12-27-19	EPA200.7
Magnesium	55.9		5.00	mg/L	12-27-19	EPA200.7
Potassium	<3.39	0.339	50.00	mg/L	12-27-19	EPA200.7
Sodium	165		50.00	mg/L	12-27-19	EPA200.7

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INJECTION PRESSURE

Injection pressure still runs the same the annulus average is 20 PSIG and the tubing average is at 240 PSIG the RFD pump runs at 56.3 Hz. with a yield of 28 GPM. 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 11.7 psi respectively. The operating pressure is at around 20 psig. Discharge line is of 3" Polyethylene SDR 11 with a max operating pressure of 160 PSI.

Brine Water transfer line from storage tanks at the Schubert Farms Well # 1 facility to the storage point located 1.5 miles south of the Schubert Farms Well # 1 has an operating pressure of 130 psi. The second point of diversion is the transfer of brine from the storage tanks known as the Peanut Shed to the ANITZ sales facility located 0.8 miles east of WHY 18 on Nadine Rd. (P-26-19S-38E) this line is constructed of 2" 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 0 pounds of pressure at the base of the line due to the (Peanut Shed) storage tanks being higher in elevation. In the transferring operation of brine from the storage tanks (Peanut Shed) it takes 20 to 30 static pounds to move fluid through the 2" line to the ANITZ sales point. Pump # 1 runs at 26 GPM and Pump # 2 runs at 42 GPM depending on demand both pumps can be run together.

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 four times 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 Limit	Units	Analyzed Date	Method
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INORGANIC COMPOUNDS

Alkalinity, Bicarbonate	234		5.0	mg/L	6-12-19	310.1
Alkalinity Carbonate	<1.00		1.00	mg/L	6-12-19	310.1
Chloride	188,000		4.00	mg/L	6-13-19	4500-C1-B
Conductivity	236,000		1.00	uS/cm	6-12-19	120.1
pH	6.93		0.100	pH Units	6-12-19	150.1
Sulfate	2540		500	mg/L	6-11-19	375.4
TDS	284,000		5.00	mg/L	6-14-19	160.1

H.R.C., Inc.

Alkalinity Total	192		4.0	mg/L	6-12-19	310.1
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TOTAL RECOVERABLE METALS by ICP (E220.7)

Continued Brine Report for June 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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Calcium	705		25.0	mg/L	6-18-19	EPA200.7
Magnesium	303		25.0	mg/L	6-18-19	EPA200.7
Potassium	606	16.9	250	mg/L	6-18-19	EPA200.7
Sodium	145,000		1000	mg/L	6-19-19	EPA200.7

BRINE ANALYTICAL RESULTS: DECEMBER 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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INORGANIC COMPOUNDS

Alkalinity, Bicarbonate	234		5.0	mg/L	12-20-19	310.1
Alkalinity Carbonate	<1.00		1.00	mg/L	12-20-19	310.1
Chloride	176,000		4.00	mg/L	12-19-19	4500-C1-B
Conductivity	263,000		1.00	uS/cm	12-20-19	120.1
pH	7.16		0.100	pH Units	12-20-19	150.1
Sulfate	2660		500	mg/L	12-23-19	375.4
TDS	283,000		5.00	mg/L	12-23-19	160.1
Alkalinity Total	192		4.0	mg/L	12-20-19	310.1

TOTAL RECOVERABLE METALS by ICP (E220.7)

Continued Brine Report for December 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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Calcium	744		100.0	mg/L	12-27-19	EPA200.7
Magnesium	233		100.0	mg/L	12-27-19	EPA200.7
Potassium	340	67.7	1000	mg/L	12-27-19	EPA200.7
Sodium	118,000		1000	mg/L	12-27-19	EPA200.7

FRESH WATER ANALYTICAL RESULTS: JUNE 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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INORGANIC COMPOUNDS

Alkalinity, Bicarbonate	224		5.00	mg/L	6-12-19	310.1
Alkalinity Carbonate	<1.00		1.00	mg/L	6-12-19	310.1
Chloride	140		4.00	mg/L	6-13-19	4500-C1-B
Conductivity	1040		1.00	uS/cm	6-12-19	120.1
pH	7.82		0.100	pH Units	6-12-19	150.1
Sulfate	190		25.00	mg/L	6-11-19	375.4
TDS	675		5.00	mg/L	6-13-19	160.1
Alkalinity Total	184		4.00	mg/L	6-12-19	310.1

TOTAL RECOVERABLE METALS by ICP (E220.7)

Continued F/W Report for June 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	102		0.500	mg/L	6-18-19	EPA200.7
Magnesium	28.2		0.500	mg/L	6-18-19	EPA200.7
Potassium	4.15	0.339	5.00	mg/L	6-18-19	EPA200.7
Sodium	100		5.00	mg/L	6-18-19	EPA200.7

FRESH WATER ANALYTICAL RESULTS: DECEMBER 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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INORGANIC COMPOUNDS

Alkalinity, Bicarbonate	298		5.00	mg/L	12-20-19	310.1
Alkalinity Carbonate	<1.00		1.00	mg/L	12-20-19	310.1
Chloride	248		4.00	mg/L	12-19-19	4500-C1-B
Conductivity	1,640		1.00	uS/cm	12-20-19	120.1
pH	7.65		0.100	pH Units	12-20-19	150.1
Sulfate	206		50.0	mg/L	12-23-19	375.4
TDS	979		5.00	mg/L	12-23-19	160.1
Alkalinity Total	244		4.00	mg/L	12-20-19	310.1

TOTAL RECOVERABLE METALS by ICP (E220.7)

Continued F/W Report for December 2019

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
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Calcium	144		5.00	mg/L	12-27-19	EPA200.7
Magnesium	27.6		5.00	mg/L	12-27-19	EPA200.7
Potassium	20.8	3.39	50.00	mg/L	12-27-19	EPA200.7
Sodium	176		50.00	mg/L	12-27-19	EPA200.7

MECHANICAL INTEGRITY TEST CHART

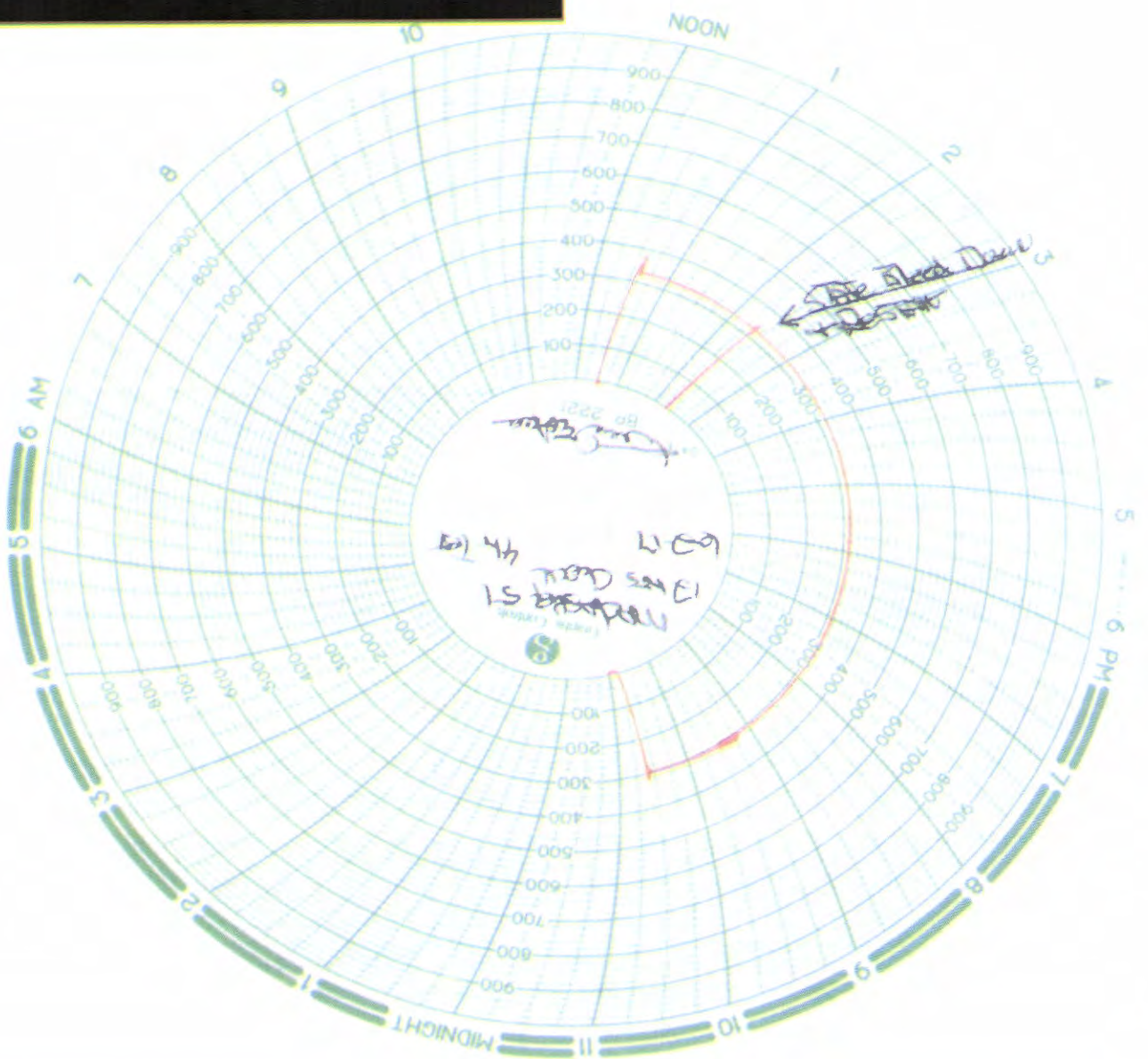
A formation mechanical test was performed on 2/23/17 on the BW-36. The Salado Formation was pressured up to 320 psi and was witnessed by a district officer and C-103 approved by Mark Whitaker in Hobbs on 11/15/17.

Recorder was removed and well was bled back to tanks. Nipple up connections and placed well back into operation producing brine at 230-240 psi. Please find the subsequent report C-103 and the Chart below for your viewing.

Next formation integrity test will be scheduled in February of 2022 H.R.C., Inc. will notify Santa Fe and Hobbs District Office to set up a time and date of the BW-36 Formation MIT.

Please find a copy of the MIT Chart on page 13 on page 14, 15 the C-103 Subsequent Report.

MIT BW-36 CHART 6-2-17



Submit to: Dept. of Agriculture, Division of Energy, Minerals and Natural Resources
 Building 1, 1220 South St. Francis Dr.
 Santa Fe, NM 87505
 Attention: Oil & Gas Division
 Phone: (505) 827-1234
 Fax: (505) 827-1235
 E-mail: oilgas@dmnr.nm.gov

State of New Mexico
 Energy, Minerals and Natural Resources
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form O-40X
 Revised 1-1-1977

WELL APPLICANT
 QUALITY FORM

1. Indicate Type of Lease
 STATE ☐ FEDERAL ☒
 2. State Oil & Gas Lease No.
 N/A

3. Lease Name or Unit Agreement Name
 SOUTH FERTILIZER

4. Well Number (100)

5. Well ID Number 131652

6. Well Name or Wellhead
 Name: (96173)

SEMI-ANNUAL NOTICES AND REPORTS ON WELLS
 (SEE RULE 19-1-15, NMAC, FOR MORE INFORMATION)
 (SEE RULE 19-1-15, NMAC, FOR MORE INFORMATION)

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

2. Name of Operator

H.R.C., Inc.

3. Address of Operator

P.O. Box 1102, Hobbs, NM 87401

4. Well Location

Unit: Section 25 Township 19S Range 18E



5. Elevation (feet) above MSL: 4980.00

6. Well from the NMPN County: Lea



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

NOTICE OF INTENTION TO

- REPAIR OR REMEDIAL WORK ☐
- TEMPORARILY ABANDON ☐
- PULL OR ALTER CASING ☐
- DOWNHOLE COMMINGLING ☐
- CLOSED-LOOP SYSTEM ☐
- OTHER ☐
- PLUG AND ABANDON ☐
- CHANGE PLANS ☐
- MULTIPLE COMPS ☐

SUBSEQUENT REPORT OF

- REMEDIAL WORK ☐
- COMMENCE DRILLING OPS ☐
- CASING/CEMENT JOB ☐
- ALTERING CASING ☐
- P AND A ☐

OTHER: WORKOVER TO CONVERT TO BRINE W

13. Describe proposed or completed operations. Clearly state all pertinent dates and give pertinent dates including completion of starting any proposed work. SEE RULE 19-1-15, NMAC, For Multiple Completions. Attach wellbore diagrams, proposed completion or recompletion.

***SEE ATTACHED WORKOVER PROCEEDURE COMPLETION REPORT

Sign Date: [Signature]

Reg Release Date: [Signature]

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

SIGNATURE: [Signature] TITLE: OWNER/PE

DATE: 11/14/17

Type of permit name: [Signature] E-mail address: [Signature]
 For State Use Only: [Signature]

PHONE: 505 893 2222

APPROVED BY: [Signature] TITLE: PE 3
 Conditions of Approval (if any):

DATE: 11/15/17

Feb 9, 2017

Rig up Capitan Wireline and set CIBP @ 2667'; above previous CIBP and cement plug that was set @ 2750' on June 21, 2016. (CIBP above top of cement was required to set whip stock by Baker Hughes)

Feb. 20, 2017

Rig up Lucky Services and Baker Hughes reverse unit
Set BOP; run in hole with 2 7/8" tubing and csg. scraper, circulate, tag CIBP @ 2660
Run in hole with whipstock and set. lay down 2 joints
SDEN

Feb. 21, 2017

Rig up swivel; mull csg. from 2651 to 2661'; come out of hole and rig up with bit assembly.
POOH with mill, lay down, make up bit asy
Run in hole begin drill into salt, drill from 2661' to 2715
Rig down swivel and pull up into csg.
SDEN

Feb 22, 2017

RH tag @ 2703, wash to 2715, circulate; space out tbg. with sub.
Set bottom of tbg / bit assembly @ 2680
Rig down swivel and pulling unit
Install well head
Hook up reverse unit.
Circulate and pressure to 275 psi
SDEN

Feb. 23, 2017

Pressure to 300 psi; make chart;
Circulate 5 hours at 150 to 200 psi;
Water turns salty. Rig down reverse unit.
Shut well in
Begin installing surface equipment

April 17, 2017

Begin injecting water to produce brine water

H.R.C., Inc. has updated the AOR for the Schubert Farms Well # 1 (BW-36) showing no new permits have been plotted on the NM OCD GIS program in the half mile AOR. H.R.C., Inc. will give notice to the Department if any future staking transpires within the AOR.

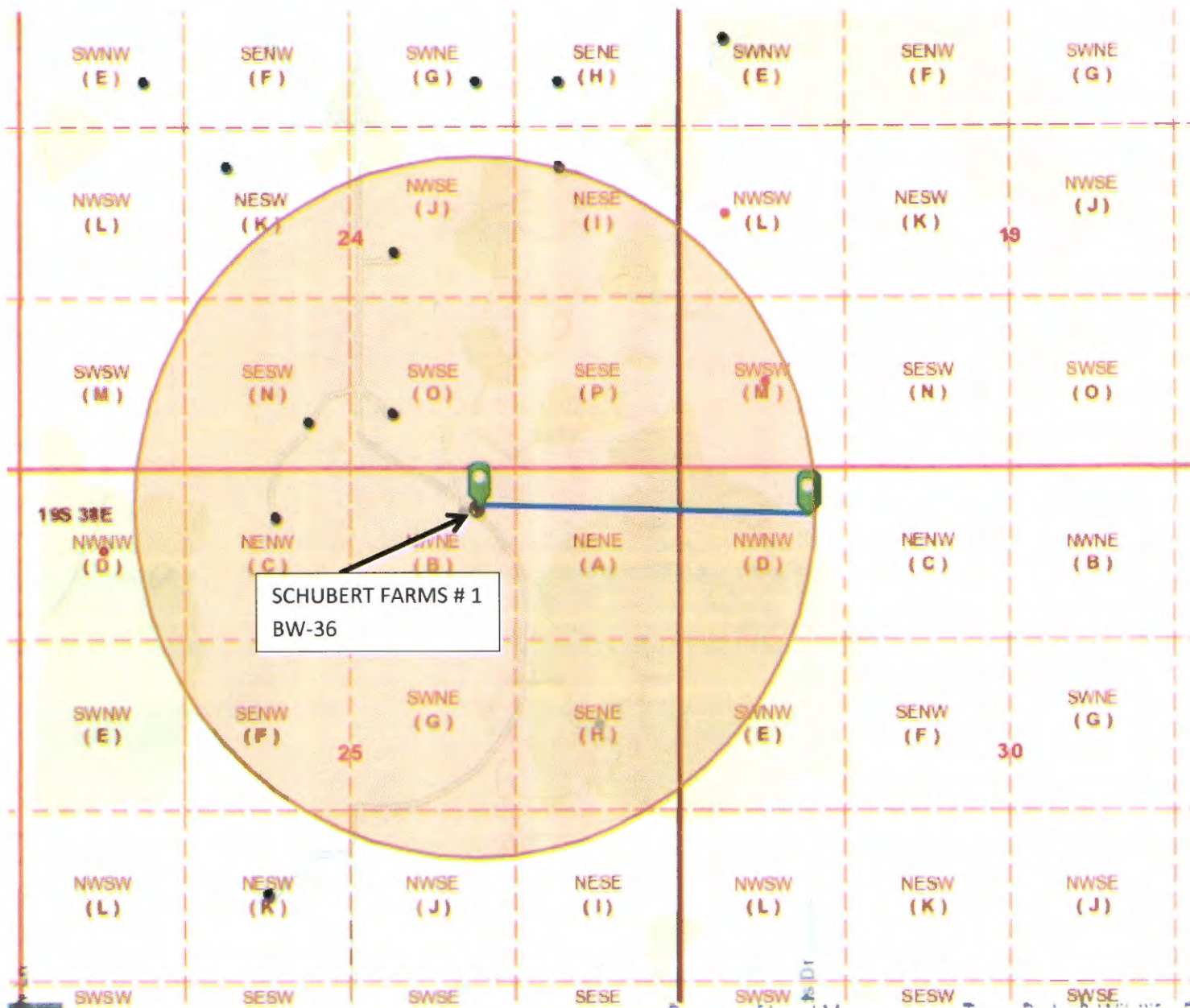
Please find on page 17 a half mile AOR review map showing no new permits nor has there been any new wells drilled at this point.

Please find on page 18 a two mile AOR review showing three new permits below are the APDs in the two mile AOR.

New Permits to Drill in Two Mile AOR

30-025-42532	Werta Federal # 006	Apache Corp.	I-35-19S- 38E	32.61576	-103.11174	Oil House Drinker
30-025-42530	Plow Boy Federal # 002	Apache Corp.	J-35-19S- 38E	32.61394	-103-11716	Oil House Blinebry
30-025-42531	Werta Federal # 005	Apache Corp.	P-35-19S- 38E	32.61213	-103.11175	Oil House Blinebry

HALF MILE AOR SCHUBERT FARMS WELL # 1 (BW-36)



TWO MILE AOR SCHUBERT FARMS WELL # 1 (BW-36)



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

Please see page 13 through page 15 for last MIT conducted and C-103 Subsequent Report on 6-2-17 held 300 psi and passed with OCD witnesses.

Surface Subsidence Surveys were conducted by Basin Surveys certified by Gary L. Jones. Three Elevation markers are in place. Please find below where the EM markers are located for BW-36.

NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEVATION
EM-1	597952.32	921529.98	32°38'15.88"	103°05'53.79"	3581.27
EM-2	597849.72	921532.48	32°38'14.86"	103°05'53.77"	3581.58
EM-3	598024.36	921313.69	32°38'16.62"	103°05'56.30"	3582.37

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

REVISION #	DATE	DESCRIPTION
6	January 15, 2019	Resurvey-No Change in Elevations
7	May 7, 2019	Resurvey-No Change in Elevations
8	October 14, 2019	Resurvey-No Change in Elevations
9	January 31, 2020	Resurvey-No Change in Elevations

Cavern Characterization

BW-36 has extracted an estimated total of 1,104,720 ft.³ of Halite from the Salado formation from March, 2017 to December 31, 2019. This calculates to 88,377,610 lbs. of Halite that has produced 723,600 Bbl. of brine within this period stated above.

The Litho Density Compensated Neutron log shown on page 21 has approximately 51' of good Halite net pay showing less than 4 API units on the Gama Ray side of the log that is presently being mined. This interval is from 2661'-2715'

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 $V = \pi R^2 h / 3$ where $[V = (3.14159 * 139.771^2) * (54') / 3]$

$V = 1,104,730$ ft.³ of Halite has been extracted to date respectively. This amount of volume calculated correlates with the total of brine produced from 2017 through December 31, 2019 of 1,104,720 Bbl.

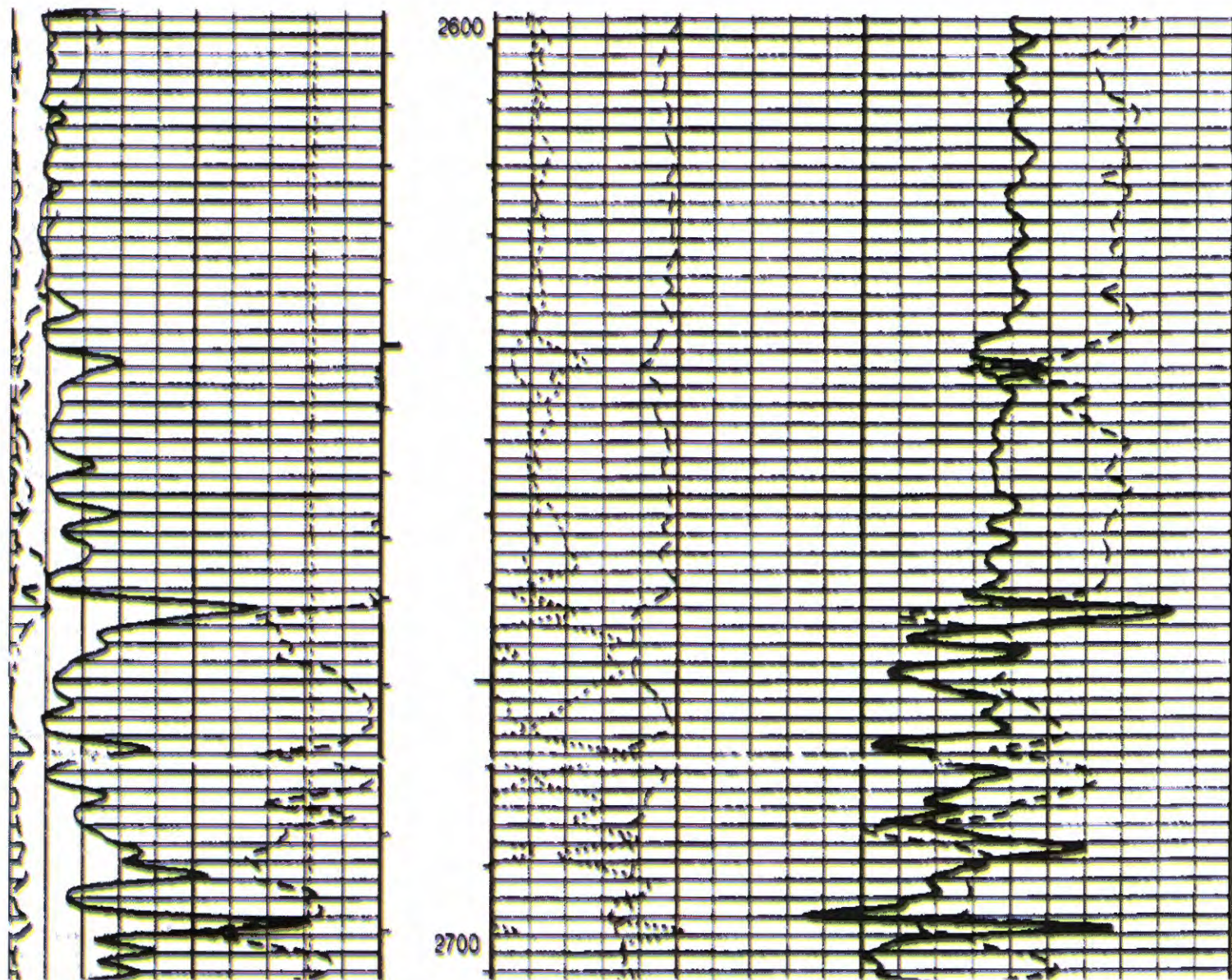
It takes 122.136 Lbs. of salt to produce one barrel of quality brine yielding a Specific Gravity of 1.1959. Multiplying salt ratio to total fluid bbl. total of 723,600 (extracted fluid bbl.) equals 88,377,610 Lbs. of salt mined from 2017 to the end of December 31, 2019.

Taking the amount of Halite mined of 88,377,610 Lbs. and dividing the amount by 80 (Lbs. salt per ft.³) will equal 1,104,720 ft.³. In respect to the cavern safety factor of 0.45 % the Schubert Farms Well No. 1 (BW-36) has a factor value of $(279.54' W / 955' H) = 0.29$ well below the States warning factor. New horizons above 2661' will yield greater opportunities.

BW-36 has a lot of life to continue mining for Halite that is used throughout our needs for the oil industry in Southeastern New Mexico.

SCHUBERT FARMS WELL # 001 LITHO DENSITY COMPENSATED NEUTRON LOG

WINDOW @ 2661' TD OH 2715'



SUMMARY RATIO INJECTION VS. EXTRACTION

2019 FLUID INJECTION & BRINE PRODUCTION VOLUME RATIO %

MONTH	BRINE	PSI	FRESH WATER	PSI	RATIO	RATIO %
JANUARY	33,307	230-240	33,197	20	33307:33197	1.003314
FEBRUARY	32,545	230-240	32,279	20	32545:32279	1.008241
MARCH	31,057	230-240	30,864	20	31057:30864	1.006253
APRIL	23,006	230-240	22,861	20	23006:22861	1.006343
MAY	22,428	230-240	22,233	20	7476:7411	1.008771
JUNE	20,388	230-240	20,252	20	5097:5063	1.006715
JULY	10,459	230-240	10,366	20	10459:10366	1.008972
AUGUST	8009	230-240	7,924	20	8009:7924	1.010727
SEPTEMBER	6,854	230-240	6,790	20	3427:3395	1.009426
OCTOBER	25,640	230-240	25,500	20	1282:1275	1.00549
NOVEMBER	22,023	230-240	21,933	20	2447:2437	1.004103
DECEMBER	27,560	230-240	27,459	20	27560:27459	1.003678

MAJOR FACILITY ACTIVITY OR EVENTS

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

SURFACE SUBSIDENCE MONITORING PLAN

Surface Subsidence Surveys were conducted by Basin Surveys certified by Gary L. Jones. Three Elevation markers are in place. Please find below where the EM markers are located for BW-36.

NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEVATION
EM-1	597952.32	921529.98	32°38'15.88"	103°05'53.79"	3581.27
EM-2	597849.72	921532.48	32°38'14.86"	103°05'53.77"	3581.58
EM-3	598024.36	921313.69	32°38'16.62"	103°05'56.30"	3582.37

Three Surveys were conducted by Basin Surveys during the 2019 period with the description stating that there were no changes in elevations also there was a survey that was conducted in January 2020.

Depicted below are the 2019 reports of the surveys for your review with the survey done in January 2020. Please find the plats of the Surveys at the end of this report for your viewing.

REVISION #	DATE	DESCRIPTION
6	January 15, 2019	Resurvey-No Change in Elevations
7	May 7, 2019	Resurvey-No Change in Elevations
8	October 14, 2019	Resurvey-No Change in Elevations
9	January 31, 2020	Resurvey-No Change in Elevations

CAVERN CHARACTERIZATION DATA RESULTS.

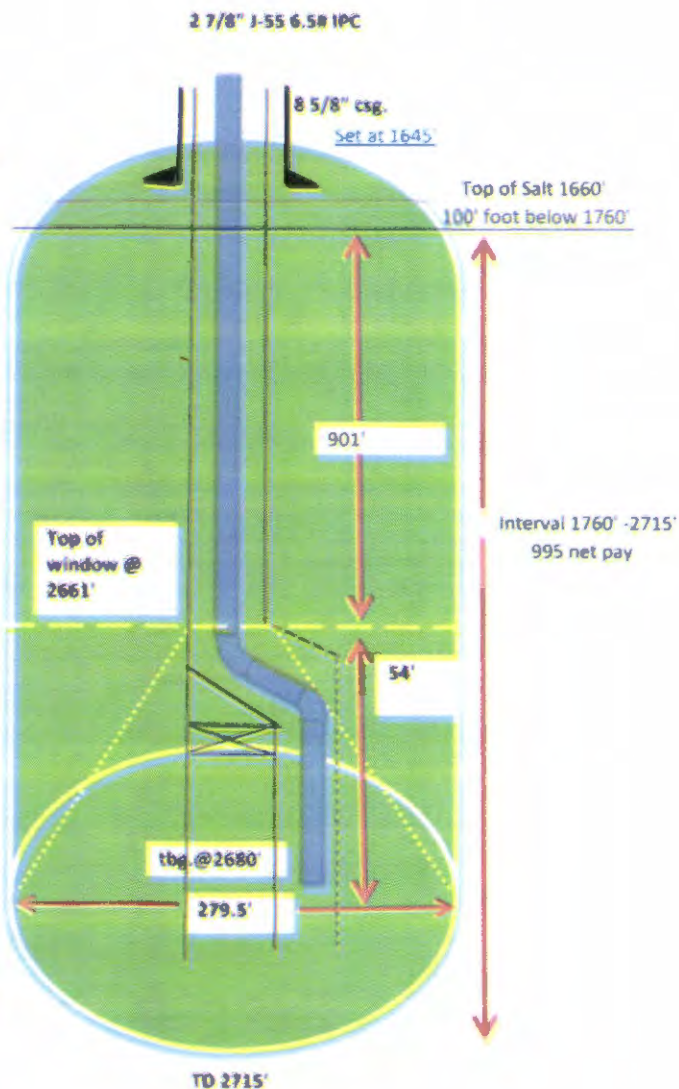
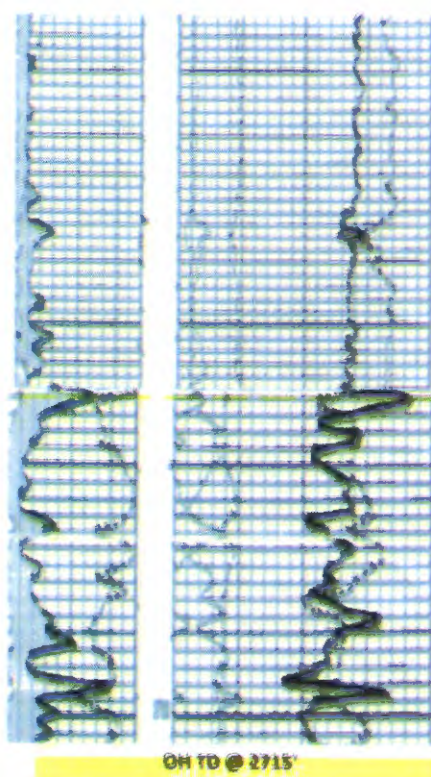
Please refer to page 20 and page 21 for data results.

On Page 25; please find the characterization of the Schubert Farms Well No. 1 (BW-36)

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

Schubert Farms Well No1
API 30-025-37548
B SEC 25 T19S R38E
LAT: 32.6375999 LONG:-103.0988007

CAVERN SIZE BY CUBIC FOOT OF VOLUME



PPG 9.97 brine
PPG 8.34 fresh
SG 1.1951

2017 thru Dec. 2019 Total Brine bbl. 723,600
122.136 LBS / BBL = 88,377,610 LBS HALITE
(88,377,610 LBS) / (80.0 LBS per ft³) = 1,104,720 ft³

$$V = \frac{\pi r^2 h}{3}$$

$$V = (3.14159 * 139.771^2) * (54') / 3$$

$$V = 1,104,730 \text{ ft}^3$$

Est. height is 54'
Est. cavern floor diameter is 279.5'
Cavern Ratio 279.5' / 955 = 0.29 Factor

APR 11 2019 PM03:34



HRC, INC.

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

January 17, 2019

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

Ref: 2018 Annual Report
Schubert Farms No. 1 (API # 30-025-37548) CBW-36)

Dear Mr. Griswold,

Enclosed please find the monthly freshwater injection and brine production numbers for the Hobbs facility for the year of 2018. Included also are Cardinal Laboratories' results of analyses for samples for the month of December 2017 and the production amounts for December 2017 and the 2017 production totals for your reference.

Thank you,

Sincerely,

Gary M. Schubert
GMS/br

Schubert Farms Well No. 1

Year 2018

MONTH	BRINE PRODUCTION (BY Meter)	FRESH WATER INJECTED (By Meter)
January	25,912	25,360
February	21,338	21,124
March	26,609	26,407
April	20,459	20,102
May	18,030	17,831
June	24,897	24,719
July	23,761	23,557
August	23,511	23,319
September	24,333	24,114
October	29,826	29,631
November	31,826	31,614
December	36,304	36,121



DEC 13 2018

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

December 18, 2018

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 11/21/18 8:15.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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)

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,

A handwritten signature in black ink, appearing to read "Celey D. Keene", written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241Project: SCHUBERT
Project Number: FARMS #1 WATER SAMPLES
Project Manager: BEN DONAHUE
Fax To:Reported:
18-Dec-18 11:46

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRINE WATER	H803420-01	Water	21-Nov-18 06:15	21-Nov-18 08:15
FRESH WATER	H803420-02	Water	21-Nov-18 06:15	21-Nov-18 08:15
MONITOR WELL	H803420-03	Water	21-Nov-18 06:15	21-Nov-18 08:15

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

BRINE WATER
H803420-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	478		5.00	mg/L	1	8112610	AC	26-Nov-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8112610	AC	26-Nov-18	310.1	
Chloride*	152000		4.00	mg/L	1	8112601	AC	26-Nov-18	4500-Cl-B	
Conductivity*	237000		1.00	uS/cm	1	8112118	AC	21-Nov-18	120.1	
pH*	6.87		0.100	pH Units	1	8112118	AC	21-Nov-18	150.1	
Sulfate*	4190		833	mg/L	83.3	8112713	AC	27-Nov-18	375.4	
TDS*	254000		5.00	mg/L	1	8112718	AC	28-Nov-18	160.1	
Alkalinity, Total*	392		4.00	mg/L	1	8112610	AC	26-Nov-18	310.1	

Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	820		50.0	mg/L	500	B812008	AES	05-Dec-18	EPA200.7	
Magnesium*	507		50.0	mg/L	500	B812008	AES	05-Dec-18	EPA200.7	
Potassium*	830		500	mg/L	500	B812008	AES	05-Dec-18	EPA200.7	
Sodium*	94700		500	mg/L	500	B812008	AES	05-Dec-18	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

FRESH WATER
H803420-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	327		5.00	mg/L	1	8112610	AC	26-Nov-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8112610	AC	26-Nov-18	310.1	
Chloride*	260		4.00	mg/L	1	8112601	AC	26-Nov-18	4500-Cl-B	
Conductivity*	1490		1.00	uS/cm	1	8112118	AC	21-Nov-18	120.1	
pH*	7.53		0.100	pH Units	1	8112118	AC	21-Nov-18	150.1	
Sulfate*	165		50.0	mg/L	5	8112713	AC	27-Nov-18	375.4	
TDS*	702		5.00	mg/L	1	8112718	AC	28-Nov-18	160.1	
Alkalinity, Total*	268		4.00	mg/L	1	8112610	AC	26-Nov-18	310.1	

Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	110		0.100	mg/L	1	B812008	AES	05-Dec-18	EPA200.7	
Magnesium*	21.6		0.100	mg/L	1	B812008	AES	05-Dec-18	EPA200.7	
Potassium*	14.6		1.00	mg/L	1	B812008	AES	05-Dec-18	EPA200.7	
Sodium*	150		1.00	mg/L	1	B812008	AES	05-Dec-18	EPA200.7	

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

MONITOR WELL
H803420-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	288		5.00	mg/L	1	8112610	AC	26-Nov-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8112610	AC	26-Nov-18	310.1	
Chloride*	320		4.00	mg/L	1	8112601	AC	26-Nov-18	4500-Cl-B	
Conductivity*	1800		1.00	uS/cm	1	8112118	AC	21-Nov-18	120.1	
pH*	7.58		0.100	pH Units	1	8112118	AC	21-Nov-18	150.1	
Sulfate*	298		50.0	mg/L	5	8112713	AC	27-Nov-18	375.4	
TDS*	982		5.00	mg/L	1	8112718	AC	28-Nov-18	160.1	
Alkalinity, Total*	236		4.00	mg/L	1	8112610	AC	26-Nov-18	310.1	

Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	172		0.100	mg/L	1	B812009	AES	07-Dec-18	EPA200.7	
Magnesium*	44.3		0.100	mg/L	1	B812009	AES	07-Dec-18	EPA200.7	
Potassium*	4.95		1.00	mg/L	1	B812009	AES	07-Dec-18	EPA200.7	
Sodium*	124		1.00	mg/L	1	B812009	AES	07-Dec-18	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8112118 - General Prep - Wet Chem
LCS (8112118-BS1)

Prepared & Analyzed: 21-Nov-18

Conductivity	100000		uS/cm	100000		100	80-120			
pH	7.12		pH Units	7.00		102	90-110			

Duplicate (8112118-DUP1)

Source: H803419-01

Prepared & Analyzed: 21-Nov-18

Conductivity	236000	1.00	uS/cm	237000				0.338	20	
pH	7.07	0.100	pH Units	7.02				0.710	20	

Batch 8112601 - General Prep - Wet Chem
Blank (8112601-BLK1)

Prepared & Analyzed: 26-Nov-18

Chloride	ND	4.00	mg/L							
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LCS (8112601-BS1)

Prepared & Analyzed: 26-Nov-18

Chloride	100	4.00	mg/L	100		100	80-120			
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LCS Dup (8112601-BS1)

Prepared & Analyzed: 26-Nov-18

Chloride	100	4.00	mg/L	100		100	80-120	0.00	20	
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Batch 8112610 - General Prep - Wet Chem
Blank (8112610-BLK1)

Prepared & Analyzed: 26-Nov-18

Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							

LCS (8112610-BS1)

Prepared & Analyzed: 26-Nov-18

Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	318	12.5	mg/L				80-120			
Alkalinity, Total	260	10.0	mg/L	250		104	80-120			

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 Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8112610 - General Prep - Wet Chem
LCS Dup (8112610-BSD1)

Prepared & Analyzed: 26-Nov-18

Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120	4.02	20	
Alkalinity, Total	250	10.0	mg/L	250		100	80-120	3.92	20	

Batch 8112713 - General Prep - Wet Chem
Blank (8112713-BLK1)

Prepared & Analyzed: 27-Nov-18

Sulfate	ND	10.0	mg/L							
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LCS (8112713-BS1)

Prepared & Analyzed: 27-Nov-18

Sulfate	23.3	10.0	mg/L	20.0		117	80-120			
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LCS Dup (8112713-BSD1)

Prepared & Analyzed: 27-Nov-18

Sulfate	19.6	10.0	mg/L	20.0		98.0	80-120	17.5	20	
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Batch 8112718 - Filtration
Blank (8112718-BLK1)

Prepared: 27-Nov-18 Analyzed: 28-Nov-18

TDS	ND	5.00	mg/L							
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LCS (8112718-BS1)

Prepared: 27-Nov-18 Analyzed: 28-Nov-18

TDS	574		mg/L	672		85.4	80-120			
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Duplicate (8112718-DUP1)

Source: H803420-01

Prepared: 27-Nov-18 Analyzed: 28-Nov-18

TDS	265000	5.00	mg/L	254000				3.95	20	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B812008 - Total Rec. 200.7/200.8/200.2
Blank (B812008-BLK1)

Prepared: 03-Dec-18 Analyzed: 05-Dec-18

Sodium	ND	1.00	mg/L							
Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							

LCS (B812008-BS1)

Prepared: 03-Dec-18 Analyzed: 05-Dec-18

Calcium	3.94	0.100	mg/L	4.00		98.6	85-115			
Sodium	3.51	1.00	mg/L	3.24		108	85-115			
Magnesium	19.5	0.100	mg/L	20.0		97.5	85-115			
Potassium	8.22	1.00	mg/L	8.00		103	85-115			

LCS Dup (B812008-BSD1)

Prepared: 03-Dec-18 Analyzed: 05-Dec-18

Potassium	8.08	1.00	mg/L	8.00		101	85-115	1.65	20	
Sodium	3.40	1.00	mg/L	3.24		105	85-115	3.01	20	
Calcium	3.98	0.100	mg/L	4.00		99.5	85-115	0.907	20	
Magnesium	19.7	0.100	mg/L	20.0		98.4	85-115	0.965	20	

Batch B812009 - Total Rec. 200.7/200.8/200.2
Blank (B812009-BLK1)

Prepared: 03-Dec-18 Analyzed: 07-Dec-18

Magnesium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
Calcium	ND	0.100	mg/L							

LCS (B812009-BS1)

Prepared: 03-Dec-18 Analyzed: 11-Dec-18

Potassium	8.21	1.00	mg/L	8.00		103	85-115			
Magnesium	20.7	0.100	mg/L	20.0		104	85-115			
Calcium	4.17	0.100	mg/L	4.00		104	85-115			
Sodium	3.38	1.00	mg/L	3.24		104	85-115			

Cardinal Laboratories

* = Accredited Analyte

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 Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 18-Dec-18 11:46

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B812009 - Total Rec. 200.7/200.8/200.2										
ECS Dup (B812009-BSD1)				Prepared: 03-Dec-18 Analyzed: 11-Dec-18						
Potassium	8.16	1.00	mg/L	8.00		102	85-115	0.686	20	
Calcium	4.19	0.100	mg/L	4.00		105	85-115	0.480	20	
Sodium	3.34	1.00	mg/L	3.24		103	85-115	1.13	20	
Magnesium	20.8	0.100	mg/L	20.0		104	85-115	0.586	20	

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Celey D. Keene, Lab Director/Quality Manager

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO										ANALYSIS REQUEST									
P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____										P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____									
Project Owner: <u>Gr. Schubert</u> Sample: <u>Subtract Farms #1 Water Sample</u> Location: <u>Schubert Farms #1 Bore well</u> Name: <u>Ben Donahue</u>										Project Owner: <u>Gr. Schubert</u> Sample: <u>Subtract Farms #1 Water Sample</u> Location: <u>Schubert Farms #1 Bore well</u> Name: <u>Ben Donahue</u>									
Matrix: _____ # CONTAINERS: _____ (G) RAB OR (C) OMP: _____										Matrix: _____ # CONTAINERS: _____ (G) RAB OR (C) OMP: _____									
Sample I.D. _____ 1. <u>Bore Water</u> 2. <u>Fresh Water</u> 3. <u>Monitor well</u>										Sample I.D. _____ 1. <u>Bore Water</u> 2. <u>Fresh Water</u> 3. <u>Monitor well</u>									
PRESERV: _____ OTHER: _____ ACID/BASE: _____ ICE / COOL: _____ OTHER: _____										PRESERV: _____ OTHER: _____ ACID/BASE: _____ ICE / COOL: _____ OTHER: _____									
DATE: _____ TIME: _____										DATE: _____ TIME: _____									

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Received By: Ben Donahue Date: 11/21/13 Time: 15:15
Received By: Ben Donahue Date: 11/21/13 Time: 15:15

Phone Result: ☐ Yes ☐ No Add'l Phone #: _____
Fax Result: ☐ Yes ☐ No Add'l Fax #: _____

REMARKS: _____

By: (Circle One) PS - Bus Other: 0.32 / #97
Checked By: Ben Donahue

Sample Condition: Cool Intact
Cool: ☒ Yes ☐ No
Intact: ☒ Yes ☐ No

Cardinal cannot accept verbal chain of custody. Discrepancies in sample analysis results may occur.

June 04, 2018

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 05/18/18 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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)

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

FORM
6-4-18

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1 WATER SAMPLES- BRIN
Project Manager: BEN DONAHUE
Fax To:

Reported:
04-Jun-18 12:06

FRESH WATER
H801390-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	229		5.00	mg/L	1	8050906	AC	21-May-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8050906	AC	21-May-18	310.1	
Chloride*	124		4.00	mg/L	1	8051614	AC	21-May-18	4500-Cl-B	
Conductivity*	1020		1.00	uS/cm	1	8052104	AC	21-May-18	120.1	
pH*	7.87		0.100	pH Units	1	8052104	AC	21-May-18	150.1	
Sulfate*	206		50.0	mg/L	5	8052201	AC	22-May-18	375.4	
TDS*	656		5.00	mg/L	1	8052105	AC	23-May-18	160.1	
Alkalinity, Total*	188		4.00	mg/L	1	8050906	AC	21-May-18	310.1	

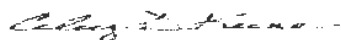
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	85.3		1.00	mg/L	10	B805178	JDA	29-May-18	EPA200.7	
Magnesium*	24.7		1.00	mg/L	10	B805178	JDA	29-May-18	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B805178	JDA	29-May-18	EPA200.7	
Sodium*	92.3		10.0	mg/L	10	B805178	JDA	29-May-18	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES- BRIN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-Jun-18 12:06

BRINE WATER

H801390-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	256		5.00	mg/L	1	8050906	AC	21-May-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8050906	AC	21-May-18	310.1	
Chloride*	166000		4.00	mg/L	1	8051614	AC	21-May-18	4500-Cl-B	
Conductivity*	236000		1.00	uS/cm	1	8052104	AC	21-May-18	120.1	
pH*	6.95		0.100	pH Units	1	8052104	AC	21-May-18	150.1	
Sulfate*	4490		833	mg/L	83.33	8052201	AC	22-May-18	375.4	
TDS*	263000		5.00	mg/L	1	8052105	AC	23-May-18	160.1	
Alkalinity, Total*	210		4.00	mg/L	1	8050906	AC	21-May-18	310.1	

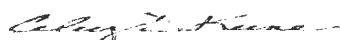
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	814		50.0	mg/L	500	B805178	JDA	29-May-18	EPA200.7	
Magnesium*	401		50.0	mg/L	500	B805178	JDA	29-May-18	EPA200.7	
Potassium*	667		500	mg/L	500	B805178	JDA	29-May-18	EPA200.7	
Sodium*	98200		500	mg/L	500	B805178	JDA	29-May-18	EPA200.7	

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES- BRIN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-Jun-18 12:06

MONITOR WELL
H801390-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	249		5.00	mg/L	1	8050906	AC	21-May-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8050906	AC	21-May-18	310.1	
Chloride*	328		4.00	mg/L	1	8052107	AC	21-May-18	4500-Cl-B	
Conductivity*	1860		1.00	uS/cm	1	8052104	AC	21-May-18	120.1	
pH*	7.56		0.100	pH Units	1	8052104	AC	21-May-18	150.1	
Sulfate*	273		50.0	mg/L	5	8052201	AC	22-May-18	375.4	
TDS*	1170		5.00	mg/L	1	8052105	AC	23-May-18	160.1	
Alkalinity, Total*	204		4.00	mg/L	1	8050906	AC	21-May-18	310.1	

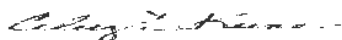
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	176		1.00	mg/L	10	B805178	JDA	29-May-18	EPA200.7	
Magnesium*	46.5		1.00	mg/L	10	B805178	JDA	29-May-18	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B805178	JDA	29-May-18	EPA200.7	
Sodium*	127		10.0	mg/L	10	B805178	JDA	29-May-18	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES- BRIN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-Jun-18 12:06

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8050906 - General Prep - Wet Chem
Blank (8050906-BLK1)

Prepared & Analyzed: 09-May-18

Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							

LCS (8050906-BS1)

Prepared & Analyzed: 09-May-18

Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	318	12.5	mg/L				80-120			
Alkalinity, Total	260	10.0	mg/L	250		104	80-120			

LCS Dup (8050906-BSD1)

Prepared & Analyzed: 09-May-18

Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	365	12.5	mg/L				80-120	13.9	20	
Alkalinity, Total	300	10.0	mg/L	250		120	80-120	14.3	20	

Batch 8051614 - General Prep - Wet Chem
Blank (8051614-BLK1)

Prepared & Analyzed: 16-May-18

Chloride	ND	4.00	mg/L							
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LCS (8051614-BS1)

Prepared & Analyzed: 16-May-18

Chloride	100	4.00	mg/L	100		100	80-120			
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LCS Dup (8051614-BSD1)

Prepared & Analyzed: 16-May-18

Chloride	104	4.00	mg/L	100		104	80-120	3.92	20	
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Batch 8052104 - General Prep - Wet Chem
LCS (8052104-BS1)

Prepared & Analyzed: 21-May-18

Conductivity	501		uS/cm	500		100	80-120			
pH	7.20		pH Units	7.00		103	90-110			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES- BRIA
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-Jun-18 12:06

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8052104 - General Prep - Wet Chem

Duplicate (8052104-DUP1)		Source: H801389-01		Prepared & Analyzed: 21-May-18						
Conductivity	1020	1.00	uS/cm		1020			0.0984	20	
pH	7.54	0.100	pH Units		7.53			0.133	20	

Batch 8052105 - Filtration

Blank (8052105-BLK1)		Prepared: 21-May-18 Analyzed: 23-May-18								
TDS	ND	5.00	mg/L							

LCS (8052105-BS1)		Prepared: 21-May-18 Analyzed: 23-May-18								
TDS	518	5.00	mg/L	527	98.3	80-120				

Duplicate (8052105-DUP1)		Source: H801385-01		Prepared: 21-May-18 Analyzed: 23-May-18						
TDS	996	5.00	mg/L		1000			0.800	20	

Batch 8052107 - General Prep - Wet Chem

Blank (8052107-BLK1)		Prepared & Analyzed: 21-May-18								
Chloride	ND	4.00	mg/L							

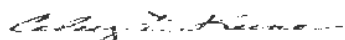
LCS (8052107-BS1)		Prepared & Analyzed: 21-May-18								
Chloride	100	4.00	mg/L	100	100	80-120				

LCS Dup (8052107-BSD1)		Prepared & Analyzed: 21-May-18								
Chloride	104	4.00	mg/L	100	104	80-120	3.92	20		

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES- BRIN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-Jun-18 12:06

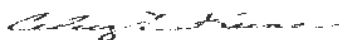
Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8052201 - General Prep - Wet Chem										
Blank (8052201-BL K1)				Prepared & Analyzed: 22-May-18						
Sulfate	ND	10.0	mg/L							
LCS (8052201-BS1)				Prepared & Analyzed: 22-May-18						
Sulfate	19.6	10.0	mg/L	20.0		98.2	80-120			
LCS Dup (8052201-BSD1)				Prepared & Analyzed: 22-May-18						
Sulfate	20.8	10.0	mg/L	20.0		104	80-120	5.88	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1 WATER SAMPLES- BRIA
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-Jun-18 12:06

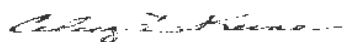
Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Results	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B805178 - Total Rec. 200.7/200.8/200.2										
Blank (B805178-BLK1)				Prepared: 24-May-18 Analyzed: 29-May-18						
Potassium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
LCS (B805178-BS1)				Prepared: 24-May-18 Analyzed: 29-May-18						
Magnesium	20.2	0.100	mg/L	20.0		101	85-115			
Potassium	8.17	1.00	mg/L	8.00		102	85-115			
Calcium	4.00	0.100	mg/L	4.00		100	85-115			
Sodium	3.21	1.00	mg/L	3.24		99.2	85-115			
LCS Dup (B805178-BSD1)				Prepared: 24-May-18 Analyzed: 29-May-18						
Calcium	4.07	0.100	mg/L	4.00		102	85-115	1.63	20	
Potassium	8.34	1.00	mg/L	8.00		104	85-115	2.03	20	
Sodium	3.26	1.00	mg/L	3.24		101	85-115	1.43	20	
Magnesium	20.6	0.100	mg/L	20.0		103	85-115	1.60	20	

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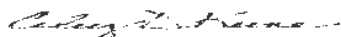
Celey D. Keene, Lab Director/Quality Manager

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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Celey D. Keene, Lab Director/Quality Manager

Schubert Farms Well No. 1

Year 2017

MONTH	BRINE PRODUCTION (BY Meter)	FRESH WATER INJECTED (By Meter)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December	24,921	24,360



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

December 05, 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 10:22.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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)

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, 88241Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:Reported:
05-Dec-17 14:36

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRINE WATER	H703207-01	Water	16-Nov-17 09:00	16-Nov-17 10:22
MONITOR WELL	H703207-02	Water	16-Nov-17 09:00	16-Nov-17 10:22
FRESH WATER	H703207-03	Water	16-Nov-17 09:00	16-Nov-17 10:22

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

BRINE WATER
H703207-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	476		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*	162000		4.00	mg/L	1	7112001	AC	20-Nov-17	4500-Cl-B	
Conductivity*	475000		1.00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
pH*	6.96		0.100	pH Units	1	7111701	AC	16-Nov-17	150.1	
Sulfate*	6580		833	mg/L	83.3	7112201	AC	22-Nov-17	375.4	
TDS*	266000		5.00	mg/L	1	7111608	AC	17-Nov-17	160.1	
Alkalinity, Total*	390		4.00	mg/L	1	7110705	AC	17-Nov-17	310.1	

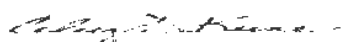
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	844		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Magnesium*	455		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Potassium*	1420		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Sodium*	91100		200	mg/L	200	B711206	JDA	29-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

MONITOR WELL H703207-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	327		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*	356		4.00	mg/L	1	7112001	AC	20-Nov-17	4500-CL-B	
Conductivity*	1790		1.00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
pH*	7.60		0.100	pH Units	1	7111701	AC	16-Nov-17	150.1	
Sulfate*	264		50.0	mg/L	5	7112201	AC	22-Nov-17	375.4	
TDS*	1180		5.00	mg/L	1	7111608	AC	17-Nov-17	160.1	
Alkalinity, Total*	268		4.00	mg/L	1	7110705	AC	17-Nov-17	310.1	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Calcium*	171		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Magnesium*	45.3		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Sodium*	125		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

FRESH WATER

H703207-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
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-Cl-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 Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	119		5.00	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Magnesium*	25.6		5.00	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Potassium*	<50.0		50.0	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Sodium*	130		50.0	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7110705 - General Prep - Wet Chem

Blank (7110705-BLK1)

Prepared & Analyzed: 07-Nov-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 (7110705-BS1)

Prepared & Analyzed: 07-Nov-17

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

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: 17-Nov-17

TDS	ND	5.00	mg/L							
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LCS (7111608-BS1)

Prepared: 16-Nov-17 Analyzed: 17-Nov-17

TDS	228	5.00	mg/L	213		107	80-120			
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Duplicate (7111608-DUP1)

Source: H703199-01

Prepared: 16-Nov-17 Analyzed: 17-Nov-17

TDS	9630	5.00	mg/L		9890			2.64	20	
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Batch 7111701 - General Prep - Wet Chem

LCS (7111701-BS1)


Prepared: 16-Nov-17 Analyzed: 17-Nov-17

Conductivity	507		uS/cm	500		101	80-120			
pH	6.97		pH Units	7.00		99.6	90-110			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7111701 - General Prep - Wet Chem

Duplicate (7111701-DUP1)		Source: H703206-01		Prepared: 16-Nov-17 Analyzed: 17-Nov-17						
Conductivity	501000	1.00	uS/cm		494000			1.46	20	
pH	7.07	0.100	pH Units		7.06			0.142	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 & 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		

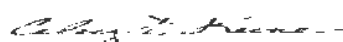
Batch 7112201 - General Prep - Wet Chem

Blank (7112201-BLK1)				Prepared & 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 & Analyzed: 22-Nov-17						
Sulfate	23.6	10.0	mg/L	20.0	118	80-120	1.79	20		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	KPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B711172 - Total Rec. 200.7/200.8/200.2
Blank (B711172-BLK1)

Prepared: 20-Nov-17 Analyzed: 22-Nov-17

Sodium	ND	1.00	mg/L
Magnesium	ND	0.100	mg/L
Calcium	ND	0.100	mg/L
Potassium	ND	1.00	mg/L

LCS (B711172-BS1)

Prepared: 20-Nov-17 Analyzed: 22-Nov-17

Magnesium	20.8	0.100	mg/L	20.0	104	85-115
Calcium	1.23	0.100	mg/L	4.00	106	85-115
Sodium	6.68	1.00	mg/L	6.48	103	85-115
Potassium	8.07	1.00	mg/L	8.00	101	85-115

LCS Dup (B711172-BS1)

Prepared: 20-Nov-17 Analyzed: 22-Nov-17

Magnesium	20.8	0.100	mg/L	20.0	104	85-115	0.0742	20
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

Batch B711206 - Total Rec. 200.7/200.8/200.2
Blank (B711206-BL K1)

Prepared: 27-Nov-17 Analyzed: 29-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 (B711206-BS1)

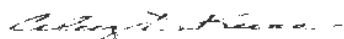
Prepared: 27-Nov-17 Analyzed: 29-Nov-17

Magnesium	20.7	0.100	mg/L	20.0	104	85-115
Potassium	8.35	1.00	mg/L	8.00	104	85-115
Calcium	4.15	0.100	mg/L	4.00	104	85-115
Sodium	6.64	1.00	mg/L	6.48	102	85-115

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B711206 - Total Rec. 200.7/200.8/200.2										
LCS Dup (B711206-BSD1)				Prepared: 27-Nov-17 Analyzed: 29-Nov-17						
Potassium	8.07	1.00	mg/L	8.00		101	85-115	3.36	20	
Magnesium	20.0	0.100	mg/L	20.0		100	85-115	3.34	20	
Sodium	6.43	1.00	mg/L	6.48		99.2	85-115	3.28	20	
Calcium	3.99	0.100	mg/L	4.00		99.7	85-115	4.11	20	

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Celey D. Keene, Lab Director/Quality Manager

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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*—Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Name: ETZ Water Station
Manager: Ben Donahue

State: Zip:
City: State: Zip:
Phone #: Fax #:
Project Owner:

Name: Schneider Farms #1
Location: Ben Donahue

Name: Ben Donahue

E ONLY

D.

Sample I.D.

Brine Water
Monitor Well
fresh water

(G)RAB OR (C)OMP
CONTAINERS 9

GROUNDWATER ✓

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE

ICE / COOL

OTHER

PRESERV

SAMPLING

DATE TIME
11-16-17 9:00

BILL TO ANALYSIS REQUEST

P.O. #:

Company:

Attn:

Address:

City:

State:

Phone #:

Fax #:

Latton/Havens

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Received By: Yvonne White

Date: 11/16/17

Time: 10:22am

Date:

Time:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

email to: garymschneider@gmail.com

Received By: (Circle One) 0.30

UPS - Bus - Other:

Sample Condition

Cool ☐ Intact ☐

Yes ☐ No ☐

Checked By: 10. #75

Corrected 0.550

Placed for written response in (575) 101-2476

SECTION 25, TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

EM #3

Anchors

Firewall

EM #1

Firewall

EM #2

Firewall

Building

Anchors

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	597952.52	921529.98	32°38'15.88"	103°05'53.79"	3581.27
EM-2	597849.72	921532.48	32°38'14.86"	103°05'53.77"	3581.58
EM-3	598024.36	921313.69	32°38'16.62"	103°05'56.30"	3582.37

REVISION #	DATE	DESCRIPTION
1	MAY 11, 2017	ORIGINAL SURVEY
2	AUGUST 30, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
3	JANUARY 10, 2018	RESURVEY-NO CHANGE IN ELEVATIONS



SECTION 25, TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

EM #3

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EM #1

Anchors

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WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEVATION
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EM-3	598024.36	921313.69	32°38'16.62"	103°05'56.30"	3582.37

REVISION #	DATE	DESCRIPTION
1	MAY 11, 2017	ORIGINAL SURVEY
2	AUGUST 30, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
3	JANUARY 10, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
4	MAY 1, 2018	RESURVEY-NO CHANGE IN ELEVATIONS



SECTION 25, TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

EM #3

Anchors

Firewall

EM #1

Anchors

Building

Anchors

Firewall

EM #2

Firewall

Anchors

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

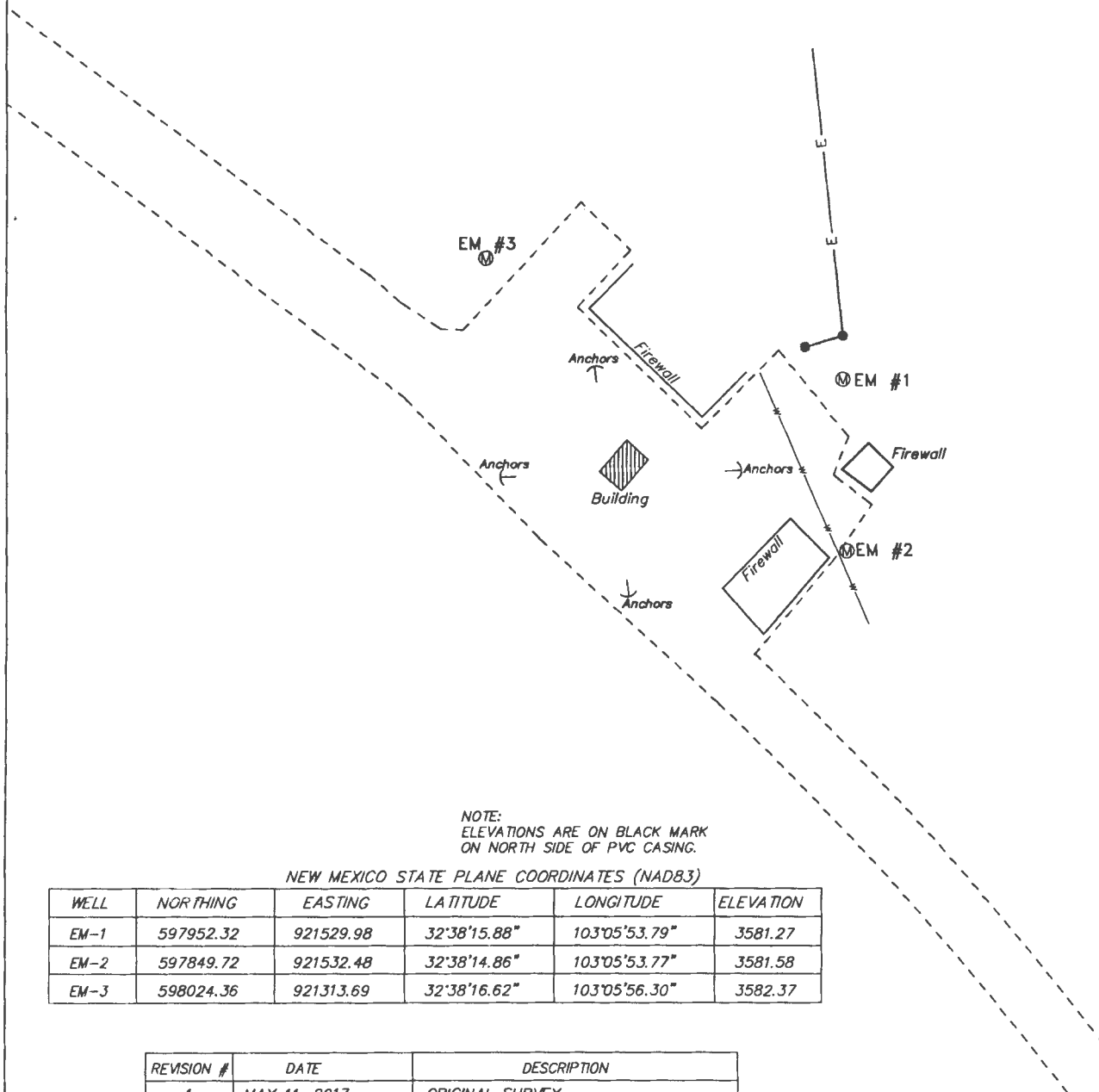
NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEVATION
EM-1	597952.32	921529.98	32°38'15.88"	103°05'53.79"	3581.27
EM-2	597849.72	921532.48	32°38'14.86"	103°05'53.77"	3581.58
EM-3	598024.36	921313.69	32°38'16.62"	103°05'56.30"	3582.37

REVISION #	DATE	DESCRIPTION
1	MAY 11, 2017	ORIGINAL SURVEY
2	AUGUST 30, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
3	JANUARY 10, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
4	MAY 1, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
5	SEPTEMBER 5, 2018	RESURVEY-NO CHANGE IN ELEVATIONS



**SECTION 25, TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



REVISION #	DATE	DESCRIPTION
1	MAY 11, 2017	ORIGINAL SURVEY
2	AUGUST 30, 2017	RESURVEY-NO CHANGE IN ELEVATIONS
3	JANUARY 10, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
4	MAY 1, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
5	SEPTEMBER 5, 2018	RESURVEY-NO CHANGE IN ELEVATIONS
6	JANUARY 15, 2019	RESURVEY-NO CHANGE IN ELEVATIONS

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, January 4, 2018 10:37 AM
To: 'Gary Schubert'
Cc: Griswold, Jim, EMNRD
Subject: BWs 31 and 36 Annual Reports

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
Phone # (575) 393-6662
Fax # (575) 393-6662

RECEIVED OCD

2017 DEC 27 P 3: 10

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
Schubert Farms No. 1 (API # 30-025-37548) (BW-36)

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 April and November, 2017.

Thank you,

Sincerely,

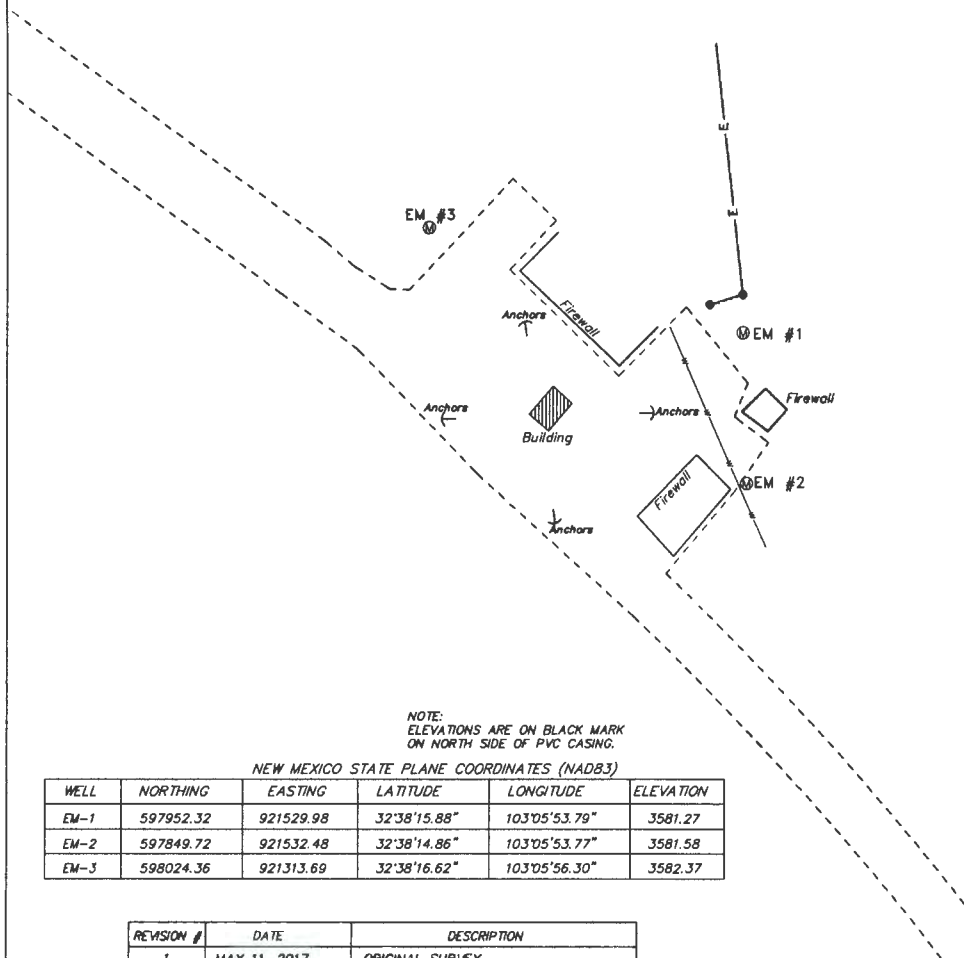

Gary M. Schubert
GMS/br

Schubert Farms Well No. 1

Year 2017

MONTH	BRINE PRODUCTION (BY Meter)	FRESH WATER INJECTED (By Meter)
January	0	0
February	0	0
March	13,011	12,833
April	5,636	5,238
May	11,060	10,143
June	9,831	9,902
July	14,400	14,362
August	11,962	10,340
September	20,945	21,183
October	21,988	20,795
November	19,764	19,522
December		

SECTION 25, TOWNSHIP 19 SOUTH, RANGE 38 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED
FROM FIELD NOTES OF AN ACTUAL SURVEY AND
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND
SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, P.L.M., P.S. No. 7977
Professional Land Surveyor No. 5074

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

W.O. Number: 33294 Drawn By: K. GOAD

Date: 09-15-2017 Disk: KJG - SCHUBERT FARMS 33294

100 0 100 200 FEET

SCALE: 1" = 100'

H.R.C. INC.

REF: ELEVATION MARKERS

ELEVATION MARKERS LOCATED IN
SECTION 25, TOWNSHIP 19 SOUTH, RANGE 38 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

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

May 04, 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 04/20/17 12:00.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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)

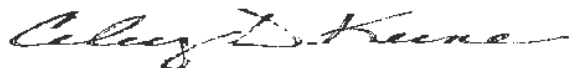
Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

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)

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, 88241Project: SCHUBERT FARMS
Project Number: NONE GIVEN
Project Manager: BEN DONAHUE
Fax To:Reported:
04-May-17 14:52

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FRESH WATER	H701043-01	Water	20-Apr-17 08:00	20-Apr-17 12:00
BRINE WATER	H701043-02	Water	20-Apr-17 08:00	20-Apr-17 12:00
MONITOR WELL	H701043-03	Water	20-Apr-17 08:00	20-Apr-17 12:00

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT FARMS
 Project Number: NONE GIVEN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-May-17 14:52

FRESH WATER
H701043-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	244		5.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Chloride*	510		4.00	mg/L	1	7042103	AC	25-Apr-17	4500-Cl-B	
Conductivity*	2710		1.00	uS/cm	1	7042105	AC	21-Apr-17	120.1	
pH*	7.32		0.100	pH Units	1	7042007	AC	20-Apr-17	150.1	
Sulfate*	579		125	mg/L	12.5	7042613	AC	26-Apr-17	375.4	QM-07
TDS*	1870		5.00	mg/L	1	7042114	AC	25-Apr-17	160.1	
Alkalinity, Total*	200		4.00	mg/L	1	7041918	AC	24-Apr-17	310.1	

Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	254		0.100	mg/L	1	B704200	JDA	01-May-17	EPA200.7	
Magnesium*	86.9		0.100	mg/L	1	B704200	JDA	01-May-17	EPA200.7	
Potassium*	7.62		1.00	mg/L	1	B704200	JDA	01-May-17	EPA200.7	
Sodium*	228		1.00	mg/L	1	B704200	JDA	01-May-17	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT FARMS
Project Number: NONE GIVEN
Project Manager: BEN DONAHUE
Fax To:

Reported:
04-May-17 14:52

BRINE WATER
H701043-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	268		5.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Chloride*	122000		4.00	mg/L	1	7042103	AC	25-Apr-17	4500-Cl-B	
Conductivity*	357000		1.00	uS/cm	1	7042105	AC	21-Apr-17	120.1	
pH*	6.85		0.100	pH Units	1	7042007	AC	20-Apr-17	150.1	
Sulfate*	4430		833	mg/L	83.3	7042613	AC	26-Apr-17	375.4	
TDS*	198000		5.00	mg/L	1	7042114	AC	25-Apr-17	160.1	
Alkalinity, Total*	220		4.00	mg/L	1	7041918	AC	24-Apr-17	310.1	

Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	920		10.0	mg/L	100	B704200	JDA	01-May-17	EPA200.7	
Magnesium*	524		10.0	mg/L	100	B704200	JDA	01-May-17	EPA200.7	
Potassium*	950		100	mg/L	100	B704200	JDA	01-May-17	EPA200.7	
Sodium*	80100		100	mg/L	100	B704200	JDA	01-May-17	EPA200.7	

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*=Accredited Analyte

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Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT FARMS
 Project Number: NONE GIVEN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-May-17 14:52

MONITOR WELL
H701043-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	244		5.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Chloride*	316		4.00	mg/L	1	7042103	AC	25-Apr-17	4500-Cl-B	
Conductivity*	1700		1.00	uS/cm	1	7042105	AC	21-Apr-17	120.1	
pH*	7.58		0.100	pH Units	1	7042007	AC	20-Apr-17	150.1	
Sulfate*	221		50.0	mg/L	5	7042613	AC	26-Apr-17	375.4	
TDS*	1090		5.00	mg/L	1	7042114	AC	25-Apr-17	160.1	
Alkalinity, Total*	200		4.00	mg/L	1	7041918	AC	24-Apr-17	310.1	

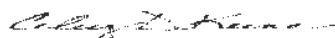
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	161		2.00	mg/L	20	B704200	JDA	01-May-17	EPA200.7	
Magnesium*	46.3		2.00	mg/L	20	B704200	JDA	01-May-17	EPA200.7	
Potassium*	<20.0		20.0	mg/L	20	B704200	JDA	01-May-17	EPA200.7	
Sodium*	131		20.0	mg/L	20	B704200	JDA	01-May-17	EPA200.7	

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT FARMS
 Project Number: NONE GIVEN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-May-17 14:52

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 7041918 - General Prep - Wet Chem
Blank (7041918-BLK1)

Prepared & Analyzed: 19-Apr-17

Alkalinity, Carbonate	ND	1.00	mg/L
Alkalinity, Bicarbonate	10.0	5.00	mg/L
Alkalinity, Total	8.00	4.00	mg/L

LCS (7041918-BS1)

Prepared & Analyzed: 19-Apr-17

Alkalinity, Carbonate	ND	1.00	mg/L				80-120
Alkalinity, Bicarbonate	132	5.00	mg/L				80-120
Alkalinity, Total	108	4.00	mg/L	100	108		80-120

LCS Dup (7041918-BSD1)

Prepared & Analyzed: 19-Apr-17

Alkalinity, Carbonate	ND	1.00	mg/L				80-120	20
Alkalinity, Bicarbonate	127	5.00	mg/L				80-120	3.86 20
Alkalinity, Total	104	4.00	mg/L	100	104		80-120	3.77 20

Batch 7042007 - General Prep - Wet Chem
LCS (7042007-BS1)

Prepared & Analyzed: 20-Apr-17

pH	7.23		pH Units	7.00		103	90-110
----	------	--	----------	------	--	-----	--------

Duplicate (7042007-DUP1)

Source: H701041-04

Prepared & Analyzed: 20-Apr-17

pH	7.83	0.100	pH Units	7.82		0.128	20
----	------	-------	----------	------	--	-------	----

Batch 7042103 - General Prep - Wet Chem
Blank (7042103-BLK1)

Prepared & Analyzed: 21-Apr-17

Chloride	ND	4.00	mg/L
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT FARMS
Project Number: NONE GIVEN
Project Manager: BEN DONAHUE
Fax To:

Reported:
04-May-17 14:52

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 7042103 - General Prep - Wet Chem
LCS (7042103-BS1)

Prepared & Analyzed: 21-Apr-17

Chloride	104	4.00	mg/L	100		104	80-120			
----------	-----	------	------	-----	--	-----	--------	--	--	--

LCS Dup (7042103-BSD1)

Prepared & Analyzed: 21-Apr-17

Chloride	100	4.00	mg/L	100		100	80-120	3.92	20	
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Batch 7042105 - General Prep - Wet Chem
LCS (7042105-BS1)

Prepared & Analyzed: 21-Apr-17

Conductivity	498		uS/cm	500		99.6	80-120			
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Duplicate (7042105-DUP1)

Source: H701041-01

Prepared & Analyzed: 21-Apr-17

Conductivity	707	1.00	uS/cm		703			0.567	20	
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Batch 7042114 - Filtration
Blank (7042114-BLK1)

Prepared: 21-Apr-17 Analyzed: 27-Apr-17

TDS	ND	5.00	mg/L							
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LCS (7042114-BS1)

Prepared: 21-Apr-17 Analyzed: 27-Apr-17

TDS	229	5.00	mg/L	240		95.4	80-120			
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Duplicate (7042114-DUP1)

Source: H701021-01

Prepared: 21-Apr-17 Analyzed: 27-Apr-17

TDS	2260	5.00	mg/L		2310			1.84	20	
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Batch 7042613 - General Prep - Wet Chem
Blank (7042613-BLK1)

Prepared & Analyzed: 26-Apr-17

Sulfate	ND	10.0	mg/L							
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT FARMS
 Project Number: NONE GIVEN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-May-17 14:52

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7042613 - General Prep - Wet Chem										
LCS (7042613-BS1)				Prepared & Analyzed: 26-Apr-17						
Sulfate	20.1	10.0	mg/L	20.0		101	80-120			
LCS Dup (7042613-BSD1)				Prepared & Analyzed: 26-Apr-17						
Sulfate	19.8	10.0	mg/L	20.0		99.0	80-120	1.55	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT FARMS
 Project Number: NONE GIVEN
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 04-May-17 14:52

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B704200 - Total Rec. 200.7/200.8/200.2
Blank (B704200-BLK1)

Prepared: 28-Apr-17 Analyzed: 01-May-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 (B704200-BS1)

Prepared: 28-Apr-17 Analyzed: 01-May-17

Magnesium	20.7	0.100	mg/L	20.0	104	85-115
Sodium	6.81	1.00	mg/L	6.48	105	85-115
Potassium	8.36	1.00	mg/L	8.00	104	85-115
Calcium	4.07	0.100	mg/L	4.00	102	85-115

LCS Dup (B704200-BSD1)

Prepared: 28-Apr-17 Analyzed: 01-May-17

Calcium	4.07	0.100	mg/L	4.00	102	85-115	0.0739	20
Sodium	6.83	1.00	mg/L	6.48	105	85-115	0.275	20
Magnesium	20.8	0.100	mg/L	20.0	104	85-115	0.274	20
Potassium	8.32	1.00	mg/L	8.00	104	85-115	0.396	20

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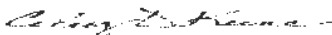
Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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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Celey D. Keene, Lab Director/Quality Manager

December 05, 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 10:22.

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 www.tceq.texas.gov/field/ga/lab_accred_certif.html.

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)

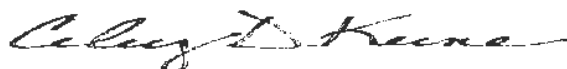
Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

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)

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, 88241Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:Reported:
05-Dec-17 14:36

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRINE WATER	H703207-01	Water	16-Nov-17 09:00	16-Nov-17 10:22
MONITOR WELL	H703207-02	Water	16-Nov-17 09:00	16-Nov-17 10:22
FRESH WATER	H703207-03	Water	16-Nov-17 09:00	16-Nov-17 10:22

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

BRINE WATER
H703207-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	476		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*	162000		4.00	mg/L	1	7112001	AC	20-Nov-17	4500-Cl-B	
Conductivity*	475000		1.00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
pH*	6.96		0.100	pH Units	1	7111701	AC	16-Nov-17	150.1	
Sulfate*	6580		833	mg/L	83.3	7112201	AC	22-Nov-17	375.4	
TDS*	266000		5.00	mg/L	1	7111608	AC	17-Nov-17	160.1	
Alkalinity, Total*	390		4.00	mg/L	1	7110705	AC	17-Nov-17	310.1	

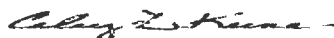
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	844		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Magnesium*	455		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Potassium*	1420		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Sodium*	91100		200	mg/L	200	B711206	JDA	29-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

MONITOR WELL
H703207-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	327		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*	356		4.00	mg/L	1	7112001	AC	20-Nov-17	4500-Cl-B	
Conductivity*	1790		1.00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
pH*	7.60		0.100	pH Units	1	7111701	AC	16-Nov-17	150.1	
Sulfate*	264		50.0	mg/L	5	7112201	AC	22-Nov-17	375.4	
TDS*	1180		5.00	mg/L	1	7111608	AC	17-Nov-17	160.1	
Alkalinity, Total*	268		4.00	mg/L	1	7110705	AC	17-Nov-17	310.1	

Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

Calcium*	171		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Magnesium*	45.3		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Sodium*	125		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

FRESH WATER H703207-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

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-Cl-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 Analytical Laboratories

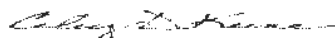
Total Recoverable Metals by ICP (E200.7)

Calcium*	119		5.00	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Magnesium*	25.6		5.00	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Potassium*	<50.0		50.0	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Sodium*	130		50.0	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7110705 - General Prep - Wet Chem
Blank (7110705-BLK1)

Prepared & Analyzed: 07-Nov-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 (7110705-BS1)

Prepared & Analyzed: 07-Nov-17

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

Alkalinity, Carbonate	ND	2.50	mg/L				80-120	20
Alkalinity, Bicarbonate	355	12.5	mg/L				80-120	7.30
Alkalinity, Total	290	10.0	mg/L	250		116	80-120	7.14

Batch 7111608 - Filtration
Blank (7111608-BLK1)

Prepared: 16-Nov-17 Analyzed: 17-Nov-17

TDS	ND	5.00	mg/L
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LCS (7111608-BS1)

Prepared: 16-Nov-17 Analyzed: 17-Nov-17

TDS	228	5.00	mg/L	213		107	80-120
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Duplicate (7111608-DUP1)

Source: H703199-01

Prepared: 16-Nov-17 Analyzed: 17-Nov-17

TDS	9630	5.00	mg/L		9890		2.64	20
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Batch 7111701 - General Prep - Wet Chem
LCS (7111701-BS1)

Prepared: 16-Nov-17 Analyzed: 17-Nov-17

Conductivity	507		uS/cm	500		101	80-120
pH	6.97		pH Units	7.00		99.6	90-110

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 ETZ WATER STATION
 PO BOX 6056
 HOBBS NM, 88241

 Project: SCHUBERT
 Project Number: FARMS #1
 Project Manager: BEN DONAHUE
 Fax To:

 Reported:
 05-Dec-17 14:36

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7111701 - General Prep - Wet Chem

Duplicate (7111701-DUP1)		Source: H703206-01		Prepared: 16-Nov-17		Analyzed: 17-Nov-17				
Conductivity	501000	1.00	uS/cm		494000			1.46	20	
pH	7.07	0.100	pH Units		7.06			0.142	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 & 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 & 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 & Analyzed: 22-Nov-17						
Sulfate	23.6	10.0	mg/L	20.0	118	80-120	1.79	20		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B711172 - Total Rec. 200.7/200.8/200.2
Blank (B711172-BLK1)

Prepared: 20-Nov-17 Analyzed: 22-Nov-17

Sodium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							

LCS (B711172-BS1)

Prepared: 20-Nov-17 Analyzed: 22-Nov-17

Magnesium	20.8	0.100	mg/L	20.0		104	85-115			
Calcium	4.23	0.100	mg/L	4.00		106	85-115			
Sodium	6.68	1.00	mg/L	6.48		103	85-115			
Potassium	8.07	1.00	mg/L	8.00		101	85-115			

LCS Dup (B711172-BSD1)

Prepared: 20-Nov-17 Analyzed: 22-Nov-17

Magnesium	20.8	0.100	mg/L	20.0		104	85-115	0.0742	20	
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	

Batch B711206 - Total Rec. 200.7/200.8/200.2
Blank (B711206-BLK1)

Prepared: 27-Nov-17 Analyzed: 29-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 (B711206-BS1)

Prepared: 27-Nov-17 Analyzed: 29-Nov-17

Magnesium	20.7	0.100	mg/L	20.0		104	85-115			
Potassium	8.35	1.00	mg/L	8.00		104	85-115			
Calcium	4.15	0.100	mg/L	4.00		104	85-115			
Sodium	6.64	1.00	mg/L	6.48		102	85-115			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETZ WATER STATION
PO BOX 6056
HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1
Project Manager: BEN DONAHUE
Fax To:

Reported:
05-Dec-17 14:36

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B711206 - Total Rec. 200.7/200.8/200.2
LCS Dup (B711206-BSD1)

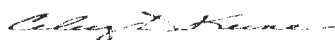
Prepared: 27-Nov-17 Analyzed: 29-Nov-17

Potassium	8.07	1.00	mg/L	8.00		101	85-115	3.36	20	
Magnesium	20.0	0.100	mg/L	20.0		100	85-115	3.34	20	
Sodium	6.43	1.00	mg/L	6.48		99.2	85-115	3.28	20	
Calcium	3.99	0.100	mg/L	4.00		99.7	85-115	4.11	20	

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Celey D. Keene, Lab Director/Quality Manager

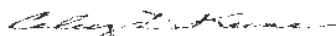
Notes and Definitions

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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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Name: GTZ Water Station
Manager: Ben Donahue

State: Zip:
575 343 3114 Fax #:

Project Owner:

Name: Schubert Farms
Location:

Name: Ben Donahue

BILL TO				ANALYSIS REQUEST														
P.O. #:																		
Company:																		
Attn:																		
Address:																		
City:																		
State:																		
Phone #:																		
Fax #:																		
Sample I.D.	Sample Description	Matrix	PRESERV	SAMPLING	DATE	TIME	<div style="text-align: center; font-size: 2em; transform: rotate(-45deg);"> <i>Station/Review</i> </div>											
201	Brine Water	GROUNDWATER	✓		11-16-17	9:00												
1	Monitor Well	GROUNDWATER	✓															
2	fresh water	GROUNDWATER	✓															
3		GROUNDWATER	✓															

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Received By: [Signature] Date: 11/16/17 Time: 10:22 AM
Received By: [Signature] Date: Time:

Phone Result: ☐ Yes ☐ No
Fax Result: ☐ Yes ☐ No
Add'l Phone #:
Add'l Fax #:

REMARKS:
email to: garmschwab@gmail.com

Checked By: [Signature]
Sample Condition: Cool ☐ Intact ☐
UPS - Bus - Other: Corrected 0.55c Yes ☐ No ☐ TP. #75