

BW-038

ANNUAL

REPORT

2020

2020 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

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Month	Brine Monthly BBLS	Brine Cumulative BBLS	Fresh Monthly BBLS	Fresh Cumulative BBLS	PSI
Jan	10,880	10,880	11,983	11,983	265
Feb	13,209	24,089	14,546	26,529	265
Mar	2,735	26,824	3,012	29,541	265
Apr	390	27,214	429	29,970	265
May	820	28,034	902	30,872	265
June	550	28,584	606	31,478	265
July	2,160	30,744	2,380	33,858	265
Aug	2,225	32,969	2,450	36,307	265
Sep	1,120	34,089	1,234	37,542	265
Oct	8,985	43,074	9,900	47,441	265
Nov	14,590	57,664	16,068	63,509	265
Dec	15,172	72,836	16,691	80,200	265

Year	Brine Yearly BBLS	Brine Cumulative BBLS	Fresh Yearly BBLS	Fresh Cumulative BBLS
2019	85,810	85,810	94,485	94,485
2020	72,836	158,646	80,200	174,685

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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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Celestine Keene
Celestine 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	

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****2020****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**

There was no data for this period and the pandemic had everything chaotic. Normal operations with vendors, etc. were interrupted.

2. Quarterly Chemical Analysis

Analysis was not done in 2020 and the pandemic had everything chaotic. Normal operations with vendors, etc. were interrupted

3. Surface Subsidence Monitoring Plan Data Results

Other than the initial survey and plan creation, there was no other survey done. The pandemic had everything chaotic. Normal operations with vendors, etc. were interrupted.

Leaks and Spills Corrective Action Reports

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

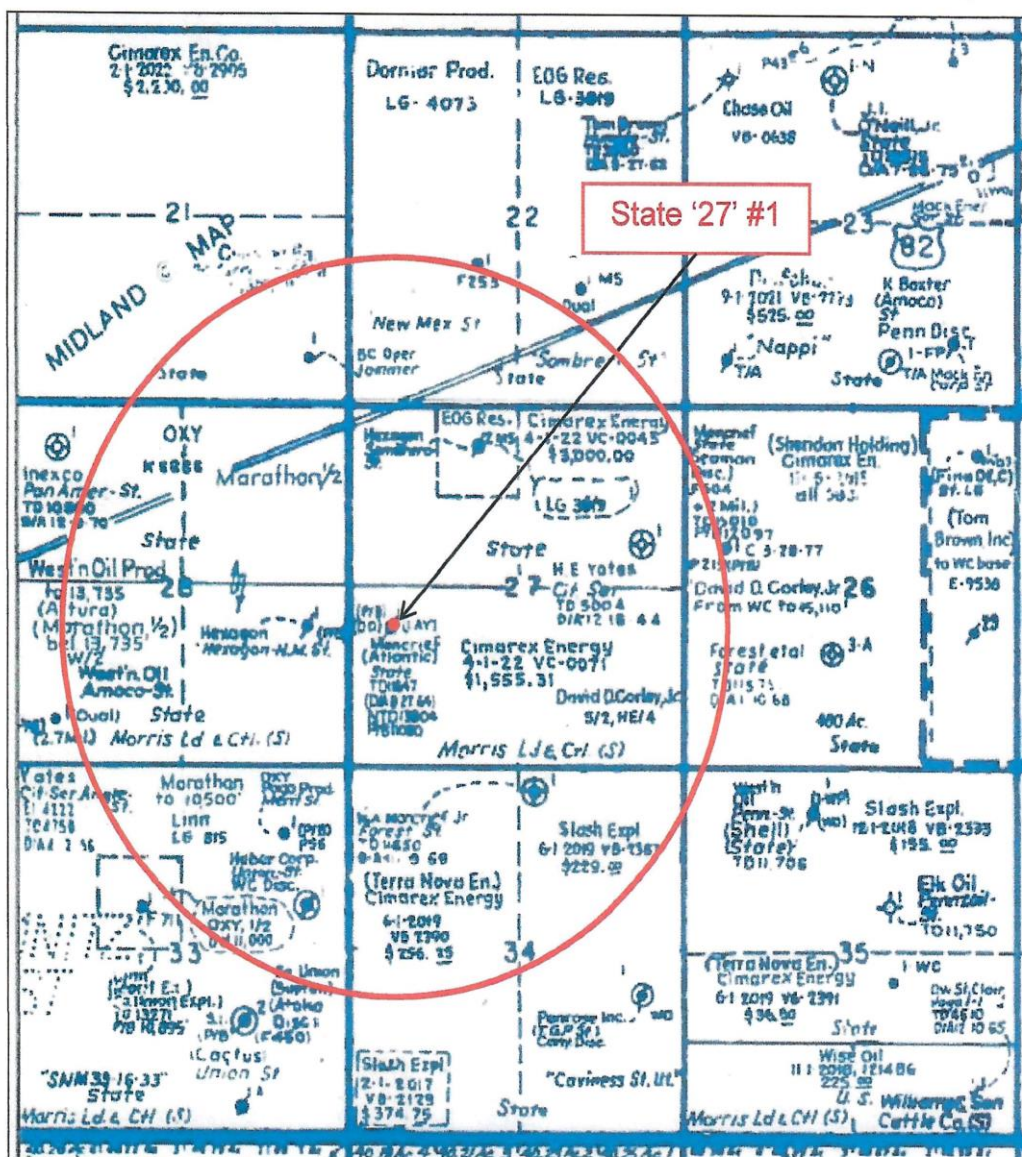
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Area of Review Update Summary

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.



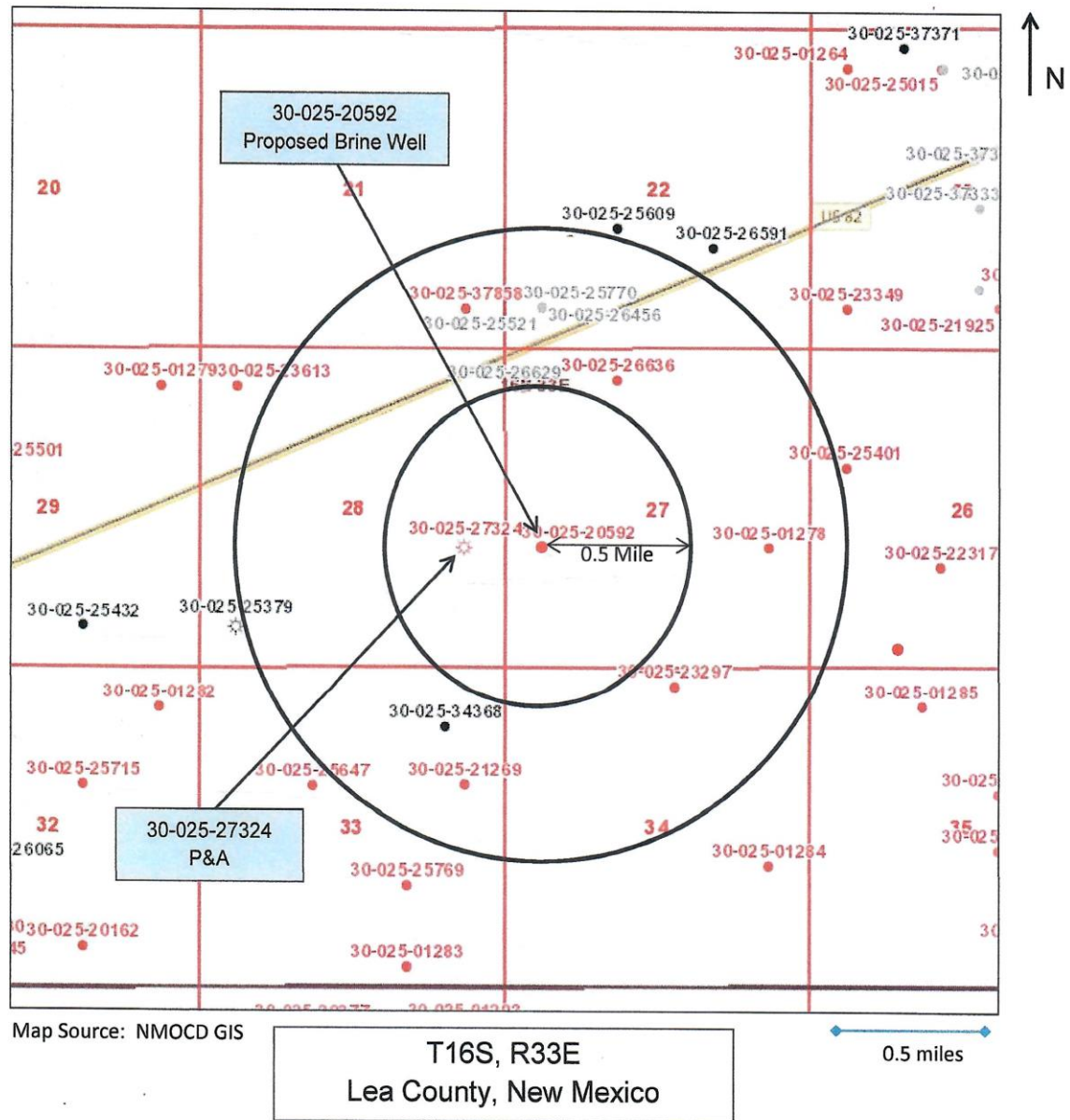
Map Source: Midland Map Co.

T16S, R33E

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Llano Disposal, LLC

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**. There were no MIT's completed in 2020.

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****2020****Injected Fluids to Brine Ratio**

Total Brine for the year 72,836

Total Fresh for the year 80,200

Ratio of Fresh to Brine **1.1011**

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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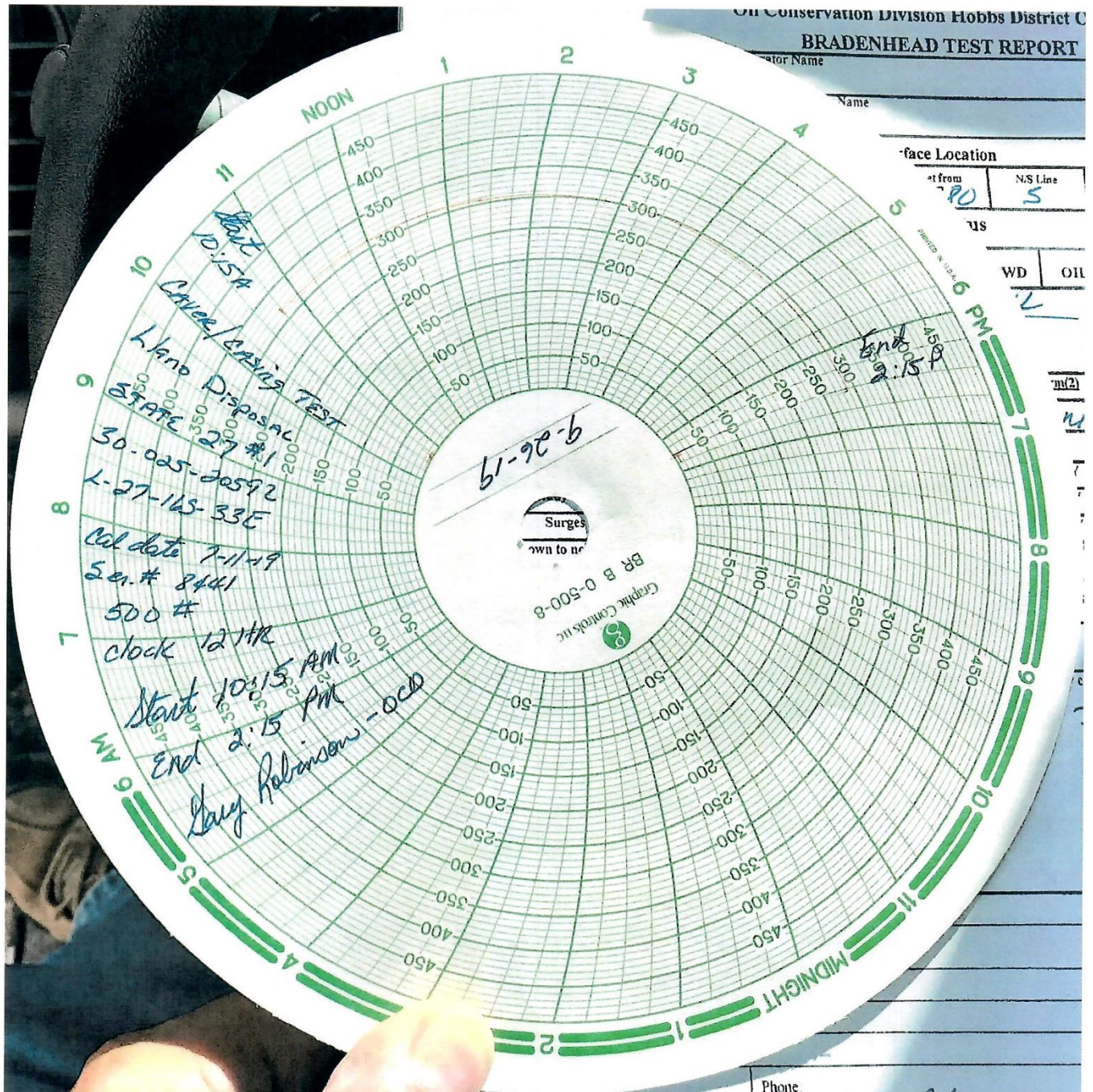
APPENDIX A

MITs

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

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

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APPENDIX B

Cavern Characterization

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Cavern Characterization

As of 12/31/2020, 174,685 bbls of fresh water have been injected into salt strata for the purpose of brine generation (7,336,770 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, 12,179,038 pounds of halite have gone into solution this year. Halite has a SG of 2.17 (compared /then, that 88,594 cubic feet of halite has gone into solution this year. The amount of fresh water injected (174,685 bbls) as compared to the amount of brine produced (158,646 bbls) shows that water is being used to fill the cavity as the cavity increases in volume:

$158,646 \text{ bbls} / 174,685 \text{ bbls} = 90.8\%$ 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^2 is "R squared". r^2 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 42×1.6 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.

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.

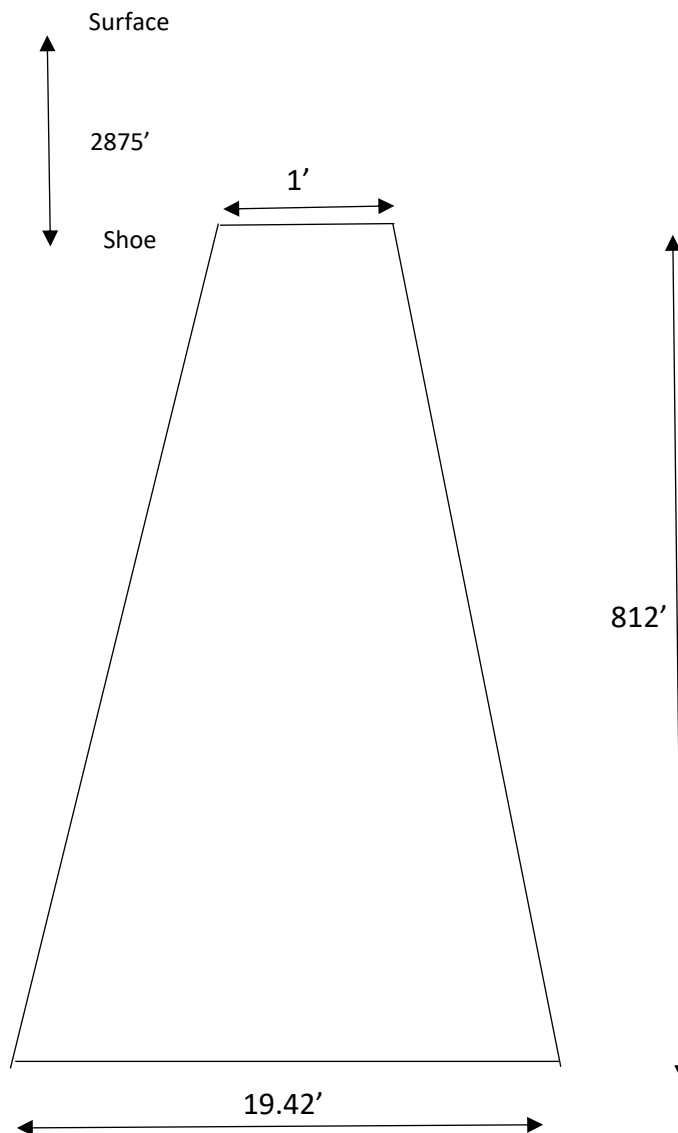
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Cavern Size, Shape, & Volume Estimate

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



Estimated height (H) to Casing Shoe is 2875'

Estimated cavern floor diameter (D) is 19.42'

Estimated * Cavern Collapse Ratio is **.0068** where $19.42/2875 = .0068$

Inserted formula values: $.3330 \times 3.1415(9.710\text{sq} + 10.710) 812$ or 88,665 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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Llano Disposal, LLC BW-38 API 30-025-20592

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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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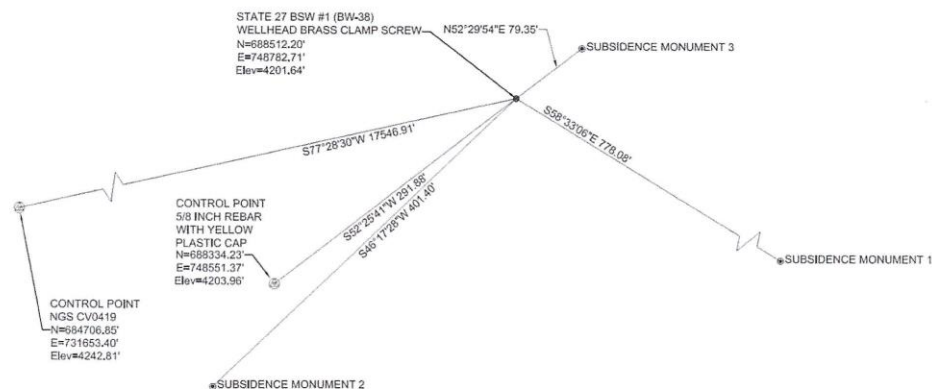
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SUBSIDENCE MONUMENT SURVEY

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:



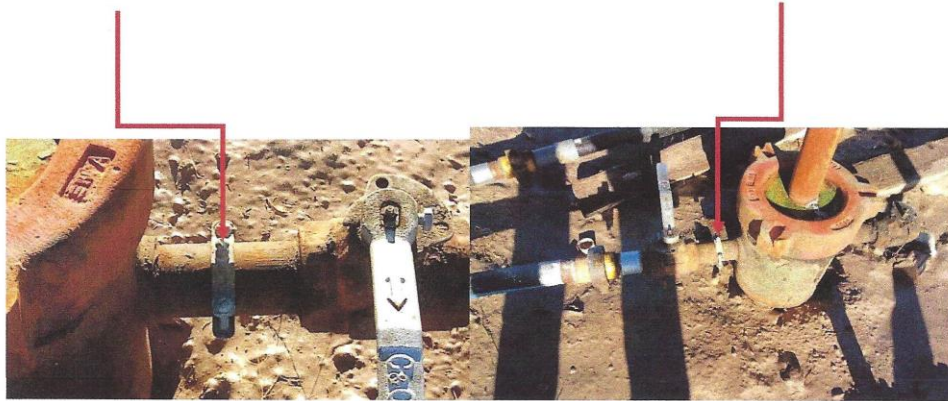
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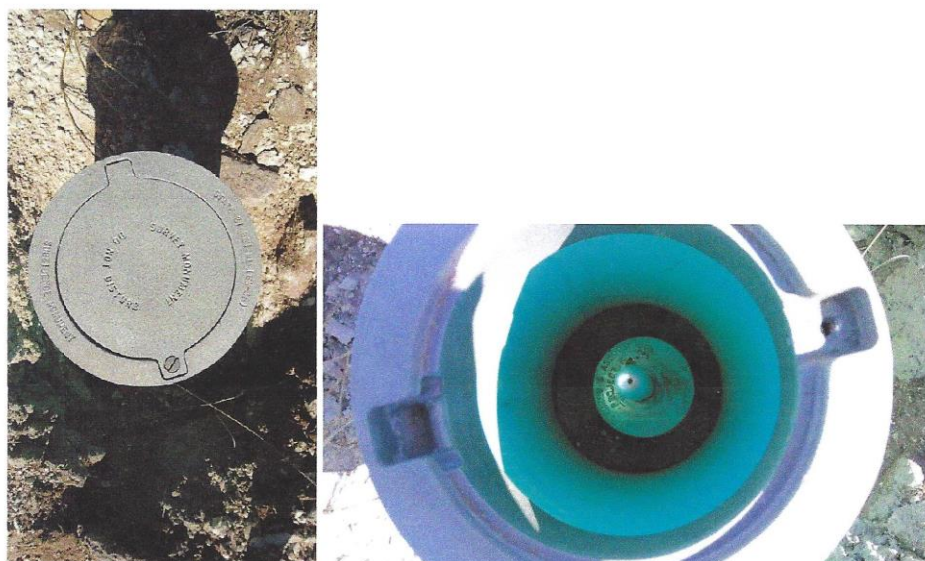
Llano Disposal LLC'S State 27 BSW #1 (BW-38)

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:



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**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



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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

2020



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) (U S 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

2020

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 -----

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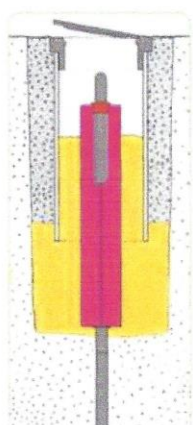
Top Security Sleeve Rod Monuments



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

2020

APPENDIX D

Sundries

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 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-105 Revised April 3, 2017
		1. WELL API NO. 30-025-20592
		2. Type of Lease STATE x FEE FED/INDIAN
		3. State Oil & Gas Lease No. Salado (SLO)
WELL COMPLETION OR RECOMPLETION REPORT AND LOG		
4. Reason for filing: COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)		5. Lease Name or Unit Agreement Name State 27
		6. Well Number: 1
7. Type of Completion: NEW WELL WORKOVER DEEPENING PLUGBACK DIFFERENT RESERVOIR OTHER <u> X </u> Re-entry for brine service _____		
8. Name of Operator Llano Disposal, LLC		9. OGRID 370661
10. Address of Operator PO Box 250 Lovington, NM 88260		11. Pool name or Wildcat Salado
12. Location	Unit Ltr	Section
Surface:	L	27
BH:	Same	
13. Date Spudded 5/16/18	14. Date T.D. Reached 12/5/18	15. Date Rig Released 12/5/18
16. Date Completed (Ready to Produce) 12/8/18		17. Elevations (DF and RKB, RT, GR, etc.) 4201' GR
18. Total Measured Depth of Well 13,804 original. 2575' current (OH salt)		19. Plug Back Measured Depth 1763' in 9 5/8" TD salt 2575'.
20. Was Directional Survey Made? Yes (in NMOCD Online file).		21. Type Electric and Other Logs Run CBL and CNL
22. Producing Interval(s), of this completion - Top, Bottom, Name 1763'-2575', Salado (salt for brine generation).		
23. CASING RECORD (Report all strings set in well)		
CASING SIZE	WEIGHT LB./FT.	DEPTH SET
13 3/8"	48#	414'
9 5/8"	36# and 32#	4578'
5 1/2"	20# and 17#	13,798'
24. LINER RECORD		25. TUBING RECORD
SIZE	TOP	BOTTOM
	No Liner.	
26. Perforation record (interval, size, and number) No perforations. Open hole completion.		27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. No stimulation.
DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED

28. PRODUCTION											
Date First Production 12/8/18			Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) <i>Forced flow by circulation of water.</i>					Well Status (<i>Prod. or Shut-in</i>) <i>Producing</i>			
Date of Test 12/8/18	Hours Tested 24	Choke Size Open 2" valves.	Prod'n For Test Period 857 bbls brine	Oil - Bbl none	Gas - MCF none	Water - Bbl. 857 bbls brine	Gas - Oil Ratio NA				
Flow Tubing Press. 185 psi (inj)	Flow Casing Press. 15 psi	Calculated 24-Hour Rate 25 gpm	Oil - Bbl. NA	Gas - MCF NA	Water - Bbl. 857 bbls brine	Oil Gravity - API - (<i>Corr.</i>) NA					
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) None (NA)								30. Test Witnessed By Marvin Burrows			
31. List Attachments Well bore diagram.											
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit. None.								33. Rig Release Date: 12/05/18			
34. If an on-site burial was used at the well, report the exact location of the on-site burial: NA Latitude _____ Longitude _____ NAD83											
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief											
Signature <i>Marvin Burrows</i>			Printed Name Marvin Burrows		Title Agent for Llano.		Date <i>10/29/20</i>				
E-mail Address <u>burrowsmarvin@gmail.com</u>			<i>575-631-8067</i>		<div style="border: 1px solid green; padding: 2px; display: inline-block;"> APPROVED <small>By Carl Chavez at 9:42 am, Oct 30, 2020</small> </div>						

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy _____	T. Canyon _____	T. Ojo Alamo _____	T. Penn A" _____
T. Salt _____ 1476' (below 4201' GR Elevation) _____	T. Strawn _____	T. Kirtland _____	T. Penn. "B" _____
B. Salt _____ 2575' _____	T. Atoka _____	T. Fruitland _____	T. Penn. "C" _____
T. Yates _____	T. Miss _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. 7 Rivers _____	T. Devonian _____	T. Cliff House _____	T. Leadville _____
T. Queen _____	T. Silurian _____	T. Menefee _____	T. Madison _____
T. Grayburg _____	T. Montoya _____	T. Point Lookout _____	T. Elbert _____
T. San Andres _____	T. Simpson _____	T. Mancos _____	T. McCracken _____

T. Glorieta_____	T. McKee_____	T. Gallup_____	T. Ignacio Otzte_____
T. Paddock_____	T. Ellenburger_____	Base Greenhorn_____	T. Granite_____
T. Blinebry_____	T. Gr. Wash_____	T. Dakota_____	
T. Tubb_____	T. Delaware Sand_____	T. Morrison_____	
T. Drinkard_____	T. Bone Springs_____	T. Todilto_____	
T. Abo_____	T. _____	T. Entrada_____	
T. Wolfcamp_____	T. _____	T. Wingate_____	
T. Penn_____	T. _____	T. Chinle_____	
T. Cisco (Bough C)_____	T. _____	T. Permian_____	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....

No. 3, from.....to.....

No. 2, from.....to.....

No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

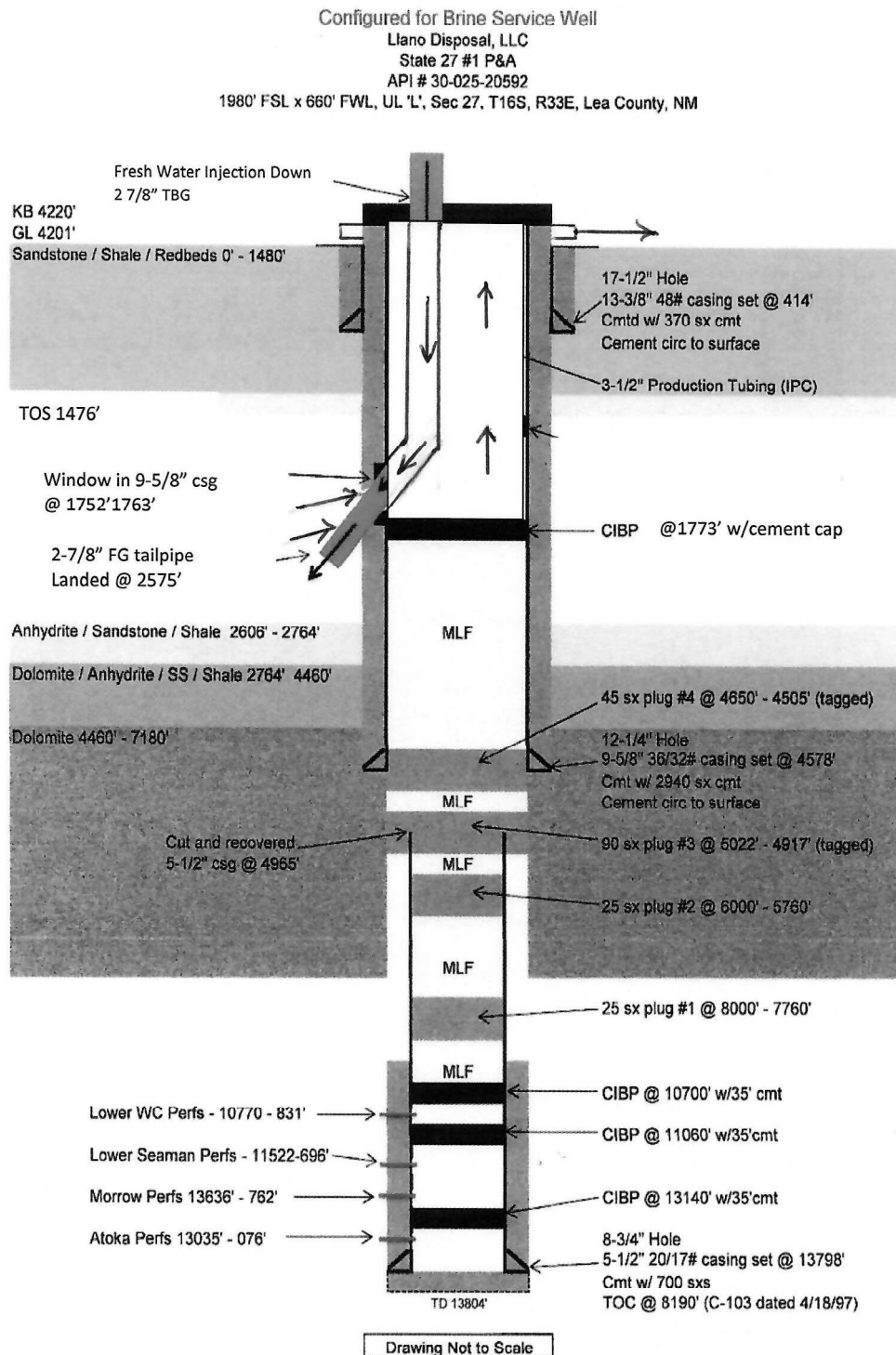
No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
			<p>Verification of top of salt was determined by investigation of OCD Online drilling records of offset wells, and by a study of the CNL ran on this well.</p> <p>Offset TOS :</p> <p>30-025-01295 TOS 1496'</p> <p>30-025-23297 TOS 1445'</p> <p>30-025-25647 TOS 1475'</p> <p>30-025-27324 TOS 1490'</p> <p>API 30-025-27324 is a 1320' west offset to subject brine well.</p>				



Annual Report

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

2020

Energy, Minerals and Natural Resources

Revised July 18, 2013

WELL API NO. 30-025-20592

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
SALT (SLD)

7. Lease Name or Unit Agreement Name
STATE 27

8. Well Number
1

9. OGRID Number
370661

10. Pool name or Wildcat
SALADO

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 ☐ CLEAN SALT

CLOSED-LOOP SYSTEM ☐ BLOCKAGE

OTHER: ☐

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 NMAL. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

It is our intention to rig up Friday Morning, 9/18/20, to pick up on tubing to clean salt bridge. (Lucky Services)

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 Burnows TITLE ACCT DATE 9/15/20

Type or print name MARVIN BURNOWS E-mail address: BURNOWS PHONE: 575-671-8067

For State Use Only MARVIN@GMAIL.COM

APPROVED BY: Kerry Smith TITLE COA DATE 9-18-20

Conditions of Approval (if any):

A notice of intent to rig up to pick up on tubing to attempt to clear salt block.

Annual Report

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

2020

APPENDIX E

Well Diagrams

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 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-105 Revised April 3, 2017
		1. WELL API NO. 30-025-20592
		2. Type of Lease STATE x FEE FED/INDIAN
		3. State Oil & Gas Lease No. Salado (SLO)
WELL COMPLETION OR RECOMPLETION REPORT AND LOG		
4. Reason for filing: COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)		5. Lease Name or Unit Agreement Name State 27
		6. Well Number: 1
7. Type of Completion: NEW WELL WORKOVER DEEPENING PLUGBACK DIFFERENT RESERVOIR OTHER <input checked="" type="checkbox"/> Re-entry for brine service _____		
8. Name of Operator Llano Disposal, LLC		9. OGRID 370661
10. Address of Operator PO Box 250 Lovington, NM 88260		11. Pool name or Wildcat Salado
12. Location	Unit Ltr	Section
Surface:	L	27
BH:	Same	
13. Date Spudded 5/16/18	14. Date T.D. Reached 12/5/18	15. Date Rig Released 12/5/18
16. Date Completed (Ready to Produce) 12/8/18		17. Elevations (DF and RKB, RT, GR, etc.) 4201' GR
18. Total Measured Depth of Well 13,804 original. 2575' current (OH salt)		19. Plug Back Measured Depth 1763' in 9 5/8" TD salt 2575'.
20. Was Directional Survey Made? Yes (in NMOCD Online file).		21. Type Electric and Other Logs Run CBL and CNL
22. Producing Interval(s), of this completion - Top, Bottom, Name 1763'-2575', Salado (salt for brine generation).		
23. CASING RECORD (Report all strings set in well)		
CASING SIZE	WEIGHT LB./FT.	DEPTH SET
13 3/8"	48#	414'
9 5/8"	36# and 32#	4578'
5 1/2"	20# and 17#	13,798'
24. LINER RECORD		25. TUBING RECORD
SIZE	TOP	BOTTOM
	No Liner.	
26. Perforation record (interval, size, and number) No perforations. Open hole completion.		27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. No stimulation.
DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED

28. PRODUCTION									
Date First Production 12/8/18		Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) <i>Forced flow by circulation of water.</i>				Well Status (<i>Prod. or Shut-in</i>) <i>Producing</i>			
Date of Test 12/8/18	Hours Tested 24	Choke Size Open 2" valves.	Prod'n For Test Period 857 bbls brine	Oil - Bbl none	Gas - MCF none	Water - Bbl. 857 bbls brine	Gas - Oil Ratio NA		
Flow Tubing Press. 185 psi (inj)	Flow Casing Press. 15 psi	Calculated 24-Hour Rate 25 gpm	Oil - Bbl. NA	Gas - MCF NA	Water - Bbl. 857 bbls brine	Oil Gravity - API - (<i>Corr.</i>) NA			
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) None (NA)						30. Test Witnessed By Marvin Burrows			
31. List Attachments Well bore diagram.									
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit. None.						33. Rig Release Date: 12/05/18			
34. If an on-site burial was used at the well, report the exact location of the on-site burial: NA Latitude _____ Longitude _____ NAD83									
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief									
Signature <i>Marvin Burrows</i>		Printed Name Marvin Burrows		Title Agent for Llano.		Date 10/29/20			
E-mail Address <u>burrowsmarvin@gmail.com</u>		575-631-8067		<div style="border: 1px solid green; padding: 2px; display: inline-block;"> APPROVED <small>By Carl Chavez at 9:42 am, Oct 30, 2020</small> </div>					

INSTRUCTIONS

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INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy _____	T. Canyon _____	T. Ojo Alamo _____	T. Penn A" _____
T. Salt _____ 1476' (below 4201' GR Elevation) _____	T. Strawn _____	T. Kirtland _____	T. Penn. "B" _____
B. Salt _____ 2575' _____	T. Atoka _____	T. Fruitland _____	T. Penn. "C" _____
T. Yates _____	T. Miss _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. 7 Rivers _____	T. Devonian _____	T. Cliff House _____	T. Leadville _____
T. Queen _____	T. Silurian _____	T. Menefee _____	T. Madison _____
T. Grayburg _____	T. Montoya _____	T. Point Lookout _____	T. Elbert _____
T. San Andres _____	T. Simpson _____	T. Mancos _____	T. McCracken _____

T. Glorieta_____	T. McKee_____	T. Gallup_____	T. Ignacio Otzte_____
T. Paddock_____	T. Ellenburger_____	Base Greenhorn_____	T. Granite_____
T. Blinebry_____	T. Gr. Wash_____	T. Dakota_____	
T. Tubb_____	T. Delaware Sand_____	T. Morrison_____	
T. Drinkard_____	T. Bone Springs_____	T. Todilto_____	
T. Abo_____	T. _____	T. Entrada_____	
T. Wolfcamp_____	T. _____	T. Wingate_____	
T. Penn_____	T. _____	T. Chinle_____	
T. Cisco (Bough C)_____	T. _____	T. Permian_____	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....

No. 3, from.....to.....

No. 2, from.....to.....

No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

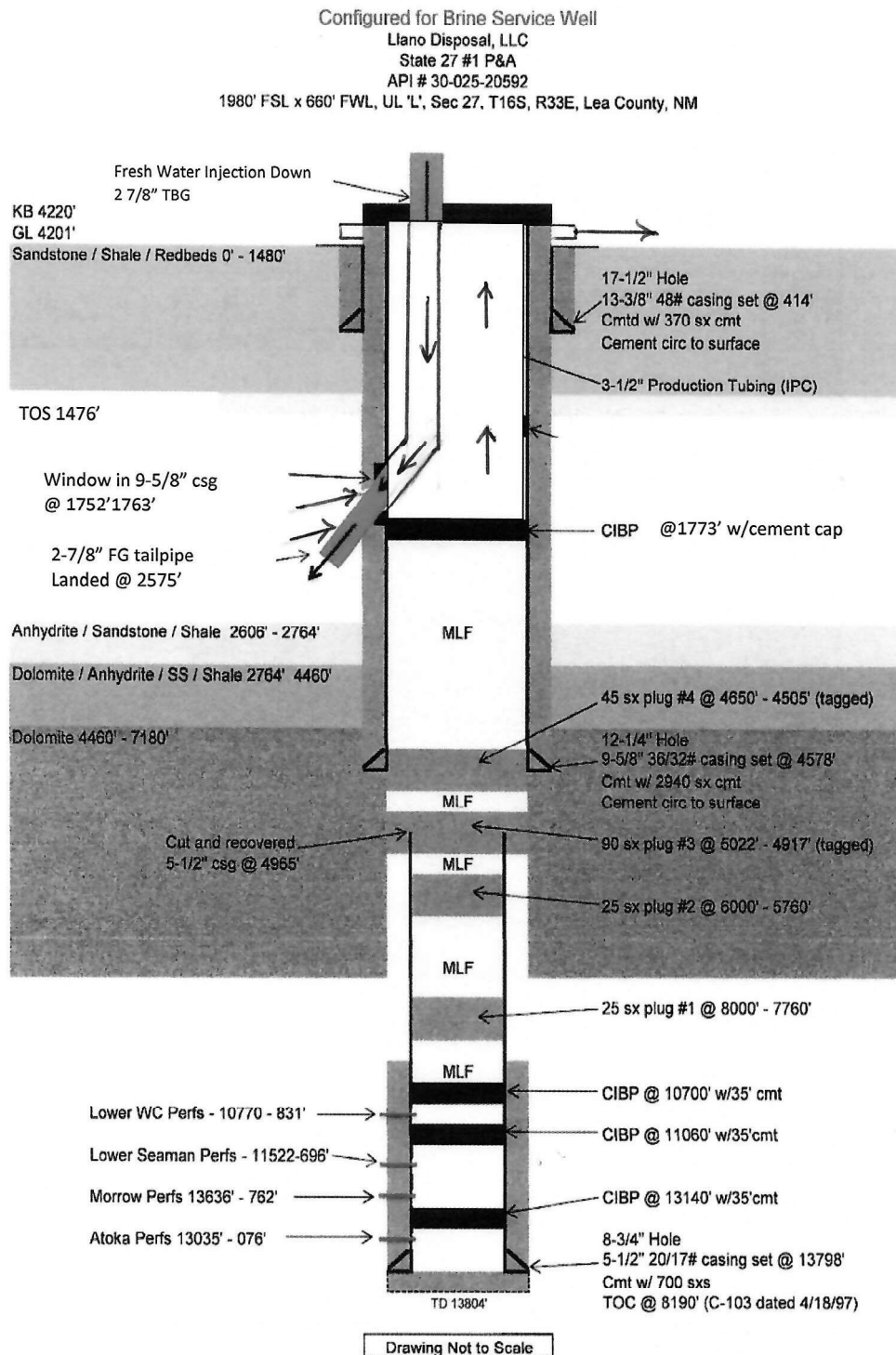
No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

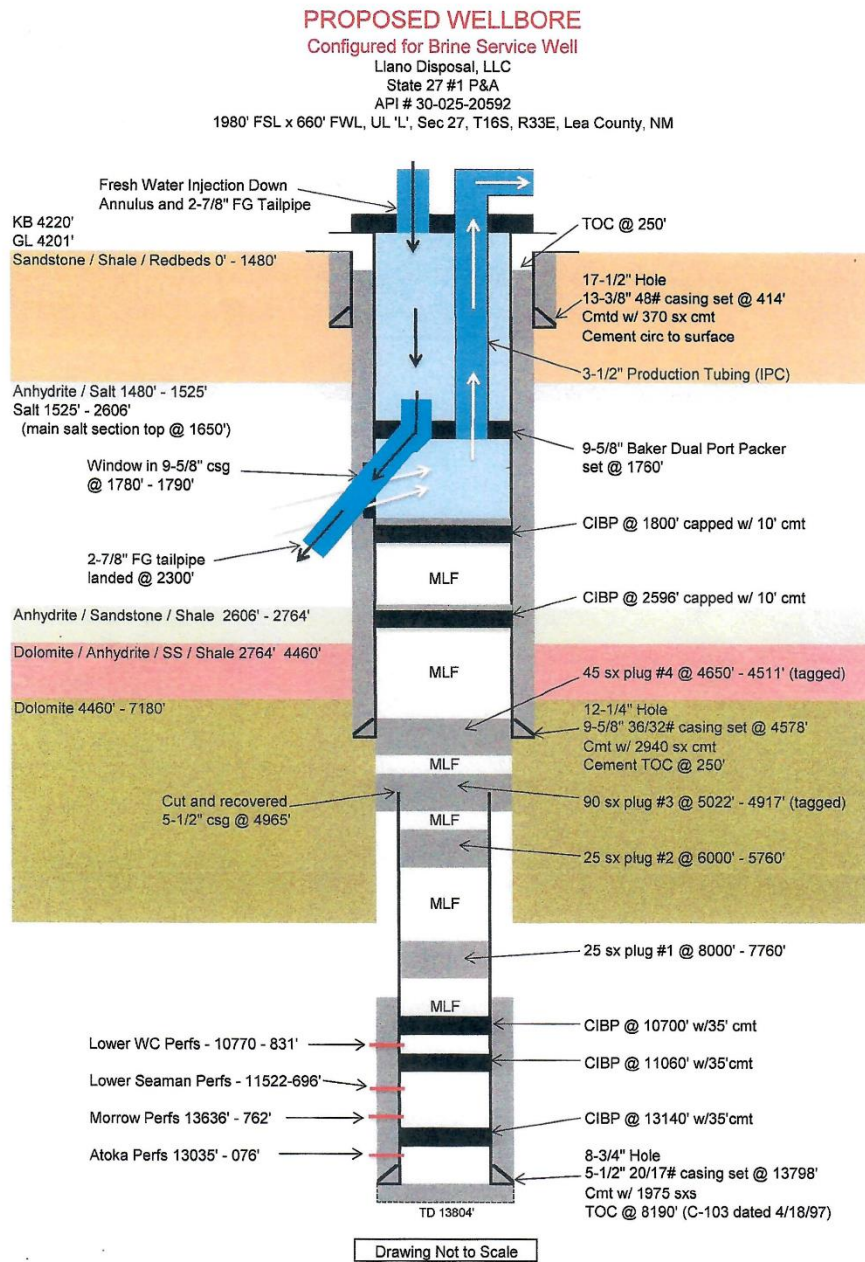
From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
			<p>Verification of top of salt was determined by investigation of OCD Online drilling records of offset wells, and by a study of the CNL ran on this well.</p> <p>Offset TOS :</p> <p>30-025-01295 TOS 1496'</p> <p>30-025-23297 TOS 1445'</p> <p>30-025-25647 TOS 1475'</p> <p>30-025-27324 TOS 1490'</p> <p>API 30-025-27324 is a 1320' west offset to subject brine well.</p>				



Annual Report

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

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Annual Report

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APPENDIX F

Chemical Analysis

Annual Report

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

2020



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.

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

2020



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

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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

2020



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	

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Celey D. Keene, Lab Director/Quality Manager

Annual Report

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

2020



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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
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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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Annual Report

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

2020



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
Batch 8062505 - General Prep - Wet Chem										
Blank (8062505-BLK1)				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							
LCS (8062505-BS1)				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			
LCS Dup (8062505-BSD1)				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	
Batch 8070311 - Filtration										
Blank (8070311-BLK1)				Prepared: 03-Jul-18 Analyzed: 09-Jul-18						
TDS	ND	5.00	mg/L							
LCS (8070311-BS1)				Prepared: 03-Jul-18 Analyzed: 05-Jul-18						
TDS	482	5.00	mg/L	527		91.5	80-120			
Duplicate (8070311-DUP1)				Source: H801800-02 Prepared: 03-Jul-18 Analyzed: 05-Jul-18						
TDS	1730	5.00	mg/L	1720				0.348	20	
Batch 8070501 - General Prep - Wet Chem										
Blank (8070501-BLK1)				Prepared & Analyzed: 05-Jul-18						
Chloride	4.00	4.00	mg/L							

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Annual Report

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

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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

Inorganic Compounds - Quality Control**Cardinal Laboratories**

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

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Annual Report

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

2020



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
Batch B807085 - Total Rec. 200.7/200.8/200.2										
Blank (B807085-BLK1)				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							
LCS (B807085-BS1)				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			
LCS Dup (B807085-BSD1)				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	

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Annual Report

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

2020



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

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APPENDIX G

Certification

Annual Report

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

2020

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

10/25/22

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 153925

COMMENTS

Operator: LLANO DISPOSAL, L.L.C. P.O. Box 250 Lovington, NM 88260	OGRID: 370661
	Action Number: 153925
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Annual Report 2020	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 153925

CONDITIONS

Operator: LLANO DISPOSAL, L.L.C. P.O. Box 250 Lovington, NM 88260	OGRID: 370661
	Action Number: 153925
	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