BW – 37

PERMIT APPLICATIONS, RENEWALS, & MODS (2)

2018

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3108 NMAC), the following discharge permit application has been submitted to the Director of the New Mexico Oil Conservation Division ("OCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(BW-37) Llano Disposal, LCC., Darr Angell, Owner, P.O. Box 190, Lovington, NM 88260, has submitted an application for a new Underground Injection Control (UIC) Class III Brine Well Discharge Permit for the "State '4' Brine Supply Well No. 1" (API# 30-025-26370) , located 1,980 FNL and 660 FWL, UL: E in Section 4, Township 13 South, Range 36 East (Lat. N 33.22251°, Long.: W 103.31548°), NMPM, Lea County, New Mexico. The injection well is plugged oil well (TD 13,476 ft. bgl) located approximately 2.4 miles south of the City of Tatum intersection of East Broadway St. (Hwy. 380) and N. Main St. (Hwy. 206), approximately 660 ft. east of Hwy. 206. The well was a plugged oil well and will be re-drilled to a total depth of 2,450 ft. below ground level (bgl).

The fluid flow process is termed "reverse flow" based on the well construction. Fresh groundwater will be injected into the Salado Salt Formation (Salado) through the casing annulus (prevents well corrosion), dual port packer, and 2-7/8 in. Fiberglass (FG) tailpipe at an average injection rate of 1,550 bbl/day (~ 45 gpm) and maximum injection rate of 1,900 bbl/day (~58

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of Bernalillo SS

Bernadette Gonzales , the undersigned, on oath states that she is an authorized Representative of The Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which hereto attached, was published in said paper in the regular daily edition, for 1 time(s) on the following date(s):

04/01/2018

Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 1 day of April of 2018

PRICE $228.87

Statement to come at the end of month.

ACCOUNT NUMBER 1009556

OFFICIAL SEAL
Sandra B. Gutierrez
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 2-18-21

Sandra B. Gutierrez

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Darr Angell
Llano Disposal, LLC
P.O. Box 190
Lovington, NM 88260

COMPLETE THIS SECTION ON DELIVERY

A. Received by (*Please Print Clearly*) DARR ANGELL B. Date of Delivery

C. Signature
X ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

APR - 2 2018 USPS NM 88260

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (*Extra Fee*) ☐ Yes

…) and N. Main St. (Hwy. 206), approximately 660 ft. east of Hwy. 206. The well was a plugged oil well and will be re-drilled to a total depth of 2,450 ft. below ground level (bgl).

The fluid flow process is termed "reverse flow" based on the well construction. Fresh groundwater will be injected into the Salado Salt Formation (Salado) through the casing annulus (prevents well corrosion), dual port packer, and 2-7/8 in. Fiberglass (FG) tailpipe at an average injection rate of 1,550 bbl/day (~ 45 gpm) and maximum injection rate of 1,900 bbl/day (~58 gpm). Injection shall be below a permitted maximum surface injection pressure (MSIP) of 480 psig.

Brine fluids from the Salado entering the well casing will be produced through the window at 2,400 ft. bgl cut in the well casing and through the 3- ½ in. production tubing within the well casing to surface. The window is positioned between the 8-5/8 in. dual port packer set at 2,300 ft. bgl and 8-5/8 in. cast iron bridge plug (CIBP) set at 2,450 ft. bgl. The top of the window is at least 100 ft. into the Salado below the Anhydrite-Salado contact.

The 2-7/8 in. FG tailpipe extends downward at an angle through the window to a depth of 2,900 ft. bgl into the Salado to allow for proper salt cavern development and maximum stability over time. Fresh water is supplied by a new water supply well at the Tatum Brine Station and another fresh water supply well over a one mile away from the brine well.

The well TD is 13, 476 ft. bgl with an 8- 5/8 in. well casing and shoe extending to 4,589 ft. bgl. There is a series of 100 ft. plugs in the 7-7/8 in. open-hole positioned at 5,200 ft., 8,070 ft., 10,500 ft., 11,973 ft., and 12,870 ft. bgl. Produced Salado brine fluid is expected to be at a concentration of about 320,000 ppm Total Dissolved Solids- TDS. Groundwater most likely to be affected by a spill, leak or accidental discharge…

the Anhydrite-Salado contact.

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The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list may contact the Environmental Bureau Chief of the OCD at the address given above. The permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, or at the OCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaining a copy of the application and draft permit may contact the OCD at the address given above. Prior to ruling on any proposed permit, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit comments or request that OCD hold a public hear-

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If no hearing is held, the Director will approve the proposed permit based on information available, including all comments received. If a public hearing is held, the director will approve or disapprove the proposed permit based on information in the permit application and information submitted at the hearing.

Para obtener más información sobre esta solicitud en español, sirvase comunicarse por favor: New Mexico Energy, Minerals and Natural Resources Department (Depto. Del Energia, Minerals y Recursos Naturales de Nuevo México), Oil Conservation Division (Depto. Conservación Del Petróleo), 1220 South St. Francis Drive, Santa Fe, New México (Contacto: Laura Tulk, 575-748-1283).

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of April 2018.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

SEAL

Holcomb Consultants
6900 Spring Cherry Lane
Amarillo, Texas 79124

March 2, 2018

Jim Griswold – Environmental Bureau Chief
Carl Chavez – Environmental Engineer
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, New Mexico 87505

Re: NOTICE OF INTENT TO DISCHARGE
WQCC 20.6.2.1201 NMAC

Dear Mr. Griswold and Chavez:

Holcomb Consultants, as agent for Llano Disposal, LLC, is formally notifying the New Mexico Oil Conservation Division of Llano's intent to permit a Class III brine well located in Lea County, New Mexico. Pursuant to the Water Quality Control Commission Regulations (WQCC) 20.6.2.1201.B and C. NMAC, the following information is provided:

1) The name of the person making the discharge:
   Llano Disposal, LCC, Mr. Darr Angell, owner

2) The address of the person making the discharge:
   P. O. Box 190 (783 Highway 483)
   Lovington, New Mexico 88260

3) The location of the discharge:
   Brine Well Location: SW/4 NW/4, UL 'E', Section 4, T13S, R36E
   Proposed Brine Station Location: SW/4 NW/4, UL 'E', Section 4, T13S, R36E

4) An estimate of the concentration of water contaminants in the discharge:
   Injection Water: fresh water from nearby fresh water well with approximately 400 mg/l TDS
   Produced Brine Water: approximately 320,000 mg/l TDS

5) The quantity of the discharge:
   Estimated Instantaneous Flow Rate: 1 – 3 barrels per minute
   Estimated Monthly Total: 0 – 58,000 barrels per month

Holcomb Consultants
6900 Spring Cherry Lane
Amarillo, Texas 79124

Pursuant to 20.6.2.3114 NMAC Llano's cashier's check number 1009997 in the amount of $100 made payable to the "Water Quality Management Fund" as filing fee for the discharge permit application was mailed to your office on March 2, 2018.

Attached are the discharge permit application along with pertinent attachments, a proposed C-101 and a proposed C-103 completion procedure. If OCD requires additional information concerning this notice of intent or discharge permit application, please contact me at 806-471-5628 or email danny@pwllc.net. Thank you for your consideration of this application.

Sincerely,

DJHolcomb

Danny J Holcomb
Holcomb Consultants
Agent for Llano Disposal, LLC

Attachments

THIS CHECK IS VOID WITHOUT A COLORED BACKGROUND AND A TRUE WATERMARK ON THE BACK

HAPPY STATE BANK
AND TRUST COMPANY
www.happybank.com

CASHIER'S CHECK

1009997

88-1087
1113

7

NOTICE TO CUSTOMERS
THE PURCHASE OF AN INDEMNITY BOND MAY BE REQUIRED BEFORE ANY CASHIER'S CHECK OF THIS BANK WILL BE REPLACED OR REFUNDED IN THE EVENT IT IS LOST, MISPLACED OR STOLEN.

DATE February 28, 2018

REMITTER LLANO DISPOSAL LLC

PAY ONE HUNDRED AND 00/100 $********100.00

TO THE ORDER OF WATER QUALITY MANAGEMENT FUND

PURPOSE BW-37 Application Fee

AUTHORIZED SIGNATURE(S)

HAP 5010-N (R 8/15)

SIGNATURE HAS A COLORED BACKGROUND • BORDER CONTAINS MICROPRINTING

⑈01009997⑈ ⑆111310870⑆ ⑈116378⑈

— Copy —

Original check mailed to Santa Fe 3/3/18.

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Revised August 1, 2011

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

DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITES

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

☒ New ☐ Renewal

I. Facility Name: __Tatum Brine Station - State '4' BSW #1__________

II. Operator: ___Llano Disposal, LLC__________

Address: __P. O. Box 190 (783 Highway 483), Lovington, NM 88260__________

Contact Person: __Marvin Burrows__________ Phone: ___575-631-8067__________

III. Location: _____SW_____/4 _____NW_____/4 Section ____4____Township ____13S_____Range ___36E____
Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site. See section IV of attached discharge plan.

V. Attach a description of the types and quantities of fluids at the facility. See section V of attached discharge plan.

VI. Attach a description of all fluid transfer and storage and fluid and solid disposal facilities. See section VI of attached discharge plan.

VII. Attach a description of underground facilities (i.e. brine extraction well). See section VII of attached discharge plan.

VIII. Attach a contingency plan for reporting and clean-up of spills or releases. See section VIII of attached discharge plan.

IX. Attach geological/hydrological evidence demonstrating that brine extraction operations will not adversely impact fresh water. See section IX of attached discharge plan.

X. Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. See section X of attached discharge plan.

XI. CERTIFICATION:

I hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name: __Darr Angell__________ Title: ___Owner__________

Signature: Darr Angell__________ Date: 3-2-18__________

E-mail
Address:__darrangell@gmail.com__________

State 4 #1 Brine Well and Tatum Brine Station
Discharge Plan

I. Name of Facility
Provide complete name. Indicate whether this is a new or renewal application.

Answer – This is a new application for a new facility. The proposed brine well name is State '4' BSW #1 and the proposed surface facility name is Tatum Brine Station.

II. Name of Operator or Legally Responsible Party and Local Representative
Include address and telephone number.

The operator/legally responsible party name is Llano Disposal, LLC, P. O. Box 190 (783 Highway 483), Lovington, NM 88260. The operator's OGRID number is 370661. Llano Disposal, LLC is the owner of all the surface lands that the proposed brine well and brine station will be situated upon. Llano Disposal's office is located at 783 Highway 483, Lovington, NM 88260. The local representative is Mr. Marvin Burrows at 575-631-8067.

III. Location of Facility
Give a legal description of the location (i.e. 1/4. 1/4, Section, Township, Range) and county. Use state coordinates or latitude/longitude on unsurveyed land. Submit a large scale topographic map, facility site plan, or detailed aerial photograph for use in conjunction with the written material. It should depict the location of the injection well, storage tanks, process equipment, relevant objects, facility property boundaries, and other site information required in Sections V through IX below.

Answer – The proposed brine well was originally drilled and abandoned in 1979. It is named the State '4' #1 (API # 30-025-26370) located at 1980 FNL X 660 FWL, Unit Letter 'E', Section 4, T13S, R36E, Lea County, New Mexico. The brine well is located at latitude 33.2225075°, longitude -103.3154755° (NAD83). The proposed brine well and brine station would be located approximately 1.8 miles south of the Tatum town limits. The well is currently in P&A-site released status. We propose to recomplete the well from a P&A well to a brine well in the Salado (Salt) Formation between 2400' – 2970'. The proposed brine station would also be located in UL 'E', Section 4, T13S, R36E, Lea County, New Mexico at latitude 33.222475°, longitude -103.315918° (NAD83). The proposed water source well will be located approximately 110 feet southwest of the proposed brine well. The water source well also will be located in UL 'E', Section 4, T13S, R36E, Lea County, New Mexico at latitude 33.222287°, longitude -103.315707° (NAD83). See maps, facility site plan and aerial photographs in Attachments "A" – "G".

IV. Landowners
Attach the name and address of the landowner(s) of record of the facility site.

Answer – The landowner of record for the proposed brine well, water source well and brine station location is the applicant, Llano Disposal, LLC, P. O. Box 190 (783 Highway 483), Lovington, NM 88260. Mr. Darr Angell is the principal owner of Llano Disposal, LLC.

V. Type and Quantities of Fluids Stored or Used at the Facility
List all fluids stored or used at the facility (e.g. High TDS salt water, fresh water, chemicals, etc.). Include source, average daily volume produced, estimated volume stored, location, and type of containers.

Answer – At the proposed fresh water source well, there will be a submersible pump which lifts fresh water from the well, transports it approximately 110 feet through a buried 3" SDR-11 polyethylene pipeline to the brine well. At the brine well, the fresh water is injected down the 8-5/8" casing annulus with brine circulated out the 3-1/2" internally plastic coated tubing. The brine is then transported approximately 135 feet through a buried 3" SDR-11 polyethylene pipeline from the brine well to the brine station. At the brine station, there will be one 500 bbl fiberglass catch/flush tank, and three 1000 bbl fiberglass tanks for brine storage. Both of the pipelines will be buried a minimum of 36" deep (below frost line).

Anticipated daily average volumes produced will be 1500 BWPD of brine water and 1550 BWPD of fresh water. Anticipated volumes stored will be 2500 bbls of brine water. No chemicals will be stored at the brine well location or brine station.

VI. Transfer, Storage and Disposal of Fluids and Solids
A. Provide sufficient information to determine what water contaminants may be discharged to the surface and subsurface within the facility. Information desired includes whether tanks, piping, and pipelines are pressurized, above ground or buried. Provide fluid flow schematics with sufficient detail to show individual units (pumps, tanks, pipelines, etc.).

1. Tankage and Chemical Storage Areas – Storage tanks for fluids other than fresh water must be bermed to contain a volume one-third more than the largest tank. If tanks are interconnected, the berm must be designed to contain a volume one-third more than the total volume of the interconnected tanks. Chemical and drum storage areas must be paved, curbed and drained such that spills or leaks from drums are contained on the pads or in lined sumps.

Answer – At the proposed brine station, there will be three interconnected 1000 bbl fiberglass brine water storage tanks and one 500 bbl fiberglass catch/flush tank. All four tanks will be located within a common secondary containment berm. Each tank will have an isolation valve and will remain unpressured. The secondary containment consists of an earthen berm with a 20 mil string reinforced LLDPE liner capable of holding a minimum of 4800 bbls. There will be a 32' X 60' concrete loading pad with a 20" X 20" X 55' concrete sump that is situated on top of the concrete loading pad. Any fluids entering the sump will be pumped to the 500 bbl catch/flush tank inside the lined secondary containment. On the proposed well location, there will be no tanks, pumps or chemicals. See schematics of the brine well and brine station in Attachment "L". There will be a buried 3" SDR-11 polyethylene fresh water pipeline between a water supply well and the brine well location. There will also be a buried 3" SDR-11 polyethylene pipeline between the brine well and the brine station. Both pipelines will remain unpressured while pump is not running. See section E below for detailed pipeline specifications.

2. Surface impoundments - Date built, use, type and volume of materials stored, area, volume, depth, slope of containments, sub-grade description, liner type and thickness, compatibility of liner and stored materials, installation methods, leak detection methods, freeboard, run-off/run-on protection.

Answer – There are no existing surface impoundments at this facility. If permit application is approved, a new secondary containment around storage tanks discussed in section VI.A.1 above will be built. A berm using caliche hauled in from an offsite pit will be used. This bermed area will then be lined with a 20 mil LLDPE liner with UV protection. Storm water run-on/run-off is expected to be minimal due to the level nature of the surrounding terrain and the State highway east barrow ditch. However, an earthen berm of topsoil dirt will be installed along the northern and western boundaries of the brine station. This storm water berm will contain or divert any storm water run-on from entering or leaving the brine station area.

3. Leach fields - Type and volume of effluents, leach field area and design layout. If non-sewage or mixed flow from any process units or internal drains is, or has been, sent to the leach fields, include dates of use and disposition of septic tank sludges.

Answer – Not applicable, no leach fields are planned.

4. Solids disposal - Describe types, volumes, frequency, and location of on-site solids dried disposal. Typical solids include sands, sludges, filters, containers, cans and drums.

Answer – Routine domestic household type trash or other similar non-domestic waste pursuant to 19.15.35.8 NMAC will be stored in common trash dumpsters that are supplied and picked up routinely by the local waste management trucking company. This waste will be disposed of at a New Mexico Environmental Department permitted solid waste disposal facility.

B. For each of the transfer/storage/disposal methods listed above:

1. Describe the existing and proposed measures to prevent or retard seepage such that ground water at any place of present or future use will meet the WQCC

Standards of Section 3-103, and not contain any toxic pollutant as defined in Section 1-101.UU.

Answer – All storage tanks at the proposed brine station will be protected by a secondary containment area lined with a 20 mil LLDPE liner. This liner is a smooth, high quality, linear low density polyethylene (LLDPE) geomembrane with excellent chemical resistance, outstanding stress crack resistance, low permeability and excellent UV radiation resistance. This secondary containment area will be capable of holding a minimum of one-third more than the combination of interconnected tanks within. The 32 foot by 60 foot concrete loading pad will be curbed on the edges and sloped to a grating covered 20" wide by 55' long by 20" deep sump which is constructed in a single pour with the concrete loading pad. This sump will catch any spills/leaks occurring on the loading pad. The sump level will be automated and excess fluids will be pumped through above-ground piping to a 500 bbl fiberglass catch/flush tank located within the secondary containment area. All process piping at the brine station will be installed above-ground.

2. Provide the location and design of site(s) and method(s) to be available for sampling, and for measurement or calculation of flow.

Answer - Samples can be taken either at each individual tank valve, on the load lines or at the wellhead manifold. Fresh water measurement will occur at the fresh water well. Brine water measurement will occur at the brine wellhead. Electronic accumulating flow meters with an accuracy of ±1% will be utilized.

3. Describe the monitoring system existing or proposed in the plan to detect leakage or failure of any discharge system. If ground water monitoring exists or is proposed, provide information on the number, location, design, and installation of monitoring wells.

Answer –The brine station will be controlled by a SCADA system to monitor and manage pressures, flows and upset conditions. Automated alarms and shutdowns are included in this system including communication to responding personnel during unattended operations.

Upon permit approval, a ground water quality monitoring program will be initiated on three fresh water wells near the proposed brine well/brine station. These proposed monitor wells are located west, north and northeast of the brine well and brine station. These water wells were selected due to their proximity to the facilities. See Attachment "C" for location of the three proposed ground water wells. Water samples from these three wells would be tested quarterly for general chemistry parameters, BTEX and TPH. This would establish the ground water quality over time.

C. Off-Site Disposal
If wastewaters, sludges, solids etc. are pumped or shipped off-site, indicate general composition (e.g. waste oils), method of shipment (e.g. pipeline, trucked), and final disposition (e.g. recycling plant, OCD-permitted or domestic landfill, Class II disposal well). Include name, address, and location of receiving facility. If receiving facility is a sanitary or modified domestic landfill show operator approval for disposal of the shipped wastes.

Answer - Routine domestic household type trash or other similar non-domestic waste pursuant to 19.15.35.8 NMAC will be stored in common trash dumpsters that are supplied and picked up routinely by the local waste management trucking company. This waste will be disposed of at a New Mexico Environmental Department permitted solid waste disposal facility. Liquid waste generated onsite, primarily from the sump catch/flush tank, will be transported by third party trucking companies to an approved Class II SWD well permitted by the NMOCD. Any contaminated soil waste will be transported by third party trucking companies to an approved NMOCD surface waste management facility (i.e. Sundance, et al).

D. Proposed Modifications

1. If protection of ground water cannot be demonstrated pursuant to Section B.1. above, describe what modification (including closure) is proposed to meet the requirements of the Regulations. Describe in detail the proposed changes. Provide the information requested in A. and B. above for the proposed modified facility and a proposed time schedule for construction and completion. (Note: OCD has developed specific guidelines for lined surface impoundments that are available on request.)

Answer – This facility will be built after approval of this discharge plan and brine well application. No existing facility now exists that would require current modifications.

2. For ponds, pits, leach fields, etc. where protection of ground water cannot be demonstrated, describe the proposed closure of such units so that existing fluids are removed, and emplacement of additional fluids and run-off/run-on of precipitation are prevented. Provide a proposed time schedule for closure.

Answer - This would be a newly built facility with no ponds, pits, or leach fields in the design.

E. Underground Piping
If the facility contains underground piping, the age and specification (i.e., wall thickness, fabrication material, etc.) of said piping should be submitted. Upon evaluation of such information, mechanical integrity testing of piping may be necessary as a condition for discharge plan approval. If such testing (e.g. hydrostatic tests) has already been conducted, details of the program should be submitted.

Answer – This plan would include approximately 135 feet of new 3" SDR-11 HDPE pipeline for transportation of brine water to be installed underground between the brine well and the brine station. This SDR-11 HDPE pipe has a 160 psi rating, 0.318" minimum wall thickness, 2.825" ID and 3.500" OD. It ships in 500' or 1000' coils and is seamless pipe that would be thermally fused at the ends. This pipeline would be buried at a minimum of 36" to top of pipe (below frost line depth). This newly installed pipeline will be hydrostatically pressure tested per the NMOCD's HST Guidelines. Testing frequency would include an initial test at 100% of manufacturer's MAOP during installation and subsequent tests on an annual basis or sooner if leakage is ever suspected. An NMOCD representative can be notified to witness all tests.

This plan also includes approximately 110 feet of new 3" SDR-11 HDPE pipeline for transportation of fresh water to be installed a minimum of 36" underground between the fresh water source well and the brine well. No fluids other than fresh water are planned to be used in this pipeline.

These two HDPE pipelines would be designed to minimize the use of 90 degree fittings by making turns via long radius sweeps where possible.

F. Inspection, Maintenance and Reporting

1. Describe proposed routine inspection procedures for surface impoundments and other transfer, storage, or disposal units including leak detection systems. Include frequency of inspection, how records are to be maintained and OCD notification in the event of leaks.

Answer – Routine inspections of surface equipment and automation systems would occur daily by an onsite facility supervisor. Inspection logs would be documented and maintained onsite for subsequent review.

2. If ground water monitoring is used to detect leakage or failure of the surface impoundments, leach fields, or other approved transfer/storage/disposal systems provide:

a. The frequency of sampling, and constituents to be analyzed.

Answer – Per WQCC and NMOCD requirements, the brine water would be tested for general chemistry parameters, BTEX and TPH on a quarterly basis. Three nearby ground water wells would be tested for the same parameters on a quarterly basis. This would establish the baseline of ground water conditions over time. These wells were selected due to their proximity to the facilities. See Attachment "C" for location of the three proposed ground water wells.

b. The proposed periodic reporting of the results of the monitoring and sampling.

Answer – We propose that the periodic reporting of both the brine water quality and ground water quality occur annually in the January 31 annual report.

c. The proposed actions and procedures (including OCD notification) to be undertaken by the discharger in the event of detecting leaks or failure of the discharge system.

Answer – The NMOCD would be notified via Form C-141 upon discovery of a leak detection or failure of the discharge system. The brine well would be shut in pending evaluation and correction of the failure or leak.

3. Discuss general procedures for containment of precipitation and runoff such that water in contact with process areas does not leave the facility, or is released only after testing for hazardous constituents. Include information on curbings, drainage, disposition, notification, etc.

Answer – As discussed in section VI.A.2 above, a storm water run-on berm will be installed around the northern, eastern and southern sides of the brine station to protect from storm water run-on at the brine station. As for run-off, the facility will contain all precipitation that occurs inside the tankage secondary containment. Any rain water collected in this containment area will be vacuumed up and either recycled within the facility or disposed of in an NMOCD approved manner. Heavy rain on the concrete loading pad will be collected into the sump by curbing and pump transferred to the 500 bbl catch/flush tank. Any water collected in this catch/flush tank will be hauled to a Class II SWD well approved by the NMOCD. The well location at the brine well will be contoured so that standing water is not allowed to pond near or around the wellhead. See Attachment "G" for USGS drainage map of the impacted area. It indicates the general topography in this area gently slopes northwest to southeast.

4. Describe methods used to detect leaks and ensure integrity of above and below ground tanks, and piping. Discuss frequency of inspection and procedures to be undertaken if significant leaks are detected.

Answer – Routine visual inspections of surface equipment and automation systems would occur daily by an onsite facility supervisor. Inspection logs will be documented and maintained onsite to insure any necessary repairs are completed and for subsequent review. The buried 135 foot SDR-11 polyethylene brine pipeline will initially be hydrostatically pressure tested upon installation to insure mechanical integrity. It will be hydrostatically retested annually as long as no leakage is suspected. If leakage is ever suspected, the pipeline would be removed from service and tested. All pipeline tests will be logged into the inspection logs onsite. Storage tanks will be visually inspected internally when emptied for maintenance. Tanks will be visually inspected externally during daily routine inspections.

5. Submit a general closure plan describing what actions are to be taken when the facility discontinues operations. These actions must include:

a. Removal of all fluids, contaminants and equipment.

Answer – When the facility permanently discontinues operations, all stored fluids in equipment will be removed and either sold, reused or disposed. All ground contaminants will be recovered and disposed of per State, Federal and local regulations in effect at the time of closure. All surface equipment and infrastructure will be properly removed from the site. Underground pipelines will be flushed with fresh water, capped on both ends and abandoned in place.

b. Grading of facility to as close to the original contour as is practical.

Answer – After all surface equipment and concrete is removed, the brine station surface area and the brine well location will be re-contoured to original contour and reseeded with native grasses.

c. Proper disposal of fluids, sludges and solids pursuant to rules and regulations in effect at the time of closure.

Answer – All disposal of fluids, sludges and solids will be performed per State, Federal and local regulations in effect at the time of closure.

See section X.B for additional closure plan details.

VII. Brine Extraction Well(s)
Insitu brine extraction wells must meet the requirements of Part 5 of the Water Quality Control Commission Regulations in addition to other applicable requirements of WQCC and Oil Conservation Division Rules and Regulations.

A. Drilling, Deepening, or Plug Back Operations
Before drilling, deepening, or plug back operations, the operator of the well must file the following plans, specifications, and pertinent documents with the Oil Conservation Division 90 days prior to start-up of the planned operation.

1. Form C-101 "Application for Permit to Drill, Deepen, or Plug Back" (OCD Rule 1101).

Answer – Forms C-102 and C-103 for the State '4' #1 (API #30-025-26370) were submitted to the NMOCD District 1 Office on January 5, 2018. They were approved January 19, 2018. Draft forms C-101 and C-103 were submitted to the NMOCD Santa Fe and Hobbs Offices on March 1, 2018 and are attached to this discharge plan documentation.

2. A "Notice of Intent to Discharge" in accordance with WQCC regulation 1-201 (New facilities only).

Answer – Llano Disposal, LLC submitted a formal "Notice of Intent to Discharge" attached to this discharge permit application. When the application is determined by the NMOCD to be administratively complete, the review process begins to determine whether a final discharge permit is approved by the NMOCD.

3. A map showing the number, name, and location of all producing oil and gas wells, injection wells, abandoned holes, surface bodies of water, watercourses, springs, mines, quarries, water wells, and other pertinent surface features within one mile from the wellbore(s).

Answer – See Attachment "D" for a map of the oil/gas wells and fresh water wells within the one mile area of review. This map also indicates the general topography of the area. The area elevation is relatively flat with a slight slope from northwest to southeast. There are no identifiable surface bodies of water, watercourses, springs, mines or quarries within the area of review. There are two caliche pits within the AOR.

4. Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site. Show the position of such ground water within this area relative to the injection formation. Indicate the direction of water movement, where known, for each zone of ground water.

Answer – Underground aquifers in this area are the Ogallala and Quaternary Alluvium formations. The ground water in these formations is unconfined where the underlying red beds are relatively impermeable. This underlying layer prevents further vertical movement within the aquifer. Based on information reviewed, the ground water flow within the Ogallala is generally to the southeast. According to OSE records in the subject section and contiguous 8 sections, water depths range in a band at approximately 40 – 80 feet below ground level. With the base of the reported red beds being at 1350' in the proposed brine well, the nearest ground water would be a minimum vertical distance of 1050' above the proposed injection zone. The primary water bearing depth of 40 – 80 feet would be a minimum vertical distance of 2320' above the proposed injection zone. No additional ground water zones are evident in the area.

5. List all abandoned wells/shafts or other conduits in the area of review which penetrate the injection zone. Identify those which may provide a pathway for migration of contaminant through being improperly sealed, completed or abandoned. Detail what corrective action will be taken prior to start-up of operations to prevent any movement of contaminants into ground water of less than/equal to 10,000 mg/l TDS through such conduits due to the proposed injection activity (e.g. plugging open holes). Include completion and plugging records.

If information becomes available after operations have begun, which indicates the presence of a conduit that will require plugging then the injection pressure will be limited to avoid movement of contaminants through such a conduit into protected ground water.

Answer – See Attachment "D" for a map of all oil and gas wells within the area of review that penetrate the injection zone (2400' – 2970' MD). There is one plugged and abandoned offset well in the area of review. It is identified below:

API Well Number	Well Status	Location	TD	Plugs Near Salt
30-025-22310	P&A	B-5-16S-36E	10, 500'	@ 1451', 4454'

This plugged offset well has cement plugs above and below the salt formation which are designed to eliminate any pathway for migration. It is located 3094 feet northwest of the subject well. Plugging records and a current wellbore diagram for the offset well within the 1 mile area of review are provided in Attachment "H".

6. Maps and cross-sections detailing the geology and geologic structure of the local area.

Answer – See NW-SE and SW-NE cross-sections in Attachment "N".

7. A proposed formation testing program to obtain an analysis or description of fluids in the receiving formation.

Answer – Llano Disposal proposes to obtain brine well fluid samples at the wellhead manifold quarterly. These samples will be laboratory tested for general chemistry parameters, BTEX and THP. Test results would be reported to the NMOCD during the January 31 annual report.

8. Schematic drawings of the surface and subsurface construction details.

Answer – See Attachment "L" for surface facility and subsurface schematics.

9. The proposed drilling, evaluation, and testing, programs. Include logging procedures, coring program, and deviation checks.

Answer – Since the subject well has already been drilled and is currently in plugged status, this information exists in NMOCD files. See Attachment "I" for copies of the NMOCD well reports and a current and proposed wellbore diagram. Llano Disposal will report all future well completion information via Form C-105 and provide copies of any new logs run.

10. The proposed stimulation, injection, and operation procedures (Note WQCC 5-206 limitations).
Answer – No initial stimulation is proposed. Fresh water will be injected down the tubing/casing annulus and circulate brine water up the tubing. The brine water will be transported by pipeline to a nearby brine station and stored in surface tanks for subsequent sale.

11. A plan for plugging and abandonment of the well that meets the requirements of WQCC regulations section 5-209. A plugging bond pursuant to OCD Rule 101 is required prior to commencement of any new well drilling operations.

Answer – The plugging plan includes swabbing approximately one foot of water out of the cavern, removing the tubing string and packer, then setting a cast iron bridge plug at 10 feet above the 8-5/8" casing window and filling the casing with a Class C high strength salt resistant cement. The wellhead will be cut off and a dry hole marker installed. Llano Disposal, LLC has previously provided a $108,000 irrevocable letter of credit accepted and approved by the NMOCD to cover bonding for well plugging, surface restoration and surface subsidence monitoring for 5 years beyond closure date as discussed further in Financial Assurance Plan section X.C below.

B. Workover Operations
Before performing remedial work, altering or pulling casing, plugging or abandonment, or any other workover, approval of OCD must be obtained. Approval should be requested on OCD Form C-103 "Sundry Notices and Reports on Wells" (OCD Rule 1103-A).

Answer – Llano will file Notice of Intent C-103 prior to future workover operations.

C. Additional Information Required with Discharge Plan
In addition to all of the information required above in Part VII.A. (Drilling, Deepening, or Plug Back Operations), include the following with your discharge plan application.

1. Provide evaluation, completion and well workover information. Include all logs, test results, completion reports and workover descriptions.

Answer – Please see Attachment "I" for the drilling, completion and testing reports to-date by the previous operator. Llano Disposal will file C-103 NOI's prior to and Subsequent Notice C-103s following any downhole work. Llano will also file form C-105 reports after completion operations have been performed.

2. Provide the proposed maximum and average injection pressures and injection volume. If one well is to be used for injection and extraction, fresh water must be injected down the annulus and brine must be recovered up the tubing. Reverse flow will be allowed for up to once a month for 24 hours for clean out. If an alternative operating method is desired then a written request must be submitted to the OCD which describes the proposed operating procedures and how the mechanical integrity of the casing will be guaranteed.

Answer – Llano proposes to inject fresh water down the tubing-casing annulus and circulate brine water up the tubing. Below are our proposed injection pressures and volumes which are well below the fracture gradient of 0.75 psi/ft:

Maximum injection pressure – 475 psi
Average injection pressure – 250 psi
Maximum injection volume – 1900 BWPD
Average injection volume – 1550 BWPD

3. Submit a proposed mechanical integrity testing program. OCD requires a casing pressure test isolating the casing from the formation using either a bridge plug or packer prior to start of operation, and repeated at least once every five years or during well work over. In addition, OCD requires an open hole pressure test to 500 PSI for 4 hours on an annual basis.

Answer – Llano proposes to test the casing to 300 psi for 30 minutes using a packer or bridge plug during completion operations. Additionally, Llano proposes to pull production tubing and run a packer or bridge plug to test the casing to 300 psi for 30 minutes at intervals of five years or less. NMOCD personnel will be notified in advance for witnessing. Concerning the open-hole pressure test, Llano believes 500 psi surface pressure is too much pressure to put on the well/cavern. We propose to perform this annual test at 300 psi surface pressure for 4 hours. This would minimize the intensity of sudden pressure surges and releases which may cause damage to the formation.

4. Provide an analysis of the injection fluid and brine. Include location and design of site(s) and method(s) of sampling. Analysis will be for concentrations of Total Dissolved Solids, Sodium, Calcium, Potassium, Magnesium, Bromide, Carbonate/Bicarbonate, Chloride and Sulfate.

Answer – When the brine well is in operation, fresh water and brine samples can be taken from sample ports at the wellhead or at the brine station load line. Brine samples can also be taken from these same locations. Recently Llano sampled two existing fresh water wells proposed to be ground water monitor wells. These tests represent the current aquifer quality in the area. These test results are included in Attachment "J".

5. Compare volumes of fresh water injected to volume of brine to detect underground losses and specify method by which volumes are determined. After approval, submittal of a quarterly report listing, by month, the volume of fluids injected and produced will be required.

Answer – Llano proposes to measure both fresh water injected and brine water produced by installing individual electronic flow meters with totalizers on the brine well manifold. The totalizer volumes will be recorded monthly and provide the records for evaluating underground losses. If the volumes exceed a 10% tolerance, the NMOCD would be notified and the discrepancy would be investigated.

6. For renewal application for facilities in operation in excess of 15 years, provide information on the size and extent of the solution cavern and geologic / engineering data demonstrating that continued brine extraction will not cause surface subsidence of catastrophic collapse.

Answer – Llano would address this section during future renewal application processes as operational experience with the formation in this well is gathered.

VIII. Spill/Leak Prevention and Reporting Procedures (Contingency Plans)
It is necessary to include in the discharge plan submittal a contingency plan that anticipates where any leaks or spills might occur. It must describe how the discharger proposes to guard against such accidents and detect them when they have occurred. The contingency plan also must describe the steps proposed to contain and remove the spilled substance or mitigate the damage caused by the discharge such that ground water is protected, or movement into surface waters is prevented. The discharger will be required to notify the OCD Director in the event of significant leaks and spills. This commitment and proposed notification threshold levels must be included in the contingency plan.

A. Prevention
Describe how spills and leaks will be prevented at the facility. Include specifically how spillage/leakage will be prevented during truck loading and at major transfer points within the facility. Discuss general "housekeeping" procedures for areas not directly associated with the above major processes.

Answer – See the Emergency Contingency and Response Plan in Attachment "K" for proposed actions to spill/leak prevention and general housekeeping actions.

B. Containment and Cleanup
Describe procedures for containment and cleanup of major and minor spills at the facility. Include information as to whether areas are curbed, paved, and drained to sumps; final disposition of spill materials; etc.

Answer – Spills will be contained by secondary containments around the brine station tanks. Spills at the loading pad will be contained in the concrete sump then pumped to a catch/flush tank located inside the lined secondary containment. The concrete loading pad will be curbed to direct flow of spills to the sump. The liquid spills recovered in the catch/flush tank will be trucked to a Class II disposal well permitted by the NMOCD.

C. Notification
Propose a schedule for OCD notification of spills. The OCD requires the discharger to notify the director within 48 hours of the detection or suspected detection of a spill, and provide subsequent reports as required.

Answer – See Attachment "K" for the NMOCD notification plan listed within the proposed facility contingency plan.

IX. Site Characteristics

A. The following hydrologic/geologic information is required to be submitted with all discharge plan applications. Some information already may be included in this application or may be on file with OCD and can be provided to the applicant on request.

1. Provide the name, description, and location of any bodies of water, streams (indicate perennial or intermittent), or other watercourses (arroyos, canals, drains, etc.); and ground water discharges sites (seeps, springs, marshes, swamps) within one mile of the outside perimeter of the facility. For water wells, locate wells within one mile and specify use of water (e.g. public supply, domestic, stock, etc.).

Answer – Due to the relatively flat nature of the terrain within the 1 mile area of review, there are no bodies of water, streams, arroyos, canals, drains, seeps, springs, marshes or swamps evident. Fifteen fresh water wells have been identified on the ground and via the OSE data base. About half of them are utilized for cattle production and the other half are used for domestic household supply. See Attachment "D" for location of these water wells.

2. Provide the depth to and total dissolved solids (TDS) concentration (in mg/l) of the ground water most likely to be affected by any discharge (planned or unplanned). Include the source of the information and how it was determined. Provide a recent water quality analysis of the ground water, if available, including name of analyzing laboratory and sample date.

Answer – New water samples were obtained from two water wells within the area. See Attachment "J" for test results. The well titled "East Fresh Water Well" is a windmill located 1.27 miles northeast of the subject brine well and utilized for cattle production. The well titled "West Fresh Water Well" is a windmill located 0.92 miles north of the subject brine well and also utilized for cattle production. OSE data base indicates the average depth to water in the area of review is 40 – 80 feet.

3. Provide the following information and attach or reference source information as available (e.g. driller's logs):

a. Soil type(s) (sand, clay, loam, caliche);

Answer – Soil types are alluvium sand, shale, red beds and anhydrite per C-105 Formation data on wells within the 1 mile area of review.

b. Name of aquifer(s);

Answer – Ogallala and Quaternary Alluvium formations.

c. Composition of aquifer material (e.g. alluvium, sandstone, basalt, etc.); and

Answer – Alluvium medium sand.

d. Depth to rock at base of alluvium (if available).

Answer - The aquifer is generally located at a depth of 40 – 80 feet in this area. There is an underlying impermeable red bed layer that prevents further vertical movement within the aquifer. Red beds are evident immediately below the aquifer and extend for a depth of about 1350' across the area of review.

4. Provide information on:

a. The flooding potential at the discharge site with respect to major precipitation and/or run-off events; and

Answer – The area of review is not listed as a Flood Plain by FEMA. Average annual rainfall for this site is 10"-12" per year. There is a very slight slope northwest to southeast across the area of review. The area could be occasionally inundated with locally heavy rainfall, but it is very unlikely that storm water runoff events from other areas would impact the proposed site. New Mexico Highway 206 runs north/south approximately 500 feet west of the proposed site. This highway with developed barrow ditches helps control runoff events coming from the west and northwest. See FEMA map in Attachment "O".

b. Flood protection measures (berms, channels, etc.), if applicable.

Answer – The brine station will have a storm water runoff berm installed on the northern and western edges of the site. This berm should direct any approaching runoff events away from the station. The brine well location will be graded so that rain water will not pond around the well head.

B. Additional Information
Provide any additional information necessary to demonstrate that approval of the discharge plan will not result in concentrations in excess of the standards of WQCC Section 3-103 or the presence of any toxic pollutant (Section 1-101.UU.) at any place of withdrawal of water for present or reasonably foreseeable future use. Depending on the method and location of discharge, detailed technical information on site hydrologic and geologic conditions may be required to be submitted for discharge plan evaluation. Check with OCD before providing this information. However, if required it could include but not be limited to:

1. Stratigraphic information including formation and member names, thickness, lithologies, lateral extent, etc.

Answer – The location of the proposed brine well is located in the geologic region known as Northwest Shelf of the Permian Basin. The brine well target formation is the Salado formation of the lower Ochoan Epoch. This Epoch is part of the upper Permian Age and extends across the Northwest Shelf, Delaware Basin and Central Basin Platform. It thins and finally pinches out on the eastern shelf. Layers in this series are predominately evaporates which contain strings of dolomite, shale, siltstone and sandstone. The thickness of the salt section averages around 1000'. The Triassic rock overlying the lower Permian formations is the Dockum group and is divisible into the Santa Rosa sandstone and Chinle formations. The Tertiary rocks are represented by the Ogallala formation and ranges in thickness from 0' to 300' within this general area. It is primarily made up of calcareous, unconsolidated sand, clay, silt and gravel. This formation is the primary ground water source within this area. See Attachment "M" for area geology and general stratigraphy.

2. Generalized maps and cross-sections;

Answer – See a map and cross-section in Attachments "M" and "N".

3. Potentiometric maps for aquifers potentially affected;

Answer – No potentiometric maps were found for this water basin in Lea County.

4. Porosity, hydraulic conductivity, storactivity and other hydrologic parameters of the aquifer;

Answer – No pumping tests, slug tests or constant-head tests were performed. However, values for these parameters were calculated using standard variables for an unconfined aquifer with medium sand as the aquifer material. Results are:

Porosity – 29-49%
Hydraulic Conductivity – 305 gal/day/ft^2

Storactivity – 0.2
Specific Yield – 32%
Specific Retention – 3%

5. Specific information on the water quality of the receiving aquifer.

Answer – The receiving formation is the Salado Formation (salt) which is not an aquifer. The Salado Formation is generally a solid formation with no in situ water evident. There are no records in the well file indicating that the Salado formation contained any water when this well was originally drilled.

6. Information on expected alteration of contaminants due to sorption, recipitation or chemical reaction in the unsaturated zone, and expected reactions and/or dilution in the aquifer.

Answer – The surface in the area of review is grassland utilized for cattle production. Other than animal waste, there are no contaminants or man-made agricultural chemicals utilized on this surface. The proposed brine well operation will include minimal man-made chemicals. Brine storage tanks will also have secondary containment protection. Infiltration of contaminants through the unsaturated or vadose zone to the aquifer is not expected during the proposed brine well operation. Additionally, no alteration of contaminants due to sorption, recipitation or chemical reaction in the unsaturated zone is expected. Finally, no reactions and/or dilution in the overlying aquifer are expected from brine operations.

X. Other Compliance Information

Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. Examples include previous Division orders or letters authorizing operation of the facility or any surface impoundments at the location.

Answer – New forms C-102 and C-103 for the subject well were submitted to the NMOCD District 1 Office on January 5, 2018 and approved by the NMOCD on January 19, 2018. Draft forms C-101 and C-103 were submitted to the NMOCD Santa Fe and Hobbs Offices on March 1, 2018 and are attached to this discharge plan documentation.

A. Surface Subsidence Monitoring

To monitor potential changes in surface conditions at the proposed brine well, Llano proposes to establish three surface subsidence monuments suitable for three dimensional surface monitoring as well as establishing an X, Y, and Z position on the proposed brine well. The monuments will be Berntsen's 9/16" stainless steel floating sleeved rod monuments (see Attachment "P") which are well suited for monitoring positional changes in the ground surface. The monuments are designed so that frost heave and swelling and shrinking soil conditions have no effect on the stainless steel rod on which measurements will be made. A location point on the wellhead will also be established so that the well itself will be used as a fourth subsidence monument. Rod monuments will be installed in a triangular configuration around the brine well wellhead at a maximum distance of 150 feet from the well.

1. Monument Installation Procedure

A 12" diameter hole will be augered to a depth of about 3-1/2 feet. The stainless steel rod will be manually driven into the ground, a section at a time, to a depth of 8 feet. The top of the rod would be about 6" below ground level. A finned floating sleeve (filled with NO-TOX grease) is placed over the rod and the datum point added on the rod end. A 6" diameter x 42" long PVC pipe conduit with access cover glued to top end is then placed over the finned sleeve. The inside of the PVC conduit is then filled with fine sand to a level about 3" below the top of the rod. The outside of the PVC conduit will be filled with sand to about 1 foot below ground level, then concrete will be placed from 1 foot depth to ground level.

2. Annual Subsidence Surveys

The survey contractor will use modern survey equipment to establish X, Y, Z positions on the surface subsidence monuments on an annual basis. Survey grade GPS equipment will be utilized to establish the horizontal position of each subsidence monument relative to the New Mexico Coordinate System North American Datum 1983 (2007). Using Static and Fast Static observations the expected horizontal accuracy of the GPS equipment as established by the manufacturer for the subsidence monuments is ±0.01 ft. A digital level will be utilized to establish the vertical position of the surface subsidence monuments relative to the North American Vertical Datum of 1988 (NAVD88). Using differential leveling techniques the expected vertical accuracy of the equipment as established by the manufacturer for the subsidence monuments is ±0.01 ft.

The initial survey will be conducted prior to first injection into the proposed brine well. This survey will establish horizontal and vertical coordinate baseline values on the three monuments and the well. Additional surveys will be performed annually in order to compare coordinate values checking for movement in the monuments and well. After cease of operations of the proposed brine well, annual surface subsidence surveys will be conducted for a minimum of five additional years. Reports of these surveys will be submitted to the NMOCD in the annual (January 31) operating report.

B. Closure Plan

Upon cease of operations and after regulatory approval, Llano will plug and abandon the brine well, remove all surface equipment, restore the surface to original contour and reseed it with native grasses. In addition, Llano will continue surface subsidence monument surveys for a minimum of 5 years after well plugging.

State 4 #1 Brine Well and Tatum Brine Station
Discharge Plan

1. Well Plug and Abandonment
The brine well will be plugged and abandoned per WQCC regulations section 5-209 and NMOCD rules in place at that time. As discussed in Section VII.A.11 above, the plugging plan includes swabbing approximately one foot of water out of the cavern, removing the tubing string, setting a cast iron bridge plug at 10 feet above the 8-5/8" casing window and filling the casing with a Class C high strength salt resistant cement. The wellhead will be cut off and a dry hole marker installed. Over time, large portions of the resulting salt cavern will re-solidify.

2. Surface Restoration
All surface equipment at the brine well location and brine station will be emptied, decommissioned and removed either through recycle, scrapping, sale or used by the owner elsewhere. The disturbed surface at the well location and brine station will be reclaimed and re-contoured to near original condition. The disturbed area will be reseeded with a BLM grass seed mixture to establish 70% minimum regrowth coverage.

3. Surface Subsidence Monitoring
The annual surface subsidence monitoring program discussed in section X.A.2 above will be continued for a minimum of 5 years following plugging and abandonment of the brine well.

C. Financial Assurance Plan
Llano currently has no well plugging bond for the proposed brine well. However, Llano has provided financial assurance for the State '4' #1 Brine Well and Tatum Brine Station via an irrevocable letter of credit in the amount of $108,000 covering well plugging and abandonment, surface restoration and surface subsidence monitoring for 5 years after ceasing operations as detailed below.

1. Well Plugging - $41,475
Based on recently obtained bids and experience in plugging wells, Llano proposes a well plugging bond amount of $41,475. See cost breakdown below.

$17,400	Well plugging contractor labor/equipment including cement
$8,925	Equipment rental (workstring, flowback tanks, BOPE, porta-john, etc)
$4,725	Transportation of equipment
$3,150	Supervision
$2,730	Purchase/transportation of brine and fresh water
$2,100	Disposal of tank fluids
$1,260	Excavate/cutoff wellhead and anchors; weld on flat plate and PxA marker
$1,185	Miscellaneous

2. Surface Restoration - $47,625
Based on recently obtained surface restoration cost quotes, these costs total $47,625 as detailed below:

$8,400	Equipment/Labor – washout tanks for disposal, haul fluids and solids to disposal
$2,200	Backhoe/Labor - 2 days to crush fiberglass tanks and PVC components at brine station
$2,520	35 Yd Roll-off Dumpsters - delivery, rental and hauling to landfill
$551	Lea County Landfill Charges – 3 ea 35 yd dumpsters = 105 cy x 300 lbs = 15.75 tons @ $35/ton
$1,700	Onsite Supervision
$20,059	Equipment/Labor – pull all fencing, remove all concrete, disassemble all metal components, re-contour land to original grade, rebuild barbed wire fence to original ranch configuration, remove underground piping, electrical conduit, wiring, high line poles, wiring and signage
$2,300	Trucking/Disposal – of concrete to Lea County Landfill @ $35/ton
$3,700	Trucking – haul metal components to Hobbs Iron & Metal for recycle
$4,725	Decommission buried polyethylene brine pipeline - costs include fresh water, trucking and pumping to wash pipeline clean and disposal of brine and wash water, then leave pipeline in place for ranching, fresh water sales use
$1,470	Reseeding BLM mix grass on estimated 2 acres at well location and brine station

3. Surface Subsidence Monitoring - $18,900

Based on recently obtained surface subsidence survey cost quotes, these costs total $18,900 for 5 years of follow-on subsidence monument monitoring. Cost estimate is $1260 per year per monument surveyed. Annual cost to survey three monuments is $3780 per year or $18,900 for 5 years.

D. Notification Plan

Pursuant to 20.6.2.3108 NMAC, Llano Disposal proposes the following public notice plan to be implemented within 30 days upon the department's determination that the discharge permit application is deemed administratively complete.

1. Public Notice Onsite Signage (minimum 2' x 3' size) Pursuant to 20.6.2.3108.B.1 NMAC

Llano will install one (1) sign meeting the above requirements in both English and Spanish to be located on private land adjacent to the eastern right-of-way of Hwy 206 approximately ¼ mile south of mile post 17 in Section 4, T13S, 36E. This posting site is located approximately 500 feet west of the proposed brine station location. This notice will be posted for a minimum of 30 days. The proposed text on this sign is included in Attachment "Q".

2. Public Notice Offsite Pursuant to 20.6.2.3108.B.1 NMAC

Llano will post a notice of the discharge application in English and Spanish on a public bulletin board in the Lea County Courthouse which is approximately 19 miles from the proposed brine well and brine station. This notice will be posted for a minimum of 30 days. The proposed text of this notice is included in Attachment "R".

3. Notice to Adjoining Property Owners Pursuant to 20.6.2.3108.B.2 NMAC
Llano will provide written notice of the discharge application in English by certified mail, return receipt requested, to owners of record of all properties adjacent to the property owned by the discharger. According to Lea County property records, there are two adjacent property owners and 1 additional property owner within 1/3 mile of the property line of applicant. The proposed text of these notices, attachments and a listing of the owners are included in Attachment "S".

4. Notice to the Property Owner of the Discharge Site Pursuant to 20.6.2.3108.B.3 NMAC
Notice to the landowner is not required since the applicant, Llano Disposal, LLC, is the owner of this land. Although the surface ownership is private land, the mineral ownership is State of New Mexico owned. Llano will provide written notice in English by certified mail, return receipt requested, to the New Mexico State Land Office, the mineral owner of the discharge site. According to SLO records as of February 23, 2018, the State owned minerals in UL 'E', Section 4, T13S, R36E are unleased. Text of the notice letter to the State of New Mexico is included in Attachment "S".

5. Public Notice Newspaper Display Ad (minimum 3" x 4") Pursuant to 20.6.2.3108.B.4 NMAC
Llano will publish one (1) newspaper advertisement meeting the above requirements in both English and Spanish in the "Lovington Leader", a newspaper of general circulation nearest the location of the proposed discharge. The proposed text of these newspaper advertisement notices is included in Attachment "T".

6. Proof of Notice Pursuant to 20.6.2.3108.D NMAC
Within 15 days of completion of public notice requirements listed above, Llano will submit to the department proof of notice, including an affidavit of mailings and the list of property owners, proof of publication in the newspaper, and an affidavit of public posting onsite the discharge location and offsite in the Lea County Courthouse.

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-101
Revised July 18, 2013

☐AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
Llano Disposal, LLC **PO Box 190** **Lovington, NM 88260**	**370661** 3. API Number **30-025-26370**

4. Property Code	5. Property Name	6. Well No.
	State '4'	**001**

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
E	**4**	**13S**	**36E**		**1980**	**N**	**660**	**W**	**Lea**

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name	Pool Code
BSW; Salado	**96173**

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
E	**M**	**R**	**S**	**3997**
16. Multiple	17. Proposed Depth	18. Formation	19. Contractor	20. Spud Date
N	**4550' (PBTD)**	**Salado**	**Unknown**	**Unknown**

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
40' – 75'	**~2597 feet**	**Greater than 1 mile**

☒**We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	**17-1/2"**	**13-3/8"**	**61**	**382**	**420**	**Surface – In Place**
Intermed	**11"**	**8-5/8"**	**32/28/24**	**4589**	**1900**	**222' – In Place**
N/A	**7-7/8"**	**None**	**N/A**	**Existing TD 13476'**	**N/A**	**N/A**

Casing/Cement Program: Additional Comments

Enclosures: Current and Proposed Wellbore Diagrams, C-103 (proposed conversion procedure)

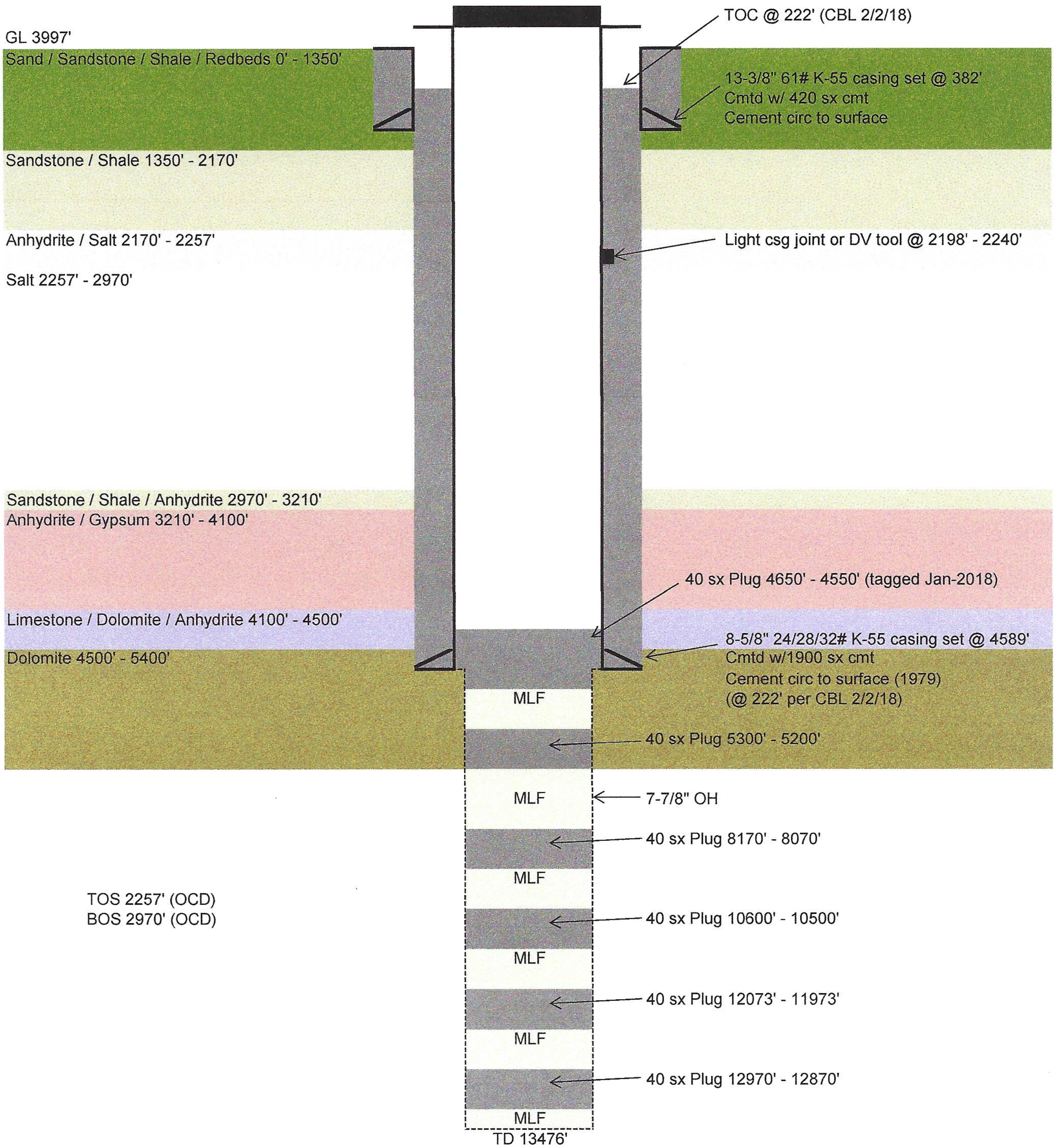
22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double/Pipe/Blinds	3000	3000	Cameron/Schaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature: DJ Holcomb	OIL CONSERVATION DIVISION Approved By:
Printed name: **Danny J. Holcomb**	Title:
Title: **Agent for Llano Disposal, LLC**	Approved Date: Expiration Date:
E-mail Address: **danny@pwllc.net**	
Date: **3/1/2018** Phone: **806-471-5628**	Conditions of Approval Attached

CURRENT WELLBORE

Re-entered Well
Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980' FNL x 660' FWL, UL 'E', Sec 4, T13S, R36E, Lea County, NM

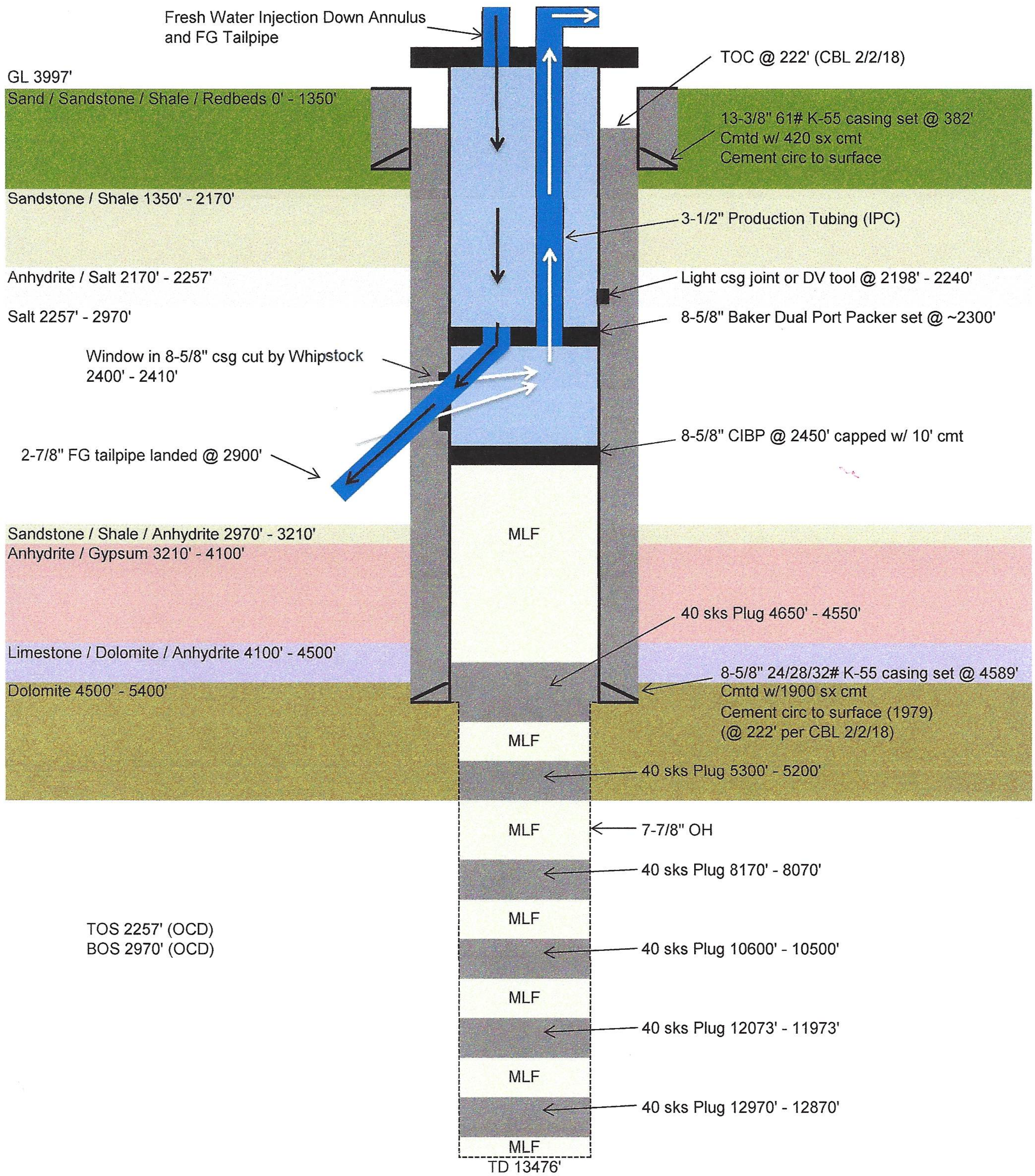


Drawing Not to Scale

PROPOSED WELLBORE

Configured for Brine Well Service

Llano Disposal, LLC
State '4' BSW #1
API # 30-025-26370
1980' FNL x 660' FWL, UL 'E', Sec 4, T13S, R36E, Lea County, NM



Drawing Not to Scale

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.
30-025-26370

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

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 - Proposed Brine Well

7. Lease Name or Unit Agreement Name
State '4'

8. Well Number 1

2. Name of Operator
Llano Disposal, LLC

9. OGRID Number
370661

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

10. Pool name or Wildcat
BSW; Salado

4. Well Location
Unit Letter E : 1980 feet from the North line and 660 feet from the West line
Section 4 Township 13S Range 36E NMPM Lea County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3997' GL

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☒	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☒			
OTHER: Prep well to convert to BSW ☒		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, Llano Disposal LLC proposes the following procedure to convert this well to brine well service after WQCC Discharge Permit approval:

1) MIRU WL, run 8-5/8" CIBP on WL, set at 2450' capped with 10' cement via WL dump bailer. RDMO WL.
2) MIRU pulling unit, reverse unit/swivel and Whipstock assembly, NU BOP, unload and tally 2-7/8" workstring, set 2 frac tanks (closed loop system) and fill one tank with BW. Perform casing MIT to 300 psi for 30 minutes. RIH with Whipstock anchor on workstring, tag CIBP cement cap at 2440', set anchor at 2440', pull workstring.
3) RIH with casing cutter assembly, four 4-3/4" DCs and workstring to Whipstock anchor, mill 10' casing side window in 8-5/8" casing at 2400' – 2410'. POH with workstring, DCs, casing cutter, pick up bit. RIH with workstring and bit assembly, drill through salt to 2920', circulate hole clean. POH with workstring, DCs and BHA.
4) RIH with 8-5/8" Baker dual port packer on 3-1/2" IPC production tubing, set packer at 2300', land 2-7/8" fiberglass tailpipe at 2900'.
5) ND BOP, hook up wellhead, perform open-hole pressure test to 300 psi for 4 hours. RDMO pulling unit, reverse unit, frac tanks.
6) Circulate FW to test brine service well. Install surface equipment. Begin brine water production.

Re-entry ~~Spud~~ Date: 1/29/2018 Rig Release Date: 1/31/2018

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

SIGNATURE DJHolcomb TITLE Agent for Llano Disposal, LLC DATE 3/1/2018

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

For State Use Only

APPROVED BY:________ TITLE________ DATE________
Conditions of Approval (if any):

Holcomb Consultants
6900 Spring Cherry Lane
Amarillo, Texas 79124

March 2, 2018

NMOCD Environmental Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Mr. Carl Chavez

Re: State 4 #1 (30-025-26370)
UL 'E', Section 4, T13S, R36E, Lea County, New Mexico

Per the rules and regulations of the New Mexico Oil Conservation Division, please find enclosed a copy of NMOCD form C-108 for the above referenced well. This C-108 is being submitted with a WQCC Discharge Plan Application.

Llano Disposal, LLC, P. O. Box 190, Lovington, NM 88260 hereby submits a form C-108 (Application for Authorization to Inject) to the New Mexico Oil Conservation Division seeking administrative approval to convert the State '4' #1, API 30-025-26370, 1980 FNL x 660 FWL, Unit Letter "E", Section 4, T13S, R36E, Lea County, New Mexico from a plugged and abandoned well to a commercial brine service well. The proposed production interval would be the Salado formation through cased hole completion between 2400' – 2970'. Injection fluid will be fresh water from a nearby water well. Anticipated average daily injection volume is 1550 BWPD with a maximum daily injection volume of 1900 BWPD. Anticipated average injection pressure is 250 psi with a maximum injection pressure of 475 psi. The well is located approximately 1.8 miles south of Tatum, New Mexico.

No notices of this C-108 application were made since WQCC rules (20.6.2.3108 NMAC) will determine notice requirements once a discharge plan is considered "Administratively Complete" by the OCD.

Sincerely,

DJ Holcomb

Danny J. Holcomb
Agent for Llano Disposal, LLC
Email: danny@pwllc.net
Cell: 806-471-5628

Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980 FNL x 660 FWL
Unit Letter 'E', Section 4, T13S, R36E
Lea County, New Mexico
C108 Application for Authorization to Inject

I.

The purpose of this application is seeking administrative approval for authorization to convert the State '4' #1 from a plugged and abandoned well to a commercial brine production well. This C-108 application is submitted in conjunction with a WQCC discharge plan application.

II.

Operator: Llano Disposal, LLC
Address: P.O. Box 190, Lovington, New Mexico 88260
Contact Party: Marvin Burrows phone: 575-631-8067 email: burrowsmarvin@gmail.com

III.

Well Name: State '4' #1
API Number: 30-025-26370
Location: Unit Letter 'E', Section 4, T13S, R36E, Lea County, New Mexico
Operator: Llano Disposal, LLC OGRID: 370661
Proposed Formation: BSW; Salado (Pool Code: 96173)
Please see Exhibit "A" for additional well data.

IV.

This is not an expansion of an existing project.

V.

Please see Exhibit "B" for lease map.

VI.

There is one offset well located within the 1 mile Area of Review. It was drilled in 1967 as a Wolfcamp test and was plugged and abandoned in 1969. See Exhibit "C" for a 1 mile AOR map, offset well list and offset wellbore diagram.

VII.

1. Anticipated daily injection volume – 1550 BWPD with a maximum of 1900 BWPD.
2. System will be closed. It will include a brine station and brine will be trucked out.
3. Anticipated disposal pressure: Average 250 psig, Maximum 475 psig.
4. Please see Exhibit "D" for fresh water analysis of water injected for brine production.

VIII.

The proposed injection interval is the Salado (salt) formation between 2400' – 2970'.

Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980 FNL x 660 FWL
Unit Letter 'E', Section 4, T13S, R36E
Lea County, New Mexico
C108 Application for Authorization to Inject

IX.

Proposed Completion Procedure: After drilling out cement plugs from surface to 2500', circulate out mud laden fluid, fill casing with water, run CBL, CNL and caliper log from 3292' to surface and submit to OCD for review. If approved, set an 8-5/8" CIBP on wireline at 2450' capped with 10' of cement. Cut a window in the 8-5/8" casing at 2400'-2410', drill through salt to 2920'. Run a dual port 8-5/8" packer set at 2300' with 2-7/8' fiberglass tail pipe landed at 2900' and 3-1/2" IPC production tubing to surface. No stimulation will be performed. Note: Depths for casing window, packer and tailpipe were agreed upon during consultations with OCD personnel after log evaluations.

X.

Copies of any logs performed will be submitted to OCD.

XI.

NM OSE records indicate that there are 32 fresh water wells located within a nine square mile Area of Review. See Exhibit "E" for OSE data base query and water sample test results on two of these wells.

XII.

Available geological and engineering data have been examined and no evidence of open faults or hydrological connection between the proposed salt formation and any underground sources of drinking water has been found.

XIII.

This C-108 is for OCD general use. No notifications of this C-108 have been made. Notifications will be made per WQCC rules (20.3.2.3108 NMAC) following OCD determination that the proposed associated discharge plan is "Administratively Complete".

Danny J. Holcomb DJHolcomb
Agent for Llano Disposal, LLC

Date: 3/2/2018

Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980 FNL x 660 FWL
Unit Letter 'E', Section 4, T13S, R36E
Lea County, New Mexico
Well Data

Adobe Oil & Gas Corporation drilled and abandoned this well as a Mississippi test in 1979.

Drilled 17-1/2" hole to 382', ran 13-3/8" 61# K-55 surface casing to 382', cemented with 420 sacks cement. Circulated cement to surface.

Drilled 11" hole to 4590', ran 8-5/8" 32#/28#/24# K-55 intermediate casing to 4589', cemented with 1900 sacks cement. Circulated cement to surface.

Drilled 7-7/8" hole to 13476', performed multiple DSTs and ran logs, plugged and abandoned as a dry hole. Set 40 sack cement plugs as follows:

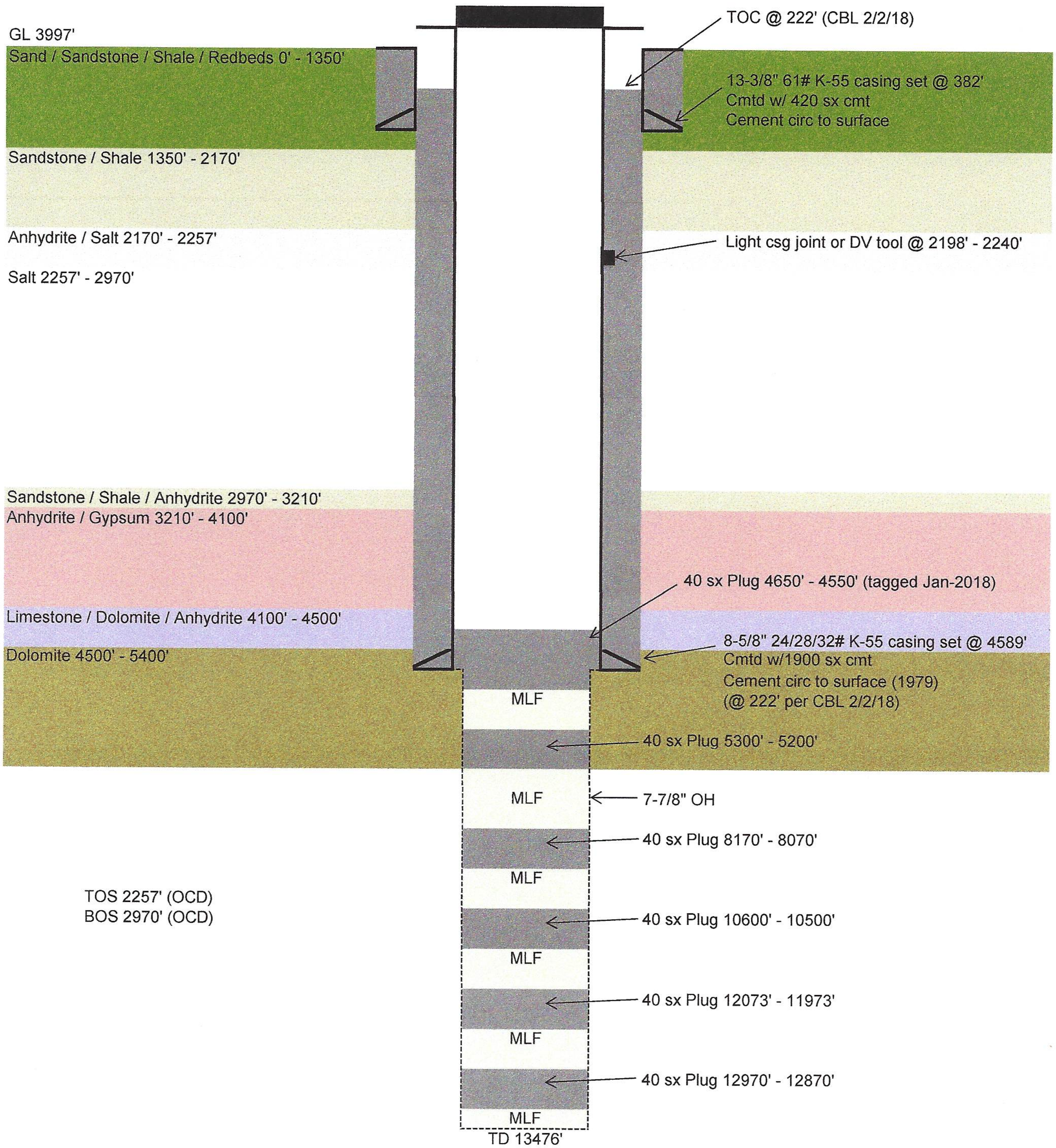
Plug #1	12970'-12870'
Plug #2	12073'-11973'
Plug #3	10600'-10500'
Plug #4	8170'-8070'
Plug #5	5300'-5200'
Plug #6	4650'-4550'
Plug #7	1800'-1700'
Surface Plug	30'-surface

Reported Formation Tops	Depths (ft)
Anhydrite	2200
Salt	2257 (OCD)
B. Salt	2970 (OCD)
Yates	3100
San Andres	4506
Glorieta	5980
Tubb	7420
Abo	8172
Wolfcamp	9600
Cisco	10590
Canyon	10905
Strawn	11315
Atoka	12072
Mississippi	12975

EXHIBIT "A"

CURRENT WELLBORE

Re-entered Well
Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980' FNL x 660' FWL, UL 'E', Sec 4, T13S, R36E, Lea County, NM



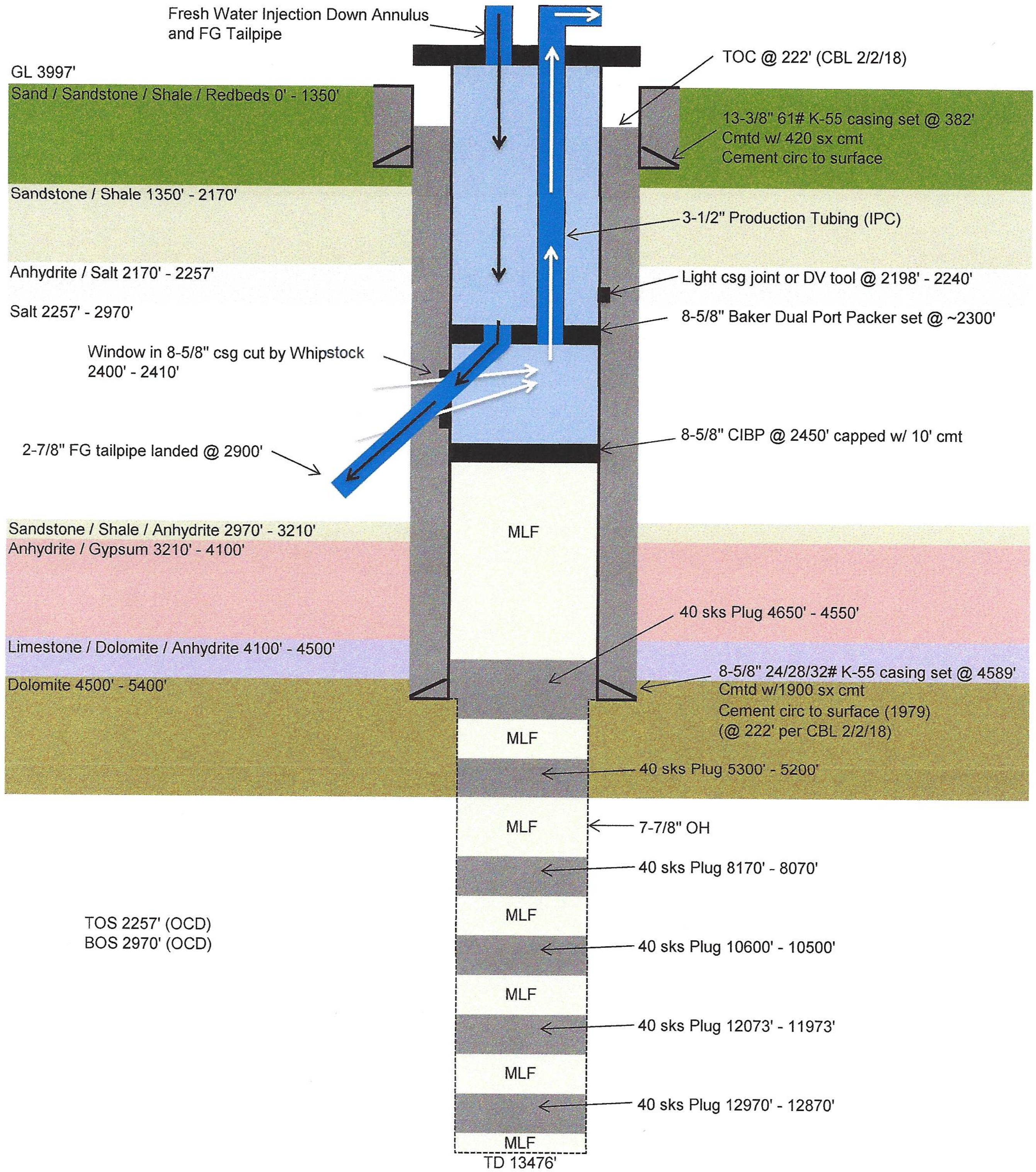
Drawing Not to Scale

EXHIBIT "A"

PROPOSED WELLBORE

Configured for Brine Well Service

Llano Disposal, LLC
State '4' BSW #1
API # 30-025-26370
1980' FNL x 660' FWL, UL 'E', Sec 4, T13S, R36E, Lea County, NM



Drawing Not to Scale

EXHIBIT "A"

Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980 FNL X 660 FWL, UL 'E', Sec 4, T13S, R36E
Lea County, New Mexico
Lease Map - 1 Mile Area of Review

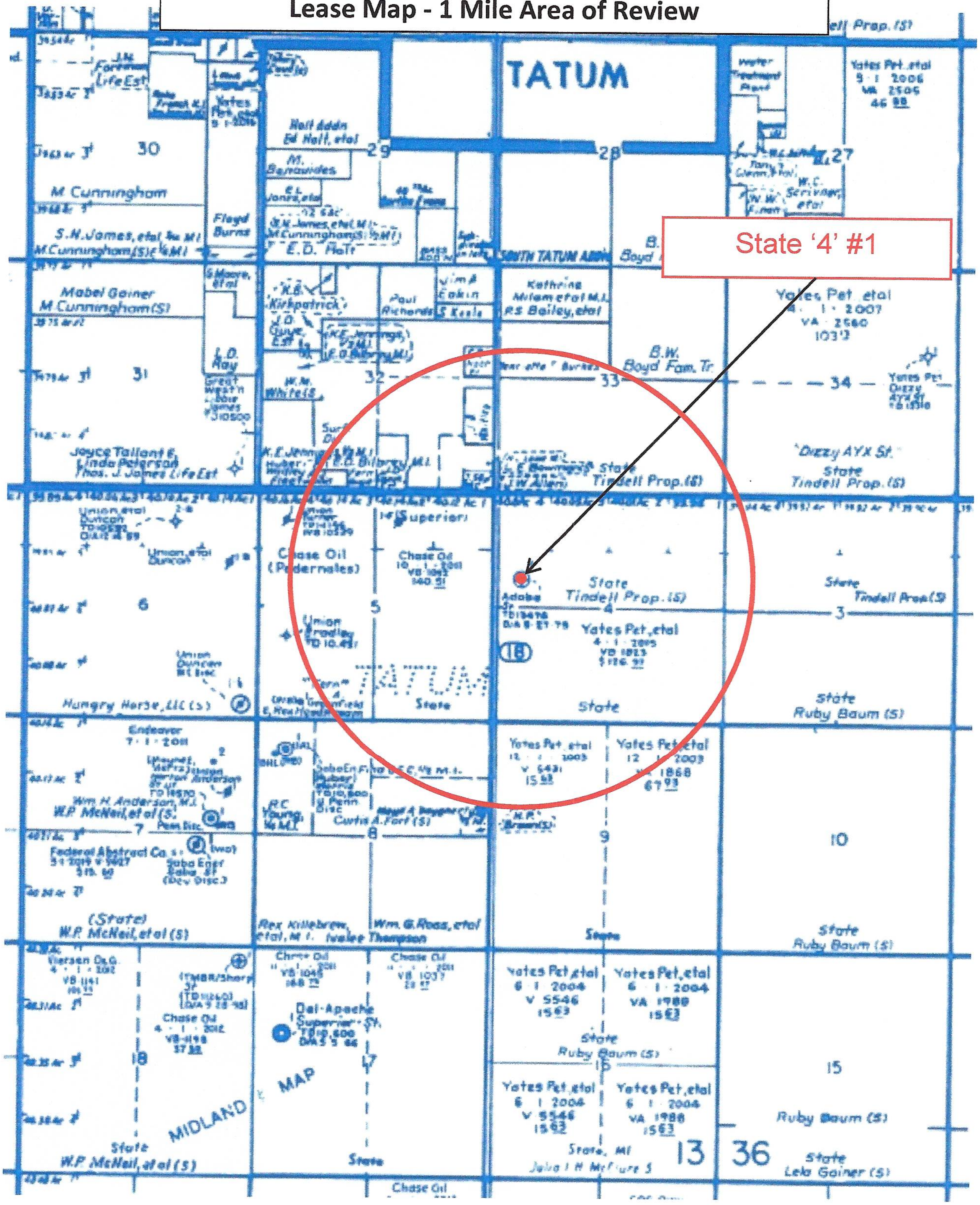
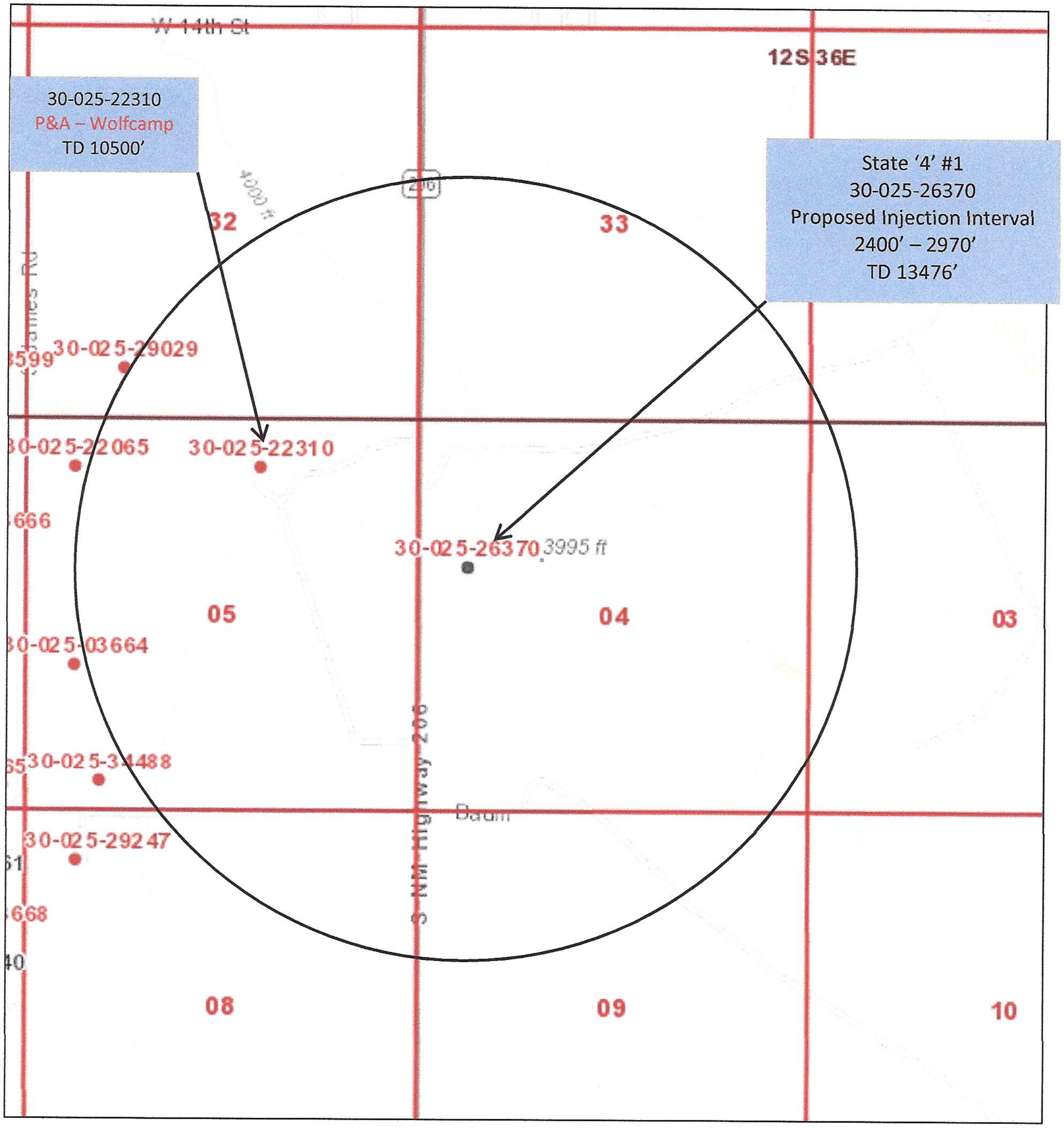


EXHIBIT "B"

Llano Disposal, LLC
State '4' #1
API 30-025-26370
1980 FNL x 660 FWL, UL 'E', Sec 4, T13S, R36E
1 Mile Area of Review



Source – NMOCD GIS Map

EXHIBIT "C"

Llano Disposal, LLC

State '4' #1

API # 30-025-26370

Offset Wells Located within 1 Mile Area of Review

There is only one offset well within the 1 mile AOR.

UL, Sec, T, R	API Well No.	Well Name	TVD	Operator	Status
B-5-13S-36E	30-025-22310	State 'F' #1	10500'	Superior Oil Company	Plugged and abandoned 1969

This well was drilled in 1967 as a Wolfcamp test. It was plugged and abandoned in 1969. See page 9 for a current wellbore diagram.

EXHIBIT "C"

OFFSET WELL CURRENT WELLBORE

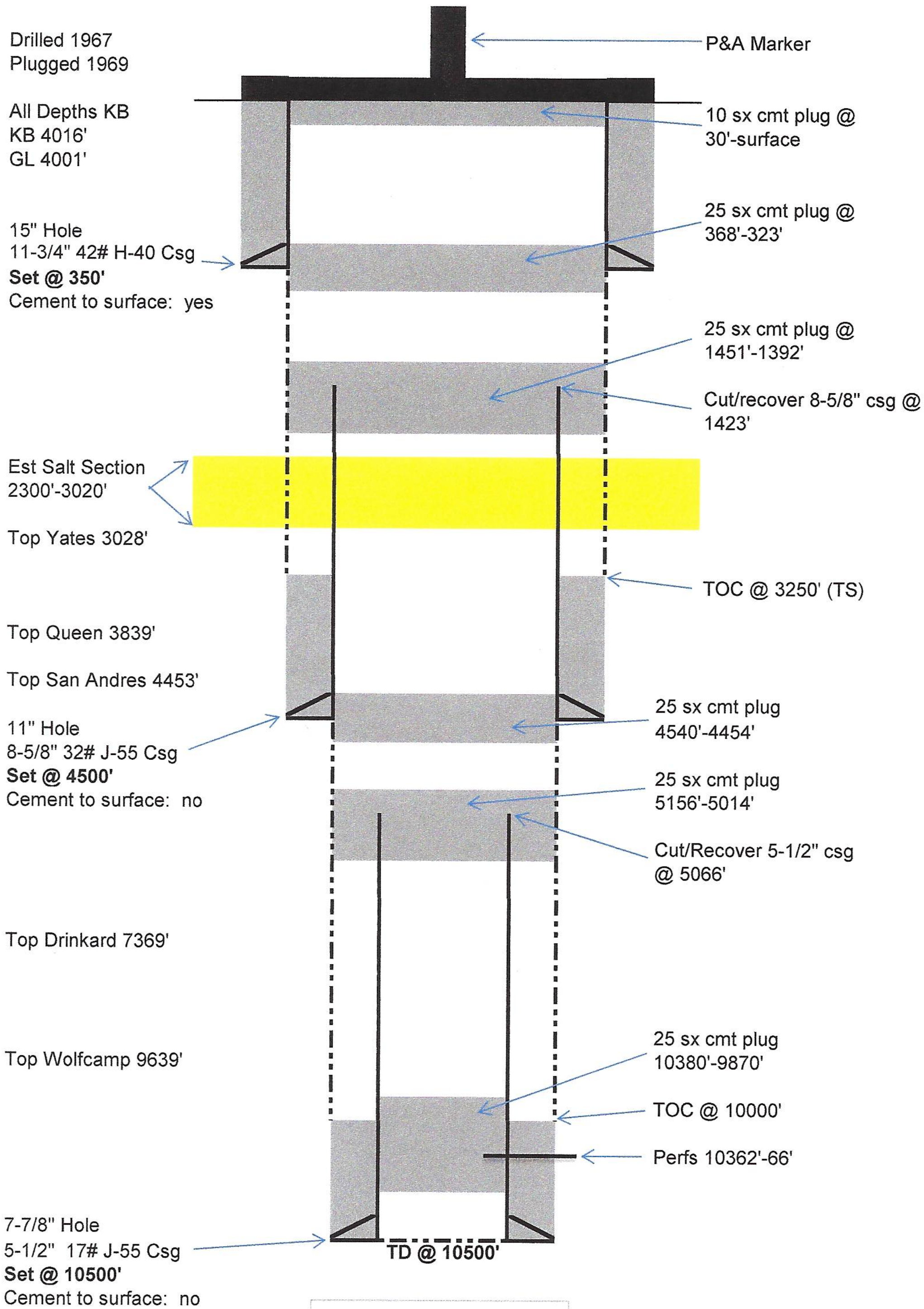
P&A

Superior Oil Company

State 'F' #1

API# 30-025-22310

660' FNL X 2130' FEL, UL 'B', Sec 5, T13S, R36E, Lea County, NM



Drawing Not to Scale

Salt section in Brine Candidate Well is 2257' - 2970'

EXHIBIT "C"

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 00118 POD4		L	LE	3	1	3	32	12S	36E	655246	3678294*			
L 00118 POD4	R	L	LE	3	1	3	32	12S	36E	655246	3678294*			
L 00118 POD5		L	LE	3	1	3	32	12S	36E	655246	3678294*	112	30	82
L 00130 POD4		L	LE	3	1	3	32	12S	36E	655246	3678294*			
L 00155 POD3		L	LE	1	1	3	32	12S	36E	655246	3678494*	138	48	90
L 01316		L	LE	2	2	2	32	12S	36E	656639	3679317*	50	25	25
L 01485		L	LE	2	4	4	32	12S	36E	656659	3678111*	75	43	32
L 02863		L	LE	2	2	2	32	12S	36E	656639	3679317*	72	25	47
L 03422		L	LE	4	4	4	33	12S	36E	658269	3677937*	100	64	36
L 04064		L	LE	2	2	2	32	12S	36E	656639	3679317*	75	55	20
L 05163		L	LE		2	1	32	12S	36E	655736	3679206*	107	32	75
L 05675		L	LE	2	2	2	32	12S	36E	656639	3679317*	70		
L 06823		L	LE				32	12S	36E	655957	3678596*	90	38	52
L 07205		L	LE		1	1	32	12S	36E	655333	3679199*	75	40	35
L 07509		L	LE	1	1	1	32	12S	36E	655232	3679298*	85	40	45
L 07900		L	LE	3	4	4	32	12S	36E	656459	3677911*	71	18	53
L 08000		L	LE		1	3	32	12S	36E	655347	3678395*	126		
L 08015		L	LE	3	3	1	32	12S	36E	655239	3678696*	140	46	94
L 08263		L	LE		4	3	32	12S	36E	655756	3677999*	107	48	59
L 08479		L	LE	3	4	2	32	12S	36E	656446	3678715*	69	24	45
L 10214		L	LE			4	32	12S	36E	656359	3678207*	121		
L 10313		L	LE		2	2	32	12S	36E	656540	3679218*	105	28	77
L 11521		L	LE	1	1	1	32	12S	36E	655232	3679298*	100	42	58
L 13776 POD1		L	LE	3	1	2	32	12S	36E	655988	3679143	120	35	85

***UTM location was derived from PLSS - see Help**

EXHIBIT "D"

Average Depth to Water:	**37 feet**
Minimum Depth:	**18 feet**
Maximum Depth:	**64 feet**

Record Count: 24

PLSS Search:

Section(s): 32, 33, 34 **Township:** 12S **Range:** 36E

EXHIBIT "D"

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 00167		L	LE	1	1	1	09	13S	36E	656895	3676108*	113	80	33
L 00180		L	LE	3	1	3	05	13S	36E	655273	3676687*	106		
L 00180 S		L	LE	3	3	1	05	13S	36E	655266	3677089*	95		
L 00200 POD4		L	LE	1	1	2	05	13S	36E	656063	3677704*			
L 00200 POD4	R	L	LE	1	1	2	05	13S	36E	656063	3677704*			
L 00327	R	L	LE	1	1	1	08	13S	36E	655286	3676082*	88		
L 00327 POD2		L	LE	4	4	1	08	13S	36E	655895	3675486*	88		
L 00900	R	L	LE	2	1	3	08	13S	36E	655500	3675278*	112		
L 00900 POD3		L	LE	2	1	3	08	13S	36E	655500	3675278*	122		
L 00900 S		L	LE	4	1	4	08	13S	36E	655609	3674977*	150	50	100
L 07827		L	LE		2	1	05	13S	36E	655762	3677598*		45	
L 08081		L	LE		2	2	08	13S	36E	656594	3676002*	60	45	15
L 09659		L	LE		2	1	08	13S	36E	655790	3675990*	65		

Average Depth to Water: **55 feet**

Minimum Depth: **45 feet**

Maximum Depth: **80 feet**

Record Count: 13

PLSS Search:

Section(s): 3, 4, 5, 8, 9, 10 **Township:** 13S **Range:** 36E

*UTM location was derived from PLSS - see Help

Fresh Water Well Test Results

CARDINAL Laboratories

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

Analytical Results For:

LLANO DISPOSAL, LLC 125 W. ST. ANNE HOBBS NM, 88240	Project: TATUM BRINE Project Number: SE CORNER OF TATUM Project Manager: MARVIN BURROWS Fax To: NONE	Reported: 28-Nov-17 17:15

EAST FRESH WATER WELL

H703118-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardinal Laboratories							
Inorganic Compounds										
Alkalinity, Bicarbonate	**200**		5.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Chloride*	**88.0**		4.00	mg/L	1	7110601	AC	10-Nov-17	4500-Cl-B	
Conductivity*	**825**		1.00	uS/cm	1	7111001	AC	10-Nov-17	120.1	
pH*	**7.63**		0.100	pH Units	1	7111001	AC	10-Nov-17	150.1	
Sulfate*	**140**		25.0	mg/L	2.5	7110903	AC	09-Nov-17	375.4	
TDS*	**410**		5.00	mg/L	1	7110809	AC	10-Nov-17	160.1	
Alkalinity, Total*	**164**		4.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
			Green Analytical Laboratories							
Total Recoverable Metals by ICP (E200.7)										
Calcium*	**75.1**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Magnesium*	**16.6**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Sodium*	**61.2**		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

EXHIBIT "D"

Fresh Water Well Test Results

CARDINAL Laboratories

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

Analytical Results For:

LLANO DISPOSAL, LLC 125 W. ST. ANNE HOBBS NM, 88240	Project: TATUM BRINE Project Number: SE CORNER OF TATUM Project Manager: MARVIN BURROWS Fax To: NONE	Reported: 28-Nov-17 17:15

WEST FRESH WATER WELL

H703118-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
				Cardinal Laboratories						
Inorganic Compounds										
Alkalinity, Bicarbonate	**205**		5.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Chloride*	**56.0**		4.00	mg/L	1	7110601	AC	10-Nov-17	4500-Cl-B	
Conductivity*	**607**		1.00	uS/cm	1	7111001	AC	10-Nov-17	120.1	
pH*	**7.74**		0.100	pH Units	1	7111001	AC	10-Nov-17	150.1	
Sulfate*	**103**		25.0	mg/L	2.5	7110903	AC	09-Nov-17	375.4	
TDS*	**344**		5.00	mg/L	1	7110809	AC	10-Nov-17	160.1	
Alkalinity, Total*	**168**		4.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
				Green Analytical Laboratories						
Total Recoverable Metals by ICP (E200.7)										
Calcium*	**58.2**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Magnesium*	**11.5**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Sodium*	**39.7**		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

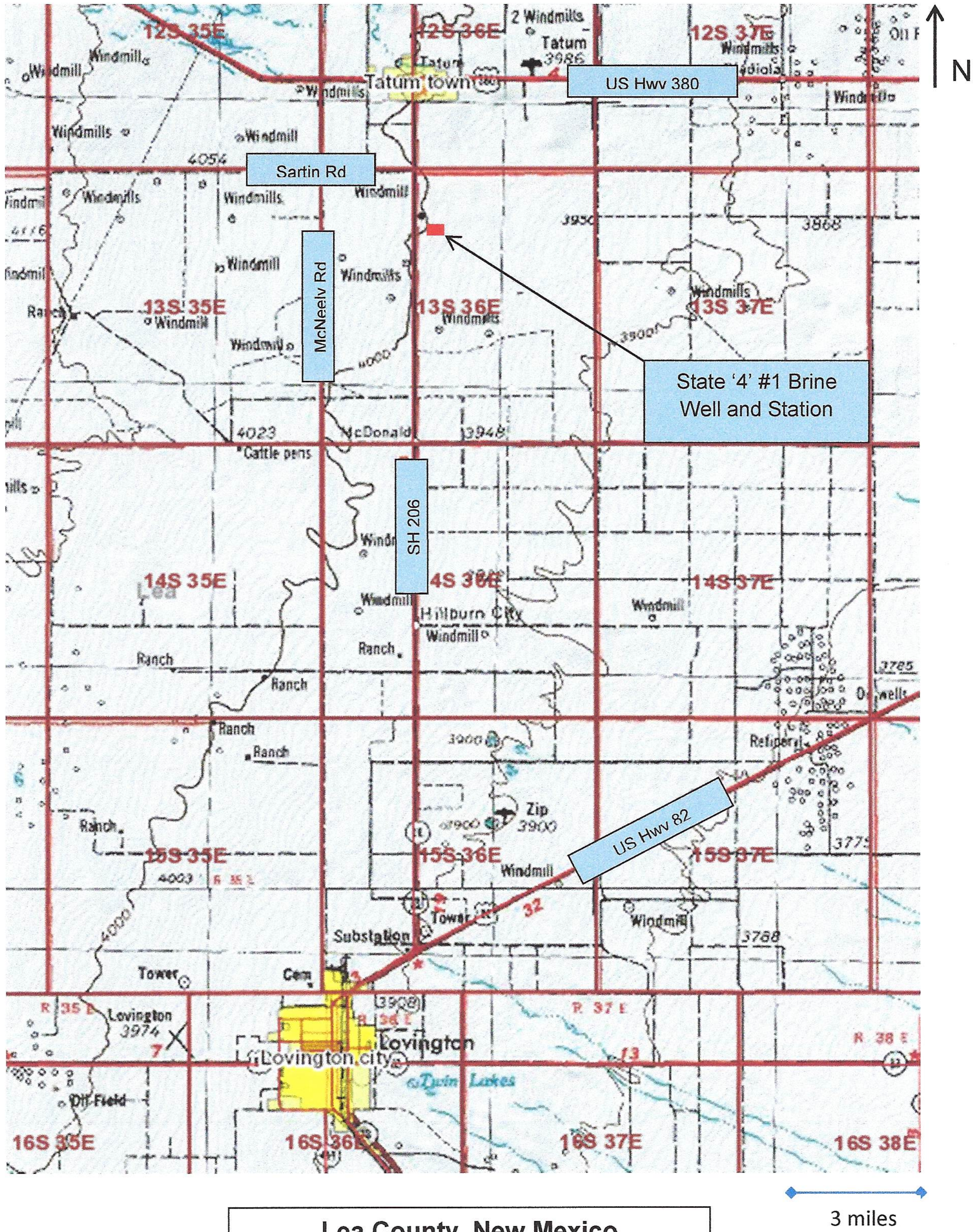
EXHIBIT "D"

Llano Disposal, LLC
State'4' BSW #1
Discharge Plan

Attachment Index

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

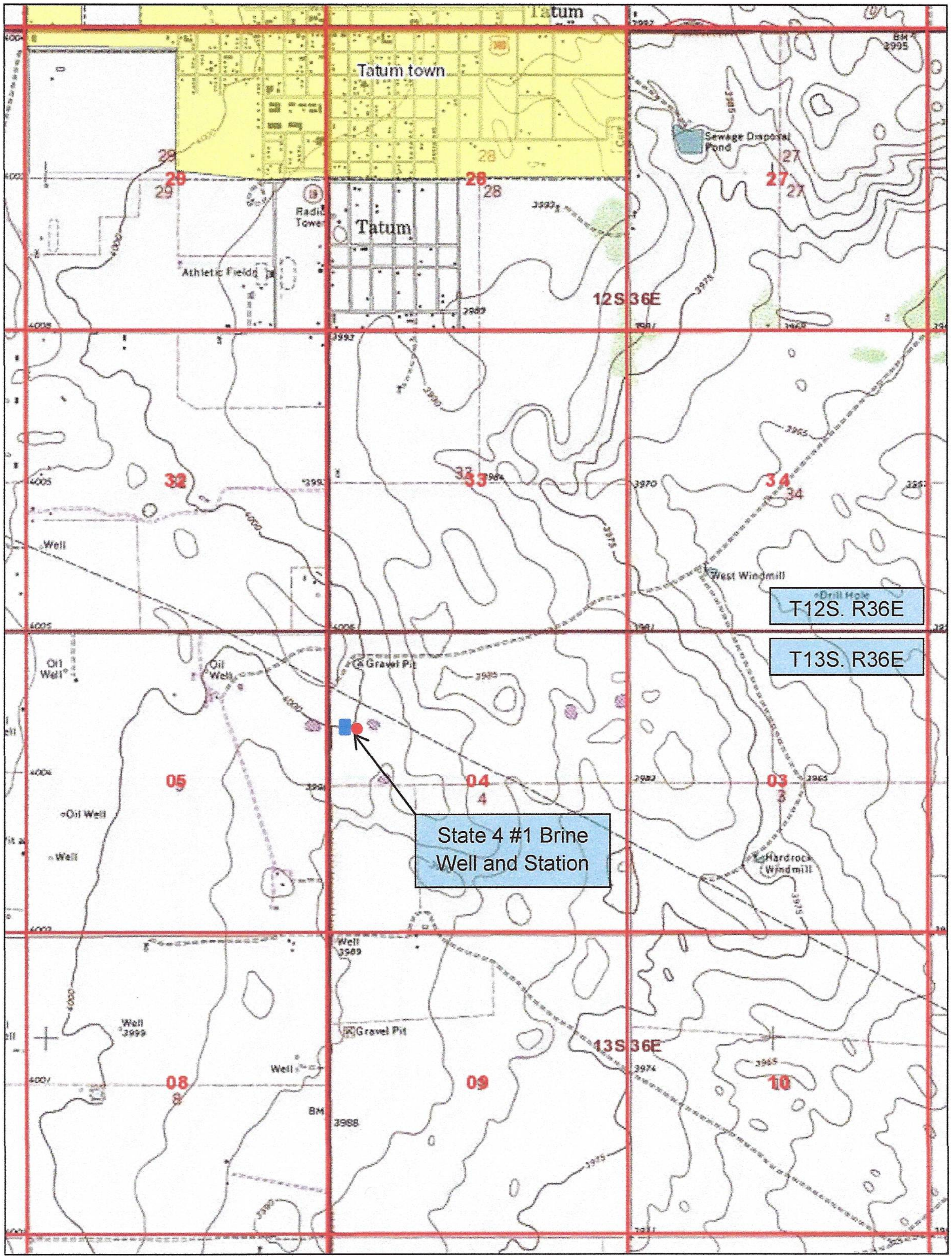
Attachment A – Small Scale Topo Map



Lea County, New Mexico

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

Attachment B – Large Scale Topo Map

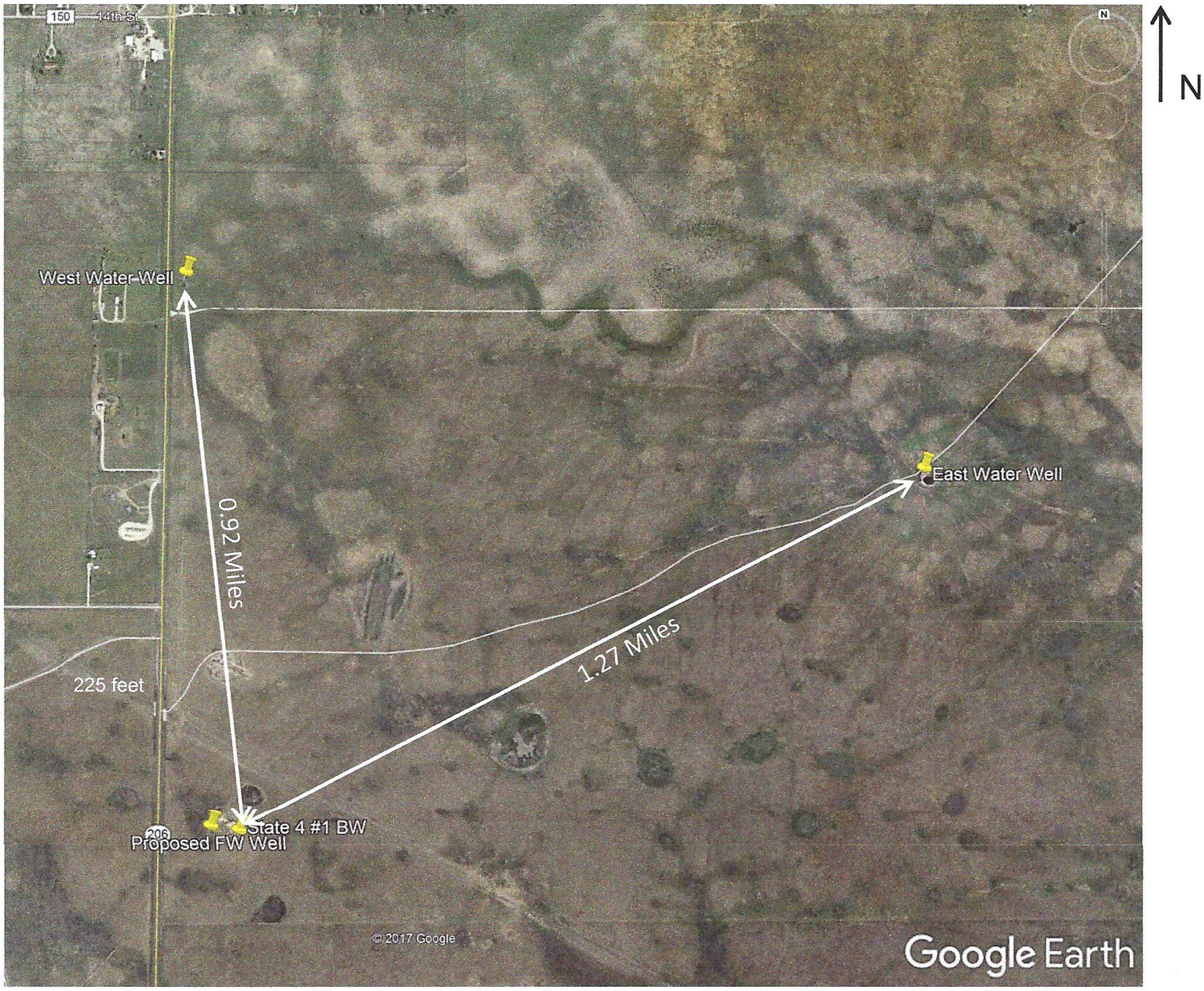


Lea County, New Mexico

0.5 miles

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

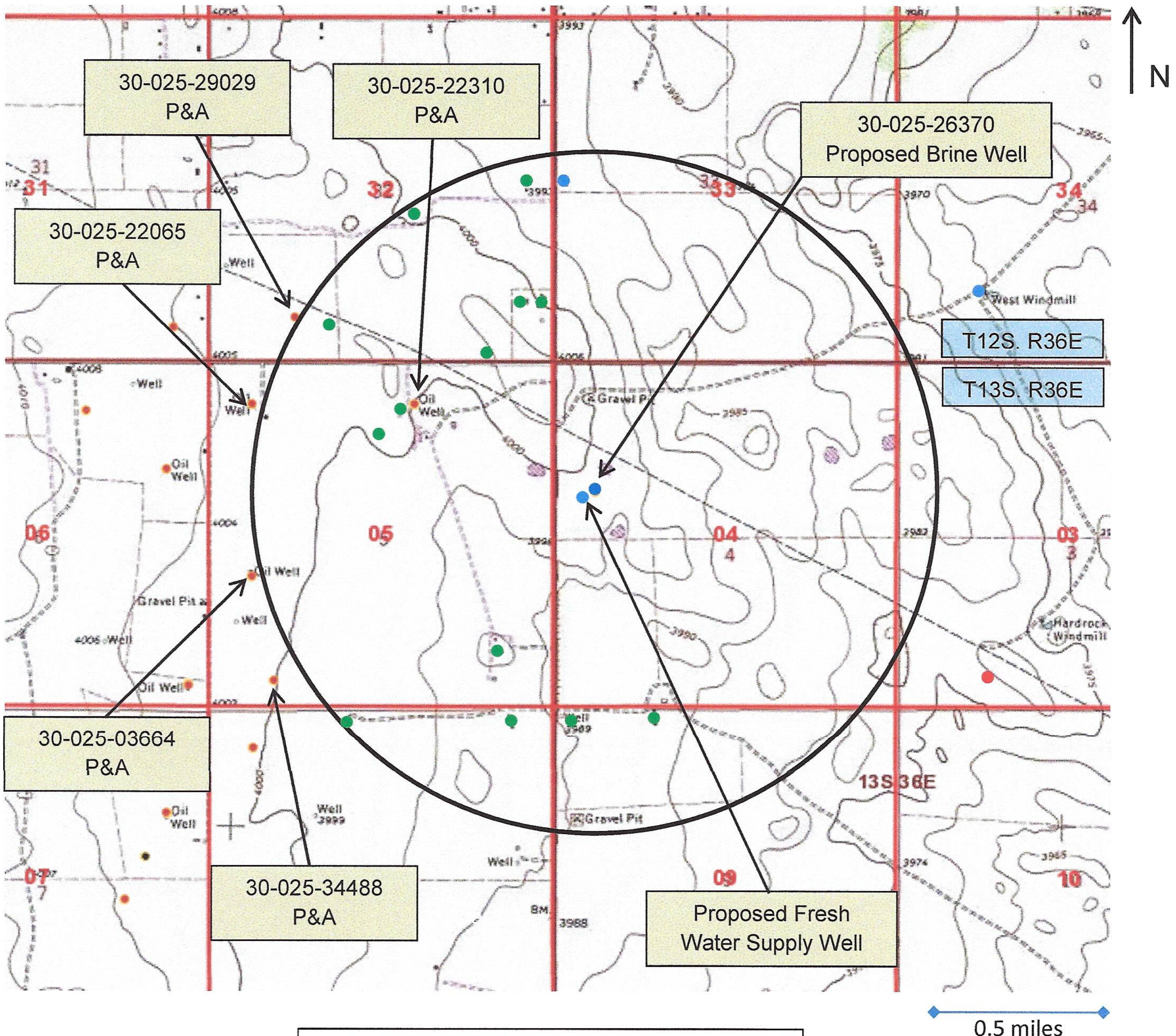
Attachment C – Aerial Photo with Ground Water Monitoring Wells



Lea County, New Mexico

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

Attachment D – 1 Mile AOR with Oil/Gas Wells and Fresh Water Wells

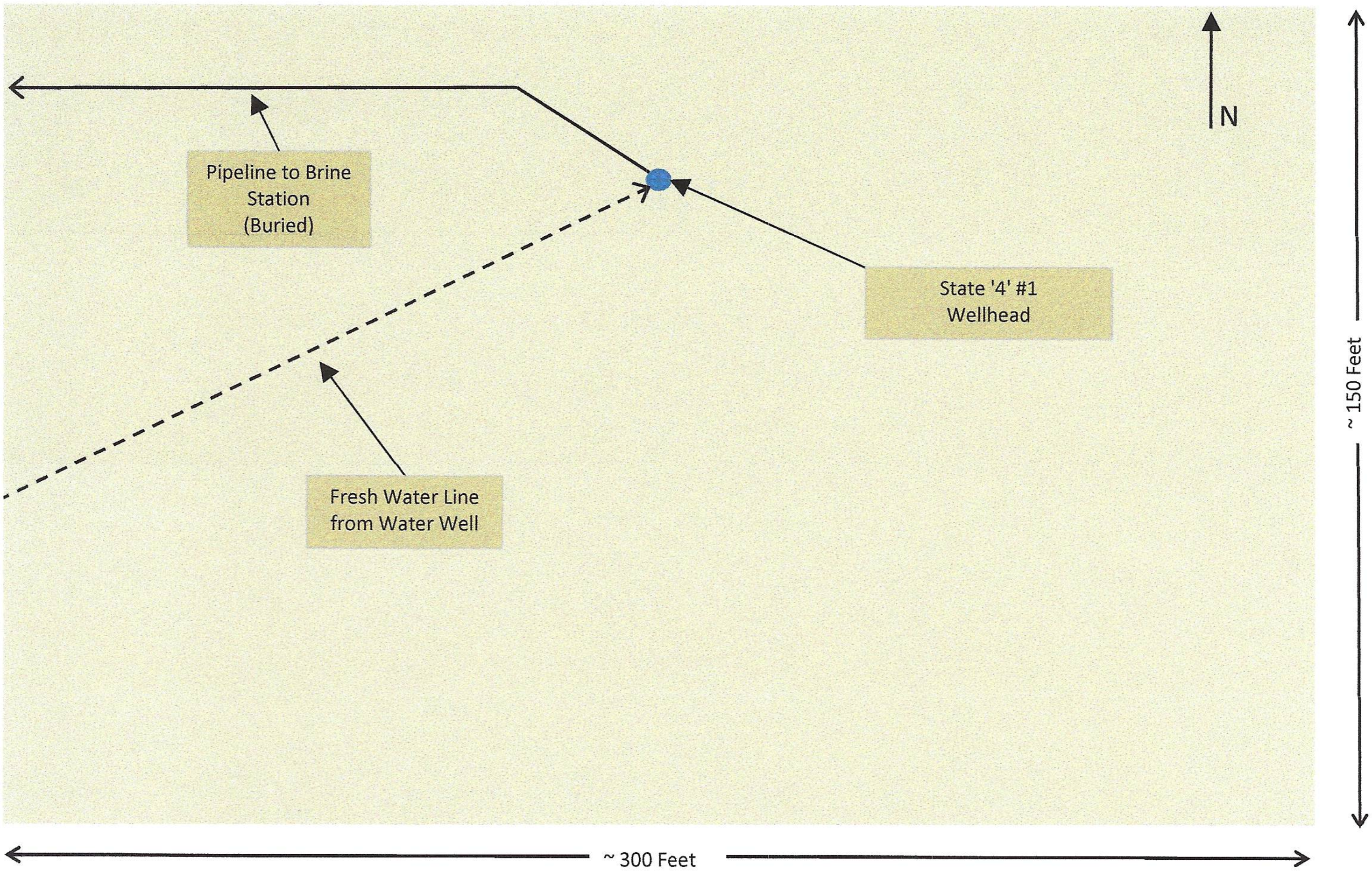


Lea County, New Mexico

- Fresh Water Wells
- Proposed Ground Water Monitor Wells

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

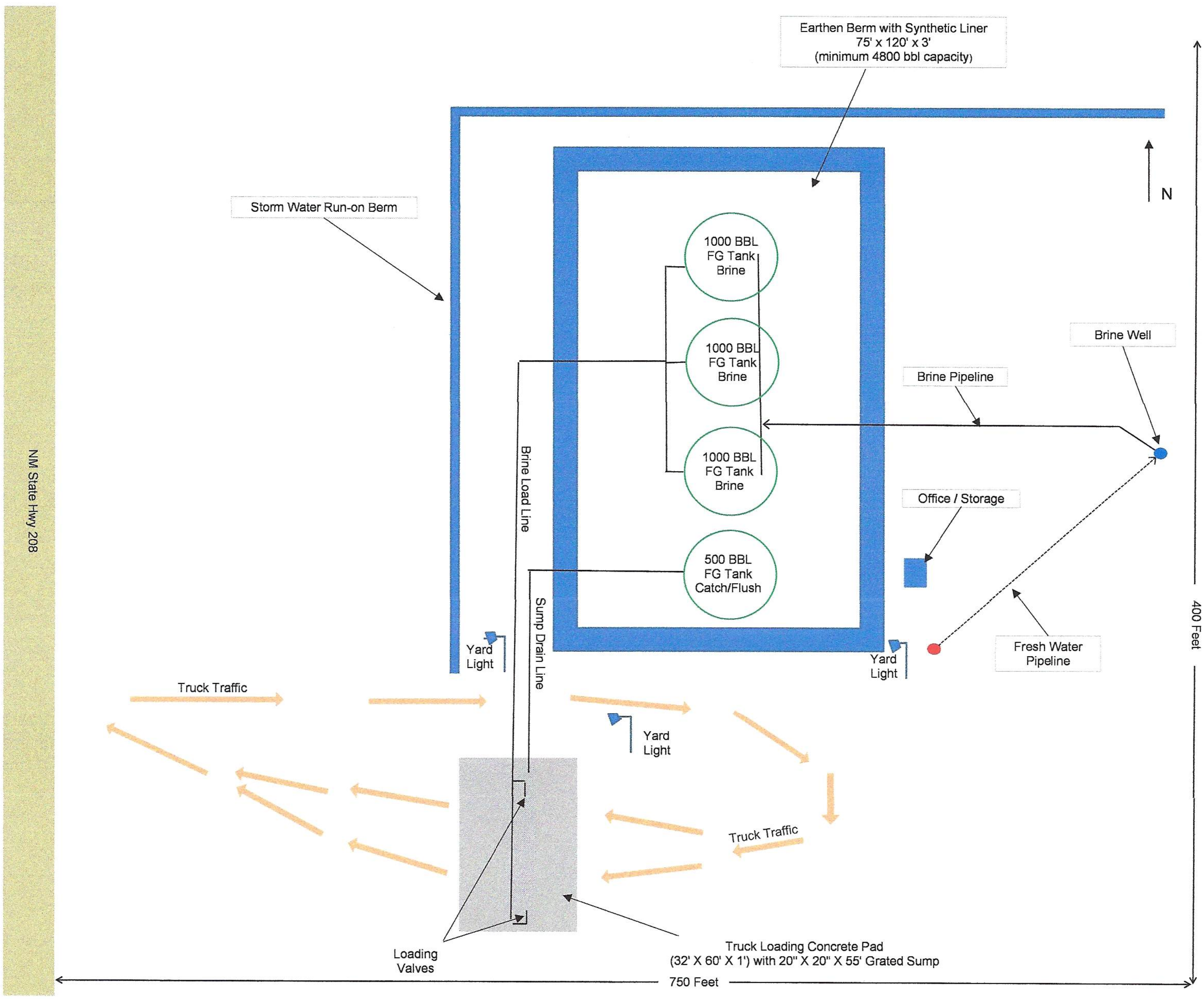
Attachment E – Well Location Site Plan



Surface Owner – Llano Disposal, LLC
P. O. Box 190, Lovington, NM 88260
Drawing Not to Scale

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

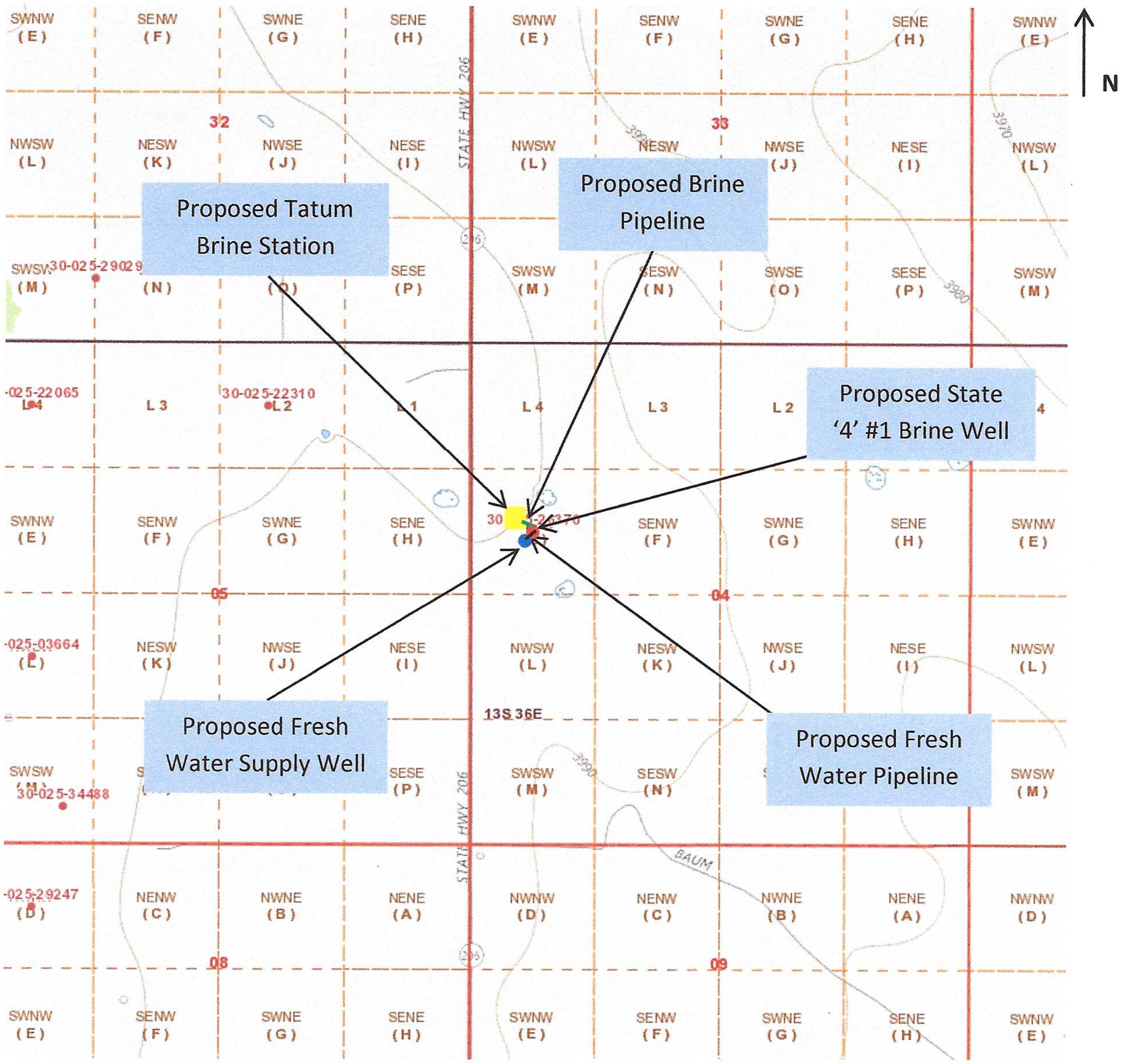
Attachment F – Brine Station Site Plan



Surface Owner – Llano Disposal, LLC
P. O. Box 190, Lovington, NM 88260
Drawing Not to Scale

State ‘4’ #1
API # 30-025-26370
Discharge Plan Attachments

Attachment G – USGS Drainage Map of Project Area



Map Source – USGS Drainage Map

0.5 mile

There are no USGS defined drainage basins in the project area. The topography is generally sandy and grass covered. Most of the area is drained via playa lakes as indicated by the map above. There are no established streambeds in the area.

Lea County, New Mexico

OFFSET WELL 30-025-22310

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No. K-191

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. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator: The Superior Oil Company

8. Farm or Lease Name: State "F"

3. Address of Operator: P. O. Box 1900, Midland, Texas 79701

9. Well No. 1

4. Location of Well: UNIT LETTER B, 660 FEET FROM THE North LINE AND 2130 FEET FROM THE East LINE, SECTION 5 TOWNSHIP 13-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat: Tatum (Wolfcamp)

15. Elevation *(Show whether DF, RT, GR, etc.)*: 4016 KB, 4001 GR

12. County: Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

- PERFORM REMEDIAL WORK [ ]
- TEMPORARILY ABANDON [ ]
- PULL OR ALTER CASING [ ]
- PLUG AND ABANDON [ ]
- CHANGE PLANS [ ]
- OTHER [ ]

SUBSEQUENT REPORT OF:

- REMEDIAL WORK [ ]
- COMMENCE DRILLING OPNS. [ ]
- CASING TEST AND CEMENT JOB [ ]
- OTHER [ ]
- ALTERING CASING [ ]
- PLUG AND ABANDONMENT [X]

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

3-6,7,8-69 Moved in and rigged up Casing Pullers, Inc., Rig #1. Filled hole with mud laden fluid. Spotted 25 sacks El Toro regular cement over 5-1/2" casing perfs at 10,090-10,096'. Top of cement at 9870'. Welded pull nipple on 5-1/2" casing.

3-9,10-69 Shot 5-1/2" casing at 5066'. Pulled and recovered 5093' of 5-1/2" casing.

3-11-69 Ran 2-7/8" tubing to 5156'. Spotted 25 sacks El Toro regular cement across 5-1/2" csg stub at 5066'. Top of cement at 5014'. Pulled up to 4540' & spotted 25 sacks El Toro regular cement across bottom of 8-5/8" casing at 4500'. Top of cement at 4454'. Finished pulling out of hole with tubing.

3-12,13-69 Cut off 11-3/4" casinghead 4' below ground level. Welded on 8-5/8" pull nipple. Shot 8-5/8" casing at 1423'. Pulled and recovered 1434' of 8-5/8" casing. Ran 2-7/8" tubing to 1451' and spotted 25 sacks El Toro regular cement across 8-5/8" casing stub at 1423'. Top of cement at 1392. Pulled tubing up to 368' and spotted 25 sacks El Toro regular cement across bottom of 11-3/4" casing at 350'. Top of cement at 323'. Pulled out of hole with tubing. Placed 10 sacks of El Toro regular cement in top of 11-3/4" casing. Welded 1/2" steel plate on 11-3/4" casing with dry hole marker extending 4-1/2" above ground level. Hole filled with mud laden fluid. Well plugged and abandoned 3-13-69.

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

SIGNED O.V. Sivage O.V.Sivage TITLE Production Engineer DATE March 27, 1969

APPROVED BY John W. Runyan TITLE Geologist DATE

CONDITIONS OF APPROVAL, IF ANY:

ATTACHMENT H

OFFSET WELL CURRENT WELLBORE

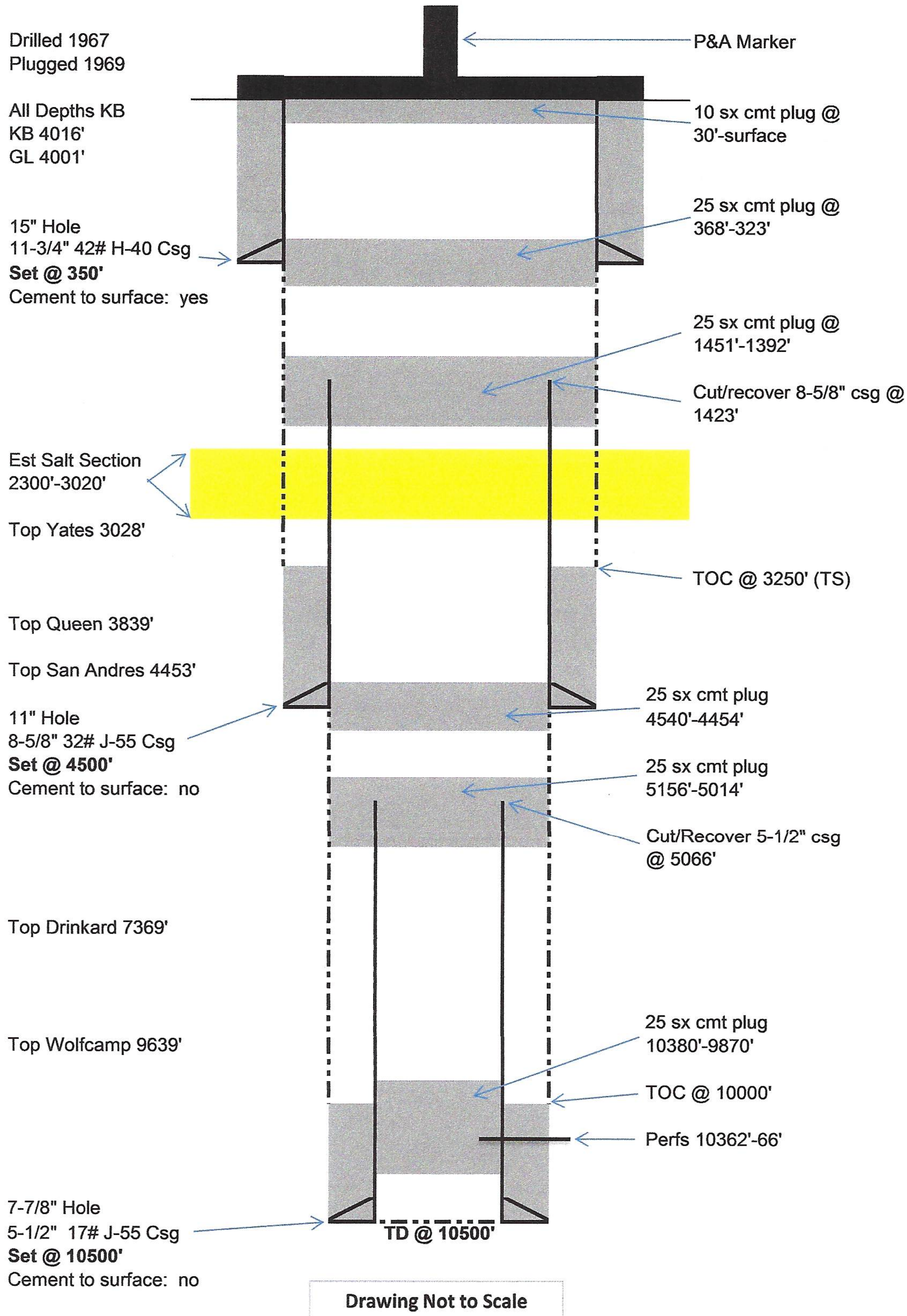
P&A

Superior Oil Company

State 'F' #1

API# 30-025-22310

660' FNL X 2130' FEL, UL 'B', Sec 5, T13S, R36E, Lea County, NM

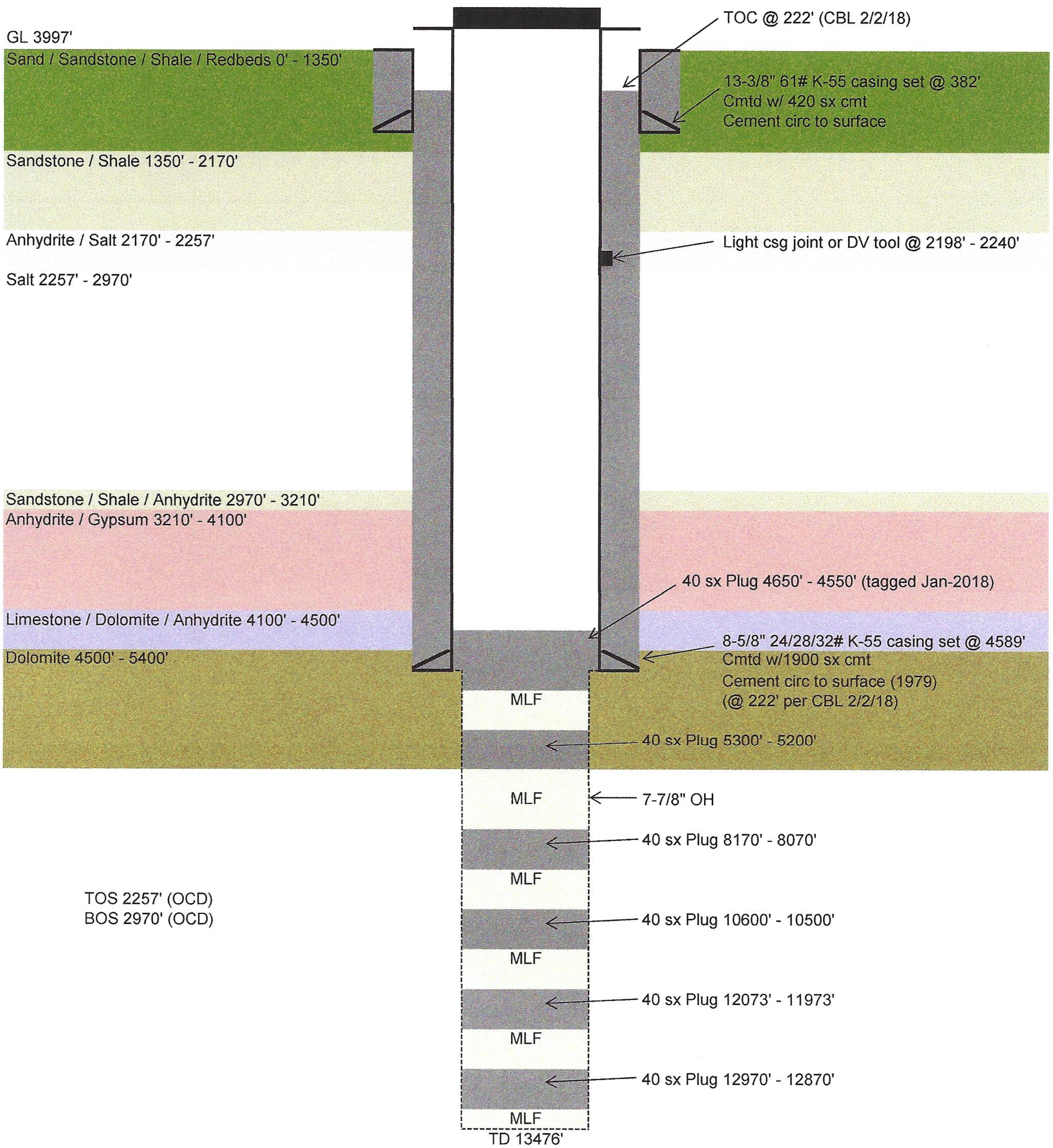


Salt section in Brine Candidate Well is 2257' - 2970'

ATTACHMENT H

CURRENT WELLBORE

Re-entered Well
Llano Disposal, LLC
State '4' #1
API # 30-025-26370
1980' FNL x 660' FWL, UL 'E', Sec 4, T13S, R36E, Lea County, NM



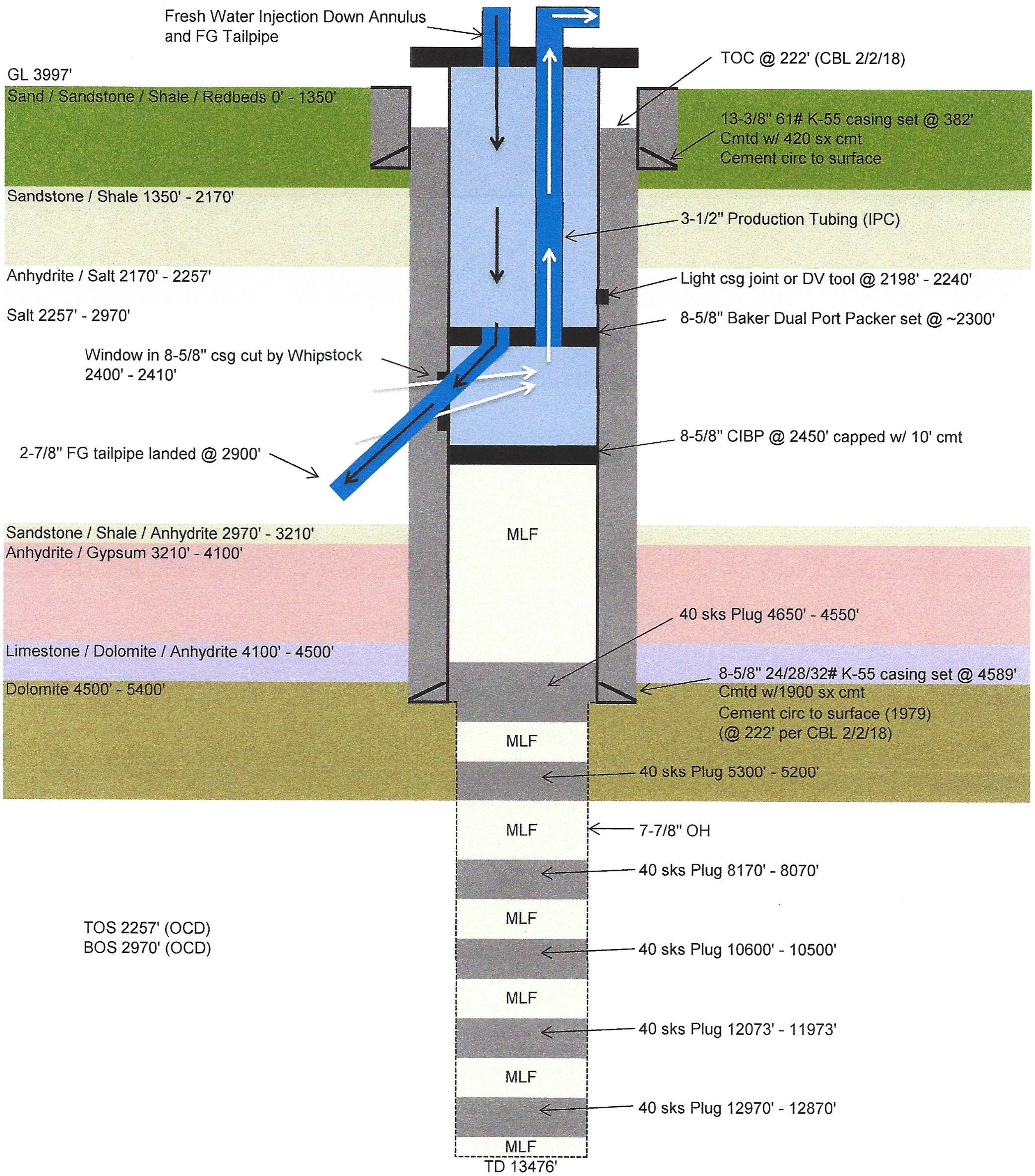
Drawing Not to Scale

Attachment I
Drawing Not to Scale

PROPOSED WELLBORE

Configured for Brine Well Service

Llano Disposal, LLC
State '4' BSW #1
API # 30-025-26370
1980' FNL x 660' FWL, UL 'E', Sec 4, T13S, R36E, Lea County, NM



Drawing Not to Scale

Attachment I

Drawing Not to Scale

30-025-26370

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease: STATE [X] FEE [ ]

5. State Oil & Gas Lease No.: LG-4456

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. Unit Agreement Name:

8. Farm or Lease Name: State "4"

2. Name of Operator: Adobe Oil & Gas Corporation

9. Well No.: 1

3. Address of Operator: 1100 Western United Life Building, Midland, TX 79701

10. Field and Pool, or Wildcat: Undesignated (ND)

4. Location of Well: UNIT LETTER E LOCATED 1980 FEET FROM THE North LINE AND 660 FEET FROM THE West LINE OF SEC. 4 TWP. 13-S RGE. 36-E NMPM

12. County: Lea

19. Proposed Depth: 13,450 | 19A. Formation: Mississippian | 20. Rotary or C.T.: Rotary

21. Elevations (Show whether DF, RT, etc.): 3997 | 21A. Kind & Status Plug. Bond: Blanket Plugging | 21B. Drilling Contractor: Moranco | 22. Approx. Date Work will start: July 25, 1979

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2	13 3/8	48	350	350	Surface
11	8 5/8	24-28-32	4,525	1400	Surface
7 7/8	5 1/2	17 & 20	13,450	500	10,000

Blowout preventors: 10"-900 series doublegate w/blind rams & pipe rams
Hydril (Bag type)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed [signature] Title Vice President Date July 6, 1979

(This space for State Use)

APPROVED BY [signature] TITLE SUPERVISOR DISTRICT I DATE JUL 9 1979

CONDITIONS OF APPROVAL, IF ANY:

Attachment I

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 14-65

30-025-26370

All distances must be from the outer boundaries of the Section.

Operator ADOBE OIL & GAS CORPORATION		Lease STATE "4"		Well No. 1
Unit Letter "E"	Section 4	Township 13-S	Range 36-E	County LEA
Actual Footage Location of Well: 1980 feet from the NORTH line and 660 feet from the WEST line				
Ground Level Elev. 3997	Producing Formation MISSISSIPIAN	Pool WILDCAT		Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

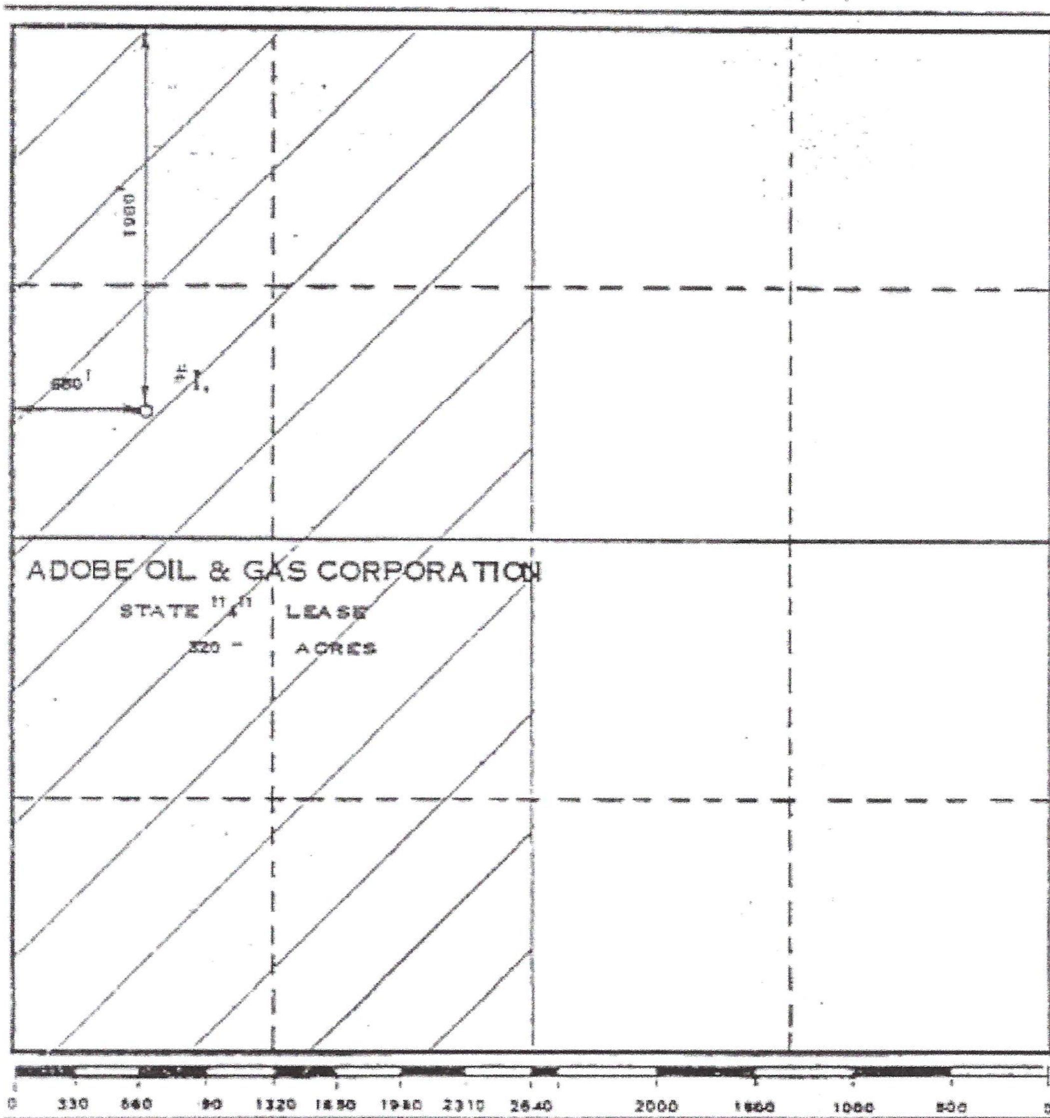
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation ____________________

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)____________________

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: M. D. Rogers

Position: Vice President

Company: Adobe Oil & Gas Corporation

Date: July 6, 1979

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: JUNE 29, 1979

Registered Professional Engineer and/or Land Surveyor

MAX A. SCHUMANN JR.

Certificate No. 1510

Attachment I

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

30-025-26370

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No. LG-4456

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. OIL WELL [ ] GAS WELL [X] OTHER-

7. Unit Agreement Name

2. Name of Operator: Adobe Oil & Gas Corporation

8. Farm or Lease Name: State "4"

3. Address of Operator: 1100 Western United Life Bldg., Midland, TX 79701

9. Well No. 1

4. Location of Well: UNIT LETTER E, 1980 FEET FROM THE north LINE AND 660 FEET FROM THE west LINE, SECTION 4 TOWNSHIP 13-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat: Undesignated

15. Elevation (*Show whether DF, RT, GR, etc.*): 3997 GL

12. County: Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

- PERFORM REMEDIAL WORK [ ]
- TEMPORARILY ABANDON [ ]
- PULL OR ALTER CASING [ ]
- PLUG AND ABANDON [ ]
- CHANGE PLANS [ ]
- OTHER [ ]

SUBSEQUENT REPORT OF:

- REMEDIAL WORK [ ]
- COMMENCE DRILLING OPNS. [ ]
- CASING TEST AND CEMENT JOB [X]
- ALTERING CASING [ ]
- PLUG AND ABANDONMENT [ ]
- OTHER [ ]

17. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

Spudded 17-1/2" hole @ 11:30 a.m. 8/1/79. Set 382' of 13-3/8" 61# K-55 csg @ 380' KB & cemented w/420 sx Class "C" cement w/1/4# flocele/sx w/2% CaCl. Cement circ. POB 12:15 a.m. 8/2/79. Cut off, nipple up & tested BOP, head & csg to 1000# for 30 min, ok. Drld 11" hole to 4590' & ran 109 jts 32#, 28#, 24# 8-5/8" K-55 csg & set @ 4589'. Cemented w/1700 sx Howco Lite w/10# salt w/1/4# flocele w/3# Gilsonite/sx + 200 sx Class "C" w/2% CaCl. Cement circ. POB 6 a.m. 8/9/79. Cut off, nipple up & tested BOP, head & csg to 2000#, ok.

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

SIGNED Bill Owens TITLE Engineer DATE 10/3/79

APPROVED BY Orig. Signed by Jerry Sexton Dist 1, Supv. TITLE DATE OCT -9 1979

CONDITIONS OF APPROVAL, IF ANY:

Attachment I

30-025-26370

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.
L.G. 4456

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. OIL WELL [ ] GAS WELL [X] OTHER. dry

7. Unit Agreement Name

2. Name of Operator
Adobe Oil & Gas Corporation

8. Farm or Lease Name
State "4"

3. Address of Operator
1100 Western United Life Bldg., Midland, TX 79701

9. Well No.
1

4. Location of Well
UNIT LETTER E , 1980 FEET FROM THE north LINE AND 660 FEET FROM THE west LINE, SECTION 4 TOWNSHIP 13-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
Undesignated

15. Elevation (Show whether DF, RT, GR, etc.)
3997 GL

12. County
Lea

16.
Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK [ ] PLUG AND ABANDON [ ]
TEMPORARILY ABANDON [ ]
PULL OR ALTER CASING [ ] CHANGE PLANS [ ]
OTHER [ ]

SUBSEQUENT REPORT OF:

REMEDIAL WORK [ ] ALTERING CASING [ ]
COMMENCE DRILLING OPNS. [ ] PLUG AND ABANDONMENT [X]
CASING TEST AND CEMENT JOB [ ]
OTHER DST & log [X]

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

9/21/79 DST #1 12,985-13,235' Upper Mississippian - Took 15 min preflow w/very weak blow, 1 hr ISI, 1 hr FF w/very weak blow, 4 hr FSI. Recovered 380' drlg fluid w/no show of oil or gas. IFP 439-483#, ISIP 879#, FFP 439-483#, FSIP 1746#.

9/25/79 Drld to TD 13,476' & ran DLL & CNL-Density logs. Prep to P&A.

9/26-27/79 GIH open ended w/DP. Set cement plugs as follows:
40 sx Class "H" 12,970-12,870', 12,073-11,973', 10,600-10,500', 8170-8070', 5300-5200', 4650-4550', 1800-1700'.
Set 10 sx plug @ surface. Cut off wellhead & installed marker.

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

SIGNED Bill Owens TITLE Engineer DATE 10/4/79

APPROVED BY [signature] TITLE OIL & GAS INSPECTOR DATE APR 16 1982

CONDITIONS OF APPROVAL, IF ANY:

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Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No. L.G. 4456

30-025-26370

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] DRY [X] OTHER

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER

7. Unit Agreement Name

8. Farm or Lease Name: State "4"

2. Name of Operator: Adobe Oil & Gas Corporation

9. Well No. 1

3. Address of Operator: 1100 Western United Life Bldg., Midland, TX 79701

10. Field and Pool, or Wildcat: Undesignated

4. Location of Well

UNIT LETTER E LOCATED 1980 FEET FROM THE north LINE AND 660 FEET FROM THE west LINE OF SEC. 4 TWP. 13-S RGE. 36-E NMPM

12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
8/1/79	9/24/79	dry	3997 GL	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By →	Rotary Tools	Cable Tools
13,476	dry	-		0-13,476	

24. Producing Interval(s), of this completion — Top, Bottom, Name: dry

25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: DLL/CNL/Density

27. Was Well Cored: NO

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	61	380	17-1/2	420 sx Cl C w/2% CaCl	0
8-5/8"	24,28,32	4590	11	1700 sx Lite + 200 sx Cl C	0

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number): dry

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
Dry		

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

35. List of Attachments

36. *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.*

SIGNED Bill Owens TITLE Engineer DATE 10/4/79

Attachment I

30-025-26370

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It 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 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy 2200	T. Canyon 10,905	T. Ojo Alamo	T. Penn. "B"
T. Salt 2320	T. Strawn 11,315	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka 12,072	T. Pictured Cliffs	T. Penn. "D"
T. Yates 3100	T. Miss 12,975	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefee	T. Madison
T. Queen	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	T. Mancos	T. McCracken
T. San Andres 4506	T. Simpson	T. Gallup	T. Ignacio Qtzte
T. Glorieta 5980	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinebry	T. Gr. Wash	T. Morrison	T.
T. Tubb 7420	T. Granite	T. Todilto	T.
T. Drinkard	T. Delaware Sand	T. Entrada	T.
T. Abo 8172	T. Bone Springs	T. Wingate	T.
T. Wolfcamp 9600	T.	T. Chinle	T.
T. Penn.	T.	T. Permian	T.
T Cisco (~~Bough C~~) 10,590	T.	T. Penn. "A"	T.

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	1350		sand, shale, & redbeds				
1350	2200		sand & shale				
2200	3100		anhydrite & salt				
3100	3210		sand, shale, & anhydrite				
3210	4100		anhydrite & gypsum				
4100	4500		lime, dolo, & anhydrite				
4500	5400		dolo				
5400	5980		dolo & lime				
5980	7420		dolo				
7420	7550		shale				
7550	8170		dolo, shale w/trac anhydrite				
8170	9600		dolo				
9600	10,590		lime & shale				
10,590	12,070		lime, dolo, & shale				
12,975	13,473		lime & shale				

RECEIVED
OCT - 9
O.C.D. HOBBS, OFFICE

Attachment I

CARDINAL Laboratories

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

Analytical Results For:

LLANO DISPOSAL, LLC 125 W. ST. ANNE HOBBS NM, 88240	Project: TATUM BRINE Project Number: SE CORNER OF TATUM Project Manager: MARVIN BURROWS Fax To: NONE	Reported: 28-Nov-17 17:15

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EAST FRESH WATER WELL	H703118-01	Water	07-Nov-17 13:00	08-Nov-17 14:45
WEST FRESH WATER WELL	H703118-02	Water	07-Nov-17 13:00	08-Nov-17 14:45

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Attachment J

Analytical Results For:

LLANO DISPOSAL, LLC 125 W. ST. ANNE HOBBS NM, 88240	Project: TATUM BRINE Project Number: SE CORNER OF TATUM Project Manager: MARVIN BURROWS Fax To: NONE	Reported: 28-Nov-17 17:15

EAST FRESH WATER WELL

H703118-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	**200**		5.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Chloride*	**88.0**		4.00	mg/L	1	7110601	AC	10-Nov-17	4500-Cl-B	
Conductivity*	**825**		1.00	uS/cm	1	7111001	AC	10-Nov-17	120.1	
pH*	**7.63**		0.100	pH Units	1	7111001	AC	10-Nov-17	150.1	
Sulfate*	**140**		25.0	mg/L	2.5	7110903	AC	09-Nov-17	375.4	
TDS*	**410**		5.00	mg/L	1	7110809	AC	10-Nov-17	160.1	
Alkalinity, Total*	**164**		4.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Calcium*	**75.1**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Magnesium*	**16.6**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Sodium*	**61.2**		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Attachment J

Analytical Results For:

LLANO DISPOSAL, LLC 125 W. ST. ANNE HOBBS NM, 88240	Project: TATUM BRINE Project Number: SE CORNER OF TATUM Project Manager: MARVIN BURROWS Fax To: NONE	Reported: 28-Nov-17 17:15

WEST FRESH WATER WELL

H703118-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	**205**		5.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Chloride*	**56.0**		4.00	mg/L	1	7110601	AC	10-Nov-17	4500-Cl-B	
Conductivity*	**607**		1.00	uS/cm	1	7111001	AC	10-Nov-17	120.1	
pH*	**7.74**		0.100	pH Units	1	7111001	AC	10-Nov-17	150.1	
Sulfate*	**103**		25.0	mg/L	2.5	7110903	AC	09-Nov-17	375.4	
TDS*	**344**		5.00	mg/L	1	7110809	AC	10-Nov-17	160.1	
Alkalinity, Total*	**168**		4.00	mg/L	1	7110705	AC	10-Nov-17	310.1	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Calcium*	**58.2**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Magnesium*	**11.5**		1.00	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	
Sodium*	**39.7**		10.0	mg/L	10	B711128	JDA	17-Nov-17	EPA200.7	

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Attachment J

Llano Disposal, LLC
State 4 #1 Brine Operations
Emergency Contingency and Response Plan

Location of Facilities:
Both the State '4' Brine Well #1 and the Tatum Brine Station are located approximately 2.4 miles south of Tatum, New Mexico via SH 206 then east on caliche road. See attached map.

Facility	Latitude	Longitude	UL, S, T, N
State '4' BSW #1	33.2225075°	-103.3154755°	E-4-13S-36E
Tatum Brine Station	33.2226212°	-103.3170283°	E-4-13S-36E

Emergency Response Agencies	Emergency	Direct Number
Tatum Volunteer Fire Dept	911	575-398-3473
Lovington Fire and EMS	911	575-396-2359
Lea County Sheriff's Dept	911	575-396-3611
New Mexico State Police	911	575-392-5588

Llano Responder	Cell Phone	Home Phone
Marvin Burrows – Fac Mgr	575-631-8067	
Darr Angell - Owner	575-704-2777	575-396-4418

Reporting Agencies	Phone
NMOCD – Santa Fe	505-476-3440
NMOCD – Hobbs (Emergency Cell)	575-370-3186
National Response Center	800-424-8802
EPA Region 6 Emergency Response	214-665-6428
Chemtrec	800-424-9300

Materials Stored or Transferred Onsite	Location of Anticipated Leaks/Spills
Fresh and brine water (Non-hazardous)	Brine station inside secondary containment, concrete loading pad, pipelines, and at brine well
Contaminated Soil (Non-hazardous)	Sealed drums at brine station
Trash (Non-hazardous)	Trash bins at brine station

Leak/Spill Prevention Actions

Brine water storage tanks have a synthetic liner secondary containment and level controls
Concrete loading pad has curbs and an automated concrete sump
Buried brine polyethylene pipeline will be pressure tested annually to insure mechanical integrity

Containment and Clean up Actions

1) Incidental drips, leaks and spills will be picked up routinely and placed back into the system or in waste containers by the facility operator.
2) Releases of more than 5 bbls of brine water or 1 bbl of waste outside secondary containment will be handled per the Emergency Procedures/Notification listed below.

Emergency Procedures and Notification

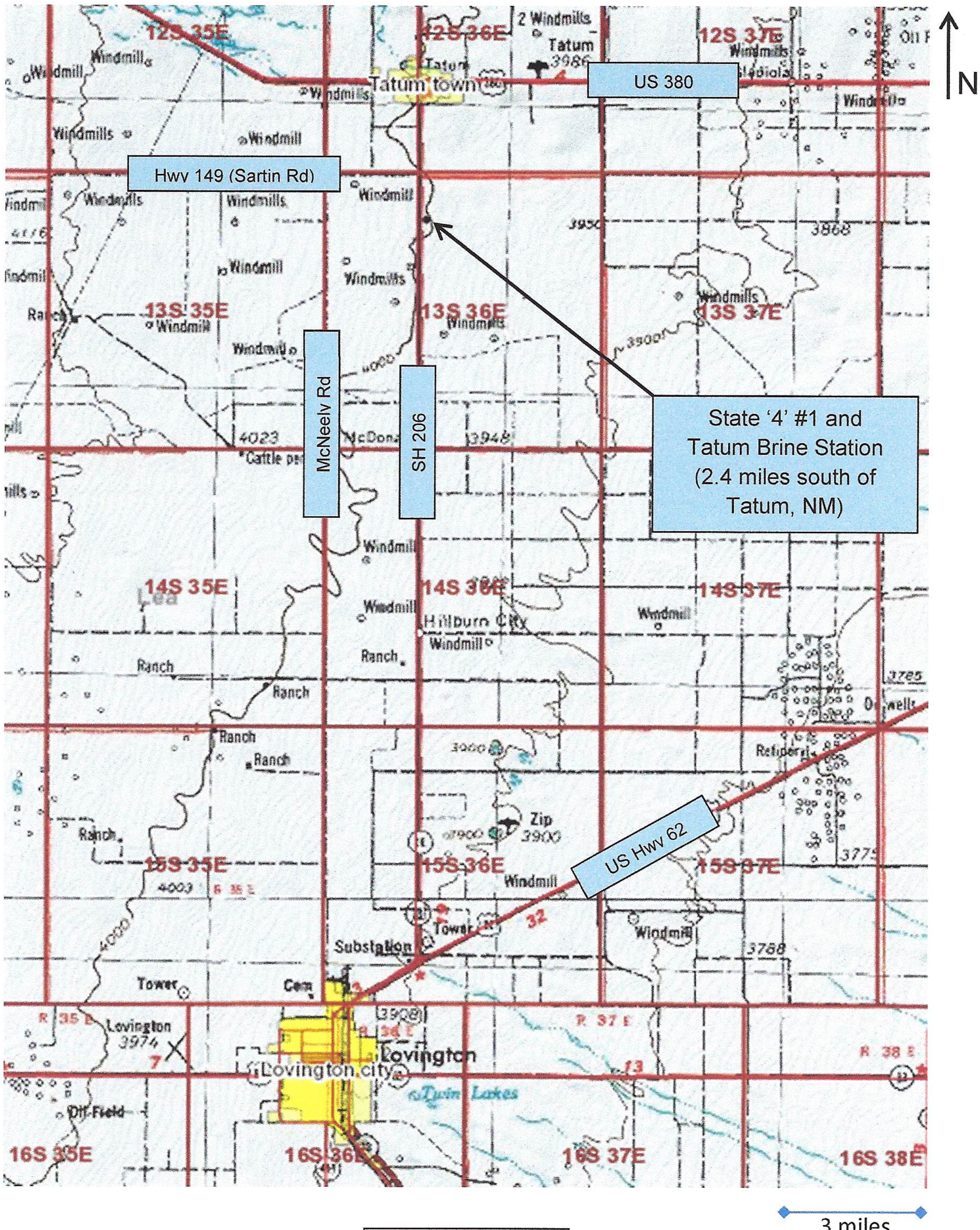
1) Assess the situation (if it is safe to do so) and notify Llano Supervisor for assistance and additional personnel, if needed. Stop the leak/spill as directed by the Llano Supervisor (if it is safe to do so).
2) Notify one of the Emergency Response Agencies noted above if there is a life threatening situation.
3) Provide assistance to Emergency Responders and/or Llano Supervisor.
4) Barricade any spill area to protect the public, if necessary and if it is safe to do so.
5) Llano Supervisor will direct all available resources to stop, contain and mitigate the emergency situation.
6) Llano Supervisor will notify NMOCD District Office by phone and form C-141 for brine spills <25 bbls.
7) Llano Supervisor will verbally notify NMOCD Director (Santa Fe) for brine spill >25 bbls.

Attachment K

Posted Date - ______________

Llano Disposal, LLC
State 4 #1 Brine Operations
Emergency Contingency and Response Plan

Emergency Response Map

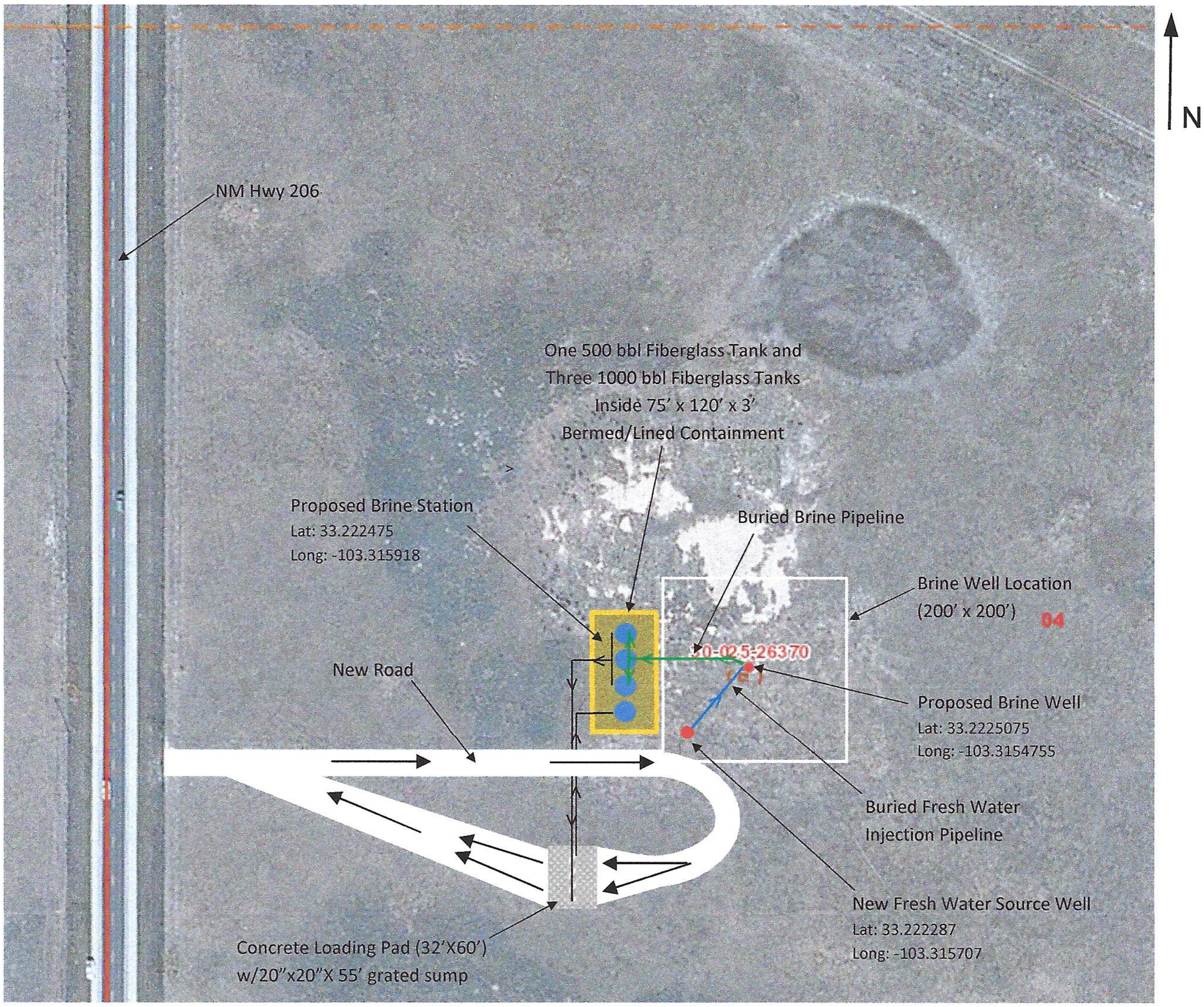


Attachment K

Posted Date - ______________

Llano Disposal, LLC
Proposed State '4' BSW #1 and Tatum Brine Station
UL 'E', Section 4, T13S, R36E
Lea County, New Mexico

Attachment L – Schematics



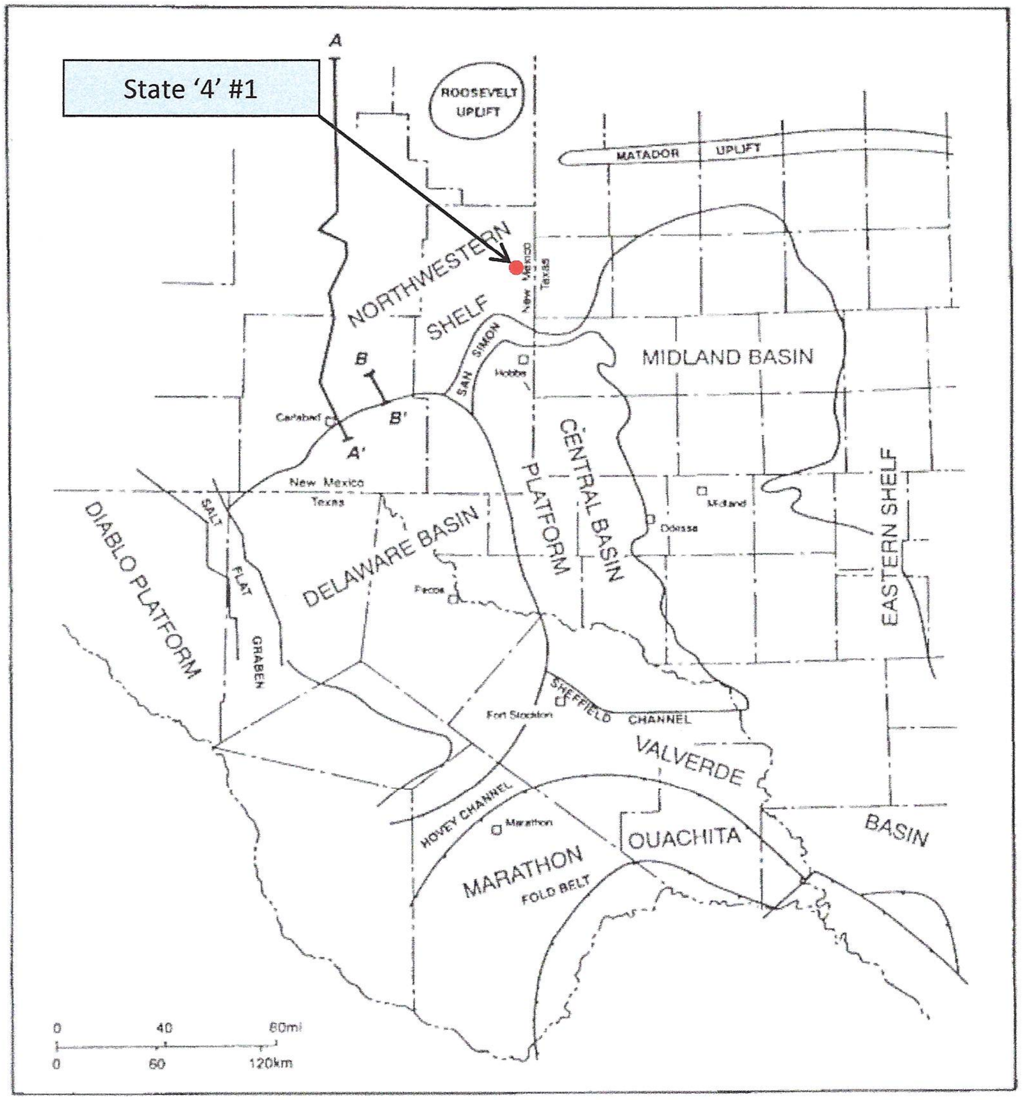
Lea County, New Mexico

Note: The entire 40 acre unit letter will be fenced off with a minimum of 4 strands of barbed wire. There will be a road opening at the state highway ROW fence line.

State '4' #1
API # 30-025-26370
Discharge Plan Attachments

Attachment M – Area Geology

BROADHEAD and SPEER



Attachment M – General Stratigraphy

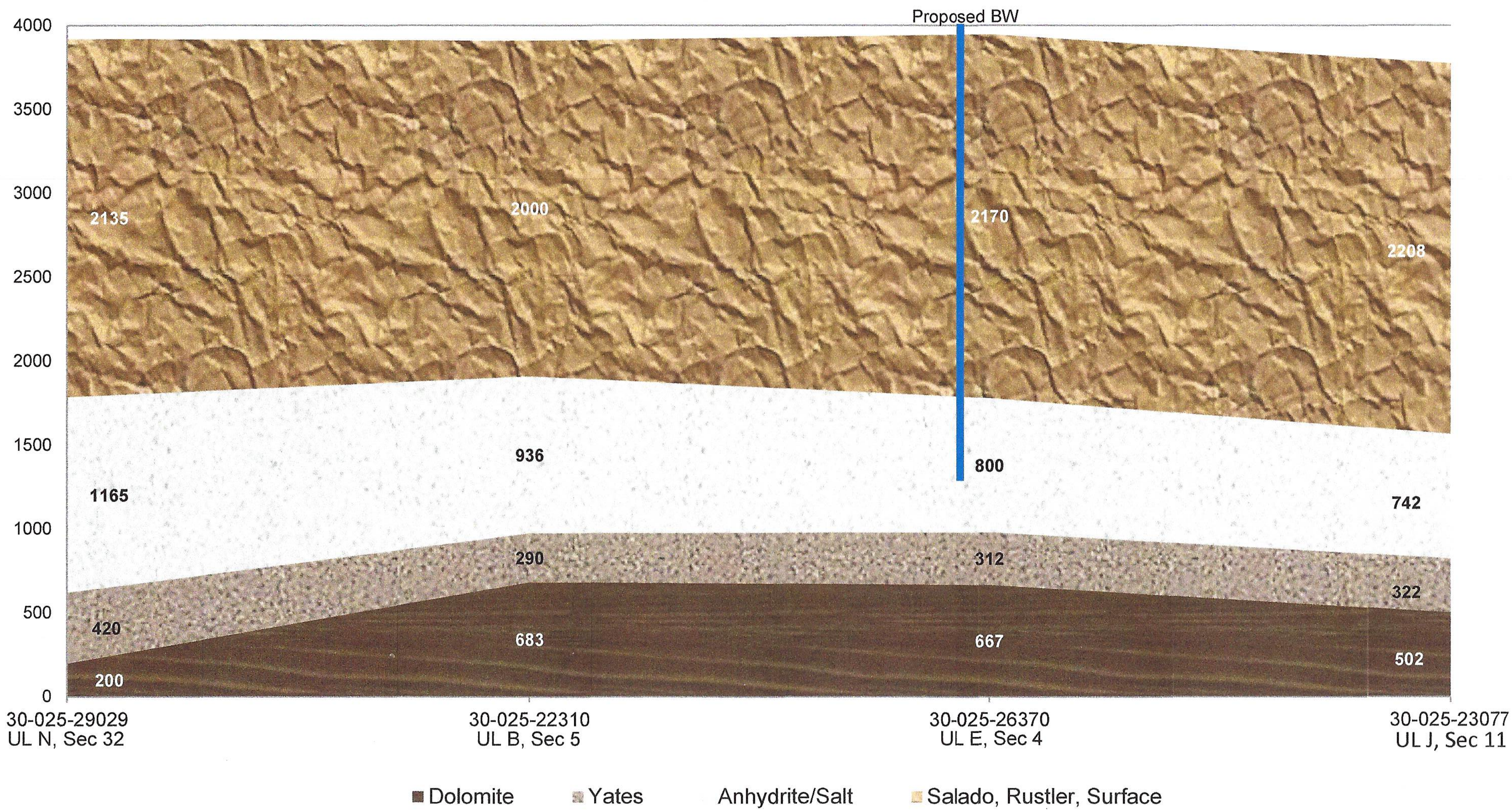
Stratigraphy of the Northwest Shelf of the Permian Basin

PERIOD	EPOCH	FORMATION		GENERAL LITHOLOGY	APPROXIMATE THICKNESS (ft)
Permian	Ochoan	Dewey Lake		Redbeds/Anhydrite	200-400
		Rustler		Halite	100
		Salado		Halite/Anhydrite	1000
	Guadalupian	Tansil		Anhydrite/Dolomite	200
		Yates		Anhydrite/Dolomite Anhydrite	200
		Seven Rivers		Dolomite/Anhydrite	500
		Queen		Sandy Dolomite/ Anhydrite/Sandstone	200-500
		Grayburg		Dolomite/Anhydrite/ Shale/Sandstone	300
		San Andres		Dolomite/Anhydrite	1500
	Leonardian	Glorieta		Sandy Dolomite	100
		Yeso	Paddock	Dolomite/Anhydrite/ Sandstone	1500
			Blinebry		
			Tubb		
			Drinkard		
		Abo		Dolomite/Anhydrite/ Shale	1000
	Wolfcampian	Wolfcamp		Limestone/Dolomite	0-1500
Pennsylvanian	Virgilian	Cisco		Limestone/Sandstone	0-1250
	Missourian	Canyon		Limestone/Shale	
	Des Moinesian	Strawn		Limestone/Sandstone	0-750
	Atokan	Bend		Limestone/Sandstone /Shale	0-1250
	Morrowan	Morrow			
Mississippian		----		Limestone/Shale	0-800
Devonian		----		Dolomite/Chert	0-1200
Silurian		Fusselman			
Ordovician	Upper	Montoya		Dolomite/Chert	0-400
	Middle	Simpson		Limestone/Sandstone /Shale	0-200
	Lower	Ellenburger		Dolomite	0-400
Cambrian		----		Sandstone	----

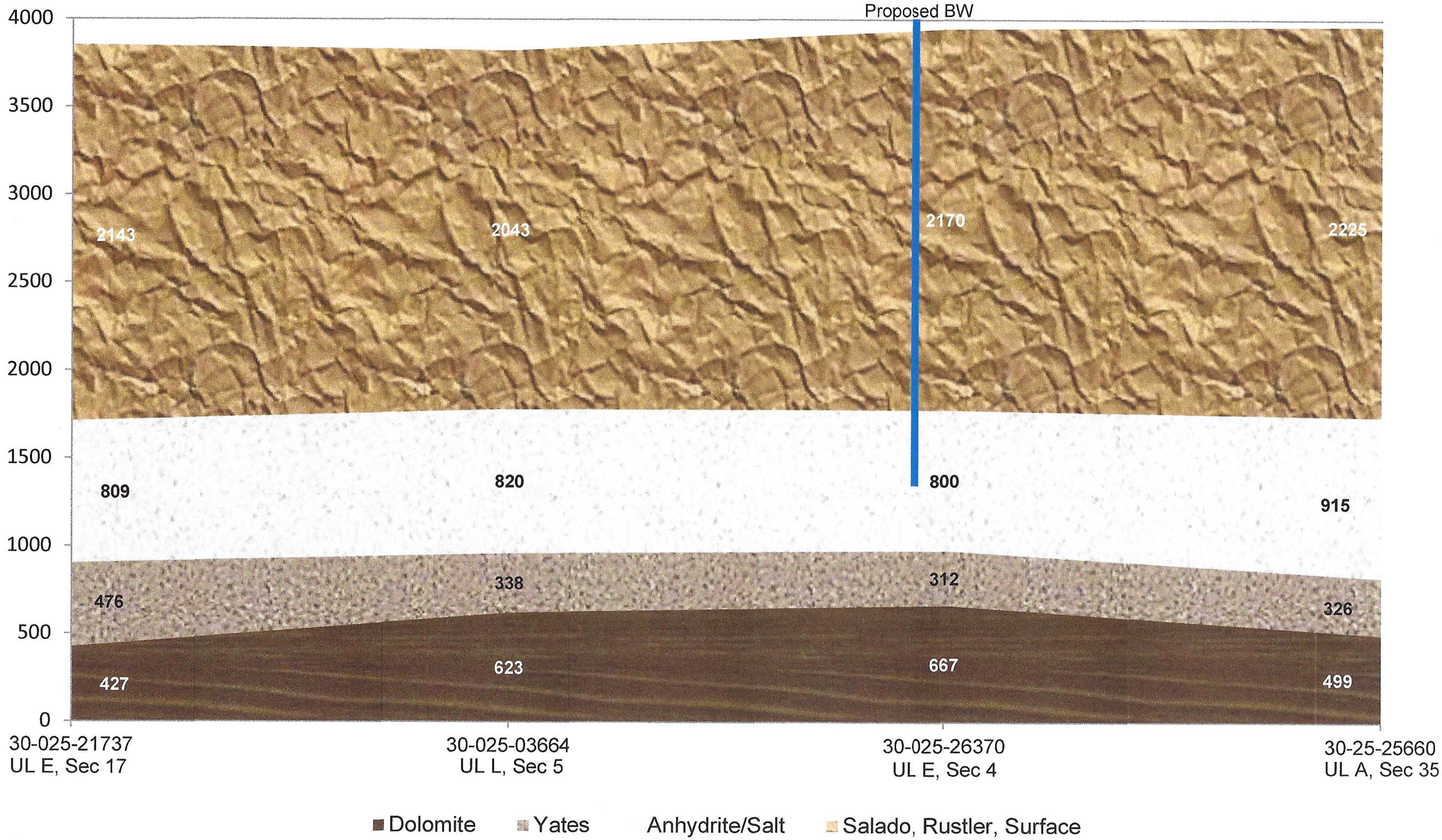
Stratigraphy of the Northwest Shelf of the Permian Basin. General lithology and approximate stratigraphic thickness for each formation are indicated. Modified from Pranter (1999) by Cabrera-Garzon, Raul, 2001, Ph.D., Thesis (2001) Redrawn by Nassir Alnaji, 2001

Source: Pranter (1999).

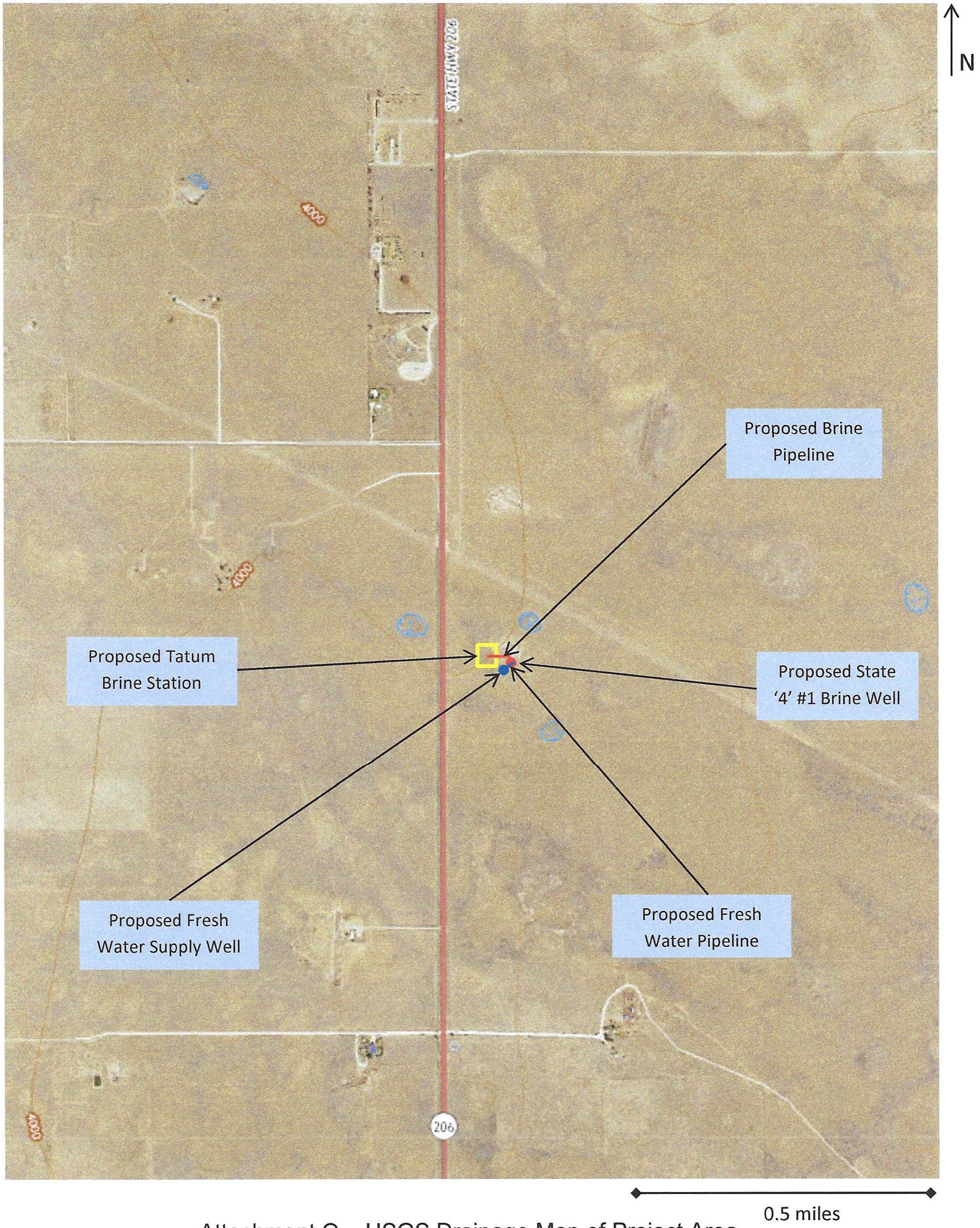
State '4' #1
Northwest to Southeast Cross Section
Attachment N



State '4' #1
Southwest to Northeast Cross Section
Attachment N



State '4' #1
API # 30-025-26370
Discharge Plan Attachments



Attachment O – USGS Drainage Map of Project Area

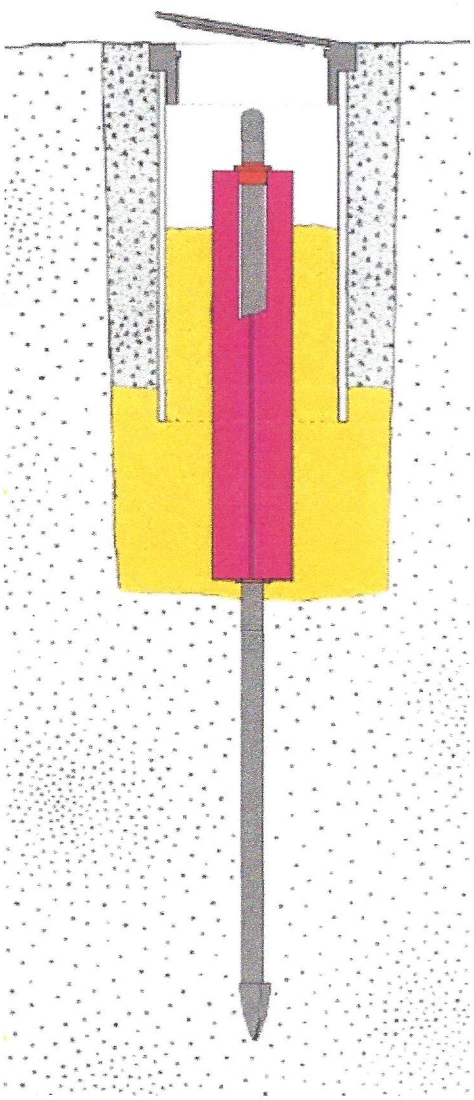
Sectional Rod Monuments

Berntsen
Survey Markers

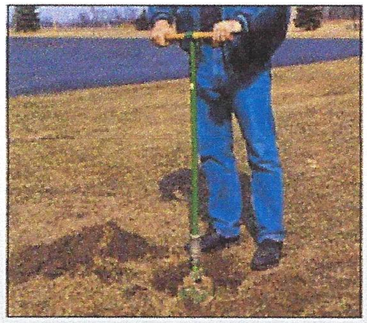
Monument Design	Monument Installation Procedure

Monument Design

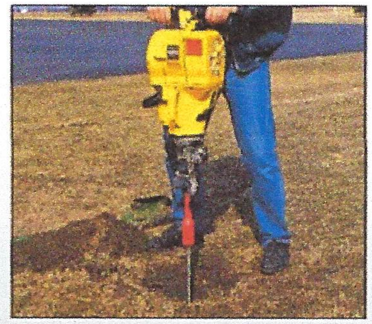
SLEEVED ROD MONUMENT WITH FLOATING SLEEVE



Monument Installation Procedure

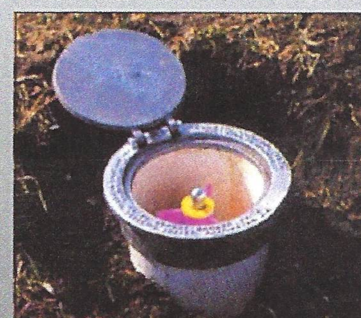


A 12 inch (300 mm) hole is augered to a depth of about 3 1/2 feet (1050 mm).

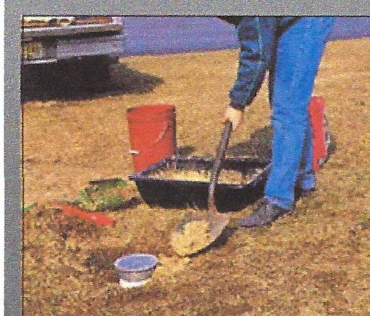


The rod monument is driven into the ground, a section at a time, to refusal*. The top of the last rod should be about 6 inches (150 mm) below the surface. *See page 15*

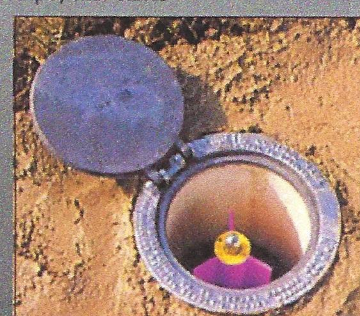
The finned sleeve (filled with grease) is placed over the rod and the datum point added (or filed onto the rod end).



A 6 inch (150 mm) diameter PVC pipe 3 feet (915 mm) long, with access cover glued on, is placed over the finned sleeve (pipe should not touch the fins). Back-fill (INSIDE the PVC Pipe) with sand.



The hole and pipe are carefully back-filled with sand. The top 12 inches (300 mm) of the hole (OUTSIDE of the PVC Pipe) are back-filled with concrete.



The finished mark - a well protected first-order benchmark.

Attachment P – Subsidence Monument Rod Design and Installation Procedure

State'4' #1
API # 30-025-26370
Discharge Plan Attachments – Attachment Q

Public Notice

Legal notification for 2' X 3' (min) signage per Water Quality Control Commission Regulations 20.6.2.3108.B.1 NMAC

Llano Disposal, LLC, 783 highway 483, Lovington, NM 88260, Mr. Darr Angell has filed an application with the New Mexico Oil Conservation Division (OCD) to install and operate a Class III brine well and brine station.

The new brine station will be located approximately 500 feet east of this sign. A detailed description and map of the proposed facilities are hereby attached below.

Brine wells are wells completed into salt formations for the purpose of solution mining the salt to create brine water. Fresh water is pumped into deep salt zones thereby producing concentrated salt water called "brine water". This brine water is used in the oilfield primarily for drilling and completion operations. It is anticipated that brine water will be produced at a rate of less than 1900 barrels per day with a total dissolved concentration of 320,000 mg/l (primarily NaCl). Groundwater in this area is present at depths of approximately 40 – 80 feet. The concentration of total dissolved solids in this groundwater is generally about 400 mg/l. The permit requires that the brine well and associated operations must be constructed and operated in a matter that will not adversely affect groundwater quality.

The New Mexico Oil Conservation Division (OCD) will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Interested persons may contact:

Environmental Bureau Chief
Oil Conservation Division (OCD)
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Telephone: 505-476-3440

State'4' #1

API # 30-025-26370

Discharge Plan Attachments – Attachment Q

Laminated Attachments (8-1/2" x 11" ea) Posted to Bottom of Sign

Page 1 of Detailed Notification

Llano Disposal, L.L.C. (Mr. Darr Angell), 783 Highway 483, Lovington, NM 88260 has submitted an application to the New Mexico Oil Conservation Division (NMOCD) for installation and operation of a Class III brine well to be located in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.2225075°, Long. -103.3154755°), Lea County, New Mexico. The brine injection well is located approximately 1.8 miles south of Tatum, New Mexico or 0.4 miles south-south-east of the intersection of State Highway 206 and County Road 149 (Sartin Rd).

The application proposes to produce fresh water from a water source well to be drilled in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.222287°, Long. -103.315707°), Lea County, New Mexico. From time to time when brine is needed, the fresh water would be transported via a buried polyethylene pipeline approximately 110 feet southwest to the brine well. The fresh water would be pumped down the well's casing to an approximate depth of 2400 feet to 2900 feet below ground level at a rate of approximately 40 - 120 GPM and a normal operating pressure of 200 to 250 psig. The maximum allowable surface injection pressure would be 475 psig. Dissolution brine water (NaCl) would then be produced up the well tubing to surface.

The produced brine water would be metered then transported via a second buried polyethylene pipeline approximately 135 feet west to three 1000 barrel fiberglass storage tanks at the proposed Tatum Brine Station located in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.222475°, Long. -103.315918°), Lea County, New Mexico. This brine station is located approximately 1.8 miles south of Tatum, New Mexico or 0.4 miles south of the intersection of State Hwy 206 and County Road 149 (Sartin Rd). The brine water would be transferred/sold by delivery into water trucks on a concrete loading pad with containment curbing and a sump to prevent spills. There would be a synthetic liner and secondary containment underneath the brine storage tanks. All of the above listed infrastructure is located on private land owned by the applicant.

Brine water is used in the oil and gas industry to supply concentrated salt water (i.e. brine water) with a total dissolved concentration of approximately 320,000 mg/l and a density that is 20% higher than fresh water. Typical brine water is 10 pounds per gallon (ppg) with the increased weight due to dissolved NaCl. Heavy brine water is essential in preventing blow-outs in high pressure gas wells and prevents loss of circulation when drilling through salt zones typically found in southeastern New Mexico.

The brine well will be designed to produce approximately 13 million barrels of brine water over a 20 year life period. The anticipated cavern radius will not exceed 150 feet. The well has been located on private land and provides a minimum of 2500 feet separation from any significant features, such as houses, water supplies, buildings, schools, businesses, etc.

Groundwater possibly affected by an unintentional spill or leak is located at a depth of approximately 40 – 80 feet below ground level. Typical groundwater in this area has a total dissolved solids concentration of approximately 400 mg/l. According to the Office of the State Engineer, average water well depths in the area are 107 feet below ground level. The brine facility will be designed and permitted to have no intentional water contaminants discharged to the surface or subsurface for the protection of groundwater.

Page 2 of Detailed Notification

The brine station will have a concrete loading pad for trucks and will have a synthetic liner underneath tanks areas to prevent any spills or leaks from reaching the ground surface. The brine well will have cemented casing and tubing strings to protect groundwater.

The owner and operator of the proposed facility will be:

Llano Disposal, LLC
783 Highway 483
Lovington, NM 88260

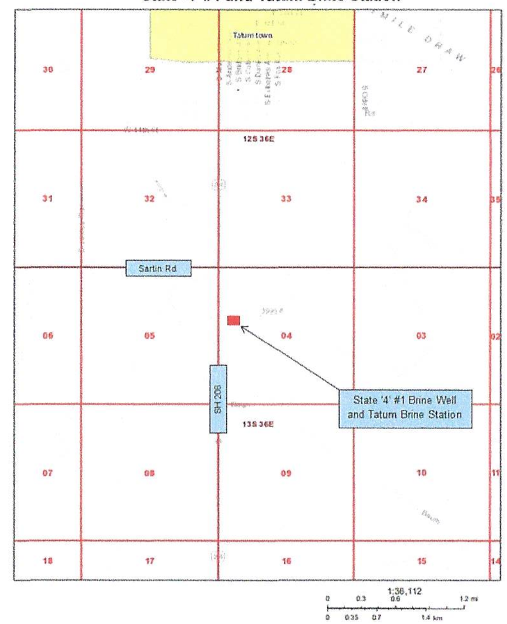
Comments and inquiries about the application may be directed to Llano Disposal, LLC c/o Mr. Danny Holcomb at 806-471-5628 or email danny@pwllc.net. Mr. Holcomb is a consultant to Llano Disposal, LLC providing assistance obtaining the regulatory permits for this project.

The New Mexico Oil Conservation Division (OCD) will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list for future notices may contact:

Environmental Bureau Chief
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Telephone: 505-476-3440

Map of Area of Review

State '4' #1 and Tatum Brine Station



Sec 4, T13S, R36E
Lea County, New Mexico

Notificación Aviso

Notificación legal de 2' X 3' (min) señalización por Reglamento de Comisión de Control de Calidad de Agua 20.6.2.3108.B.1 NMAC

Llano Disposal, LLC, 783 Highway 483, Lovington, NM 88260, Sr. Darr Angell ha presentado una solicitud con el División de Conservación de Petroléo de Nuevo Méxicano para instalar y operar así una salmuera de clase III y estación de la salmuera.

La nueva estación de salmuera será situados aproximadamente 500 pies este de este signo. Una descripción detallada y un mapa de las instalaciones propuestas por este medio se unen por debajo.

Pozos de salmuera son pozos completados en formaciones de sal con el propósito de la solución de minería de la sal para crear agua de la salmuera. Agua dulce es bombeado en zonas profundas sal tal modo produciendo concentrado agua salada llamado "agua de la salmuera". Esta agua de la salmuera se utiliza en el campo petrolífero principalmente para operaciones de perforación y terminación. Se prevé que se producirán salmuera agua a una velocidad de menos de 1900 barriles por día con una concentración disuelta total de 320.000 mg/l (principalmente NaCl). Agua subterránea en esta área está presente en aproximadamente 40 a 80 pies de profundidad. La concentración de sólidos totales disueltos en esta agua subterránea es generalmente cerca de 400 mg/l. El permiso requiere que la salmuera bien y asociados las operaciones deben ser construidas y operadas en un asunto que no afectará negativamente la calidad de las aguas subterráneas.

El División de Conservación de Petroléo de Nuevo Méxicano se aceptan comentarios y declaraciones de interés respecto a esta aplicación y creará una lista de correo de instalaciones específicas para las personas que deseen recibir futuras notificaciones. Las personas interesadas podrán en contacto con:

Jefe de la Oficina Ambiental
División de Conservación de Petroléo de Nuevo Méxicano
1220 South Saint Francis Drive
Santa Fe, New México 87505
Teléfono: 505-476-3440

State'4' #1
API # 30-025-26370
Discharge Plan Attachments – Attachment Q

Laminado los archivos adjuntos (8-1/2 "x 11") publicado a parte inferior de la señal

Página 1 de notificación detallada

Llano Disposal, L.L.C. (Sr. Darr Angell), 783 Highway 483, Lovington, NM 88260 ha presentado solicitud para La División de Conservación de Petroléo de Nuevo Méxicano (NMOCD) para la in y operación de una clase III de la salmuera bien que se encuentra en la unidad letra E de la sec municipio de 13 sur, gama 36 Oriente (Lat. 33.2225075°, Long. 103.3154755°), Condado Lea, N México. La inyección de salmuera es bien situados aproximadamente 1,8 millas al sur de Tatum México o 0,4 millas sur-sureste de la intersección de estado Hwy 206 y County Road 149 (Sartin

La aplicación propone producir agua fresca de una fuente de agua a ser perforado en unidad le la sección 4, municipio 13 sur, gama 36 Oriente (Lat. 33.222287°, Long. -103.315707°), Condad Nuevo México. De vez en cuando se necesita salmuera, el agua dulce transportarse a través de tubería de polietileno enterrada aproximadamente 110 pies noreste a la salmuera bien. El agua bombea al pozo de cubierta a una profundidad aproximada de 2400 pies a 2900 pies debajo de suelo a una tasa de aproximadamente 40-120 GPM y una presión normal de 200 a 250 psi. La p de inyección superficial permisible máxima sería 475 psig. Agua de disolución salmuera (NaCl) se produciría por el bien de la tubería a la superficie.

El agua de la salmuera producida se mide entonces transportado por una tubería de polietileno segundo aproximadamente 135 pies al oeste a tres barril 1000 tanques de almacenamiento de vidrio en la estación de salmuera Tatum propuesto ubicado en unidad letra E de la sección 4, m 13 sur, gama 36 Oriente (Lat. 33.222475°, Long. -103.315918°), Condado Lea, Nuevo México. E estación de salmuera está situados apoximadamente 1,8 millas al sur de Tatum, Nuevo México millas al sur de la intersección de estado Hwy 206 y County Road 149 (Sartin Rd). El agua de la salmuera sería transferido/vendido por entrega en camiones de agua sobre una almohadilla cor de contención de carga de cemento y un colector de aceite para evitar derrames. Habría un forr sintético y contención secundaria debajo de los tanques de almacenamiento de la salmuera. To infraestructura lista anterior se encuentra en terrenos privados propiedad de la demandante.

Agua de la salmuera se utiliza en el aceite y la industria del gas para suministrar concentrado sa (es decir, salmuera) con una concentración disuelta total de aproximadamente 320.000 mg/l y u densidad que es 20% mayor de agua dulce. Salmuera típica está 10 libras por galón con el aum peso debido a NaCl disuelto. Agua de salmuera pesada es esencial en la prevención de salidas en pozos de gas de alta presión y previene la pérdida de circulación durante la perforación a tra zonas de sal suelen encontradas en el sureste de nuevo México.

Bien la salmuera se diseñará para producir aproximadamente 13 millones de barriles de salmue durante un período de vida de 20 años. El radio caverna anticipada no excederá de 150 pies. El ha situado en terrenos privados y un mínimo de 2500 pies de separación de las características importantes, tales como casas, suministros de agua, edificios, escuelas, empresas, etc.

Página 2 de notificación detallada

Agua subterránea posiblemente afectado por un derrame accidental o escape se encuentra a una profundidad de aproximadamente 40 – 80 pies debajo de nivel del suelo. Típico agua subterránea er esta área tiene una concentración de sólidos disueltos totales de aproximadamente 400 mg/l. Según oficina del ingeniero de estado, profundidades bien media del agua en la zona son 107 pies debajo c nivel del suelo. La instalación de la salmuera será diseñada y puede no tener contaminantes intencic de agua descargadas a la superficie o subsuperficie para la protección de las aguas subterráneas. L estación de salmuera tendrá una plataforma de carga de cemento para camiones y tendrá un revestimiento sintético debajo de áreas de depósitos para evitar cualquier vertido o derrame acciden de llegar a la superficie de la tierra. La salmuera bien habremos cementado carcasa y tubos cadenas para proteger las aguas subterráneas.

El propietario y operador de la instalación propuesta será:

Llano Disposal, LLC
783 Highway 483
Lovington, NM 88260

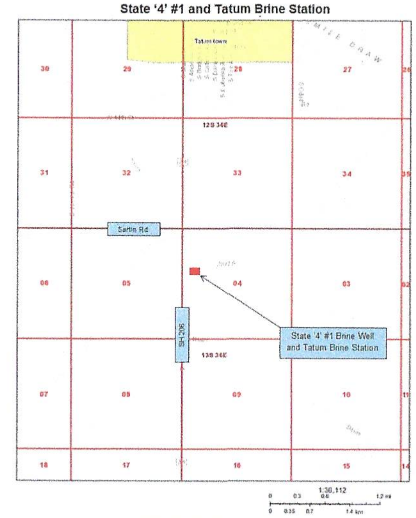
Comentarios y consultas sobre la aplicación pueden ser dirigidas a disposición Llano Disposal, LLC c Sr. Danny Holcomb en 806-471-5628 o por correo electrónico danny@pwllc.net. El Sr. Holcomb es consultor para proporcionar asistencia de Llano Disposal, LLC obtener los permisos reglamentarios p este proyecto.

La División de Conservación de Petroléo de Nuevo Méxicano se aceptan comentarios y declaracione interés respecto a esta aplicación y creará una lista de correo de instalaciones específicas para las personas que deseen recibir futuras notificaciones. Puede contactar a las personas interesadas en obtener más información, enviar comentarios o solicitar estar en una lista de correo de instalaciones específicas para futuros avisos:

Jefe de la Oficina Ambiental
División de Conservación de Petroléo de Nuevo Méxicano
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Teléfono: 505-476-3440

Mapa del área de revisión

State '4' #1 and Tatum Brine Station



Sec 4, T13S, R36E
Lea County, New Mexico

State '4' #1
API #30-025-26370
Discharge Plan Attachments - Attachment R

Public Notice

Legal notification for offsite Public Notice per Water Quality Control Commission Regulations 20.6.2.3108.B.1 NMAC

Llano Disposal, L.L.C. (Mr. Darr Angell), 783 Highway 483, Lovington, NM 88260 has submitted an application to the New Mexico Oil Conservation Division (NMOCD) for installation and operation of a Class III brine well to be located in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.2225075°, Long. -103.3154755°), Lea County, New Mexico. The brine injection well is located approximately 1.8 miles south of Tatum, New Mexico or 0.4 miles south-south-east of the intersection of State Highway 206 and County Road 149 (Sartin Rd).

The application proposes to produce fresh water from a water source well to be drilled in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.222287°, Long. -103.315707°), Lea County, New Mexico. From time to time when brine is needed, the fresh water would be transported via a buried polyethylene pipeline approximately 110 feet northeast to the brine well. The fresh water would be pumped down the well's casing to an approximate depth of 2400 feet to 2900 feet below ground level at a rate of approximately 40 - 120 GPM and a normal operating pressure of 200 to 250 psi. The maximum allowable surface injection pressure would be 475 psig. Dissolution brine water (NaCl) would then be produced up the well tubing to surface.

The produced brine water would be metered then transported via a second buried polyethylene pipeline approximately 135 feet west to three 1000 barrel fiberglass storage tanks at the proposed Tatum Brine Station located in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.222475°, Long. -103.315918°), Lea County, New Mexico. This brine station is located approximately 1.8 miles south of Tatum, New Mexico or 0.4 miles south of the intersection of State Hwy 206 and County Road 149 (Sartin Rd). The brine water would be transferred/sold by delivery into water trucks on a concrete loading pad with containment curbing and a sump to prevent spills. There would be a synthetic liner and secondary containment underneath the brine storage tanks. All of the above listed infrastructure is located on private land owned by the applicant.

Brine water is used in the oil and gas industry to supply concentrated salt water (i.e. brine water) with a total dissolved concentration of approximately 320,000 mg/l and a density that is 20% higher than fresh water. Typical brine water is 10 pounds per gallon (ppg) with the increased weight due to dissolved NaCl. Heavy brine water is essential in preventing blow-outs in high pressure gas wells and prevents loss of circulation when drilling through salt zones typically found in southeastern New Mexico.

The brine well will be designed to produce approximately 13 million barrels of brine water over a 20 year life period. The anticipated cavern radius will not exceed 150 feet. The well has been located on private land and provides a minimum of 2500 feet separation from any significant features, such as houses, water supplies, buildings, schools, businesses, etc.

Groundwater possibly affected by an unintentional spill or leak is located at a depth of approximately 40 – 80 feet below ground level. Typical groundwater in this area has a total dissolved solids concentration of approximately 400 mg/l. According to the Office of the State Engineer, average water well depths in the area are 107 feet below ground level. The brine facility will be designed and permitted to have no intentional water contaminants discharged to the surface or subsurface for the protection of groundwater. The brine station will have a concrete loading pad for trucks and will have a synthetic liner underneath tanks areas to prevent any spills or leaks from reaching the ground surface. The brine well will have cemented casing and tubing strings to protect groundwater.

The owner and operator of the proposed facility will be:

Llano Disposal, LLC
783 Highway 483
Lovington, NM 88260

Comments and inquiries about the application may be directed to Llano Disposal, LLC c/o Mr. Danny Holcomb at 806-471-5628 or email danny@pwllc.net. Mr. Holcomb is a consultant to Llano Disposal, LLC providing assistance obtaining the regulatory permits for this project.

The New Mexico Oil Conservation Division (OCD) will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list for future notices may contact:

Environmental Bureau Chief
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Telephone: 505-476-3440

Aviso Público

Legal notificación para fuera del sitio aviso público por Reglamento de Comisión de Control de Calidad de Agua 20.6.2.3108.B.1 NMAC

Llano Disposal, L.L.C. (Sr. Darr Angell), 783 Highway 483, Lovington, NM 88260 ha presentado una solicitud para La División de Conservación de Petroléo de Nuevo Méxicano (NMOCD) para la instalación y operación de una clase III de la salmuera bien que se encuentra en la unidad letra E de la sección 4, municipio de 13 sur, gama 36 Oriente (Lat. 33.2225075°, Long. 103.3154755°), Condado Lea, Nuevo México. La inyección de salmuera es bien situados aproximadamente 1,8 millas al sur de Tatum, Nuevo México o 0,4 millas sur-sureste de la intersección de estado Hwy 206 y County Road 149 (Sartin Rd).

La aplicación propone producir agua fresca de una fuente de agua a ser perforado en unidad letra E de la sección 4, municipio 13 sur, gama 36 Oriente (Lat. 33.222287°, Long. -103.315707°), Condado Lea, Nuevo México. De vez en cuando se necesita salmuera, el agua dulce transportarse a través de una tubería de polietileno enterrada aproximadamente 110 pies noreste a la salmuera bien. El agua se bombea al pozo de cubierta a una profundidad aproximada de 2400 pies a 2900 pies debajo de nivel del suelo a una tasa de aproximadamente 40-120 GPM y una presión normal de 200 a 250 psi. La presión de inyección superficial permisible máxima sería 475 psig. Agua de disolución salmuera (NaCl) entonces se produciría por el bien de la tubería a la superficie.

El agua de la salmuera producida se mide entonces transportado por una tubería de polietileno enterrada segundo aproximadamente 135 pies al oeste a tres barril 1000 tanques de almacenamiento de fibra de vidrio en la estación de salmuera Tatum propuesto ubicado en unidad letra E de la sección 4, municipio 13 sur, gama 36 Oriente (Lat. 33.222475°, Long. -103.315918°), Condado Lea, Nuevo México. Esta estación de salmuera está situados apoximadamente 1,8 millas al sur de Tatum, Nuevo México o 0,4 millas al sur de la intersección de estado Hwy 206 y County Road 149 (Sartin Rd). El agua de la salmuera sería transferido/vendido por entrega en camiones de agua sobre una almohadilla con frenar de contención de carga de cemento y un colector de aceite para evitar derrames. Habría un forro sintético y contención secundaria debajo de los tanques de almacenamiento de la salmuera. Toda la infraestructura lista anterior se encuentra en terrenos privados propiedad de la demandante.

Agua de la salmuera se utiliza en el aceite y la industria del gas para suministrar concentrado sal agua (es decir, salmuera) con una concentración disuelta total de aproximadamente 320.000 mg/l y una densidad que es 20% mayor de agua dulce. Salmuera típica está 10 libras por galón con el aumento de peso debido a NaCl disuelto. Agua de salmuera pesada es esencial en la prevención de salidas de golpe en pozos de gas de alta presión y previene la pérdida de circulación durante la perforación a través de zonas de sal suelen encontradas en el sureste de nuevo México.

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State '4' #1
API #30-025-26370
Discharge Plan Attachments - Attachment R

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Llano Disposal, LLC
783 Highway 483
Lovington, NM 88260

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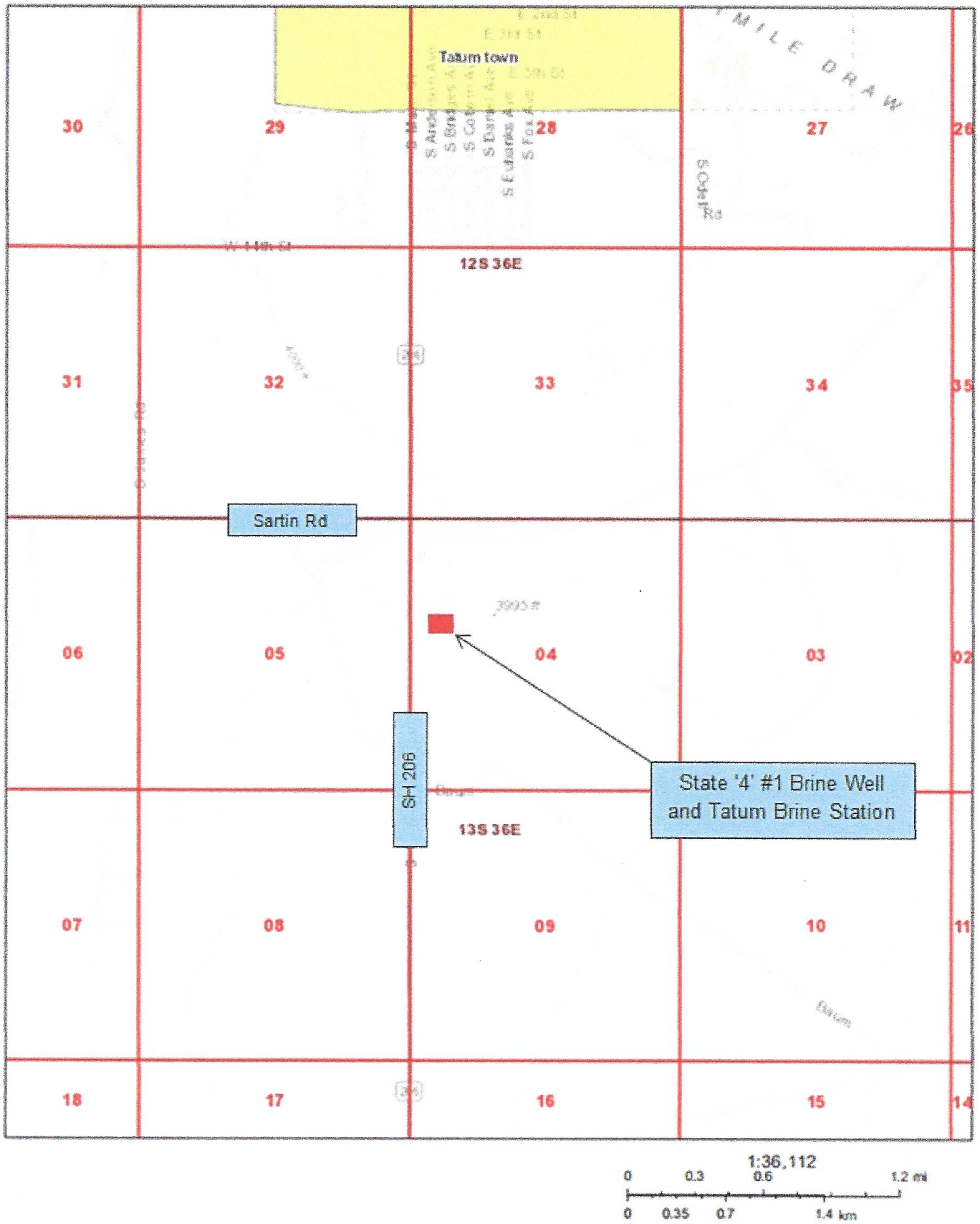
Santa Fe, New Mexico 87505
Teléfono: 505-476-3440

State '4' #1
API #30-025-26370
Discharge Plan Attachments - Attachment R

State '4' #1 and Tatum Brine Station



Sec 4, T13S, R36E
Lea County, New Mexico

State '4' #1
API # 30-025-26370
Discharge Plan Attachments – Attachment 'S'

Public Notice Letter

Certified Mail

Date: ______________

Property Owner of Record

Name:

Address:

City/State:

Public Notice

Legal notification per Water Quality Control Commission Regulations 20.6.2.3108.B.2 NMAC to property owner(s) of record that adjoin the property owned by the applicant.

Llano Disposal, L.L.C. (Mr. Darr Angell), 783 Highway 483, Lovington, NM 88260 has submitted an application to the New Mexico Oil Conservation Division (NMOCD) for installation and operation of a Class III brine well to be located in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.2225075°, Long. -103.3154755°), Lea County, New Mexico. The brine injection well is located approximately 1.8 miles south of Tatum, New Mexico or 0.4 miles south-south-east of the intersection of State Highway 206 and County Road 149 (Sartin Rd).

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State '4' #1
API # 30-025-26370
Discharge Plan Attachments – Attachment 'S'

Brine water is used in the oil and gas industry to supply concentrated salt water (i.e. brine water) with a total dissolved concentration of approximately 320,000 mg/l and a density that is 20% higher than fresh water. Typical brine water is 10 pounds per gallon (ppg) with the increased weight due to dissolved NaCl. Heavy brine water is essential in preventing blow-outs in high pressure gas wells and prevents loss of circulation when drilling through salt zones typically found in southeastern New Mexico.

The brine well will be designed to produce approximately 13 million barrels of brine water over a 20 year life period. The anticipated cavern radius will not exceed 150 feet. The well has been located on private land and provides a minimum of 2500 feet separation from any significant features, such as houses, water supplies, buildings, schools, businesses, etc.

Groundwater possibly affected by an unintentional spill or leak is located at a depth of approximately 40 – 80 feet below ground level. Typical groundwater in this area has a total dissolved solids concentration of approximately 400 mg/l. According to the Office of the State Engineer, average water well depths in the area are 107 feet below ground level. The brine facility will be designed and permitted to have no intentional water contaminants discharged to the surface or subsurface for the protection of groundwater. The brine station will have a concrete loading pad for trucks and will have a synthetic liner underneath tanks areas to prevent any spills or leaks from reaching the ground surface. The brine well will have cemented casing and tubing strings to protect groundwater.

The owner and operator of the proposed facility will be:

Llano Disposal, LLC
783 Highway 483
Lovington, NM 88260

Comments and inquiries about the application may be directed to Llano Disposal, LLC c/o Mr. Danny Holcomb at 806-471-5628 or email danny@pwllc.net. Mr. Holcomb is a consultant to Llano Disposal, LLC providing assistance obtaining the regulatory permits for this project.

The New Mexico Oil Conservation Division (OCD) will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list for future notices may contact:

Environmental Bureau Chief
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Telephone: 505-476-3440

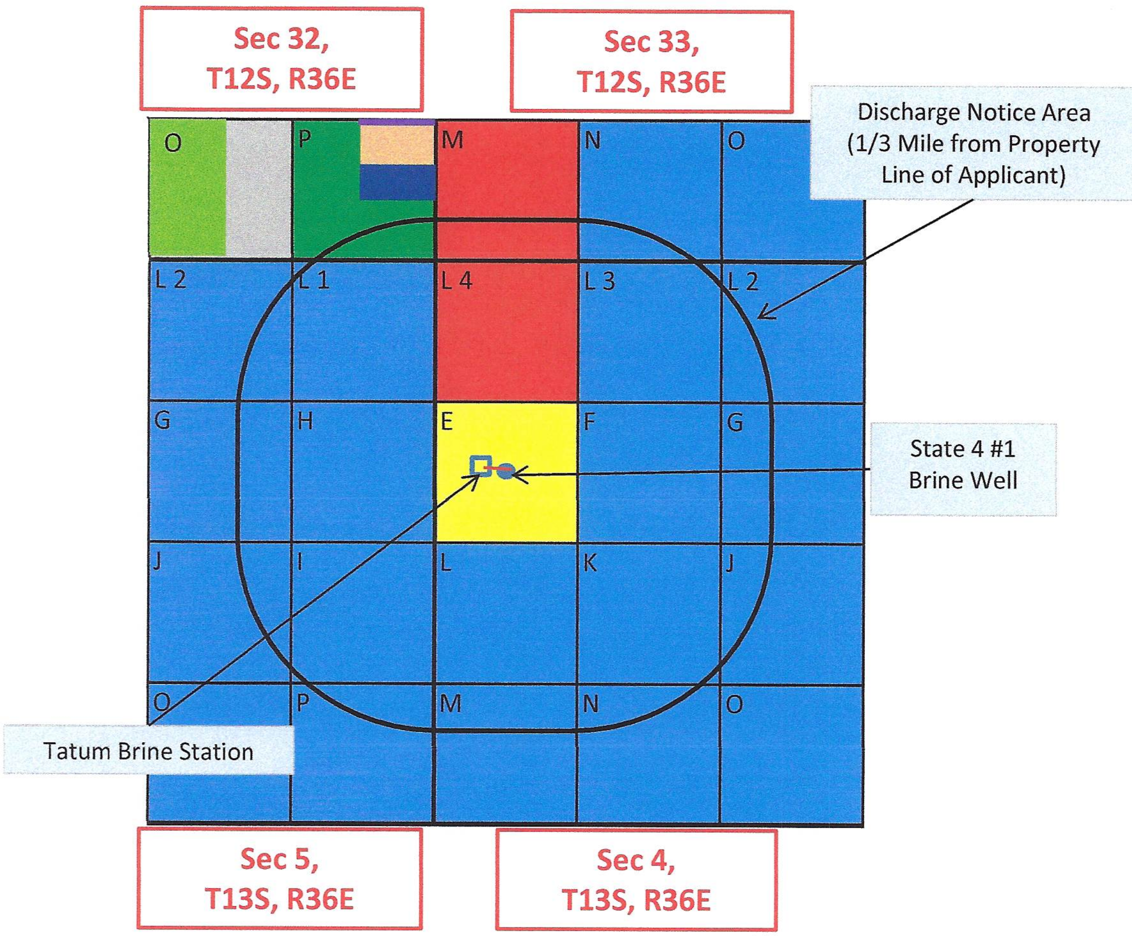
Sincerely,

Danny J. Holcomb
Agent for Llano Disposal, LLC

Attachment (map of area)

State '4' #1
API # 30-025-26370
Discharge Plan Attachments – Attachment 'S'

Llano Disposal, LLC
State '4' #1
Property Ownership Map



Llano Disposal, LLC - applicant
State of New Mexico, P. O. Box 1148, Santa Fe, NM 87504
Kinsolving and Kinsolving, P. O. Box 325, Tatum, NM 88267
Weslie Allen, Et Al, P. O. Box 77, Tatum, NM 88267

Property Owner Notices

State ‘4’ #1
API # 30-025-26370
Discharge Plan Attachments – Attachment ‘S’

NOTIFICATION LIST - ADJOINING PROPERTY OWNERS

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
1	Llano Disposal, LLC c/o Mr. Darr Angell	P. O. Box 190	Lovington, NM 88260	Surface Owner

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
2	State of New Mexico Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Adjoining Property Owner
3	Kinsolving and Kinsolving	P. O. Box 325	Tatum, NM 88267	Adjoining Property Owner
4	Weslie Allen, Et Al	P. O. Box 77	Tatum, NM 88267	Adjoining Property Owner

NOTIFICATION LIST - MINERAL OWNER AND LESSEE

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
	State of New Mexico Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
	None - unleased			Mineral Lessee

State'4' #1
API # 30-025-26370
Discharge Plan Attachments - Attachment T

Public Notice Display Ad

Legal notification for 3" X 4" (min) newspaper display ad per Water Quality Control Commission Regulations 20.6.2.3108.B.4 NMAC

Llano Disposal, L.L.C. (Mr. Darr Angell), 783 Highway 483, Lovington, NM 88260 has submitted an application to the New Mexico Oil Conservation Division (NMOCD) for installation and operation of a Class III brine well to be located in Unit Letter E of Section 4, Township 13 South, Range 36 East (Lat. 33.2225075°, Long. -103.3154755°), Lea County, New Mexico. The brine injection well is located approximately 1.8 miles south of Tatum, New Mexico or 0.4 miles south-south-east of the intersection of State Highway 206 and County Road 149 (Sartin Rd).

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Santa Fe, New Mexico 87505
Telephone: 505-476-3440

State'4' #1
API # 30-025-26370
Discharge Plan Attachments - Attachment T

Anuncios de Pantalla de Aviso Público

Notificación legal de 3" X 4" (min) anuncio de la exhibición del periódico por Reglamento de Comisión de Control de Calidad de Agua 20.6.2.3108.B.4 NMAC

Llano Disposal, L.L.C. (Sr. Darr Angell), 783 Highway 483, Lovington, NM 88260 ha presentado una solicitud para La División de Conservación de Petroléo de Nuevo Méxicano (NMOCD) para la instalación y operación de una clase III de la salmuera bien que se encuentra en la unidad letra E de la sección 4, municipio de 13 sur, gama 36 Oriente (Lat. 33.2225075°, Long. 103.3154755°), Condado Lea, Nuevo México. La inyección de salmuera es bien situados aproximadamente 1,8 millas al sur de Tatum, Nuevo México o 0,4 millas sur-sureste de la intersección de estado Hwy 206 y County Road 149 (Sartin Rd).

La aplicación propone producir agua fresca de una fuente de agua a ser perforado en unidad letra E de la sección 4, municipio 13 sur, gama 36 Oriente (Lat. 33.222287°, Long. -103.315707°), Condado Lea, Nuevo México. De vez en cuando se necesita salmuera, el agua dulce transportarse a través de una tubería de polietileno enterrada aproximadamente 110 pies noreste a la salmuera bien. El agua se bombea al pozo de cubierta a una profundidad aproximada de 2400 pies a 2900 pies debajo de nivel del suelo a una tasa de aproximadamente 40-120 GPM y una presión normal de 200 a 250 psi. La presión de inyección superficial permisible máxima sería 475 psig. Agua de disolución salmuera (NaCl) entonces se produciría por el bien de la tubería a la superficie.

El agua de la salmuera producida se mide entonces transportado por una tubería de polietileno enterrada segundo aproximadamente 135 pies al oeste a tres barril 1000 tanques de almacenamiento de fibra de vidrio en la estación de salmuera Tatum propuesto ubicado en unidad letra E de la sección 4, municipio 13 sur, gama 36 Oriente (Lat. 33.222475°, Long. -103.315918°), Condado Lea, Nuevo México. Esta estación de salmuera está situados apoximadamente 1,8 millas al sur de Tatum, Nuevo México o 0,4 millas al sur de la intersección de estado Hwy 206 y County Road 149 (Sartin Rd). El agua de la salmuera sería transferido/vendido por entrega en camiones de agua sobre una almohadilla con frenar de contención de carga de cemento y un colector de aceite para evitar derrames. Habría un forro sintético y contención secundaria debajo de los tanques de almacenamiento de la salmuera. Toda la infraestructura lista anterior se encuentra en terrenos privados propiedad de la demandante.

Agua de la salmuera se utiliza en el aceite y la industria del gas para suministrar concentrado sal agua (es decir, salmuera) con una concentración disuelta total de aproximadamente 320.000 mg/l y una densidad que es 20% mayor de agua dulce. Salmuera típica está 10 libras por galón con el aumento de peso debido a NaCl disuelto. Agua de salmuera pesada es esencial en la prevención de salidas de golpe en pozos de gas de alta presión y previene la pérdida de circulación durante la perforación a través de zonas de sal suelen encontradas en el sureste de nuevo México.

Bien la salmuera se diseñará para producir aproximadamente 13 millones de barriles de salmuera durante un período de vida de 20 años. El radio caverna anticipada no excederá de 150 pies. El pozo se ha situado en terrenos privados y un mínimo de 2500 pies de separación de las características importantes, tales como casas, suministros de agua, edificios, escuelas, empresas, etc.

State'4' #1
API # 30-025-26370
Discharge Plan Attachments - Attachment T

Agua subterránea posiblemente afectado por un derrame accidental o escape se encuentra a una profundidad de aproximadamente 40 – 80 pies debajo de nivel del suelo. Típico agua subterránea en esta área tiene una concentración de sólidos disueltos totales de aproximadamente 400 mg/l. Según la oficina del ingeniero de estado, profundidades bien media del agua en la zona son 107 pies debajo de nivel del suelo. La instalación de la salmuera será diseñada y puede no tener contaminantes intencional de agua descargadas a la superficie o subsuperficie para la protección de las aguas subterráneas. La estación de salmuera tendrá una plataforma de carga de cemento para camiones y tendrá un revestimiento sintético debajo de áreas de depósitos para evitar cualquier vertido o derrame accidental de llegar a la superficie de la tierra. La salmuera bien habremos cementado carcasa y tubos cadenas para proteger las aguas subterráneas.

El propietario y operador de la instalación propuesta será:

Llano Disposal, LLC
783 Highway 483
Lovington, NM 88260

Comentarios y consultas sobre la aplicación pueden ser dirigidas a disposición Llano Disposal, LLC c/o Sr. Danny Holcomb en 806-471-5628 o por correo electrónico danny@pwllc.net . El Sr. Holcomb es consultor para proporcionar asistencia de Llano Disposal, LLC obtener los permisos reglamentarios para este proyecto.

La División de Conservación de Petroléo de Nuevo Méxicano se aceptan comentarios y declaraciones de interés respecto a esta aplicación y creará una lista de correo de instalaciones específicas para las personas que deseen recibir futuras notificaciones. Puede contactar a las personas interesadas en obtener más información, enviar comentarios o solicitar estar en una lista de correo de instalaciones específicas para futuros avisos:

Jefe de la Oficina Ambiental
División de Conservación de Petroléo de Nuevo Méxicano
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505
Teléfono: 505-476-3440

Chavez, Carl J, EMNRD

From:	danny@pwllc.net
Sent:	Tuesday, February 20, 2018 5:33 PM
To:	Chavez, Carl J, EMNRD
Cc:	Marvin Burrows
Subject:	[FWD: Communication Phone Call After Recent Well Work : BW-37 State '4' No. 1 (API# 30-025-26370)]
Attachments:	llanostate4#1-RCBL 020218.pdf; Llano State 4 #1-CNL 020218.pdf; llanostate4#1-Caliper Log 020218.pdf; State 4 #1 WBD 020218.pdf

Carl,
Marvin and I will call your office tomorrow. Last time, we had issues with the time. Sometimes when meeting requests are emailed across time zones, the meeting time is shown in the receivers time zone instead of the senders. To confirm, is the meeting at 2:30pm MT?
Thank you,
Danny J. Holcomb
Cell: 806-471-5628
Email: danny@pwllc.net

-------- Original Message --------
Subject: Communication Phone Call After Recent Well Work : BW-37 State '4' No. 1 (API# 30-025-26370)
From: "Chavez, Carl J, EMNRD" <CarlJ.Chavez@state.nm.us>
Date: Tue, February 20, 2018 1:37 pm
To: Marvin <burrowsmarvin@gmail.com>, "danny@pwllc.net" <danny@pwllc.net>, "Griswold, Jim, EMNRD" <Jim.Griswold@state.nm.us>

Meeting Request

[Accept] [Decline]
If you accept, this meeting will be added to your Calendar automatically.

Meeting Name:	Communication Phone Call After Recent Well Work : BW-37 State '4' No. 1 (API# 30-025-26370)
Location:	Telephone Conference Call
Start Time:	Wed, Feb 21 2018 2:30 pm
End Time:	Wed, Feb 21 2018 3:30 pm
Conflicts in the Next Year:	None
Description:	

Llano Disposal, LLC will call Carl?s Office at (505) 476-3490 or provide OCD will a teleconference code to call into meeting.

OCD will discuss concerns about well, and recent changes to the proposed well construction configuration by Llano Disposal, LLC. based on various logs (see attachments) run on well.

Could you double-check what I found below? Seems like cement work is in order from 2,300 to surface at certain locations.

After preliminary review of info., it would seem that Llano does not have 100 ft. of separation between TOS (2,170 ft.) and proposed window because the casing appears shot between ~2,200 and 2,230 ft. (Caliper Log).

CBL appears to show possible lack of cement at 1,175 to 1,225; 1,275 to 1,415; 1,885 to 1,905; and 2,240 to 2,270 (NO CEMENT).

Proposed packer moved up to 2150 ft. from original 2395 ft.

The revised well construction proposed window (~ 2300 ? 2310 ft) is within 20 ft. of the anhydrite/salt contact at 2320 ft. and there is not at least 100 ft. of separation from the salt-rock contact.

Thank you.

Comments:

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM

RENEGADE SERVICES

60-ARM CALIPER ODT CASING INSPECTION LOG

Company LLANO DISPOSAL, LLC
Well STATE 4 #1
Field TATUM
County LEA State NM

Location: API # : 30-025-26370

Other Services: RCBL/CNL

SEC	TWP	RGE

Permanent Datum G.L. Elevation
Log Measured From G.L.
Drilling Measured From K.B.

Elevation: K.B. / D.F. / G.L.

Date	2-2-2018
Run Number	ONE
Depth Driller	13,476'
Depth Logger	3298
Bottom Logged Interval	3292
Top Log Interval	SURFACE
Open Hole Size	NA
Type Fluid	H2O
Density / Viscosity	NA
Max. Recorded Temp.	NA
Estimated Cement Top	SEE LOG
Time Well Ready	ROA
Time Logger on Bottom	9:00 AM
Equipment Number	71
Location	LEVELLAND TX
Recorded By	R.D. MOTHERAL
Witnessed By	MR. BURROWS

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.625"	28#	SURFACE	
Prot. String				
Production String				
Liner				

<<< Fold Here >>>

Comments

ALL DEPTHS ARE LOGGER DEPTHS
NO CORRELATION LOG AVAILABLE ON LOCATION
NO KB USED

MAIN PASS

Database File	llanostate4#1.db
Dataset Pathname	pass2
Presentation Format	pr60im86
Dataset Creation	Fri Feb 02 09:24:08 2018
Charted by	Depth in Feet scaled 1:240

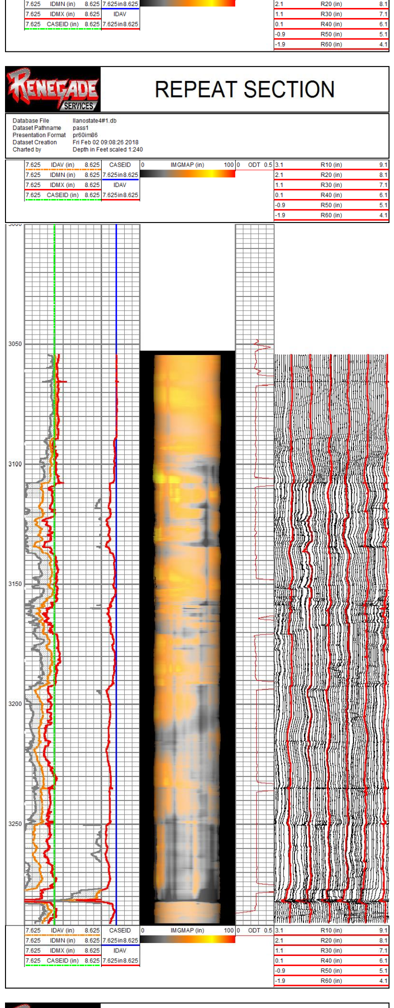
7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1	R10 (in)	9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1	R20 (in)	8.1
7.625 IDMX (in) 8.625	IDAV			1.1	R30 (in)	7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1	R40 (in)	6.1
				-0.9	R50 (in)	5.1
				-1.9	R60 (in)	4.1

7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1	R10 (in)	9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1	R20 (in)	8.1
7.625 IDMX (in) 8.625	IDAV			1.1	R30 (in)	7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1	R40 (in)	6.1
				-0.9	R50 (in)	5.1
				-1.9	R60 (in)	4.1

REPEAT SECTION

Database File	llanostate4#1.db
Dataset Pathname	pass1
Presentation Format	pr60im86
Dataset Creation	Fri Feb 02 09:08:26 2018
Charted by	Depth in Feet scaled 1:240

7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1	R10 (in)	9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1	R20 (in)	8.1
7.625 IDMX (in) 8.625	IDAV			1.1	R30 (in)	7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1	R40 (in)	6.1
				-0.9	R50 (in)	5.1
				-1.9	R60 (in)	4.1

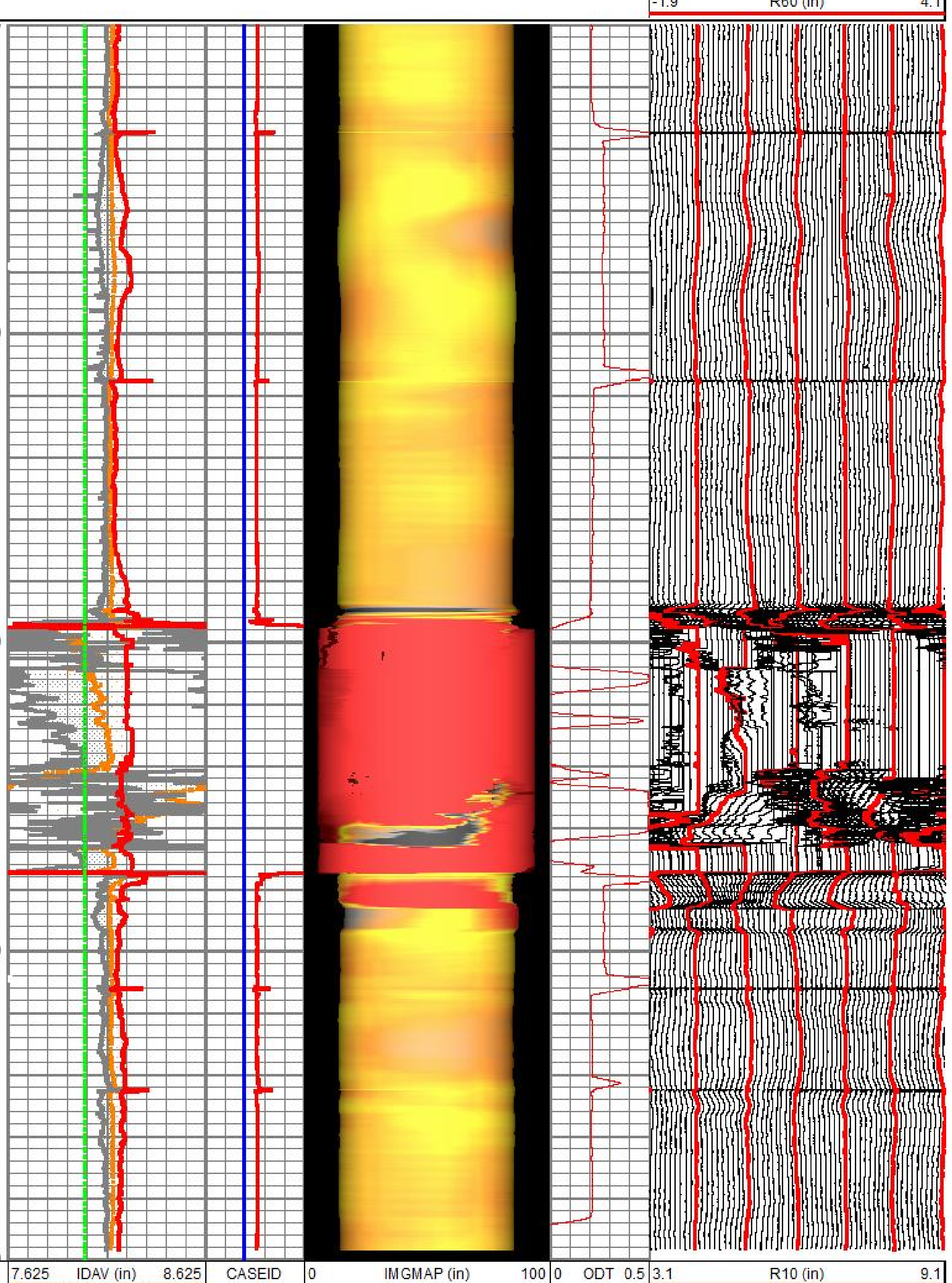


7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1	R10 (in)	9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1	R20 (in)	8.1
7.625 IDMX (in) 8.625	IDAV			1.1	R30 (in)	7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1	R40 (in)	6.1
				-0.9	R50 (in)	5.1
				-1.9	R60 (in)	4.1

REPEAT SECTION

Database File	llanostate4#1.db
Dataset Pathname	pass3
Presentation Format	pr60im86
Dataset Creation	Fri Feb 02 10:47:52 2018
Charted by	Depth in Feet scaled 1:240

7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1 R10 (in) 9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1 R20 (in) 8.1
7.625 IDMX (in) 8.625	IDAV			1.1 R30 (in) 7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1 R40 (in) 6.1
				-0.9 R50 (in) 5.1
				-1.9 R60 (in) 4.1



7.625 IDAV (in) 8.625	CASEID	0 IMGMAP (in) 100	0 ODT 0.5	3.1 R10 (in) 9.1
7.625 IDMN (in) 8.625	7.625in8.625			2.1 R20 (in) 8.1
7.625 IDMX (in) 8.625	IDAV			1.1 R30 (in) 7.1
7.625 CASEID (in) 8.625	7.625in8.625			0.1 R40 (in) 6.1
				-0.9 R50 (in) 5.1
				-1.9 R60 (in) 4.1

Calibration Report

Database File llanostate4#1.db
Dataset Pathname pass3
Dataset Creation Fri Feb 02 10:47:52 2018

60 Arm Multi Sensor Caliper Calibration Report

Serial Number: 1507709
Tool Model: 60
Performed: Fri Feb 02 08:36:52 2018

Ref ID:	4.02	4.33	4.92	6.10	6.69	in
Arm1	1501.00	1780.50	2288.05	3272.00	3768.05	in
Arm2	1446.30	1713.25	2204.20	3164.50	3648.35	in
Arm3	1392.10	1664.55	2164.85	3134.95	3621.90	in
Arm4	1519.80	1780.45	2259.55	3189.55	3654.50	in
Arm5	1525.25	1791.70	2284.05	3241.70	3723.10	in
Arm6	1181.45	1446.65	1940.35	2904.10	3390.15	in
Arm7	1347.05	1620.00	2129.00	3112.95	3597.65	in
Arm8	1423.55	1686.05	2172.55	3127.95	3609.35	in
Arm9	1455.80	1725.00	2221.95	3178.25	3648.75	in
Arm10	1495.75	1766.30	2272.15	3261.95	3753.40	in
Arm11	1605.70	1878.00	2374.60	3339.00	3820.60	in
Arm12	1434.10	1697.10	2188.65	3144.20	3620.35	in
Arm13	1516.05	1787.85	2292.90	3278.15	3770.60	in
Arm14	1455.15	1710.65	2192.00	3144.55	3630.15	in
Arm15	1654.20	1921.45	2418.30	3384.90	3867.65	in
Arm16	1551.60	1825.30	2333.35	3318.05	3807.75	in
Arm17	1329.25	1583.80	2068.40	3010.30	3478.90	in
Arm18	1465.80	1722.25	2214.00	3178.55	3658.10	in
Arm19	1345.15	1613.35	2120.45	3095.40	3570.90	in
Arm20	1315.15	1579.20	2073.25	3032.35	3512.65	in
Arm21	1574.40	1831.55	2319.30	3277.00	3756.90	in
Arm22	1358.00	1618.20	2107.85	3061.95	3535.80	in
Arm23	1381.15	1648.05	2146.45	3111.25	3591.10	in
Arm24	1386.20	1635.90	2106.95	3035.95	3509.30	in
Arm25	1420.05	1682.35	2175.90	3140.70	3625.60	in
Arm26	1552.50	1810.10	2302.45	3276.45	3765.65	in
Arm27	1452.00	1705.85	2190.65	3142.15	3616.90	in
Arm28	1212.65	1474.10	1971.10	2944.90	3428.35	in
Arm29	1494.30	1749.00	2239.35	3199.30	3677.20	in
Arm30	1435.20	1690.95	2173.05	3116.30	3592.65	in

* Bad

Calibration Report

Serial Number:
Tool Model:
Performed:

Ref ID:	4.02	4.33	4.92	6.10	6.69	in
Arm31	1568.60	1825.00	2311.70	3268.20	3745.95	in
Arm32	1316.75	1586.70	2097.00	3086.50	3582.45	in
Arm33	1584.75	1844.50	2340.75	3313.55	3798.00	in
Arm34	1498.90	1762.95	2268.70	3246.75	3736.20	in
Arm35	1408.35	1676.25	2181.10	3164.40	3652.95	in
Arm36	1353.70	1616.70	2112.90	3080.15	3566.05	in
Arm37	1475.25	1738.20	2229.50	3196.05	3683.65	in
Arm38	1161.50	1428.60	1925.65	2908.55	3397.55	in
Arm39	1348.80	1618.80	2115.00	3076.45	3552.55	in
Arm40	1439.30	1703.05	2201.75	3176.00	3662.40	in
Arm41	1073.20	1347.95	1861.30	2846.95	3329.45	in
Arm42	1474.40	1728.95	2204.70	3145.45	3617.20	in
Arm43	1404.50	1675.40	2180.35	3153.60	3632.60	in
Arm44	1490.90	1746.50	2234.55	3187.15	3663.55	in
Arm45	1246.90	1521.05	2027.00	3006.50	3491.95	in
Arm46	1728.80	1987.10	2467.40	3409.90	3888.20	in
Arm47	1396.80	1659.90	2145.65	3093.35	3567.65	in
Arm48	1457.05	1716.00	2197.45	3127.90	3597.00	in
Arm49	1470.90	1737.60	2234.40	3205.15	3695.90	in
Arm50	1542.90	1813.55	2299.25	3247.55	3725.65	in
Arm51	1201.05	1469.25	1961.20	2923.50	3411.00	in
Arm52	1303.45	1562.45	2046.95	3000.10	3478.80	in
Arm53	1426.00	1684.80	2164.35	3106.40	3589.20	in
Arm54	1396.75	1648.95	2121.65	3063.00	3537.30	in
Arm55	1626.30	1889.90	2373.75	3317.05	3791.15	in
Arm56	1289.75	1553.25	2046.35	3009.00	3485.65	in
Arm57	1462.05	1714.55	2173.60	3071.75	3521.80	in
Arm58	1702.10	1969.00	2451.55	3394.25	3865.95	in
Arm59	1445.00	1707.80	2185.70	3132.45	3616.05	in
Arm60	1281.20	1544.50	2027.80	2974.25	3449.10	in

* Bad

HWWSMFC verifications Calibration Report

	Pre Verification	Post Verification	Casing Check	
Performed:	Fri Dec 29 09:42:20 2017	Thu Dec 28 13:33:28 2017		
Ref ID:	6.10	4.92	0.00	in
Min.	6.08	4.90	0.00	in
Max.	6.10	4.93	0.00	in
Avg.	6.09	4.92	0.00	in
Dia1	6.08	4.92	0.00	in
Dia2	6.09	4.92	0.00	in
Dia3	6.08	4.92	0.00	in
Dia4	6.08	4.92	0.00	in
Dia5	6.08	4.92	0.00	in
Dia6	6.09	4.93	0.00	in
Dia7	6.08	4.92	0.00	in
Dia8	6.09	4.92	0.00	in
Dia9	6.09	4.92	0.00	in
Dia10	6.09	4.90	0.00	in
Dia11	6.09	4.92	0.00	in
Dia12	6.09	4.92	0.00	in
Dia13	6.09	4.92	0.00	in
Dia14	6.10	4.91	0.00	in
Dia15	6.09	4.92	0.00	in
Dia16	6.09	4.92	0.00	in
Dia17	6.09	4.92	0.00	in
Dia18	6.09	4.92	0.00	in
Dia19	6.08	4.93	0.00	in
Dia20	6.08	4.91	0.00	in
Dia21	6.09	4.93	0.00	in
Dia22	6.08	4.91	0.00	in
Dia23	6.09	4.92	0.00	in
Dia24	6.09	4.93	0.00	in
Dia25	6.09	4.93	0.00	in
Dia26	6.08	4.92	0.00	in
Dia27	6.08	4.93	0.00	in
Dia28	6.08	4.92	0.00	in
Dia29	6.09	4.92	0.00	in
Dia30	6.09	4.92	0.00	in

Inclinometer Calibration Report

Performed: (Not Performed)

	Low Read.	High Read.	Low Ref.	High Ref.		Gain	Offset
X Accelerometer	0.00	1.00	0.00	1.00	gee	1.00	0.00
Y Accelerometer	0.00	1.00	0.00	1.00	gee	1.00	0.00
Z Accelerometer	0.00	1.00	0.00	1.00	gee	1.00	0.00
RB						1.00	0.00

Log Variables

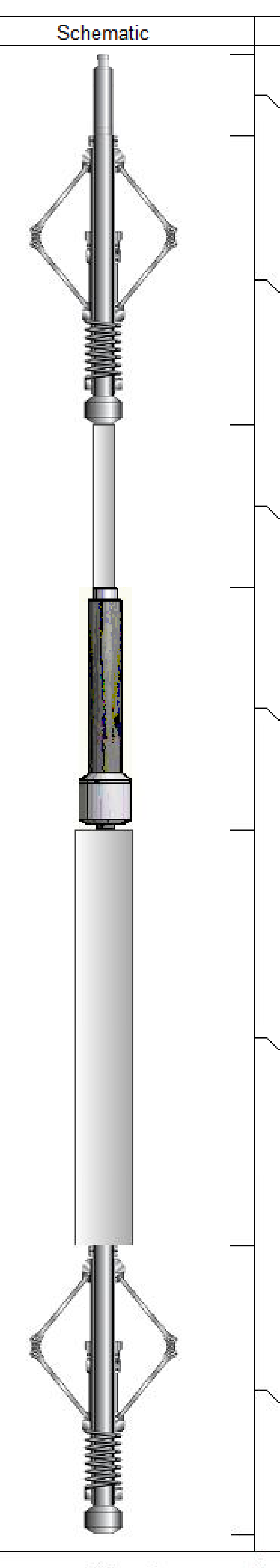
Database C:\ProgramData\Warrior\Data\llanostate4#1.db
Dataset field/well/run1/pass3/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEID in	CASEOD in	CASETHCK in	MinAPIWall in	PERFS	SRFTEMP degF	TDEPTH ft
7.875	100	8.016	8.625	0	0.264	0	0	0

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEID : Casing I.D.
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
MinAPIWall : Minimum API Wall Thickness
PERFS : Perforation Flag
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-1.4375CHD Titan Cable Head 1 7/16	1.00	1.44	10.00
			CENT-Probe Probe 2 3/4 Centralizer	3.50	2.75	20.00
			GDT_WTC-WTS01 (1503889) Digital Telemetry GDTBus	1.97	1.38	5.60
CRCCnt FrmCnt WTSTime WTSTemp CHV ODTRawP ODTTemp ODTTIME	11.50 11.50 11.50 11.50 11.50 9.87 9.87 9.87		HWT_ODT-ODT01 (0001) Hotwell ODT	2.96	2.75	22.05
Meas	5.27		GDT_MFI-60 (1507709) Multi-Finger Caliper Tool (60) GDTBus	5.04	4.00	68.89
MFCBEAR MFCACCZ MFCACCY MFCACCX Aux1	3.50 3.50 3.50 3.50 3.50		CENT-Probe Probe 2 3/4 Centralizer	3.50	2.75	20.00

Dataset: llanostate4#1.db: field/well/run1/pass3
Total length: 17.98 ft
Total weight: 146.54 lb
O.D.: 4.00 in

RENEGADE SERVICES

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM

RENEGADE SERVICES

RADIAL CEMENT BOND GAMMA-RAY CCL LOG

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM

Company LLANO DISPOSAL, LLC
Well STATE 4 #1
Field TATUM
County LEA State NM
Location: API # : 30-025-26370
Other Services: CIL/CNL
SEC TWP RGE
Permanent Datum G.L. Elevation
Log Measured From G.L.
Drilling Measured From K.B.
Elevation: K.B. D.F. G.L.

Date	2-2-2018
Run Number	ONE
Depth Driller	13,476'
Depth Logger	3298
Bottom Logged Interval	3292
Top Log Interval	SURFACE
Open Hole Size	NA
Type Fluid	H2O
Density / Viscosity	NA
Max. Recorded Temp.	NA
Estimated Cement Top	SEE LOG
Time Well Ready	ROA
Time Logger on Bottom	9:00 AM
Equipment Number	71
Location	LEVELLAND TX
Recorded By	R.D. MOTHERAL
Witnessed By	MR. BURROWS

Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String	8.625"	28#	SURFACE	
Production String				
Liner				

<<< Fold Here >>>

Comments

ALL DEPTHS ARE LOGGER DEPTHS
NO CORRELATION LOG AVAILABLE ON LOCATION
NO KB USED

RENEGADE SERVICES

MAIN PASS

Database File	llanostate4#1.db
Dataset Pathname	pass6
Presentation Format	rrcbl_8_
Dataset Creation	Fri Feb 02 12:02:37 2018
Charted by	Depth in Feet scaled 1:240

400 TT (usec) 300
0 GR (GAPI) 150
CCL
0 Amplitude (mV) 100
Amplified Amplitude 0 (mV) 10
200 VDL (usec) 1200
Free Pipe Gate
-5 AMPMIN 150
-5 AMPAVG 150
-5 AMPMAX 150
95 TEMP (degF) 110
TEMP (degF)
Cement Map

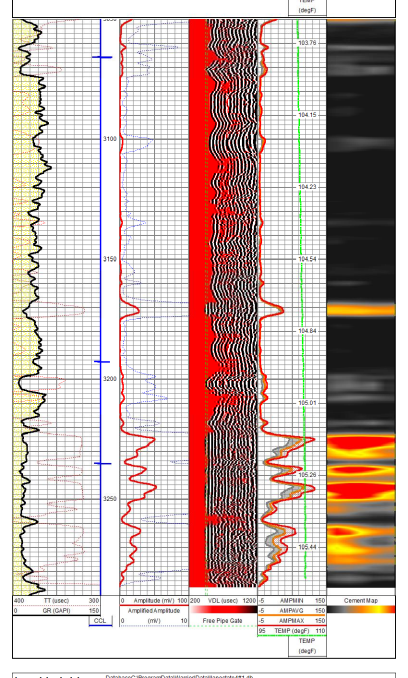
400 TT (usec) 300
0 GR (GAPI) 150
CCL
0 Amplitude (mV) 100
Amplified Amplitude 0 (mV) 10
200 VDL (usec) 1200
Free Pipe Gate
-5 AMPMIN 150
-5 AMPAVG 150
-5 AMPMAX 150
95 TEMP (degF) 110
TEMP (degF)
Cement Map

RENEGADE SERVICES

REPEAT SECTION

Database File	llanostate4#1.db
Dataset Pathname	pass5
Presentation Format	rrcbl_8_
Dataset Creation	Fri Feb 02 11:48:55 2018
Charted by	Depth in Feet scaled 1:240

400 TT (usec) 300
0 GR (GAPI) 150
CCL
0 Amplitude (mV) 100
Amplified Amplitude 0 (mV) 10
200 VDL (usec) 1200
Free Pipe Gate
-5 AMPMIN 150
-5 AMPAVG 150
-5 AMPMAX 150
95 TEMP (degF) 110
TEMP (degF)
Cement Map



400 TT (usec) 300
0 GR (GAPI) 150
CCL
0 Amplitude (mV) 100
Amplified Amplitude 0 (mV) 10
200 VDL (usec) 1200
Free Pipe Gate
-5 AMPMIN 150
-5 AMPAVG 150
-5 AMPMAX 150
95 TEMP (degF) 110
TEMP (degF)
Cement Map

Log Variables

DatabaseC:\ProgramData\Warrior\Data\llanostate4#1.db
Dataset field/well/run1/pass6/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 100	CASED? Yes	CASEID in 8.016	CASEOD in 8.625	CASETHCK in 0	CASEWGHT lb/ft 11.5	CMNTTHCK in 0
CMTTKCOR Off	CSTKCOR Off	MAXAMPL mV 0	MINAMPL mV 1	MinAPIWall in 0.264	MINATTN db/ft 0.8	NPORSEL Limestone	PERFS 0	PPT usec 0
SRFTEMP degF 0	SZCOR Off	TDEPTH ft 0						

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
MAXAMPL : Maximum Amplitude
MINAMPL : Minimum Amplitude
MinAPIWall : Minimum API Wall Thickness

CASED? : Cased hole ?
CASEID : Casing I.D.
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
CMNTTHCK : Cement Thickness
CMTTKCOR : CN CemThk. Cor. ?
CSTKCOR : CN CasThk. Cor. ?
MINATTN : Minimum Attenuation
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

Calibration Report

Database File llanostate4#1.db
Dataset Pathname pass6
Dataset Creation Fri Feb 02 12:02:37 2018

Compensated Neutron Calibration Report

Model: CNT - Probe_B
Serial Number: 100526

SHOP CALIBRATION Tue Nov 07 11:32:58 2017

	Cal Tube	Units
Tank Ratio	11.6940	SS/LS
LS Detector	65.48	cps
SS Detector	766.91	cps
Tool Ratio	11.7125	SS/LS
Tool Gain	0.9984	----

PRE-SURVEY VERIFICATION

SS Detector	LS Detector	Measured (p.u.)	Target (p.u.)

POST-SURVEY VERIFICATION

SS Detector	LS Detector	Measured (p.u.)	Target (p.u.)

Gamma Ray Calibration Report

Serial Number:	120366	
Tool Model:	Probe275dig	
Performed:	Tue Nov 07 11:24:04 2017	
Calibrator Value:	1092.0	GAPI
Background Reading:	43.6	cps
Calibrator Reading:	1820.3	cps
Sensitivity:	0.6146	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	100919c	
Tool Model:	RBTC3	
Calibration Casing Diameter:	8.625	in
Calibration Depth:	199.817	ft

Master Calibration, performed Fri Feb 02 11:26:17 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.014	0.612	1.000	54.795	89.943	-0.232
CAL	0.006	1.007				
5'	0.012	0.605	1.000	54.795	90.692	-0.071
SUM						
S1	0.007	0.795	0.000	100.000	126.951	-0.902
S2	0.008	0.653	0.000	100.000	155.152	-1.309
S3	0.008	0.510	0.000	100.000	199.057	-1.611
S4	0.008	0.454	0.000	100.000	223.788	-1.705
S5	0.008	0.478	0.000	100.000	212.569	-1.658
S6	0.008	0.589	0.000	100.000	172.032	-1.384
S7	0.008	0.728	0.000	100.000	138.970	-1.157
S8	0.009	0.818	0.000	100.000	123.673	-1.126

Internal Reference Calibration, performed Fri Feb 02 11:18:49 2018:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	1.007	1.000	0.000

Air Zero Calibration, performed Fri Feb 02 11:17:56 2018:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Temperature Calibration Report

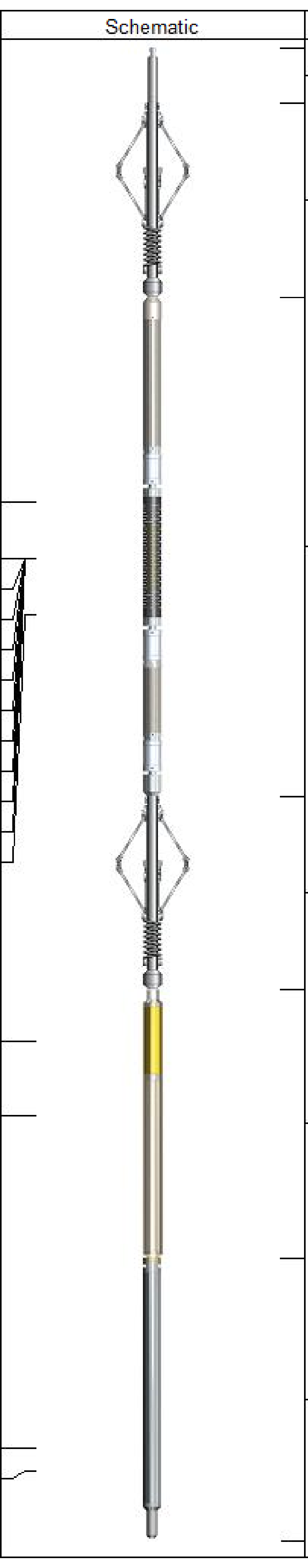
Serial Number: 100919c
Tool Model: RBTC3
Performed: (Not Performed)

	Reference		Reading	
Low Reference:	0.00	degF	0.00	degF
High Reference:	1.00	degF	1.00	degF

Gain: 1.00
Offset: 0.00
Delta Spacing 1

Sensor	Offset (ft)
TEMP	18.50
WVFS8	17.50
WVFS7	17.50
WVFS6	17.50
WVFS5	17.50
WVFS4	17.50
WVFS3	17.50
WVFS2	17.50
WVFS1	17.50
WVFCAL	17.50
WVF3FT	17.50
WVF5FT	16.50
CCL	8.91
GR	7.57
CNLSC	1.65
CNSSC	1.24

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb)
CHD-1.6875CHD	1.00	1.69	10.00
CENT-Probe Probe 2 3/4 Centralizer	3.45	2.75	20.00
RBT-RBTC3 (100919c)	8.92	0.00	
CENT-Probe Probe 2 3/4 Centralizer	3.45	2.75	20.00
GR-Probe275dig (120366) Probe Digital Gamma CCL	4.77	2.75	57.00
CNT-Probe_B (100526) Probe Digital CNL Tool	5.03	2.75	60.00

Dataset: llanostate4#1.db: field/well/run1/pass6
Total length: 26.62 ft
Total weight: 167.00 lb
O.D.: 2.75 in

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM

COMPENSATED NEUTRON
GAMMA-RAY
CCL LOG

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM
Country	U.S.A

Company LLANO DISPOSAL, LLC
Well STATE 4 #1
Field TATUM
County LEA
State NM Country U.S.A

Location: API # : 30-025-26370

Other Services: CIL/RCBL

SEC	TWP	RGE

Permanent Datum G.L. Elevation
Log Measured From K.B.
Drilling Measured From
Elevation: K.B. D.F. G.L.

Date	2-2-2018
Run Number	ONE
Depth Driller	13,476'
Depth Logger	3298
Bottom Logged Interval	3292
Top Log Interval	SURFACE
Open Hole Size	NA
Type Fluid	H2O
Density / Viscosity	NA
Max. Recorded Temp.	NA
Estimated Cement Top	SEE LOG
Time Well Ready	ROA
Time Logger on Bottom	9:00 AM
Equipment Number	71
Location	LEVELLAND TX
Recorded By	R.D. MOTHERAL
Witnessed By	MR. BURROWS

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String	8.625"	28#	SURFACE	
Production String				
Liner				

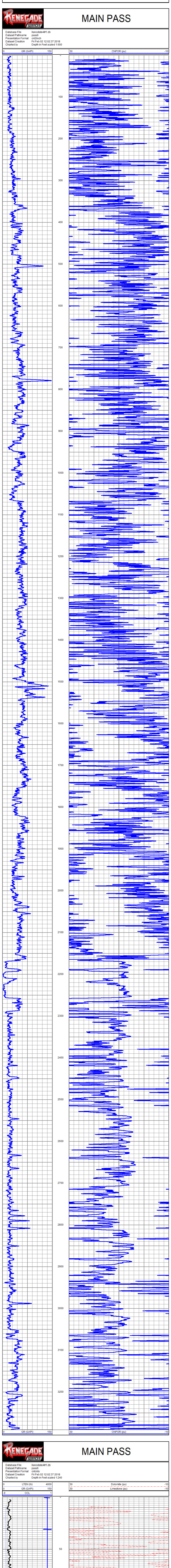
<<< Fold Here >>>

Comments

ALL DEPTHS ARE LOGGER DEPTHS
NO CORRELATION LOG AVAILABLE ON LOCATION
NO KB USED

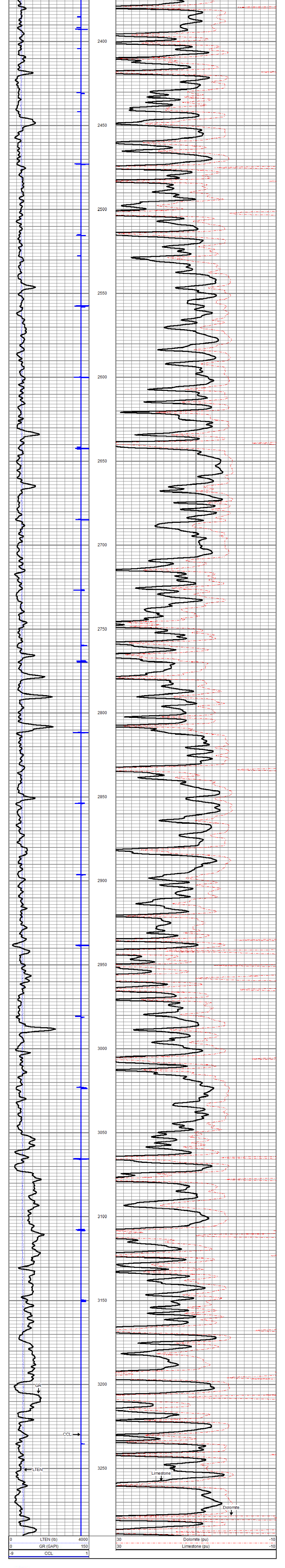
MAIN PASS

Database File	llanostate4#1.db
Dataset Pathname	pass6
Presentation Format	cnl2inch
Dataset Creation	Fri Feb 02 12:02:37 2018
Charted by	Depth in Feet scaled 1:600



MAIN PASS

Database File	llanostate4#1.db
Dataset Pathname	pass6
Presentation Format	cntcnts
Dataset Creation	Fri Feb 02 12:02:37 2018
Charted by	Depth in Feet scaled 1:240

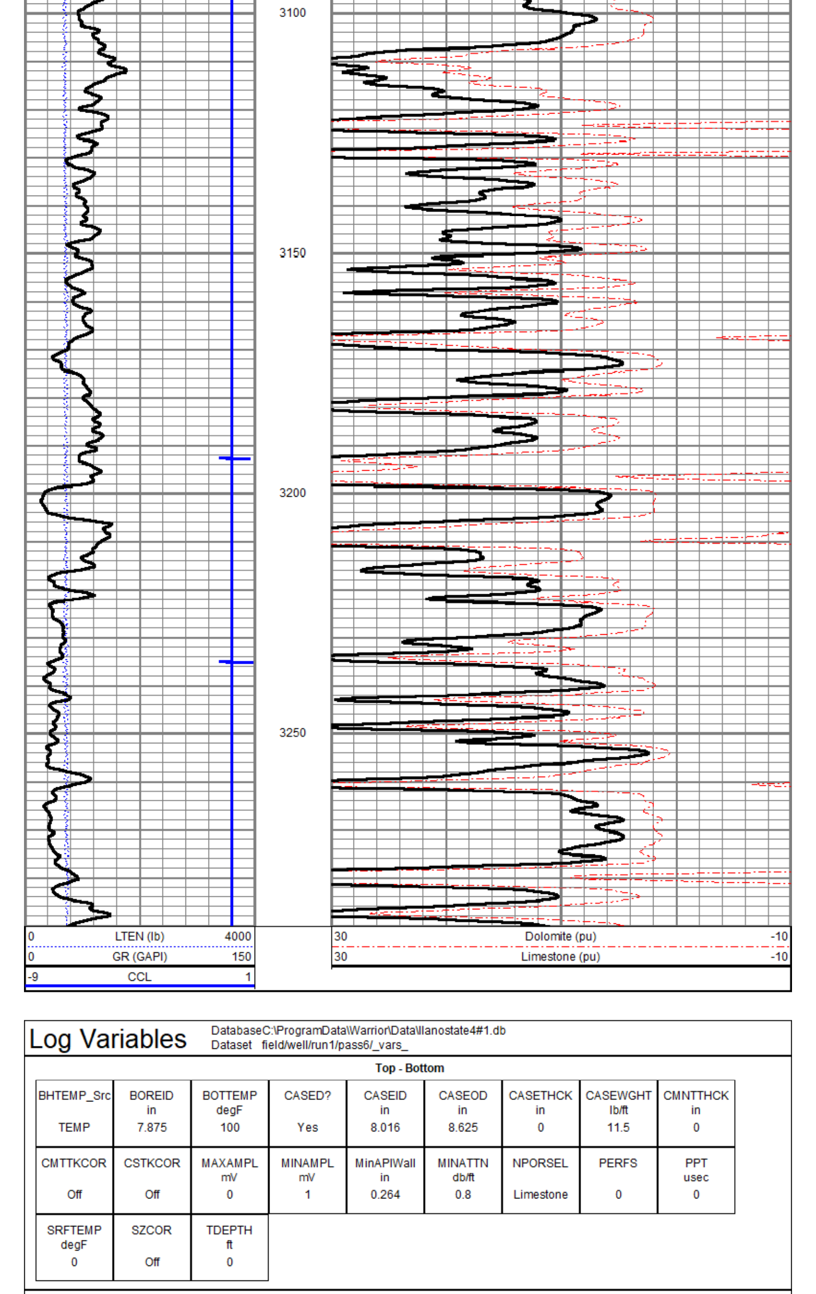


0	LTEN (lb)	4000		
0	GR (GAPI)	150		
-9	CCL	1		
30	Dolomite (pu)	-10		
30	Limestone (pu)	-10		

REPEAT SECTION

Database File llanostate4#1.db
Dataset Pathname pass5
Presentation Format cntcnts
Dataset Creation Fri Feb 02 11:48:55 2018
Charted by Depth in Feet scaled 1:240

0	LTEN (lb)	4000
0	GR (GAPI)	150
-9	CCL	1
30	Dolomite (pu)	-10
30	Limestone (pu)	-10



0	LTEN (lb)	4000
0	GR (GAPI)	150
-9	CCL	1
30	Dolomite (pu)	-10
30	Limestone (pu)	-10

Log Variables

DatabaseC:\ProgramData\Warrior\Data\llanostate4#1.db
Dataset field/well/run1/pass6/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASED?	CASEID in	CASEOD in	CASETHCK in	CASEWGHT lb/ft	CMNTTHCK in
TEMP	7.875	100	Yes	8.016	8.625	0	11.5	0

CMTTKCOR	CSTKCOR	MAXAMPL mV	MINAMPL mV	MinAPIWall in	MINATTN db/ft	NPORSEL	PERFS	PPT usec
Off	Off	0	1	0.264	0.8	Limestone	0	0

SRFTEMP degF	SZCOR	TDEPTH ft
0	Off	0

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASED? : Cased hole ?
CASEID : Casing I.D.
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
CMNTTHCK : Cement Thickness
CMTTKCOR : CN CemThk. Cor. ?
CSTKCOR : CN CasThk. Cor. ?
MAXAMPL : Maximum Amplitude
MINAMPL : Minimum Amplitude
MinAPIWall : Minimum API Wall Thickness
MINATTN : Minimum Attenuation
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

Calibration Report

Database File llanostate4#1.db
Dataset Pathname pass6
Dataset Creation Fri Feb 02 12:02:37 2018

Compensated Neutron Calibration Report

Model: CNT - Probe_B
Serial Number: 100526

SHOP CALIBRATION Tue Nov 07 11:32:58 2017

	Cal Tube	Units
Tank Ratio	11.6940	SS/LS
LS Detector	65.48	cps
SS Detector	766.91	cps
Tool Ratio	11.7125	SS/LS
Tool Gain	0.9984	----

PRE-SURVEY VERIFICATION

SS Detector	LS Detector	Measured (p.u.)	Target (p.u.)

POST-SURVEY VERIFICATION

SS Detector	LS Detector	Measured (p.u.)	Target (p.u.)

Gamma Ray Calibration Report

Serial Number: 120366
Tool Model: Probe275dig
Performed: Tue Nov 07 11:24:04 2017

Calibrator Value: 1092.0 GAPI

Background Reading: 43.6 cps
Calibrator Reading: 1820.3 cps

Sensitivity: 0.6146 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 100919c
Tool Model: RBTC3

Calibration Casing Diameter: 8.625 in
Calibration Depth: 199.817 ft

Master Calibration, performed Fri Feb 02 11:26:17 2018:

	Raw (v) Zero	Raw (v) Cal	Calibrated (mv) Zero	Calibrated (mv) Cal	Results Gain	Results Offset
3'	0.014	0.612	1.000	54.795	89.943	-0.232
CAL	0.006	1.007				
5'	0.012	0.605	1.000	54.795	90.692	-0.071
SUM						
S1	0.007	0.795	0.000	100.000	126.951	-0.902
S2	0.008	0.653	0.000	100.000	155.152	-1.309
S3	0.008	0.510	0.000	100.000	199.057	-1.611
S4	0.008	0.454	0.000	100.000	223.788	-1.705
S5	0.008	0.478	0.000	100.000	212.569	-1.658
S6	0.008	0.589	0.000	100.000	172.032	-1.384
S7	0.008	0.728	0.000	100.000	138.970	-1.157
S8	0.009	0.818	0.000	100.000	123.673	-1.126

Internal Reference Calibration, performed Fri Feb 02 11:18:49 2018:

	Raw (v) Zero	Raw (v) Cal	Calibrated (v) Zero	Calibrated (v) Cal	Results Gain	Results Offset
CAL	0.000	0.000	0.006	1.007	1.000	0.000

Air Zero Calibration, performed Fri Feb 02 11:17:56 2018:

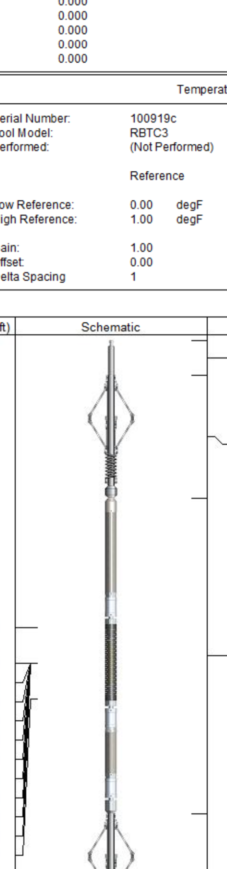
	Raw (v) Zero	Calibrated (v) Zero	Results Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Temperature Calibration Report

Serial Number: 100919c
Tool Model: RBTC3
Performed: (Not Performed)

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF

Gain: 1.00
Offset: 0.00
Delta Spacing 1

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-1.6875CHD	1.00	1.69	10.00
			CENT-Probe Probe 2 3/4 Centralizer	3.45	2.75	20.00
TEMP	18.50					
WVFS8	17.50		RBT-RBTC3 (100919c)	8.92	0.00	
WVFS7	17.50					
WVFS6	17.50					
WVFS5	17.50					
WVFS4	17.50					
WVFS3	17.50					
WVFS2	17.50					
WVFS1	17.50					
WVFCAL	17.50					
WVF3FT	17.50					
WVF5FT	16.50					
			CENT-Probe Probe 2 3/4 Centralizer	3.45	2.75	20.00
CCL	8.91					
GR	7.57		GR-Probe275dig (120366) Probe Digital Gamma CCL	4.77	2.75	57.00
			CNT-Probe_B (100526) Probe Digital CNL Tool	5.03	2.75	60.00
CNLSC	1.65					
CNSSC	1.24					

Dataset: llanostate4#1.db: field/well/run1/pass6
Total length: 26.62 ft
Total weight: 167.00 lb
O.D.: 2.75 in

RENEGADE SERVICES

Company	LLANO DISPOSAL, LLC
Well	STATE 4 #1
Field	TATUM
County	LEA
State	NM
Country	U.S.A

MAIN PASS