

# BW-036

# ANNUAL

# REPORT

# 2022

# **2022 ANNUAL CLASS III WELL REPORT**

**H.R.C. INC.**

**Schubert Farms Well # 1 (BW-036)**

**API 30-025-37548**

**January 30, 2023**

**GARY M. SCHUBERT**

## TABLE OF CONTENTS

ITEM	PAGE
SUMMARY OF CLASS III OPERATIONS 2022	3
FLUID INJECTION & BRINE PRODUCTION VOLUMES	4
EXTRACTION VS. INJECTION RATIOS	5
INJECTION PRESSURE	5
MONITOR WELL WATER SAMPLE CHEMICAL ANALYSIS DATA	6
PRODUCED BRINE & INJECTED FRESH WATER CHEMICAL ANALYSIS DATA	9
PIPE LINE HYDROSTATIC TEST RESULTS	14
VISUAL LEAK INSPECTION MONITORING	14
MECHANICAL INTEGRITY TESTS	15
AREA OF REVIEW (AOR) UPDATE	15
DEVIATIONS FROM NORMAL FLOW CONFIGURATION	15
MAJOR FACILITY ACTIVITIES OR EVENTS	15
SURFACE SUBSIDENCE MONITORING PLAN RESULTS	15
SOLUTION CAVERN CHARACTERIZATION DATA RESULTS	16
CONCLUSIONS & RECOMMENDATIONS	17
ANNUAL CERTIFICATION	17
APPENDIX A (Production & Injection Pressure and Volume Data)	18
APPENDIX B (Monitor Well, Prod Brine & Injected FW Sample Chemical Analysis Reports)	19
APPENDIX C (Mechanical Integrity Test Chart & Report)	60
APPENDIX D (1/2 & 2 Mile AOR Map)	65
APPENDIX E (Facility Schematic)	66
APPENDIX F (Surface Subsidence Monitoring Plat & Data)	69
APPENDIX G (Wellbore Schematic & Cavern Characterization Data)	72

## SUMMARY OF CLASS III OPERATIONS 2022

Schubert Farms Well # 1 (BW-36) production operations in 2022 recorded an upward trend as the industry grew from the year 2021. An annual total of 318,549 bbl. of brine was extracted at an average weight of 9.89 PPG (1.1851 SG), an increase of 7.8% over 2021. Sales are expected to remain steady through 2023 based on an increased demand for brine water.

Analysis of water samples from the designated monitor well showed no changes in water quality.

All facility lines and connections receive a daily visual inspection. Readings on pressure gauges are recorded daily, along with the produced brine and injected water volumes. Safety shut off mechanisms are tested to ensure that the high and low pressure shut down systems are fully functional. In 2022 there were no leaks that occurred during the year. The fresh water systems and well are insulated to protect the fresh water system from freezing. All meters and valves were protected and are in good working condition.

H.R.C., Inc. preventive maintenance plan is to replace any connections or valves that could be showing wear. This will continue as a safe operating procedure in 2023. Connections are changed when the first sign of salt is seen behind the threaded end. During 2022 the transfer pump that transports brine to the sales tanks required a mechanical seal replaced in the month of February as well as November. The rotating assembly for the pump was also replaced during the November service work by Odessa Pumps of Hobbs. The seal replacement is a common task due to the abrasion of the 9.98 PPG brine. When 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. A new irrigation valve was installed in March to replace the one that had been in use for the previous several years. This irrigation valve is used in tandem with a float switch to control the filling of the injection water tank and usually has a life of about two years.

At the beginning of August the location experienced an electrical meter failure and was down for approximately twelve days while waiting on Xcel Energy to replace the meter that failed. This downtime is reflected in the lower production volume from the month of August. Other than the loss of power there were no deviations from normal operations of the well.

Surface subsidence monitoring results show no changes in elevations at the designated monitoring points.

Solution cavern characterization results show that the cavern size and shape remain within NMOCD recommended limits.

H.R.C., Inc. has continued its COVID protection plan for employees, requiring hand sanitizers, aerosols and nitrile gloves in the field and office. Field tickets are stored in plastic bags and handled diligently for the least exposure possible to its employees.

H.R.C., Inc. Schubert Farms # 1 is an asset to industry and continues to support oil & gas production operations in New Mexico.



**FLUID INJECTION & BRINE PRODUCTION VOLUMES****2022 MONTHLY TOTALS PRODUCED BRINE & INJECTED FRESH WATER**

<b>MONTH</b>	<b>PROD. BRINE</b>	<b>INJ. FRESH WATER</b>
JANUARY	28,945	28,617
FEBRUARY	30,073	29,679
MARCH	29,474	29,107
APRIL	26,784	26,500
MAY	26,507	26,226
JUNE	26,191	25,964
JULY	24,625	24,367
AUGUST	20,126	19,902
SEPTEMBER	27,199	26,888
OCTOBER	28,306	28,005
NOVEMBER	24,740	24,464
DECEMBER	25,579	25,288
TOTAL	318,549	315,007

**ANNUAL TOTALS PRODUCED BRINE & INJECTED FRESH WATER**

<b>YEAR</b>	<b>PROD. BRINE</b>	<b>INJ. FRESH WATER</b>
2017	153,518	148,678
2018	306,806	303,899
2019	264,276	261,658
2020	223,625	221,247
2021	295,614	292,663
2022	318,549	315,007
TOTAL	1,562,388	1,543,152

## EXTRACTION VS. INJECTION RATIOS

### 2021 FLUID INJECTION & BRINE PRODUCTION VOLUME RATIO

MONTH	BRINE	BRINE PSI	FRESH WATER	FW PSI	RATIO (RAW)	RATIO (CALC)
JANUARY	28,945	20	28,617	255	28945:28617	1.011462
FEBRUARY	30,073	22	29,679	259	30073:29679	1.013275
MARCH	29,474	21	29,107	259	29474:29107	1.012609
APRIL	26,784	19	26,500	257	26784:26500	1.010717
MAY	26,507	19	26,226	258	26507:26226	1.010715
JUNE	26,191	20	25,964	257	26191:25964	1.008743
JULY	24,625	20	24,367	258	24625:24367	1.010588
AUGUST	20,126	19	19,902	257	20126:19902	1.011255
SEPTEMBER	27,199	21	26,888	259	27199:26888	1.011566
OCTOBER	28,306	20	28,005	259	28306:28005	1.010748
NOVEMBER	24,740	19	24,464	257	24740:24464	1.011282
DECEMBER	25,579	21	25,288	259	25579:25288	1.011507

## INJECTION PRESSURE

Injection pressure remains consistent with 2021. Annulus average is 20.08 PSIG and the tubing average is at 257.83 PSIG. RFD pump runs at 54.8 Hz. with a yield of 30 to 34 GPM. The lease operator checks the pressure daily and records it on his daily logs.

Please find production & injection pressure and volume data attached in Appendix A, and can be seen in the table above.

## MONITOR WELL WATER SAMPLE CHEMICAL ANALYSIS DATA

The BW-36 order requires that the specified monitor well be sampled quarterly and chemical analysis results be reported to the OCD. H.R.C. Inc. had been performing this sampling on a semi-annual basis prior to 2022. However, quarterly sampling and analysis for the produced brine and injected fresh water has been instituted as of January 2022 and the monitor well will be sampled at the same time and same interval, so therefore will also begin and then remain on a quarterly basis going forward. Cardinal Laboratories sampled water from the designated monitor well on 12/27/21, 04/01/2022, 7/1/2022, and 10/5/22.

Summary of the analyses from for Inorganic Compounds and Total Recovery Metals by ICP (E200.7) are shown below. There were no appreciable changes in the designated monitor well water quality throughout 2022, and as compared to 2021.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14 for 12/27/21, T104704398-21-14 for 04/01/22, T104704398-22-15 for 07/01/22, and certificate number T104704398-22-15 for 10/5/22.

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

Method EPA 552.2 Total Halo acetic 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 Halo acetic Acids (HAA-5)

Full details of the analytical results are attached at the end of this report in Appendix B.

**DECEMBER 2021 / JANUARY 2022 RESULTS****MONITOR WELL INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	259		5.00	MG/L	12-20-21	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	12-20-21	310.1
Chloride	364		4.00	MG/L	12-20-21	4500. C1.B
Conductivity	1970		1.00	UMHOS/CM	12-17-21	120.1
pH	7.42		0.100	pH units	12-17-21	150.1
Sulfate	264		50.0	MG/L	12-20-21	375.4
TDS	1160		5.0	MG/L	12-21-21	160.1
Alkalinity Total	212		4.00	MG/L	12-20-21	310.1

**MONITOR WELL TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	182		1.00	MG/L	1-6-22	EPA 200.7
Magnesium	50.7		1.00	MG/L	1-5-22	EPA 200.7
Potassium	5.36	4.58	10.00	MG/L	1-5-22	EPA 200.7
Sodium	127		10.00	MG/L	1-5-22	EPA 200.7

**APRIL 2022 RESULTS****MONITOR WELL INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	205		5.00	MG/L	04-04-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	04-04-22	310.1
Chloride	400		4.00	MG/L	04-05-22	4500. C1.B
Conductivity	2150		1.00	UMHOS/CM	04-04-22	120.1
pH	7.42		0.100	pH units	04-04-22	150.1
Sulfate	267		50.0	MG/L	04-06-22	375.4
TDS	1220		5.0	MG/L	04-06-22	160.1
Alkalinity Total	168		4.00	MG/L	04-04-22	310.1

**MONITOR WELL TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	211		1.00	MG/L	04-08-22	EPA 200.7
Magnesium	57.1		1.00	MG/L	04-08-22	EPA 200.7
Potassium	5.58	.355	2.00	MG/L	04-08-22	EPA 200.7
Sodium	125		2.00	MG/L	04-08-22	EPA 200.7

**JULY 2022 RESULTS****MONITOR WELL INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	220		5.00	MG/L	07-06-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	07-06-22	310.1
Chloride	412		4.00	MG/L	07-06-22	4500. C1.B
Conductivity	1970		1.00	UMHOS/CM	07-01-22	120.1
pH	7.52		0.100	pH units	07-01-22	150.1
Sulfate	342		50.0	MG/L	07-06-22	375.4
TDS	1230		5.00	MG/L	07-07-22	160.1
Alkalinity Total	180		4.00	MG/L	07-06-22	310.1

**MONITOR WELL TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	184		1.00	MG/L	07-13-22	EPA 200.7
Magnesium	50.9		1.00	MG/L	07-13-22	EPA 200.7
Potassium	5.03	1.78	10.00	MG/L	07-13-22	EPA 200.7
Sodium	116		10.00	MG/L	07-13-22	EPA 200.7

**OCTOBER 2022 RESULTS****MONITOR WELL INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	215		5.00	MG/L	10-09-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	10-09-22	310.1
Chloride	480		4.00	MG/L	10-06-22	4500. C1.B
Conductivity	2250		1.00	UMHOS/CM	10-09-22	120.1
pH	7.50		0.100	pH units	10-07-22	150.1
Sulfate	262		50.0	MG/L	10-12-22	375.4
TDS	1250		5.00	MG/L	10-06-22	160.1
Alkalinity Total	176		4.00	MG/L	10-09-22	310.1

**MONITOR WELL TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	192		1.00	MG/L	10-11-22	EPA 200.7
Magnesium	52.4		1.00	MG/L	10-11-22	EPA 200.7
Potassium	<10.0		10.00	MG/L	10-11-22	EPA 200.7
Sodium	119		10.00	MG/L	10-11-22	EPA 200.7

## PRODUCED BRINE & INJECTED FRESH WATER CHEMICAL ANALYSIS DATA

The BW-36 order requires that the produced brine and injected fresh water be sampled quarterly and chemical analysis results be reported to the OCD. H.R.C. Inc. had been erroneously performing this sampling on a semi-annual basis instead of quarterly. Quarterly sampling and analysis has been instituted as of January 2022, and will remain on a quarterly basis going forward. Cardinal Laboratories sampled produced brine and injected fresh water from the BW-36 on 12/27/21, 04/01/2022, 7/1/2022, and 10/5/22. Summary of the analyses for Inorganic Compounds and Total Recovery Metals by ICP (E200.7) are shown below. There were only no appreciable changes in both the produced brine chemistry and injected fresh water chemistry throughout 2022, and as compared to 2021.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14 for 12/27/21, T104704398-21-14 for 04/01/22, T104704398-22-15 for 07/01/22, and certificate number T104704398-22-15 for 10/5/22.

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

Method EPA 552.2 Total Halo acetic 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 Halo acetic Acids (HAA-5)

Full details of the analytical results are attached at the end of this report in Appendix B.

**DECEMBER 2021 / JANUARY 2022 RESULTS****BRINE WATER INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	317		5.00	MG/L	12-20-21	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	12-20-21	310.1
Chloride	176000		4.00	MG/L	12-20-21	4500. C1.B
Conductivity	270000		1.00	UMHOS/CM	12-17-21	120.1
pH	6.73		0.100	pH units	12-17-21	150.1
Sulfate	8040		1250	MG/L	12-20-21	375.4
TDS	296000		5.0	MG/L	12-20-21	160.1
Alkalinity Total	260		4.00	MG/L	12-20-21	310.1

**BRINE WATER TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	708		20.0	MG/L	1-5-22	EPA 200.7
Magnesium	148		20.0	MG/L	1-5-22	EPA 200.7
Potassium	176	36.6	200	MG/L	1-5-22	EPA 200.7
Sodium	100000		200	MG/L	1-6-22	EPA 200.7

**APRIL 2022 RESULTS****BRINE WATER INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	234		5.00	MG/L	04-04-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	04-04-22	310.1
Chloride	178000		4.00	MG/L	04-05-22	4500. C1.B
Conductivity	267000		1.00	UMHOS/CM	04-04-22	120.1
pH	6.75		0.100	pH units	04-04-22	150.1
Sulfate	2230		500	MG/L	04-06-22	375.4
TDS	297000		5.00	MG/L	04-05-22	160.1
Alkalinity Total	192		4.00	MG/L	04-04-22	310.1

**BRINE WATER TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	770		50.0	MG/L	04-08-22	EPA 200.7
Magnesium	164		50.0	MG/L	04-08-22	EPA 200.7
Potassium	122	88.8	500	MG/L	04-08-22	EPA 200.7
Sodium	108000		500	MG/L	04-08-22	EPA 200.7

## JULY 2022 RESULTS

## BRINE WATER INORGANIC COMPOUNDS

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	254		5.00	MG/L	07-06-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	07-06-22	310.1
Chloride	176000		4.00	MG/L	07-06-22	4500. C1.B
Conductivity	268000		1.00	UMHOS/CM	07-01-22	120.1
pH	6.83		0.100	pH units	07-01-22	150.1
Sulfate	3710		833	MG/L	07-06-22	375.4
TDS	299000		5.00	MG/L	07-06-22	160.1
Alkalinity Total	208		4.00	MG/L	07-06-22	310.1

## BRINE WATER TOTAL RECOVERABLE METALS by ICP (E220.7)

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	695		20.0	MG/L	07-13-22	EPA 200.7
Magnesium	141		20.0	MG/L	07-13-22	EPA 200.7
Potassium	90.0	36.6	200	MG/L	07-13-22	EPA 200.7
Sodium	105000		200	MG/L	07-13-22	EPA 200.7

## OCTOBER 2022 RESULTS

## BRINE WATER INORGANIC COMPOUNDS

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	254		5.00	MG/L	10-09-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	10-09-22	310.1
Chloride	174000		4.00	MG/L	10-06-22	4500. C1.B
Conductivity	230000		1.00	UMHOS/CM	10-07-22	120.1
pH	6.87		0.100	pH units	10-07-22	150.1
Sulfate	2820		833	MG/L	10-12-22	375.4
TDS	292000		5.00	MG/L	10-10-22	160.1
Alkalinity Total	208		4.00	MG/L	10-09-22	310.1

## BRINE WATER TOTAL RECOVERABLE METALS by ICP (E220.7)

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	683		50.0	MG/L	10-11-22	EPA 200.7
Magnesium	138		50.0	MG/L	10-11-22	EPA 200.7
Potassium	<500		500	MG/L	10-11-22	EPA 200.7
Sodium	100000		500	MG/L	10-11-22	EPA 200.7



**DECEMBER 2021 / JANUARY 2022 RESULTS****INJECTION WATER INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	322		5.00	MG/L	12-20-21	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	12-20-21	310.1
Chloride	276		4.00	MG/L	12-20-21	4500. C1.B
Conductivity	1610		1.00	UMHOS/CM	12-17-21	120.1
pH	7.74		0.100	pH units	12-17-21	150.1
Sulfate	160		25.0	MG/L	12-20-21	375.4
TDS	976		5.00	MG/L	12-20-21	160.1
Alkalinity Total	264		4.00	MG/L	12-20-21	310.1

**INJECTION WATER TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	123		.100	MG/L	1-5-22	EPA 200.7
Magnesium	24.2		.100	MG/L	1-5-22	EPA 200.7
Potassium	12.6	.183	1.00	MG/L	1-5-22	EPA 200.7
Sodium	153		1.00	MG/L	1-5-22	EPA 200.7

**APRIL 2022 RESULTS****INJECTION WATER INORGANIC COMPOUNDS**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	254		5.00	MG/L	04-04-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	04-04-22	310.1
Chloride	450		4.00	MG/L	04-05-22	4500. C1.B
Conductivity	2810		1.00	UMHOS/CM	04-04-22	120.1
pH	7.26		0.100	pH units	04-04-22	150.1
Sulfate	529		125	MG/L	04-06-22	375.4
TDS	1780		5.00	MG/L	04-05-22	160.1
Alkalinity Total	208		4.00	MG/L	04-04-22	310.1

**INJECTION WATER TOTAL RECOVERABLE METALS by ICP (E220.7)**

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	246		.500	MG/L	04-08-22	EPA 200.7
Magnesium	77.2		.500	MG/L	04-08-22	EPA 200.7
Potassium	8.99	.888	5.00	MG/L	04-08-22	EPA 200.7
Sodium	230		5.00	MG/L	04-08-22	EPA 200.7

## JULY 2022 RESULTS

## INJECTION WATER INORGANIC COMPOUNDS

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	259		5.00	MG/L	07-06-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	07-06-22	310.1
Chloride	280		4.00	MG/L	07-06-22	4500. C1.B
Conductivity	1660		1.00	UMHOS/CM	07-01-22	120.1
pH	7.56		0.100	pH units	07-01-22	150.1
Sulfate	20.8		50.0	MG/L	07-06-22	375.4
TDS	1040		5.00	MG/L	07-06-22	160.1
Alkalinity Total	212		4.00	MG/L	07-06-22	310.1

## INJECTION WATER TOTAL RECOVERABLE METALS by ICP (E220.7)

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	121		1.00	MG/L	07-13-22	EPA 200.7
Magnesium	30.1		1.00	MG/L	07-13-22	EPA 200.7
Potassium	8.82	1.78	10.0	MG/L	07-13-22	EPA 200.7
Sodium	145		10.0	MG/L	07-13-22	EPA 200.7

## OCTOBER 2022 RESULTS

## INJECTION WATER INORGANIC COMPOUNDS

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Alkalinity, Bicarbonate	264		5.00	MG/L	10-09-22	310.1
Alkalinity, Carbonate	<1.00		1.00	MG/L	10-09-22	310.1
Chloride	550		4.00	MG/L	10-06-22	4500. C1.B
Conductivity	3280		1.00	UMHOS/CM	10-09-22	120.1
pH	7.29		0.100	pH units	10-07-22	150.1
Sulfate	771		250	MG/L	10-12-22	375.4
TDS	2210		5.00	MG/L	10-08-22	160.1
Alkalinity Total	216		4.00	MG/L	10-09-22	310.1

## INJECTION WATER TOTAL RECOVERABLE METALS by ICP (E220.7)

Analyte	Result	MDL	Reporting Limit	Units	Analyzed Date	Method
Calcium	260		1.00	MG/L	10-11-22	EPA 200.7
Magnesium	88.4		1.00	MG/L	10-11-22	EPA 200.7
Potassium	<10		10.0	MG/L	10-11-22	EPA 200.7
Sodium	250		10.0	MG/L	10-11-22	EPA 200.7

## 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 A.N. ETZ sales facility located 0.8 miles east of HWY 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' 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 A.N. ETZ 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 INSPECTION MONITORING

H.R.C. Inc. operations personnel walks each above ground facility line daily, and inspects all lines and connections for any sign of leaks or sweating of threads.

The H.R.C. lease operator drives out the lines that are underground and below frost level and visually inspects for any signs of compromised line integrity. This is done up to four times daily, but at a minimum once daily.

No leaks were detected in 2022. Because there were no leaks or spills detected in 2022, there are no leak or spill corrective action reports required.

## **MECHANICAL INTEGRITY TESTS**

A mechanical integrity test was completed on February 25, 2022. Please find a copy of the MIT Chart, Procedure Report, and C-103 in Appendix C.

## **AREA OF REVIEW (AOR) UPDATE**

H.R.C., Inc. has updated the 2022 AOR for the Schubert Farms Well # 1 (BW-36), showing no new permits or new drilled wells have been located within the ½ or 2 mile AOR since the 2022 report.

Please find a copy of the ½ and 2 mile AOR review map in Appendix D.

## **DEVIATIONS FROM NORMAL FLOW CONFIGURATION**

H.R.C. Inc. certifies that the well was operated in compliance with its permitted normal flow configuration throughout 2022 (inject fresh water down tubing, produce brine up annulus). The well ran smoothly for the entire year and did not require any change in flow operation.

## **MAJOR FACILITY ACTIVITIES OR EVENTS**

There were no major facility activities or events in 2022. There are still currently four 500 bbl fiberglass brine water holding tanks and two 750 bbl fiberglass freshwater holding tanks. Normal operations have continued out of these tanks and no changes are anticipated to the facility in 2023. Please find a copy of the BW-36 facility schematic in Appendix E for the current tank configuration.

## **SURFACE SUBSIDENCE MONITORING PLAN RESULTS**

Surface subsidence surveys were conducted in March 2022, July 2022, and September 2022, by Basin Surveys, certified by Gary L. Jones, Texas PLS. Three elevation markers are in place. No changes in elevation have been found.

Please find a copy of the BW-36 surveyor's plat in Appendix F, with locations of the BW-36 EM markers, and stating no changes found as of September 30, 2022.

## SOLUTION CAVERN CHARACTERIZATION DATA RESULTS

The characterization of the cavern can be mathematically calculated using  $V = \pi R^2 h / 3$ , where the cavern is assumed to be conical in shape,  $V$  = volume of salt removed in  $\text{ft}^3$ ,  $R$  = cavern radius in ft at bottom, and  $h$  = height of cavern in ft.

The Litho Density Compensated Neutron logs showed approximately 54' of good Halite net pay showing less than 4 API units on the Gamma Ray side of the log that is presently being mined. This interval is from 2661'-2715'. Height of cavern,  $h = 54$  ft.

BW-36 has produced 1,562,388 Bbl. of brine from the Salado formation from March, 2017 to December 31, 2022. It takes 122.136 Lbs. of salt to produce one barrel of quality brine yielding a Specific Gravity of 1.195. Multiplying salt ratio to total fluid bbl. equals 190,823,820 lbs of salt mined during this period. The amount of salt mined, 190,823,820 lbs, divided by 80 lbs salt/ft.<sup>3</sup> equals 2,385,298 ft.<sup>3</sup> volume of salt removed through December 31, 2022. Volume of cavern,  $V = 2,385,298 \text{ ft}^3$ .

Substituting into  $V = \pi R^2 h / 3$  for  $V$  and  $h$ , and solving for  $R$  shows that the radius of the cavern,  $R = 205$  ft. Diameter of cavern,  $D = 2R = 410$  ft.

Depth of cavern is taken to be depth of casing window, 2661 ft.

In respect to the recommended maximum allowable D/depth cavern size factor of 0.5, the Schubert Farms Well No. 1 (BW-36) has a factor value of  $(410' / 2661') = 0.154$ , which is well below the maximum allowable.

BW-36 has years of remaining life to continue mining for the salt that is used throughout the oil and gas industry in Southeastern New Mexico. New horizons above 2661' can be considered in the future to increase the lifespan of this facility.

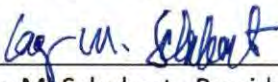
Please find a copy of the BW-36 wellbore schematic and input data for the cavern characterization calculations in Appendix G.

## CONCLUSIONS & RECOMMENDATIONS

This well and facility are in good working order and maintained regularly. The cavern diameter/depth ratio is well within recommended maximum limits, and will not cause cavern collapse. There has been no evidence of surface subsidence. The nearby monitor well shows no evidence of contamination of USDW's. H.R.C. Inc. has worked to stay in compliance with all reporting and monitoring since last year and will continue to do so. H.R.C. Inc. will continue to operate this well in a safe and clean manner and will make weed control a priority during 2023.

## 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  for H.R.C., Inc. Date 1/30/23  
Gary M. Schubert, President

## APPENDIX A

## BW-36 Injection / Production

## 2022 Production &amp; Injection Pressures and Volumes

Month	Brine Production (Bbls) Average Pressure (psi)	Fresh Injection (Bbls) Average Pressure (psi)
January	28,945 20	28,617 255
February	30,073 22	29,679 259
March	29,474 21	29,107 259
April	26,784 19	26,500 257
May	26,507 19	26,226 258
June	26,191 20	25,964 257
July	24,625 20	24,367 258
August	20,126 19	19,902 257
September	27,199 21	26,888 259
October	28,306 20	28,005 259
November	24,740 19	24,464 257
December	25,579 21	25,288 259
Yearly Total	318,549 20.08	315,007 257.83

Running Totals	Brine Production (Bbls) 1,562,388	Fresh Injection (Bbls) 1,543,152
----------------	--------------------------------------	-------------------------------------



## APPENDIX B

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

---

January 10, 2022

BEN DONAHUE

ETZ WATER STATION

PO BOX 6056

HOBBS, NM 88241

RE: SCHUBERT

Enclosed are the results of analyses for samples received by the laboratory on 12/17/21 12:22.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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.trecs.texas.gov/field/pa/lab\\_accred\\_certif.html](http://www.trecs.texas.gov/field/pa/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 that reads "Caley D. Keene".

Caley D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241	Project: SCHUBERT Project Number: SHUBERTFARMS #1 WATER SAMPL Project Manager: BEN DONAHUE Fax To:	Reported: 10-Jan-22 12:15
---	---	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FRESH WATER	H213654-01	Water	17-Dec-21 08:30	17-Dec-21 12:22
BRINE WATER	H213654-02	Water	17-Dec-21 08:35	17-Dec-21 12:22
MONITOR WELL	H213654-03	Water	17-Dec-21 08:50	17-Dec-21 12:22

Cardinal Laboratories

\* = Accredited Analyte

DISCLAIMER: Liability and Coverage: Cardinal's liability and clients' exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence or any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. It is noted that Cardinal is not liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services furnished by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

Project: SCHUBERT  
Project Number: SHUBERTFARMS #1 WATER SAMPL  
Project Manager: BEN DONAHUE  
Fax To:

Reported:  
10-Jan-22 12:15

**FRESH WATER**  
**H213654-01 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds:**

Alkalinity, Bicarbonate	322		5.00	mg/L	1	1120308	AC	20-Dec-21	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	1120308	AC	20-Dec-21	310.1	
Chloride*	276		4.00	mg/L	1	1121717	GM	20-Dec-21	4500-Cl-B	
Conductivity*	1610		1.00	umhos/cm @ 25°C	1	1121716	GM	17-Dec-21	120.1	
pH*	7.74		0.100	pH Units	1	1121716	GM	17-Dec-21	150.1	
Temperature °C	21.5			pH Units	1	1121716	GM	17-Dec-21	150.1	
Sulfate*	160		25.0	mg/L	2.5	1122003	AC	20-Dec-21	375.4	
TDS*	976		5.00	mg/L	1	1120903	AC	20-Dec-21	160.1	
Alkalinity, Total*	264		4.00	mg/L	1	1120308	AC	20-Dec-21	310.1	

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

Calcium*	123		0.100	mg/L	1	B213157	JDA	05-Jan-22	EPA200.7	
Magnesium*	24.2		0.100	mg/L	1	B213157	JDA	05-Jan-22	EPA200.7	
Potassium*	12.6	0.183	1.00	mg/L	1	B213157	JDA	05-Jan-22	EPA200.7	
Sodium*	153		1.00	mg/L	1	B213157	JDA	05-Jan-22	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

Project: SCHUBERT  
Project Number: SHUBERTFARMS #1 WATER SAMPL  
Project Manager: BEN DONAHUE  
Fax To:

Reported:  
10-Jan-22 12:15

**BRINE WATER**  
**H213654-02 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	317		5.00	mg/L	1	1120308	AC	20-Dec-21	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	1120308	AC	20-Dec-21	310.1	
Chloride*	176000		4.00	mg/L	1	1121717	GM	20-Dec-21	4500-Cl-B	
Conductivity*	270000		1.00	umhos/cm @ 25°C	1	1121716	GM	17-Dec-21	120.1	
pH*	6.73		0.100	pH Units	1	1121716	GM	17-Dec-21	150.1	
Temperature °C	21.6			pH Units	1	1121716	GM	17-Dec-21	150.1	
Sulfate*	8040		1250	mg/L	125	1122003	AC	20-Dec-21	375.4	
TDS*	296000		5.00	mg/L	1	1120903	AC	20-Dec-21	160.1	
Alkalinity, Total*	260		4.00	mg/L	1	1120308	AC	20-Dec-21	310.1	

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

Calcium*	708		20.0	mg/L	200	B213157	JDA	05-Jan-22	EPA200.7	
Magnesium*	148		20.0	mg/L	200	B213157	JDA	05-Jan-22	EPA200.7	
Potassium*	176	36.6	200	mg/L	200	B213157	JDA	05-Jan-22	EPA200.7	
Sodium*	100000		500	mg/L	500	B213157	JDA	06-Jan-22	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

Project: SCHUBERT  
Project Number: SHUBERTFARMS #1 WATER SAMPL  
Project Manager: BEN DONAHUE  
Fax To:

Reported:  
10-Jan-22 12:15

**MONITOR WELL**  
**H213654-03 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	259		5.00	mg/L	1	1120308	AC	20-Dec-21	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	1120308	AC	20-Dec-21	310.1	
Chloride*	364		4.00	mg/L	1	1121717	GM	20-Dec-21	4500-CL-B	
Conductivity*	1970		1.00	umhos/cm @ 25°C	1	1121716	GM	17-Dec-21	120.1	
pH*	7.42		0.100	pH Units	1	1121716	GM	17-Dec-21	150.1	
Temperature °C	21.7			pH Units	1	1121716	GM	17-Dec-21	150.1	
Sulfate*	264		50.0	mg/L	5	1122003	AC	20-Dec-21	375.4	
TDS*	1160		5.00	mg/L	1	1120903	GM	21-Dec-21	160.1	
Alkalinity, Total*	212		4.00	mg/L	1	1120308	AC	20-Dec-21	310.1	

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

Calcium*	182		2.50	mg/L	25	B213157	JDA	05-Jan-22	EPA200.7	
Magnesium*	50.7		2.50	mg/L	25	B213157	JDA	05-Jan-22	EPA200.7	
Potassium*	5.36	4.56	25.0	mg/L	25	B213157	JDA	05-Jan-22	EPA200.7	J
Sodium*	127		25.0	mg/L	25	B213157	JDA	05-Jan-22	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

Celestine D. Keene, Lab Director/Quality Manager

Page 5 of 10





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

Project: SCHUBERT  
Project Number: SHUBERTFARMS #1 WATER SAMPL  
Project Manager: BEN DONAHUE  
Fax To:

Reported:  
10-Jan-22 12:15

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1120308 - General Prep - Wet Chem</b>										
<b>Blank (1120308-BLK1)</b>				<b>Prepared &amp; Analyzed: 03-Dec-21</b>						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
<b>LCS (1120308-BS1)</b>				<b>Prepared &amp; Analyzed: 03-Dec-21</b>						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	292	12.5	mg/L				80-120			
Alkalinity, Total	240	10.0	mg/L	250		96.0	80-120			
<b>LCS Dup (1120308-BSD1)</b>				<b>Prepared &amp; Analyzed: 03-Dec-21</b>						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120	4.18	20	
Alkalinity, Total	250	10.0	mg/L	250		100	80-120	4.08	20	
<b>Batch 1120903 - Filtration</b>										
<b>Blank (1120903-BLK1)</b>				<b>Prepared: 09-Dec-21 Analyzed: 13-Dec-21</b>						
TDS	ND	5.00	mg/L							
<b>LCS (1120903-BS1)</b>				<b>Prepared: 09-Dec-21 Analyzed: 13-Dec-21</b>						
TDS	523		mg/L	500		105	80-120			
<b>Duplicate (1120903-DUP1)</b>				<b>Source: H213532-06 Prepared: 09-Dec-21 Analyzed: 13-Dec-21</b>						
TDS	613	5.00	mg/L		591			3.65	20	
<b>Batch 1121716 - General Prep - Wet Chem</b>										
<b>LCS (1121716-BS1)</b>				<b>Prepared &amp; Analyzed: 17-Dec-21</b>						
Conductivity	105000		uS/cm	100000		105	80-120			
pH	7.11		pH Units	7.00		102	90-110			

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid to client for analysis. All claims, including those for negligence or any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. It is agreed that Cardinal be held harmless for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services furnished by Cardinal, regardless of whether an claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples described above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

*Celey D. Keene*  
Celey D. Keene, Lab Director/Quality Manager

Page 6 of 10



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

## Analytical Results For:

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

Project: SCHUBERT  
Project Number: SHUBERTFARMS #1 WATER SAMPL  
Project Manager: BEN DONAHUE  
Fax To:

Reported:  
10-Jan-22 12:15


Inorganic Compounds - Quality Control  
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1121716 - General Prep - Wet Chem</b>										
<b>Duplicate (1121716-DUP1)</b>		<b>Source: H213653-01</b>		<b>Prepared &amp; Analyzed: 17-Dec-21</b>						
Conductivity	1610	1.00	umhos/cm @ 25°C		1630			1.17	20	
pH	7.47	0.100	pH Units		7.44			0.402	20	
Temperature °C	21.3		pH Units		21.2			0.471	200	
<b>Batch 1121717 - General Prep - Wet Chem</b>										
<b>Blank (1121717-BLK1)</b>		<b>Prepared &amp; Analyzed: 17-Dec-21</b>								
Chloride	ND	4.00	mg/L							
<b>LCS (1121717-BS1)</b>		<b>Prepared &amp; Analyzed: 17-Dec-21</b>								
Chloride	100	4.00	mg/L	100	100	100	80-120			
<b>LCS Dup (1121717-BSD1)</b>		<b>Prepared &amp; Analyzed: 17-Dec-21</b>								
Chloride	104	4.00	mg/L	100	104	104	80-120	3.92	20	
<b>Batch 1122003 - General Prep - Wet Chem</b>										
<b>Blank (1122003-BLK1)</b>		<b>Prepared &amp; Analyzed: 20-Dec-21</b>								
Sulfate	ND	10.0	mg/L							
<b>LCS (1122003-BS1)</b>		<b>Prepared &amp; Analyzed: 20-Dec-21</b>								
Sulfate	22.4	10.0	mg/L	20.0	112	112	80-120			
<b>LCS Dup (1122003-BSD1)</b>		<b>Prepared &amp; Analyzed: 20-Dec-21</b>								
Sulfate	23.1	10.0	mg/L	20.0	116	116	80-120	3.21	20	

Cardinal Laboratories

\*—Accredited Analyte

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

  
Celey D. Keene, Lab Director/Quality Manager

Page 7 of 10



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

## Analytical Results For:

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

Project: SCHUBERT  
Project Number: SHUBERTFARMS #1 WATER SAMPL  
Project Manager: BEN DONAHUE  
Fax To:

Reported:  
10-Jan-22 12:15

## 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
<b>Batch B213157 - Total Rec. 200.7/200.8/200.2</b>										
<b>Blank (B213157-BLK1)</b>										
				Prepared: 28-Dec-21 Analyzed: 05-Jan-22						
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
<b>LCS (B213157-B51)</b>										
				Prepared: 28-Dec-21 Analyzed: 05-Jan-22						
Sodium	3.15	1.00	mg/L	3.24		97.1	85-115			
Potassium	7.86	1.00	mg/L	8.00		98.3	85-115			
Magnesium	20.2	0.100	mg/L	20.0		101	85-115			
Calcium	3.93	0.100	mg/L	4.00		98.3	85-115			
<b>LCS Dup (B213157-B5D1)</b>										
				Prepared: 28-Dec-21 Analyzed: 05-Jan-22						
Magnesium	20.2	0.100	mg/L	20.0		101	85-115	0.397	20	
Potassium	7.86	1.00	mg/L	8.00		98.2	85-115	0.0388	20	
Sodium	3.14	1.00	mg/L	3.24		96.8	85-115	0.252	20	
Calcium	3.93	0.100	mg/L	4.00		98.3	85-115	0.00694	20	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 8 of 10



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

## Notes and Definitions

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

## Cardinal Laboratories

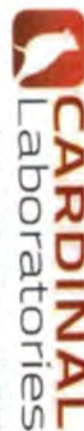
\*-Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 9 of 10





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>City Water Station</u> Project Manager: <u>Ben Dondue</u> Address: <u>PO Box 5102</u> City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u> Phone #: <u>575 343 3514</u> Fax #: _____ Project #: _____ Project Name: <u>Sambas Farms #1 Water Samples</u> Project Location: <u>Sambas Farms #1 Brine Well</u> Sampler Name: <u>Ben Dondue</u>		P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Lab I.D. _____ Sample I.D. _____ (G/RAB OR C/OMP) # CONTAINERS _____ GROUNDWATER _____ WASTEWATER _____ SOIL _____ OIL _____ SLUDGE _____ OTHER: _____ ACID/BASE: _____ ICE / COOL _____ OTHER: _____		DATE _____ TIME _____ 12/17/21 8:30a 12/17/21 8:35a 12/17/21 8:50a	
Delivered By: (Circle One) Sampler - UPS - Blue - Other: _____ Observed Temp. °C: <u>1.0</u> Corrected Temp. °C: <u>0.5</u> Sample Condition: <u>Good / Intact</u> Checked By: <u>JP</u> Turnaround Time: _____ Standard: <u>Push</u> Bacteria (only) Sample Condition: <u>Good / Intact</u> Observed Temp. °C: _____ Corrected Temp. °C: _____		Received By: <u>Shawna Delaney</u> Date: <u>12-17-21</u> Time: <u>1222</u> Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____ All Results are emailed. Please provide Email address: <u>gsimsavage@gmail.com</u> Remarks: _____	

† Cardinal cannot accept verbal changes. Please email changes to coley.keene@cardinalabnm.com



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

April 12, 2022

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 04/01/22 15:09.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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](http://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



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

**Analytical Results For:**

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241	Project: SCHUBERT Project Number: SHUBERT FARMS #1 Project Manager: BEN DONAHUE Fax To:	Reported: 12-Apr-22 16:15
---	--	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FRESH WATER	H221319-01	Water	01-Apr-22 08:05	01-Apr-22 15:09
BRINE WATER	H221319-02	Water	01-Apr-22 08:10	01-Apr-22 15:09
MONITOR WELL	H221319-03	Water	01-Apr-22 08:00	01-Apr-22 15:09

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
12-Apr-22 16:15

**FRESH WATER**  
**H221319-01 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	254		5.00	mg/L	1	2040415	GM	04-Apr-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2040415	GM	04-Apr-22	310.1	
Chloride*	450		4.00	mg/L	1	2040418	AC	05-Apr-22	4500-Cl-B	
Conductivity*	2810		1.00	umhos/cm @ 25°C	1	2040417	GM	04-Apr-22	120.1	
pH*	7.26		0.100	pH Units	1	2040417	GM	04-Apr-22	150.1	
Temperature °C	23.3			pH Units	1	2040417	GM	04-Apr-22	150.1	
Sulfate*	529		125	mg/L	12.5	2040416	GM	06-Apr-22	375.4	
TDS*	1780		5.00	mg/L	1	2040104	GM	05-Apr-22	160.1	
Alkalinity, Total*	208		4.00	mg/L	1	2040415	GM	04-Apr-22	310.1	

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

Calcium*	246		0.500	mg/L	5	B220889	AES	08-Apr-22	EPA200.7	
Magnesium*	77.2		0.500	mg/L	5	B220889	AES	08-Apr-22	EPA200.7	
Potassium*	8.99	0.888	5.00	mg/L	5	B220889	AES	08-Apr-22	EPA200.7	
Sodium*	230		5.00	mg/L	5	B220889	AES	08-Apr-22	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 10

pg. 31





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
12-Apr-22 16:15

**BRINE WATER**  
**H221319-02 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	234		5.00	mg/L	1	2040415	GM	04-Apr-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2040415	GM	04-Apr-22	310.1	
Chloride*	178000		4.00	mg/L	1	2040418	AC	05-Apr-22	4500-Cl-B	
Conductivity*	267000		1.00	umhos/cm @ 25°C	1	2040417	GM	04-Apr-22	120.1	
pH*	6.75		0.100	pH Units	1	2040417	GM	04-Apr-22	150.1	
Temperature °C	23.3			pH Units	1	2040417	GM	04-Apr-22	150.1	
Sulfate*	2230		500	mg/L	50	2040416	GM	06-Apr-22	375.4	
TDS*	297000		5.00	mg/L	1	2040104	GM	05-Apr-22	160.1	
Alkalinity, Total*	192		4.00	mg/L	1	2040415	GM	04-Apr-22	310.1	

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

Calcium*	770		50.0	mg/L	500	B220889	AES	08-Apr-22	EPA200.7	
Magnesium*	164		50.0	mg/L	500	B220889	AES	08-Apr-22	EPA200.7	
Potassium*	122	88.8	500	mg/L	500	B220889	AES	08-Apr-22	EPA200.7	
Sodium*	108000		500	mg/L	500	B220889	AES	08-Apr-22	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
12-Apr-22 16:15

**MONITOR WELL**  
**H221319-03 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	205		5.00	mg/L	1	2040415	GM	04-Apr-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2040415	GM	04-Apr-22	310.1	
Chloride*	400		4.00	mg/L	1	2040418	AC	05-Apr-22	4500-Cl-B	
Conductivity*	2150		1.00	umhos/cm @ 25°C	1	2040417	GM	04-Apr-22	120.1	
pH*	7.42		0.100	pH Units	1	2040417	GM	04-Apr-22	150.1	
Temperature °C	23.3			pH Units	1	2040417	GM	04-Apr-22	150.1	
Sulfate*	267		50.0	mg/L	5	2040416	GM	06-Apr-22	375.4	
TDS*	1220		5.00	mg/L	1	2040104	GM	06-Apr-22	160.1	
Alkalinity, Total*	168		4.00	mg/L	1	2040415	GM	04-Apr-22	310.1	

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

Calcium*	211		1.00	mg/L	10	B220889	AES	08-Apr-22	EPA200.7	
Magnesium*	57.1		1.00	mg/L	10	B220889	AES	08-Apr-22	EPA200.7	
Potassium*	5.58	0.355	2.00	mg/L	2	B220889	AES	08-Apr-22	EPA200.7	
Sodium*	125		2.00	mg/L	2	B220889	AES	08-Apr-22	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
12-Apr-22 16:15

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Batch 2040104 - Filtration</b>										
<b>Blank (2040104-BLK1)</b>				Prepared: 01-Apr-22 Analyzed: 04-Apr-22						
TDS	ND	5.00	mg/L							
<b>LCS (2040104-BS1)</b>				Prepared: 01-Apr-22 Analyzed: 05-Apr-22						
TDS	532		mg/L	500		106	80-120			
<b>Duplicate (2040104-DUP1)</b>				Source: H221301-02 Prepared: 01-Apr-22 Analyzed: 04-Apr-22						
TDS	531	5.00	mg/L		501			5.81	20	
<b>Batch 2040415 - General Prep - Wet Chem</b>										
<b>Blank (2040415-BLK1)</b>				Prepared & Analyzed: 04-Apr-22						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
<b>LCS (2040415-BS1)</b>				Prepared & Analyzed: 04-Apr-22						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	280	12.5	mg/L				80-120			
Alkalinity, Total	230	10.0	mg/L	250		92.0	80-120			
<b>LCS Dup (2040415-BS1)</b>				Prepared & Analyzed: 04-Apr-22						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	292	12.5	mg/L				80-120	4.37	20	
Alkalinity, Total	240	10.0	mg/L	250		96.0	80-120	4.26	20	
<b>Batch 2040416 - General Prep - Wet Chem</b>										
<b>Blank (2040416-BLK1)</b>				Prepared: 04-Apr-22 Analyzed: 06-Apr-22						
Sulfate	ND	10.0	mg/L							

Cardinal Laboratories

\*=Accredited Analyte

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

Celest D. Keene, Lab Director/Quality Manager

Page 6 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
12-Apr-22 16:15

**Inorganic Compounds - Quality Control**  
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2040416 - General Prep - Wet Chem</b>										
<b>LCS (2040416-BS1)</b>				Prepared: 04-Apr-22 Analyzed: 06-Apr-22						
Sulfate	19.5	10.0	mg/L	20.0		97.6	80-120			
<b>LCS Dup (2040416-BSD1)</b>				Prepared: 04-Apr-22 Analyzed: 06-Apr-22						
Sulfate	19.1	10.0	mg/L	20.0		95.6	80-120	2.17	20	
<b>Batch 2040417 - General Prep - Wet Chem</b>										
<b>LCS (2040417-BS1)</b>				Prepared & Analyzed: 04-Apr-22						
pH	7.11		pH Units	7.00		102	90-110			
Conductivity	101000		uS/cm	100000		101	80-120			
<b>Duplicate (2040417-DUP1)</b>				Source: H221318-01		Prepared & Analyzed: 04-Apr-22				
pH	7.19	0.100	pH Units		7.15			0.558	20	
Conductivity	2770	1.00	umhos/cm @ 25°C		2760			0.362	20	
Temperature °C	23.4		pH Units		23.3			0.428	200	
<b>Batch 2040418 - General Prep - Wet Chem</b>										
<b>Blank (2040418-BLK1)</b>				Prepared & Analyzed: 05-Apr-22						
Chloride	ND	4.00	mg/L							
<b>LCS (2040418-BS1)</b>				Prepared & Analyzed: 05-Apr-22						
Chloride	100	4.00	mg/L	100		100	80-120			
<b>LCS Dup (2040418-BSD1)</b>				Prepared & Analyzed: 05-Apr-22						
Chloride	104	4.00	mg/L	100		104	80-120	3.92	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
12-Apr-22 16:15

**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
<b>Batch B220889 - Total Recoverable by ICP</b>										
<b>Blank (B220889-BLK1)</b>										
					Prepared: 07-Apr-22 Analyzed: 08-Apr-22					
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
<b>LCS (B220889-BS1)</b>										
					Prepared: 07-Apr-22 Analyzed: 08-Apr-22					
Sodium	1.55	1.00	mg/L	1.62		95.7	85-115			
Potassium	4.07	1.00	mg/L	4.00		102	85-115			
Magnesium	10.3	0.100	mg/L	10.0		103	85-115			
Calcium	1.97	0.100	mg/L	2.00		98.6	85-115			
<b>LCS Dup (B220889-BSD1)</b>										
					Prepared: 07-Apr-22 Analyzed: 08-Apr-22					
Magnesium	9.95	0.100	mg/L	10.0		99.5	85-115	2.98	20	
Potassium	4.00	1.00	mg/L	4.00		100	85-115	1.68	20	
Sodium	1.50	1.00	mg/L	1.62		92.4	85-115	3.57	20	
Calcium	1.91	0.100	mg/L	2.00		95.4	85-115	3.33	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 8 of 10



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

**Notes and Definitions**

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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-8 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

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

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Page 9 of 10

pg. 37



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

[illegible]





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

July 18, 2022

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 07/01/22 10:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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](http://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



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

**Analytical Results For:**

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241	Project: SCHUBERT Project Number: SHUBERT FARMS #1 WATER SAM Project Manager: BEN DONAHUE Fax To:	Reported: 18-Jul-22 14:57
---	--	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRINE WATER	H222827-01	Water	01-Jul-22 05:50	01-Jul-22 10:12
MONITOR WELL	H222827-02	Water	01-Jul-22 05:45	01-Jul-22 10:12
INJECTION WATER	H222827-03	Water	01-Jul-22 05:55	01-Jul-22 10:12

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
18-Jul-22 14:57

**BRINE WATER**  
**H222827-01 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	254		5.00	mg/L	1	2042827	GM	06-Jul-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2042827	GM	06-Jul-22	310.1	
Chloride*	176000		4.00	mg/L	1	2063022	GM	06-Jul-22	4500-Cl-B	
Conductivity*	268000		1.00	umhos/cm @ 25°C	1	2070119	AC	01-Jul-22	120.1	
pH*	6.83		0.100	pH Units	1	2070119	AC	01-Jul-22	150.1	
Temperature °C	20.8			pH Units	1	2070119	AC	01-Jul-22	150.1	
Sulfate*	3710		833	mg/L	83.3	2063006	GM	06-Jul-22	375.4	
TDS*	299000		5.00	mg/L	1	2070520	GM	06-Jul-22	160.1	
Alkalinity, Total*	208		4.00	mg/L	1	2042827	GM	06-Jul-22	310.1	

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

Calcium*	695		50.0	mg/L	500	B221831	AES	13-Jul-22	EPA200.7	
Magnesium*	141		50.0	mg/L	500	B221831	AES	13-Jul-22	EPA200.7	
Potassium*	90.0	88.8	500	mg/L	500	B221831	AES	13-Jul-22	EPA200.7	
Sodium*	105000		500	mg/L	500	B221831	AES	13-Jul-22	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 10



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
18-Jul-22 14:57

**MONITOR WELL**  
**H222827-02 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	220		5.00	mg/L	1	2042827	GM	06-Jul-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2042827	GM	06-Jul-22	310.1	
Chloride*	412		4.00	mg/L	1	2063022	GM	06-Jul-22	4500-Cl-B	
Conductivity*	1970		1.00	umhos/cm @ 25°C	1	2070119	AC	01-Jul-22	120.1	
pH*	7.52		0.100	pH Units	1	2070119	AC	01-Jul-22	150.1	
Temperature °C	20.8			pH Units	1	2070119	AC	01-Jul-22	150.1	
Sulfate*	342		50.0	mg/L	5	2063006	GM	06-Jul-22	375.4	
TDS*	1230		5.00	mg/L	1	2070520	GM	07-Jul-22	160.1	
Alkalinity, Total*	180		4.00	mg/L	1	2042827	GM	06-Jul-22	310.1	

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

Calcium*	184		1.00	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	
Magnesium*	50.9		1.00	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	
Potassium*	5.03	1.78	10.0	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	
Sodium*	116		10.0	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 10

pg. 42





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
18-Jul-22 14:57

**INJECTION WATER**  
**H222827-03 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	259		5.00	mg/L	1	2042827	GM	06-Jul-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2042827	GM	06-Jul-22	310.1	
Chloride*	280		4.00	mg/L	1	2063022	GM	06-Jul-22	4500-Cl-B	
Conductivity*	1660		1.00	umhos/cm @ 25°C	1	2070119	AC	01-Jul-22	120.1	
pH*	7.56		0.100	pH Units	1	2070119	AC	01-Jul-22	150.1	
Temperature °C	20.8			pH Units	1	2070119	AC	01-Jul-22	150.1	
Sulfate*	248		50.0	mg/L	5	2063006	GM	06-Jul-22	375.4	
TDS*	1040		5.00	mg/L	1	2070520	GM	06-Jul-22	160.1	
Alkalinity, Total*	212		4.00	mg/L	1	2042827	GM	06-Jul-22	310.1	

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

Calcium*	121		1.00	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	
Magnesium*	30.1		1.00	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	
Potassium*	8.82	1.78	10.0	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	
Sodium*	145		10.0	mg/L	10	B221831	AES	13-Jul-22	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 10

pg. 43





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
18-Jul-22 14:57

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Batch 2042827 - General Prep - Wet Chem</b>										
<b>Blank (2042827-BLK1)</b>				Prepared & Analyzed: 29-Apr-22						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
<b>LCS (2042827-BS1)</b>				Prepared & Analyzed: 29-Apr-22						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	292	12.5	mg/L				80-120			
Alkalinity, Total	240	10.0	mg/L	250		96.0	80-120			
<b>LCS Dup (2042827-BSD1)</b>				Prepared & Analyzed: 29-Apr-22						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120	4.18	20	
Alkalinity, Total	250	10.0	mg/L	250		100	80-120	4.08	20	
<b>Batch 2063006 - General Prep - Wet Chem</b>										
<b>Blank (2063006-BLK1)</b>				Prepared: 30-Jun-22 Analyzed: 06-Jul-22						
Sulfate	ND	10.0	mg/L							
<b>LCS (2063006-BS1)</b>				Prepared: 30-Jun-22 Analyzed: 06-Jul-22						
Sulfate	20.4	10.0	mg/L	20.0		102	80-120			
<b>LCS Dup (2063006-BSD1)</b>				Prepared: 30-Jun-22 Analyzed: 06-Jul-22						
Sulfate	19.7	10.0	mg/L	20.0		98.4	80-120	3.74	20	
<b>Batch 2063022 - General Prep - Wet Chem</b>										
<b>Blank (2063022-BLK1)</b>				Prepared & Analyzed: 30-Jun-22						
Chloride	ND	4.00	mg/L							

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 10

pg. 44



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
18-Jul-22 14:57

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2063022 - General Prep - Wet Chem</b>										
<b>LCS (2063022-BS1)</b>				Prepared & Analyzed: 30-Jun-22						
Chloride	100	4.00	mg/L	100		100	80-120			
<b>LCS Dup (2063022-BSD1)</b>				Prepared & Analyzed: 30-Jun-22						
Chloride	100	4.00	mg/L	100		100	80-120	0.00	20	
<b>Batch 2070119 - General Prep - Wet Chem</b>										
<b>LCS (2070119-BS1)</b>				Prepared & Analyzed: 01-Jul-22						
Conductivity	100000		uS/cm	100000		100	80-120			
pH	7.13		pH Units	7.00		102	90-110			
<b>Duplicate (2070119-DUP1)</b>				Source: H222826-01 Prepared & Analyzed: 01-Jul-22						
Conductivity	275000	1.00	umhos/cm @ 25°C		276000			0.508	20	
pH	6.57	0.100	pH Units		6.54			0.458	20	
Temperature °C	20.8		pH Units		20.8			0.00	200	
<b>Batch 2070520 - Filtration</b>										
<b>Blank (2070520-BLK1)</b>				Prepared: 05-Jul-22 Analyzed: 06-Jul-22						
TDS	ND	5.00	mg/L							
<b>LCS (2070520-BS1)</b>				Prepared: 05-Jul-22 Analyzed: 06-Jul-22						
TDS	851		mg/L	1000		85.1	80-120			
<b>Duplicate (2070520-DUP1)</b>				Source: H222826-03 Prepared: 05-Jul-22 Analyzed: 06-Jul-22						
TDS	1060	5.00	mg/L		1080			1.88	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 7 of 10

pg. 45



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
18-Jul-22 14:57

**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
<b>Batch B221831 - Total Recoverable by ICP</b>										
<b>Blank (B221831-BLK1)</b>				Prepared: 11-Jul-22 Analyzed: 13-Jul-22						
Magnesium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
<b>LCS (B221831-BS1)</b>				Prepared: 11-Jul-22 Analyzed: 13-Jul-22						
Magnesium	9.62	0.100	mg/L	10.0		96.2	85-115			
Potassium	3.98	1.00	mg/L	4.00		99.5	85-115			
Sodium	1.65	1.00	mg/L	1.62		102	85-115			
Calcium	1.87	0.100	mg/L	2.00		93.6	85-115			
<b>LCS Dup (B221831-BSD1)</b>				Prepared: 11-Jul-22 Analyzed: 13-Jul-22						
Calcium	1.79	0.100	mg/L	2.00		89.3	85-115	4.66	20	
Magnesium	9.17	0.100	mg/L	10.0		91.7	85-115	4.85	20	
Sodium	1.72	1.00	mg/L	1.62		106	85-115	4.15	20	
Potassium	3.69	1.00	mg/L	4.00		92.4	85-115	7.48	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 8 of 10



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

### Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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

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

*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager

Page 9 of 10

pg. 47





Released to Imaging: 2/24/2023 11:36:18 AM



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

October 17, 2022

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 10/05/22 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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](http://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





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

**Analytical Results For:**

ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241	Project: SCHUBERT Project Number: SCHUBERT FARMS #1 WATER SAM Project Manager: BEN DONAHUE Fax To:	Reported: 17-Oct-22 15:23
---	---	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MONITOR WELL	H224652-01	Water	05-Oct-22 09:50	05-Oct-22 13:45
INJECTION WATER	H224652-02	Water	05-Oct-22 09:55	05-Oct-22 13:45
BRINE WATER	H224652-03	Water	05-Oct-22 10:00	05-Oct-22 13:45

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 11



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**MONITOR WELL****H224652-01 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	215		5.00	mg/L	1	2100726	GM	09-Oct-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2100726	GM	09-Oct-22	310.1	
Chloride*	480		4.00	mg/L	1	2092901	AC	06-Oct-22	4500-Cl-B	
Conductivity*	2250		1.00	umhos/cm @ 25°C	1	2100727	GM	09-Oct-22	120.1	
pH*	7.50		0.100	pH Units	1	2100727	GM	07-Oct-22	150.1	
Temperature °C	22.4			pH Units	1	2100727	GM	07-Oct-22	150.1	
Sulfate*	262		50.0	mg/L	5	2100725	GM	12-Oct-22	375.4	
TDS*	1250		5.00	mg/L	1	2093001	AC	06-Oct-22	160.1	
Alkalinity, Total*	176		4.00	mg/L	1	2100726	GM	09-Oct-22	310.1	

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

Calcium*	192		1.00	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	
Magnesium*	52.4		1.00	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	
Sodium*	119		10.0	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 11



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**INJECTION WATER**  
**H224652-02 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	264		5.00	mg/L	1	2100726	GM	09-Oct-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2100726	GM	09-Oct-22	310.1	
Chloride*	550		4.00	mg/L	1	2092901	AC	06-Oct-22	4500-Cl-B	
Conductivity*	3280		1.00	umhos/cm @ 25°C	1	2100727	GM	09-Oct-22	120.1	
pH*	7.29		0.100	pH Units	1	2100727	GM	07-Oct-22	150.1	
Temperature °C	22.3			pH Units	1	2100727	GM	07-Oct-22	150.1	
Sulfate*	771		250	mg/L	25	2100725	GM	12-Oct-22	375.4	
TDS*	2210		5.00	mg/L	1	2093001	AC	06-Oct-22	160.1	
Alkalinity, Total*	216		4.00	mg/L	1	2100726	GM	09-Oct-22	310.1	

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

Calcium*	260		1.00	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	
Magnesium*	88.4		1.00	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	
Sodium*	250		10.0	mg/L	10	B222803	AES	11-Oct-22	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 11



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**BRINE WATER**  
**H224652-03 (Water)**

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

**Cardinal Laboratories****Inorganic Compounds**

Alkalinity, Bicarbonate	254		5.00	mg/L	1	2100726	GM	09-Oct-22	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	2100726	GM	09-Oct-22	310.1	
Chloride*	174000		4.00	mg/L	1	2092901	AC	06-Oct-22	4500-Cl-B	
Conductivity*	230000		1.00	umhos/cm @ 25°C	1	2100727	GM	07-Oct-22	120.1	
pH*	6.87		0.100	pH Units	1	2100727	GM	07-Oct-22	130.1	
Temperature °C	22.3			pH Units	1	2100727	GM	07-Oct-22	130.1	
Sulfate*	2820		833	mg/L	83.3	2100725	GM	12-Oct-22	375.4	
TDS*	292000		5.00	mg/L	1	2100724	GM	10-Oct-22	160.1	
Alkalinity, Total*	208		4.00	mg/L	1	2100726	GM	09-Oct-22	310.1	

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

Calcium*	683		50.0	mg/L	500	B222803	AES	11-Oct-22	EPA200.7	
Magnesium*	138		50.0	mg/L	500	B222803	AES	11-Oct-22	EPA200.7	
Potassium*	<500		500	mg/L	500	B222803	AES	11-Oct-22	EPA200.7	
Sodium*	100000		500	mg/L	500	B222803	AES	11-Oct-22	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 11

pg. 53





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Batch 2092901 - General Prep - Wet Chem</b>										
<b>Blank (2092901-BLK1)</b>				Prepared & Analyzed: 29-Sep-22						
Chloride	ND	4.00	mg/L							
<b>LCS (2092901-BS1)</b>				Prepared & Analyzed: 29-Sep-22						
Chloride	104	4.00	mg/L	100		104	80-120			
<b>LCS Dup (2092901-BSD1)</b>				Prepared & Analyzed: 29-Sep-22						
Chloride	100	4.00	mg/L	100		100	80-120	3.92	20	
<b>Batch 2093001 - Filtration</b>										
<b>Blank (2093001-BLK1)</b>				Prepared: 30-Sep-22 Analyzed: 04-Oct-22						
TDS	ND	5.00	mg/L							
<b>LCS (2093001-BS1)</b>				Prepared: 30-Sep-22 Analyzed: 03-Oct-22						
TDS	492		mg/L	500		98.4	80-120			
<b>Duplicate (2093001-DUP1)</b>				Source: H224512-04 Prepared: 30-Sep-22 Analyzed: 03-Oct-22						
TDS	584	5.00	mg/L		569			2.60	20	
<b>Batch 2100724 - Filtration</b>										
<b>Blank (2100724-BLK1)</b>				Prepared: 07-Oct-22 Analyzed: 11-Oct-22						
TDS	ND	5.00	mg/L							
<b>LCS (2100724-BS1)</b>				Prepared: 07-Oct-22 Analyzed: 10-Oct-22						
TDS	534		mg/L	500		107	80-120			

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 11

pg. 54



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2100724 - Filtration</b>										
<b>Duplicate (2100724-DUP1)</b>		<b>Source: H224652-03</b>		<b>Prepared: 07-Oct-22 Analyzed: 10-Oct-22</b>						
TDS	293000	5.00	mg/L		292000			0.262	20	
<b>Batch 2100725 - General Prep - Wet Chem</b>										
<b>Blank (2100725-BLK1)</b>		<b>Prepared: 07-Oct-22 Analyzed: 12-Oct-22</b>								
Sulfate	ND	10.0	mg/L							
<b>LCS (2100725-BS1)</b>		<b>Prepared: 07-Oct-22 Analyzed: 12-Oct-22</b>								
Sulfate	19.2	10.0	mg/L	20.0		95.9	80-120			
<b>LCS Dup (2100725-BSD1)</b>		<b>Prepared: 07-Oct-22 Analyzed: 12-Oct-22</b>								
Sulfate	21.4	10.0	mg/L	20.0		107	80-120	10.8	20	
<b>Batch 2100726 - General Prep - Wet Chem</b>										
<b>Blank (2100726-BLK1)</b>		<b>Prepared: 07-Oct-22 Analyzed: 09-Oct-22</b>								
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
<b>LCS (2100726-BS1)</b>		<b>Prepared: 07-Oct-22 Analyzed: 09-Oct-22</b>								
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			
<b>LCS Dup (2100726-BSD1)</b>		<b>Prepared: 07-Oct-22 Analyzed: 09-Oct-22</b>								
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	318	12.5	mg/L				80-120	0.00	20	
Alkalinity, Total	260	10.0	mg/L	250		104	80-120	0.00	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 7 of 11





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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2100727 - General Prep - Wet Chem</b>									
<b>LCS (2100727-BS1)</b>					Prepared: 07-Oct-22 Analyzed: 09-Oct-22				
Conductivity	99200		uS/cm	100000		99.2	80-120		
pH	7.08		pH Units	7.00		101	90-110		
<b>Duplicate (2100727-DUP1)</b>					Source: H224651-01 Prepared: 07-Oct-22 Analyzed: 09-Oct-22				
Conductivity	655	1.00	umhos/cm @ 25°C <sup>1</sup>		641		2.16	20	
pH	7.65	0.100	pH Units		7.62		0.393	20	
Temperature °C	22.5		pH Units		22.6		0.443	200	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 8 of 11



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

**Analytical Results For:**

ETZ WATER STATION  
PO BOX 6056  
HOBBS NM, 88241

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

Reported:  
17-Oct-22 15:23

**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
<b>Batch B222803 - Total Recoverable by ICP</b>										
<b>Blank (B222803-BLK1)</b>				Prepared: 10-Oct-22 Analyzed: 11-Oct-22						
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
<b>LCS (B222803-BS1)</b>				Prepared: 10-Oct-22 Analyzed: 11-Oct-22						
Sodium	1.63	1.00	mg/L	1.62		101	85-115			
Potassium	3.84	1.00	mg/L	4.00		96.0	85-115			
Magnesium	9.57	0.100	mg/L	10.0		95.7	85-115			
Calcium	1.86	0.100	mg/L	2.00		92.8	85-115			
<b>LCS Dup (B222803-BSD1)</b>				Prepared: 10-Oct-22 Analyzed: 11-Oct-22						
Magnesium	9.55	0.100	mg/L	10.0		95.5	85-115	0.148	20	
Potassium	3.84	1.00	mg/L	4.00		96.0	85-115	0.00174	20	
Sodium	1.59	1.00	mg/L	1.62		97.9	85-115	2.62	20	
Calcium	1.86	0.100	mg/L	2.00		92.9	85-115	0.0177	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Page 9 of 11



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

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient 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

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

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Page 10 of 11

pg. 58



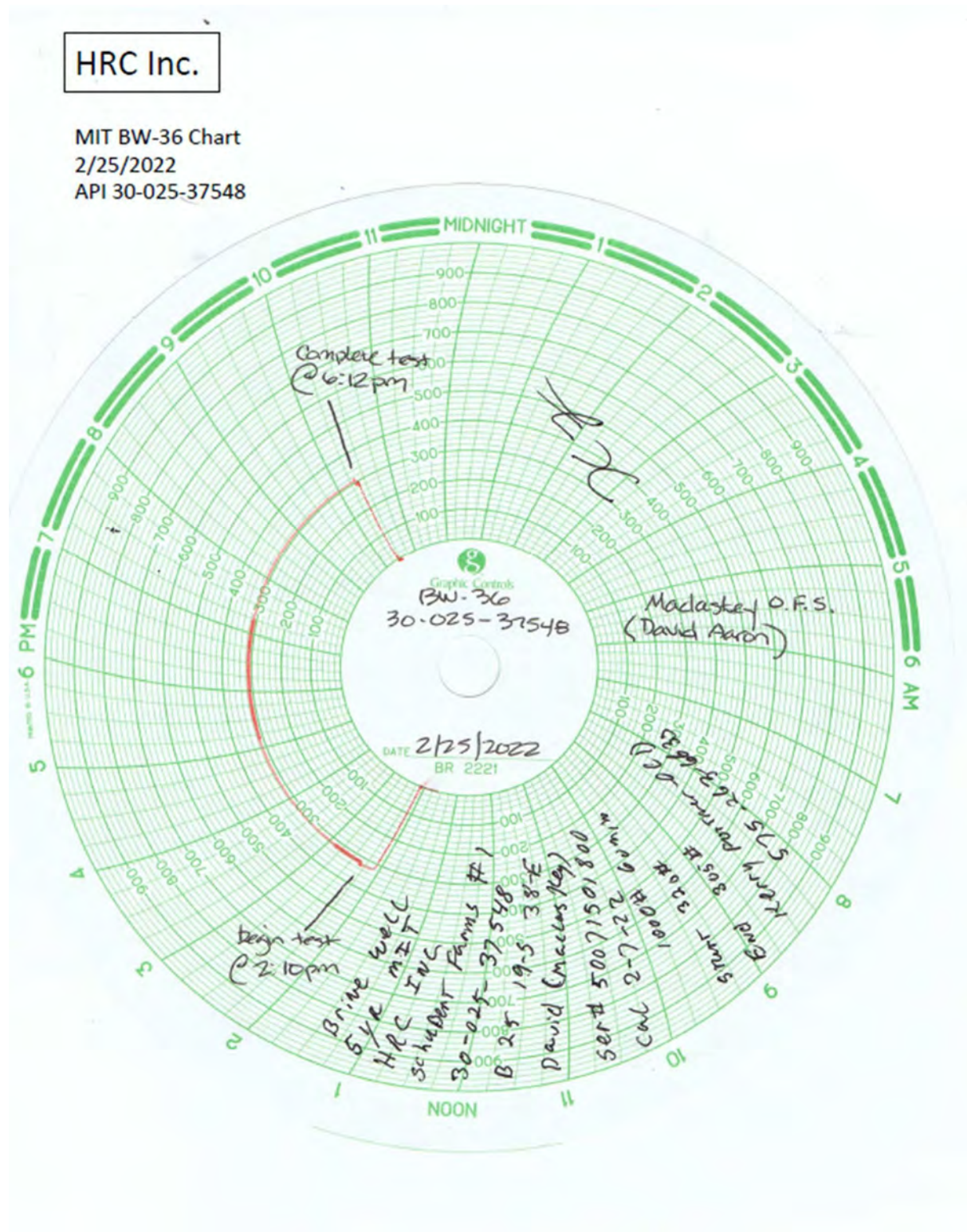
101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



## APPENDIX C



BW-36

API # 30-025-37548

2/25/2022 MIT Test

2/25/2022

8:00 AM: Rig up Maclaskey Oil Field Service (David Aaron); Shut in discharge @ casing & begin pumping down tubing to reach test pressure. Well required approx. 260 bbl. pumped down tubing to bring cavern pressure from normal working pressure (approx. 245 psig) to cavern test pressure (approx. 318 psig).

2:00 PM: Install chart on chart recorder; open valve to chart recorder & isolate chart recorder from pump truck.

2:10 PM: Begin Test (cavern pressure approx. 318 psig)

6:12 PM: Complete Test (cavern pressure approx. 309 psig); bleed pressure off of chart recorder

6:30 PM: Rig down/release Maclaskey Pump Truck

7:20 PM: Open casing to production tanks and bleed off pressure overnight

2/26/2022

8:15 AM: Put well back on production (cavern pressure approx. 240 psig)

\*Chart recorder was set on 12 hour clock setting, see American Valve certification page for chart recorder calibration.



**American Valve & Meter, Inc.**

1113 W. BROADWAY

P.O. BOX 166  
HOBBS, NM 88240

T0: Maclaskey Oilfield Services

DATE: 2/7/22

This is to certify that:

I, Justin Harris , Technician for American Valve & Meter Inc. Has checked the  
calibration of the following instrument.

08" Pressure recorder

S/N: 50071501800

at these points.

Pressure #1000			Temperature *or Pressure #		
Test	Found	Left	Test	Found	Left
- 0	-	- 0	-	-	-
- 500	-	- 500	-	-	-
- 700	-	- 700	-	-	-
- 1000	-	- 1000	-	-	-
- 200	-	- 200	-	-	-
- 0	-	- 0			

Remarks: \_\_\_\_\_

Signature: 

Submit 1 Copy To Appropriate District Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

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

Form C-103  
 Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. <b>30-025-37548</b>
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <b>Brine Well</b>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator <b>HRC Inc.</b>		6. State Oil & Gas Lease No. <b>N/A</b>
3. Address of Operator <b>P.O. Box 5102 Hobbs, NM 88241</b>		7. Lease Name or Unit Agreement Name <b>Schubert Farms (31632A)</b>
4. Well Location Unit Letter <b>B</b> : <b>330</b> feet from the <b>N</b> line and <b>1650</b> feet from the <b>E</b> line Section <b>25</b> Township <b>19-S</b> Range <b>38-E</b> NMPM County <b>Lea</b>		8. Well Number <b>001</b> 9. OGRID Number <b>B31652</b> 10. Pool name or Wildcat <b>Salado</b>
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		

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

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

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

**Performed 5-year MIT on Brine Well**

**\* SEE ATTACHED WORKOVER PROCEDURE & COMPLETION REPORT**

Spud Date:

Rig Release Date:

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

SIGNATURE **Gary M Schubert** TITLE **Owner** DATE **2/25/2022**  
 Type or print name **Gary M Schubert** E-mail address: **garymschubert@gmail.com** PHONE: **(513) 393-6662**  
 For State Use Only

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 Conditions of Approval (if any): \_\_\_\_\_



District 1  
1625 N. Fessenden Dr., Hobbs, NM 88201  
Phone: (505) 393-6161 Fax: (505) 393-6720

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division Hobbs District Office

BRADENHEAD TEST REPORT

Operator Name <b>HRC INC</b>		API Number <b>30-025-37548</b>
Property Name <b>Schubert Farms</b>		Well No. <b>001</b>

Surface Location

UL - Lot <b>B</b>	Section <b>25</b>	Township <b>19-S</b>	Range <b>38-E</b>	Feet from <b>330</b>	NS Line <b>N</b>	Feet from <b>1650</b>	E/W Line <b>E</b>	County <b>Lea</b>
----------------------	----------------------	-------------------------	----------------------	-------------------------	---------------------	--------------------------	----------------------	----------------------

Well Status

**Brine Well**

TA'D WELL YES <input checked="" type="checkbox"/>	SHUT-IN YES <input checked="" type="checkbox"/>	INJ <input type="checkbox"/>	INJECTOR <input type="checkbox"/>	SWD <input type="checkbox"/>	OIL <input type="checkbox"/>	PRODUCER <input type="checkbox"/>	GAS <input type="checkbox"/>	DATE <b>2-25-22</b>
--	--	---------------------------------	--------------------------------------	---------------------------------	---------------------------------	--------------------------------------	---------------------------------	------------------------

OBSERVED DATA

**no packer**

	(A) Surface	(B) Interm(1)	(C) Interm(2)	(D) Prod Casing	(E) Tubing
Pressure	<b>0</b>	<b>NA</b>	<b>NA</b>	<b>260</b>	<b>260</b>
Flow Characteristics					
Puff	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>CO2</b>
Steady Flow	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>WTR</b>
Surges	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>GAS</b>
Down to nothing	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	Type of Fluid
Gas or Oil	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	Exposed for
Water	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	<b>Y / N</b>	Waterhead if
					applies

Remarks - Please state for each string (A,B,C,D,E) pertinent information regarding bleed down or continuous build up if applies.

**Annual  
UTC Test (Brine Well)  
MacLuskey (David)  
ser # 50671501800  
CAL 2-7-22**

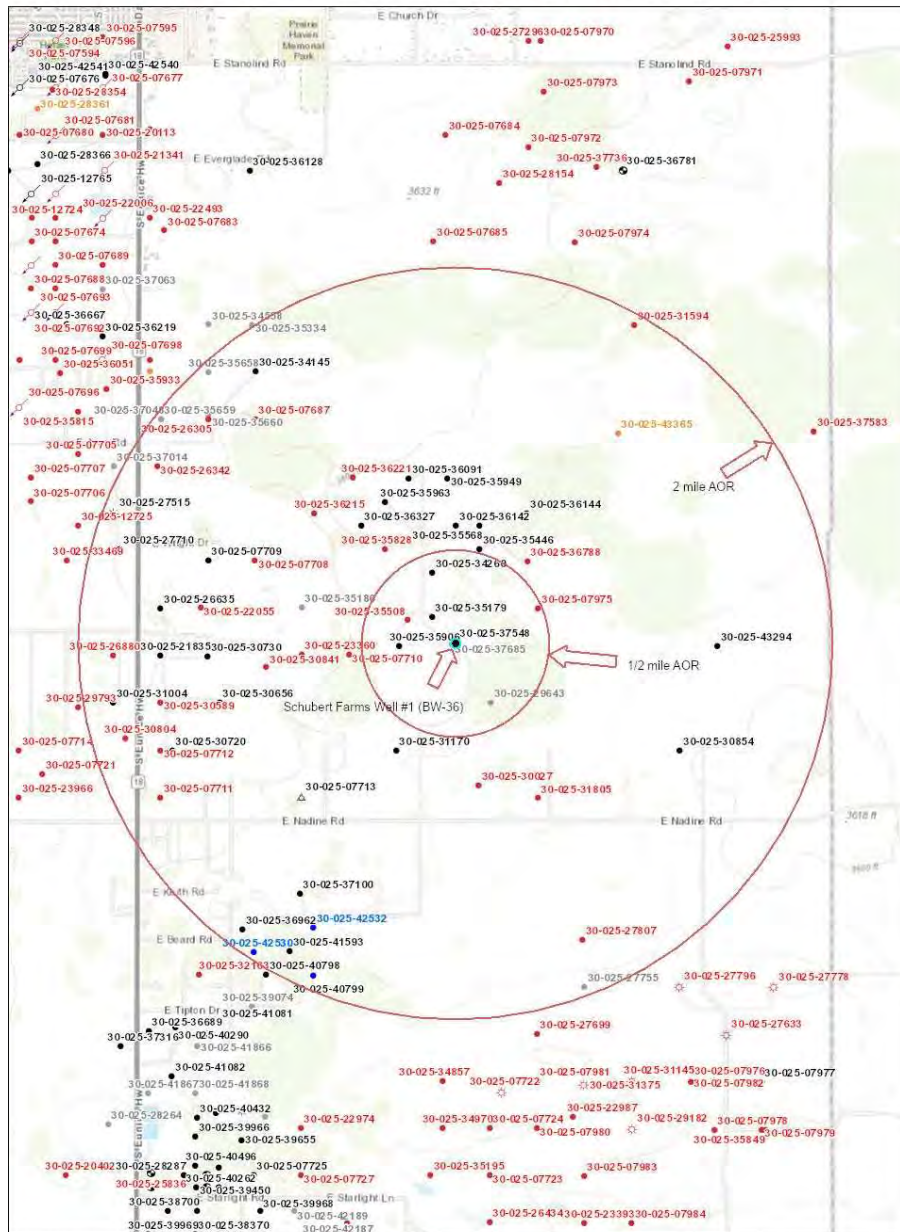
**start 320#  
end 305#**

Signature:		OIL CONSERVATION DIVISION
Printed name:		Entered into RBDMS
Title:		Re-test
E-mail Address:		<b>207</b>
Date:	Phone:	
Witness: <b>Kerry Fortner - OCD</b>		
<b>575-263-6633</b>		

INSTRUCTIONS ON BACK OF THIS FORM

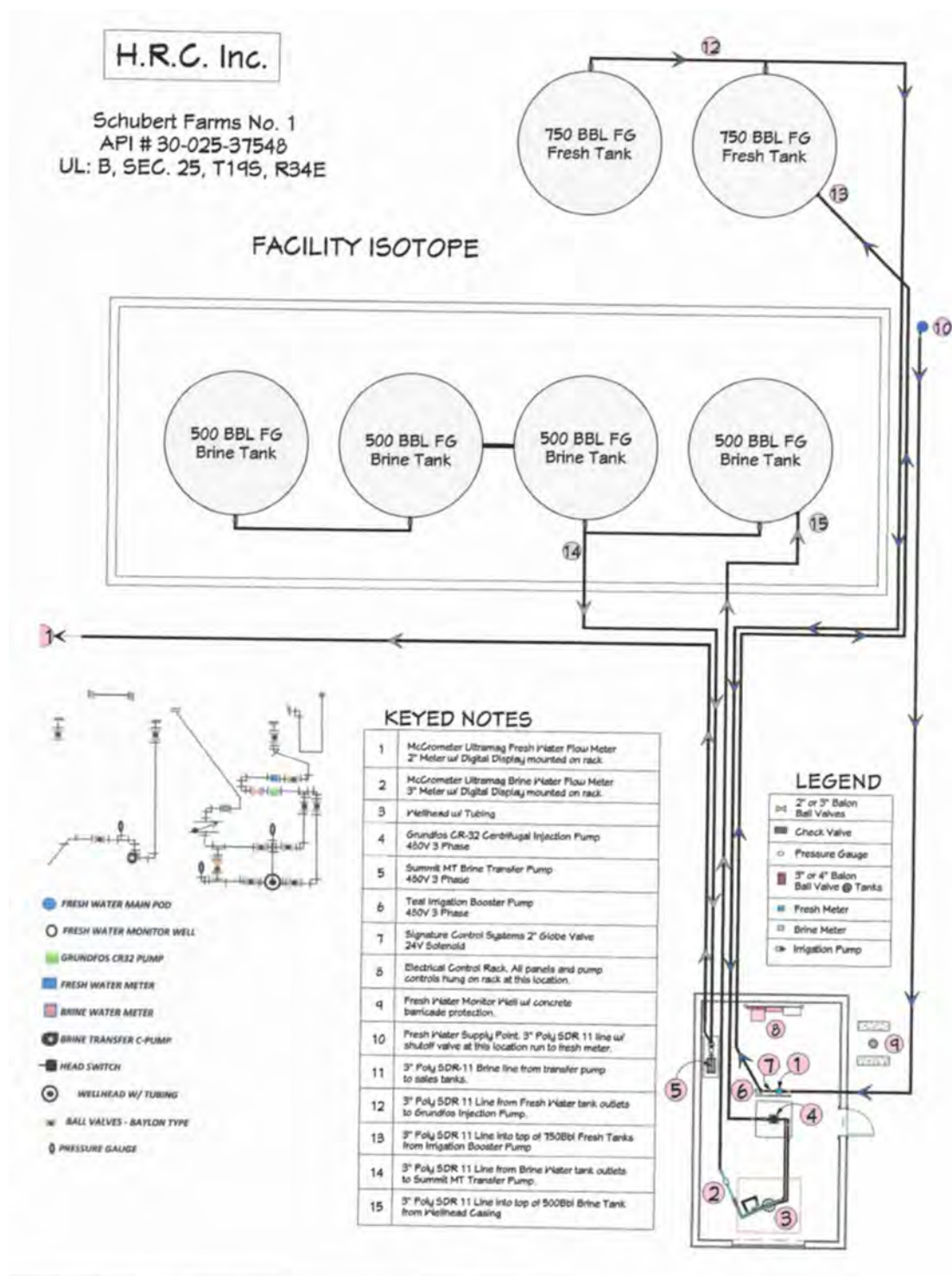
## APPENDIX D

## Schubert Farms Well #1 (BW-36) 1/2 &amp; 2 Mi AOR





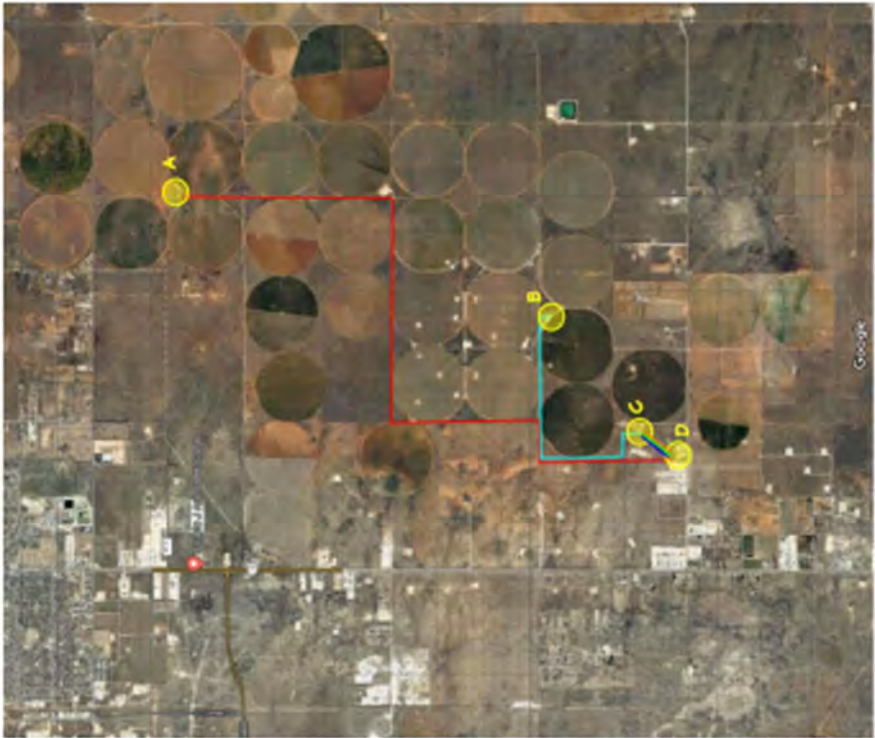
## APPENDIX E





H.R.C. Inc.

Pipeline Overlay Map

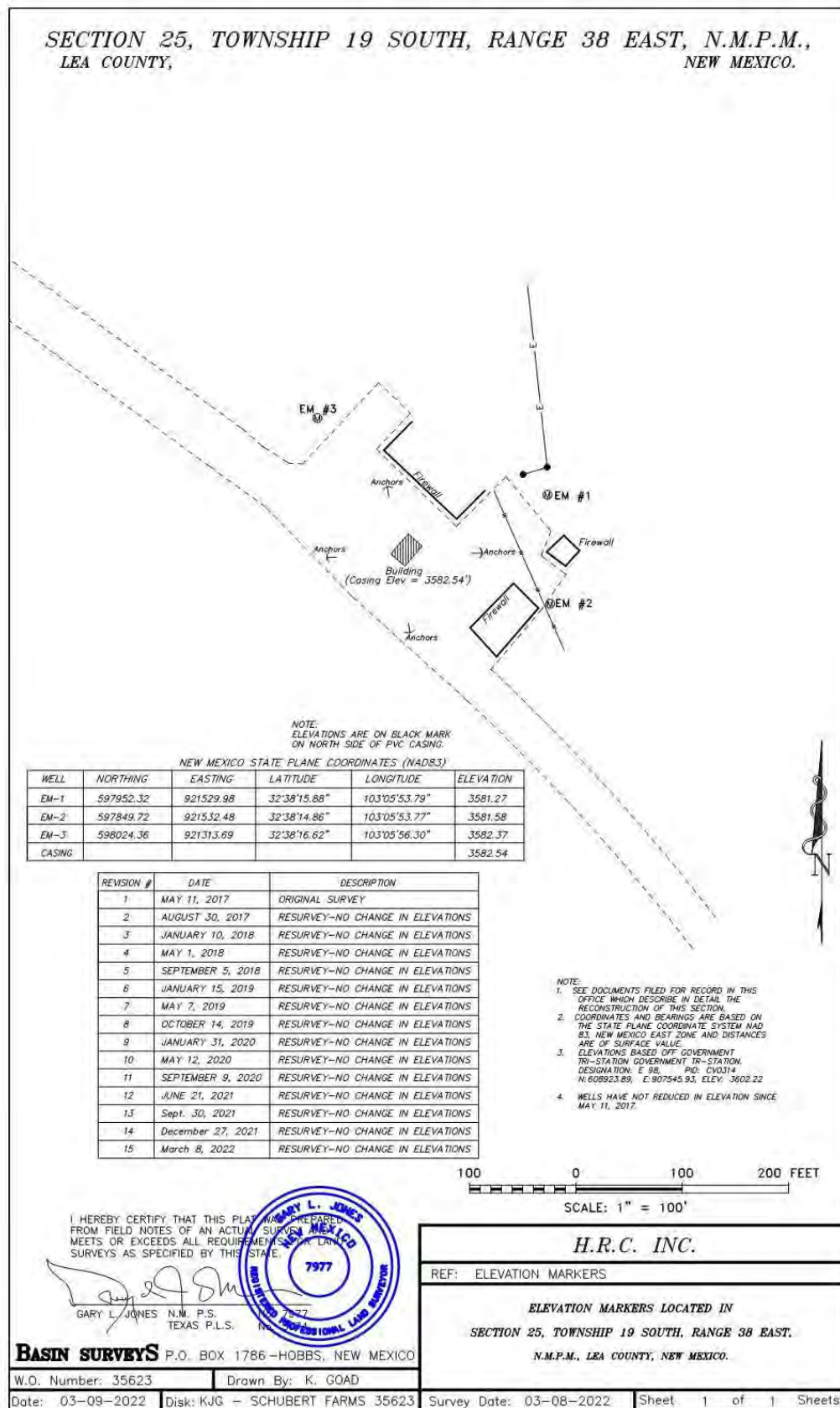


A	Schubert 7 Well # 1 32.673935, -103.083677
B	Schubert Farms Well # 1 32.637603, -103.048728
C	Peanut Shed Storage Battery 32.628787, -103.111053
D	ETZ Water Station 32.624077, -103.113627

	3" SDR 11 Poly pipeline from Schubert 7 Well # 1 to ETZ Water Station
	3" SDR 11 Poly pipeline from Schubert Farms Well # 1 to Peanut Shed Storage Battery
	3" SDR 11 Poly pipeline from transfer pump at Peanut Shed to ETZ Water Station
	2" SDR 11 Poly pipeline from transfer pump at Peanut Shed to ETZ Water Station
	2" SDR 11 Poly pipeline from transfer pump at Peanut Shed to ETZ Water Station

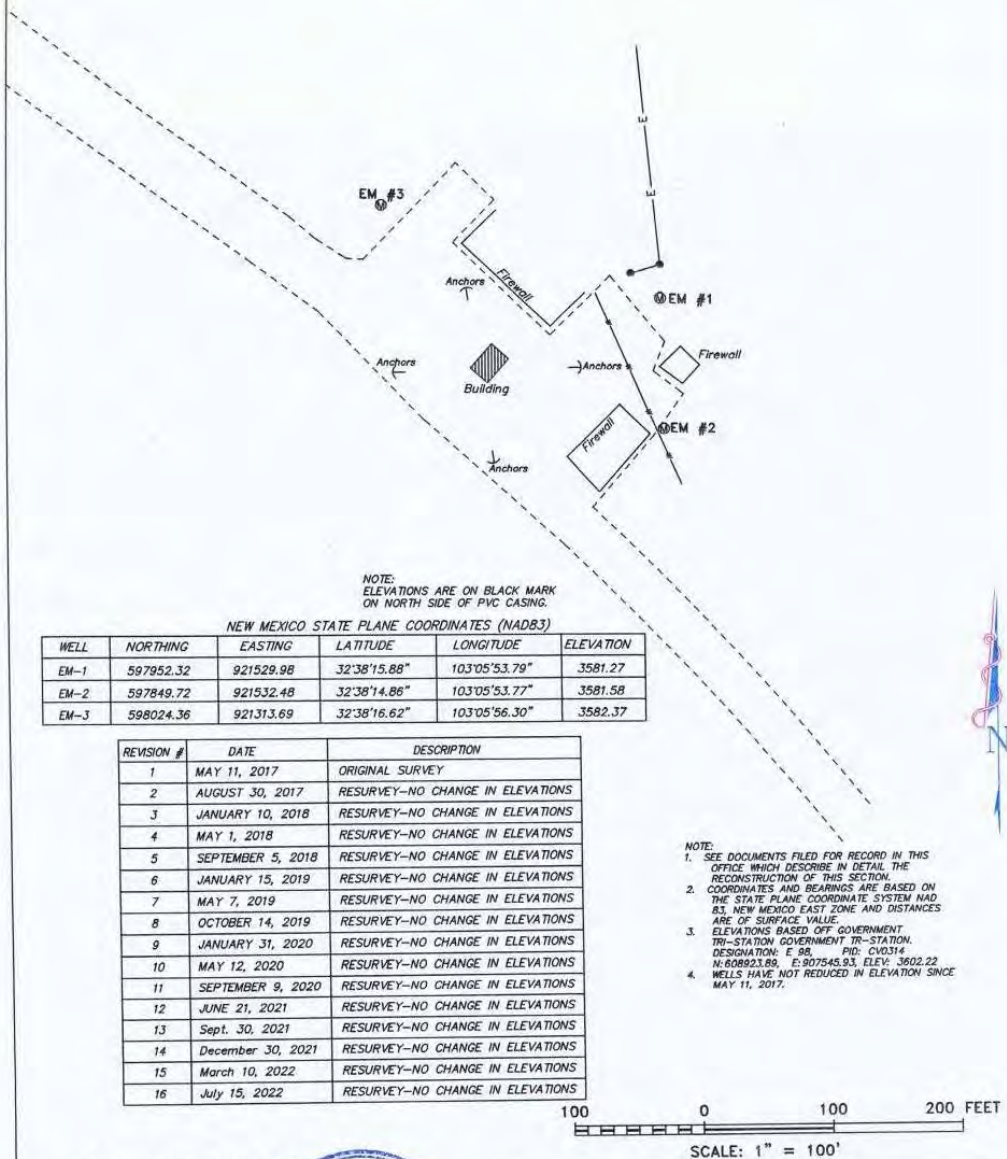


## APPENDIX F





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 N.M. P.S. No. 7977  
TEXAS P.L.S. No. 5074

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

W.O. Number: 35623

Drawn By: K. GOAD

Date: 07-21-2022

Disk: KJG - SCHUBERT FARMS 35623

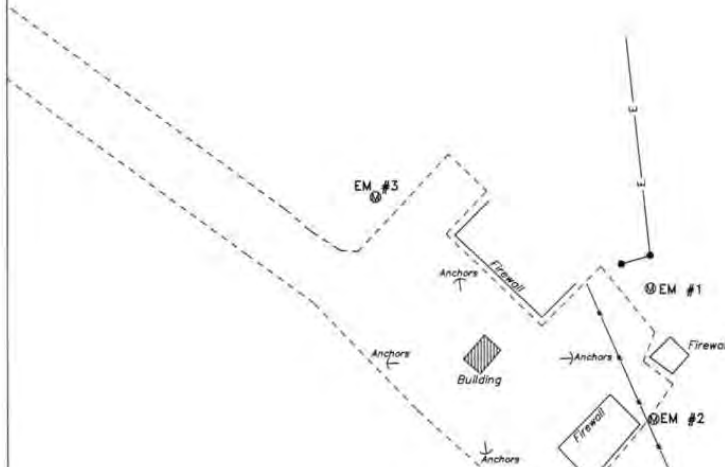
H.R.C. INC.

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: 07-15-2022-10:00:00 1 of 1 Sheets

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



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
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
10	MAY 12, 2020	RESURVEY-NO CHANGE IN ELEVATIONS
11	SEPTEMBER 9, 2020	RESURVEY-NO CHANGE IN ELEVATIONS
12	JUNE 21, 2021	RESURVEY-NO CHANGE IN ELEVATIONS
13	Sept. 30, 2021	RESURVEY-NO CHANGE IN ELEVATIONS
14	December 30, 2021	RESURVEY-NO CHANGE IN ELEVATIONS
15	March 10, 2022	RESURVEY-NO CHANGE IN ELEVATIONS
16	July 15, 2022	RESURVEY-NO CHANGE IN ELEVATIONS
17	Sept., 2022	RESURVEY-NO CHANGE IN ELEVATIONS

NOTE:  
1. SEE DOCUMENTS FILED FOR RECORD IN THIS OFFICE WHICH DESCRIBE IN DETAIL THE RECONSTRUCTION OF THIS SECTION.  
2. COORDINATES AND BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM NAD 83, NEW MEXICO EAST ZONE AND DISTANCES ARE OF SURFACE VALUE.  
3. ELEVATIONS BASED OFF GOVERNMENT TRI-STATION GOVERNMENT TRI-STATION DESIGNATION: E 98, PD: CV0314 N: 608923.89, E: 907545.93, ELEV: 3602.22  
4. WELLS HAVE NOT REDUCED IN ELEVATION SINCE MAY 11, 2017.

100 0 100 200 FEET

SCALE: 1" = 100'

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE 1977

GARY L. JONES N.M. P.S.  
TEXAS P.L.S.

P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 35623

Drawn By: K. GOAD

Date: 10-07-2022

Disk: KJG - SCHUBERT FARMS 35888

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: 09-30-2022

Sheet 1 of 1 Sheets

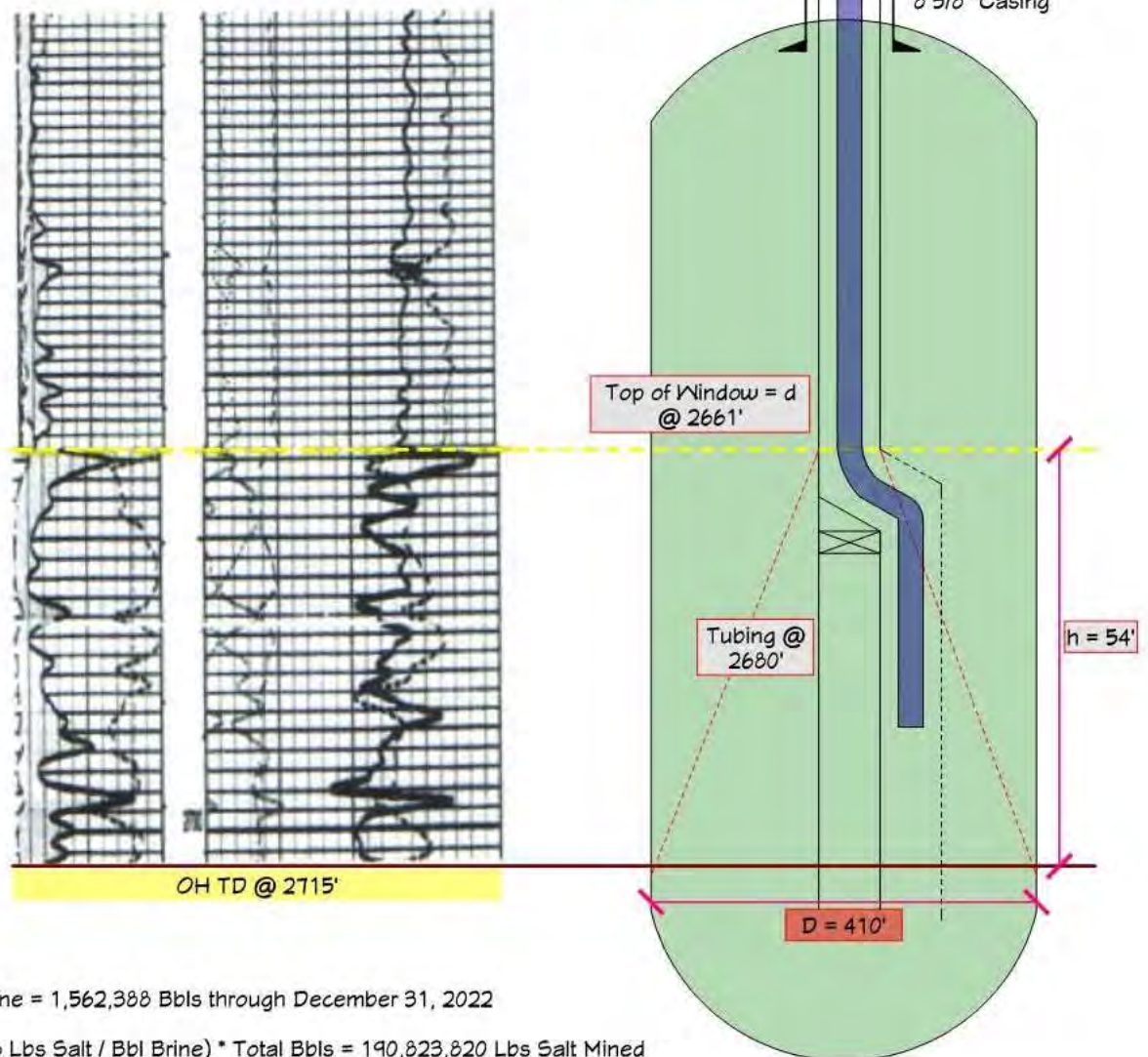


## APPENDIX G

## H.R.C. Inc.

Schubert Farms Well #1 BW-36  
 330 FNL, 1650 FEL, Unit (B), Sec. 25, T19S, R38E  
 API # 30-025-37548  
 Lea County, NM

## CAVERN SIZE BY CUBIC FOOT OF VOLUME



Total Brine = 1,562,388 Bbls through December 31, 2022

(122.136 Lbs Salt / Bbl Brine) \* Total Bbls = 190,823,820 Lbs Salt Mined

190,823,820 Lbs Salt / (80 lbs salt per cu ft.) = V = 2,385,298 cu ft. Salt Mined

Using  $V = \pi R^2 h / 3$  where  
 $V = 2,385,298$  cu ft.  
 $h = 54$  ft.

PPG 9.98 Brine  
 PPG 8.34 Fresh  
 SG 1.1951

Cavern Radius  $R = 205$  ft.  
 Diameter of Cavern  $D = 2R = 410$  ft.  
 Cavern Depth  $d = 2661$  ft.

The Diameter to depth ratio  $D/d =$  Cavern size factor  
 $410' / 2661' = 0.154$ ,  $< 0.5$  max

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS  
  
Action 190411

COMMENTS

Operator: HRC INC P.O. Box 5102 Hobbs, NM 88241	OGRID:	131652
	Action Number:	190411
	Action Type:	[UF-DP] NOI Brine Facility Discharge Plan (DISCHARGE PLAN BRINE EXTRACTION NOI)

COMMENTS

Created By	Comment	Comment Date
cchavez	BW-36 Annual Report 2022	2/24/2023

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 190411

CONDITIONS

Operator: HRC INC P.O. Box 5102 Hobbs, NM 88241	OGRID:
	131652
	Action Number:
	190411
Action Type: [UF-DP] NOI Brine Facility Discharge Plan (DISCHARGE PLAN BRINE EXTRACTION NOI)	

CONDITIONS

Created By	Condition	Condition Date
cchavez	None	2/24/2023