

# BW-038

# ANNUAL

# REPORT

# 2019

# 2019 Annual Class III Well Report Llano Disposal, LLC BW-38 API – 30-25-20592

Submitted by: Laura Angell, 10/26/22

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**Summary of Class III Well Operations**

BW3 (State 27 # 1) was put into service in the last quarter 2018 after a successful re-entry and recompletion. After re-entry was accomplished, a production string was run into the Salado. Fresh water was then circulated to test brine quality. Brine quality from this well has been excellent at 10.00 and 10.00+ lbs. per gallon. The amount of fresh water injected to brine recovered has been within expected ratio and in agreement with known cavern development. Injection pressure required to raise brine to surface has been approximate to anticipated (calculated) value.

Initially, there was not a great demand for brine water in the Maljamar area. However, that market has evolved as horizontal shale drilling continues to migrate northward from southern Lea and Eddy counties. Brine demand has increased accordingly. This well is situated perfectly to service changing industry needs. Currently this well is the only brine producer in the Maljamar area.

No changes have been made to the well/surface connection. Also, no changes have been made to the physical plant since the well was first put into operation. Trucks load on a one-foot-thick concrete pad. The loading pad is curbed, and has a sump for catching any brine incidentally spilled in handling hoses, etc. A heavy gauge plastic liner has been maintained under the storage tank and dike areas.

MITs have been performed on this well when required and have all been Hobbs OCD witnessed. Test pressure charts are found in **APPENDIX A** at the end of this report.

A chronological list of C103 forms that Llano Disposal has filed on subject well can be found in **APPENDIX D** at the end of this report.



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## Monthly Fluid Injection and Brine Production

2019

Month	Brine Monthly BBLS	Brine Cumulative BBLS	Fresh Monthly BBLS	Fresh Cumulative BBLS	PSI	Percent Fresh/ Brine
Jan						
Feb						
Mar						
Apr	4,962	4,962	5,466	5,466	265	1.1015
May	15,495	20,457	17,058	22,524	265	1.1009
June	7,178	27,635	7,904	30,428	265	1.1011
July	14,456	42,091	15,929	46,357	265	1.1019
Aug	22,280	64,371	24,512	70,869	265	1.1002
Sep	8,260	72,631	9,103	79,973	265	1.1021
Oct	3,464	76,095	3,813	83,786	265	1.1008
Nov	2,685	78,780	2,955	86,741	265	1.1006
Dec	7,030	85,810	7,744	94,485	265	1.1016

Year	Brine Yearly BBLS	Brine Cumulative BBLS	Fresh Yearly BBLS	Fresh Cumulative BBLS
2019	85,810	85,810	94,485	94,485

**Annual Report****Llano Disposal, LLC BW-38 API 30-025-20592****2019****Annual Monitor Well Analytical Data Results**

Please see page 8 of this report for deviations.

**Injection Pressure Data**

Injection pressure at the well (tubing) averages 265/PSI. The brine well casing pressure (brine to battery), averages about 22 PSI. The field operator checks the pressures daily and records them on the daily log.

**Pipeline Hydrostatic Test Results**

Service piping carrying fresh water to BW38, is a combination of 2" steel and 2" SDR11 HD poly piping. This line is tested accordingly to 160 psi. The feeder line (fresh water) runs due north from the freshwater pump. The distance is approximately 145'. Testing is accomplished by closing a steel ball valve on the well head, then allowing the freshwater pump to bring pressure up to 160 psi. The line is then isolated by valving installed at each end of the line. Pressure is held static on the line for 1 hour, during which time the line is visually inspected. The 3" SDR11 HD poly line leading from BW38 due west approximately 2500' to the tankage facility, is tested in the same manner. A valve in the line is closed at the tankage facility. Then the freshwater line at the wellhead is allowed to pressure to 160 psi. A jumper line between the freshwater line and the brine line has been installed at BW38 well head to accomplish this. After brine line pressure has risen to 160 psi, the entire system is shut down, then the brine line is isolated by closing valving in place at each end of the line. Pressure is held for 1 hour, during which time the line is visually inspected.

The freshwater line and the brine line run across land that is under the same ownership as Llano Disposal, LLC. Therefore, observing these lines for inspection during testing, and during normal operations, is frequent, and at will. The lines between the storage tanks and the truck loading valves, are all SDR11 high density poly. These lines carry normal head pressure of 0 psi (emptied tanks) to 17 psi (full tankage) but are virtually always under positive pressure. These lines are under continual live camera observation and viewed in person daily, both by truckers and by Llano field personnel. All tanks are 30' fiberglass and are manifolded together with 6" SDR11 HD poly line. Valving is installed on the outlet of each tank so that any one, or all the tanks can be closed off if needed. All valving and connections are plastic coated steel, stainless steel, poly, or fiberglass.

**Pipeline Visual Inspections** for leaks are done at minimum every other day, monitoring lines, joints, tanks, and recording volumes and pressure.

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## Quarterly Chemical Analysis

The full report can be viewed in **APPENDIX F** at the end of this report.

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

**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

**SAMPLE A**  
**H801855-01 (Water)**

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

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

Alkalinity, Bicarbonate	190		5.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Chloride*	36.0		4.00	mg/L	1	8070501	AC	10-Jul-18	4500-Cl-B	
Conductivity*	480		1.00	uS/cm	1	8071001	AC	10-Jul-18	120.1	
pH*	7.73		0.100	pH Units	1	8071001	AC	10-Jul-18	150.1	
Sulfate*	34.3		10.0	mg/L	1	8071002	AC	10-Jul-18	375.4	
TDS*	324		5.00	mg/L	1	8070311	AC	11-Jul-18	160.1	
Alkalinity, Total*	156		4.00	mg/L	1	8062505	AC	10-Jul-18	310.1	

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

Calcium*	70.9		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Magnesium*	8.93		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Potassium*	2.86	0.677	10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	J
Sodium*	15.2		10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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

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**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

**SAMPLE B****H801855-02 (Water)**

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

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

Alkalinity, Bicarbonate	181		5.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Chloride*	48.0		4.00	mg/L	1	8070501	AC	10-Jul-18	4500-Cl-B	
Conductivity*	468		1.00	uS/cm	1	8071001	AC	10-Jul-18	120.1	
pH*	7.86		0.100	pH Units	1	8071001	AC	10-Jul-18	150.1	
Sulfate*	34.0		10.0	mg/L	1	8071002	AC	10-Jul-18	375.4	
TDS*	310		5.00	mg/L	1	8070311	AC	11-Jul-18	160.1	
Alkalinity, Total*	148		4.00	mg/L	1	8062505	AC	10-Jul-18	310.1	

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

Calcium*	47.0		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Magnesium*	9.14		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Potassium*	2.49	0.677	10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Sodium*	38.4		10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Annual Report****Llano Disposal, LLC BW-38 API 30-025-20592****2019****Mechanical Integrity Test**

A MIT was performed on 9/26/19: Llano scheduled, then ran a MIT on BW38 using a calibrated chart recorder and the well passed the pressure test requirement. See the chart in **APPENDIX A**.

**Deviations from normal Operations****1. Surface Subsidence Monitoring Plan Data Results**

Other than the initial survey and plan creation, there was no other survey done, since the well had only been in operation for a very short period.

**2. Quarterly Chemical Analysis**

Additional analysis was not done in 2019 since the well had only been in operation a short period of time.

**3. Surface Subsidence Monitoring Plan Data Results**

Other than the initial survey and plan creation, there was no other survey done since the well had only been in operation a short period of time.

**Leaks and Spills Corrective Action Reports**

There were no leaks, spills, or corrective action during this period.



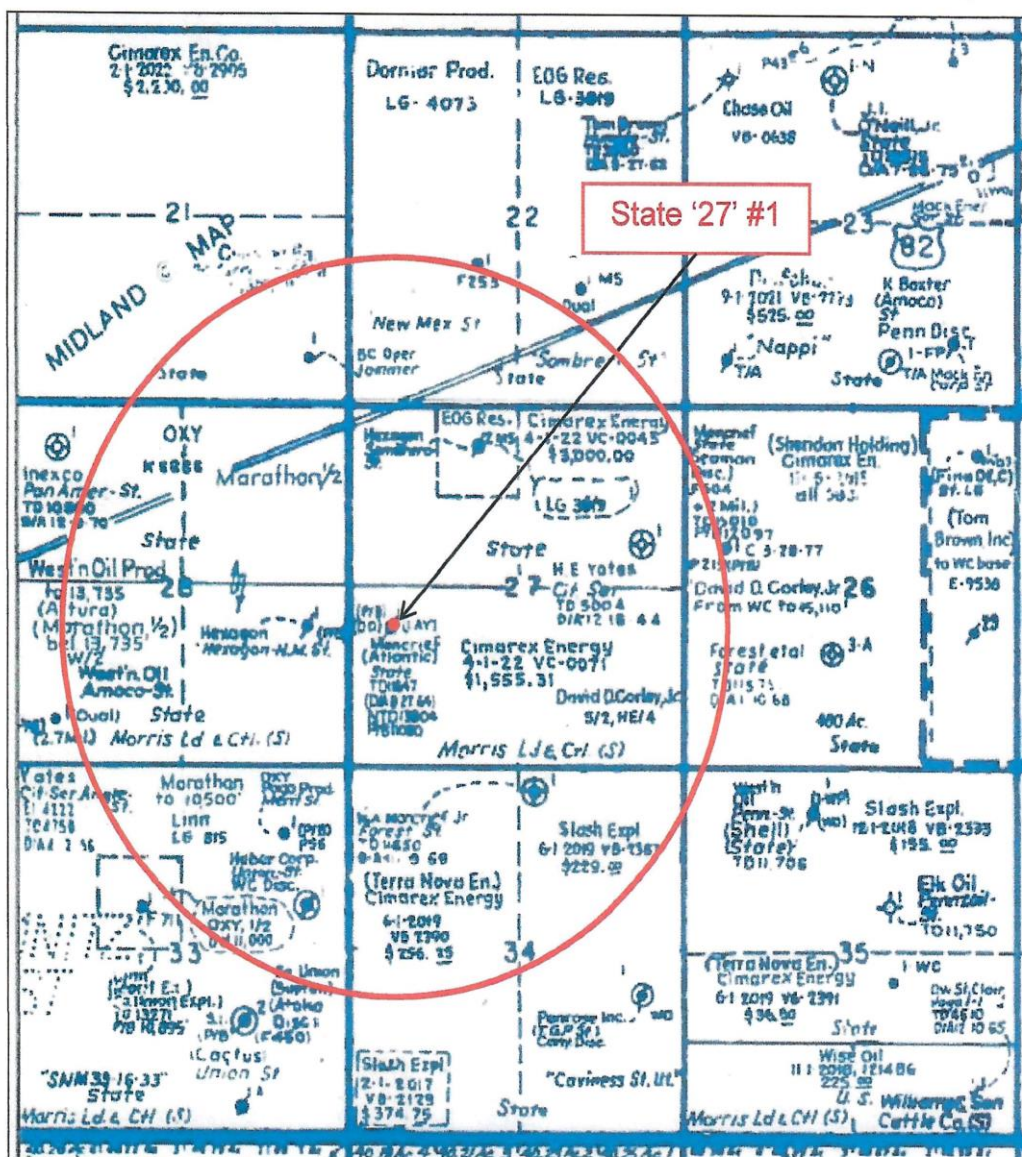
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## Area of Review Update Summary

Please see below, the original AOR document that was submitted as part of the original application for BW38. A current, location-by-location review of this brine permit has been completed, and it was found that there has been no oil or gas well development in the area since the original AOR document was created and submitted to NMOCD as part of the original brine permit.



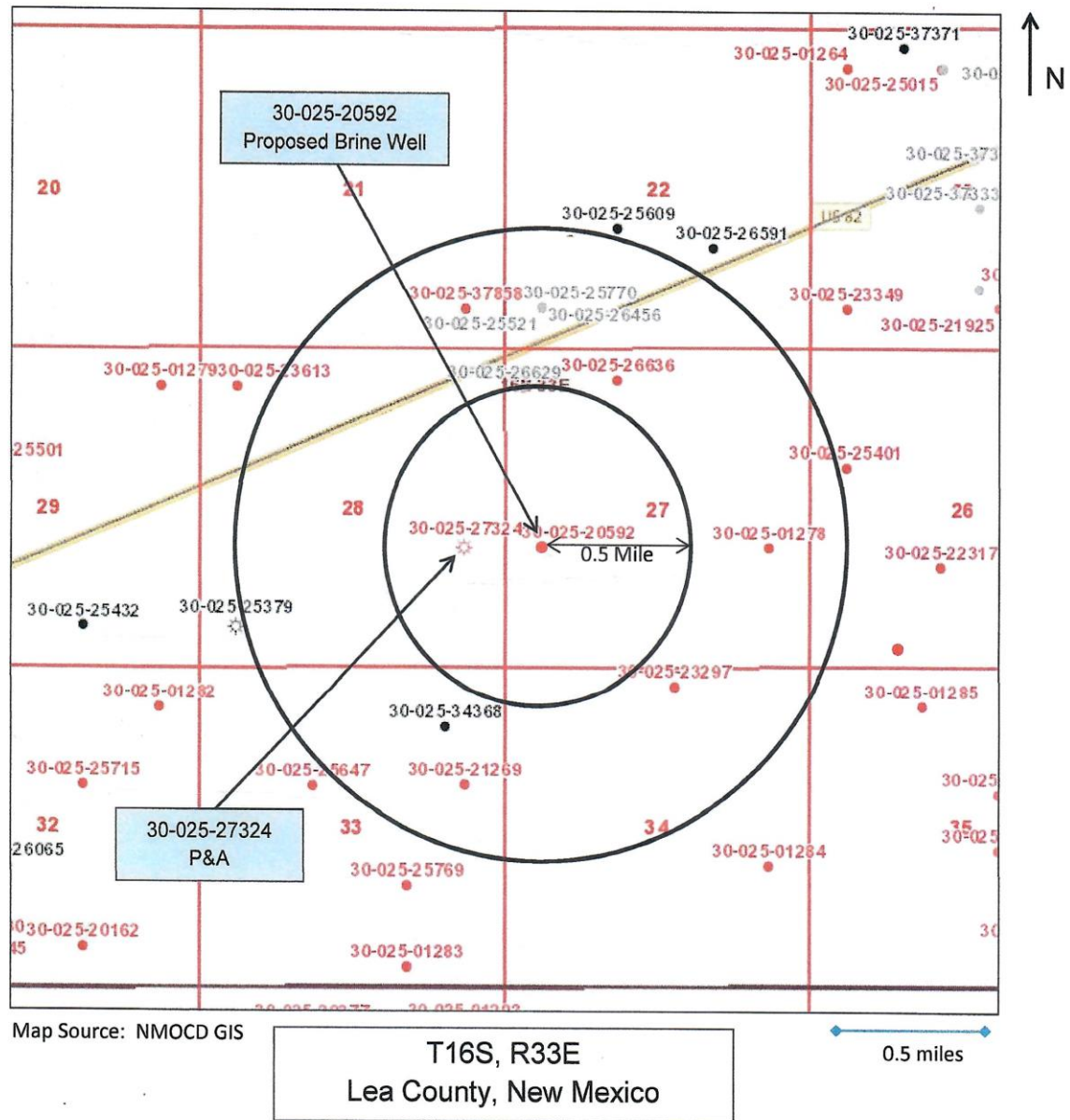
Map Source: Midland Map Co.

T16S, R33E

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## Llano Disposal, LLC BW-38 API 30-025-20592

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Llano Disposal, LLC

State 27 #1

API # 30-025-20592

## Offset Wells Located within 0.5 and 1 Mile Areas of Review

There is only one offset well located within the 0.5 mile AOR.

UL, Sec, T, R	API Well No.	Well Name	TVD	Operator	Status	Salt Plugs or Covered with Casing/Cement
I-28-16S-33E	30-025-27324	Hexagon NM 28 State #1	13848'	Hexagon Oil & Gas Inc	Drilled 1981, P&A 1991	Cmt plug @ TOS and below salt, 8-5/8" csg/cmt cover salt

There are six additional offset wells located outside the 0.5 mile AOR, but within the 1 mile AOR.

UL, Sec, T, R	API Well No.	Well Name	TVD	Operator	Status	Salt Plugs or Covered with Casing/Cement
P-21-16S-33E	30-025-37858	Jammer #1	10902'	Legacy Reserves Operating, LP	Drilled 2006, P&A 2010	Cmt plugs @ TOS and below salt, 8-5/8" csg/cmt cover salt
C-27-16S-33E	30-025-26636	Sombrero MS State #2	11730'	I&W Inc	Drilled 1980, P&A 1998	Cmt plugs @ TOS and below salt, 8-5/8" csg/cmt cover salt
I-27-16S-33E	30-025-01278	Cities Service State #1	5004'	Harvey E. Yates	Drilled 1944, P&A 1946	Bridge plugs at TOS and at BOS, no csg/cmt cover salt
A-33-16S-33E	30-025-34368	Merit 33 State #1	15094'	Oxy USA Inc	Drilled 1998, active WC producer	9-5/8" csg/cmt cover salt
H-33-16S-33E	30-025-21269	Union State #1	11650'	J. M. Huber Corp	Drilled 1965, P&A 1972	Cmt plugs above and below salt, 8-5/8" csg covers salt
B-34-16S-33E	30-025-23297	Apple State #1	11650'	Manzano Oil Corp	D&A 1969, Re-entered 1986, P&A 1987	Cmt plugs above and below salt, 8-5/8" csg covers salt



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**Summary MITs, Surface Subsidence Surveys, Cavern Size & Shape, Cavern Volume and Geometry Measurements with Conclusion(s) and Recommendation(s)**

A MIT was performed on 9/26/19. Llano scheduled, then ran the MIT on BW38 using a calibrated chart recorder. Subsequent pressure test was successful to 320 psi. See the chart in **APPENDIX A**.

Please find the Subsidence Plan and Report in **APPENDIX C** at the end of this report, that was prepared for us by Pettigrew and Associates out of their Hobbs, NM office. The importance and purpose of the report is to closely monitor any geological shifting, either vertically or horizontally, in the earth surrounding the brine well. All parameters of Pettigrew's investigation are included in the report, along with a review of the monitoring points as installed and archived during the initial development of the well. The full report/plan is included in **APPENDIX C**.

A description of the Cavern Size & Shape, Cavern Volume and Geometry Measurements, are in **APPENDIX B** at the end of this report.

In conclusion, the operational history of BW38 could be described as "good", meaning that the well has performed very well in producing 10# brine. There are no recommendations at this time.

**Annual Report****Llano Disposal, LLC BW-38 API 30-025-20592****2019****Injected Fluids to Brine Ratio**

Total Brine for the year	85,810
Total Fresh for the year	94,485
Ratio of Fresh to Brine	<b>1.1011</b>

**Summary of Major Facility Activities**

There were no major activities during this period.

**Surface Subsidence Monitoring Plan Data Results**

The initial plan and survey were done and are included in **Appendix C** at the end of this report.

**Solution Cavern Characterization Data Results**

Please see **APPENDIX B** at the end of this report for a full description.

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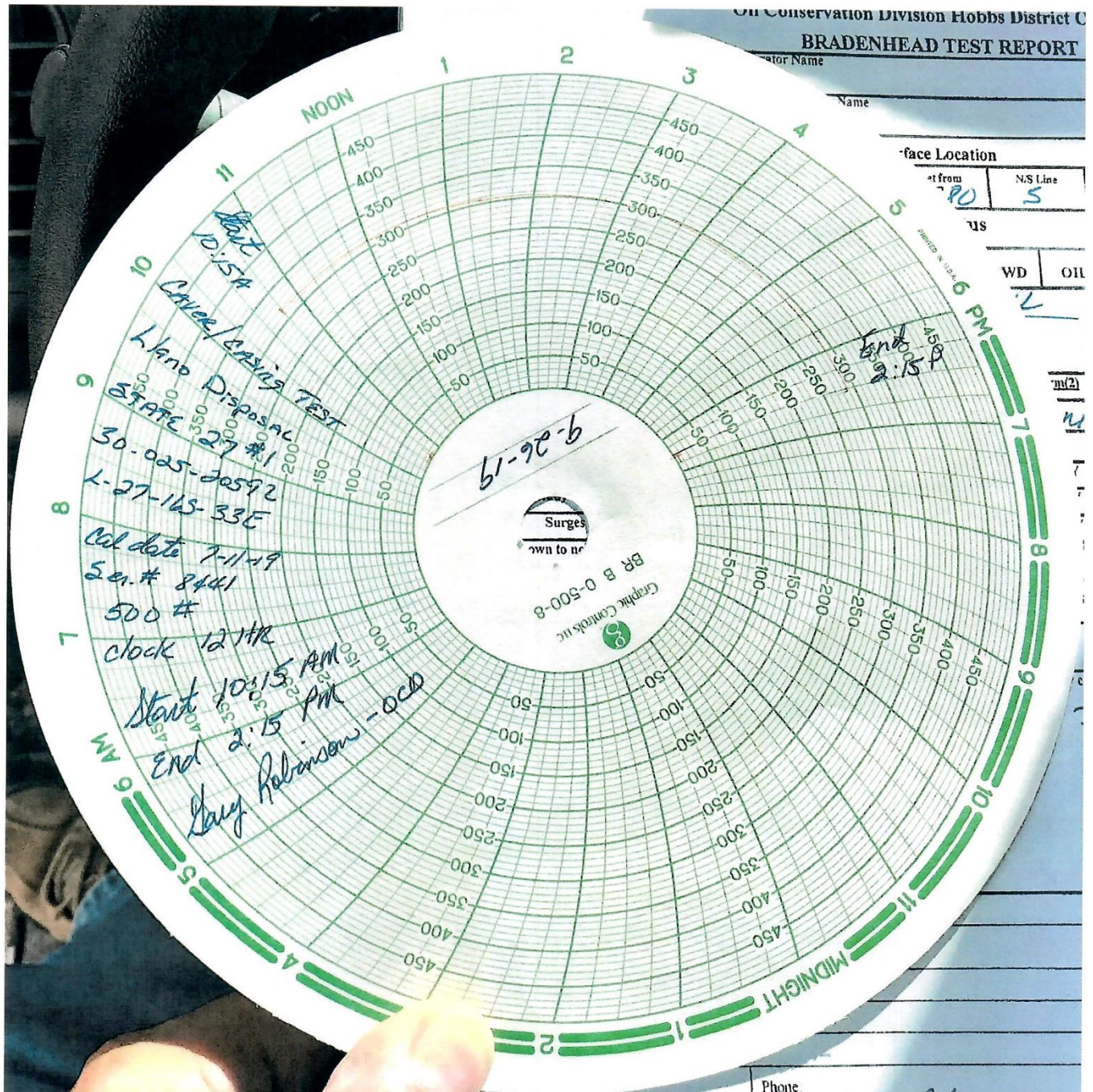
## **APPENDIX A**

MITs

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## **APPENDIX B**

### **Cavern Characterization**



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## Llano Disposal, LLC BW-38 API 30-025-20592

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**Cavern Characterization**

For 2019, 94,485 bbls of fresh water have been injected into salt strata for the purpose of brine generation (3,968,370 gallons). Well production history has shown that the well reliably produces 10.0 + pound quality brine water. It therefore follows that each gallon of fresh water (testing 8.34 pounds per gallon) has dissolved 1.66 pounds of halite. By simple calculation, 6,587,494 pounds of halite have gone into solution this year. Halite has a SG of 2.17 (compared to fresh water), so is calculated and known to weigh 137.47 pounds per cubic foot. It follows then, that 47,919 cubic feet of halite has gone into solution this year. The amount of fresh water injected (94,485 bbls) as compared to the amount of brine produced (85,810 bbls) shows that water is being used to fill the cavity as the cavity increases in volume:

121,118 bbls / 133,338 bbls = 90.8% of water is being recovered as brine, 9.2% is being used to fill the brine cavity.

Since it is impossible to know the exact dimensions of the cavity, some assumptions are reasonably made. OCD regulations require that fresh water be injected down a tubing string so that brine may be produced up the tubing/casing annulus. Therefore, brine generation begins at total tubing depth, and by the time water so circulated reaches that annulus, it has become saturated brine (or "10# brine"). It is logical then, that dissolution will be rapid at first, then tapers off as saturation is achieved. Such action would imply a cone shaped (inverted cone) cavity.

The formula to calculate the volume of a truncated cone is:

$$\text{Volume} = (1/3) \times \pi (R^2 + (R \times r) + r^2) H$$

Where:

- 1) r equals the radius of the small end cone diameter in feet
- 2) R equals the radius of the large end cone diameter in feet
- 3) R<sup>2</sup> is "R squared". r<sup>2</sup> is "r squared".
- 4) H is depth in feet from tubing depth to top of salt (casing shoe).

Fresh water used at BW38 for the purpose of brine generation is known to weigh 8.4 lbs. per gallon. Therefore 1.6 lbs. of salt must be taken up by each gallon of fresh water so injected to result in 10 ppg brine water, which is the known industry standard. It follows then that each barrel of brine water (one API barrel = 42 gallons) contains 42 x 1.6 lbs. of salt, or 67.2 lbs. of salt. One cubic foot of salt weighs 137.47 lbs. Continuing, the cubic feet of salt consumed in one year is equal to the total amount of salt that is calculated to have gone into solution divided by 137.47 lbs.

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The illustration on the following page, with dimensions shown, satisfies the number of cubic feet of halite in solution since operations began, hence the size of cavern.

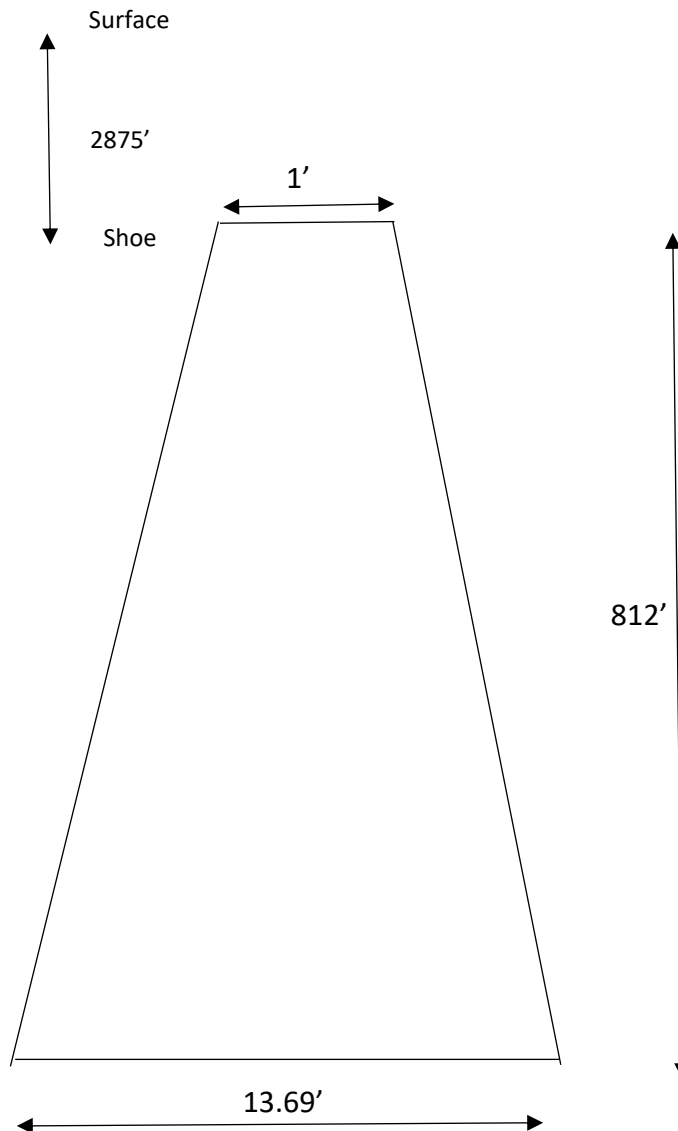
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## Cavern Size, Shape, &amp; Volume Estimate

State 27 # 1 (BW-38)  
EOY 2019 Brine Cavity Characterization



Estimated height (H) to Casing Shoe is 2875'

Estimated cavern floor diameter (D) is 13.69'

Estimated \* Cavern Collapse Ratio is **.0047** where  $13.69/2875 = .0047$

Inserted formula values:  $.3330 \times 3.1415(6.982\text{sq} + 7.982) 812$  or 47,919 cu ft of halite solution mined (by rounding to the third decimal).

\* Per the OCD, the Cavern Collapse Ratio is D/H



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## **APPENDIX C**

### **Subsidence Survey Results**

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Marvin Burrows  
Llano Disposal LLC  
Lovington, New Mexico, 88260  
806-471-5628

March 14, 2019

RE: Survey Report  
Llano Disposal LLC'S State 27 BSW #1 (BW-38) Project  
2019.1018

100 E. Navajo Drive Suite 100 Hobbs NM 88240 T 575 393 9827 F 575 393 1543 Pettigrew.us

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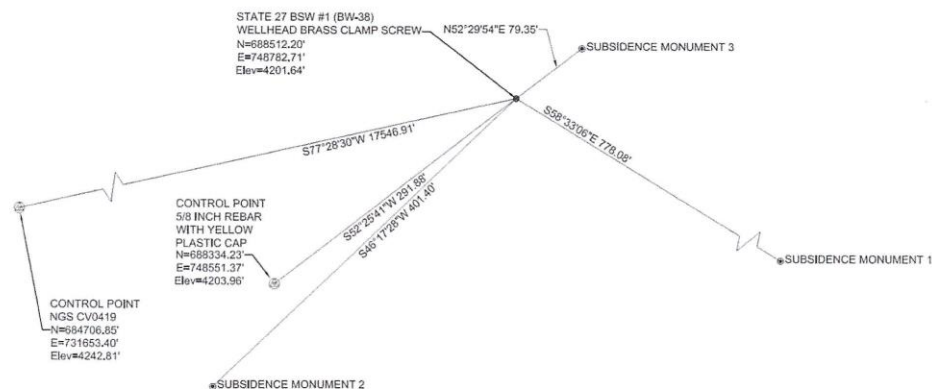
2019



## SUBSIDENCE MONUMENT SURVEY

On February 27, 2019 a field survey was conducted to set and observe positions of three new subsidence monuments for the State 27 BSW #1 (BW-38) Llano Wellhead located at: N33°13'21.03893", W103°18'55.69480". The well location and associated subsidence monuments can be accessed from Highway 82, approximately 6.5 miles East of Maljamar, NM in Lea County.

The Google Earth image and the sketch below illustrate locations of the monuments:





The discussion was to set at least three monuments at varying distances from the well head. The three monuments were set at differing distances in three separate directions.

This survey was conducted using Trimble R10 GNSS Receivers and a Trimble S6. The GNSS Receivers were used to establish the locations of the monuments and the well head through Differential GNSS observations. In an effort to tie into an existing published control point, the National Geodetic Survey website was reference to find the nearest published benchmark. Vertical Control point CV0419 is located approximately 17,546.91 feet or 3.31 miles southwest of the well site. A Control Point (10-A 5/8-inch rebar with a yellow plastic cap) was set close to the project's location. A GNSS base was setup over the point and static data was observed for nearly two hours. The data was then submitted to an online positioning service to firmly establish the horizontal coordinates:

Latitude: N32°53'25.53739", Longitude: W103°39'29.79702" with an elevation of 4203.96 feet. Once this position was established, the NGS Monument (CV0419) was verified for accuracy.

While, the accepted elevation for the point was used. The Trimble S6 was then used to accurately establish the elevation of the monuments and the wellhead in relation to the NGS control point featured above in the Google Maps screenshot. The data is stored onboard and may be transferred directly into the computer software at the office for analysis of results, ensuring greater accuracy.

### **SUBSIDENCE MONITORING PLAN**

The NGS Control Point CV0419, with an observed elevation of 4242.79 feet above mean sea level (MSL), will be used as the Reference Control Point for determining the elevations of the newly placed Subsidence Monuments. The elevations of these monuments will be observed semi-annually by a level loop run with the DiNi level to ensure accuracy and precision.

Future observations made on all available points and tabulated to compare the elevations to the base elevations were established on February 27, 2019. The results will be graphically represented by trend lines representing measurements made on each monument. The continual change will be monitored by P.A. and presented to you semi-annually.



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## MONUMENT DESCRIPTIONS

Each of the monuments set and observed are shown below with a description and images of the point.

### CV0419

NGS Control Point CV0419 is a brass U.S. Coast & Geodetic Survey Benchmark set in concrete. It is stamped with an X and with the year it was set as shown below, followed by the NGS datasheet:



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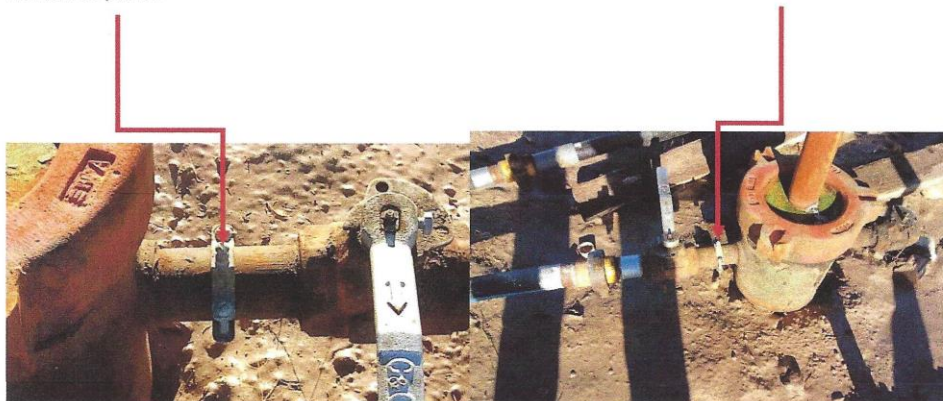
Llano Disposal, LLC BW-38 API 30-025-20592

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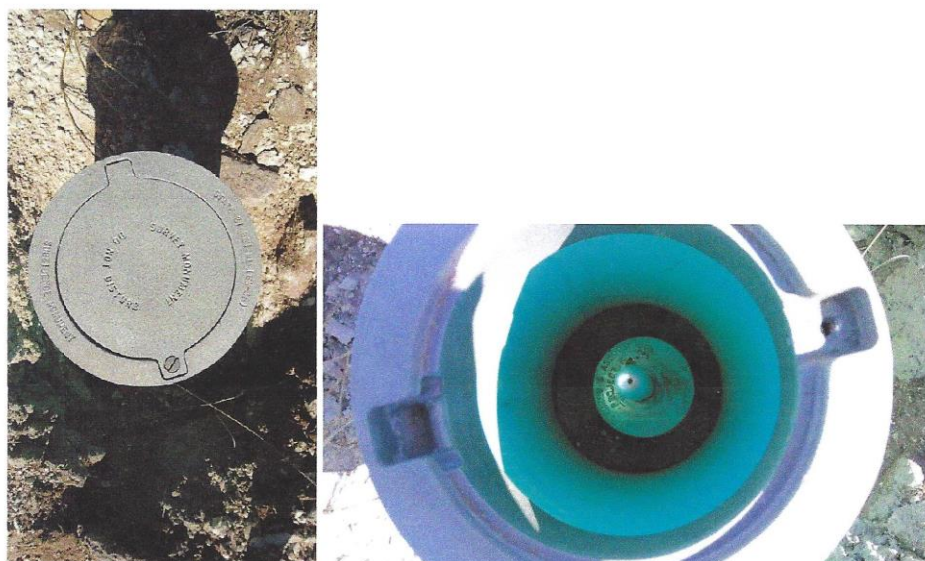
Llano Disposal LLC'S State 27 BSW #1 (BW-38)

The existing wellhead was measured on the top screw of a brass clamp; leaving the wellhead on a horizontal plane.



**Subsidence Monument 1**

A Berntsen three quarter inch Aluminum Top Security Sleeve Monument was set. It consists of a rod driven till refusal into a pre drilled three-foot deep hole with a twelve inch diameter. The sleeved rod is encased in six-inch PVC filled with sand, then topped with a Datum Point and an Aluminum Floating Datum Cap. It is then capped with an Access Cover that must be removed with a flathead screw driver or similar tool. The Monument is pictured below:



**Subsidence Monument 2**

A Berntsen three quarter inch Aluminum Top Security Sleeve Monument was set. It consists of a rod driven till refusal into a pre drilled three-foot deep hole with a twelve inch diameter. The sleeved rod is encased in six-inch PVC filled with sand, then topped with a Datum Point and an Aluminum Floating Datum Cap. It is then capped with an Access Cover that must be removed with a flathead screw driver or similar tool. The Monument is pictured below:





**Subsidence Monument 3**

A Berntsen three quarter inch Aluminum Top Security Sleeve Monument was set. It consists of a rod driven till refusal into a pre drilled three-foot deep hole with a twelve inch diameter. The sleeved rod is encased in six-inch PVC filled with sand, then topped with a Datum Point and an Aluminum Floating Datum Cap. It is then capped with an Access Cover that must be removed with a flathead screw driver or similar tool. The Monument is pictured below



Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



## STATE PLANE POINT REPORT FROM TRIMBLE BUSINESS CENTER

Project file data		Coordinate System	
Name:	Z:\2019.1018\Field Data \LlanoDisposal_BSW#1.vce	Name:	United States/State Plane 1983
Size:	74 KB	Datum:	NAD 1983 (Conus)
Modified:	3/12/2019 8:08:14 AM (UTC:-6)	Zone:	New Mexico East 3001
Time zone:	Mountain Standard Time	Geoid:	GEOID12B (Conus)
Reference number:		Vertical datum:	
Description:		Calibrated site:	Default
Comment 1:			
Comment 2:			
Comment 3:			

## Additional Coordinate System Details

Local Site Settings			
Project latitude:	N32.89043	Ground scale factor:	1.00023945679565
Project longitude:	W 103.65826	False northing offset:	0.000
Project height:	4131.494	False easting offset:	0.000

## Point List

ID	Northing (U S survey foot)	Easting (U S survey foot)	Elevation (U S survey foot)	Feature Code
1	684706.851	731653.399	4242.814	CV0419
500	688512.204	748782.710	4201.637	WELLHEAD BRASS CLAMP SCREW
501	688106.256	749446.501	4198.647	SUBSIDENCE MONUMENT 1
502	688234.839	748492.553	4205.138	SUBSIDENCE MONUMENT 2
503	688560.510	748845.660	4201.367	SUBSIDENCE MONUMENT 3

3/12/2019 2:29:32 PM	Z:\2019.1018\Field Data \LlanoDisposal_BSW#1.vce	Trimble Business Center
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Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



## LAT/LONG POINT REPORT FROM TRIMBLE BUSINESS CENTER

Project file data		Coordinate System	
Name:	Z:\2019.1018\Field Data \LlanoDisposal_BSW#1.vce	Name:	United States/State Plane 1983
Size:	74 KB	Datum:	NAD 1983 (Conus)
Modified:	3/12/2019 8:08:14 AM (UTC:-6)	Zone:	New Mexico East 3001
Time zone:	Mountain Standard Time	Geoid:	GEOID12B (Conus)
Reference number:		Vertical datum:	
Description:		Calibrated site:	Default
Comment 1:			
Comment 2:			
Comment 3:			

## Additional Coordinate System Details

Local Site Settings			
Project latitude:	N32.89043	Ground scale factor:	1.00023945679565
Project longitude:	W 103.65826	False northing offset:	0.000
Project height:	4131.494	False easting offset:	0.000

## Point List

ID	Latitude (Local)	Longitude (Local)	Height (Local) (US survey foot)	Feature Code
1	N32.88074	W103.71338	4170.055	CV0419
500	N32.89091	W103.65752	4129.175	WELLHEAD BRASS CLAMP SCREW
501	N32.88978	W103.65537	4126.189	SUBSIDENCE MONUMENT 1
502	N32.89015	W103.65847	4132.669	SUBSIDENCE MONUMENT 2
503	N32.89104	W103.65731	4128.905	SUBSIDENCE MONUMENT 3

3/12/2019 2:28:27 PM	Z:\2019.1018\Field Data \LlanoDisposal_BSW#1.vce	Trimble Business Center
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## Annual Report

## Llano Disposal, LLC BW-38 API 30-025-20592

2019

## NATIONAL GEODETIC SURVEY DATA SHEET:

The information used in this report was obtained using the benchmark search engine <http://benchmarks.scaredycatfilms.com/index.php#> to locate the benchmark and the <https://www.geocaching.com/play> website to generate a pdf copy of the original datasheet shown below.

## The NGS Data Sheet

See file [dsdata.pdf](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.12.5.2
1      National Geodetic Survey,      Retrieval Date = JANUARY 24, 2019
CV0419
*****
CV0419 DESIGNATION - S 34
CV0419 PID - CV0419
CV0419 STATE/COUNTY- NM/LEA
CV0419 COUNTRY - US
CV0419 USGS QUAD - BUCKEYE NW (1985)
CV0419
CV0419 *CURRENT SURVEY CONTROL
CV0419
CV0419* NAD 83(2011) POSITION- 32 52 50.67906(N) 103 42 48.16824(W)
ADJUSTED
CV0419* NAD 83(2011) ELLIP HT- 1271.020 (meters) (06/27/12)
ADJUSTED
CV0419* NAD 83(2011) EPOCH - 2010.00
CV0419* NAVD 88 ORTHO HEIGHT - 1293.204 (meters) 4242.79 (feet)
ADJUSTED
CV0419
CV0419 GEOID HEIGHT - -22.177 (meters)
GEOID12B
CV0419 NAD 83(2011) X - -1,271,316.846 (meters) COMP
CV0419 NAD 83(2011) Y - -5,209,862.727 (meters) COMP
CV0419 NAD 83(2011) Z - 3,443,549.027 (meters) COMP
CV0419 LAPLACE CORR - 1.99 (seconds)
DEFLEC12B
CV0419 DYNAMIC HEIGHT - 1291.396 (meters) 4236.85 (feet) COMP
CV0419 MODELED GRAVITY - 979,194.1 (mgal) NAVD
88
CV0419
CV0419 VERT ORDER - FIRST CLASS II
CV0419
CV0419 Network accuracy estimates per FGDC Geospatial Positioning Accuracy
CV0419 Standards:
CV0419 FGDC (95% conf, cm) Standard deviation (cm) CorrNE
CV0419 Horiz Ellip SD_N SD_E SD_h (unitless)
CV0419 -----
CV0419 NETWORK 0.65 1.76 0.28 0.25 0.90 -0.06077748
CV0419 -----

```



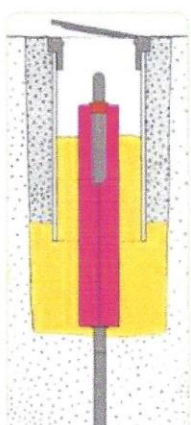
### Top Security Sleeve Rod Monuments



### Berntsen Sectional Rod Monument with Floating Sleeve

Berntsen's exclusive Top Security™ Sleeve 3-Dimensional Rod Monument System is specifically designed for high-precision geodetic and GPS surveys. Its patented design helps protect against excessive movements in the control monument. The Berntsen extendible rods, when driven to refusal, provide excellent vertical stability. The unique Y-shaped design of the Top Security Sleeve adds the second and third dimension to provide the most stable 3-D survey monument available.

**Eliminate most common and unexpected shifts in stability** by eliminating most of the direct transfer of shifts in movement from ground level or surface movement. Here's how: Rod markers (driven to refusal) have good vertical stability but can be disturbed by the natural phenomenon known as frost heave. Rod markers, installed with a greased-filled PVC pipe surrounding the upper three or four feet (900 or 1200 mm) (or more) of rod, are known to be effective in combating movement caused by frost heave but offer little protection against possible horizontal movement of surrounding earth (another major cause of differences in readings on rod markers). For the first time, Berntsen's Top Security Sleeve™ with the horizontal stability of the original Berntsen Top Security™ finned rod marker system, this is now available in a commercially available survey monument.



**It's even extendible!** 3' (914mm) lengths of Top Security Sleeves can also be connected together by Berntsen's exclusive End Cap Alignment Bushings and a little PVC Cement. When used in combination(s), nearly any even-foot length over six feet long (1.83m) of support for the rod marker is possible. That's innovative and flexible design at work for you.

**More good news!** The Top Security Sleeves' greatest advantage at installation time is speed. Simply drive standard Berntsen round rods to refusal, slip on the grease-filled finned Top Security Sleeve (recommended sleeve length greater than maximum recorded local frost depth), back-fill around the fins with sand, tamp firmly. The color coded End Cap Alignment Bushings follow Berntsen's long established universal color codes for rod marker systems and tell other surveyor's at a glance what size rod is installed - 9/16" (14 mm) Yellow; 3/4" (19 mm) Blue. We recommend NO-TOX lubricating grease to fill the Top Security Sleeve. It is specially formulated to be non-toxic and environmentally safe. It is available in an easy to use cartridge that fits a standard "grease gun". One cartridge should be used for each 36" (915mm) long Top Security Sleeve.



**Annual Report**

**Llano Disposal, LLC BW-38 API 30-025-20592**

**2019**

## **APPENDIX D**

Sundries

## Annual Report

## Llano Disposal, LLC BW-38 API 30-025-20592

2019

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

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

Form C-103  
 Revised July 18, 2013

WELL API NO.  
 30-025-20592

5. Indicate Type of Lease  
 STATE ☒ FEE ☐  
 State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name  
 State 27

8. Well Number  
 1

9. OGRID Number  
 370661

10. Pool name or Wildcat  
 BSW: Salado

SUNDRY NOTICES AND REPORTS ON WELLS  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other - PxA Well Re-entry

2. Name of Operator  
 Llano Disposal, LLC

3. Address of Operator  
 P.O. Box 190, Lovington, NM 88260

4. Well Location  
 Unit Letter L : 1980 feet from the South line and 660 feet from the West line  
 Section 27 Township 16S Range 33E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
 4201' GL

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☒ PLUG AND ABANDON ☐  
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
 PULL OR ALTER CASING ☐ MULTIPLE COMPL. ☐  
 DOWNHOLE COMMINGLE ☐  
 CLOSED-LOOP SYSTEM ☒  
 OTHER: Re-entry to run CBL, CNL and caliper log ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
 COMMENCE DRILLING OPNS ☐ P AND A ☐  
 CASING/CEMENT JOB ☐  
 OTHER: ☐

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

In accordance with discussions with OCD Environmental Bureau, OCD District I and SLO, Llano Disposal LLC proposes to re-entry this P&A well to inspect casing for possible conversion to a brine supply well pending WQCC Discharge Permit BW-38 approval:

- 1) Back drag/level location, set anchors, dig out around existing PxA marker, MI welder, cut off PxA marker, reveal good 13-3/8" and 9-5/8" casing, install new casing (if necessary) and well head at ground level.
- 2) MIRU pulling unit, NU BOP, unload and tally 2-7/8" workstring, set 2 frac tanks and fill one with FW. MIRU reverse unit, swivel and stripping head, RIH with 8-3/4" skirted MT bit, bit sub, four 4-3/4" DCs and 2-7/8" workstring, drill cement plug #7 (surface to 30'), plug #6 (465' - 198') and plug #5 (1600' - 1465') utilizing closed loop system.
- 3) Tag plug #5 at 4505', circulate hole clean, close BOP, test casing to 300#, POOH & LD 2-7/8" workstring, DCs, bit sub and bit.
- 4) MIRU WL, run CBL, CNL and casing caliper log from base of salt at approximately 2606' to surface, RDMO WL.
- 5) ND BOP, install B-I adaptor, secure and close in well, RDMO pulling unit, reverse unit and tanks.
- 6) Submit CBL, CNL and caliper log to OCD Environmental Bureau (SF) and OCD District I (Hobbs) to determine if well is suitable for brine well service. Suspend further well work until additional permitting is approved.

Spud Date: Rig Release Date: 

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

SIGNATURE DJ Holcomb TITLE Agent for Llano Disposal, LLC DATE 4/18/2018Type or print name Danny J. Holcomb E-mail address: danny@pwllc.net PHONE: 806-471-5628

## For State Use Only

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 04/26/18

Conditions of Approval (if any):

A notice of intent. This form was submitted by Llano Agent, Danny Holcomb, for the purpose of notifying OCD that Llano intended to prepare the location for a re-entry attempt; reestablish the original roadway and pad; excavate the original casing; remove the dry hole marker; and then install BOP equipment. Based on previously submitted well files, Llano described how the re-entry was anticipated to be accomplished and what other actions would be taken.



## Annual Report

## Llano Disposal, LLC BW-38 API 30-025-20592

2019

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

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

Form C-103  
 Revised July 18, 2013

WELL API NO.  
 30-025-20592

5. Indicate Type of Lease  
 STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name  
 State 27 (321282)

8. Well Number 1 BW-38

9. OGRID Number (Pending)  
 370661

10. Pool name or Wildcat  
 BSW; Salado (96173)

SUNDY NOTICES AND REPORTS ON WELLS  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other - PxA Well Re-entry

2. Name of Operator  
 Llano Disposal, LLC

3. Address of Operator  
 P.O. Box 190, Lovington, NM 88260

4. Well Location  
 Unit Letter L : 1980 feet from the South line and 660 feet from the West line  
 Section 27 Township 16S Range 33E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
 4201' GL

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
 DOWNHOLE COMMINGLE ☐  
 CLOSED-LOOP SYSTEM ☐  
 OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☒ ALTERING CASING ☐  
 COMMENCE DRILLING OPNS. ☒ P AND A ☐  
 CASING/CEMENT JOB ☐  
 OTHER: Re-entry to run CBL, CNL and caliper log ☒

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

In accordance with discussions with OCD Environmental Bureau, OCD District 1 and SLO, Llano Disposal LLC re-entered this well to inspect casing for possible conversion to a brine supply well pending WQCC Discharge Permit BW-38 approval:

- 4/27/18 - Leveled location, set anchors, dug out around existing PxA marker, MI welder, cut off PxA marker, revealed good 13-3/8" and 9-5/8" casing, installed new casing and well head at ground level.
- 5/14/18 - MIRU pulling unit, NU BOP, unloaded and tallied 2-7/8" workstring, set 2 frac tanks and filled one with FW. MIRU reverse unit, swivel and stripping head, RIH with 8-3/4" skirted MT bit, bit sub, four 4-3/4" DCs and 2-7/8" workstring, drilled cement plug #7 (surface to 30'), plug #6 (465' - 198') and plug #5 (1600' - 1465') utilizing closed loop system.
- 5/19/18 - Tagged plug #5 at 4511', circulated hole clean, closed BOP, tested casing to 500# for 30 minutes, held. POOH & LD 2-7/8" workstring, DCs, bit sub and bit. ND BOP, install B-1 adaptor, secured and closed in well, RDMO pulling unit, reverse unit and tanks.
- 5/22/18 - MIRU WL, run CBL, CNL and casing caliper log from San Andres cement plug at 4511' to surface, RDMO WL.
- 5/23/18 - Emailed logs (CBL, CNL and caliper log) to OCD Environmental Bureau (SF) and hand delivered hard copies to Paul Kautz at OCD District 1 (Hobbs). Suspend further well work until additional permitting is approved.

Re-entry Spud Date: 5/14/2018 Rig Release Date: 5/19/2018

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

SIGNATURE DJ Holcomb TITLE Agent for Llano Disposal, LLC DATE 5/29/2018

Type or print name Danny J. Holcomb E-mail address: danny@pwlcllc.net PHONE: 806-471-5628

For State Use Only

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 06/14/18

Conditions of Approval (if any):

This C103 was submitted after accomplishing the work outlined in the previous C103. All plugs were encountered as listed by the previous operator and were drilled out accordingly. As agreed, Llano ran a CBL log, Compensated Neutron Log, and casing caliper log from 4511' to surface. These logs were submitted to NMOCD for review.



Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

Energy, Minerals and Natural Resources  
Revised July 18, 2013

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

**HOBBES OCD**  
OIL CONSERVATION DIVISION  
220 South St. Francis Dr.  
Santa Fe, NM 87505  
NOV 06 2018

**RECEIVED**

WELL API NO. 30-025-20592

5. Indicate Type of Lease  
STATE ☒ FEE ☐

6. State Oil & Gas Lease No. \_\_\_\_\_

7. Lease Name or Unit Agreement Name  
STATE 27

8. Well Number 1 (BSW 38)

9. OGRID Number  
370661

10. Pool name or Wildcat  
Brine (96173)

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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

2. Name of Operator  
Llano Disposal, LLC

3. Address of Operator  
P.O. Box 250, Lovington NM 88260

4. Well Location  
Unit Letter L: 1980 feet from the S line and 660 feet from the W line  
Section 27 Township 16S Range 33E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
4201

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐  
CLOSED-LOOP SYSTEM ☐  
OTHER: Complete to Brine Well ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐  
OTHER: ☐

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

Llano will rig up to complete well bore to Brine Generation Service per approved plans outlined in NMOC Brine permit BSW038.

Spud Date: 11/15/18

Rig Release Date: \_\_\_\_\_

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

SIGNATURE Marvin Burrows TITLE Agent for DATE 11/3/18  
Type or print name Marvin Burrows E-mail address BURROWSMARVIN@EMIL.COM PHONE: 631-6067  
For State Use Only

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 11/06/18  
Conditions of Approval (if any): \_\_\_\_\_

A notice of intent form notifying OCD that Llano planned to rig up to proceed with completion activities as approved under permit.

Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

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

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

Form C-103  
 Revised July 18, 2013

WELL API NO. <b>30-025-20592</b>	
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No. <b>BSW</b>	
7. Lease Name or Unit Agreement Name <b>STATE 27</b>	
8. Well Number <b>1</b>	
9. OGRID Number <b>370661</b>	
10. Pool name or Wildcat <b>SALADO</b>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	

SUNDY NOTICES AND REPORTS ON WELLS  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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

2. Name of Operator  
**LLANO DISPOSAL, LLC**

3. Address of Operator  
**Box 250, Lovington N.M. 88260**

4. Well Location  
 Unit Letter **L** : 1980 feet from the **S** line and **660** feet from the **W** line  
 Section **27** Township **16S** Range **33E** NMPM County **Lea**

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

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

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

Per plan outlined in NMOC permit BSW038, cut a window in the 95' casing, then drilled into the salt section. Discovered salt bearing strata. Run temp production string to circulate clean (fresh down tubing, bring up casing).

Spud Date:

Rig Release Date:

 12/6/18

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

SIGNATURE Marvin Burrows TITLE Agent for DATE 12/14/18  
 Type or print name Marvin Burrows E-mail address: BURROWS MARVIN PHONE: 575-631-8067  
 For State Use Only @GMAIL.COM  
 APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 12/17/18  
 Conditions of Approval (if any):

A subsequent report of work done notifying OCD that Llano had accomplished completion work as prescribed BW38 permit as issued.



## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

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

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised July 18, 2013

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO. <b>30-025-20592</b>
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE
6. State Oil & Gas Lease No. <b>STATE SALADO</b>
7. Lease Name or Unit Agreement Name <b>STATE 27</b>
8. Well Number <b>1</b>
9. OGRID Number <b>370661</b>
10. Pool name or Wildcat <b>SALADO BSW</b>

SUNDRY NOTICES AND REPORTS ON WELLS  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well Gas Well Other ☒ **BSW**

2. Name of Operator  
**Llano Disposal, LLC**

3. Address of Operator  
**P.O. Box 250, Lovington NM, 88260**

4. Well Location  
 Unit Letter **L** : **1980** feet from the **S** line and **660** feet from the **W** line  
 Section **27** Township **16S** Range **38E** NMPM County **Lea**

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

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

## NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK PLUG AND ABANDON  
 TEMPORARILY ABANDON CHANGE PLANS  
 PULL OR ALTER CASING MULTIPLE COMPL

DOWNHOLE COMMINGLE

CLOSED-LOOP SYSTEM

OTHER: ☒ **Pressure Test.**

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ALTERING CASING  
 COMMENCE DRILLING OPNS. P AND A  
 CASING/CEMENT JOB

OTHER:

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

**Llano Disposal would like to schedule a casing/cavity pressure for this well on Friday, Jan 11, 2019, at 10:00 AM.**

Spud Date:

Rig Release Date:

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

SIGNATURE Marvin Bunnows TITLE Agent for DATE 1/14/19  
 Type or print name MARVIN BUNNOWS E-mail address: BUNNOWS MARVIN@GMAIL.COM PHONE: 575-631-8067  
 For State Use Only

APPROVED BY: George Sauer TITLE Petroleum Engineer DATE 1/15/2019  
 Conditions of Approval (if any):

A notice of intent notifying OCD that Llano planned to run a brine cavity pressure test. Stipulated date and time in notice. This test was cancelled due to a lack of available service equipment.

## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

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

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

Form C-103  
 Revised July 18, 2013

WELL API NO. 30-025-20592

5. Indicate Type of Lease  
 STATE ☒ FEE ☐

6. State Oil & Gas Lease No.  
---

7. Lease Name or Unit Agreement Name  
State "27"

8. Well Number 1 (BSW 38)

9. OGRID Number  
370661

10. Pool name or Wildcat  
Brine (96173)

SUNDRY NOTICES AND REPORTS ON WELLS  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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

2. Name of Operator  
Llano Disposal LLC

3. Address of Operator  
PO Box 250 Lovington NM 88260

4. Well Location  
 Unit Letter L : 1980 feet from the S line and 660 feet from the W line  
 Section 27 Township 16S Range 33E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
4201

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
 PULL OR ALTER CASING ☐ MULTIPLE COMPL. ☐  
 DOWNHOLE COMMINGLE ☐  
 CLOSED-LOOP SYSTEM ☐  
 OTHER: Casing/cavity test ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
 COMMENCE DRILLING OPNS. ☐ P AND A ☐  
 CASING/CEMENT JOB ☐  
 OTHER: ☐

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

Llano Disposal LLC would like to schedule a casing/cavity pressure test for this well on June 28 2019 @ 8:00 am

Spud Date:

Rig Release Date:

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

SIGNATURE E. Skins TITLE Agent DATE 6-21-19  
 Type or print name Elizabeth Skins E-mail address: Service@llano PHONE: 575-602-2503  
bi.no.com  
 APPROVED BY: Carey Skins TITLE Environmental Engr. DATE 6/21/19  
 Conditions of Approval (if any):

A notice of intent form submitted to the prior C103 that had to be cancelled due to inability to secure pump truck services. This test was also not performed – weather related.



Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

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

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

Form C-103  
 Revised July 18, 2013

WELL API NO. 30-025-20592

5. Indicate Type of Lease  
 STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name  
 State "27"

8. Well Number 18SW 387

9. OGRID Number 370661

10. Pool name or Wildcat  
 Brine (96173)

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

2. Name of Operator  
 Llano Disposal LLC

3. Address of Operator  
 PO BOX 250 Lovington NM 88260

4. Well Location  
 Unit Letter L : 1980 feet from the S line and 660 feet from the W line  
 Section 27 Township 16S Range 33E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
 4201

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
 DOWNHOLE COMMINGLE ☐  
 CLOSED-LOOP SYSTEM ☐  
 OTHER: Casing/Cavity test ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
 COMMENCE DRILLING OPNS. ☐ P AND A ☐  
 CASING/CEMENT JOB ☐  
 OTHER: ☐

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

Llano Disposal LLC would like to schedule a  
 Casing/Cavity Pressure test for this well on July 31  
 2019  
 @ 8:30 a.m.

Spud Date:

Rig Release Date:

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

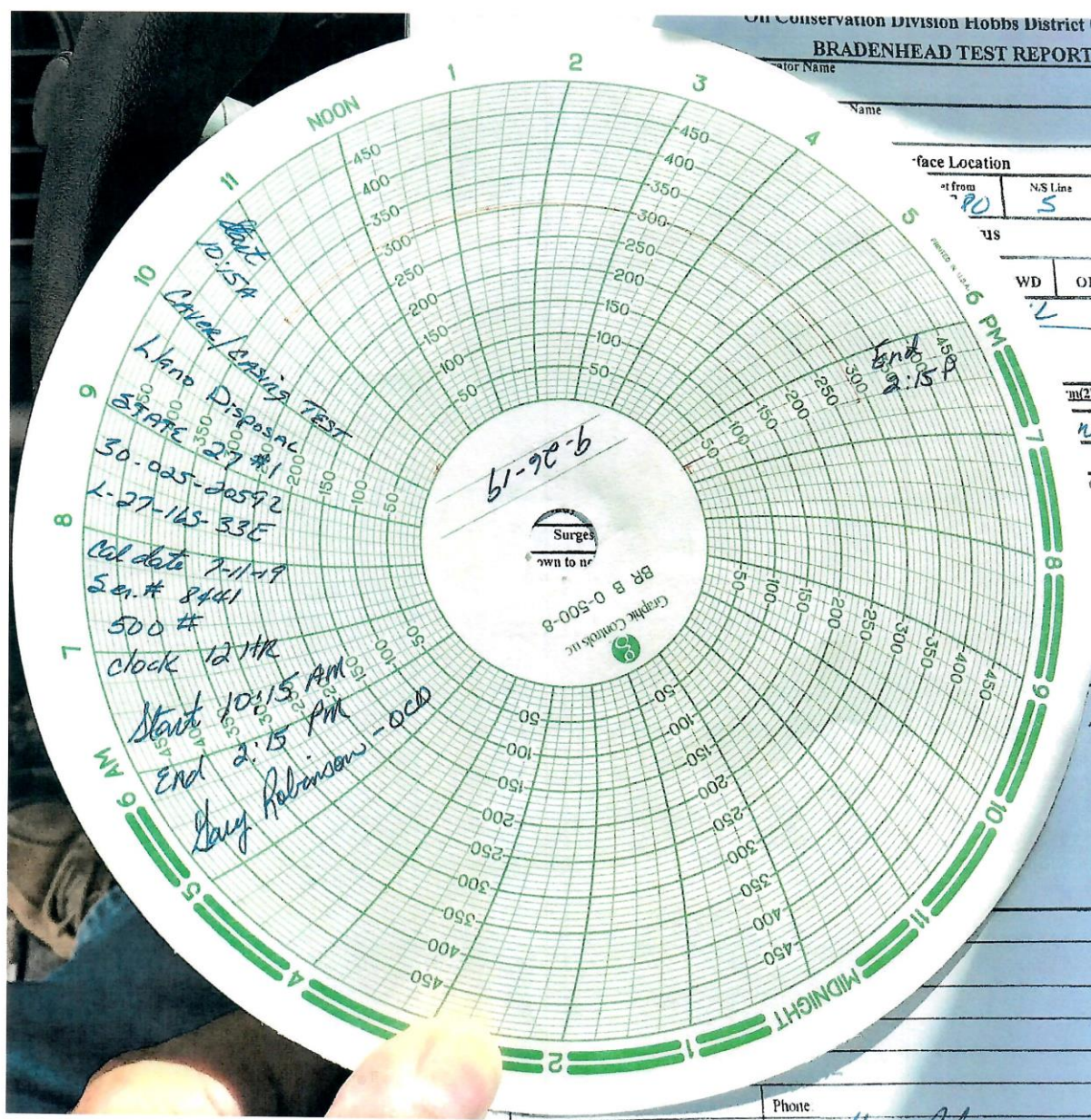
SIGNATURE Elizabeth Gaskins TITLE Agent DATE 7-24-19  
 Type or print name Elizabeth Gaskins E-mail address: Service@llano PHONE: 575-602-2502  
 For State Use Only brine.com  
 APPROVED BY: Kenny Foster TITLE Compliance Officer A DATE 7-25-19  
 Conditions of Approval (if any):

A notice of intent form to give notice again, of a brine cavity test to be performed on this well.

Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



Subsequent to previous notices, resolution of procedure, and in coordination with OCD, a brine cavity pressure test was run on 7/11/19 with NMOCD Gary Robinson witness. The well passed the 3-hour pressure test requirement, and so resumed brine operation.



**Annual Report**

**Llano Disposal, LLC BW-38 API 30-025-20592**

**2019**

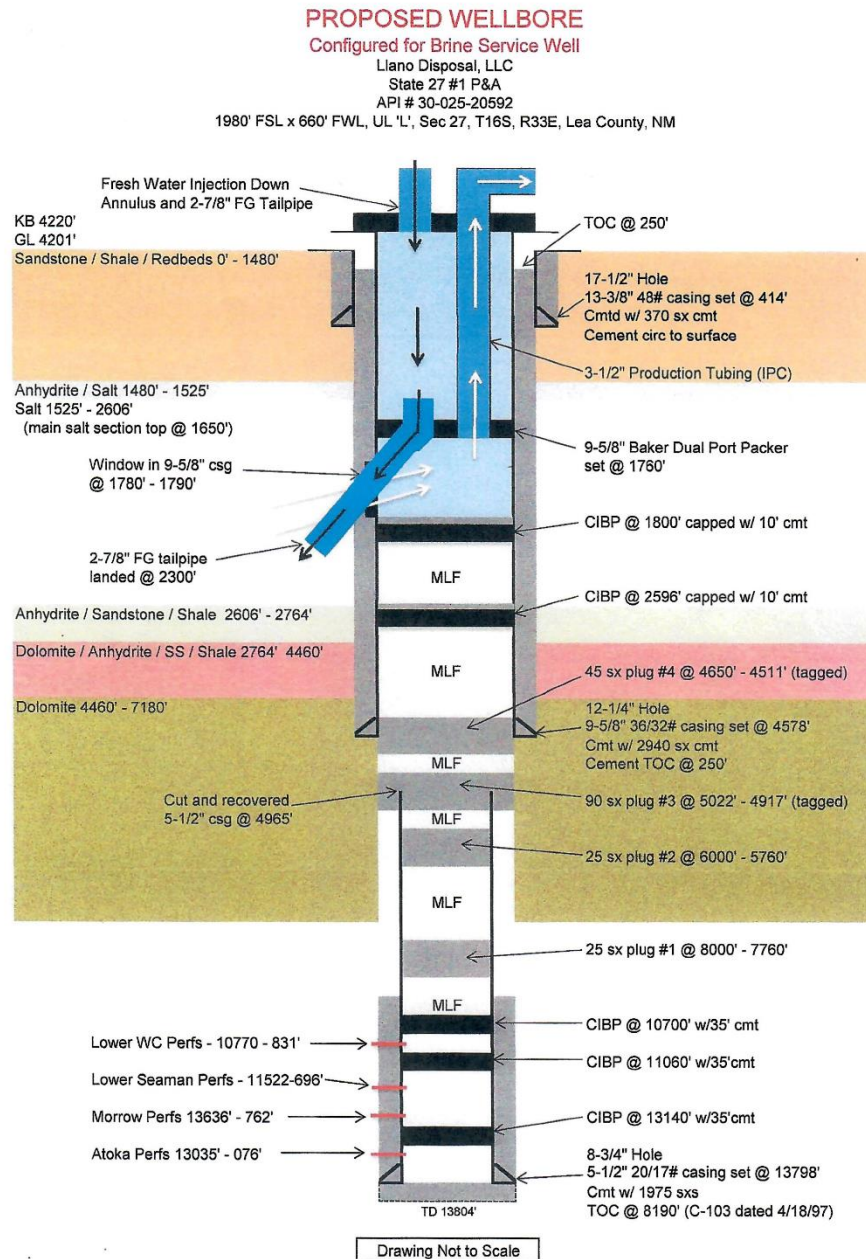
## **APPENDIX E**

**Well Diagrams**

## Annual Report

## Llano Disposal, LLC BW-38 API 30-025-20592

2019



Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

## APPENDIX F

### Chemical Analysis

Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

July 16, 2018

MARVIN BURROWS

LLANO DISPOSAL, LLC

125 W. ST. ANNE

HOBBS, NM 88240

RE: CAPROCK BSW

Enclosed are the results of analyses for samples received by the laboratory on 07/09/18 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

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

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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

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

Sincerely,

A handwritten signature in cursive script, reading "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

**Analytical Results For:**

LLANO DISPOSAL, LLC 125 W. ST. ANNE HOBBS NM, 88240		Project: CAPROCK BSW Project Number: NONE GIVEN Project Manager: MARVIN BURROWS Fax To: NONE	Reported: 16-Jul-18 09:40	
Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received

SAMPLE A	H801855-01	Water	09-Jul-18 14:45	09-Jul-18 15:30
SAMPLE B	H801855-02	Water	09-Jul-18 14:45	09-Jul-18 15:30

Cardinal Laboratories

\* = Accredited Analyte

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

A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 9

## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

**SAMPLE A**  
**H801855-01 (Water)**

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

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

Alkalinity, Bicarbonate	190		5.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Chloride*	36.0		4.00	mg/L	1	8070501	AC	10-Jul-18	4500-Cl-B	
Conductivity*	480		1.00	uS/cm	1	8071001	AC	10-Jul-18	120.1	
pH*	7.73		0.100	pH Units	1	8071001	AC	10-Jul-18	150.1	
Sulfate*	34.3		10.0	mg/L	1	8071002	AC	10-Jul-18	375.4	
TDS*	324		5.00	mg/L	1	8070311	AC	11-Jul-18	160.1	
Alkalinity, Total*	156		4.00	mg/L	1	8062505	AC	10-Jul-18	310.1	

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

Calcium*	70.9		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Magnesium*	8.93		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Potassium*	2.86	0.677	10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	J
Sodium*	15.2		10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

**SAMPLE B**  
**H801855-02 (Water)**

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

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

Alkalinity, Bicarbonate	181		5.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8062505	AC	10-Jul-18	310.1	
Chloride*	48.0		4.00	mg/L	1	8070501	AC	10-Jul-18	4500-Cl-B	
Conductivity*	468		1.00	uS/cm	1	8071001	AC	10-Jul-18	120.1	
pH*	7.86		0.100	pH Units	1	8071001	AC	10-Jul-18	150.1	
Sulfate*	34.0		10.0	mg/L	1	8071002	AC	10-Jul-18	375.4	
TDS*	310		5.00	mg/L	1	8070311	AC	11-Jul-18	160.1	
Alkalinity, Total*	148		4.00	mg/L	1	8062505	AC	10-Jul-18	310.1	

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

Calcium*	47.0		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Magnesium*	9.14		1.00	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Potassium*	2.49	0.677	10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	
Sodium*	38.4		10.0	mg/L	10	B807085	JDA	12-Jul-18	EPA200.7	

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8062505 - General Prep - Wet Chem</b>										
<b>Blank (8062505-BLK1)</b>				Prepared & Analyzed: 25-Jun-18						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
<b>LCS (8062505-BS1)</b>				Prepared & Analyzed: 25-Jun-18						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120			
Alkalinity, Total	250	10.0	mg/L	250		100	80-120			
<b>LCS Dup (8062505-BSD1)</b>				Prepared & Analyzed: 25-Jun-18						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	355	12.5	mg/L				80-120	15.2	20	
Alkalinity, Total	290	10.0	mg/L	250		116	80-120	14.8	20	
<b>Batch 8070311 - Filtration</b>										
<b>Blank (8070311-BLK1)</b>				Prepared: 03-Jul-18 Analyzed: 09-Jul-18						
TDS	ND	5.00	mg/L							
<b>LCS (8070311-BS1)</b>				Prepared: 03-Jul-18 Analyzed: 05-Jul-18						
TDS	482	5.00	mg/L	527		91.5	80-120			
<b>Duplicate (8070311-DUP1)</b>				Source: H801800-02 Prepared: 03-Jul-18 Analyzed: 05-Jul-18						
TDS	1730	5.00	mg/L	1720				0.348	20	
<b>Batch 8070501 - General Prep - Wet Chem</b>										
<b>Blank (8070501-BLK1)</b>				Prepared & Analyzed: 05-Jul-18						
Chloride	4.00	4.00	mg/L							

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8070501 - General Prep - Wet Chem</b>										
<b>LCS (8070501-BS1)</b>										
					Prepared & Analyzed: 05-Jul-18					
Chloride	100	4.00	mg/L	100		100	80-120			
<b>LCS Dup (8070501-BSD1)</b>										
					Prepared & Analyzed: 05-Jul-18					
Chloride	96.0	4.00	mg/L	100		96.0	80-120	4.08	20	
<b>Batch 8071001 - General Prep - Wet Chem</b>										
<b>LCS (8071001-BS1)</b>										
					Prepared & Analyzed: 10-Jul-18					
pH	7.06		pH Units	7.00		101	90-110			
Conductivity	478		uS/cm	500		95.6	80-120			
<b>Duplicate (8071001-DUP1)</b>										
					Source: H801855-01		Prepared & Analyzed: 10-Jul-18			
Conductivity	483	1.00	uS/cm		480			0.623	20	
pH	7.77	0.100	pH Units		7.73			0.516	20	
<b>Batch 8071002 - General Prep - Wet Chem</b>										
<b>Blank (8071002-BLK1)</b>										
					Prepared & Analyzed: 10-Jul-18					
Sulfate	ND	10.0	mg/L							
<b>LCS (8071002-BS1)</b>										
					Prepared & Analyzed: 10-Jul-18					
Sulfate	22.1	10.0	mg/L	20.0		110	80-120			
<b>LCS Dup (8071002-BSD1)</b>										
					Prepared & Analyzed: 10-Jul-18					
Sulfate	19.8	10.0	mg/L	20.0		99.0	80-120	10.7	20	

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

**Analytical Results For:**

LLANO DISPOSAL, LLC  
125 W. ST. ANNE  
HOBBS NM, 88240

Project: CAPROCK BSW  
Project Number: NONE GIVEN  
Project Manager: MARVIN BURROWS  
Fax To: NONE

Reported:  
16-Jul-18 09:40

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B807085 - Total Rec. 200.7/200.8/200.2</b>										
<b>Blank (B807085-BLK1)</b>				Prepared: 11-Jul-18 Analyzed: 12-Jul-18						
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
<b>LCS (B807085-BS1)</b>				Prepared: 11-Jul-18 Analyzed: 12-Jul-18						
Sodium	3.50	1.00	mg/L	3.24		108	85-115			
Potassium	8.13	1.00	mg/L	8.00		102	85-115			
Magnesium	19.5	0.100	mg/L	20.0		97.4	85-115			
Calcium	4.01	0.100	mg/L	4.00		100	85-115			
<b>LCS Dup (B807085-BSD1)</b>				Prepared: 11-Jul-18 Analyzed: 12-Jul-18						
Potassium	8.33	1.00	mg/L	8.00		104	85-115	2.43	20	
Sodium	3.48	1.00	mg/L	3.24		107	85-115	0.713	20	
Calcium	4.09	0.100	mg/L	4.00		102	85-115	1.84	20	
Magnesium	19.9	0.100	mg/L	20.0		99.6	85-115	2.24	20	

Cardinal Laboratories

\* = Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

## Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



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

## Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

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Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019



RUSH!!

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

6 of 6 added

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

Company Name: Llano Disposal LLC

Project Manager: P.O. Box 250

Address: Livingston State: NM Zip: 88240

City: Livingston State: NM Zip: 88240

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_

Project Location: Lea County, NM State: \_\_\_\_\_ Zip: \_\_\_\_\_

Sampler Name: Maxine Burrows Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	ANALYSIS REQUEST
H801835	Sample A		1	GROUNDWATER			11/18/18	2:45	Cation/Anion
	Sample B		1	WASTEWATER					
				SOIL					
				OIL					
				SLUDGE					
				OTHER:					
				ACID/BASE:					
				ICE / COOL					
				OTHER:					

IN CASE NOTE: Liability and Damages. Cardinal's liability and damages are limited to the amount paid by the client for the analysis. No other damages shall be deemed owed unless made in writing and received by Cardinal within 30 days after completion of the applicable analysis. In no event shall Cardinal be liable for indirect or consequential damages. Cardinal's liability shall be limited to the performance of services. In no event shall Cardinal be liable for damages resulting from the use of the above stated results or analysis.

Relinquished By: Maxine Burrows Date: 11/18/18 Time: 1:30

Received By: Maxine Burrows Date: 11/18/18 Time: 2:45

Delivered By: (Circle One) UPS #75 Sample Condition: Intact Yes No

Sampler - UPS - Bus - Other: 2692/26752 No Yes No

CHECKED BY: [Signature]

REMARKS: burrowsmaxine@gmail.com

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

Fax Result: ☐ Yes ☐ No Add'l Fax #: \_\_\_\_\_

**Annual Report**

**Llano Disposal, LLC BW-38 API 30-025-20592**

**2019**

## **APPENDIX G**

Certification

Annual Report

Llano Disposal, LLC BW-38 API 30-025-20592

2019

**Llano Disposal, LLC** certifies that continued salt solution mining will not cause cavern collapse, surface subsidence, property damage, or otherwise threaten public health and the environment, based on geologic and engineering data provided herein.

Darr Angell

Name

Owner/Permittee Holder

Title

Darr Angell

Signature

10/26/22

Date

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

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

COMMENTS

Action 153924

COMMENTS

Operator: LLANO DISPOSAL, L.L.C. P.O. Box 250 Lovington, NM 88260	OGRID: 370661
	Action Number: 153924
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Annual Report 2019	11/8/2022

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 153924

**CONDITIONS**

Operator: LLANO DISPOSAL, L.L.C. P.O. Box 250 Lovington, NM 88260	OGRID: 370661
	Action Number: 153924
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

**CONDITIONS**

Created By	Condition	Condition Date
cchavez	Conditions of Approval are as follows: 1) Submitted reports must contain deliverables specified and required in the Permit; 2) Appendices must contain complete and comprehensive information for the reporting period; and 3) Implement well construction changes via OCD Form C-103 NOI in order to satisfy OCD permit conditions.	11/9/2022