# BW - 36

# PERMIT APPLICATIONS, RENEWALS, & MODS

2018

#### Chavez, Carl J, EMNRD

From: David Alvarado <davidal00136@gmail.com>

Sent: Thursday, April 5, 2018 1:33 PM

**To:** Chavez, Carl J, EMNRD

**Subject:** Discharge Renewal for Schubert Farms Well No. 1 BW-36 with Exhibits

**Attachments:** Discharge Renewal BW-36.pdf; Schubert Farms B-36 Exhibits A-L.pdf; Schubert Farms

B-36 Exhibits M-T.pdf

Hi, Carl here is the Renewal for the Schubert Farms Well No. 1 BW-36 with the Exhibits.

Thanks once more Dave

## DISCHARGE RENEWAL APPLICATION FOR BRINE EXTRACTION

H.R.C., INC

**BW-36** 

API# 30-025-37548

**SCHUBERT FARMS WELL No. 1** 

April 5, 2018

DAVID H. ALVARADO

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

#### State of New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Renewal

Submit Original Plus 1 Copy to Santa Fe 1 Copy to Appropriate District Office

Revised August 1, 2011

#### DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITES

New

(Refer to the OCD Guidelines for assistance in completing the application)

I.	Facility Name:	Schubert Farms Well No.1 API 30-025-37548 .
II.	Operator:	H.R.C., INC (GARY SCHUBERT OWNER)
	Address:	PO BOX 5102 HOBBS, NEW MEXICO 88241-5102 .
	Contact Person:	GARY SCHUBERT Phone: (575) 393-6662 .
Ш.	Location:	NW /4 NE /4 Section 25 Township 19S Range 38E . Submit large scale topographic map showing exact location. PLEASE SEE EXHIBIT A
IV.	Attach the name	and address of the landowner of the facility site.
V.	Attach a descript	ion of the types and quantities of fluids at the facility.
VI.	Attach a descript	ion of all fluid transfer and storage and fluid and solid disposal facilities.
VII.	Attach a descript	ion of underground facilities (i.e. brine extraction well).
VIII.	Attach a continge	ency plan for reporting and clean-up of spills or releases.
IX.	Attach geologica fresh water.	l/hydrological evidence demonstrating that brine extraction operations will not adversely impact
X.	Attach such other and/or orders.	r information as is necessary to demonstrate compliance with any other OCD rules, regulations
XI.	CERTIFICATIO	N:
	in this document obtaining the info	nder penalty of law that I have personally examined and am familiar with the information submitted and all attachments and that, based on my inquiry of those individuals immediately responsible for ormation, I believe that the information is true, accurate and complete. I am aware that there are ties for submitting false information including the possibility of fine and imprisonment.
Nan	ne: <u>DAVID H.</u>	ALVARADO . Title: Acting Agent for H.R.C. Inc
Sign	nature:	Date: 4/5/18

E-mail Address: <u>davidal00136@gmail.com</u>

## DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITES

#### I. NAME OF FACILITY

This is a renewal application for existing Class III solution brine mine well at the H.R.C. Brine Facility Shubert Farms # 1. (30-025-375548)

LAT: 32.6375999 LONG: -103.0988007

## II. NAME OF OPERATOR OR LEGALLY RESPONSIBLE PARTY AND LOCAL REPRESENTATIVE.

The Operator / Legally responsible party are H.R.C., INC. PO Box 5102 Hobbs, New Mexico 88241. Surface is Fee as the lessor owner is Gary Schubert PO Box 5102 Hobbs, New Mexico 88241 (575) 393 3194.

#### III. LOCATION OF FACILITY

The Schubert Farms # 1 is (NW/4, NE/4 Unit B) of Section 25, Township 19 South, Range 38 East 330 FNL AND 1650 FEL LAT 32.6375999, LONG -103.0988007 Lea County New Mexico.

The facility is located South of Hobbs approximately 5 miles from HWY 18 and HWY 180 turn left on Nadine road travel .81 miles the front sales facility will be to the left. The Schubert Farms Well No. 1 is located

aproxamently 1.28 miles to the northeast of the front sales facility.

The Schubert Farms Well No. 1 has its own facility where brine is stored it is located North of the sales facility aproxamently .36 miles to the northeast

Please see Exhibit A. Large Topografic Map with this report.

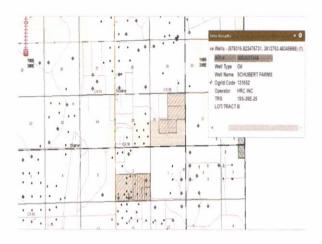


GSI map of Schubert Farms Well No. 1

#### IV. LANDOWNERS

Gary Schubert and Marcia Schubert, PO Box 5102 Hobbs, New Mexico 88241 are the owners and operators of the Schubert 7 Well No. 1.

Please see **Exhibit: B. State Land Map** at the end of this report.



**NMSLO** map

### V. TYPE AND QUANTITIES OF FLUIDS STORED OR USED AT THE FACILITY

Two types of fluid are stored at the Schubert Farms Well No. 1 facility those are brine and fresh water.

Brine is stored in two fiber glass tanks with a capacity of 500 bbl. each allowing a total of 1000 bbl. capacity.

Brine tanks are kept at a safety level of 6 ft. to 10 ft. at the top end holding a total of 660 bbl. of brine.

Levels vary depending on the demand of the brine on a day to day basis. The brine tanks do not exceed 10 ft. of brine solution volume.

Southwest of the Schubert Farms Well No. 1 are the holding brine tank battery were brine produced from the well is transported to the battery from the Schubert Farms Well No. 1 location.

This battery has eight 500 bbl. tanks containing brine solution with a total capacity of 4000 bbl. Tank levels at this battery are set at 10ft. allowing 6 foot of safety room from filling to a critical level. The maximum safety amount capacity of brine is 2,640 bbl. Please find **Exhibit: S. ISOTOPE** of this battery.

Levels at this battery will fluctuate depending on the demand of sales at the Sales Facility it is transported via poly line by a C-pump.

Fresh water is also stored at the Schubert Farms No 1 location next to the brine fiber glass brine tanks.

Only one Steel 500 bbl. tank supplies the VFD (Variable Frequency Drive) C-pump for the well.

Fresh water is supplied from the Schubert Farms water system where the tank is hooked up to an exit valve located on an irrigation line Pod at the northeast corner of the tank pad berm. This Pod retains positive pressure at all times.

Brine tanks are equalized and the Fresh water tank and the brine tanks are both controlled with a separate head switches set to shut off supply at 10 ft.

Volumes will vary due to day to day operational needs with the demand of brine at the sales loading station.

#### VI. ATTACH A DISCRIPTION OF ALL FLUID TRANSFER AND STORAGE AND FLUID AND SOLID DISPOSAL FACILITY

Fresh water is supplied from the Schubert Farms irrigation main water line and a water well that sets in front of the pump house.

The farms main irrigation line lies underground and is constructed of polyethylene / PVC line that is stubbed upwards above surface with a Pod and is located at the north- east end of the facility battery holding pad. The Pod holds a constant pressure of around 25 psig. This port is controlled with a motorized valve and is governed by the needed volume within the tank.

The second source of fresh water is generated from a water well that has a submergible pump and is used to help fill the fresh water tanks if the main line is down at any time this well was drilled to the top of the red bed.

Both points of water are terminated at the facilities fresh water tank. The water well discharge is a one inch line dropped into the thief hatch and the main water line from the Pod is tied at the top where the equalizing port is located.

Water column level in the tank is controlled by a head switch located in front of the sales line port of the fresh water tank.

Once the demand of water is initiated by the head switch it opens a 2" motor valve allowing water to enter the fresh water tank.

The 4" line at the sales port 12" form the base of the tank is the feed line to the suction side of the pump within the pump

house. This 4" line enters the pump house on the North side of the pump house building. Hydrostatic head methodology is used to feed the supply of water for the pump.

The flow of water enters the pump house below ground then up through a riser where the fresh water assembly line houses a magnetic stim type meter localized in the middle of the assembly.

Passing the meter assembly it is connected to the suction side of the Grundfos HPCR 32 Pump with a 3" flex hose equipped with extra heavy IPC connections and Victaulic connectors.

A control ball valve is located before it enters the meter housing and a ball valve located in front of the F 150 type flange that mates to the pump's suction port located at the base of the multistage pump.

This methodology allows complete isolation allowing full control of any type of work that being connection replacements or work needed to be performed on the meter.

Fresh water then enters the pump where a 25 Hp. motor mounted on top of the pump rotates the multi stage bowls that discharges the fresh water from the opposite side of the suction port and is located also at the base of the pump.

The discharge port is mated with a F150 type flange that has a 4" port and is swedge to 2" with extra heavy IPC connection tee and an ell creating two lines from the discharge side.

Both are mated with control ball valves connected to a high pressure flex hose that are tied at the ends of the connections with Victaulic type connectors.

The primary line is connected to the top of the master valve tree that supplies the water to the bottom hole assemble of the tubing that is set at 2680'.

The other line is a flush line that is tied into the annulus port of the well head. Periodically the casing will be swept with fresh water to keep any salt rings from building up between the casing and tubing.

This methodology is used to keep any buildup of back pressure off the Salado formation. Both the tubbing tree and the annulus are equipped with fluid filled psi gauges.

Pressure readings are read every day and recorded with the meter readings of the fresh water and brine solution extraction in the daily operation reports by the Lease Operator.

Injection is down the 2 7/8 J-55 IPC tubing and maintains a positive surface pressure of 200-250 psig during brine extraction operations. BHA is at a depth of 2,680 ft. most likely a 4 ¾ inch rock type bit was used to set the tubing into the Salado thru a window in the 5 ½" 17# casing that was milled from 2651'-2661'.

Brine is extracted up the 5 1/2" 17 ppf casing to surface through the annulus port of the wellhead.

The port has a nipple then ball valve followed by some connections that create a riser that runs horizontal and is equipped with a check valve. Two ells were used with connections to create a down comer leg that brings the line down where the line is equipped with a nipple that mates to the half of the F150 flange that mates to the flow meter body supported with two U bolts anchoring line to a stand.

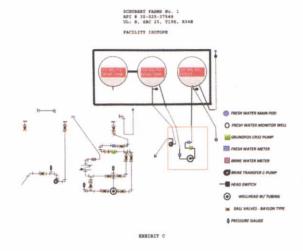
Brine solution effluents enters the annulus valve and check valve propelled to the meter where the ploy line takes the saturated brine to the top of the East brine fiber glass 500 bbl. tank via 4" poly SDR 11 for storage.

Both tanks are sitting level and above ground with a polyethylene barrier and berm with the ability to hold 133% of total tank volume.

Brine solution is equalized with a line connected between both tanks. A poly line mated with F150 flanges on each end mate to the F150 flanges that are equipped on the fiber glass tanks about 18" from the base of the tanks.

The East brine fiberglass tank sales port has connections that tee supporting a valve and head switch and a line that heads to the pump house building that supplies the suction side of the transfer C-Pump.

The Discharge of the transfer C-pump is at the top and is equipped with a change over swedge back to 2" with a 2" ell, nipple, tee, nipple, and ball valve. The tee has a fluid filled pressure gauge that shows what the static pressure is as brine is transported to the brine holding tanks located to the south west of the Schubert Farms # 1 Please see Exhibit: C. Isotope of the Shubert Farms # 1 location at the end of this report.



Isotope of the Shubert Farms # 1 location

## VII. ATTACH A DISCRIPTION OF UNDERGROUND FACILITY

Schubert Farms Well No. 1 spudded on 12/2/05 C 105. C – 103 Subsequent Reported spudded on 12/3/05. 12/4/05 drilling a 12 ½" hole w/fresh water.

12/5/05 TD surface, 39 joints of 8 5/8"casing was run the point was at 1645' then cemented casing with 700 sx class C cement it was reported that 129 sxs was circulated to the pit.

No record of the BHA was given but normal practice was a saw tooth collar on the bottom of the casing and a float shoe would be run one joint above the saw tooth assembly.

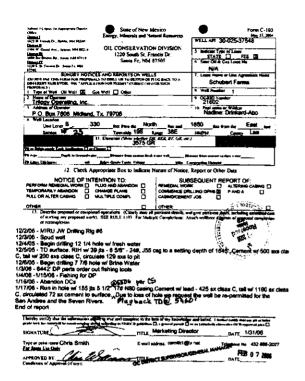
Cubic foot volume between 8 5/8" casing and 12 ¼" hole at the point depth of 1645' is 678.89 cubic feet. 700 sx Cmt. Class C cement at a 1.32 slurry weight has 924 cubic foot of volume. This is 35% excess cement and was brought to surface.

Waited for cement to set, no record of casing testing nor WOC was recorded. On 12/6/05 began drilling 7 7/8" hole commenced at the top of the float collar then drilled out shoe brine water was used.

1/3/06 drill pipe parted at a depth of 6,442 feet they called out for fishing tools. From 1/4/06 thru 1/15/06 the attempt to fish the drill pipe did not succeed 1/16/06 they abandon the drill collars.

1/17/06 5 ½" 17# N80 was run and cemented with 1585 sxs class C cement per C-105 report plug back TD was recorded 5460 feet and 5 1/2" casing point at 5506'. Report stated 72 sxs cement was circulated to the pit. Production Company requested the well be re-permitted for the San Andres and Seven Rivers.

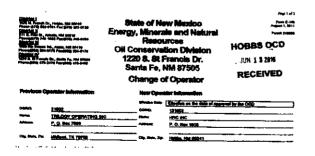
Please see Exhibit D well C-103 Commence Drilling Operations and Casing cement Job at the end of this report.



### Commence Drilling Operations and Casing cement Job

NMOCD approved Form C-145 Change of Operator from Trilogy Operating Inc. to HRC Inc. and was approved by NMOCD Paul Kautz District 1 on 6/13/2016.

Please see EXHIBIT: E Change of Operator C-145 at the end of this report



**Change of Operator C-145** 

On June 20, 2016 service unit rigged up on the Schubert Farms 1 and extracted the rods then extracted the tubbing with the pump and laid down BHA.

June 21, 2016 wire line set a CIBP at 2750' then tested the casing and CIBP to 780 psig and showed good continuity. A CBL was run from the top of the CIBP to surface.

Wire line bail dumped 5 sacks of cement on top of the CIBP at 2750' giving over 50 foot of cement column top of cmt. Estimated to be 2700'+. HRC Inc. Submitted the CBL to NM OCD for review.

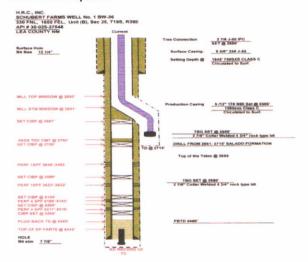
February 9, 2017 Wireline set a CIBP at a depth of 2667' and a whip stock guide was set on 2/20/17.

February 21, 2017 service unit moved in and reverse unit rigged up and made ready to start milling window. Milling started at 2651 to 2661' then came out of the hole with BHA and tripped back in with a bit assembly the new open hole in the Salado formation was drilled down from 2661' to TD at 2715' then came up the hole and left hanging above the window then SDFD.

February 22, 2017 tripped in hole with BHA and tagged at 2703' then proceeded to washed to 2715. Tubbing was spaced out and BHA was set at 2680'. NU wellhead on 2/23/17 well was MIT to 300 psi with a chart recorder and held good. Then proceeded to circulate for five hours well was then shut in.

April 17, 2017 Schubert Farms No. 1 begins injection of fresh water to extract Brine.

February 23, 2917 Schubert Farms Well No. 1 was completed Please see Exhibit: F. Schubert Farms No. 1 Wellbore Diagram with this report.



WELLBORE DIAGRAM

#### VIII. ATTACH A CONTINGENCY PLAN FOR REPORTING AND CLEAN-UP OF SPILLS OR RELEASES

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

- 1. As soon as possible after learning of such a discharge within 24 hours will orally notify the chief of the ground water quality bureau of the department, or his counter partner in any constituent agency delegated responsibility for enforcement of these rules. HRC Inc. will notify Jim Griswold or Carl Chavez in Santa Fe, District II Hobbs of any release discharge. Information that will be reported at the time is as follows:
- a. Name, address, and telephone number of the person in charge of the facility as well as the owner or operator of the facility;

- b. Name and address of the facility;
- **c.** Date and time, location, and duration of the discharge;
- d. The Source and cause of discharge;
- **e.** A description of the discharge, including its chemical composition;
- f. The estimated volume of the discharge;
- **g.** Any actions taken to mitigate immediate damage from the discharge.

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

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

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

H.R.C., Inc. taking safety measures to control of any discharge. The Schubert Farms Well No. 1 has a lease operator that is on location daily and oversees the facility.

His duties are to make full walk around inspections of all connections, valves, hoses, tank levels, operating pressures, meter readings, gather loading tickets security entry cameras and reports them daily.

All tanks are set above ground level with a berm barrier holding over 133% of total tank capacity followed with a secondary barrier of 20+ mil Polly.

## IX. ATTACH GEOLOGICAL/HYDROLOGICAL EVIDENCE DEMONSTRATING THAT BRINE EXTRACTION OPERATIONS WILL NOT ADVERSELY IMPACT FRESH WATER.

The Ogallala Aquifer formation (Phanerozoic / Cenozoic / Tertiary) is the only source of fresh water in the AOR of the Schubert Farms Well No. 1.

The S&H Enterprises water well # L-298 A-B located NW/4, NE/4, NW/4 of Sec 25, T19S, R38E drilling Lithology report showed the following:

From	То	Thickness	Type Material
ft.	ft.		
0	9	9	Topsoil
9	26	17	Caliche
26	30	4	Rock
30	92	62	Sand
92	108	16	Sandy Clay
108	115	7	Sandy Rock
115	135	20	Sand Clay
135	143	8	Red Shale

Please find with this Report Exhibit: G. Drilling Report of the S&H Enterprises L-298 A-B Irrigation water well.

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**S&H ENTERPRISES WATER WELL L-298 A-B** 

Top of the water level is at 70' we have no record on the thickness of the capillary fringe. The Alluvium estimate would be 60 to 70 feet thick.

The Topo map provided in this report **Exhibit**A shows a slight declination to the southeast.

The elevation at the Schubert Farms Well No. 1 is recorded at 3581' at ground level.

Below the red bed of the Ogallala Aquifer lays the:

Triassic (Dockum),

**Permian Ochoan** (Dewey Lake, Rustler, Salado, Castile)

**Permian Guadalupian** Tansill, (Yates, Seven Rivers, Queen, Grayburg) oil bearing strata.

Pre-Ongard API 30-025-07710 UL: D Sec 25, T19S, R38E drilled in 1950 and API 30-025-07975 UL: M SEC 19, T19S, R39E drilled in 1944 shows a great Lithology Report of the footage being drilled Please see Exhibit: H. & EXHIBIT: I. at the end of this report Showing the Tops of Conformance and the Lithology.

API#	From ft.	To ft.	Thicknes s	Type of material
30- 025-				
07710	0	1650	1650	Surf sands/Red beds
	1650	1723	73	Anhydrite
	1723	2763	1040	Salado Salt

API#	From ft.	To ft.	Thicknes s	Type of material
30- 025-				
07975	0	220	220	Surf sands/shale
	220	1659	1439	Red beds
	1659	1744	85	Anhydrite
	1744	2995	1251	Salt / Anhydrite

Pre OnGuard well 30-025-07710 UL: D Sec 25, T19S, R39E Lat: 32.6367264 Long: -103.1084976 is 2941 feet to the West of the Schubert Farms Well No.1.

Pre OnGuard well 30-025-07975 UL: M Sec 19, T19S, R39E Lat: 32.6402931 Long: -103.0912857 is northeast 2,468.9 feet from the Schubert Farms Well No. 1.

Please find with this report **EXHIBIT J** an Aerial view of the location and description of the Pre Ongard wells in relation to the Schubert Farms Well No.1



LITHOLOGY POINTS OF CROSS SECTION

EXHIBIT J

One can correlate the Pre Ongard wells API 30-025-07975 & API 30-025-07710 lithology report with Schlumberger Litho Density Compensated Neutron /HNGS log on record with the NMOCD.

Please find with this report **EXHIBIT K.** the log depicts the 1655' thickness of the roof strata above the Salado showing the thickness of

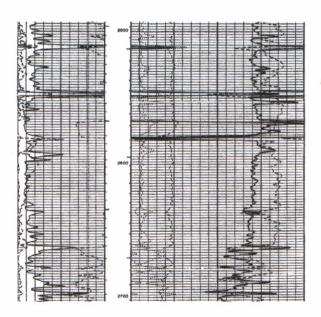
Red beds, RB and Shale, and ±160 foot Anhydrite above the shoe set at 1645 ft.

The Schubert Farms Well No. 1 CBL shows continuity between the outer casing wall and the borehole wall that provides a barrier protecting the fresh water sands.

Schubert Farms Well No. 1 is well protected that brine solution will not penetrate the Aquafer of the Ogallala.

NM OCD has on file the CBL log that shows continuity with the outer walls of the casing and the borehole wall.

Pease find with this report **EXIHIBIT L.** The Salado GR / Litho Density Compensated Neutron log showing the Halite stringers to the top of the Yates formation est. at 2855'.



As flooding the slope dip will run off to the southeast. Brine tanks on the Schubert

Farms Well No.- 1 as talked about earlier in this report has a berm and secondary containment to hold 133% of total capacity. Third party trucking empties out the berm containment when it fills with rain water and disposes it at a registered NMOCD approved SWD.

No lakes, arroyos, or streams are in the AOR of the Schubert Farms Well No. 1 the area is of Agriculture land farming with cattle in certain areas to the South with some production to the West of the Schubert Farms Well No. 1. PLEASE SEE EXHIBIT R AIRIAL VEIW OF SCHUBERT FARMS WELL No. 1 AOR.



AIRIAL VEIW OF SCHUBERT FARMS WELL No. 1 AOR.

X. Attach other information as necessary to demonstrate compliance with any other OCD rules, regulations and / or orders 1. Section 2. A Quarterly analysis of injected fluids and brine. Pursuant to 20.6.2.5207C

Tabulated Quarterly analysis last five years Fresh Water Schubert Farms Well No. 1 20.6.2.5207C (1)

Schubert Farms Well No. 1 was placed in operation in March of 2017 below are the Water Analysis during this period of time.

Mo. /	pН	TDS	CL	Na	SG
Year	] _				
2017					
JAN					
APR	7.32	1870	510	228	
SEP					
NOV	7.98	896	224	130	
DEC.					
2018					
JAN.					
MARCH					
JUNE			· · · · · · · · · · · · · · · · · · ·		
SEP					
DEC.					

Tabulated Quarterly analysis last five years Brine Water Schubert Farms Well No. 1 20.6.2.5207C (1)

Mo. /	pН	TDS	CL	Na	S
Year					G
2017					
JAN.					
APR	6.85	198000	122000	80100	
JUNE					
SEP					
NOV	6.96	266000	162000	91100	
DEC.					

2018		
JAN.		
MARCH		
JUNE		
SEP		
DEC.		

Tabulated Quarterly analysis last five years Monitor Fresh Water Well Schubert 7 Well No. 1 20.6.2.5207C (1)

Mo. / Year	pН	TDS	CL	Na	SG
2017					
JAN.					
MARCH					
APR	7.58	1090	316	131	
JUNE					
SEP					
NOV	7.60	1180	356	125	
DEC.					
2018		- 17			
JAN.					
MARCH					
JUNE					
SEP					
DEC.					

20.6.2.5207C (2) Monitoring injection volumes, Brine, Fresh Water and pressures.

20.6.2.5207C (2) Monitoring injection volumes, Brine, Fresh Water and pressures.

#### 2017 REPORT OF BRINE & F / W

Month	Prod	Brine Prod.	Injecti	F/W
		by meter	on	inj. by
	psig		psig	meter
JAN	-	-	-	-
FEB	-	-	-	-
MAR	70	13011	230	12833
APR	70	5636	230	5238
MAY	90	11060	270	10143
JUN	100	9831	270	9902
JUL	85	14400	270	14362
AUG	35	11962	250	10340
SEP	40	20945	245	21183
OCT	40	21988	250	20795
NOV	40	19764	250	19522
DEC	20	24921	230	24360
EAR TO	TAL	153,518		148,678

#### 2018 REPORT OF BRINE & F / W

Month	Prod	Brine Prod.	Injecti	F/W
		by meter	on	inj. by
	psig		psig	meter
JAN	25	25912	245	25360
FEB	35	21338	250	21124
MAR				
APR				
MAY				
JUN				
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				

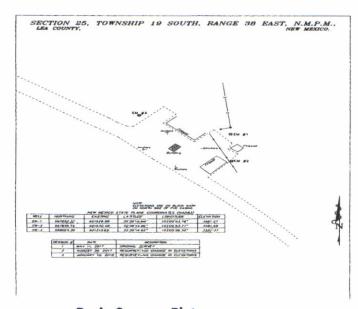
#### 2.B. SOLUTION CAVERN MONITORING

#### **PROGRAM**

#### 1. Surface Subsidence Monitoring Plan

H.R.C., Inc. has placed in action the Monitoring Plan on May 11, 2017 a survey was conducted where three elevation markers were placed by Basin Surveys Gary L. Jones. Total of three surveys have been conducted the last one on record was on January 10, 2018. There were no changes in Elevation that has occurred in this time period.

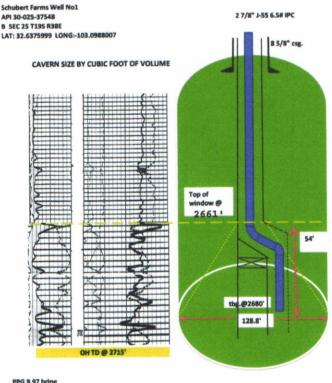
Because this is a live document H.R.C. Inc. will report to the Department of the next survey as Basin Surveys completes them. Please find at the end of this report **Exhibit:** M. Basin Surveys Elevation Markers



Basin Surveys Plat.

## 2. B.2. SOLUTION CAVERN CHARACTERIZATION PROGRAM

Schubert Farms Well No.1 has extracted a total of 153,518 bbl. of brine from March 2017 thru the end of December 2017 calculating cone volume of ft<sup>3</sup> this shows the base diameter to be 128.8' and the height of 54' Please see EXHIBIT: N. CAVERN CHARACTERIZATION PLAN at the end of this report.



PPG 9.97 brine PPG 8.34 fresh SG 1.1951

> 2017 Total Brine bbl. 153,518 122.136 LBS / BBL = 18,750,075 LBS HALITE (18,750,075 LBS) / (80BLS per ft³) = 234,376 ft³

V=  $\prod R^2 h / 3$ V = (3.14159 \* 64.4<sup>2</sup>) \* (54') / 3 V = 234,528 ft.<sup>3</sup>

Est. hight is 54'
Est. cavern floor diameter is 128.8'

EXHIBIT N

#### **CAVERN CHARACTERIZATION PLAN**

#### 2.B.3 ANNUAL CERTIFICATION

H.R.C., Inc. has demonstrated with the Surface Subsidence Monitoring Plan that no evidence of elevation markers to have changed.

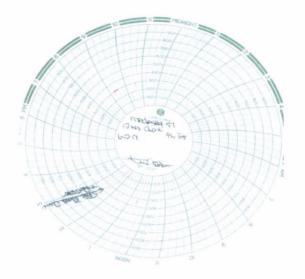
Please find with this report **EXHIBIT K.** the log depicts the 1502' thickness of the roof strata above the Salado to the top of the Red Bed. showing the thickness of 1417'± RB / Shale, and 85' ± Anhydrite. Schubert Farms Well No. 1 is well protected that brine solution will not penetrate the Aquafer of the Ogallala.

Pease find with this report **EXIHIBIT L.** The Salado GR / Neutron log showing the Halite stringers to the top of the Yates formation. The Strata demonstrates strong shale beds and anhydrite beds supporting the solution mining within the Salado formation.

Schubert Farms Well No. 1 conducted a formation MIT on February 23, 2017 pressured formation to 300 psi ran a chart and tested okay. Well was kept shut in until 11/22/16 where a chart recorder was hooked up to the annulus and started a four hour formation test witnessed by OCD Officer Kerry Fortner and passed showing that the formation is sound and intact.

Please find Exhibit O. Letter OCD evaluation passed MIT, Letter from Lynx Petroleum Consultants, Inc. explanation of new Halite Beds saturation absorption. Subsequent 6-2-2017 MIT test, Chart of the recording

pressure and Chart Calibration Certificate. Included with this report.



6-2-17 MIT Chart

#### 2.H.3. ENVIROMENTAL MONITORING

H.R.C.. INC. incompliance with is 20.6.2.3107B NMAC or EPA QA / QC Standards. Cardinal Laboratories services are analytical testing all their Accreditations through the State of Colorado of **Public** Health Department accreditation applies to public drinking water matrices of the State of Colorado and New Mexico Please find at the end of this report **EXHIBIT: P. & Q. Cardinal Laboratories water** Analysis for the Schubert Farms Well No. 1.

#### 2. J ANNUAL REPORTING

H.R.C., Inc. has submitted its Schubert Farms Well No. 1 annual 2017 report to the NM OCD and has been posted on the website for review complying with 20.6.2.3107 NMAC.

#### 3.C CONTINUOUS MONITORING DEVICES

Schubert Farms Well No. 1 has complied with the monitoring of pressure, flow rate, Volume flow, and pressure on the annulus.

Methodology of the monitoring are as follows an oil fluid gauge is placed at the annulus port where the operator reads and records daily on a daily sheet of the pressure each day.

Tubing has a Cross connection above the master valve and the upper port is supported with an oil fluid gauge monitoring the fluid tubing pressure of the fluid heading to the BHA. Pressures are recorded onto the lease operator's daily log sheet.

Brine solution has a meter that registers bbl amounts. As it leaves the annulus port then through a connection hose it enters a ridged line where the meter is housed in the middle then it leaves and is tied to a 4" SDR 11 poly line to the fill tank. The lease operator daily records the meter reading and records the reading onto his daily log sheet.

Fresh water is metered before entering the suction side of the PD pump it enters a ridged line where the meter is housed in the middle as it leaves the ridged line it is connected with a flex hose and is tied into the suction side of the Grundfos CR 32 pump. The lease

operator records the meter reading and enters the meter reading into his daily sheet.

All tanks, connections, valves, checks valves are inspected daily and most days two or three times a day.

Head switches control the water level and set as to not over fill the tanks. Added protection is a radio frequency communicating with the front facility shutting down the system if the fluid levels start to reach a critical level. Please see **EXHIBIT: C. Facility Schematic** for your review.

# 3.A.3. INITIAL HYDROSTATIC TESTING OF PIPELINE HYDROSTATIC TEST REPORT WITH "AS BUILT" PIPELINE TRANSSECT AND ASSOCIATED CONSTRUCTION INFORMATION

EXHIBIT: C. Facility Schematic demonstrates the plumbing needs for the Schubert Farms Well No. 1 facility. Please find EXHIBIT: R TABULATED OF CONNECTIONS AND PIPE SPECS at the end of this report.

SCHORERY PARKS VACILITY TABULATED SEREN OF COMMECTIONS AND PIPE

CONNECTION TYPE	SIZK	MODEL	CONSTRUTION	PORT	PSI RATED AT
BALON FLOATING VALVES	4"X 3" X 4"	48-532-SE	CARBON STEEL	3"	750
BALON FLOATING VALVES	3"X3"X3"	3F-542-SE	CARBON STEEL	3"	750
BALON FLOATING VALVES	2"X 2" X 2"	2F-532-5E	CAJUSON STEEL	2"	750
X HEAVY 2" ELL IPC	2.375"	FIG.No. 02001	CARBON STEEL	2"	2000
X HEAVY 3" ELL IPC	3.375	FIG.No. 02001	CARBON STEEL	3"	2000
X HEAVY 4" ELL IPC	4.188"	FIG.No. 02001	CARSON STEEL,	41	2000
X HEAVY 2" COLLAR IPC	2.375"	ASTM SA106N	CARBON STEEL	2"	3000
X HEAVY 3" COLLAR IPC	3.375"	ASTM SA105N	CARBON STEEL	3"	3000
X HEAVY 4" COLLAR IPC	4.188"	ASTM SA105N	CARBON STEEL	4"	3000
X HEAVY 2" TEE IPC	2.375"	ASTM SA105H	CARBON STEEL	2"	2000
X HEAVY 3" TEE IPC	3.375"	ASTM SA105N	CARBON STEEL	3*	2000
X HEAVY 4" TEE IPC	4.188*	ASTM SA105N	CARBON STEEL	4"	2000
X HEAVY Z" MIPPLE IPC	2.375"	A106 Sch. 80	CARBON STEEL	2"	2000
X HEAVY 3" NIPPLE IPC	3.375"	A106 Sch. 80	CARBON STEEL	3.	2000
X HEAVY 4" NIPPLE IPC	4.188"	A106 Sch. 80	CARBON STEEL	4"	2000
X HEAVY 1 1/2" X 2" SWEDGE IPC	1.9" x 2.375"	XH	CARBON STEEL	1 1/2" X 2"	2000
X HEAVY 2" X 3" SWEDGE IPC	2.375" X 3.5"	ХH	CARBON STEEL	2" X 3"	2000
X HEAVY 3" X 4" SWEDGE IPC	3.5" X 4 1/2"	XH	CARBON STEEL	3° X 4"	2000
X HEAVY 3" CROSS TEE IPC	3.75	ASTM BA105N	CARBON STEEL	3"	3000
2" VICTAULIC CONNECTOR	2.375"	177N	CARBON STEEL	7"	1000
4" VICTAULIC CONNECTOR	4.188*	177N	CARBON STEEL	4*	1000
2" SOR 11 HOPE POLY LINE	2.375	SDR 11 HOPE	Polyethylene	Ž.	160
3" SOE 11 HOPE POLY LINE	3.5	SDR 11 HDPE	Polyethylone	3*	160
4" SDR 11 HOPE POLY LINE	4.5	SDR 11 HDPE	Polyethylene	4"	160
4" SDR 11 TRASDUCER	4.5	SOR 11 HOPE	STEEL / SDALL	4"	160
2" BRADED HOSE	2.375"	PIRE	RUBBER /STEEL	r	UP TO 5000
3" BRADED HOSE	3.375	PTFE	RUBBER /STEEL	3"	LIP TO 5000
4" BRADED HOSE	4.188	PTFE	RUBBER /STEEL	4"	UP TO 5000

Safety measures for loss of pressure and critical pressures at the Schubert Farms Well No. 1 facility are as follows: The Grunsfos HP CR-32 Stage pump is equipped with a Murphy Control Switch that is set at a low psig level of 50# and a shutdown critical level of 350# located behind the pump.

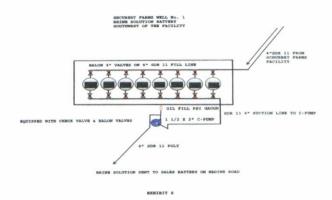
As stated in this report the Operator checks each day the psi gauges that are mounted on top of the tubing and that of from the annulus port. It is recorded in his daily log of operations. A complete walk around visual is done daily for any leaks.

Hydrostatic height psi at 15.5 foot fill line to the brine tank has a constant psi of 8.06 psi on the line on the ground. Fresh water at 15.5 foot has a positive psi on the line on the ground of 6.714 psi.

## 3.K FLUID INJECTION AND BRINE PRODUCTION VOLUMES AND PRESURES

Please see **Page 12** for the recorded volumes for 2017 and 2018 sent to the Department for review.

The Schubert Farms Well No. 1 facility sends its quality brine solution to a holding battery southwest of the facility then it is transferred to the sales facility on Nadine Road. Please see EXHIBIT: S. BRINE SOLUTION BATTERY SOUTHWEST OF FACILITY of Schubert Farms facility.



Schubert Farms Brine Holding Tank Battery Southwest of Schubert Farms Facility.

The holding tanks supply the main sales tanks at the Sales location on Nadine Road. The tanks are filled to a maximum level of 10 feet with the eight tanks this battery holds 2640 bbl. when full. The supply and demand at the sales facility will determines working levels at this battery.

Brine effluents from the Schubert Farms 1 facility are transported through a polyline and enters this battery through the front East side of the sales valve header. A four inch polyline is connected to each tank and equalizes the volume within each tank.

Four inch ball valves are mated to the front of each sales port 12" from the base of each 500 bbl. fiberglass tank.

Located on the back of the tanks are 3" drain ports at the bottom of each tank they are equipped each equipped with Balon ball valves and are tied all together with a SDR 11 polyline using poly heat welded tees.

This header is the supply to the C-pump that is controlled with a head switch that communicates with the Sales Facility. During sales of Brine at the Sales site.

The Sales site on Nadine road has two sets of tanks one is the sales brine tanks and the other is the Fresh water sales tanks. Brine is transported from the Schubert Farms holding tanks and also the Schubert 7 facility.

Brine enters the far West tank where all tanks are equalized together. Each 500 bbl. fiberglass tanks has a control valve in front of each tank. All valves are mated together with a four inch poly line that supplies the on loading brine valves at the loading station.

The fresh water tanks are also mated together from the sales port of each tank and supplies the needed fresh water to the on loading fresh water station for the trucks. Please see Exhibit: T. Isotope of Sales Facility.

S NADINE ROAD

A SERVICE STRUCTURE S

SALES FRESH AND QUALITY BRINE STATION

SALES FACILITY ON NADINE ROAD

#### **SUMMARY**

Schubert Farms well No. 1 is currently solution mining below the higher density of Halite beds that are above the point of mining.

With this new well will bring much needed information and knowledge to the solution mining methodology of injecting down tubing and recovering brine through the annulus. 204 feet of net pay lies above the window at 2661 feet.

The upper Halite beds will be non-disturbed until the need to cut another window above in the far future to continue solution mining.

It adds food for thought for future Brine wells in using this methodology of mining halite by allowing the preservation of the upper strata layers of the Salado Formation from saturation as opposed to open hole mining also it reasons in the physics of adding stability to the roof of the cavern.

David H. Alvarado

**ALVARADO & SONS CONSULTING** 

Office: 575 -365-2449

Cell: 575 513-1238

davidal00136@gmail.com

Schubert Farms Well No. 1
 API 30-025-37548

LAT:32.6375999 LONG:-103.0988007

NW/4 NE/4 UNIT B, SEC25,T19S,R38E

330 FNL, 1650 FEL

LEA COUNTY NEW MEXICO

GIS TOPO

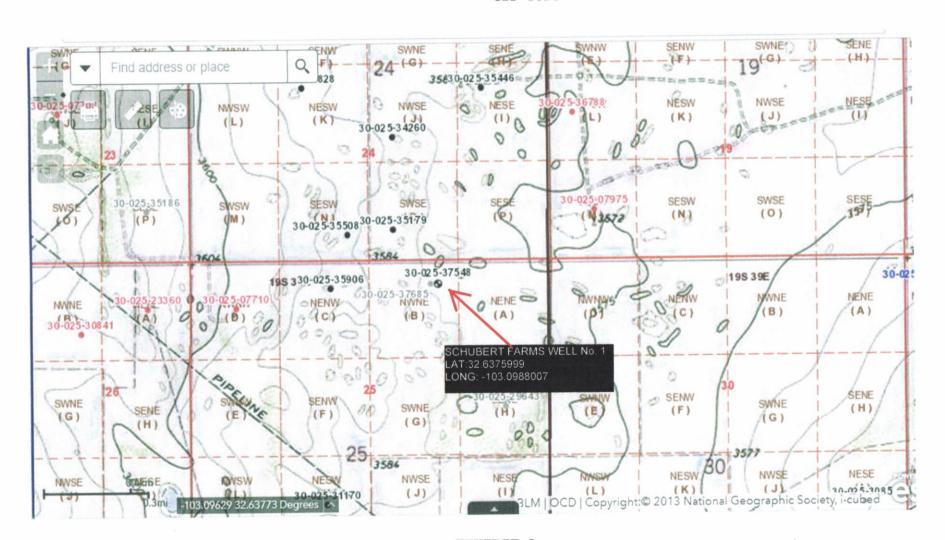


EXHIBIT A

Schubert Farms Well No. 1 API # 30-025-37548

NMSLO Map of GARY SCHUBERT Fee Property

LAT: 32.6375999 LONG:-103.0988007

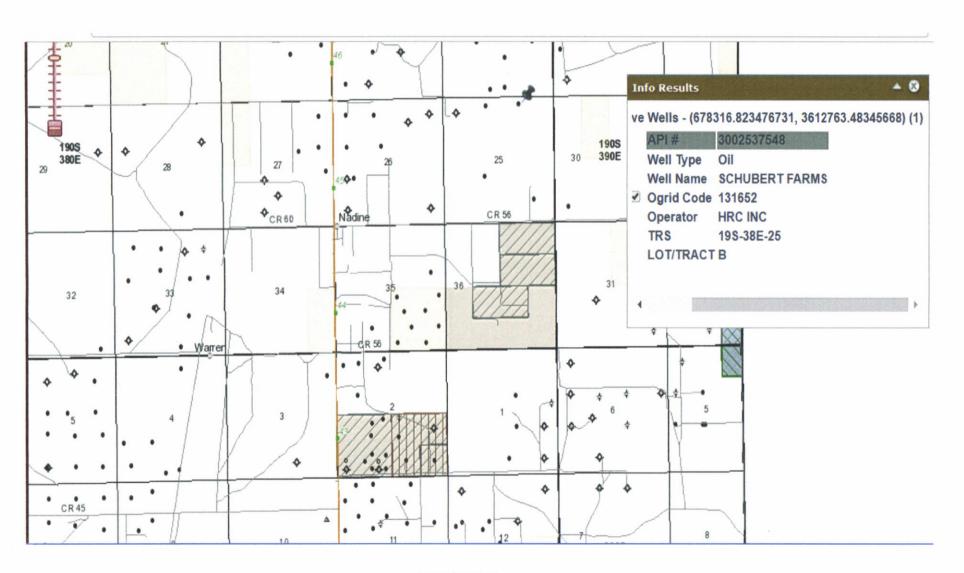


EXHIBIT B

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

#### FACILITY ISOTOPE

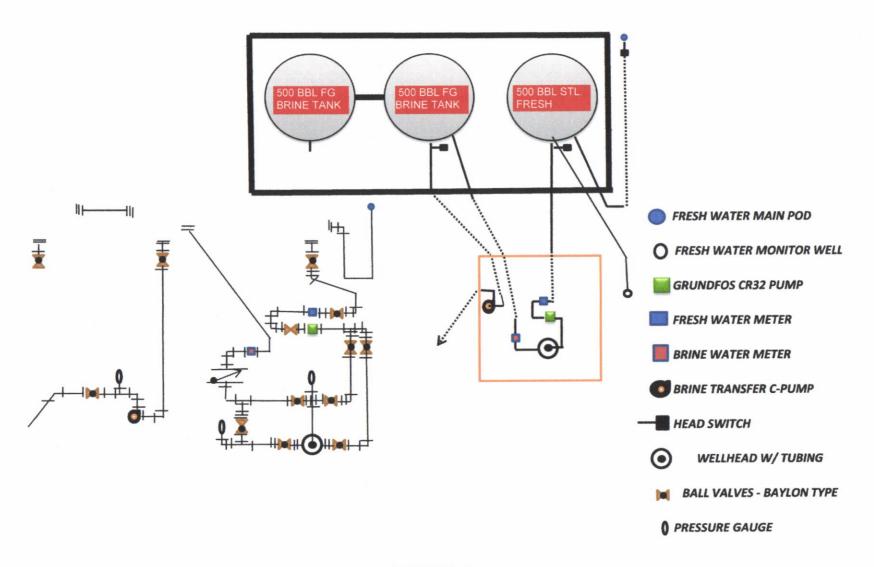


EXHIBIT C

#### COMMENCE DRILLING OPERATION

Submit 3 Copies To Appropriate District Office District I	State of Ne Energy, Minerals and			Form C-103 May 27, 2004
1625 N. French Dr., Hobbs, NM 88240	5,, • ••		WELL API 30-	025-37548
<u>District II</u> 1301 W. Grand Ave., Artesia, NM 88210	OIL CONSERVAT	TION DIVISION	5. Indicate Type	of Lauca
District III 1000 Rio Brazos Rd., Aztec, NM 87410	1220 South St		STATE [	∃ FEE 🔯
District IV	Santa Fe, N	IM 87505	6. State Oil & Ga	s Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505			N/A	
	TICES AND REPORTS ON W		7. Lease Name of	Unit Agreement Name
(DO NOT USE THIS FORM FOR PROP DIFFERENT RESERVOIR, USE "APPL PROPOSALS.)				ert Farms
1. Type of Well: Oil Well 🗵	Gas Well Other		8. Well Number	_1
Name of Operator     Trilogy Operating, Inc.	·		9. OGRID Numb 21602	
3. Address of Operator	J. T., 70700		10. Pool name or	Wildcat Drinkard-Abo
P.O. Box 7606 Midlar	1d, 1x. 79708		ivadine, t	JIIIIKAIU-AUU
Unit Letter B	:330 feet from the	North line and	1650     leet from	n the East line
Section 19 25	Township 198		NMPM	County Lea
	11. Elevation (Show wheth	er DR, RKB, RT, GR, etc.)		
Pit or Below-grade Tank Application	3575	GR		
Pit typeDepth to Ground		Country wall Dis		
Pit Liner Thickness:				ice water
<del> </del>			ustruction Material	D .
12. Check	Appropriate Box to Indic	ate Nature of Notice,	Report or Other	Data
NOTICE OF I	NTENTION TO:		SEQUENT REI	PORT OF:
PERFORM REMEDIAL WORK			_	ALTERING CASING
TEMPORARILY ABANDON  PULL OR ALTER CASING	_			P AND A
_	,			1962
OTHER:	pleted operations. (Clearly sta	OTHER:		
of starting any proposed w	vork). SEE RULE 1103. For N	Aultiple Completions: At	i give pertinem date	m of proposed completion
or recompletion.			/s <sup>2</sup>	Hopps
12/2/05 - MIRU JW Drilling F	₹ig #6		[2	#30 E300 B
12/3/05 - Spud well			\ <u>\\\</u>	all s
12/4/05 - Begin drilling 12 1/			12.	<b>3</b> 4 🖑
12/5/05 - TD surface. RIH w	/ 39 jts - 8 5/8" - 24#, J	55 csg to a setting	depth of 1645	Cement w/ 500 sxs cla:
C, tail w/ 200 sxs class C, cir				
12/6/05 - Begin drilling 7 7/8				
1/3/06 - 6442' DP parts orde				
1/4/06 - 1/15/06 - Fishing for	OCEAH DO	. 65		
1/16/06 - Abandon DCs 1/17/06 - Run in hole w/ 155	ite 5 1/2" 17# N80 car	sing Cement w/ loa	d 425 ev alar	es C toil w/ 1160 ev elege
C circulated 72 sx cement to	r surface . Due to loss	of hole we request	t the well he re	enermitted for the
C, circulated 72 sx cement to San Andres and the Seven F	Rivers. Pluoba	ck TO 6 5466	Strong won bord	-permatted for the
End of report				
I hereby certify that the information grade tank has been will be constructed a	t allove is true and complete to a classed according to NMOCD gold	the best of my knowledge	and belief. I for the	r certify that any pit or below-
		LE Marketing Direc		1/24/00
SIGNATURE	TIT	LE		DATE 1/31/06  Pelhone No. 432 686-2027  FEB 0 7 2006  DATE
Type or print name Chris Smith	1 E-n	mil address: CSmith1@b	c.net Te	Jenhone No. 432 686-2027
For State Use Only	10		SENERAL MANAC	FEB 0 7 2000
APPROVED BY: Mes C	Williams III	ETRICT SUPERVISOR.	-	DATE
Conditions of Approval (if any):	QC E	, , , , , , , , , , , , , , , , , , ,		·

#### CHANGE OF OPERATOR

District |
1025 N. French Dr., Hobbs, NM 88240
Phone:(576) 383-6161 Fex:(575) 383-0720
District ||
511 S. First St., Artesis, NM 88210
Phone:(575) 748-1283 Fex:(675) 748-9720
District ||
1000 Rio Grazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fex:(505) 334-6170
District ||
1220 S. SI Frencis Dr., Santa Fe. NM 87505
Phone:(505) 476-3470 Fex:(505) 478-3462

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

Page 1 of 3

Form C-146

August 1, 2011

Pamil 218806

HOBBS OCD

JUN 1 3 2016

RECEIVED

#### Previous Operator Information

#### **New Operator Information**

Change of Operator

		Effective Date:	Effective on the date of approval by the OCD
OGRID:	21502	OGRID:	131652
Name:	TRILOGY OPERATING INC	Name:	HRCINC
Address;	P. O. Box 7806	Addless:	P. O. Box 1606
Cky, State, Zip;	Midland, TX 79708	City, State, Zip:	Hobbs, NM 88241

I hereby certify that the rules of the Oil Conservation Division ("OCD") have been compiled with and that the information on this form and the certified list of wells is true to the best of my knowledge and belief.

Additionally, by signing below, HRC INC certifies that it has read and understands the following synopsis of applicable rules.

PREVIOUS OPERATOR certifies that all below-grade tanks constructed and installed prior to June 16, 2008 associated with the selected walls being transferred are either (1) in compliance with 19.15.17 NMAC, (2) have been closed pursuant to 19.15.17.13 NMAC or (3) have been retrofitted to compty with Paragraphs 1 through 4 of 19.15.17.11(I) NMAC.

HRC INC understands that the OCD's approval of this operator change:

- constitutes approval of the transfer of the permit for any parmitted pil, below-grade tank or closed-loop system associated with the selected wells; and
- constitutes approvel of the transfer of any below-grade tanks constructed and installed prior to June 16, 2008 associated with the
  selected wells, regardless of whether the transferor has disclosed the existence of those below-grade tanks to the transferoe or to the
  OCO, and regardless of whether the below-grade tanks are in compliance with 19.15.17 NMAC.

3/29/2016

Previous C	Operator	New Operato	
Signature:	a the Contract of the second	Signature:	los W. platout
Printed Name:	Michiel C. Murrey	Printed Name;	GARY M. SCHUBER T
Title:	Progedont	Title:	Pers.
Date:	C) 22 (/C Phone:	Date:	4/5/16 Phone:

NMOCD Approval
Electronic Signature: Paul Kautz, District 1

Date: <u>June 13, 2016</u>

**SCHUBERT FARMS WELL No. 1 BW-36** 330 FNL, 1650 FEL, Unit (B), Sec 25, T19S, R38E API # 30-025-37548 LEA COUNTY NM Current 2 7/8 J-55 IPC **Tree Connection** SET @ 2680' Surface Hole **Surface Casing:** 8 5/8" 24# J-55 Bit Size 12 1/4" 1645' 750SXS CLASS C Setting Depth @ Circulated to Surf. MILL TOP WINDOW @ 2650' 5 /12" 17# N80 Set @ 5506' **Production Casing** 1585sxs Class C MILL BTM WINDOW @ 2661' Circulated to Surf. **SET CIBP @ 2667'** TBG SET @ 2680'
2 7/8" Collar Welded 4 3/4" rock type bit 5SXS TOC CMT @ 2700' DRILL FROM 2661-2715' SALADO FORMATION SET CIBP @ 2750' TD @ 2715' Top of the Yates @ 2855 PERF 1SPF 3046'-3482 SET CIBP @ 3580' TBG SET @ 2680' 2 7/8" Collar Welded 4 3/4" rock type bit PERF 1SPF 3623'-3822' **SET CIBP @ 5150'** PERF 4 SPF 5160'-5163' **SET CIBP @ 5200'** PERF 4 SPF 5217'-5219' CIBP SET @ 5260' **PBTD 5460'** PLUG BACK TD @ 5460' TOP OF DP PARTS @ 6442' HOLE Bit size 7 7/8" NO RECORD OF

**EXHIBIT F** 

H.R.C., INC.

Revued tune 1972

### STATE ENGINEER OFFICE

#### Section 1. CENERAL INFORMATION

			•				Owner				
		NoL=		[							
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EXHIBIT G

		•	Section 6. LOG OF HOLE	
Depth . From	in Feet ·	Thickness in Feet	Color and Type of Material Encountered	
n .	9	9	TOPSOIL	_
9	26	17	Francis (1981)	—
		·	ROCK	
<del>26</del> 30	. 92	62	SAND	
92	BOL	16	January VIII	—
108	115		SANDY ROCK	<del></del> -
115	135	20	SANDY CLAY	
135	143	. 8	RED SHALE	
<del></del>			EXHIBIT G	
			<u> </u>	
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Section 7, REMARKS AND ADDITIONAL INFORMATION

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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Floyd Allett Doller &

ENSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. A company of the State Engineer. A considerable of the state of the State Engineer. A considerable of the state of the State Engineer. A considerable of the state of the State Engineer. A considerable of the State Engine

NEW MEXICO OIL CONSERVATION CONOCIO WELL RECORD

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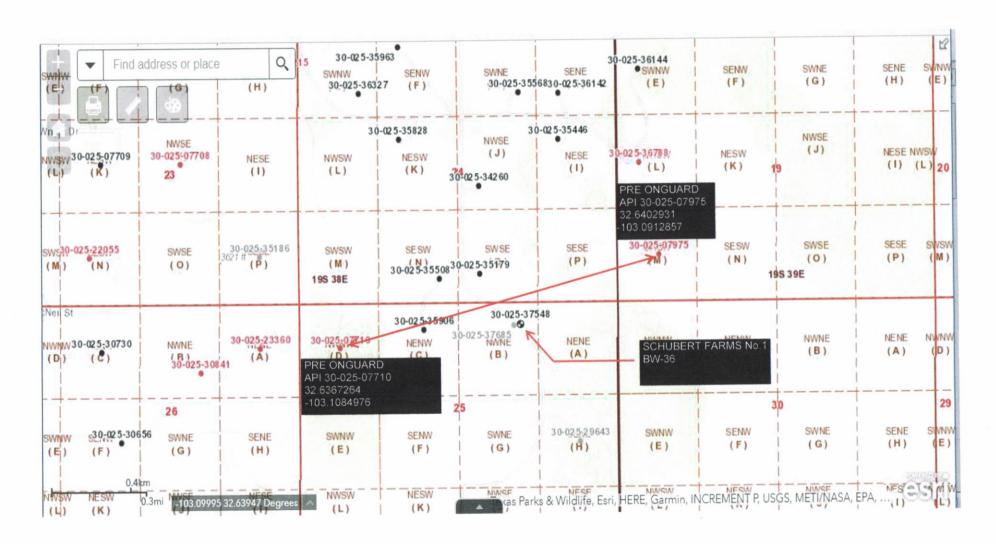
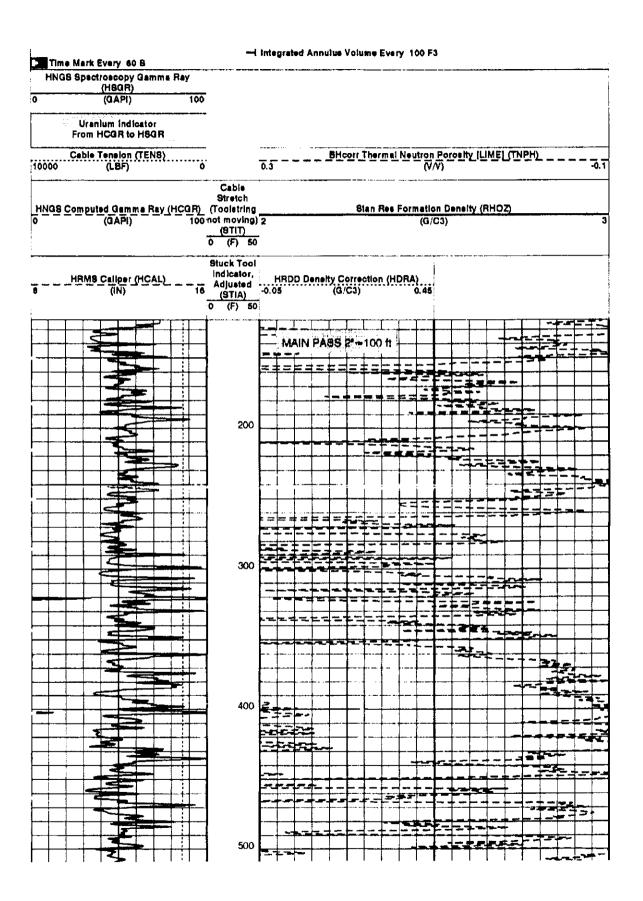
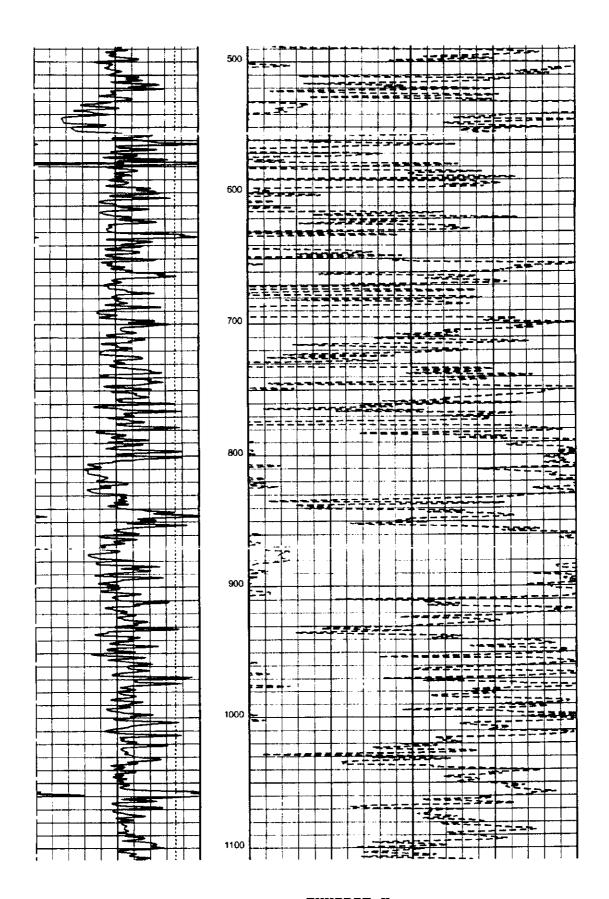


EXHIBIT J

Witnessed By	Recorded By	Unit Number	Logger On Bottom	Circulation Stopped	wagnim recorded lemperatures	THE COLUMN	-	Source FMF	RMC @ Measured Temperature	FIMF @ Measured Temperature	FM @ Measured Temperature	Source Of Sample	ML Fuid Loss	Censey	Type Fluid in Hole	S. S. S.	Casing Schumberger	Casad Casa Size to Cobo	Control of the Contro	Top or letteral	Bother or interva	Schlumberner Deoth	Decath Oriller	Ann Number	Consissor Date	Cou Field Loca Well Com	tto		33 54 Tr	adir SC: F	NL ber y C	t F. Ope	arn	740	* FE						, '								
		Location	Time	Time .	Semperatures	+		6	:				<del>]</del>	y		:	Per .	Deput	į				!			API Serial No. 30-025-37548	-	Drilling Measured From:	Log Micesured From:	Permanent Datum			2	330 FNL & 1650 FEL	Compensa	>	Three Dete	TOATEON	פו אדבטפו	F68	140011	1	Schubert		9.	Transaction of			
Mr. Mike Monney	Esleban Padilla	3076 Hobbs, New	15-Jan-2006	14-Jan-2006	28 08QT	9		Calculated			0.054 ohm.m	Circulation Tank		ě	0-731	UIC/R7	15.48	: -	:	200	100 P	#B	F	2	th ian.one	al No.	1,	į				Section 23, 10 mileto 135, hange 366	mobile 100 Brance	J FE	Compensated Neutron / HNGS		Three Detector Litho Density	TURLIFURM EXPRESS	I EVEDECC				Schubert Farms = t			Triodu Operating inc			
		New Mexico	14:00	300		0.028			- 1	© 87 deg-	@ 85 deg f			100	}	:		1000	Ì							8 <u>6</u>		Kelly Pushing	Kelly Bushing	Ground Level			ř.		n/HNGS		Density			3) iii iii					č	1			
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Witnessed By	Recorded By	Unit Number	Logger On Bottom	Circulation Stopped	Manymum recorded remperatures		-	Source RMS	RMC (a) Moasured Temperature	PMF @ Measured Temperature	RM @ Measured Temperature	Source Of Sample	> Fuid Loss	Lensay	in Hote	BE SZ26	Casing Schlumberger	Casard Custor System Casar	Control of the control	Ton lor interval	Harton I on Interve	Schlumberger Death	Cheroth Driller	Find Number	1 Oversion Late					-									:			: : : : : : : : : : : : : : : : : : : :							
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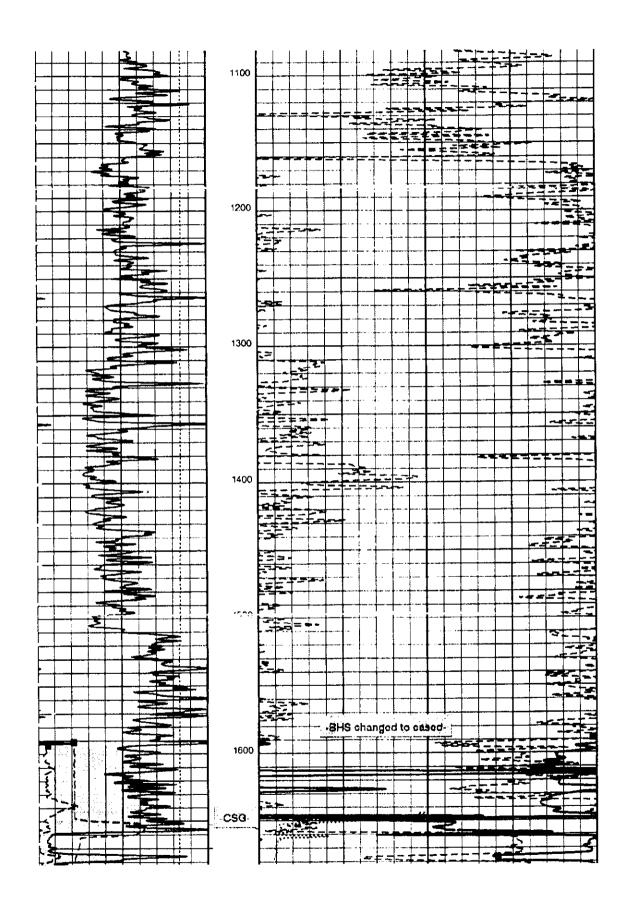


EXHIBIT K

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	Drilling Measu	- ,	y Bushing				1 -	1		
County: Field: Location Well: Compan	Crimary mozac	rea riom. "NES	1 DOD-13						<u> </u>	1
County: Field: Location Well: Compar	API So	rial No.	Section	Township:	Range:		· · ·			
8 ⊈ 3 ₹ 8	30-025	-37548	25	198	38E			]		<u> </u>
Logging Date		15-Jan-2006				Logging Date	L		i	
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Depth Driller		6442 H				Depth Driller	l		•	
Schlumberger Depti		5400 ti				Schlemberger Depth			1	-
Bottom Log Interval		5398 ft				Bottom Log Interval	1			
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Casing Schlumberg	<del>«</del>	1648 ft				Casing Schlumberger	ļ			
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LI 1 1	Ecosity	9.7 lbm/gal	50 s		•	Density Viscosity		<u>:</u>		
3	146	4.4 cm3	9	1	l	Fluid Loss HH	<del></del>			
9ource Of Sample		Orculation Tank				Source Of Sample	1	63		
RM @ Measured Te		0.054 ohm.m	eo eo deoΣ <u>.</u>		<b></b>	RM @ Measured Temperature	·	<u>@</u>	1	er ex
RMF @ Measured T		0.041 ohm.m	<u>6 gu qe</u> gf	<del></del>	<b>€</b>	RMF @ Measured Temperature	ł	€o)		<del>77</del>
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TO STATE OF STREET	PMC	Calculated		<u> </u>		PM @ MFT PMF @ MRT	- · @	. (3)	@	ω
	PMF @ MFT	0.037 @ 98	0.028 (+) 98	وب		Maximum Recorded Temperatures	ien	، اوس	· ··	- <del> </del> <del></del>
Maximum Recorded Circulation Stopped		96 degF	4:30			Circulation Stopped Time	1	•	ł	, ,
		I .	1 177		- <del></del>	Logger On Bottom Time	<del> </del>	— <del></del>	1	- <del>i</del> -
Logger On Bottom Unit Number	Location Time	15-Jan-2006 3076 Hobbs	14:00		:	Unit Number Location	1 1	5		
Recorded By	LUCUSION	Esteban Padilla		i		Pecorded By	<del> </del>		┥	
Witnessed By		Mr. Mike Monne			<del>-</del>	Witnessed By	†		1	
		1	· 3						· — —	

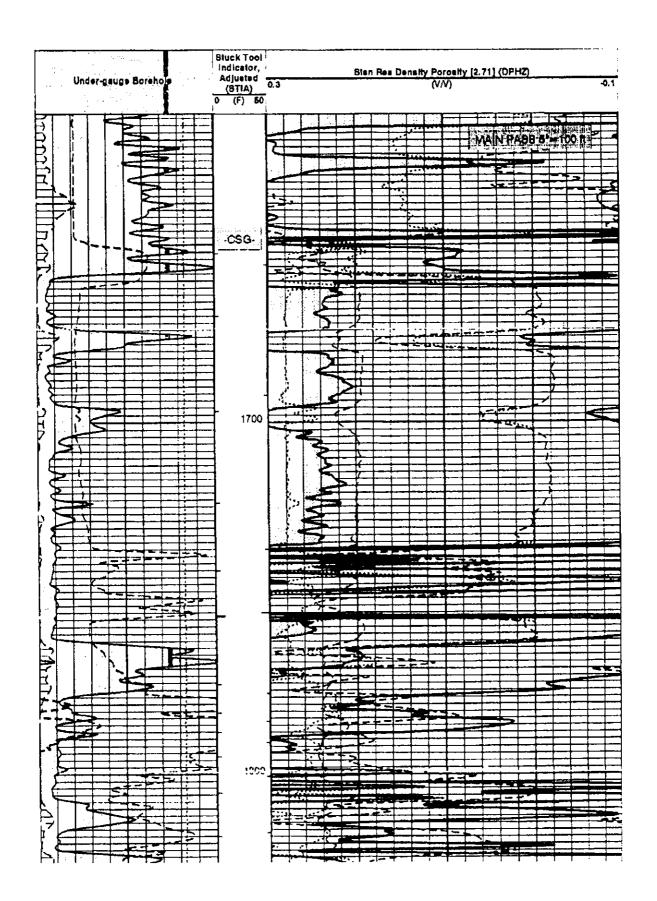
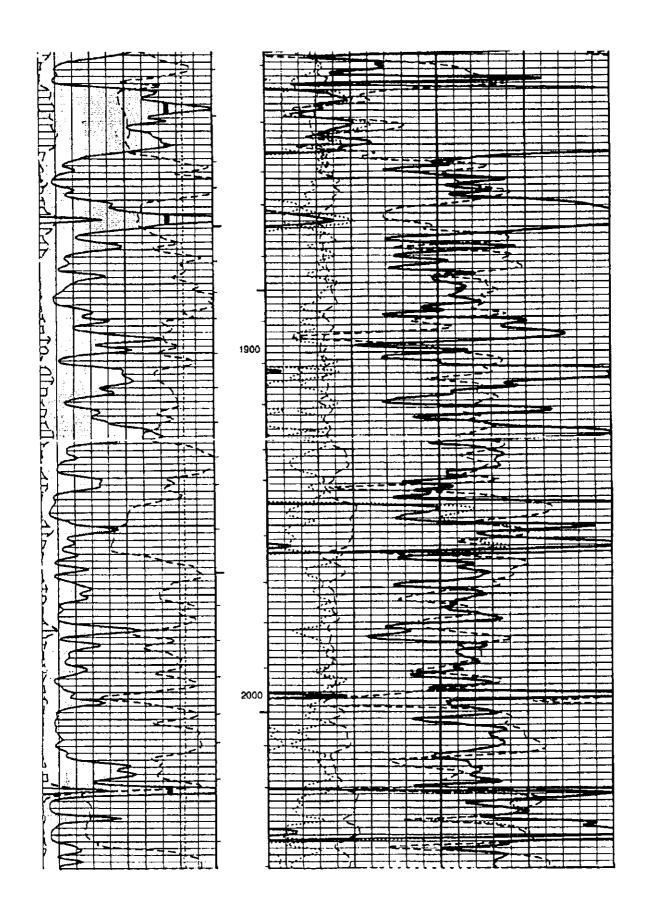
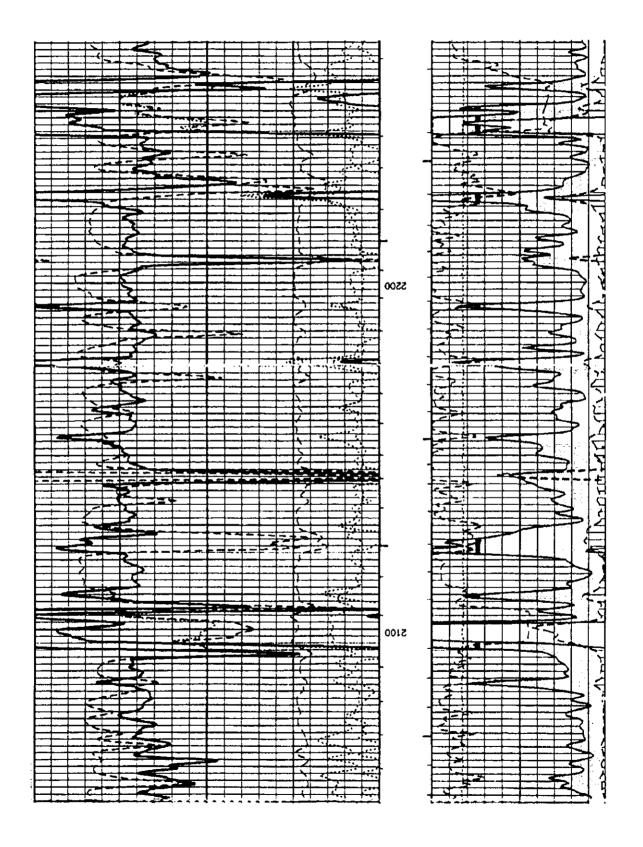
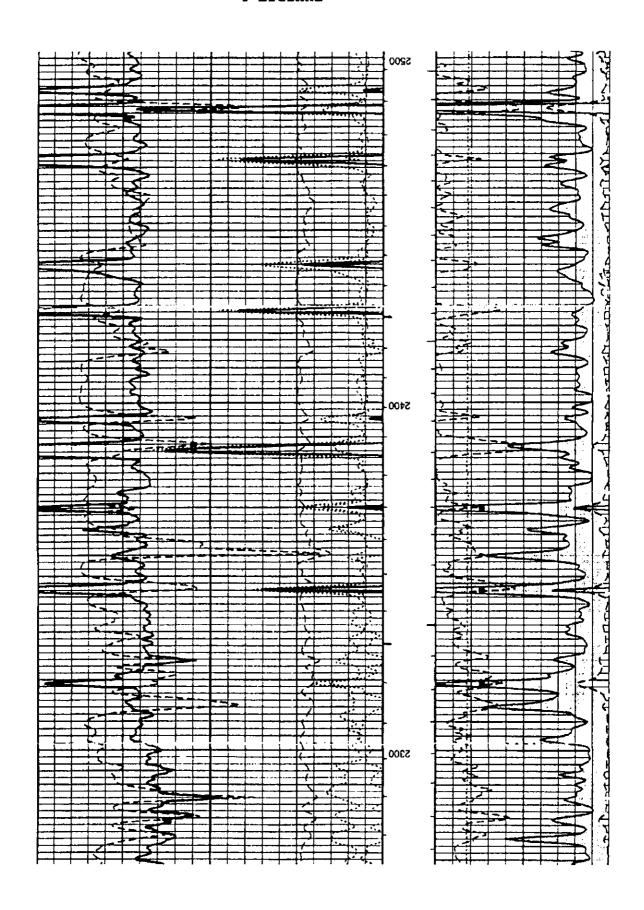
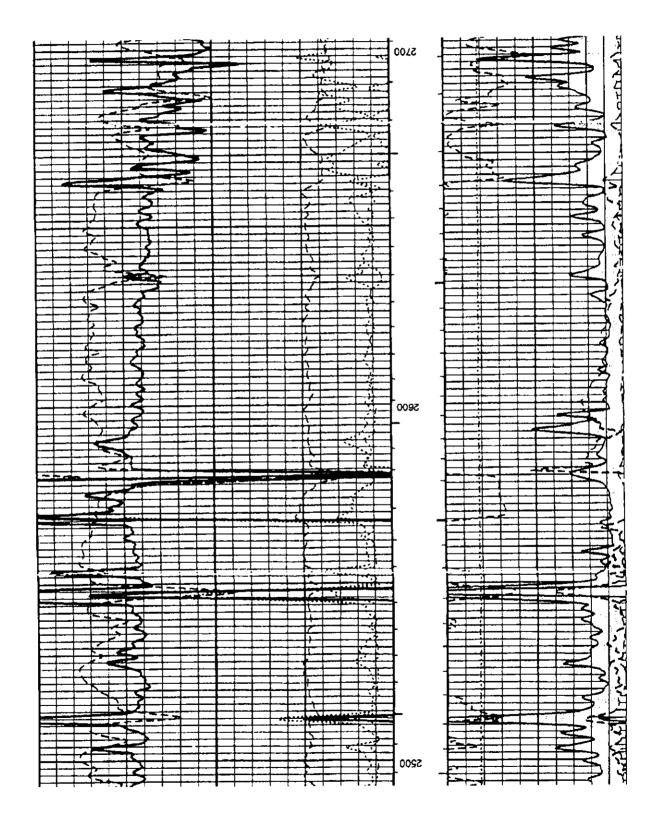


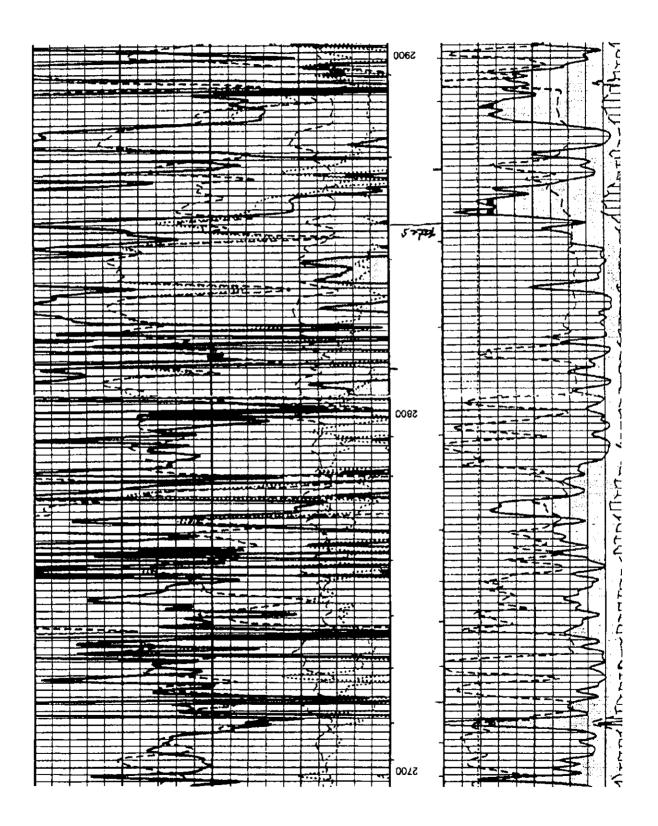
EXHIBIT L





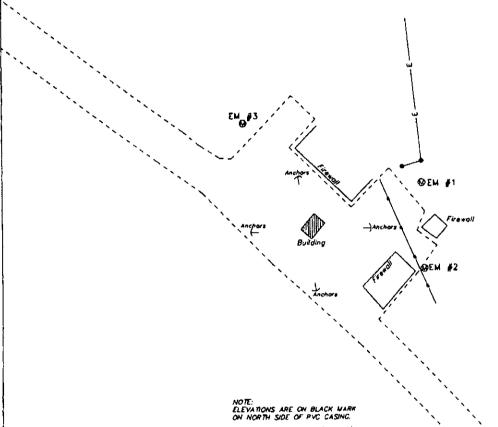






#### SCHUBERT FARMS WELL No. 1 SURFACE MONITORING MARKERS

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



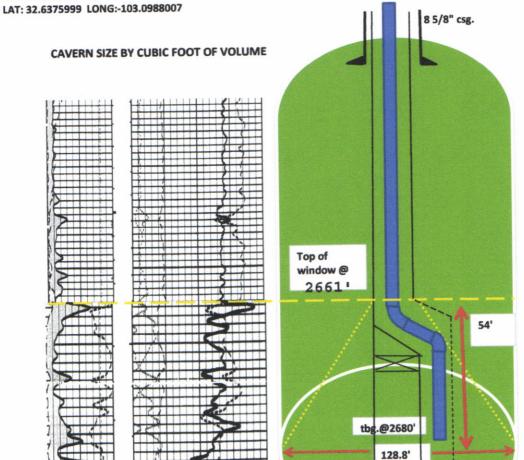
NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	HORTHING	EASTING	LARRICE	LONGITUDE	ELEVATION
EW-1	597952.32	921529.98	32'38'15.56"	103'05'53.79"	3581.27
EN-2	5978+3.72	921532.48	32'38'14.86"	103705'53.77"	3581,58
EV-3	598024.36	921313.69	32'38'16.62"	10305'56.30"	J582? J7

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

Schubert Farms Well No1 API 30-025-37548 B SEC 25 T19S R38E

2 7/8" J-55 6.5# IPC



PPG 9.97 brine PPG 8.34 fresh SG 1.1951

> 2017 Total Brine bbl. 153,518 122.136 LBS / BBL = 18,750,075 LBS HALITE (18,750,075 LBS) / (80BLS per ft³) = 234,376 ft³

OH TD @ 2715'

 $V = \prod_{R^2h} / 3$   $V = (3.14159 * 64.4^2) * (54') / 3$   $V = 234,528 \text{ ft.}^3$ 

Est. hight is 54'
Est. cavern floor diameter is 128.8'

**EXHIBIT N** 

#### SCHUBERT FARMS WELL No.1 API 30-025-37548 MIT ACCEPTANCE OCD LETTER

#### Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Tuesday, June 27, 2017 9 41 AM

To

'Gary Schubert'

Cc:

Griswold, Jim, EMNRD, Whitaker, Mark A, EMNRD, Fortner, Kerry, EMNRD

Subject:

RE BW-36 Schubert Farms Well No 1 (API# 30-025-37548) OCD June 2, 2017 MIT

Approval

#### Gary

Good morning The New Mexico Oil Conservation Division (OCD) is in receipt of and has completed its evaluation of the requested information.

OCD has determined that the above subject well MIT passed.

OCD review and reading from the original MIT chart indicates a start pressure of 325 psig and end pressure of 300 psig. However, based on the spring weight, 24-hr chart scale, and clock speed, etc. run for the MIT, OCD does not discount your stated pressures below

OCD evaluated this Cavern MIT Method utilizing the "Casing MIT" Pressure of +/- 10% Pass/Fail due to the low volume of fluids associated with the new brine well and small cavern size. As the cavern size matures, and fluid volume increases, OCD will communicate closely with the Permittee on MIT interpretations, and will eventually implement the +/- 1% Pass/Fail evaluation for the Cavern MIT method. In addition, OCD may require a Casing MIT to be run in lieu of a Cavern MIT in the future.

Please contact me if you have questions. Thank you

Mr Carl J Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph (505) 476-3490
E-mail Carl Chavez@state.nm.us

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

From: Gary Schubert [mailto garymschubert@gmail.com]

Sent: Tuesday, June 27, 2017 8 22 AM

To: Chavez, Carl J, EMNRD < Carl J Chavez@state nm us>

Subject: BW-36

Mr Chavez,

Attached is the requested information regarding the MIT test on the Schubert Farms Well No. 1 (BW-36).

1 Signed letter from Mr. Larry Scott

2 Calibration information on Chart Recorder from Maclaskey Oilfield Services

1

SCHUBERT FARMS WELL No.1 API 30-025-37548 LETTER OF EXPLANATION

#### Lynx Petroleum Consultants, Inc.

PO Box 1708 3325 Enterprise Drive

Hobbs, New Mexico 88241

575 392-8950 Fax 575 392-7886 June 9, 2017

New Mexico Oil Conservation Division 1625 N French Drive Hobbs, New Mexico 88240

Re HRC Inc Schubert Farms Brine Well No 1 (BW-36)
API#230-025-2976

#### Gentlemen

I was requested by the principal to review the pressure tests run on the above well which were performed on June 2, 2017 and exhibited a pressure loss over several test intervals of some 12-15 psig. The concern expressed was that this loss slightly exceeded that allowed by the OCD (9.6 psig)

This wellbore was recently completed in the halite interval and has no significant operational history in this zone. The well was originally drilled and completed in several intervals below the halite in attempts to establish hydrocarbon production. This history would lead to the conclusion that there has been no significant "mining" of the salt with the operations that have been conducted so far

Although I am unable to develop a quantitative analysis due to incomplete data, there is a qualitative observation that can be drawn from the wellbore history along with the charts. The pressure tests were conducted with fresh water. It is therefore probable that solution mining was underway during the test period. Water chemistry dictates that volume losses converting fresh water to brine are on the order of 3%, that is, 43.3 gallons of material (water + halite) are required to generate 42 gallons of saturated brine. The volume decrease as a result of salt going into solution could very well be the cause of the pressure loss. This effect is masked during pressure tests on established brine wells due to the fact that there is already a large reservoir of brine in the cavern. I am of the opinion that there is nothing leaking here and that the wellbore should be approved to commence operations.

Sincerely

Lynx Petroleum Consultants, Inc.

Marry R. Seott
Larry R. Scott
President

SCHUBERT FARMS WELL No. 1 API 30-025-37548 SUBSEQUENT MIT TEST

# HRC INC. P. O. Box 5011 Hobbs, NM 82841 (Office) 575-393-6662 (Fan) 575-397-2976

# HRC Inc. Schubert Farms Brine Well No. 1 (BW-36) MIT TEST

6-2-2017

7:30-AM , Rig.up Maclaskey Oilfield Services Pump Truck - (David Arron) at 7:30AM

Hook up backside CSG Pump 5 5 bbl. to 500 psi for 5 minutes; bleed down to 360 psi for 1.5 hours.

Call OCD to request witness of test talk to George Saenz (OCD) He advises to bleed pressure to 320 psi and start chart at 11-15AM

Kerry Fortner, (OCD) arrives to witness test. Kerry Fortner witnessed chart recorder calibration. He advises to bleed pressure off chart recorder to 0 psi and then open pressure back to chart recorder (note on chart). Run chart. Test for 4 hours. Begin test 12:20 pm. Complete test at 4:20 pm.

David Arron (Maclaskey Oilfield Services)

See enclosed test explanation from Lynx Petroleum Consultants, Inc

SCHUBERT FARMS WELL No. 1 BW-36 API 30-025-37548 330'FNL, 1650 FEL UL:B, SEC 25, T19S, R38E LAT:32.6375999 LONG:-103.0988007 LEA COUNTY NM

MIT CHART 6-2-17

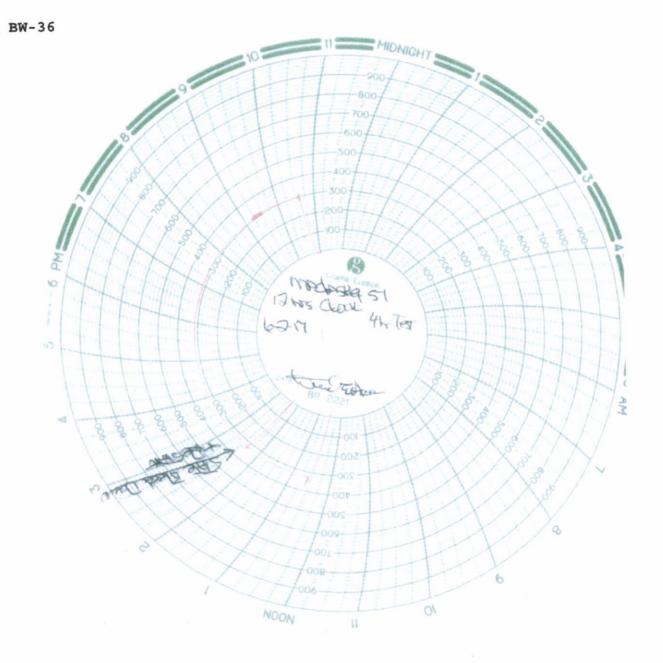


EXHIBIT O

SCHUBERT FARMS WELL No. 1 CERTIFICATE OF CALABRATION CHART RECORDER

# MACLASKEY OILFIELD SERVICES

5960 WEST LOVINGTON HWY HOBES N.M 88240 575-395-116

	•
THIS IS TO CERTIFY THAT	DATE 5-1-17
I ALGO + RODING WETER TECHNIC	AN FOR MACLASKEY OILFIELD
SERVICES, INC HAS CHECKED THE CAL	BRATIOTON LEE FOLLOWING
INSTRUMENT. 1000	PRESSURE RECORDER
	SERIAL NUMBER
TESTED AT THESE POINTS.	/ 1° 1° 1° 1
PRESSURE SOO TEST AS FOUND CORRECTED	TEST AS FOUND CORRECT
TEST AS FOUND CORRECTED	500 600
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PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

December 05, 2017

BEN DONAHUE

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

RE: SCHUBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/16/17 10:22.

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

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

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

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

Method SM 9223-B

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

Method EPA 524.2

Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2

Total Haloacetic Acids (HAA-5)

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

Celey & Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

#### Analytical Results For:

ETZ WATER STATION PO BOX 6056

HOBBS NM, 88241

Project: SCHUBERT
Project Number: FARMS #1

Reported: 05-Dec-17 14:36

Project Manager: BEN DONAHUE Fax To:

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

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Commun's Saddity and client's exclusive remoty for any claim sating, whether bead in contact to tart, shall be featured to the amount paid by client for involved. All clients, including these tar incompanies of the applicable service. In no event shall cardinal be liable for incidence or consequential damage including, without insurance, business interruptions, loss of late, or loss of profits recurred by client, without or exceptions are reliable to the performance of the services harmonider by Cardinal, regardless of vehibles to include to one reliable that the performance of the services harmonider by Cardinal, regardless of vehibles to include to one reliable that the performance of the services harmonider by Cardinal, regardless of vehibles to

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 11



ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT
Project Number: FARMS #1

Project Manager: BEN DONAHUE

Fax To:

Reported:

05-Dec-17 14:36

#### BRINE WATER H703207-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analysi	Analyzed	Method	Notes
			Cardin	al Laborate	ories					
Inorganic Compounds						····				
Alkalinity, Bicarbonate	476		5.00	mg/L	1	7110705	AC	17-Nov-17	310.1	
Alkalinity, Carhonate	<1.00		1.00	mg/L	1	7110705	AC	17-Nov-17	310.1	
Chloride*	162000		4.00	mg/L	ι	7112001	AC	20-Nov-17	4500-C1-B	
Conductivity*	475000		1.00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
рН*	6.96		0.100	pH Units	1	7111701	AC	16-Nov-17	150.1	
Sulfate*	6580		833	mg/L	83.3	7112201	AC	22-Nov-17	375.4	
TDS*	266000		5.00	mg/L	1	7111608	AC	17-Nov-17	160.1	
Alkalinity, Total*	390		4.00	mg/L	ţ	7110705	AC	17-Nov-17	310,1	
			Green Ana	ilytical Lab	oratories					
Total Recoverable Metals by	ICP (E200.7)									
Calcium*	844		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Magnesium*	455		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Potassium*	1420		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Sodium*	91100		200	ing/L	200	B711206	JDA	29-Nov-17	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

REASE NOTE: Labbling and Damages. Cardinal's Raintiny and deart's exclusive remedy for any claim arising, whether leased in contract or tast, shall be distinct to the arisinant paid by Control for analysiss. All claims, including should be facility of the control for co

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 11



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

Project Number: FARMS #1
Project Manager: BEN DONAHUE

Fax To:

Reported:

05-Dec-17 14:36

#### MONITOR WELL H703207-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardin	al Laborate	ories					
Inorganic Compounds					<u></u>					
Alkalinity, Bicarbonate	327		5.00	mg/L	1	7110705	AC	17-Nov-17	310.1	
Alkalinity, Carbonate	<1.00		1,00	mg/L	ι	7110705	AC	17-Nov-17	310,1	
Chloride*	356		4.00	mg/L	1	7112001	AC	20-Nov-17	4500-CI-B	
Conductivity*	1790		1.00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
pH*	7.60		0.100	pH Units	ı	7111701	AC	16-Nov-17	150.1	
Sulfate*	264		50.0	mg/L	5	7112201	AC	22-Nov-17	375.4	
TDS*	1180		5.00	mg/L	1	7111608	AC	17-Nov-17	160.1	
Alkalinity, Total*	268		4,00	mg/L	1	7110705	AC	17-Nev-17	310.1	
			Green Ana	ılytical Lab	oratories					
Total Recoverable Metals by	ICP (E200.7)									
Calcium*	171		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Magnesium*	45.3		1.00	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	
Sodium*	125		10.0	mg/L	10	B711206	JDA	29-Nov-17	EPA200.7	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 11



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

Project Number: FARMS #1
Project Manager: BEN DONAHUE

Fax To:

Reported:

05-Dec-17 14:36

#### FRESH WATER H703207-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Nates
			Cardin	al Laborat	ories					
Inorganic Compounds						<u>-</u>			1101	
Alkalinity, Bicarbonate	283		5.00	mg/L	1	7110705	AC	17-Nov-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	ing/L	1	7110705	AC	17-Nov-17	310.1	
Chloride*	224		4.00	mg/L	1	7112001	AC	20-Nov-17	4500-CI-8	
Conductivity*	1420		1,00	uS/cm	1	7111701	AC	17-Nov-17	120.1	
-	7.98		0.100	pH Units	1	7111701	AC	16-Nov-17	150.1	
pH"	195		25.0	mg/L	2.5	7112201	AC	22-Nov-17	375.4	
Sulfate*	896		5.00	mg/L	ι	7111608	AC	17-Nov-17	160.1	
TDS* Alkalinity, Total*	232		4.00	mg/L	I	7110705	AC	17-Nov-17	310.1	
			Green An	alytical Lab	oratories					
Total Recoverable Metals by	ICP (E200.7)						<del> </del>	<u></u>		
Calcium*	119		5.00	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Mugnesium*	25.6		5.00	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Potassium*	<50.0		50.0	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	
Sodium*	130		50.0	mg/L	50	B711172	JDA	22-Nov-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 11



#### Analytical Results For:

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

Project: SCHUBERT Project Number: FARMS #1

Project Manager: BEN DONAHUE

Fax To:

Reported: 05-Dec-17 14:36

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

		Reporting		Spike	Source	*****	%REC	D DC	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Noies
satch 7110705 - General Prep - Wet Chem										
Blank (7110705-BLK1)				Prepared &	Analyzed:	07-Nov-17				
Alkafinity, Curbonate	ND	1,00	mg/L							
Alkalinity, Bicarbenate	5.00	5.00	mg/L							
Akalinity, Total	4.00	4,00	mg/L							
.CS (7110705-BS1)				Prepared &	k Analyzed	07-Nov-17		<del></del>		
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	330	12.5	mg/L				80-120			
Alkalinity, Total	270	10.0	mg/L	250		108	80-120			
LCS Dup (7110705-BSD1)				Prepared &	& Analyzed	: 07-Nov-1				<u></u>
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	355	12.5	mg/L				80-120	7.30	20	
Alkalinity, Total	290	10.0	mg/L	250		116	80-120	7.14	20	
Batch 7111608 - Filtration		_								
Blank (7111608-BLKI)				Prepared:	16-Nov-17	Analyzed:	17-Nov-17			
TDS	ND	5.00	mg/L							
LCS (7111608-BS1)				Prepared:	16-Nov-17	Analyzed:	17-Nov-17			
TOS	228	5.00	mg/L	213		107	80-120			
Duplicate (7111608-DUP1)	So	arce: H703199	-01	Prepared:	16-Nov-17	Analyzed:	17-Nov-17			_
TDS	9630	5.00	mg/L		9890			2.64	20	
Batch 7111701 - General Prep - Wet Chem							15.11 15			
LCS (7111701-BS1)					16-Nov-17	Analyzed:	17-Nov-17 80-120			
Conductivity	507		uS/cm	500		101				
pH	6 97		pH Units	7.00		99.6	90-110			

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Celey D. Keene, Lab Director/Quality Manager

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ETZ WATER STATION PO BOX 6056 HOBBS NM, 88241 Project: SCHUBERT
Project Number: FARMS #1

Project Manager: BEN DONAHUE

Fax To:

Reported: 05-Dec-17 14:36

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

	Reporting		Spike	Source		<b>∀REC</b>		RPD	
Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
					<u></u>				
Sou	гсе: Н703206	-01	Prepared:	16-Nov-17	Analyzed: 1	7-Nov-17			
501000	1.00	uS/cm		494000					
7.07	0.100	pH Units		7.06			0,142	20	
			Prepared &	k Analyzed	20-Nov-17	7			
ND	4.00	nig/L							
			Prepared &	k Analyzed	20-Nov-1	<u> </u>			<u>-</u> .
100	4.00	mg/L	100		100	80-120			
			Prepared &	& Analyzed	: 20-Nov-1	7		<u>.                                    </u>	
100	4,00	mg/L	100		100	80-120	0.00	20	
	•	_	Prepared	& Analyzed	: 22-Nov-1	7			
ND	10.0	mg/L	-						
			Prepared	& Analyzed	: 22-Nov-1	7			
23.2	10.0	mg/L	20.0		116	80-120			
			Prepared	& Analyzed	i: 22-Nov-1	7			
23.6	10.0	mg/L	20.0	-	118	80-120	1.79	20	
	Sou 501000 7.07 ND 100	ND   10.0   10	ND   10.0 mg/L     ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   10.0 mg/L   ND   ND   ND   ND   ND   ND   ND   N	Source: H703206-01	Source: H703206-01	Source: H703206-01	ND   100   Mg/L   No	No	

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

Project: SCHUBERT Project Number: FARMS #1

Reported: 05-Dec-17 14:36

Project Manager: BEN DONAHUE

Fax To:

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

#### Green Analytical Laboratories

		Reporting		Spike	Source		%REC		RPD	<b>.</b>
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B711172 - Total Rec. 200.7/200.8/200.2				<u> </u>	<del></del>				<del></del>	
Blank (B711172-BLK1)				Prepared:	20-Nov-17 A	Analyzed: 2	2-Nov-17			·
Sodium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							
LCS (B711172-BS1)				Prepared:	20-Nov-17	Aлаlyzcd: 2				
Magnesium	20,8	0.100	mg/L	20,0		104	85-115			
Calcium	4.23	0,100	mg/L	4.00		106	85-115			
Sodium	6.68	1.00	mg/L	6.48		103	85-115			
Potassium	8.07	1.00	mg/L	8.00		101	85-115			
LCS Dup (B711172-BSD1)				Prepared:	20-Nov-17	Analyzed: 1	2-Nov-17			
Magnesium	20.8	0.100	mg/L	20.0		104	85-115	0.0742	20	
Potassitum	8.22	1.00	mg/L	8.00		103	85-115	1.77	20	
Calcium	4.24	0.100	mg/L	4.00		106	85-115	0.215	20	
Sodium	6,66	1.00	mg/L	6.48		103	85-115	0.224	20	
Batch B711206 - Total Rec. 200.7/200.8/200.2	_									
Blank (B711206-BLK1)	-			Prepared:	27-Nov-17	Analyzed:	29-Nov-17			
Calcium	ND	0.190	nig/L							
Sudium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
Polassium	ND	1.00	mg/L							
LCS (B711206-BS1)					27-Nov-17					
Magnesium	20.7	0.100	mg/L	20.0		104	85-115			
Potassium	8.35	1.00	mg/L	8.00		104	85-115			
Calcium	4.15	0.100	mg/L	4.00		104	85-115			
Sodium	6.64	1.00	mg/L	6,48		102	85-115			

#### Cardinal Laboratories

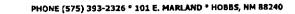
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Change time -

Celey D. Keene, Lab Director/Quality Manager

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%REC

Reported:

05-Dec-17 14:36

RPD



#### Analytical Results For:

**ETZ WATER STATION** PO BOX 6056

HOBBS NM, 88241

Calcium

Project: SCHUBERT

Project Number: FARMS #1

Project Manager: BEN DONAHUE

Fax To:

Reporting

0.100

3.99

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

#### Green Analytical Laboratories

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	Notes
Batch B711206 - Total Rec. 200.7/200.8/200	.2								·	
LCS Dup (B711206-BSD1)				Prepared: 2	27-Nov-17	Analyzed: 2	9-Nov-17			
Potassium	8.07	1.00	mg/L	8.00		101	85-115	3.36	20	
Magnesium	20.0	0.100	mg/L	20.0		100	85-115	3.34	20	
Sodium	6.43	1.00	mg/L	6.48		99.2	85-115	3.28	20	
South	1 99	0.100	me/L	4.00		99.7	85-115	4.11	20	

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#### **Notes and Definitions**

טא	Analyte NOT DETECTED at the above the reporting white
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-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

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476	BILL TO	ANALYSIS REQUEST	
any Name: 672 Water States	P.O. #:		
t Manager: Ben Durahue	.		
555:	Company:		
State: Zip:	Attn:		
* 575 343 314 Fax#	Address:		
Design Counse	City:		
ct Name: Schube Fams &	State: Zip:		
ect Location:	Phone #:		
pler Name: Ben Donahe MATRI	Fax #:		,
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POSTER OF CONTAINERS  * CONTAINERS  * CONTAINERS  SOIL  SOIL	# g   KA		
ab I.D. Sample I.D.	SLUDGE OTHER OTHER OTHER		igspace
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103201 Baine Water 6 10	11-16-17 9:00		
2 Brone Water 9			-
2 Iresh water			1
			1
ASE NOTE: Customy and Consigns: Continues location and chemica exclusive remarks for any clean; among whether beautiful to the continue of the	n contract or self-shall be limited to be area, in Each by the self-shall be applicable under and received by Cardinal within 30 days, after completion of the applicable under an area of the self-shall be subsidiaries.		
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PHONE (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 88240

May 04, 2017

BEN DONAHUE

**ETZ WATER STATION** 

PO BOX 6056

HOBBS, NM 88241

**RE: SCHUBERT FARMS** 

Enclosed are the results of analyses for samples received by the laboratory on 04/20/17 12:00.

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

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

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

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

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

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey & Keene

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

Project: SCHUBERT FARMS

VEN

Reported: 04-May-17 14:52

PO BOX 6056 HOBBS NM, 88241 Project Number: NONE GIVEN
Project Manager: BEN DONAHUE

Fax To:

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

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 11

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

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Reported: 04-May-17 14:52

Fax To:

FRESH WATER H701043-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
<u> </u>			Cardir	nal Laborat	ories					
Inorganic Compounds			<u> </u>							
Alkalinity, Bicarbonate	244		5.00	mg/L	ι	7041918	AC	24-Apr-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	ı	7041918	AC	24-Apr-17	310.1	
Chloride*	510		4,00	mg/L	ι	7042103	AC	25-Apr-17	4500-CI-B	
Conductivity*	2710		1.00	uS/em	1	7042105	AC	21-Apr-17	120.1	
piľ*	7.32		0.100	pII Units	1	7042007	AC	20-Apr-17	150.1	
Sulfate*	579		125	:ng/L	12.5	7042613	AC	26-Apr-17	375.4	QM-07
TDS*	1870		5.00	ռը∕L	1	7042114	AC	25-Apr-17	160.1	
Alkalinity, Total*	200		4.00	my/L	1	7041918	AC	24-Apr-17	310.1	
			Green Ans	ilytical Lab	oratorics					
Total Recoverable Metals by	ICP (E200.7)						<u> </u>			- **
Calcium*	254		0.100	mg/L	1	B704200	JDA	01-May-17	EPA200.7	
Magnesium*	86.9		0.100	mg/L	1	B704200	JDA	01-May-17	EPA200.7	
Potassium*	7.62		1.00	mg/L	ı	B704200	1DA	01-May-17	EPA200.7	
Sadium*	228		1.00	mg/L	t	B704200	ΙDΛ	01-May-17	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager

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

Project: SCHUBERT FARMS

Project Number: NONE GIVEN Project Manager: BEN DONAHUE

Fax To:

Reported: 04-May-17 14:52

#### BRINE WATER 11701043-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dílution	Batch	Analyst	Analyzed	Method	Notes
			Cardin	al Laborati	ories			-· -		
Inorganic Compounds										
Alkalinity, Bicarbonate	268		5.00	mg/L	ı	7041918	AC	24-Apr-17	310.1	
Alkalinity, Carbonate	<0.1>		1.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Chloride*	122000		4.00	mg/L	1	7042103	AC	25-Apr-17	4500-CI-B	
Conductivity*	357000		1.00	uS/em	1	7042105	AC	21-Apr-17	120.1	
pH*	6.85		0.100	pH Units	ι	7042007	AC	20-Apr-17	150.1	
Sulfate*	4430		833	nig/L	83.3	7042613	AC	26-Apr-17	375.4	
TDS*	198000		5.00	mg/L	1	7042114	AC	25-Apr-17	160.1	
Alkalinity, Total*	220		4.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
			Green Ana	lytical Lab	oratories					
Total Recoverable Metals by	ICP (E200.7)				_					
Calcium*	920		0.01	mg/L	100	B704200	JDA	01-May-17	EPA200.7	
 Magnesium*	524		10.0	mg/L	100	B704200	JDA	01-May-17	EPA200.7	
Potassium*	950		100	mg/L	190	B704200	JDA	01-May-17	EPA200.7	
Sodium*	80100		100	mg/L	100	B704200	AGt	01-May-17	EPA200.7	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 04-May-17 14:52

#### MONITOR WELL H701043-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardin	ial Laborat	ories					
Inorganic Compounds										
Alkalinity, Bicarbonate	244		5.00	mg/L	1	7041918	AC	24-Apr-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7041918	۸C	24-Apr-17	310.1	
Chloride*	316		4,00	mg/L	1	7042103	ΛC	25-Apr-17	4500-C1-B	
Conductivity*	1700		1,00	uS/cm	1	7042105	AC	21-Apr-17	120.1	
pli*	7.58		0.100	pH Units	1	7042007	AC	20-Apr-17	150.1	
Sulfate*	221		50.0	mg/L	5	7042613	AC	26-Apr-17	375.4	
TDS+	1090		5.00	mg/L	1	7042114	AC	25-Apr-17	160.1	
Alkalinity, Total*	200		4,00	mg/L	1	7041918	AC	24-Apr-17	310.1	
			Green Ans	ilytical Lab	oratories					
Total Recoverable Metals by	ICP (E200.7)									
Calcium*	161		2.00	nig/L	20	B704200	JDA	01-May-17	EPA200.7	
Magnesium*	46.3		2.00	mg/L	20	B704200	JDA	01-May-17	EPA200.7	
Potassium*	<20.0		20.0	mg/L	20	B704200	JDA	01-May-17	EPA200.7	
Sodium*	131		20.0	mg/L	20	B704200	JDA	01-May-17	EPA200.7	

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

#### Analytical Results For:

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

Project Number: NONE GIVEN
Project Manager: BEN DONAHUE

Fax To:

Reported: 04-May-17 14:52

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	Notes
Batch 7041918 - General Prep - Wet Chem										
Blank (7041918-BLK1)				Prepared &	Analyzed:	19-Apr-17				
Alkalinity, Carbonate	ND	1.60	mg/L							
Alkalinity, Bicarbonate	10.0	5.00	mg/L							
Alkalinity, Total	8.00	4.00	mg/L							
LCS (7041918-BS1)				Prepared &	k Analyzed:	19-Apr-17				
Alkalinity, Carbonate	ND	1.00	mg/L				80-120			
Alkalinity, Bicarbonate	132	5.00	mg/L				80-120			
Alkalinity, Total	108	4.00	mg/L	100		108	80-120			
LCS Dup (7041918-BSD1)				Prepared &	k Analyzed:	19-Apr-17				
Alkalinity, Carbonate	ND	1.00	mg/L				80-120		20	
Alkalinity, Bicarbonate	127	5.00	mg/L				80-120	3.86	20	
Alkalinity, Total	104	4.00	mg/L	100		104	80-120	3.77	20	
Batch 7042007 - General Prep - Wet Chem				<del></del>						
LCS (7042007-BS1)				Prepared &	k Analyzed:	20-Apr-17				
рН	7.23		pH Units	7,00		103	90-110			
Duplicate (7042007-DUP1)	Sou	rce: 11701041	-04	Prepared &	& Analyzed:	20-Apr-17				
рН	7.83	0,100	pH Units		7.82			0,128	20	
Batch 7042103 - General Prep - Wet Chem										
Blank (7042103-BLK1)				Prepared &	ዩ Analyzed	21-Apr-17				
Chloride	ND	4.00	mg/L							

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REASE NOTE: Usabley and Denagoe. Cordinate blookiny and client's exclusive remedy for any claim arising, whether bosed in confusct or long shall be limited to the annum chair for any client for analyses. All dearms, including those for resplayment any other cause whitsbusivery shall be deprined waving unique makes in writing and received by Cardinal winters thirty (20) dates after completion of the applicable service. In no event shall Cardinal be failed for including contracting, whose inhalpines, fusions, fus

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

#### Analytical Results For:

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

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 04-May-17 14:52

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 7042103 - General Prep - Wet Chem	····						<del></del>			
LCS (7042103-BS1)				Prepared &	k Analyzed:	21-Apr-17				
Chloride	104	4.00	mg/L	100		104	80-120			
LCS Dup (7042103-BSD1)				Propared &	¿ Analyzed:	21-Apr-17				
Chloride	100	4,00	mg/L	100		100	80-120	3.92	20	
Batch 7042105 - General Prep - Wet Chem	<del></del>			· · · .						
LCS (7042105-BS1)				Prepared &	k Analyzed:	21-Apr-17				
Conductivity	49R		uS/cm	500		99.6	80-120			
Duplicate (7042105-DUP1)	Sou	rce: 117 <u>01041</u> -	-01	Prepared &	& Analyzed:	21-Apr-17				
Conductivity	707	1.00	u\$/cm		703			0.567	20	
Batch 7042114 - Filtration										
Blank (7942114-BLK1)				Prepared:	21-Apr-17	Annlyzed: 2	7-Apr-17			
TDS	ND	\$.00	mg/L			·				
LCS (7042114-BS1)				Prepared:	21-Apr-17	Analyzed: 2	7-Apr-17			
TDS	229	5.00	mg/L	240		95.4	80-120			
Duplicate (7042114-DUP1)	Sou	rce: H701021	-01	Prepared:	21-Apr-17	Analyzed: 2	7-Apr-17			
TDS	2260	5.00	mg/L		2310	= · <del></del>		1.84	20	
Ratch 7042613 - General Prep - Wet Chem									<del></del>	
Blank (7042613-BLK1)				Prepared &	& Analyzed	: 26-Apr-17	1			
Sulfate	ND	10.0	mg/L							

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Celey D. Keene, Lab Director/Quality Manager

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

Reported:

04-May-17 14:52

#### Analytical Results For:

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

Project Manager: BEN DONAHUE

Fax To:

#### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 7042613 - General Prep - Wet Chem										
LCS (7042613-BS1)				Prepared &	k Analyzed:	26-Apr-17				

Sulfate	20.1	10.0	mg/L	20 0	101	80-120			
LCS Dup (7042613-BSD1)				Prepared & Ana	ilyzed: 26-Apr-17				
Sulfate	19.8	10.0	mu/L	20.0	99.0	80-120	1.55	20	

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PLEASE MOTE: Update, and Damages. Coverant's tability and clients, exclusive remode for any claim entaing, whether based at centralicl or bort, shed be insided to the encount paid by client for analysis. All claims, including those for necipience at any other cause whatsapper shall be devened waving Uniques made in withing and inscribed by Cardinal within thirty (30) days after completion of the applicables service. In no avent shall Cardinal be faithe for incidental or consequential demange without limitations, business interruptions, loss of use, or loss of profile incident, all subject on the applicables service.

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Celey D. Keene, Lab Director/Quality Manager

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

Project Number: NONE GIVEN

Project Manager: BEN DONAHUE

Fax To:

Reported: 04-May-17 14:52

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

#### Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B704200 - Total Rec. 200.7/20	0.8/200.2							<del></del>		
Blank (B704200-BLK1)				Prepared: 2	28-Apr-17 A	analyzed: 0	I-May-17			
Sudium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
Potassium	NĎ	1.00	mg/L							
Calcium	ND	0.100	mg/L							
LCS (B704200-BS1)				Prepared: 2	28-Apr-17 A	Analyzed: 0	I-May-17			
Magnesium	20.7	0.100	mg/L	20.0		104	85-115			
Sodium	6.81	00,1	mg/L	6.48		105	85-115			
Potassium	8.36	1.00	mg/L	8.00		104	85-115			
Calcium	4.07	0,100	mg/L	4.00		102	85-115			
LCS Dup (B704200-BSD1)				Prepared: 2	28-Apr-17 A	Analyzed: 0	1-May-17			
Calcium	4.07	0.100	nig/L	4.00		102	85-115	0.0739	20	
Sodium	6.83	1.00	mg/L	6 48		105	85-115	0.275	20	
Magnesium	20.8	0.100	mg/L	20.0		104	85-115	0.274	20	
Potassium	K.32	1.00	mg/L	00.K		104	85-115	0.396	20	

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#### **Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 Company Name: ETZ Water States

Brown Manage Et & Water Status	BILL TO ANALYSIS REQUEST	
Project Manager: Ben Donahue	P.O. #:	
Address: P.O. 5102 City: Hubby State: NM Zip: 88241 Phone #: 575 393 3194 Fax #:	Company: Attn:	
Project # Schuber France # (national Constitution)	Address:	-
Project #: Schuber Forms & Project Owner: Goy Schube	•A City:	1
The state of the s	State: Zip:	
Project Location:	Phone #:	
Sampler Name: Ben Donahus		
Lab I.D. Sample I.D.	WERSE COOL	
PLEASE NOTE: Labory and Carleyes: Cardinate abody and please disclosing femoly for any statulating under a tuned in cure analysis. At stamp including those for professional and please disclosing femoly for any statulating under a tuned in cure	PORTOR INTO SMARTE to deal to the account gains by the plant for the	
armic. In to every of all, our is taken for medicated or consequently desired, which is opened waved unless made in writing.  There is no every of all, our is taken for incidental or consequently desirables, including inflicts in datum outsides interrupted.  There is no successive interruption of or related to the incidental related and incident incident.	to destination on Construction in 3, sales after incompletion of the application.  The first income of the aftering incoming the completion of the application of the	
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Time:	garymschuber (gmail:com	i
Delivered By: (Circle One) Sample Cond	dition CHECKER BY:	
Sampler - UPS - Bus - Other: #75 0.72 Gree Pro	Ves (1) liste	
1 Cardinal cannot a		1

## SCHUBERT FARMS FACILITY TABULATED SHEET OF CONNECTIONS AND PIPE

CONNECTION TYPE	SIZE	MODEL	CONSTRUTION	PORT	PSI RATED AT
BALON FLOATING VALVES	4"X 3" X 4"	4R-S32-SE	CARBON STEEL	3"	750
BALON FLOATING VALVES	3" X 3" X 3"	3F-S42-SE	CARBON STEEL	3"	750
BALON FLOATING VALVES	2" X 2" X 2"	2F-S32-SE	CARBON STEEL	2"	750
X HEAVY 2" ELL IPC	2.375"	FIG.No. 02001	CARBON STEEL	2"	2000
X HEAVY 3" ELL IPC	3.375"	FIG.No. 02001	CARBON STEEL	3"	2000
X HEAVY 4" ELL IPC	4.188"	FIG.No. 02001	CARBON STEEL	4"	2000
X HEAVY 2" COLLAR IPC	2.375"	ASTM SA105N	CARBON STEEL	2"	3000
X HEAVY 3" COLLAR IPC	3.375"	ASTM SA105N	CARBON STEEL	3"	3000
X HEAVY 4" COLLAR IPC	4.188"	ASTM SA105N	CARBON STEEL	4"	3000
X HEAVY 2" TEE IPC	2.375"	ASTM SA105N	CARBON STEEL	2"	2000
X HEAVY 3" TEE IPC	3.375"	ASTM SA105N	CARBON STEEL	3"	2000
X HEAVY 4" TEE IPC	4.188"	ASTM SA105N	CARBON STEEL	4"	2000
X HEAVY 2" NIPPLE IPC	2.375"	A106 Sch. 80	CARBON STEEL	2"	2000
X HEAVY 3" NIPPLE IPC	3.375"	A106 Sch. 80	CARBON STEEL	3"	2000
X HEAVY 4" NIPPLE IPC	4.188"	A106 Sch. 80	CARBON STEEL	4"	2000
X HEAVY 1 1/2" X 2" SWEDGE IPC	1.9" x 2.375"	хн	CARBON STEEL	1 1/2" X 2"	2000
X HEAVY 2" X 3" SWEDGE IPC	2.375" X 3.5"	хн	CARBON STEEL	2" X 3"	2000
X HEAVY 3" X 4" SWEDGE IPC	3.5" X 4 1/2"	хн	CARBON STEEL	3" X 4"	2000
X HEAVY 3" CROSS TEE IPC	3.75"	ASTM SA105N	CARBON STEEL	3"	3000
2" VICTAULIC CONNECTOR	2.375"	177N	CARBON STEEL	2"	1000
4" VICTAULIC CONNECTOR	4.188"	177N	CARBON STEEL	4"	1000
2" SDR 11 HDPE POLY LINE	2.375	SDR 11 HDPE	Polyethylene	2"	160
3" SDE 11 HDPE POLY LINE	3 .5	SDR 11 HDPE	Polyethylene	3"	160
4" SDR 11 HDPE POLY LINE	4.5	SDR 11 HDPE	Polyethylene	4"	160
4" SDR 11 TRASDUCER	4.5	SDR 11 HDPE	STEEL / SDR11	4"	160
2" BRADED HOSE	2.375"	PTFE	RUBBER /STEEL	2"	UP TO 5000
3" BRADED HOSE	3.375"	PTFE	RUBBER /STEEL	3"	UP TO 5000
4" BRADED HOSE	4.188"	PTFE	RUBBER /STEEL	4"	UP TO 5000

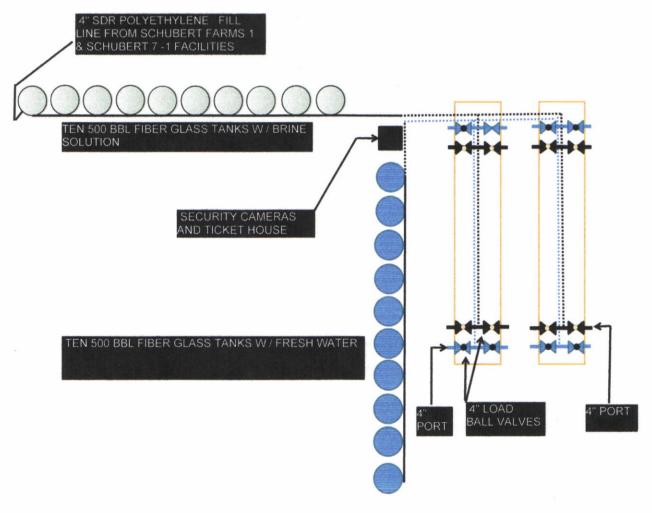
SHCUBERT FARMS WELL No. 1 BRINE SOLUTION BATTERY SOUTHWEST OF THE FACILITY 4"SDR 11 FROM SCHUBERT FARMS FACILITY BALON 4" VALVES ON 4" SDR 11 FILL LINE OIL FILL PSI GAUGE SDR 11 4" SUCTION LINE TO C-PUMP 1 1/2 X 2" C-PUMP EQUIPPED WITH CHECK VALVE & BALON VALVES 4" SDR 11 POLY

BRINE SOLUTION SENT TO SALES BATTERY ON NADINE ROAD

EXHIBIT S

H.R.C., INC. SCHUBERT 7 WELL No.1 SCHUBERT FARMS WELL No.1

#### SALES FRESH AND QUALITY BRINE STATION



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NADINE ROAD EXHIBIT T E