## **BW – 38**

### PERMIT **APPLICATIONS**, **RENEWALS**, & MODS (1 of 2)2018

### Chavez, Carl J, EMNRD

From:	danny@pwllc.net
Sent:	Wednesday, October 17, 2018 2:59 PM
То:	Chavez, Carl J, EMNRD
Cc:	Marvin Burrows
Subject:	[EXT] Applicant Proof of Notification - State 27 BSW #1 (BW-38)
Attachments:	State 27 BSW #1 (BW-38) Applicant Proof of Notice 101718.pdf

Carl,

Attached is Llano Disposal, LLC's proof of notice documentation for the State 27 BSW #1 (BW-38) discharge plan application. The attached file is 17.2 MB in size. It includes a cover letter, an index of exhibits and twelve exhibits (including photos).

Under separate cover, I will be mailing you the originals of the four signed affidavits (Exhibits A.1, B.1, C.1, D.1) via USPS tomorrow.

Thank you for allowing us to email this documentation. If you have any questions, please let me know. Thank you, Danny J. Holcomb Cell: 806-471-5628 Email: <u>danny@pwllc.net</u> Llano Disposal, LLC c/o Holcomb Consultants 6900 Spring Cherry Lane Amarillo, Texas 79124

October 17, 2018

New Mexico Oil Conservation Division Environmental Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505 Attn: Mr. Carl Chavez

Re: Discharge Plan Permit (BW-38) Llano Disposal, LLC UIC Class III Brine Well - State 27 BSW #1 (30-025-20592) <u>UL 'L', Sec 27, T16S, R33E, 1980 FSL x 660 FWL, Lea County, New Mexico</u>

Dear Mr. Chavez,

Pursuant to 20.6.2.3108.D NMAC, Llano Disposal, LLC is hereby providing proof of notice in compliance with Subsections B and C of 20.6.2.3108 NMAC for the above referenced discharge plan permit. Attached to this letter are the original affidavits of publication, mailings and postings. Copies of these affidavits were previously submitted in my email to you dated today.

If you have any questions concerning these notice documents, please let me know. Thank you in advance for your consideration of this permit application.

Sincerely,

olcomb

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

Attachments

### State '27' BSW #1 (BW-38) Public Notices

### Proof of Notice Exhibits

### **Onsite Public Notice Sign**

- Exhibit A.1 Affidavit of Onsite Public Notice Sign Installation
- Exhibit A.2 Photos of Onsite Public Notice Sign
- Exhibit A.3 Wording of Onsite Public Notice Sign (English)
- Exhibit A.4 Wording of Onsite Public Notice Sign (Spanish)

### Offsite Public Notice Posting

- Exhibit B.1 Affidavit of Offsite Public Notice Posting at Lea County Courthouse
- Exhibit B.2 Photos of Offsite Public Notice Posting at Lea County Courthouse
- Exhibit B.3 Wording of Offsite Public Notice Posting at Lea County Courthouse (English)
- Exhibit B.4 Wording of Offsite Public Notice Posting at Lea County Courthouse (Spanish)

### Notice Letters to Adjoining Property Owners, Mineral Owner and Mineral Lessee

- Exhibit C.1 Affidavit of Certified Mail Notices
- Exhibit C.2 List of Letter Noticees
- Exhibit C.3 Copies of Letters to Noticees with Certified Mail Receipts

### Public Notice in Local Newspaper Display Ad

Exhibit D.1 – Affidavit of Publication for Newspaper Display Ad in Lovington Leader (English/Spanish)

### State 27 BSW #1 (BW-38) EXHIBIT "A.1" – Affidavit of Onsite Public Notice Sign Installation

### Affidavit of Public Notice

State of New Mexico

County of Lea

I, Marvin Burrows, Agent for Llano Disposal, LLC, an applicant to the NMOCD for a UIC Class III brine well permit, solemnly swear that the required <u>public notice by signage</u> (2' x 3' minimum size) in a conspicuous place on or near the proposed discharge site was posted by me on  $\cancel{clzl}$ , 2018 on Hummingbird Road at the entrance to the proposed brine station in unit letter 'L', section 28, T16S, R33E, Lea County New Mexico. Additionally, I solemnly swear that the sign will remain posted and maintained legible for a minimum of 30 days.

in Burrow Marvin Burrows

Agent for Llano Disposal, LLC

Sworn and subscribed to before me this 2nd day of DCtober, 2018	Sworn	and subscribed	to before me thi	s 2nd day	of DCtober	, 2018
---	-------	----------------	------------------	-----------	------------	--------

Notary

My commission expires

(Seal)



### State 27 BSW #1 (BW-38) Public Notice EXHIBIT "A.2" – Photos of Onsite Public Notice Sign



### State 27 BSW #1 (BW-38) Public Notice EXHIBIT "A.2" – Photos of Onsite Public Notice Sign



EXHIBIT "A.3" – Wording of Onsite Public Notice Sign (English) State 27 BSW #1 (BW-38) Public Notice

## 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 1140 feet south of this sign. A detailed description and map of the proposed facilities are hereby attached below.

of 320,000 mg/l (primarily NaCl). Groundwater in this area is present at depths of approximately 140 - 190 feet. The concentration of total dissolved solids in this groundwater is generally about 400 mg/l. The permit requires that brine water will be produced at a rate of less than 1900 barrels per day with a total dissolved concentration water". This brine water is used in the oilfield primarily for drilling and completion operations. It is anticipated 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 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

EXHIBIT "A.3" – Wording of Onsite Public Notice Sign (English) State 27 BSW #1 (BW-38) Public Notice

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



.

El División de Conservación de Petroléo de Nuevo Méxicano se aceptan comentarios y declaraciones de interés respecto este signo. Una descripción detallada y un mapa de las instalaciones propuestas por para operaciones de perforación y terminación. Se prevé que se producirán salmuera agua a una velocidad de menos de Llano Disposal, LLC, 783 Highway 483, Lovington, NM 88260, Sr. Darr Angell ha presentado una solicitud con el División asociados las operaciones deben ser construidas y operadas en un asunto que no afectará negativamente la calidad de 1900 barriles por día con una concentración disuelta total de 320.000 mg/l (principalmente NaCI). Agua subterránea en agua salada llamado "agua de la salmuera". Esta agua de la salmuera se utiliza en el campo petrolífero principalmente La nueva estación de salmuera será situados aproximadamente 1140 pies sur de de Conservación de Petroléo de Nuevo Méxicano para instalar y operar así una salmuera de clase III y estación de la para crear agua de la salmuera. Agua dulce es bombeado en zonas profundas sal tal modo produciendo concentrado Pozos de salmuera son pozos completados en formaciones de sal con el propósito de la solución de minería de la sal disueltos en esta agua subterránea es generalmente cerca de 400 mg/l. El permiso requiere que la salmuera bien y Notificación legal de 2' X 3' (min) señalización por Reglamento de Comisión de Control de Calidad de Agua esta área está presente en aproximadamente 140 a 190 pies de profundidad. La concentración de sólidos totales EXHIBIT "A.4" – Wording of Onsite Public Notice Sign (Spanish) State 27 BSW #1 (BW-38) Public Notice este medio se unen por debajo. Notificación Aviso 20.6.2.3108.B.1 NMAC as aguas subterráneas. salmuera

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

EXHIBIT "A.4" – Wording of Onsite Public Notice Sign (Spanish) State 27 BSW #1 (BW-38) Public Notice

--. z .0 Mapa del área de revisión 106112 State '27' #1 and Hummingbird Brine Station State '27' #1 Brine Well . -÷ No T 16S, R33E Lea County, New Mexico T HANT IL Laminado los archivos adjuntos (8-1/2 "x 11") publicado a parte inferior de la señal -. -Página 2 de notificación detallada prótuncidad de aproximadamente 140–180 presideação de nivel del subio. Típica apura subferialmes en esta a fara terma terma concensaciando dino de subido delos presidencias de la concensaciamente do mujar Seguin a oficiona delingereteo de subido profundadar moda del super en la conce acta 222 piera denajo de mujer del subio. La interpreteo de subido profundadar moda del super en la conce acta 222 piera denajo de mujer del subio. La interpreteo de subido profundadar moda del super en la conce acta 2222 piera denajo de mujer del subio. La interpreteo de subido profundadar moda del super en la conce acta 222 piera denajo de mujer del subio. La interpreteo de subido profundadar moda del super en la conce acta 2023 piera del super de astimurar tendencia del subido de subido de caracido de tenza para subinariament. La attación de subirurar tendencia de deposito atta en rata culta culta pier vendido o deramene accidencia de aqua de de la farer. La solmune abidino muser de concentado curtara y lubos cadenas para protegor la a guardi de de la farer. La solmune abidino muser de concentado curtara y lubos cadenas para protegor la a guardi de de la farer. La solmune abidino muser de concentado curtara y lubos cadenas para protegor la superi de de la farer. La solmune abidino muser commentado a fundado en la curta de de la farer. La solmune abidino muser commentado a farerado en la curta de de la farer. La solmune abidino muser commentado curtara y lubos cadenas para protegor la cagua de de la farer. La solmune a biol muser commentado curtara y lubos cadenas para protegor la caguada de de la farer. La solmune abidina de acta de de curta de la declaraciones de interés respecto a esta aplicación y creará una lista de correo de instañaciones sesecticas paras paresionas eleveen receber hunaras notificaciones. Paue de contactar a las personas indresadas en obtener más información envíar comentarios o solucitar estar en una lista de correo de risca acordes especificas para fiduros avidos comentarios o solucitar estar en una lista de correo de Comeritanos y consultas sobre la aplicación pueden ser dingúais a Llano Dispotal LLC do Sr. Danny Hericomis en electar 1963a por conce extendinos <u>Stantosofordas da LE</u> ES: Hiorone es consultar para proposociona instituica de Llano Disposal. LLC oténerios formassa legamentantes para este provedur La División de Conservación de Petroléo de Nuevo Méxicano (NMOCD) se aceptan comentarios y ligua subterránea posibilemente afectado por un derramo accidental o escape se encuentra a una protructidad de aproximadamente 140–190 pies dabajo de nivel del suelo. Típico agua subterráne División de Constructón de Patroleó de Nuevo Méxicano 1220 Suht's Saint Fancia Dine Sanda Fe, ven Mexico 51905 Telidiono: 505-476: 3440 Llano Disposal, LLC 783 Highway 483 Lovington, NM 88260 statación propuesta será. El propietario y operador de la ins subterraneas. Página 1 de notificación detallada La aplicación propere producir agua fresca de una fuerte de agua propuesta para taladarse en unidad Centra L dels ascendars, municado de 154 vr. gana 358 aste (uni 2, 3380755°, 104 56 3770°). Centra L dels ascendars, municado de 154 vr. gana assa sa sua cula sagna culora transportarse a tuevis de uni une inde políticacio Devocare o unindos es rescatas asimileras, el ajua culora transportarse a El suava es benenia de políticacio as entra profuncidad para cuna da sa 2300 forsi de 104 contra abara El suava es benenia de políticar per provandamente de 2, 200 GPN, una presión normal de 200 a 250 psi u de noviel de suala una tassa de provonandamente de 2, 200 GPN, una presión normal de 200 a 250 psi u a presión de reposión superficial permidide máxima será 356 psi. Ajua de disclución salmuem (httd) subortes se procedirá per el ben de la la supería. Ellen la salmuena se cilochará para producit aproximadamente 13 millornes de barrites de salmuera duranteuro preciódos de vicida dos 20 milos. El rasjono evera a minopada no exceedada de 150 pros. El pado s 14 ha si lauga de na terrenso privados 20 vim miniman de separación de 21 80 pies de cualquier características. Importantes, islaes comocatas suministros de agua, ediricos, escuelas, empresa, ele. y operación de una clase III del 18 salimenta bien que se encuentar en la humala trada Gela sesción 127, una unacipio de 18 sur, gama 38 seta (a.H. 32.800645°, Long.-103.657157°), Condado Lea Muero México, L.H.ryección de salimena propueda está bien sluada a provinadamiente 17, jamilisa a loste de L'ano Dispos ai, L. L. C. (Sr. Darr Angell), 783 Highway 483, Lovingion, NM 82260 ha presentado una solictud para La División de Corservación de Petroléo de Nuevo Méxicano (NMCOD) para la Instalación segurard a aproximationnet B202 prior al octate tes totobarist intergres of animatrominente of text a d segurard a proximationnet b202 prior al octate tes totobarist intergres of animatrominente of text a d unitorie en text productie attached a samuer Collection control and a large Coll a sector 23. Text estato prior de samuer Collection control and a large Coll a sector 23. Exercise text production attached as approximationnet en la control and a large Coll Merco Merco o CO millas a sur de an intresection de Highway 52, poundy Read - 122 (Humininghard Russ). El agua de la salmuera seria transferido/vendizo en eritopa ne ramioneza de agua sobre una amonhada confretar de confereidon e estapa de hormigány un coledor de aceite para evitar derames hakute un trons oridecoy confereións econdaña debido de los tanopas de amiaceramiento de la covington. Nuevo Méculos en Mighrey S2, entitorosa del sur O (22 millas en Roomey Road, entitorose este o 0,3 millas en carrefera arrendamiento de ubicación bien. igua de la salimuera se utiliza en el acette y la industina del gas para suministrar concentrado sal agua es decir, salimuera) con una consentración dísueta total de aproximadamente 320.000 mg/f y una errio de peso debido a NaCi disueito. Agua de salmuera pesada es esencial en la prevención de las de gobe en pocos de gas de alta presión y previene la pérdida de circulación durante la El agua de la salmuera producida se mide entonces transportado por una tubería de polietileno enter salmuera. Toda esta infraestructura se encuentra en terrenos privados propiedad de la demandante. mayor de agua duice. Salmuera típica está 10 libras por galón (ppg) con el salidas de goipe en pozos de gas de alta presión y previene la pérdida de circulación dura perforación a través de zonas de sal suelen encontradas en el sureste de Nuevo México. lensidad que es 20%

### State 27 BSW #1 (BW-38) EXHIBIT "B.1" – Affidavit of Offsite Public Notice Posting at Lea County Courthouse

### Affidavit of Public Notice

State of New Mexico

County of Lea

I, Marvin Burrows, Agent for Llano Disposal, LLC, an applicant to the NMOCD for a UIC Class III brine well permit, solemnly swear that the required public notice by posting in a conspicuous place off the proposed discharge site was posted on a public bulletin board at the Lea County Courthouse by County Manager staff on  $10/2/18^{\circ}$ , 2018. The posting is scheduled to be posted for a minimum of 30 days.

al MI Burrow

Marvin Burrows Agent for Llano Disposal, LLC

Sworn and subscribed to before me this and day of DCtober, 2018.

Notary

My commission expires

(Seal)



EXHIBIT "B.2" – Photos of Offsite Public Posting (Lea County Courthouse) State 27 BSW #1 (BW-38) Public Notice



### State 27 BSW #1 (BW-38) Public Notice EXHIBIT "B.3" – Wording of Offsite Public Notice Posting at Lea County Courthouse (English)

### 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 L of Section 27, Township 16 South, Range 33 East (Lat. 32.8909645°, Long. -103.6576157°), Lea County, New Mexico. The proposed brine injection well is located approximately 17.8 miles west of Lovington, New Mexico on US Highway 82, then south 0.62 miles on Rooney Rd, then east 0.3 miles on lease road to well location.

The application proposes to produce fresh water from a proposed water source well to be drilled in Unit Letter L of Section 27, Township 16 South, Range 33 East (Lat. 32.890782°, Long. -103.657470°), Lea County, New Mexico. From time to time when brine is needed, the fresh water would be transported via a buried polyethylene pipeline approximately 75 feet northwest to the brine well. The fresh water would be pumped down the well's casing to an approximate depth of 1780 feet to 2300 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 356 psig. Dissolution brine water (NaCI) 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 5928 feet west to three 1000 barrel fiberglass storage tanks at the proposed Hummingbird Brine Station located in Unit Letter L of Section 28, Township 16 South, Range 33 East (Lat. 32.890740°, Long. -103.676520°), Lea County, New Mexico. This brine station is located approximately 18.7 miles west of Lovington, New Mexico or 0.2 miles south of the intersection of US Hwy 82 and County Road L-122 (Hummingbird 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 this 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 2150 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 140 – 190 feet below ground level. Typical groundwater in this area has a total dissolved solids concentration

### State 27 BSW #1 (BW-38) Public Notice EXHIBIT "B.3" – Wording of Offsite Public Notice Posting at Lea County Courthouse (English)

of approximately 400 mg/l. According to the Office of the State Engineer, average water well depth in the area is 223 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 <u>danny@pwllc.net</u>. 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

### State 27 BSW #1 (BW-38) Public Notice EXHIBIT "B.4" – Wording of Offsite Public Notice Posting at Lea County Courthouse (Spanish)

### 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 27, municipio de 16 sur, gama 33 este (Lat. 32.8909645°, Long. -103.6576157°), Condado Lea, Nuevo México. La inyección de salmuera propuesto está bien situada aproximadamente 17,8 millas al oeste de Lovington, Nuevo México en Highway 82, entonces del sur 0,62 millas en Rooney Road, entonces este 0,3 millas en carretera arrendamiento de ubicación bien.

La aplicación propone producir agua fresca de una fuente de agua propuesta para taladrarse en unidad letra L de la sección 27, municipio de 16 sur, gama 33 este (Lat. 32,890782°, Long. -103.657470°), Condado Lea, Nuevo México. De vez en cuando se necesita salmuera, el agua dulce transportarse a través de una tubería de polietileno enterrada aproximadamente 75 pies del noroeste a la salmuera bien. El agua se bombea al pozo de cubierta a una profundidad aproximada de 1780 pies a 2300 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 356 psi. Agua de disolución salmuera (NaCI) entonces se produciría por el bien de la tubería a la superficie.

El agua de la salmuera producid 5928 pies al oeste a tres 1000barril tanques de almacenamiento de fibra de vidrio en la propuesta estación de salmuera Colibrí ubicado en la unidad letra L de la sección 28, municipio de 16 sur, gama 33 este (Lat. 32,890740°, Long. -103.676520°), Condado Lea, Nuevo México. Esta estación de salmuera está situados a aproximadamente 18,7 millas al oeste de Lovington, Nuevo México o 0,2 millas al sur de la intersección de Highway 82 y County Road L-122 (Hummingbird Road). El agua de la salmuera sería transferido/vendido por entrega en camiones de agua sobre una almohadilla con frenar de contención de carga de hormigón 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 esta infraestructura 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 (ppg) 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 separación de 2150 pies de cualquier características importantes, tales como casas, suministros de agua, edificios, escuelas, empresas, etc.

### State 27 BSW #1 (BW-38) Public Notice EXHIBIT "B.4" – Wording of Offsite Public Notice Posting at Lea County Courthouse (Spanish)

Agua subterránea posiblemente afectado por un derrame accidental o escape se encuentra a una profundidad de aproximadamente 140 – 190 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, profundidad media del agua en la zona es 223 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 Llano Disposal, LLC c/o Sr. Danny Holcomb en 806-471-5628 o por correo electrónico <u>danny@pwllc.net</u>. 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 (NMOCD) 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

### State 27 BSW #1 (BW-38) EXHIBIT "C.1" – Affidavit of Certified Mail Public Notices

### Affidavit of Public Notice

State of Texas

County of Potter

I, Danny J. Holcomb, Agent for Llano Disposal, LLC, an applicant to the NMOCD for a UIC Class III brine well permit, solemnly swear that required public notices to the adjoining property/mineral owner and mineral lessee were certified mailed to recipients by me on September 26, 2018.

Danny J. Holcomb Agent for Llano Disposal, LLC

Sworn and subscribed to before me this \_\_\_\_\_ day of October, 2018.

Notary

My commission expires

(Seal)

MADELYNN D. VANDAGRIFF Notary Public, State of Texas Notary ID #1316375-4 Commission Expires 11-28-202

State 27 BSW #1 (BW-38) Exhibit "C.2" - List of Letter Noticees

# NOTIFICATION LIST - SITE PROPERTY OWNER AND ADJOINING PROPERTY OWNER

P. O. Box 190 ADDRESS CITY STATE ZIP CITY STATE ZIP Santa Fa NM 87504	P. O. Box 190     Lovington, NM 88260       ME     ADDRESS     CITY STATE ZIP       X0     Ublic Land     P. O. Box 1148       Volic Land     P. O. Box 1148       NOTIFICATION LIST - MINERAL OWNER AND LESSEE	NAME	ADDRESS	CITY STATE ZIP	TYPE
ADDRESS CITY STATE ZIP	ADDRESS CITY STATE ZIP P. O. Box 1148 Santa Fe, NM 87504 NOTIFICATION LIST - MINERAL OWNER AND LESSEE	Angell #2 Family LP c/o Mr. Darr Angell	P. O. Box 190	Lovington, NM 88260	Surface Owner/Applicant
P O Box 1148 Santa Fa NM 87504	P. O. Box 1148 Santa Fe, NM 87504 NOTIFICATION LIST - MINERAL OWNER AND LESSEE	NAME	ADDRESS	CITY STATE ZIP	ТҮРЕ
		State of New Mexico Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Adjoining Property Owner

	NAME	ADDRESS	CITY STATE ZIP	TYPE
H H	State of New Mexico Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
3	Cimarex Energy Company	600 N. Marienfeld St, Suite 600	Midland, TX 79701	Mineral Lessee (VC-0071-0000)

DINITED STATES

September 28, 2018

Dear Danny Holcomb:

The following is in response to your request for proof of delivery on your item with the tracking number: 7017 2680 0000 8751 1980.

Status:	Delivered, Individual Picked Up at Postal Facility
Status Date / Time:	September 28, 2018, 6:56 am
Location:	SANTA FE, NM 87501
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail
	Return Receipt Electronic
Shipment Details	
Weight:	1.0oz
Recipient Signature	
Signature of Recipient:	Atto
Address of Recipient:	1/148

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service<sup>®</sup> for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely, United States Postal Service<sup>®</sup> 475 L'Enfant Plaza SW Washington, D.C. 20260-0004

no	CERTIFIED MAIL <sup>®</sup> RECEIPT Domestic Mail Only
F4 4278 0000 0835 7107	For delivery information, visit our website at www.usps.com.         SARV4       Far H1         Sartified Mail Far H1       8/504         Cartified Mail Far H1       8/504         Cartified Mail Far Sortions       50.000         Batur Readet functions       \$0.000         Batur Readet functions       \$0

### Public Notice Letter

Certified Mail

September 26, 2018

Property Owner of Record New Mexico State Land Office P. O. Box 1148 Santa Fe, New Mexico 87504

### 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 L of Section 27, Township 16 South, Range 33 East (Lat. 32.8909645°, Long. -103.6576157°), Lea County, New Mexico. The proposed brine injection well is located approximately 17.8 miles west of Lovington, New Mexico on US Highway 82, then south 0.62 miles on Rooney Rd, then east 0.3 miles on lease road to well location.

The application proposes to produce fresh water from a proposed water source well to be drilled in Unit Letter L of Section 27, Township 16 South, Range 33 East (Lat. 32.890782°, Long. -103.657470°), Lea County, New Mexico. From time to time when brine is needed, the fresh water would be transported via a buried polyethylene pipeline approximately 75 feet northwest to the brine well. The fresh water would be pumped down the well's casing to an approximate depth of 1780 feet to 2300 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 356 psig. Dissolution brine water (NaCI) 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 5928 feet west to three 1000 barrel fiberglass storage tanks at the proposed Hummingbird Brine Station located in Unit Letter L of Section 28, Township 16 South, Range 33 East (Lat. 32.890740°, Long. -103.676520°), Lea County, New Mexico. This brine station is located approximately 18.7 miles west of Lovington, New Mexico or 0.2 miles south of the intersection of US Hwy 82 and County Road L-122 (Hummingbird 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 spitls. There would be a synthetic liner and secondary containment underneath the brine storage tanks. All of the 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 NaCI. 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 2150 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 140 – 190 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 depth in the area is 223 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 <u>danny@pwllc.net</u>. 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,

fromly

Danny J. Holcomb Agent for Llano Disposal, LLC

Attachment (map of area)

.



Angell #2 Family LP, P. O. Box 190, Lovington, NM 88260 State of New Mexico, P. O. Box 1148, Santa Fe, NM 87504

Lea County, New Mexico

DINITED STATES

September 28, 2018

Dear Danny Holcomb:

The following is in response to your request for proof of delivery on your item with the tracking number: 7017 2680 0000 8751 1973.

Status:	Delivered, Left with Individual
Status Date / Time:	September 28, 2018, 11:09 am
Location:	MIDLAND, TX 79701
Postal Product:	First-Class Mail <sup>®</sup>
Extra Services:	Certified Mail™
	Return Receipt Electronic
Shipment Details	
Weight:	1.0oz
Recipient Signature	
Signature of Recipient:	SPecz
Address of Recipient:	600-600

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service<sup>®</sup> for your mailing needs. If you require additional assistance, please contact your local Post Office<sup>™</sup> or a Postal representative at 1-800-222-1811.

Sincerely, United States Postal Service® 475 L'Enfant Plaza SW Washington, D.C. 20260-0004

Domestic	FIED MAIL <sup>®</sup> REC	
HIDLAND Certified Mail Fee \$ Extra Services 8 Return Receipt Certified Mail R Adult Stgratury	s3.+3 For (rhack box, and for \$100,000 hardcopy) stricted Dalway \$ \$0,000 Regered \$ \$0,000 Regered \$ \$0,000 \$0,50 *\$5.45 Cimarex Energy \$ 600 N. Marienfe Midland, TX 79	A 0203 10 USPS JORDAN STATION Here AMARILLO, TX 79124 09/26/2018 Company 914 Company 914 Company 914 Company 914

### Public Notice Letter

Certified Mail

September 26, 2018

Mineral Lessee of Record (VC-0071-0000) Cimarex Energy Company 600 N. Marienfeld Street, Suite 600 Midland, TX 79701

### Public Notice

Legal notification per Water Quality Control Commission Regulations 20.6.2.3108.B.2 <u>NMAC to State of New Mexico mineral lessee(s) of record at the proposed discharge</u> <u>site.</u>

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 L of Section 27, Township 16 South, Range 33 East (Lat. 32.8909645°, Long. -103.6576157°), Lea County, New Mexico. The proposed brine injection well is located approximately 17.8 miles west of Lovington, New Mexico on US Highway 82, then south 0.62 miles on Rooney Rd, then east 0.3 miles on lease road to well location.

The application proposes to produce fresh water from a proposed water source well to be drilled in Unit Letter L of Section 27, Township 16 South, Range 33 East (Lat. 32.890782°, Long. -103.657470°), Lea County, New Mexico. From time to time when brine is needed, the fresh water would be transported via a buried polyethylene pipeline approximately 75 feet northwest to the brine well. The fresh water would be pumped down the well's casing to an approximate depth of 1780 feet to 2300 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 356 psig. Dissolution brine water (NaCI) 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 5928 feet west to three 1000 barrel fiberglass storage tanks at the proposed Hummingbird Brine Station located in Unit Letter L of Section 28, Township 16 South, Range 33 East (Lat. 32.890740°, Long. -103.676520°), Lea County, New Mexico. This brine station is located approximately 18.7 miles west of Lovington, New Mexico or 0.2 miles south of the intersection of US Hwy 82 and County Road L-122 (Hummingbird 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 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

### State 27 BSW #1 (BW-38)

### EXHIBIT "C.3" – Letters to Noticees and Certified Mail Receipts

water. Typical brine water is 10 pounds per gallon (ppg) with the increased weight due to dissolved NaCI. 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 2150 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 140 – 190 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 depth in the area is 223 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 <u>danny@pwllc.net</u>. 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,

Oftoleonly

Danny J. Holcomb Agent for Llano Disposal, LLC

Attachment (map of area)



Angell #2 Family LP, P. O. Box 190, Lovington, NM 88260 State of New Mexico, P. O. Box 1148, Santa Fe, NM 87504

Lea County, New Mexico

EXHIBIT "D.1" – Affidavit of Publication for Newspaper Display Ad (English/Spanish) State 27 BSW #1 (BW-38) Public Notice

La aplicación proporte producir agual resoa de una tuente de agua propreeda para talacturare en unidad erea L de la sección 27, municipio de 16 sur, gama 33 este (Lat. 52,890782°, Long., 105,657470°), condado Lan. Nevo Mérico. De la cura tuenta aproximadamente 35, ples dei nonsesta a la samurare a travée de una tuberta de prosidence enternata aproximadamente 35, ples dei nonsesta a la samurare a travée de una tuberta de prosidence enternata aproximadamente 35, ples dei nonsesta a la samurare a den El agua se bombera al pozo de culterta a un provindadamente 35, ples dei nonsesta a la samurare a debin dei senta una tagade aproximadamente 40-150 GPM y una presidin norma de 200 ta 250 psi. La presión de insección supericida permisible maxima santa 366 psi. Agua de desoución samurera (NaCr) entores se producida por el bien de la tuberta a la supericida. Liano Dispotati, L.L.C. (Sr. Darr Argali), 733 Highway 463, Lovington, NM 68260 ha presentatio unal solicitod parte La Disilion de Conservación de presione de Nuevo Máxicano (NMOCD) para la instalación y operación da var clasa III de la samuera bien que se encuentra en la antida fasta E de la sección 27. municipo de 18 sur garra 33 este (Lati 32.680645°, Lorig.-100.685/6157°), Conduct. La Nuevo Máxico. La inyección de salmera propuesto está ben sfueda aproximadamente 17.8 millas al oesta de Lovington. Nuevo México. en Highway 82, entinences del sur 0.82 millas en Rooney Road, entinences este 0.3 millas en carredamiento de ubicación bien. La División de Conservación de Petreleci de Nuevo Méxicano (NMOCD) se aceptan comentantos y de-ciaraciones da interés respecto a está aplicación y creará una tista da correo de instalaciones espoci-ficos para las personas que desem fin cholar induzas notificaciones. Puede contactar a las personas instalaciones apportos en obtinente más de montes ana defensivo, enviar comentanicos o solicitar estar entura las personas instalaciones para futures quices contector a transitiva de correo de instalaciones apporti-sinas para este personas que desem la contra comentanico o solicitar estar en una lista de correo de instalaciones apporticans para futures quisco de instalaciones apporticans para futures quisco de Agua de la satimuera se utiliza en el aceire y la industria del gas para suministrar concentrado sal agua (es decir satimuera) con una concentración disuelta total de aproximadamente 320.000 mg/l y una den-sidad que es 20% insyor de agua du/e. Satimuera tipeca esta 10 librais por agúar (pgp) con el aumento de peso debicio a MGC disuelta Agua da satimura a pesada es sencial en la prevención de salidas da golipe en pozos de gas de alta pesón y prevene la portida de obruación durante la performación a través de zonas de sati abaséan y prevenen la portida de obruación durante la performación a través de zonas de sati suelen encontracias en el sureste de Nuevo Mexico. Aguis subterrânea posiblemente alectado por un demante accidental o escape se encuentra a una pro-hundude aproximadamente 140 - 150 pes dehajo de nivel del sujero. Tipico aguia aubiterrânea en esta leva tera tene una concentrate 140 - 150 pes dehajo de nivel del sujero. Tipico aguia aubiterrânea en esta leva tera tene una concentrate sudo media del agua en la zona es 223 pes debajo de nivel del suito. La instalación de la salmete sud anedia del agua en la zona es 223 pes debajo de nivel del suito. La instalación de la salmete sud supelar del agua en la zona es zos apes internativals. La guida desargadas a la superiorido de sustendar y puede no sterer contaminentes internativals. La estactór de salmuera tendrá una plandoma de auga de comoto para asimones y tendrá una para do finegora al a superiorido de laves de ceptistos para evitar cualquier vertido o denama accidente do profeger las aguitas udelas uterá las simuera bent habremos cementado carcasa y tubos caderes para profeger las agueridos de laves de ceptistos para evitar cualquier vertido o denama accidente do Comentarios y consultas sobre la aplicación pueden ser dirigidas a Llano Disposal. LLC clo Sr. Darriny Holcomb en 806-471-5628 o por correo electrónico danny @prelic.net. El Sr. Holcomb es consultor para proporcionar asistencia de Llano Disposal. LLC obtener los permisos reglamentarios para este proyecto. Bien la saimuera se diseñará para producir aptroximadamente 13 miliones de barnies da saimuera du-runte un periodo de vida de Sa eños. Erado os antima anticipadar no excedera de 150 paíss. El poros se in a situado en trensos phrádedy um minimo de soparación de 2150 paíss de cuarqueir características importantes, tales como casas, sumisismos de agua, exitíncios, escuelas, empresas, eác. Anuncios de Pantaila de Aviso Público Por Replamento de Comisión de Control de Cañdad de Agua 20.6.2.3106.8.4 NMAC Unisión de Coria Oficina Ambiental División de Corrección de Patroleo da Nuevo Méxicano 2010: Sant Francis Dive Santa Fe, New Mexico 37505 Telefono: 505-476-3440 Liano Disposal, LLC 783 Highway 483 Lovington, NM 88250 El propietario y operador de la instalación propuesta será: The application proposes to produce fresh water from a proposed water source well to be drilled in Unit Letter L of Section 27. Township 16 South, Range 33 East (Lat. 22.890782°, Long. 103 657470°), Lea County, New Maxko, From thine to theme sine home is needed, the tresh water would be transproted via a burried polyeithylena pipeline approximately 75 feet northwest optime of 1780 et to 330 to 120 GM and a normal operating pressure of 200 to 250 paig. The maximum allowable surface injection pre-sure would be 355 paig. Dissolution brine water (NaC) would then be produced up the weitub-sure would be as 55 paig. Dissolution brine water (NaC) would then be produced up the weitub-sure would be as 55 paig. The maximum allowable surface injection pre-sure would be as 55 paig. Dissolution brine water (NaC) would then be produced up the weitub-Lano Disposal, L.L.C. (Mr. Darr Angelly, 783 Highway 483, Lovington, NM 88260 has submitted an application to the New Mexico Oli Conservation Division (NMOCD) for installation and oper adrin of a Class III brine well to be located in Unit Letter L of Section 27, Township 16 South Pange 33 East (Lat. 22, 890945\*, Long. -103, 6575157\*), Lea Courty, New Mexico. The pro-posed brine injection well is located approximately 17,8 miles west of Lovington, New Mexico on US Highway 82, then south 0.62 miles on Rooney Rd, then east 0.3 miles on lease road to well location. The produced brine water would be metered then transported via a second burled polyethylene ppeline approximately 5928 feet west to three 1000 barrel (berglass storage tanks at the pro-posed Humminghird Brine Station located in Unit Letter L of Section 281, fourwhip 15 South Flange 33 East (Latt 2020) 2010, 1031, 2010, 1030, 2010, 20 Brine water is used in the oil and gas industry to supply concentrated saft water (i.e. brine water with a total dissolved concentration of approximately \$20% higher than freek water. Typicial brine water is 10 pounds per gallon (pop) with the increased weight due to dissolved NaCl. Heavy brine water is essential in proventing blow-outs in high pressure gas wells and prevents loss of circulation when drilling through saft zones typically found in southastern types. The brine well will be designed to produce approximately 13 million barrels of brine water over a 20 year life period. The amblested cavern radius will not acceded 150 fetr. The well has been located on privite land and provides a minimum of 2150 fear separation from any significant features, such as houses, water supplies, buildings, schools, businesses, etc. Groundwater possibly affected by an uninertional spill or leak is located at a depth of approximately 140 – 140 feet below ground level. It typesd groundwater in this area has a claid discolved softs concentration of approximately 400 mg/. According to the Offee of the State Ergineer average water well depth in the area is 223 feet below ground level. If the brine facility will be designed and perturbed to have no interfortion water missis characterized to the State Ergineer average water well depth in the area is 223 feet below ground level. The brine facility will be designed and perturbed to have no interfortion water contrained and scharged to the surface to subsurface for the potection of groundwater. The brine state on will have a concrete loading path of the reacting the ground surface. The brine state on will have a concrete loading path of the reacting the ground surface. Comments and inquiries about the application may be directed to Llano Disposal, LLC c/o Mr. Dariny Holdomb at 806-471-5628 or email dariny@pwllc.net. Mr. Holdomb 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 in-terest regarding this application and will create at addity-specific mating list to preserve who wish to reserve Muure notices. Persons interested in obtaining further information, submitting com-ments or requesting to be on a facility-specific mating list for future notices may contact. Per Water Quality Control Commission Regulations 20.6.2.3108 B.4 NMAC Environmental Bureau Chief ex Mexico Oli Conservation Division razo Souto Sant Francis Drive Santa Fe, New Mexico 87565 Telephone: 505-476-3440 Llano Disposal, LLC 783 Highway 483 Lovington, NM 88260 The owner and operator of the proposed facility will be: New owned by the applicant. And that the cost of publishing said notice is the sum of \$ 506.76 which sum has been entitled Public Notice was published in a regular and entire issue of THE beginning with the issue of October 4, 2018 general paid circulation published in the English language at Lovington, Lea County, in any supplement thereof, for one (1) day(s), and ending with the issue of October 4, Advertising Manager of THE LOVINGTON New Mexico; that said newspaper has been That the notice which is hereto attached, Joyce Clemens, Advertising Manager Subscribed and sworn to before me this 8th Joyce Clemens being first duly sworn on LEADER, a once a week newspaper of Twenty-six (26) consecutive weeks next hereto attached as hereinafter shown; and qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session deposes and says that she is so published in such county continuously and uninterruptedly for a period in excess of prior to the first publication of the notice is in all things duly Notary Public, Lea County, New Mexico My Commission Expires June 30, 2022 LOVINGTON LEADER and not Affidavit of Publication SS. Laws of the State of New Mexico. Sthes Weight (22. STATE OF NEW MEXICO that said newspaper day of October , 2018. (Paid) as Court Costs Uma tert COUNTY OF LEA DUNC Gina Fort oath 2018.

### Chavez, Carl J, EMNRD

From:	Chavez, Carl J, EMNRD
Sent:	Tuesday, October 16, 2018 11:48 AM
То:	Darr Angell
Cc:	'danny@pwllc.net'; 'Marvin'; Estes, Bob, DCA
Subject:	FW: bw 38
Attachments:	108843.pdf

Mr. Angell:

Please find attached and below a paragraph from the attached letter that appears to require follow-up by Llano Disposal.

Please contact Mr. Bob Estes if you have questions.

Thank you.

### \*\*\*\*\*

The application states that the surface estate is privately owned. Although a cultural resources survey is not required for permits on private land, HPD recommends that a qualified archaeologist update to current standards the previously recorded archaeological sites, and to ensure that they not inadvertently damaged by construction of the pipeline. A list of archaeological consultants can be obtained from our website at www.nmhistoricpreservation.org.

Mr. Carl J. Chavez, CHMM (#13099) New Mexico Oil Conservation Division Energy Minerals and Natural Resources Department 1220 South St Francis Drive Santa Fe, New Mexico 87505 Ph. (505) 476-3490 E-mail: CarlJ.Chavez@state.nm.us "Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD and see "Publications")

-----Original Message-----From: Estes, Bob, DCA Sent: Tuesday, October 16, 2018 11:28 AM To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> Subject: FW: bw 38

Mornin' Carl,

Here's the letter for BW 38.

Have a great day.

Bob

-----Original Message-----From: HPDXerox@state.nm.us [mailto:HPDXerox@state.nm.us] Sent: Tuesday, October 16, 2018 10:33 AM To: Estes, Bob, DCA Subject: bw 38

Please open the attached document. It was scanned and sent to you using a Xerox Multifunction Device.

Attachment File Type: pdf, Multi-Page

Multifunction Device Location: machine location not set Device Name: HPD Xerox WorkCentre 5945

For more information on Xerox products and solutions, please visit http://www.xerox.com



### STATE OF NEW MEXICO DEPARTMENT OF CULTURAL AFFAIRS HISTORIC PRESERVATION DIVISION

Susana Martinez Governor BATAAN MEMORIAL BUILDING 407 GALISTEO STREET, SUITE 236 SANTA FE, NEW MEXICO 87501 PHONE (505) 827-6320 FAX (505) 827-6338

October 16, 2018

Carl Chavez Environmental Engineer Oil Conservation Bureau-Environmental Bureau Mining and Minerals Division 1220 South St. Francis Drive Santa Fe, NM 87505

Re: Discharge permit (BW-038) Llano Disposal "State 27", Well No. 1. (HPD Log:108843)

Dear Mr. Chavez:

This letter is in response to the above referenced discharge permit application received at the Historic Preservation Division (HPD) on April 2, 2018. According to the application, the proposed project is within Township 16 South, Range 33 East, Sections 26 and 28. State Land Office records show that the site is on split estate with State Trust mineral estates.

I reviewed our records to determine if cemeteries, burial grounds or cultural resources listed on the State Register of Cultural Properties or the National Register of Historic Places exist within or near the permit area. Our records show that there are no cultural resources listed on the National Register or State Register within or near the proposed permit area and no known cemeteries or burial grounds.

Although there are no cultural resources listed on the State or National Register, our records show that the area has not been surveyed for cultural resources and there is no information about previously recorded archaeological sites near the project area of potential effect. Recent aerial photography shows that the well location and brine station have been subjected to ground disturbance.

The application states that the surface estate is privately owned. Although a cultural resources survey is not required for permits on private land, HPD recommends that a qualified archaeologist conduct a survey of the area where the new well will be drilled and the corridor where flow lines will be installed to ensure ensure that cultural resources are not inadvertently damaged by construction. A list of qualified archaeological consultants can be obtained from our website at www.nmhistoricpreservation.org.

Please do not hesitate to contact me if you have any questions regarding these comments. I can be reached by telephone at (505) 827-4225 or by email at <u>bob.estes@state.nm.us</u>.

Sincerely,

Bob Ceta

Bob Estes Ph.D. HPD Staff Archaeologist

### LEGAL NOTICE SEPTEMBER 30, 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-38) 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 '27' Brine Supply Well No. 1" (API# 30-025-20592), located 1,980 FSL and 660 FWL, UL: L in Section 27, Township 16 South, Range 33 East (Lat. N 32.89096°, Long.: W -103.65762°), NMPM, Lea County, New Mexico. The injection well is plugged oil well (TD 13,804 ft. bgl) located approximately 17.8 miles west of the City of Lovington on Hwy. 82, then south 0.62 mile on Rooney Rd, then east 0.3 miles on lease road to well location. The well was a plugged oil well and will be re-drilled to a total depth of 1,800 ft. below ground level (bgl). The proposed "Hummingbird" brine station location is: NW/4 SW/4. UL 'L', Section 28, T165, R33E.

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) talipipe at an average injection rate of 1,500 bbl/day (44 gpm) at approximately 200 psig and maximum injection rate of 1,900 bbl/day (58 gpm). Injection shall be below a permitted maximum surface injection pressure (MSIP) of 355 psig.

Brine fluids from the Salado entering the well casing will be produced through the window at 1,780 ft. bgl cut in the well casing and through the 3-  $\frac{1}{2}$  in. production tubing within the 9 - 5/8 in. well casing to surface. The window is positioned between the 9-5/8 in. dual port packer set at 1,760 ft. bgl and 9-5/8 in. cast iron bridge plug (CIBP) set at 1,800 ft. bgl. The top of the window is at least 275 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 2,300 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 proposed to be drilled 75 ft. southeast (Lat. 32.890782°, Long. -103.657470°) of the brine well. Fresh water and brine will be transported via separate buried (3 ft.) polyethylene pipelines between the brine well, water well and brine station.

The well TD is 13, 804 ft. bgl with a 9-5/8 in. well casing and shoe extending to 4,578 ft. bgl. There are a series of plugs down to well TD with CIBPs set at 1,800 ft. bgl and 2,596 ft. bgl within the 9 - 5/8 in. casing. 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 is at a depth of approximately 155 ft. bgl with a TDS concentration of proximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.

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.emrd.state.nm.us/ocd/. Persons interested in obtaining a copy of the application and draft 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 hearing. Requests for a hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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 30th day of September 2018.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

Heather Riley, Director

SEAL #33277 01101546

00218882

LEONARD LOWE NEW MEXICO OIL CONSERVATION DIVISION, EMNRD 1220 S. SAINT FRANCIS DR. SANTA FE, NM 87505

### Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated September 30, 2018 and ending with the issue dated September 30, 2018.

Publisher

Sworn and subscribed to before me this 30th day of September 2018.

black

**Business Manager** 



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

### Cash Remittance Report (CRR)

	Energy, Minerals & Nat CASH REMITTA	ural Resou NCE REP	rces Departr ORT (CRR	Appendix 8-14 revised 11/27/01	*
	Location Name ①	Lo	ocation Code	2	
OCD	- Environment	-	0740		
Today's Date:0	IONTH DAY	3 20 <u>1</u>	8		c
Collection Period: _	/ / th	rougn	_//////////	<u>(4)</u>	H
Cost Center	Revenue Code	Receipt	t Amount	Collected Amou	Int
5	5	(	7	8	
0740			100.00		
	<u></u>	I		1	
Total	]======	\$	10000 9	\$	10
Over/Short Amou	nt \$	(1)			
Over/onort Amou	φ				
CRR Deposit A	mount		\$		
	ne Devarges 13	0:		) Desland	-12
				•	
Print Name:		Signature:			_13
	ow copy to Accounts Receivable-ASD. ined at CRR submitting location.				
Official Use Only					==
Completed by the Acc	ounts Receivable		Date Rec	eived:	-0
Notes:		2			
		Ŭ			
			Amount F	eceived:	3
State Treasurer Depos	sit Number:	4	Verified b	y:	6
Deposit Date:		•			
				EMNRDCRR Re	vised 4/01



www.happybank.com

REMITTER LLANO DISPOSAL LLC

PAY ONE HUNDRED AND 00/100

TO THE WATER QUALITY MANAGEMENT FUND ORDER OF

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.

CASHIER'S CHECK

<u>88-1087</u> 1113

DATE July 16, 2018

\$\*\*\*\*\*100.00

NON NEGOTIABLE

**CUSTOMER COPY** 

PURPOSE



### ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

.

I hereby acknowledge receipt of Cheel	k No. 1021269	dated 07/16/2018
or cash received on 07 / 18 / 20 18	in the amou	int of \$ 100.00
from Happy State Ban	K - Mano Di	sposal LLC
for <b>BW-38</b>		
Submitted by: Carl Chavez		Date: 07/18/2018
Submitted to ASD by: Larraine	Devargas	Date: 07/19/2018
Received in ASD by:		Date:
Filing Fee 🔶 🗡	New Facility:	Renewal:
Modification 0	Other	
Organization Code 521.07	Applicable FY	119
To be deposited in the Water Quality I	Management Fund.	
Full Payment	or Annual Inc	crement

DATE WALK- RECEIVED IN MAIL	WEW M WALK- IN N	NEW MEXICO ENVIRONMENT DEPARTN MAIK ED IN MAIL NAME ON CHECK 8 X Nappy State Buak - ULus 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MENT - A DATE OF CHECK	LBUQUERQUE CHECK/MONEY ORDER#	FIELD OFF PROGRAM ACCOUNT CODE	ICE DAILY AMOUNT OF CHECK 100.00	IENT- ALBUQUERQUE FIELD OFFICE DAILY CHECK RECEIPT LOG       PROGRAM       DATE OF     CHECK/MONEY     AMOUNT       DATE OF     CHECK/MONEY     AMOUNT       CHECK     ORDER#     AMOUNT       AMOUNT     CODE     OF CHECK       AMOUNT     IACTL69     IAO       AMOUNT     IAO     IAO       AMOUNT     IAO     IAO       AMOUNT     IAO       AMOUNT     IAO       AMOUNT     IAO       AMOUNT     IAO       AMOUNT     IAO <t< th=""></t<>
TOTAL						1000	
		Description	Fund	Fund   Dept.   Share Acc	L SHEEI Share Acct	Sub Acct	Amount
		Liquid Waste	34000		496402		
		Water Recreation Facilities	40000	Z8501	496402		
		Food Permit Fees	99100	Z2600	496402		
		OTHER	34100	232900		2329029000	0
Holcomb Consultants 6900 Spring Cherry Lane Amarillo, Texas 79124

July 16, 2018

.

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

Re: BW-38 Filing Fee Check

Dear Mr. Chavez:

Attached is Llano Disposal, LLC's cashier's check number 1021269 in the amount of \$100 made payable to the "Water Quality Management Fund" as filing fee for the discharge permit application for the State 27 #1 Brine Well.

If you have any questions, please contact me at 806-471-5628 or email <u>danny@pwllc.net</u>. Thank you for your consideration of this application.

Sincerely,

DHolcomb

Danny J Holcomb Holcomb Consultants Agent for Llano Disposal, LLC

Attachment

Holcomb Consultants 6900 Spring Cherry Lane Amarillo, Texas 79124

July 16, 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, LLC, Mr. Darr Angell, owner
- The address of the person making the discharge: <u>P. O. Box 190 (783 Highway 483)</u> <u>Lovington, New Mexico 88260</u>
- The location of the discharge: <u>Brine Well Location: NW/4 SW/4, UL 'L', Section 27, T16S, R33E</u> <u>Proposed Brine Station Location: NW/4 SW/4, UL 'L', Section 28, T16S, R33E</u>
- 4) An estimate of the concentration of water contaminants in the discharge: <u>Injection Water:</u> fresh water from nearby fresh water well with approximately 400 mg/I TDS <u>Produced Brine Water:</u> approximately 320,000 mg/I TDS
- 5) The quantity of the discharge: <u>Estimated Instantaneous Flow Rate: 1 – 3 barrels per minute</u> <u>Estimated Monthly Total: 0 – 58,000 barrels per month</u>

Holcomb Consultants 6900 Spring Cherry Lane Amarillo, Texas 79124

Pursuant to 20.6.2.3114 NMAC Llano's cashier's check number 1021269 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 July 16, 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 <u>danny@pwllc.net</u>. Thank you for your consideration of this application.

Sincerely,

DOHolcomb

Danny J Holcomb Holcomb Consultants Agent for Llano Disposal, LLC

Attachments



CASHIER'S CHECK

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. <u>88-1087</u> 1113

DATE July 16, 2018

\$\*\*\*\*\*\*100.00

REMITTER LLANO DISPOSAL LLC

PAY ONE HUNDRED AND 00/100

TO THE WATER QUALITY MANAGEMENT FUND ORDER OF

NON NEGOTIABLE

PURPOSE



"01021269" #111310870" #116378"

Driginal check mailed to OCD-Santa Fe 7/16/18.

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 Fc, 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 I Copy to Appropriate District Office	
	Charles and the second device the second	<b>PPLICATION FOR BRI</b> OCD Guidelines for assistance in o			
		🛛 New 🗌 Renev			
		d Brine Station - State '27' BSW #1			
I.	Operator: Llano Disposal,	LLC			
	Address:P. O. Box 190 (783	Highway 483), Lovington, NM 8	8260		
	Contact Person:Marvin Bur	rows	Phone:	_575-631-8067	
ш.		SW/4 Section27 mit large scale topographic map sh			
V.	Attach the name and address o	f the landowner of the facility site.	See section IV of	attached discharge plan.	
t.	Attach a description of the type	es and quantities of fluids at the fac	ility. 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 attache discharge plan.				
VII.	Attach a description of underg	round facilities (i.e. brine extraction	n well). See sectio	on VII of attached discharge plar	
VIII.	Attach a contingency plan for n	eporting and clean-up of spills or re	leases. See sectio	n VIII of attached discharge plan	
X.	Attach geological/hydrologica fresh water. See section IX of	evidence demonstrating that brine attached discharge plan.	extraction operati	ions will not adversely impact	
х.	Attach such other information and/or orders. See section X of	as is necessary to demonstrate com f attached discharge plan.	pliance with any c	other OCD rules, regulations	
XI.	CERTIFICATION:				
	in this document and all attack obtaining the information, I be	of law that I have personally examin ments and that, based on my inqui lieve that the information is true, a tting false information including th	ry of those individ accurate and comp	luals immediately responsible fo lete. I am aware that there are	
Nan	ne:Darr Angell	Tit	tle:Owner		
Sim	nature: JOQ	Da	te: 7-5-	18	

E-mail Address:\_\_darrangell@gmail.com\_\_\_

÷

### 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 '27' BSW #1 and the proposed surface facility name is Hummingbird 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 1964. It is named the State '27' #1 (API # 30-025-20592) located at 1980 FSL X 660 FWL, Unit Letter 'L', Section 27, T16S, R33E, Lea County, New Mexico. The brine well is located at latitude 32.8909645°, longitude -103.6576157° (NAD83). The proposed brine well and brine station are located approximately 18.5 miles west of Lovington, New Mexico. The well is currently in P&A-site released status. Llano proposes to recomplete the well from a P&A well to a brine service well in the Salado (Salt) Formation between 1780' – 2400'. The proposed brine station would be located in UL 'L', Section 28, T16S, R33E, Lea County, New Mexico at latitude 32.890740°, longitude -103.676520° (NAD83). The proposed fresh water supply well will be located approximately 75 feet southeast of the proposed brine well. The fresh water supply well will be located in UL 'L', Section 27, T16S, R33E, Lea County, New Mexico at latitude 32.890782°, longitude -103.657470° (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, fresh water supply well and brine station location is the applicant, Mr. Darr Angell. Mr. Angell is the principal owner of Llano Disposal, LLC, P. O. Box 190 (783 Highway 483), Lovington, NM 88260.

#### 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 supply well, there will be a submersible pump which lifts fresh water from the well, transports it approximately 75 feet through a buried 3" SDR-11 polyethylene pipeline to the brine well. At the brine well, the fresh water is injected down the 9-5/8" casing annulus with brine circulated out the 3-1/2" internally plastic coated tubing. The brine is then transported approximately 5928 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 30' X 40' concrete loading pad with a 20" X 20" X 35' concrete sump that is situated into the surface 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 the 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 berm 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 nature of the surrounding terrain. The western edge of the brine station is bordered by Hummingbird Road, a county maintained north-south road with barrow ditches on both sides

**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 30 foot by 40 foot concrete loading pad will be curbed on the edges and sloped to a grating covered 20" wide by 35' 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.

 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  $\pm 1\%$  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, southwest and southeast of the brine well. These water wells were selected due to their proximity to the facilities. See Attachment "C" for location of the three proposed ground water monitor 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 MMOCD 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 5928 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 75 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 supply 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 – All precipitation that occurs inside the tankage "process area" would be contained by the secondary containment around the tanks. 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 5928 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 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 – Form C-101, C-102 and C-103 (re-entry) for the State '27' #1 (API #30-025-20592) were submitted to the NMOCD District 1 Office on April 18, 2018. The re-entry C-103 was approved April 26, 2018. Forms C-101 and C-102 will be approved after a Discharge Permit is approved (BW-38). Copies of these forms are included at the end of Attachment "I" for 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 0.5 mile and 1 mile areas of review. The area elevation is relatively flat with a slight slope from northwest to southeast. There are no identifiable surface bodies of water (other than dry playa lakes), watercourses, springs, mines or quarries within the area of review.

**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 - The Ogallala aguifer is the main source of water in the Lea County Underground Water Basin. The Tertiary-age Ogallala Formation consists of interbedded layers of fine- to medium-grained sand and gravel, overlain by an upper caliche layer. The total thickness of the Ogallala ranges from zero to about 350 ft thick. The thickness of the formation varies (Nye, 1930) as a result of irregularities, formed by erosional channels, in the surface of the underlying Triassic-age Dockum Group sediments (red beds). The channels generally trend to the southeast (Shoemaker, 2009). The ground water in this formation is confined where the underlying red beds are relatively impermeable. This underlying layer prevents further vertical movement within the aquifer. According to OSE records in the subject section and contiguous 8 sections, water depths range approximately 140 – 190 feet below ground level. With the base of the reported red beds being at 1480' in the proposed brine well, the nearest "theoretical" ground water would be a minimum vertical distance of 300' above the proposed injection zone. However, with a primary water bearing depth of 140 - 190 feet, ground water would be a minimum vertical distance of 1590' above the proposed injection zone. Based on drilling records in this area, there are no additional overlying ground water zones evident in this 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/I 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 that penetrate the injection zone (1790' – 2400' MD) located within the 0.5 mile area of review. There is one plugged and abandoned offset well in the area of review. It is identified below:

<b>API Well Number</b>	Well Status	Location	TD	Plugs Near Salt
30-025-27324	P&A	I-28-16S-33E	13,848'	@ 1450', 4430'

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 1330 feet west of the subject well. Plugging records and a current wellbore diagram for this offset well within the 0.5 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 a map of North-South and West-East cross-section lines and cross-sections detailing the area geology 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 (ie. buried pipelines) 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

current and proposed wellbore diagrams and copies of the NMOCD well reports. Llano Disposal will report all future well completion information via Forms C-103 and 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.

**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 9-5/8" 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-103s 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(s). Attachment "I" also contains current and proposed wellbore diagrams for this well. Llano provided copies of initial logs to the OCD via email on May 23, 2018 and followed up with a June 7, 2018 tele-conference with OCD personnel. 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 – The Mescalero Ridge is located approximately 4.4 miles southwest of the proposed brine well. Due to the relatively flat nature of the terrain on the caprock within the 1 mile area of review, there are no bodies of water (other than dry playa lake beds), streams, arroyos, canals, drains, seeps, springs, marshes or swamps evident. Five fresh water wells have been identified on the ground and via the OSE data base within the 1 mile area of review. Four of these wells are utilized for cattle/commercial water production and one is used for domestic household supply. See Attachments "C" and "D" for location of these water wells and playa lake beds.

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 sample titled "Sample A" is from a ranch house water well located 0.48 miles southwest of the subject brine well. This well is utilized for domestic household supply. The sample titled "Sample B" is from a water well located 1.08 miles west of the subject brine well. This well is utilized for commercial fresh water sales and cattle production. Both of these water wells are located on property owned by the applicant. OSE data base indicates the average depth to water in the area of review is 140 – 190 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 0.5 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 – Ogallala Formation consists of interbedded layers of fine to medium grained sand and gravel, overlain by an upper caliche layer. Alluvium Formation consists of calcareous, unconsolidated sand, clay, silt and gravel.

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

Answer - The aquifer is generally located at a depth of 140 – 190 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 1480' 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"-14" 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. Hummingbird Road (Lea County Road L-122) runs north/south on the western edge of the brine station. This county maintained road has barrow ditches on both side which controls runoff events coming from the west and northwest. See FEMA flood map in Attachment "O".

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

Answer – The brine station will have a 3 foot tall bermed/lined secondary containment around tanks. Any storm water run-on would be diverted around the tank area by this containment berm. Any rainfall within the process area would be contained with the secondary containment. 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:

 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 1050' – 1350' in this area. 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 and Alluvium formations and ranges in thickness from 0' to 350' within this general area. It is primarily made up of calcareous, unconsolidated sand, clay, silt and gravel. These two formations are the primary ground water source within this area. See Attachment "M" for area geology and general stratigraphy.

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<sup>2</sup> Storactivity -0.2Specific 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 well records 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 form C-103 for the subject well was submitted to the NMOCD District 1 Office on April 18, 2018 and it was approved by the NMOCD on April 26, 2018. Forms C-101 and C-102 were also submitted to the NMOCD Santa Fe and Hobbs Offices on April 18, 2018, but will be approved after the discharge permit (BW-38) is approved. Copies of these forms are included in Attachment "I" for 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  $\pm 0.01$  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  $\pm 0.01$  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.

#### 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 9-5/8" 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 has provided financial assurance for the State '27' #1 Brine Well and Hummingbird 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 northern edge of the proposed brine station on Hummingbird Road approximately 0.2 mile south of Hwy 82 in Section 28, T16S, R33E. This posting site is located approximately 200 feet north 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 18.8 miles from the proposed 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 is only one adjacent property owner and no additional property owners 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 June 29, 2018, the State owned minerals in UL 'L', Section 27, T16S, R33E are leased to Cimarex Energy Company. Llano will provide written notice in English by certified mail, return receipt requested, to Cimarex, the mineral lessee. Text of the notice letters 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.

# Llano Disposal, LLC State'27' BSW #1 Discharge Plan

# Attachment Index

<ul> <li>NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>Emergency Contingency and Response Plan (2 pgs)</li> <li>Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>Area Geology Map and General Lithology (2 pgs)</li> <li>Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>FEMA Flood Plain Map of Project Area</li> <li>Subsidence Monument Design and Installation Procedure</li> <li>Public Notice for Onsite Sign Posting (4 pgs)</li> <li>Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	Attachment	ent Description		
<ul> <li>Maps of Fresh Water Wells Within 1 Mile AOR and Ground Water Monitor Wells (2 pgs)</li> <li>0.5 Mile and 1 Mile Areas of Review for Oil &amp; Gas Wells</li> <li>Brine Well Location Site Plan</li> <li>Brine Station Site Plan</li> <li>USGS Drainage Map of Project Area</li> <li>H Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)</li> <li>I NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>J Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	A	Overview Map of General Area – USGS Topo Map of Area (Small Scale)		
<ul> <li>Weils (2 pgs)</li> <li>D</li> <li>0.5 Mile and 1 Mile Areas of Review for Oil &amp; Gas Wells</li> <li>E</li> <li>Brine Well Location Site Plan</li> <li>F</li> <li>Brine Station Site Plan</li> <li>G</li> <li>USGS Drainage Map of Project Area</li> <li>H</li> <li>Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)</li> <li>I</li> <li>NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>J</li> <li>Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K</li> <li>Emergency Contingency and Response Plan (2 pgs)</li> <li>L</li> <li>Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M</li> <li>Area Geology Map and General Lithology (2 pgs)</li> <li>N</li> <li>Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O</li> <li>FEMA Flood Plain Map of Project Area</li> <li>P</li> <li>Subsidence Monument Design and Installation Procedure</li> <li>Q</li> <li>Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	В	USGS Topo Map of Area (Large Scale)		
<ul> <li>E Brine Well Location Site Plan</li> <li>F Brine Station Site Plan</li> <li>G USGS Drainage Map of Project Area</li> <li>H Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)</li> <li>I NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>J Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	с			
<ul> <li>F Brine Station Site Plan</li> <li>G USGS Drainage Map of Project Area</li> <li>H Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)</li> <li>I NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>J Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	D	0.5 Mile and 1 Mile Areas of Review for Oil & Gas Wells		
<ul> <li>G USGS Drainage Map of Project Area</li> <li>H Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)</li> <li>I NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>J Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	E	Brine Well Location Site Plan		
<ul> <li>H Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)</li> <li>I NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>J Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	F	Brine Station Site Plan		
<ul> <li>NMOCD Drilling, Comp, P&amp;A Records for State '27' #1 (17 pgs)</li> <li>Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>Emergency Contingency and Response Plan (2 pgs)</li> <li>Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>Area Geology Map and General Lithology (2 pgs)</li> <li>Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>FEMA Flood Plain Map of Project Area</li> <li>Subsidence Monument Design and Installation Procedure</li> <li>Public Notice for Onsite Sign Posting (4 pgs)</li> <li>Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	G	USGS Drainage Map of Project Area		
<ul> <li>J Water Analysis Test Results on Area Fresh Water Wells (3 pgs)</li> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	н	Plugging Records for Offset Well Within the 0.5 Mile Area of Review (2 pgs)		
<ul> <li>K Emergency Contingency and Response Plan (2 pgs)</li> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	a l	NMOCD Drilling, Comp, P&A Records for State '27' #1 (17 pgs)		
<ul> <li>L Schematics for Brine Station and Brine Well Location (3 pgs)</li> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	J	Water Analysis Test Results on Area Fresh Water Wells (3 pgs)		
<ul> <li>M Area Geology Map and General Lithology (2 pgs)</li> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	к	Emergency Contingency and Response Plan (2 pgs)		
<ul> <li>N Cross-sections of Geologic Structure at State '27' #1 (3 pgs)</li> <li>O FEMA Flood Plain Map of Project Area</li> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	L	Schematics for Brine Station and Brine Well Location (3 pgs)		
<ul> <li>FEMA Flood Plain Map of Project Area</li> <li>Subsidence Monument Design and Installation Procedure</li> <li>Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	М	Area Geology Map and General Lithology (2 pgs)		
<ul> <li>P Subsidence Monument Design and Installation Procedure</li> <li>Q Public Notice for Onsite Sign Posting (4 pgs)</li> <li>R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)</li> </ul>	N	Cross-sections of Geologic Structure at State '27' #1 (3 pgs)		
QPublic Notice for Onsite Sign Posting (4 pgs)RPublic Notice for Offsite Posting at Lea County Courthouse (5 pgs)	0	FEMA Flood Plain Map of Project Area		
R Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)	Р	Subsidence Monument Design and Installation Procedure		
	Q	Public Notice for Onsite Sign Posting (4 pgs)		
	R	Public Notice for Offsite Posting at Lea County Courthouse (5 pgs)		
S Public Notice Letters to Adjoining Property Owners, SLO, Mineral Lessee (4 pgs)	S	Public Notice Letters to Adjoining Property Owners, SLO, Mineral Lessee (4 pgs)		
T Public Notice in Lovington Leader Newspaper (4 pgs)	Т	Public Notice in Lovington Leader Newspaper (4 pgs)		

Attachment A - Small Scale Topo Map



Lea County, New Mexico

## Attachment B – Large Scale Topo Map



## Attachment C – Aerial Photo with Ground Water Monitoring Wells



T16S, R33E Lea County, New Mexico

## Attachment C - 1 Mile Area of Review for Fresh Water Wells



T16S, R33E Lea County, New Mexico 0.5 miles

- Fresh Water Wells
- Proposed Ground Water Monitor Wells
- Proposed State 27 BSW #1

Attachment D - 0.5 and 1 Mile AORs with Oil/Gas Wells



## Attachment E – Well Location Site Plan (UL L, Section 27, T16S, R33E)



Surface Owner – Angell #2 Family LP P. O. Box 190, Lovington, NM 88260 Drawing Not to Scale





Surface Owner – Angell #2 Family LP P. O. Box 190, Lovington, NM 88260 Drawing Not to Scale



## Attachment G – USGS Drainage Map of Project Area

Map Source - USGS Drainage Map

There is no USGS defined drainage basin in the project area. The topography is generally sandy and grass covered. Most of the area is drained via playa lakes. There are no established streambeds in the area. The Mescalero Ridge (ie. caprock) is located approximately 4.4 miles southwest of the proposed brine well.

> T16S, R33E Lea County, New Mexico
| Submit 3 Copies<br>to Appropriate<br>District Office                            | State of New<br>Er ', Minerals and Natural  | Mexico<br>Resources Department      | Form C-103<br>Revised 1-1-89<br>OFFSET WELL 30-025-27324                    |  |  |  |
|---|---|-------------------------------------|---|--|--|--|
| DISTRICT I<br>P.O. Box 1980, Hobbs, NM 88240                                    | OIL CONSERVAT   |                                     | WELL ABO 25-2/324   |  |  |  |
| DISTRICT II<br>P.O. Drawer DD, Artesia, NM 88210                                | Santa Fe, New Mexic   | co 87504-2088                       | 5. Indicate Type of Lease   |  |  |  |
| DISTRICT III<br>1000 Rio Brazos Rd., Aztec, NM 87410                            |   |                                     | 6. State Oil & Gas Lease No 6666  |  |  |  |
| ( DO NOT USE THIS FORM FOR PI<br>DIFFERENT RESI                                 | TICES AND REPORTS ON W<br>ROPOSALS TO DRILL OR TO DEEP<br>ERVOIR. USE "APPLICATION FOR<br>C-101) FOR SUCH PROPOSALS.) | PEN OR PLUG BACK TO A               | 7. Lease Name or Unit Agreement Name<br>N-M-State 20<br>Hexagon Nm 28 State |  |  |  |
| WELL XX WELL  | OTHER   |                                     | Inchagen in the   |  |  |  |
| 2. Name of Operator<br>Heyagon 011 & Gas  | s Inc.  |                                     | 8. Well No. 1   |  |  |  |
| 3. Address of Operator  |   |                                     | 9. Pool same or Wildcat   |  |  |  |
|   | Fort Worth tx. 7610   | 02                                  | Kemstz-Lower Waltcamp   |  |  |  |
| 4. Well Location  | ach Sau   | ÷                                   | EQ  |  |  |  |
| Unit Letter :   | 1980 Feel From The Schur  | Line and                            | Feet From The Line  |  |  |  |
| Section 28  | Township 16S  | Range 33E                           | NMPM Lea County   |  |  |  |
|   | 10. Elevation (Show when  | ther DF, RKB, RT, GR, etc.)         | VIIIIIIIIIII  |  |  |  |
|   | 4207.4 6  |                                     |   |  |  |  |
|   | Appropriate Box to Indica   |                                     |   |  |  |  |
| NOTICE OF IN  | TENTION TO:   | SUE                                 | BSEQUENT REPORT OF  |  |  |  |
|   | PLUG AND ABANDON  | REMEDIAL WORK                       |   |  |  |  |
|   |   | _                                   | Św.   |  |  |  |
| TEMPORARILY ABANDON   | CHANGE PLANS  | COMMENCE DRILLIN                    |   |  |  |  |
| PULL OR ALTER CASING  |   | CASING TEST AND C                   | EMENT JOB   |  |  |  |
| OTHER:  |   | OTHER                               |   |  |  |  |
|   |   |                                     |   |  |  |  |
| <ol> <li>Describe Proposed or Completed Op-<br/>work) SEE RULE 1103.</li> </ol> | erations (Clearly state all pertinent detail  | ls, and give pertinent dates, inclu | uding estimated date of starting any proposed                               |  |  |  |
| 4-03-1991 Spot 20   | sxs cement @ 11,3   | 80'-11,100                          |   |  |  |  |
| 4-03-1991 Spot 25   | sxs cement @ 10.6   | 60-10,340 taga                      | ed  |  |  |  |
| 4-04-1991 Spot 20   | sxs @ 8000'-7800'   |                                     |   |  |  |  |
| 4-08-1991 Spot 35   | svs @ 5050'-4900'   | tagged                              |   |  |  |  |
| 4-09-1991 Spot 45   | sxs @ 4549'-4430'   | tagged                              |   |  |  |  |
| 4-09-1991 Spot 45   | sxs @ 1450'-1250'   |                                     |   |  |  |  |
| 4-10-1991 Spot 60   | 5×5 \$ 385'-285 D   | ertorated © 38                      | <i>5</i> .  |  |  |  |
| 4-10-1991 Spot 45   | sxs @ 115'-59'  |                                     |   |  |  |  |
| 4-10-1991 Spot 10   | sys @ surface   |                                     |   |  |  |  |
| Incta   | 11 dry hole marker  |                                     |   |  |  |  |
|   | circulated with 10  |                                     |   |  |  |  |
|   | 000' of 4 1/2' cas  |                                     |   |  |  |  |
|   | 5' of 8 5/8 casing  |                                     |   |  |  |  |
| I hereby certify that the information above is                                  | true and complete to the best of my knowledg  | e and belief.                       | 4/21/2  |  |  |  |
| SKONATURE Jel An  |   | TITLE VICE PRESID                   |   |  |  |  |
| TYPE OR PRINT NAME JOHN   | G. BURKE  |                                     | TELEPHONE NO. 817 / 870-13  |  |  |  |
| (This space for State Use)  | .1 .  | 01                                  | 1001  |  |  |  |
| ATTROVED BY CAMY M.   | Hill  | - me                                | DATE DATE   |  |  |  |
| CONDITIONS OF APPROVAL ANY:   |   |                                     |   |  |  |  |
| And deliver of an end of the second second                                      | AT  | TACHMENT H                          |   |  |  |  |

### CURRENT WELLBORE DIAGRAM - OFFSET WELL

P&A Well

Hexagon Oil and Gas Inc Hexagon NM 28 State #1 API # 30-025-27324

OFFSET WELL 30-025-27324

1980' FSL x 660' FEL, UL 'I', Sec 28, T16S, R33E, Lea County, NM



#### ATTACHMENT H

#### CURRENT WELLBORE (after cmt plug drillout)

#### P&A Well Llano Disposal, LLC State 27 #1 P&A API # 30-025-20592 1980' FSL x 660' FWL, UL 'L', Sec 27, T16S, R33E, Lea County, NM



PROPOSED WELLBORE Configured for Brine Service Well

Llano Disposal, LLC State 27 #1 P&A API # 30-025-20592 1980' FSL x 660' FWL, UL 'L', Sec 27, T16S, R33E, Lea County, NM



						30-025-20592
D23						Form 0-101
			NEW	M .ICO OIL CONSERVATION COM	ML ON	
PILE						Revised (12/1/55)
		-		Santa Fe, New Mexico		
LANG CAFICE					HORRS CTET	7 3 C. C.
	01L 643			OT MOTONTION TO	DITT	
PROBLTICH DPPI			NO	TICE OF INTENTION TO 1	UKILL	1.76 100
				Office of the Oil Conservation Commission and	1. 25. 2 5	3 M D9.
begins. If ch Submit this tions of the	notice in Commission	the propo QUINTU on.	JPLICATE.	. One copy will be returned following approval. and submit 6 Copies Attach Form C- 128 in	See additional in triplicate to	structions in Rules and Regula- first 3 copies of form 0-101
	Rosvel	1, New	Maxico		June 24,	1964
			(Place)		(Date)	)
OIL CONS SANTA FE			MISSION			
Gentlemen:						
Vou at	- hereby	notified th	hat it is our	r intention to commence the Drilling of a well	to be known as	
Tou at						
	Th	e Atlar	tic llef!	Ining Company (Company, or Up		***************************************
				(CompaL, or Of. 1)		The well is
	St	ate "Al	( <b>n</b>	Well No1		(Unit)
			(Loase)	South	line and	660 feet from the
located	1900		t from the.	00000	A C -	22.2 336016
	est		*********	"ine of Section	0-0 R	22-S. NMPM.
GIVE LO	CATION	FROM S	ECTION L	LINE) Wildcet Pool		County
10112 20	01111011			If State Land the Oil and Gas Lease is No	C_5748	
				If patented land the owner is	00-5110	
1	1					
D	C	B	A	Address		***************************************
-	-					
				We propose to drill well with drilling equipso	ent as follows:	er synne entereneterstersterstersterstersterstersterster
				Rotary tools from 0 - T.D.		
E	F	G	H			
L		-		The status of plugging bond is Bond No.	.8, Casualty	Company C
	1			America is in effect.		
		1 1				
X	K	1	1	Drilling Contractor	d	
1 .			- 1	*********		
N	N	0	P	***************************************		loss
M	N	0		We intend to complete this well in the Ke	mnits or Jes	aman40ncs
	1			formation at an approximate depth of	11.600	feet.
-				formation at an approximate septil official		strationer (model)

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Bise of Hole	Sise of Casing	Weight par Foot	New or Second Hand	Depth	Backs Cemen
17-1/2	13-3/8	48		350	Circulate
	9-5/8	32.3 & 36		4550	Girculate
12-1/4 8-3/4	5-1/2	15.5, 17 & 20		11600	300 sx 🖌

If changes in the above plans become advisable we will notify you immediately. ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

ind ., 19... Approved. Except as follows:

OIL CONSERVATION COMMISSION

Sincerely yours,

The Atlantic By .....

Position Dist. Drilling & Production Supt. Send Communications resarding well to

Name.A. D. Klorin

Address P.O. Rox 1078, Rosuall, New Monda

Ounde 1 = 0 = 2 an         0 = 1 < 0 = 2            But ? Alley 1 - an           But ? Alley 1 - an           San an Price           San an Price           Ande of Price           But ? Alley 1 - an           San an Price           Ande of Price           Bate of Color           San an On * San           San an Price           Bate of Price           San an Price           San an Price           San an Price           San an Price	WELL LOCATIO	CO DIL CONSER	AGE DEDICA	MISSION TION PLAT	. C.
	5	ECTION A			- H
Operator		Lesse		¥.	ell No.
The Atlantic Refi	Township	Range 22 Food	County	Iea	
L 27 ctual Footage Location of Vell:	lá South	33 East	•	16.1	
1920 feet from the	South line and	660 1	eet from the	West line	
round Level Elev. Producing Fo	A	Popl	tory	Dedicate	d Actenge: 40 Actes
another. (63-3-29 (e) NMSA 193; If the answer to question one is "" wise? YESNO If If the answer to question two is ""	ao," have the interesta o answer is "yes." Type o	f Consolidation	aterests below:	communitization a	freement or other-
	R 33E SECTION B			CERTIF	CATION
D Kemp E Texaco	er Fr	B Texaco		lere to the best of elief A. D. Kloxi Position Dist. Drlg. company	ve is true and com- my knowledge and Afin
1086/ / /	SEC. 27 Atlantic NW-1197 N N Atlantic State Ay	tachment		bown on the plat i lotted from field n urveys made by m upervision, and th ad correct to the b ad belief.	e or under my at the same is true best of my knowled Surveyor Company
			-	Date Survey	
330 660 990 1320 1650 19	o 2310 2640 2000	1500 1000	500 0		FA10-1283

HUNDER OF COPI OI SANTA FE FILE USES LIND OFFICE	STRIBUTION					INSERVATION		(Rev 3-55)
PROMATION OFFIC	01L 8A3		_			Office as PtA,Coi		
Name of Comp					Addres			
Lease	te "AT"		Ining Company			Section Township	16-8	Range 33-B
Date Work Perf	formed 6/30/64		Pool Wildo	at		County	Les	1
			THIS IS A	REPORT O	F: (Cbeck	appropriate block)		
Beginning				ng Test and edial Work			Explain):	
				Position		Company		
	. Sheets			Drilling	g Engine	er The Atl	the second s	Ining Company
	. Sheets		FILL IN BEL	Drilling	MEDIAL W	ORK REPORTS O	the second s	Laing Company
T. E.	. Sheets	TD	FILL IN BEL	Drilling	And and a state of the state of	ORK REPORTS O	the second s	Completion Date
T. E.	er		FILL IN BEL	Drilling DW FOR RE ORIGIN	MEDIAL W	ORK REPORTS O	NLY 8 Interval	
T. E. DF Elev. Fubing Diamer Perforated Inte	er erval(s)		2014 Alig	Drilling DW FOR RE ORIGIN	Oil Strie	The Atl ORK REPORTS O ATA Producin, ag Diameter	NLY 8 Interval	Completion Date
T. E. DF Elev. Fubing Diamer Perforated Inte	er erval(s)		2014 Alig	Drilling DW FOR RE ORIGIN PBTD	Oil Strie	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s)	NLY 8 Interval	Completion Date
T. E. DF Elev. Tubing Diamer Perforated Inte	er erval(s) erval Date e	TD	Tubing Depth Oil Production	Drilling DW FOR RE ORIGIN. PBTD RESULTS Gas Pro	Dil Stric Oil Stric Producio OF WORK	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s) COVER Water Production	NLY S laterval Oil Strin GOR	Completion Date og Depth Gas Well Potentin
T. E. DF Elev. Fubing Diamer Perforated Inte	erval(s) erval	TD	Tubing Depth	Drilling DW FOR RE ORIGIN. PBTD RESULTS Gas Pro	Oil Stric	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s)	NLY § Interval Oil Strin	Completion Date og Depth Gas Well Potentin
T. E. DF Elev. Fubing Diamet Perforated Inte Open Hole Inte Test Before	er erval(s) erval Date e	TD	Tubing Depth Oil Production	Drilling DW FOR RE ORIGIN. PBTD RESULTS Gas Pro	Dil Stric Oil Stric Producio OF WORK	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s) COVER Water Production	NLY S laterval Oil Strin GOR	Completion Date og Depth Gas Well Potentin
T. E. DF Elev. Fubing Diamet Perforated Inte Den Hole Inte Test Before Workower After	erval(s) erval Date e Test	T D	Tubing Depth Oil Production	Drilling DW FOR RE ORIGIN. PBTD PBTD RESULTS Gas Pro MCI	Oil Stric Oil Stric Producio OF WORK oduction FPD	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s) OVER Water Production B P D	NLY § Interval Oil Strin GOR Cubic feet/ nformation give	Completion Date og Depth Gas Well Potentin
T. E. DF Elev. Fubing Diamet Perforated Inte Den Hole Inte Den Hole Inte Test Before Workover After Workover	erval(s) erval Date e Test	T D	Tubing Depth Oil Production BPD	Drilling DW FOR RE ORIGIN. PBTD PBTD RESULTS Gas Pro MCI	Oil Stric Oil Stric Producio OF WORK oduction FPD	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s) COVER Water Production B P D by certify that the i best of my knowled	NLY g Interval Oil Stris GOR Cubic feet/ nformation give lge.	Completion Date ag Depth Bbl Gas Well Potentia MCFPD
D F Elev. Tubing Diamet Perforated Inte Open Hole Inte Test Before Workower After	erval(s) erval Date e Test	T D	Tubing Depth Oil Production BPD	Drilling DW FOR RE ORIGIN. PBTD PBTD RESULTS Gas Pro MCI	MEDIAL W AL WELL D Oil Stric Producio FPD I here to the Name Positi	ar The Atl ORK REPORTS O ATA Producin, ag Diameter ag Formation(s) OVER Water Production B P D by certify that the i best of my knowled	NLY g Interval Oil Strin GOR Cubic feet/ Information give Ige.	Completion Date ag Depth Bbl Gas Well Potentia MCFPD a above is true and compl A. D. Klowin

							30-	025	5-20592
	0/L 01L	-	MISCELL	ANEOUS	REPO	R4586A	WELDSC. C		FORM C-103 (Rev 3-55)
ame of Company	tie Refining			Address				1	
State "A]		the second se	ell No. U	nit Letter L	-	Township		Range 33	1
1/12/81-1		Pool Wildest		1	C	County Los			
		THIS IS	A REPORT OF		ppropriat				
Plugging	Drilling Operation		ing Test and C medial Work		L.	Other (Ex	plain):		
Witnessed by									
0. D. B			Position	-1- 6		Company	antis Rafi	nine	Generativ
A CONTRACT OF A	retches		Dist. D	rlg. Sup	W.	The Atl	antic Refi	ining	Company
	retches	FILL IN BEL	Dist. D. OW FOR RE ORIGIN		ORK RE	The Atl	LY		
DF Elev.	TD	FILL IN BEL	Dist. D.	MEDIAL W	ORK RE	The Atl	LY		<b>Company</b>
D F Elev. Tubing Diamet	TD	FILL IN BEL	Dist. D. OW FOR RE ORIGIN	MEDIAL W	ORK RE	The Atl PORTS ON Producing	LY	Com	pletion Date
Tubing Diamet	er		Dist. D. OW FOR RE ORIGIN	MEDIAL W	ORK REDATA	The Atl PORTS ON Producing ter	L Y Interval	Com	pletion Date
	er erval(s)		Dist. D OW FOR RE ORIGIN PBTD	MEDIAL W AL WELL C Oil Stri	ORK RE DATA	The Atl PORTS ON Producing ter	L Y Interval	Com	pletion Date
Tubing Diamet	er erval(s)	Tubing Depth	Dist. D OW FOR RE ORIGIN PBTD	Oil Stri Product	NORK REDATA	The Atl PORTS ON Producing ter	LY Interval Oil String	Com	apletion Date
Tubing Diamet	er erval(s)		Dist. D OW FOR RE ORIGIN PBTD RESULTS	MEDIAL W AL WELL C Oil Stri	Nork RE DATA ng Diame	The Atl PORTS ON Producing ter	L Y Interval	Com g Depth	pletion Date
Tubing Diamet Perforated Inte Open Hole Inte Test Before Workover	T D er rval(a) Date of	Tubing Depth Oil Production	Dist. D OW FOR RE ORIGIN PBTD RESULTS	Oil Stri Production	Nork RE DATA ng Diame	The Atl PORTS ON Producing ter ation(s)	LY Interval Oil String GOR	Com g Depth	Gas Well Potentia
Tubing Diamet Perforated Inte Open Hole Inte Test Before	T D er rval(a) Date of	Tubing Depth Oil Production	Dist. D OW FOR RE ORIGIN PBTD RESULTS	MEDIAL W AL WELL C Oil Stri Product S OF WOR oduction F P D	ING DIAMO	The Atl PORTS ON Producing ter ation(s) Production SPD	LY Interval Oil String GOR Cubic feet/F	Com g Depth	GRS Well Potential MCFPD
Tubing Diamet Perforated Inte Open Hole Inte Test Before Workover After	T D er erval(s) erval Date of Test	Tubing Depth Oil Production	Dist. D. OW FOR RE ORIGIN PBTD RESULT: Gas Pr MC	MEDIAL W AL WELL C Oil Stri Product S OF WOR oduction F P D	PORK RE DATA ng Diame ing Forma KOVER Water J E	The Atl PORTS ON Producing ter ation(s) Production SPD	LY Interval Oil String GOR Cubic feet/F	Com g Depth	Gas Well Potentia
Tubing Diamet Perforated Inte Open Hole Inte Test Before Workover After	T D er erval(s) erval Date of Test	Tubing Depth Oil Production BPD	Dist. D. OW FOR RE ORIGIN PBTD RESULT: Gas Pr MC	MEDIAL W AL WELL C Oil Stri Product S OF WOR oduction F P D	NoRK RE DATA ng Diame ing Form KOVER Water H E eby certi e best of	The Atl PORTS ON Producing ter ation(s) Production a P D	LY Interval Oil String GOR Cubic feet/E formation gives	Com g Depth	GRS Well Potential MCFPD
Tubing Diamet Perforated Inte Open Hole Inte Test Before Workover After Workover	T D er erval(s) erval Date of Test	Tubing Depth Oil Production BPD	Dist. D. OW FOR RE ORIGIN PBTD RESULT: Gas Pr MC	MEDIAL W AL WELL C Oil Stri Product S OF WOR oduction F P D I her to th Name Posit	No ORK RE DATA ng Diame ing Formi KOVER Water I E best of C.C. ion strict	The Atl PORTS ON Producing ter ation(s) Production SPD	LY Interval Oil String GOR Cubic feet/E formation gives	Com g Depth 3bi	GRS Well Potential MCFPD

			30-025-20592	(Form C-182)
WHEN THEIR ASCENES				(Reviewd 7/1/83)
CERTATION AND AND AND AND AND AND AND AND AND AN				
ud di anti anti a	NEW	MEXICO OIL CONSERVATIO	N COMMISSION	
ANCOPPICE		Santa Fe, New Mexic	0	
nampongeal oll			13" M. ou F. 1 072	
RCALTICN OFFICE		MISCELLANEOUS N	OTTCES	
returned to the school on wh or agent, of the plan submitt tional instructions in the Rul	ed. The plan a	strict Office, Oil Conservation Gommi en the approval, with any modification approved should be followed, and wo ions of the Commission. Indicate Nature of Notice by Chec	asion, before the work specified is to begin. a considered advisable, or the rejection by rk should not begin until approval is obta ating Below	CDC COURINGSON
NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL	NOTICE OF INTENTION TO DAILL DESPER	+
NOTICE OF INTENTION TO PLUG WELL	x	NOTION OF INTENTION TO PLUG BACK	NOTICE OF INTENTION TO SET LENER	
Notice of Intention to Squeeze		NOTICE OF INTENTION TO ACIDIZE	NOTICE OF INTENTION то Sноот (Nigro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)	NOTICE OF INTENTION (OTHER)	1
OIL CONSERVATION CO		Rosvell, New Mexico	August 25, 1964	
SANTA FE, NEW MEXICO	0	(Flace)	(Delo)	
NV 4 SV (40-acre Subdivision)			NMPM.,Wildoat	Poo
**************************************	FU	LL DETAILS OF PROPOSED I W INSTRUCTIONS IN THE RULE	PLAN OF WORK	
This well was di of oil and gas.		and unit a possible and anone	ntering commercial quantitie setting the following commercian	at plugs:
10	a 11470-1	1582 25 sx from	5900-5970	
15	an 10755-1	0881 25 sx from	4543-4613	
40 ax fr	an 9673-97	85 10 sr In to	op of surface pipe.	
9.3#/gal. gel m remain intact.	nd will be	laft between all plugs.	9-5/8" & 13-3/8" casing st	ring will
Verbal permissi	en for ab	ove obtained from Mr. J.D.	Ramey on 8/25/64.	
Approved	2 · (3.5%		Company or Operator	
Except as follows:		Ву	applealin	
/		Position	Dist. Drilling & Production	Supt.
Approved OIL CONSERVATION C	COMMISSION		Send Communications regarding well	to:
By A		Name	A. D. Klorin	
Tide	Section 1	Addres	P.O. Box 1978, Resvell, He	w Mezico

44

Attachment I

Title

Inter than twee of the Commiss The Atlant: Vell No	a Office, C sy days after ice Refin (Comp ice Refin (Comp ice ated if a ted j Jun ice ated	All Conserving and completing to a QUINT aing Com and or Operating fore from If Sta- te 26 Hable J P. Q. 1 P. Q. 1 Operating	Smath Fe WELL 30-02 ation Commission of well Follow TUPLICATE apany -// of		2 C-101 was sent : utes and Regulati submit 5 Copies State 	Income	A Deb ACRES WELL CONTRACTOR 19.64
Mail to District international and and a second a seco	e Office, C sy days afsi ice. Submit ice. Submit ice Refin (Comp in a Led 	er completie t is QUINT aing Com and er Commit iers from 	WELL 30-02 ation Commission on of well Follow TUPLICATE apany set -% of SN Seatth the Land the Oil a Drilling Cas Drawner, 550, ad Level	RECORD 5-2059 to which Form instructions in F If State Lend 34, of Sec22 	C-101 was sent : ubes and Regulati submit 5 Copies State , T14 Los 	Income	A OND ACRESS WELL CORRECTLY. 33-E NMP Court Heat 19.64
Atlant: Atlant to District Inter that twee of the Connelse The Atlant: Well in 1950 Section 277 willing Competence ame of Deilling Co ddress Levation above sea	y days afte ice Refin (Comp(Comp (Co	er completie t is QUINT aing Com and er Commit iers from 	30-02 nices Commission on of well Follow TUPLICATE aparty 34 of SM Scotth the Land the Oil a Drilling Cos Dramar, 550, ad Level	5-2059 to which Forms instructions in F If State Lend .4, of Sec. 27 	C-101 was sent : ubes and Regulati submit 5 Copies State , T14 Los 	Income	A OND ACRESS WELL CORRECTLY. 33-E NMP Court Heat 19.64
Mail to Distriction of the Control o	y days afte ice Refin (Comp(Comp (Co	er completie t is QUINT aing Com and er Commit iers from 	30-02 nices Commission on of well Follow TUPLICATE aparty 34 of SM Scotth the Land the Oil a Drilling Cos Dramar, 550, ad Level	5-2059 to which Forms instructions in F If State Lend .4, of Sec. 27 	C-101 was sent : ubes and Regulati submit 5 Copies State , T14 Los 	Income	
Mail to District inter than twen of the Commiss The Atlant: "El No	y days afte ice Refin (Comp(Comp (Co	er completie t is QUINT aing Com and er Commit iers from 	ation Commission on of well Follow TUPLICATE spany ar: .% of _SM	to which Form instructions in F If State Lend 	C-101 was sent : ubes and Regulati submit 5 Copies State , T14 Los 	Income	
Inter than twen of the Commiss The Atlant: The Atlant: Underlight tell in 1980 Section 27. rilling Commenced ame of Drilling C ddress levation above sea	y days afte ice Refin (Comp(Comp (Co	er completie t is QUINT aing Com and er Commit iers from 	se of well Follow TUPLICATE aparty -% ofSM Scotth are Land the Oil a Drilling_Cor Drawer_550, ad Level		subalt 5 Copies State , T16 	Income	
Inter than twen of the Commiss The Atlant: The Atlant: Underlight fell is 1980 Section 27. rilling Commenced ame of Drilling C ddress.	y days afte ice Refin (Comp(Comp (Co	er completie t is QUINT aing Com and er Commit iers from 	se of well Follow TUPLICATE aparty -% ofSM Scotth are Land the Oil a Drilling_Cos Drawer_550, ad Level		subalt 5 Copies State , T16 	Income	
ell No1 Undee1.gas ell is 1950 Section 27 rilling Commenced ame of Drilling G ddress levation above sea	(Canp in a ted j j j j i j i i i i i i i i i i i i i	NU NU NU Notes from 15 State 26 Noble 1 P. Q. 1 P. Q. 1 P. Q. 1 P. Q. 1	-% of SM South the Land the OH a Drilling Con Drawer. 550, and Level			(Laure) ag	
ell No1 Undee1.gas ell is 1950 Section 27 rilling Commenced ame of Drilling G ddress levation above sea	(Canp in a ted j j j j i j i i i i i i i i i i i i i	NU NU NU NU NU NU NU NU NU NU NU NU NU N	-% of SM South the Land the OH a Drilling Con Drawer. 550, and Level			feet from	
Underst.gas ell is 1950 Section 27. Filling Commenced ame of Drilling G derest.	ated	e 26 Feble 1 P. Q. 5 p of Grow	Scoth uc Land the Oil a Drilling Co: Drawar. 550, ad Level	Pool,		feet from	
ell is 1950 Section 27 rilling Commenced ame of Drilling C ddrest levation above sea	Jun ontractor level at Top	ier from I Sta E 26 Fable 1 P. Q. 1 Orow	South the Land the Oil a Drilling Con Drawer, 550, ad Lovel	nd Gas Less: No. , 19.56 Drillin rperatics	660	feet from	
Section 27. rilling Commenced ame of Drilling C ddress levation above sea	ontractor	Eable 1 Fable 1 P. Q. 5	Drilling Cas Drilling Cas Drawer 550, ad Level	nd Gas Lease No. , 19.56 Drillin rperation	is	August 27	. 19.64
rilling Commenced ame of Drilling C ddress evation above sea	Jun contractor	Fable 1 P. Q. 1 p of Strow	Drilling Cas Drawer 550, ad Level	19.56 Drillin rperation	y was Completed	August 27	19.64
ame of Drilling C ddress levation above sea	entractor	Feble I P. Q. S Grow	Drilling Com Drawer 550, ad Level	Midland, To	<b>TRL</b>		
ddress levation above sea	level at Toj	P. Q. STOW	Drawar 550, ad Level	Midland, To		*******	
levation above sea	level at Toj	p of Trout	d Level	4201	The lafe	mation given is to	be kept confidential w
	·	p of Taking	_, 19	THE A			
			and an annual of				
o. 1, from							
o. 1, from				IL SANDS OR 2			
	020		deltar.	No.	, from		
0. 2, IPOE	······································				, from		
o. 3, from				No. 1	, from	bo	
io. 3, from	and in the second					feet	
io. 4, from							
		-		CASING RECO	- this was		1
STER	WEIGHT	NEW C	AMOUNT	E SHOE	PULLED PROM	PERPORATIONS	PERFORE
arsee.							
	-	Xeu	397.8		Intest		Surface
13-3/8	3/ 1- 3		397.87	7 Guide Float	Intest Intest		Surface Intermediate
13-3/8							
13-3/8	.3/ <del>L</del> 3		4562.43	Fleat	Intest		
13-3/8 9-5/8 33		6 <b>7</b> Xee	4562.43 MODODN	G AND CEMEN	Intest	JULD BALTOV	Intermediate
13-3/8 9-5/8 32			4562.43	G AND CRIMEN	Intest	JUTO BATTAT	Intermediate
13-3/8 9-5/8 32	8 07 2210	WEERE	4562.43 MODODN	G AND CEMEN	TING RECORD	MUD	Intermediate

# Attachment I

\_\_\_\_\_

#### SECOND OF DRILL-STEM AND SPECIAL TESTS

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach bereto

	TOOLS USED
Rotary tools w	rere used from feet to feet, and from feet to feet
	FRODUCTION
Put to Produc	ing P&A
OIL WELL:	The production during the first 24 hours was harrels of liquid of which
	was oil;
	Gravity

30-025-20592

. harrels of 

Length of Time Shut in.....

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

		Southeastern No	ew I	Mexico		Northwestern New Mexido
T,	Anhy	1480	Т,	Devonian	T	Ojo Alamo
T.	and a second sec	1700	Т.	Silurian.	т	Kinland-Fruitland
B.	the second	2600	Τ.	Montoya	T.	Farmington.
T.	Yates.	2795	Τ.	Simpson	Т.	Pictured Cliffs
T.	7 Rivers		т.	McKre	Т.	Menufee
T.	Queen	-11 ( <i>Manufantinana</i> -1	Т.	Ellenburger	T.	Point Lookout.
T.	Grayburg		Т.	Gr. Wash	T.	Mancus,
T.	San Andres		Τ.	Granite	Τ.	Dalota
Τ.	Glorieta	5932	Т.	Volfeanp 9725	Т.	Morrison
T.	Drinkart		Т.	Kemnits Line (Penn) 10775	Т.	Penn
Τ.	Tubbs	7215	Т.	Seeman (Pann) 11520	T	
T.	Abo	7964	T.		Τ.	Contractions (100) (Contraction of (10) (1) (10) - all
T.	Penn	······································	Τ.	and the state of t	7	
T.	Miss		Т.	and the state of t	Т.	Antonia and a second se

#### FORMATION RECORD

From	To	in Feet	Formation	From	To	Thickness in Fere	Formation
0 1480 1700 2600 4460 5932 7215 7963 9725	1480 1700 2600 4460 5932 7215 7963 9725 11647	1660 1472 1283 748	Clay, Red Beds sand Anhydrite Salt Anhydrite, Red Shale, Sand, Dolomite Dolomite, Sand Siltstone, Dolomite Delo, Anhy, Shale Limestone, Chert & Gray Sha		0		

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby wear or affirm that the information given herewish is a complete and correct record of the well and all work done on it so far as can be determined from available records.

	September 11, 1964
Company or Operator. The Atlantic Refining Company	Address P. O. Box 1978, Roswell, New Merice
Name GL Author	Poster or Titl District Drilling Supervisor
Attac	chment I

							30-0	025-20592		
NO. OF COPIES RECEIVED										
DISTRIBUTION NEW MEXICO OIL CONSERVATION COMMISSION							Form C-101 Revised 14-65			
SANTA FE								5A. Indicate Type of Lease		
FILE							STATE X	FEE		
U.S.G.S.						t.		Gas Lease No.		
LAND OFFICE							L 3392,	L 4089, LG 3819		
OPERATOR						5	mmm.	MMMMM		
	-		ANT DEEDEN	00.011	IC BACK		dillilli			
APPLICATIO	IN FOR PER	MIT TO D	RILL, DEEPEN,	UR PLI	JG DACK		7. Unit Agreen	nent Name		
a. Type of Work								the second s		
DRILL	1	1	DEEPEN		PLUG B		8. Form of Les	sse Name		
b. Type of Well	1			SINGLE			Stat	e 27		
WELL CAS WELL X	0746			ZONE		ZOHE	9. Well No.			
2. Name of Operator	1	100					1-23			
W. 4	A. Moncrie	f, Jr.						Pool, or Wildcat		
Litter of Constant	DOI 10 TO THE T				76107		Wild	cat		
Moncrief Buildin	ng, Ninth	at Com	erce, Ft. Wor	th, T	exas /0104		ADVIII)	1111111111KB		
4. Location of Welt UNIT LET		LOCA	1980'	PEST PRO	THE SOULI	LINE		1111111111111		
			07	1	65 REE. 3	ЗЕ ныры	anna	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
AND 660 FLET FRO	M THE West	LINE	or sec. 27	TWP. 1	TITITITI	TITIT	12. County	<u> Allellin</u>		
innen mannen in the second	i i i i i i i i i i i i i i i i i i i	IIIII		IIII.	illillilli	111111	Lea			
	1111111	MM	<u>ttttttttt</u> t	HH	HHHHH	HHHH.	mm	mmmm		
<u> </u>	mm	MM		1111	illillilli	MM	HIIIII			
	MILLI	IIII	MMMM	10 8000	osed Depth	19A. Formatio	1111111	20, Hotary or C.T.		
<u> </u>	MAN	illilli			3,600	Morr	WO	Rotary		
	MIMM	<u>IIII</u>	<u>WWWWWW</u>		Iling Contractor	110	22. Approx	. Date Work will stort		
21. Elevations (Show whether L	DF, RT, etc.)		6 Status Plug. Bond	21B. Dr.	Moranco		4-5			
4201 ground	(	10,00	0 Blanket *		Moranco	-				
23.		P	ROPOSED CASING A	ND CEME	NT PROGRAM					
						SACKSC	FCEMENT	EST. TOP		
SIZE OF HOLE	SIZE OF		WEIGHT PER FOR	DT SE	415'	37				
	13-3				415		2940			
		5/8"				ESSARY				
	412" or	5%",	AS		MEC					

Operator plans to deepen the Atlantic Refining Company State "AY" #1 from its present total depth of 11,654' to a new total depth of 13,600' to test the lower Seaman lime, Canyon lime, Atoka sands and Morrow sands. Operator plans to deepen with Sea mud drispac from 11,654-13,600'. Blow out preventers will be double preventers with blind rams and pipe rams plus Hydril - 5000# W. P. Manifold.

Security that the information above is true and com Security that the information above is true and com	TION MANAGER	_ Date 3-31-77
This space for State Use)	SUPERVISOR DISTRICT	· · · i :://

NO. OF COPIES RECEIVED	]	30-025-20592	Form C-103
DISTRIBUTION	]	JU-04J-40J/4	Supersedes Old
SANTA FE	NEW MEXICO OIL CO	ONSERVATION COMMISSION	C-102 and C-103 Effective 1-1-65
FILE			
U.S.G.S.			5a, Indicate Type of Lease
LAND OFFICE			State X Fee
OPERATOR			5. State Oil & Gas Lease No.
			L 3392
USE "APPLICAT	TON POR PERMIT - PORME C-101) FOR	ON WELLS UG BACK TO A DIFPERENT RESERVOIR. BUCH PROPOSALS.)	
WELL X GAS WELL	0THEM-		7. Unit Agreement Name
I. Name of Operator			8. Farm or Lease Name
W. A. MONCRIEF, JF Address of Operator	ξ		State 27
	Ninth at Commonoo I	Fort Harth Towar 76102	9. Well No.
Moncrier Building,	Ninth at commerce,	Fort Worth, Texas 76102	1 10, Field and Pool, or Wildcat
	1980 FEET FROM THE South	1 LINE AND 660 PEET PROM	
THE West LINE, SECTION	он		
	15. Elevation (Show when 4201 GD	ther DF, RT, GR, etc.) 4220 KB	12. County Lea
6. Chat	A A A A A A A A A A A A A A A A A A A		
	TENTION TO:	e Nature of Notice, Report or Otl SUBSEQUENT	r REPORT OF:
PERFORM REMEDIAL WORK	PLUS AND ABANDON		ALTERING CASING
		COMMENCE DRILLING OPHS.	PLUS AND ABANDORMENT
PULL OR ALTER CASING	CHANGE PLANS	CASING YEST AND CEMENT JOB	
-		OTHER	
OTHER	[		
w/500 sax Trinity sax Class "H" w/ 6	Lite Wate w/5/10 of 15	5½" casing and set at 13,7 % CFR-2 + 1275 sax Trinity alad + 5/10 of 1% CFR-2 + 3 d ok.	Lite Wate + 200
18, 1 hereby certify that the information		est of my knowledge and belief. Exploration Manager	
· C	aned Ee		JULI 6 1977
APPROVED BY	The Title		DATE
CONDITIONS OF APPROVAL, IF ANY	Attac	hment I	

NO. OF COPIES ACCELY	KD	~				30-025	-2059	2	lpuu C-1	
DISTRIBUTION									lievised	
SANTA FE		NEW	HEXICO O	IL CON	SERVATIO	N COMMISSI	ON			Cype of Leenas
FILE		WELL COMPLI						06 :	iteter X	1'ee
U.S.G.S.		CLE COMPLE	L HON ON	. ALCO		in her on		5. 14	HIN UI	Gun Leand No.
LAND OFFICE							,		L	3392
OPERATOR								77	TITTI	THINNI TIM
								111	1111	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
N. TYPE OF WELL								-22	1111	ament Game
In the second second	811	[17] CAS	-	-				1	and requires	
. TYPE OF COMPLE		X WELL	(	04+	OTHER	-				ruse thane
		- PLUG	010							
were and over		N BACK		VR.	OTHER					te "27"
2, Name of Cherotor								9, 14	ell No.	
W. A. Moncrie	f, Jr.								1	
3. Address of Cretulor										Fool, or Wildcal
Moncrief Build	ding, Ninth	at Commerc	e, Fort	Wort	h, Texa	\$ 76102		ten	which	SALA TED
4. Location of Well								117-	1111	TITITITITITI
					1.			111	1111.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
L LEFTER	1	980		outh	the first set	660		. 11	1111	
SHIT CLITCH	LUCATED	Peer P	HOM FHE		1111115	111111	TITT	And in the Party of the Owner, where the Party of the Par	ounty	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>
THE West LINE OF	27	160	330		alll	1111111	AHH.	117	Lea	
and a product of the second	LE Data T.D. B	esched 17, Date	Courst (Bri	NAPM	VIIII		E WAR W			AIIIII
ke-entered	1									
old hole 4-11-	77 5-1	3-77   9 back T.D.	5-31-77		and the second s	+201 GD	4220			4201
			22. 11	Somy	e Compl., He	W 23, Into Dril	Iled By	lotary Tool	13	Cable Tools
13,804'	13,	769'					iled By 0	-13,80		1
24. Producing Interval(s	a), of this complet	ton - Top, Botton	n, Name 11	,522-	24 & 11	,528-32 L	Jpper S	eaman	25	. Was Directional Surv Mude
11,566-74, 11				2 Mid	dle Sea	nan				
11,678-86 and	11,690-96	Lower Seama	in							No
26. Type Electric and C	ther Logs Run	Schlumberge	r Compe	nsate	d Neutr	on-Format	ion De	nsity	27. Wg	s Well Cored
		log and Dua						· · · · · · · · · · · · · · · · · · ·		and the second se
			IL Later	alog	& Micro	SFL				No
28,			of the state of the local designation of the	and the second se		SFL s set in well)			1	No
28. CASING SIZE	WEIGHT LB.	CAS	SING RECOR	RD (Rep		s set in well)	MENTING	RECORD	1	
CASING SIZE	WEIGHT LB.	CAS	SING RECOR	RD (Rep HOL	ort all string E SIZE	s set in well) CEM	MENTING F	RECORD	1	AMOUNT PULLED
CASING SIZE	WEIGHT LB 48# H-4	CAS (FT. DEPT) 0 415'	SING RECOR	RD (Rep HOL	ert all string E SIZE	s set in well) CEN 370	MENTING F	RECORD	I	
CASING SIZE 13-3/8" 9-5/8"	₩EIGHT LB. 48# H-4 32# & 3	CAS (FT. DEPT) 0 415' 6# 4577'	SING RECOR	RD (Rep ноц 171 123	ert all string E SIZE	s set in well) CEP 370 2940			75 144	AMOUNT PULLED
CASING SIZE	WEIGHT LB 48# H-4	CAS (FT. DEPT) 0 415' 6# 4577'	SING RECOR	RD (Rep HOL	ert all string E SIZE	s set in well) CEN 370			ites and the second second	AMOUNT PULLED None 11 e - "
casing size 13-3/8" 9-5/8" 52"	weight LB. 48# H-4 32# & 3 20# & 1	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79	SING RECOR	RD (Rep ноц 171 123	ert all string E SIZE	370 2940 200 sax		H + 17	Wat	AMOUNT PULLEC None " e - "
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> 2" 29.	weight LB. 48# H-4 32# & 3 20# & 1	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD	51NG RECOR	RD (Rep HOL 173 123 8-3/	ert all string E SIZE 11 11 11 411	370 2940 200 sax 30,	Class	H + 17	Wat G RECO	AMOUNT PULLED None " " e = " te RD
casing size 13-3/8" 9-5/8" 52"	weight LB. 48# H-4 32# & 3 20# & 1	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79	SING RECOR	RD (Rep HOL 173 123 8-3/	ert all string E SIZE	s set in well) CEP 370 2940 200 sax 30, 51Z	Class	H + 17 TUBIN	Wat G RECO	AMOUNT PULLED None " " e = " te RD PACKER SET
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> / <sub>2</sub> " 29.	weight LB. 48# H-4 32# & 3 20# & 1	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD	51NG RECOR	RD (Rep HOL 173 123 8-3/	ert all string E SIZE 11 11 11 411	370 2940 200 sax 30,	Class	H + 17	Wat G RECO	AMOUNT PULLED None " " e = " te RD
CASING SIZE 13-3/8" 9-5/8" 5%" 29. SIZE	wEiGHT LB. 48# H-4 32# & 3 20# & 1 с тор	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM	51NG RECOR	RD (Rep HOL 173 123 8-3/	ert all string E SIZE 11 11 11 411	s set in well) CEP 370 2940 200 sax 30, 51Z	Class	H + 17 TUBIN	Wat G RECO	AMOUNT PULLED None " " e = " te RD PACKER SET
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 81. Perforation Record /	WEIGHT LB. 48歩 H-4 32歩 & 3 20歩 & 1 し TOP	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM	SING RECOR	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/	ert all string E SIZE 11 11 11 411	s set in well) CEP 370 2940 200 sax 30, 51Z	Class	H + 17 TUBIN DEPTH S 1,308'	Wat G RECO SET	AMOUNT PULLEC None " " e - " te RD PACKER SET 11,303'
CASING SIZE 13-3/8" 9-5/8" 5½" 29. SIZE	WEIGHT LB. 48歩 H-4 32歩 & 3 20歩 & 1 し TOP	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM	SING RECOR	RD (Rep HOL 175 125 8-3/	SCREEN	s set in well) CE/ 370 2940 200 sax 30, 512 2-3/	Class	H + 17 TUBIN DEPTH S 1,308' RE, CEME	Wat g recoi set NT squi	AMOUNT PULLEC None " " e - " te RD PACKER SET 11,303'
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 81. Perforation Record /	wEIGHT LB., 48# H-4 32# & 3 20# & 1 L тор Interval, size and 528-32	САЗ (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD ВОТТОМ	SING RECOR	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/	SCREEN	370 2940 200 sax 30, 512 2-3/ ACID, SHOT,	Class E '8" 1 FRACTUS	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A	Wat G RECO SET NT SQUI	AMOUNT PULLEC None " e = " e PACKER SET 11,303' EEZE, ETC.
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> / <sub>2</sub> " 29. SIZE 01. Performion Record ( 11,522-24, 11)	wEIGHT LB., 48# H-4 32# & 3 20# & 1 L тор Interval, size and 528-32	САЗ (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD ВОТТОМ	SING RECOR	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/	SCREEN	370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL	Class E '8" 1 FRACTUS A/30	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal	Wat G RECO SET NT SQUI	AMOUNT PULLEC None " e = " e PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> / <sub>2</sub> " 29. SIZE 31. Perforation Record / 11,522-24, 11, 11,566-74, 11,	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 &	SING RECOR H SET 7.69' SACKS CE .38 .38	RD (Rep HOL 171 123 8-3/	SCREEN	370 2940 200 sax 30, 512 2-3/ ACID, SHOT,	Class E ('8" 1 FRACTUS A A/30 w/10	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 ga	Wat G RECOI SET NT SQUI ND KING 15% I al 207	AMOUNT PULLEC None " te = " PACKER SET 11,303' EEZE, ETC. DMATERIAL USED VEA. Reacidize in 4 stages
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> / <sub>2</sub> " 29. SIZE 81. Performion Record ( 11,522-24, 11)	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 &	SING RECOR H SET 7.69' SACKS CE .38 .38	RD (Rep HOL 171 123 8-3/ MENT " 12	SCREEN	370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL	Class E (8" 1 FRACTUS A/30 w/10 Benz	H + 17 TUBIN DEPTH S 1,308 <sup>1</sup> RE, CEME MOUNT A 00 gal ,000 ga oic Ac	Wat G RECOI SET NT SQUI ND KING 15% I al 207	AMOUNT PULLEC None " e = " e PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize
13-3/8" 9-5/8" 52" 29. SIZE 31. Performation Record / 11,522-24, 11, 11,566-74, 11, 11,678-86, 11,	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 &	SING RECOR H SET 7.69' SACKS CE .38 .38	RD (Rep HOL 171 123 8-3/ MENT " 12 " 28 " 28	screen	370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL	Class E /8" 1 FRACTUS A A/30 w/10	H + 17 TUBIN DEPTH S 1,308 <sup>1</sup> RE, CEME MOUNT A 00 gal ,000 ga oic Ac	Wat G RECOI SET NT SQUI ND KING 15% I al 207	AMOUNT PULLEC None " te = " PACKER SET 11,303' EEZE, ETC. DMATERIAL USED VEA. Reacidize in 4 stages
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> /2" 29. SIZE 31. Perforation Record ( 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 33.	wEIGHT LB 48# H-4 32# & 3 20# & 1 L TOP Interval, size and ,528-32 ,604-06, 11 ,690-96	САЗ (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD ВОТТОМ (лилиber) ,610-12 & 11,620-22	SING RECOR H SET 7.69' SACKS CE .38 .38 .38	RD (Rep HOL 171 123 8-3/ MENT " 12 " 28 " 28 PRODU	SCREEN	370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696	Class E (8" 1 FRACTUS A/30 w/10 Benz	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 ga oic Ac	Wat G RECO SET NT SQU ND KINC 15% I al 207 id Fla	AMOUNT PULLEC None " e = " te RD PACKER SET 11,303' EEZE, ETC. MATERIAL USED NEA. Reacidize in 4 stages akes & ball
CASING SIZE 13-3/8" 9-5/8" 5½" 29. SIZE 31. Performation Record / 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 03. Date First Production	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Unterval, size and 528-32 604-06, 11 690-96 Produce	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM 1 number) ,610-12 & 11,620-22 ctica Method (Flow	SING RECOR H SET 7.69' SACKS CE .38 .38 .38	RD (Rep HOL 171 123 8-3/ MENT " 12 " 28 " 28 PRODU	SCREEN	370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696	Class E (8" 1 FRACTUS A/30 w/10 Benz	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 gal oic Ac ers	Wat G RECO SET NT SQUI ND KINC 15% I al 207 id Fla	AMOUNT PULLEC None " He = " Packer set 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in)
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 31. Performation Record / 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, Date First Production 5-31-77	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Unterval, size and 528-32 604-06, 11 690-96 Produc F1	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM (Aumiber) ,610-12 & 11,620-22 etticn Method (Flow owing	SING RECOF H SET	RD (Rep HOL 17 12 12 8-3/ :MENT " 12 " 12 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32. DEPTH 11,52 11,52	s set in well) CEP 370 2940 200 Sax 30, SIZ 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump)	Class E (8" 1 FRACTUS A/30 w/10 Benz seal	H + 17 TUBIN DEPTH S 1,308 <sup>1</sup> RE, CEME MOUNT A 00 gal ,000 gal oic Ac ers	Wat G RECO SET NT SQUI ND KING 15% I al 207 id Fla I Status hut in	AMOUNT PULLEC None " te = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED VEA. Reacidize in 4 stages takes & ball (Prod. or Shut-in)
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 11,678-86, 11, 33. Date First Production 5-31-77 Date of Test	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Testos	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Aumiber) ,610-12 & 11,620-22 etica histhod (Flow owing Choke Size	SING RECOF H SET 7.69' SACKS CE .38 .38 .38 .38 .38	RD (Rep HOL 171 123 8-3/ MENT " 12 " 12 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32, DEPTH 11,52 UCTION ing - Size ar OIL - Bbl.	s set in well) CEP 370 2940 200 Sax 30, SIZ 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pumpj Gas = h	Class E (8" 1 FRACTUS A/30 w/10 Benz seal	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 gal oic Ac ers Wel Sl Water - Bl	Wat G RECO SET NT SQUI ND KING 15% I al 207 id Fla I Status hut in	AMOUNT PULLEC None " e - " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize in 4 stages kes & ball (Prod. or Shut-in) a Gas-Cil Hallo
CASING SIZE 13-3/8" 9-5/8" 5½" 29. SIZE 29. SIZE 29. 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 20. Date First Production 5-31-77 Date of Test 5-31-77	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produc F1. Hours Testod 3 hrs	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 & 11,620-22 ettion Method (Flow owing Choke Size 24/64"	SING RECOF H SET 7.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 12 2 8-3/ :MENT " 12 8-3/ " 12 8-3/ " 12 8-3/ " 12 8-3/ " 12 8-3/ " 12 8-3/ " " 12 8-3/ " " 12 2 8-3/ " " " 12 2 8-3/ " " " " " " " " " " " " " " " " " " "	art all string E SIZE II 4" SCREEN J2. DEPTH 11,522 UCTION ing - Size ar OII - Bbl. 60	s set in well) CEP 370 2940 200 Sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120	Class (8" 1 FRACTUS A/30 w/10 Benz seal	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 ga oic Ac ers Vel Sl Water - Bl Trace	Wat G RECO SET NT SQUI ND KINC 15% I al 207 id Fla I Status hut in bl.	AMOUNT PULLEC None " te - " te RD PACKER SET 11,303' EEZE, ETC. MATERIAL USED NEA. Reacidize (Frod. or Shut-in) a Gas-Cil Haue 2000-1
CASING SIZE 13-3/8" 9-5/8" 5½" 9. SIZE 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 11,678-86, 11, 11,678-86, 11, 5-31-77 Date of Test 5-31-77	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Testos	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 & 11,620-22 etica Method (Flow owing Choke Size 24/64"	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32. DEPTH 11,52 UCTION ing - Size ar OIL - Bbl. 60 Cda -	s set in well) CEN 370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120 ACF	Class E (8" 1 FRACTUS A/30 w/10 Benz seal	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 ga oic Ac ers Vel Sl Water - Bl Trace	Wat G RECO SET NT SQUI ND KINC 15% I al 207 id Fla 1 Status hut in bl.	AMOUNT PULLEC None " e - " PACKER SET 11,303' EEZE, ETC. MATERIAL USED NEA. Reacidize (Frod. or Shut-in) a Gas-Cil Hallo 2000-1 ravity - API (Corr.)
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> /2" 9. SIZE 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 11,678-86, 11, 13. Date First Production 5-31-77 Date of Test 5-31-77 Tow Tubing Press. 405#	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Tested 3 hrs Casting Freesure Packer	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM (number) ,610-12 & 11,620-22 etion Method (Flow owing Choke Size 24/64'' Calculated 24 Hour Hate	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE II 4" SCREEN J2. DEPTH 11,522 UCTION ing - Size ar OII - Bbl. 60	s set in well) CEN 370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120 ACF	Class E (8" 1 FRACTUS A/30 w/10 Benz seal ACF Woter - B Trace	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 ga oic Ac: ers Wel Sl Water - Bl Trace bl.	Wat G RECOI SET NT SQUI ND KINC 15% I al 207 id Fla ND KINC 15% I al 207 id Fla ND KINC 15% I al 207 id Fla ND KINC 100	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. DMATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Haue 2000-1 rovity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" 5 <sup>2</sup> /" 29. SIZE 11,522-24, 11, 11,566-74, 11, 11,678-86, 11,778-86, 11, 11,678-86, 11,778-86, 11,	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Tested 3 hrs Casting Freesure Packer	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM (number) ,610-12 & 11,620-22 etion Method (Flow owing Choke Size 24/64'' Calculated 24 Hour Hate	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32. DEPTH 11,52 UCTION ing - Size ar OIL - Bbl. 60 Cda -	s set in well) CEN 370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120 ACF	Class E (8" 1 FRACTUS A/30 w/10 Benz seal ACF Woter - B Trace	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac: ers Wel Sl Water - Bl Trace bl.	Wat G RECOI SET NT SQUI ND KINC 15% I al 207 id Fla ND KINC 15% I al 207 id Fla ND KINC 15% I al 207 id Fla ND KINC 100	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. DMATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Haue 2000-1 rovity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 13,000 (1,	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Tested 3 hrs Casting Freesure Packer	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM I number) ,610-12 & 11,620-22 etion Method (Flow owing Choke Size 24/64'' Calculated 24 How Hate 	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32. DEPTH 11,52 UCTION ing - Size ar OIL - Bbl. 60 Cda -	s set in well) CEN 370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120 ACF	Class E (8" 1 FRACTUS A/30 w/10 Benz seal ACF Woter - B Trace	H + 17 TUBIN DEPTH S 1,308 <sup>1</sup> RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac ers Wel Sl Water - Bl Trace bl. Test Witne	Wat G RECOI SET NT SQUI ND KINC 15% I al 207 id Fla ND KINC 15% I al 207 id Fla ND KINC 15% I al 207 id Fla ND KINC 100	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Hauo 2000-1 ravity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 12,77 Pote of Test 5-31-77 Flow Tubing Press. 405# Vented. Gas (1), 11,678-86, 11, 12,77 13,77 14,77 14,77 14,77 15,77	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Testos 3 hrs Casing Pressure Packer Sold, nsed for fue contract pe	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM I number) ,610-12 & 11,620-22 etion Method (Flow owing Choke Size 24/64'' Calculated 24 How Hate 	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32. DEPTH 11,52 UCTION ing - Size ar OIL - Bbl. 60 Cda -	s set in well) CEN 370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120 ACF	Class E (8" 1 FRACTUS A/30 w/10 Benz seal ACF Woter - B Trace	H + 17 TUBIN DEPTH S 1,308 <sup>1</sup> RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac ers Wel Sl Water - Bl Trace bl. Test Witne	Wat G RECOUNT SET NT SQUINC 15% I al 207 id Fla id Fla bl. oil G 42 ssed By	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Hauo 2000-1 ravity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 31. Performation Record / 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 11,678-86, 11, 33. Date First Production 5-31-77 Date of Test 5-31-77 Flow Tubing Press. 405# Vented. Gas of the second secon	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Testos 3 hrs Casing Pressure Packer Sold, nsed for fue contract pe	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM I number) ,610-12 & 11,620-22 etion Method (Flow owing Choke Size 24/64'' Calculated 24 How Hate 	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28	art all string E SIZE " 4" 4" SCREEN 32. DEPTH 11,52 UCTION ing - Size ar OIL - Bbl. 60 Cda -	s set in well) CEN 370 2940 200 sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas - h 120 ACF	Class E (8" 1 FRACTUS A/30 w/10 Benz seal ACF Woter - B Trace	H + 17 TUBIN DEPTH S 1,308 <sup>1</sup> RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac ers Wel Sl Water - Bl Trace bl. Test Witne	Wat G RECOUNT SET NT SQUINC 15% I al 207 id Fla id Fla bl. oil G 42 ssed By	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Haue 2000-1 ravity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" 5½" 29. SIZE 31. Performion Record ( 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 11,678-86, 11, 33. Date First Production 5-31-77 Date of Test 5-31-77 Flow Tubing Press. 405# 34. Disposition of Gas ( Vented. Gas ( 35. List of Attachments	WEIGHT LB. 48# H-4 32# & 3 20# & 1 U TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Testod 3 hrs Casing Freesure Packer Sold, ased for fue contract per	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 & 11,620-22 ettion Mathod (Flow owing Choke Size 24/64" Calculated 24 Hour Hate ding.	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17½ 12½ 8-3/ MENT " 12 " 28 " 28 PRODU h, pumper tod	art all string E SIZE II 4" SCREEN 12. DEPTH 11,522 UCTION ing - Size ar 011 - Bbl. 60 Cas - 1 961	s set in well) CEP 370 2940 200 Sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas = h 120	Class E (8" 1 FRACTUS A/30 w/10 Benz seal Seal MCF Water - B Trace	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac ers Wel Sl Water - Bl Trace bl. Test Witne R. 1	Wat G RECOUNT SET NT SQUIN ND KINC 15% I al 207 id Fla id Fla id Fla bl. id Fla bl. id Fla bl. id G By D. Yea	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Haue 2000-1 ravity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" 52" 29. SIZE 31. Performation Record / 11,522-24, 11, 11,566-74, 11, 11,678-86, 11, 11,678-86, 11, 33. Date First Production 5-31-77 Date of Test 5-31-77 Flow Tubing Press. 405# Vented. Gas of the second secon	WEIGHT LB. 48# H-4 32# & 3 20# & 1 U TOP Interval, size and 528-32 604-06, 11 690-96 Produce F1. Hours Testod 3 hrs Casing Freesure Packer Sold, ased for fue contract per	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) ,610-12 & 11,620-22 ettion Mathod (Flow owing Choke Size 24/64" Calculated 24 Hour Hate ding.	SING RECOF H SET 97.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17½ 12½ 8-3/ MENT " 12 " 28 " 28 PRODU h, pumper tod	art all string E SIZE II 4" SCREEN 12. DEPTH 11,522 UCTION ing - Size ar 011 - Bbl. 60 Cas - 1 961	s set in well) CEP 370 2940 200 Sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas = h 120	Class E (8" 1 FRACTUS A/30 w/10 Benz seal Seal MCF Water - B Trace	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac ers Wel Sl Water - Bl Trace bl. Test Witne R. 1	Wat G RECOUNT SET NT SQUIN ND KINC 15% I al 207 id Fla id Fla id Fla bl. id Fla bl. id Fla bl. id G By D. Yea	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Haue 2000-1 ravity - API (Corr.) 2.2 <sup>0</sup>
CASING SIZE 13-3/8" 9-5/8" $5\frac{2}{2}"$ 29. SIZE 29. SIZE 29. SIZE 29. 11,522-24, 11, 11,566-74, 11, 11,566-74, 11, 11,678-86, 11, 20. Date First Production 5-31-77 Date of Test 5-31-77 Plow Tubing Press. 405# Vented. Gas ( Vented. Gas ( Vented. Gas ( S. List of Attachments 36. 1 hereby certify that	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Production F1. Hours Testod 3 hrs Casting Pressure Packer Sold, used for fue contract pe	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) (number) (number) (number) (number) (number) (content of the size (content of the size (content of the size) (content of t	SING RECOF H SET 17.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>3</sup> / <sub>2</sub> 12 <sup>3</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28 " 2	e and comple	s set in well) CEN 370 2940 200 Sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas = h 120 ACF D	Class E (8" 1 FRACTUS A/30 w/10 Benz seal Seal MCF Water - B Trace	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 ga oic Ac ers Vel Sl Water - Bl Trace bl. Test Withe R. 1 eveledge and	Wat G RECOUNT SET NT SQUIN ND KINC 15% I al 207 id Fla 1 Status hut in bl. On G 42 Status but in bl. D. Yea I belief.	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize in 4 stages Akes & ball (Prod. or Shut-in) a Gas-Cil Hallo 2000-1 ravity - API (Corr.) 2.20 ates
CASING SIZE 13-3/8" 9-5/8" 52" 9. SIZE 11, 522-24, 11, 11, 566-74, 11, 11, 678-86, 11, 12, 12, 12, 12, 12, 13, 14, 14, 14, 14, 14, 14, 14, 14, 14, 14	WEIGHT LB. 48# H-4 32# & 3 20# & 1 L TOP Interval, size and 528-32 604-06, 11 690-96 Production F1. Hours Testod 3 hrs Casting Pressure Packer Sold, used for fue contract pe	CAS (FT. DEPT) 0 415' 6# 4577' 7# 13,79 INER RECORD BOTTOM Inumber) (number) (number) (number) (number) (number) (content of the size (content of the size (content of the size) (content of t	SING RECOF H SET 17.69' SACKS CE .38 .38 .38 .38 .38 .38 .38 .38	RD (Rep HOL 17 <sup>3</sup> / <sub>2</sub> 12 <sup>3</sup> / <sub>2</sub> 8-3/ MENT " 12 " 28 " 28 " 28 " 28 " 28 " 28 " 28 " 2	e and comple	s set in well) CEP 370 2940 200 Sax 30, 512 2-3/ ACID, SHOT, INTERVAL 2-11,696 d type pump) Gas = h 120	Class E (8" 1 FRACTUS A/30 w/10 Benz seal Seal MCF Water - B Trace	H + 17 TUBIN DEPTH S 1,308' RE, CEME MOUNT A 00 gal ,000 gal ,000 gal oic Ac ers Wel Sl Water - Bl Trace bl. Test Witne R. 1	Wat G RECOUNT SET NT SQUIN ND KINC 15% I al 207 id Fla 1 Status hut in bl. On G 42 Status but in bl. D. Yea I belief.	AMOUNT PULLEC None " He = " PACKER SET 11,303' EEZE, ETC. MATERIAL USED WEA. Reacidize (Prod. or Shut-in) a Cas-Cil Haue 2000-1 ravity - API (Corr.) 2.2 <sup>0</sup>

#### INSTRUCTIONS

This turn is to be filed with the upperful District Differ of the Communition net later the days after the completion of any newly-differed as a summary of all executivity logins the well and a summary of all executivity logins the well and a summary of all executivity logins the well and a summary of all executive abalt about the reported to the cone of directionally drilled wolls, true vertical depths abalt also be reported. For mattice completions, items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state hand, where six explose are regarded. See half 105.

### INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

#### Southeastern New Mexico

#### Northwestern New Mexico

		1480		12 023	T	Oin Aluma	T	Penn. "11"
	Anhy	1502		10 00/				Penn. "C"
	Salt	2606						Penn. "D"
п.	Sult	07/1						
Τ.	Yistes	2704	Т.					
Т.	7 Rivers							Madison
Т.	Queen	3714	Т.	Silurian	т.	Point Lookout	T.	Elbert
Т.	Grayburg	4120	Т.	Montoya	T.	Mancos	T.	McCrocken
т.		4460	T.	Simpson	Т.	Gallup	T.	Ignacio Qizte
	Glorieta	5936	Т.	McKee	Rus	e Greenhorn	T.	Granite
**	Dedlark	- Barby Balan	T	Ellenburger	T.	Dakota	T.	
1.			-	Gr, Wash	T	Norrison	T.	
Τ.		7180	1.	Granite	-	Todillo	Т.	
Τ.		7100	1.	Delaware Sand	**	Tourito	T	
Τ.	Drinkard	7305	Т.	Delaware Sand	Т.	Entrada	1.	
т.	Abo	7856	Т.	Bone Springs	T.	Wingate	1.	
Т.	Wolfcamp	9720	Т.	Bursum Marker 10,510	T.	Chinle	T.	
T	Kemnitz	10,770	Τ.	Atoka Sand 13,068	Τ.	Permion	T.	
	Cisco .	- 11.486_	T.	Morrow Sand 13,640	Τ.	Penn. "A"	T.	
*	CISCO					NDS OR ZONES		
No.	1, from10	,383	******	to 10, 389 (Wolfcamp)			******	
No.	2, from 10	,771		to 10,848 (Kemnitz)	No	. 5, from		
No.	3, from	,640		to 13,864 (Morrow)	No	. 6, from		

### IMPORTANT WATER SANDS

Include data on rate of water inflow an	nd elevation to which water rose in hole.	
No. 1, from None		<u> </u>
No. 2, from		**************************************
No. 3, from		
No. 4, from.		

FORMATION RECORD (Attach additional sheets if necessary)

From	To Thicknes	s Formation	From	To	Thickness in Feet	Formation
Surface 1480 1593 2606 2764 4120 4460 7180 7305 7956 8004 9720 11,702 12,023 12,072	1480 1480 1593 113 2606 1013 2764 158 4120 1356 4460 340 7180 2720 7305 125 7956 651 8004 48 9720 1716 11,702 1982 12,023 321 12,072 49 12,336 264	Dolomite, anhydrite & sand Dolomite Sand Dolomite Shale & dolomite Dolomite & same shale	13,640	12,497 13,068 13,102 13,160 13,640 13,767 13,804	27 571 34 58 480 127	Lime & shale Sand & sandy lime Lime, shale & chert Sand Shale, sand & limey sand Lime, shale & chert Sand & shale Chester Lime

Submit 3 Copies to Appropriate District Office	State of New Mexico Energy, Minerals and Natural Resources	Department 30-025-20592 Form C-103 Revised 1-1-89
DISTRICT 1 P.O. BOX 1980, HODDA, NM 38240	OIL CONSERVATION DI	WELL API NO.
DISTRICT II	Santa Fe, New Mexico 87504-2	2088 30-025-20592
P.O. Drawer DD, Artesia, NM 38210		5. Indicate Type of Lesse STATE X FEE
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 37410		6. State Oil & Gas Lesse No. L-3392
	TICES AND REPORTS ON WELLS	
DIFFERENT RES	ROPOSALS TO DRILL OR TO DEEPEN OR PLUC ERVOIR. USE "APPLICATION FOR PERMIT" C-101) FOR SUCH PROPOSALS.)	5 BACK TO A 7. Lease Name or Unit Agreement Name
1. Type of Well: oc. well well well.	-	
2. Name of Operator	OTHER	STATE 27
W. A. MONCRIEF, JR.		5. Well No.
3. Address of Operator		9. Pool aams or Wildons
MONCRIEF BUILDING, N.	INTH @ COMMERCE, FT. WORTH, TH	XAS 76102 KEMNITZ LOWER WOLFCAMP
4. Well Location	90	. 660
Unit Letter ; ;	980 Feet From The SOUTH	ne and Feet From The I
Section 27	Towestab Katage	BE NMPM LEA Court
	10. Elevation (Show whether DF. RKB. 4201 GR	RT. GR. 440.)
11. Check	Appropriate Box to Indicate Nature	of Notice, Report, or Other Data
	ITENTION TO:	SUBSEQUENT REPORT OF:
		_
PERFORM REMEDIAL WORK	PLUG AND ABANDON	ALTERING CASING
TEMPORARILY ABANDON	CHANGE PLANS	ENCE DRILLING OPNS. PLUG AND ABANDONMENT
	CASIN	S TEST AND CEMENT JOB
OTHER:		
<ol> <li>Describe Proposed or Completed Op- work) SEE RULE 1103.</li> </ol>	rations (Clearly state all pertinent details, and give per	tinent dates, including estimated date of starting any proposed
7-09-97 SET CTR	9 9 10,700' spot 35' cement or	n top
	sxs @ 8000'-7760'	
7-14-97 SPOT 25	sxs @ 6000'-5760'	
7-15-97 SPOT 45	sxs @ 5022' no tag PULLED 4	965' of 5 4 casing
7-16-97 SPOT 45	sxs @ 5022'-4917' taggedsxs @ 4650'4505' tagged	
	sxs @ 1600'-1465'	0.
7-17-97 SPOT 50		¢.
	sxs 8 30'- surface	
	10 7 7 7	
INSTALL DRY HOLE CIR. HOLE WITH 1		
I servery carrily that the information above a	rue and complete to the best of my knowledge and beild.	0/5/07
SKINATURE Rahen T	M Louis The AG	ENT DATE 8/5/97 (817)
TIPE OR FRONT NAME KAREN MC	GOVERN	теленоне на. 336-72
	0	
(Thus space for State Use)	00 0	
( )Ohnnel	P. blimpan	DATE
APPROVED BY	The me	

	1625 N French Dr., Holbs, NM 88240 Phone (575) 393-6161 Fax: (575) 393-0720 District II Energy Mineral:								Form C-101 Revisol July 18, 2013	
District II 811 S. First St., Artesia,	04			ources						
Phone (575) 748-1283 District III				Oil Cons	servation I	Division			AMENDED REPORT	
District IV					ith St. Fra Fe, NM 8		30-025-20592			
APPLICA	TION FO	R PERMI	T TO DRI	LL, RE-EN	TER, DE	EPEN,	PLUGBACI	K, OR AI	DD A ZONE	
an transformation and the second s		Operator 1	Name and Address isposal, LLA					<sup>2</sup> OGRID Nu 37066	nber	
PO Box 190 Lovington, NM 88260  * Property Code State				50				30-025-20592		
				Property N State	ame 27'			11	Well No. 001	
				7. Surface Lo	cation					
	ection Townshi 27 16S	p Range 33E		Feet fit		S Line	Feet From 660	E/W Line	County	
		1		posed Botton		ition				
UL-Lot S	ection Townshi	p Range				S Line	Feet From	E/W Line	County	
				* Pool Inform	nation			Protection of the Protection o		
				Pool Name SW; Salado					Pool Code 96173	
			Add	itional Well I	nformation					
<sup>11</sup> Work Ty	уре	<sup>13</sup> Well T M		<sup>17.</sup> Cable/R R				Ground Level Elevation 4201		
16 Multip	le	17 Proposed		18 Forma	nation <sup>24</sup> Contractor <sup>26</sup> Spud Date				26. Spud Date	
N Depth to Ground	water	4505' (P)	Distance from ne	Salac anst fresh water		1	Jnknown Distance	to nonract corf	Unknown o nearest surface water	
	areor areatt mater	wen		1 Unstance	to nearest surr	accontration				
	- 190'			~2542 fo			Chistance	Greater tha		
60' -		op system in	lieu of lined pits	~2542 fe	eet		, instance			
60' - ∑We will be u	sing a closed-lo		21. Proposed	~2542 fo d Casing and	Cement Pr			Greater tha	n 1 mile	
60' - ⊴We will be us Type	sing a closed-lo Hole Size	Casing Si	21. Proposed	~2542 fo d Casing and og Weight/ft	Cement Pr Settin	g Depth	Sacks of	Greater tha	n 1 mile Estimated TOC	
60° - ∑We will be us Type Surface	Hole Size	Casing Si 13-3/8	21. Proposed ze Casir	~2542 fo d Casing and og Weight/ft 48	Cement Pr Settin 4	g Depth 14	Sacks of 37	Greater tha	n 1 mile Estimated TOC Surface In Plac	
60' - ∑We will be us Type Surface Intermed	Hole Size 17-1/2" 12-1/4"	Casing Si 13-3/8 <sup>3</sup> 9-5/8"	<sup>21.</sup> Proposed ze Casir	~2542 fo d Casing and og Weight/ft	Cement Pr Settin 4	g Depth	Sacks of	Greater tha Cement 0	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac	
60' - SWe will be us Type Surface	Hole Size	Casing Si 13-3/8° 9-5/8° 5-1/2"	<sup>21.</sup> Proposed ze Casir	~2542 fo d Casing and og Weight/ft 48 36/32 20/17	Cement Pr Settin 4 45 4965	g Depth 14 578 - 13798	Sacks of 0 37 294 70	Greater tha Cement 0	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac	
60' - ∑We will be us Type Surface Intermed	Hole Size 17-1/2" 12-1/4"	Casing Si 13-3/8° 9-5/8° 5-1/2"	<sup>21.</sup> Proposed ze Casir »	~2542 fo d Casing and bg Weight/ft 48 36/32 20/17 ht Program: /	Cement Pr Settin 4 4965 - Additional C	g Depth 14 578 13798 Comment	Sacks of 9 37/ 294 70 8	Greater tha Cement 0	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac	
60' - ∑We will be us Type Surface Intermed	Hole Size 17-1/2" 12-1/4"	Casing Si 13-3/8° 9-5/8° 5-1/2"	<sup>21.</sup> Proposed ze Casin " Casing/Cemen Enclosures: C	~2542 fo d Casing and bg Weight/ft 48 36/32 20/17 ht Program: /	Cement Pr Setting 4 4965 - Additional C Proposed W	g Depth 14 578 - 13798 Comment ellbore D	Sacks of 9 37/ 294 70 8	Greater tha Cement 0	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac	
60' - ∑We will be us Type Surface Intermed	Hole Size 17-1/2" 12-1/4"	Casing Si 13-3/8° 9-5/8° 5-1/2"	<sup>21.</sup> Proposed ze Casin " Casing/Cemen Enclosures: C	~2542 fo d Casing and og Weight/ft 48 36/32 20/17 nt Program: / Current and F d Blowout Pr	Cement Pr Setting 4 4965 - Additional C Proposed W	g Depth 14 578 - 13798 Comment ellbore D	Sacks of 0 37/ 294 70 s iagrams	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer	
60' - We will be us Type Surface Intermed Production	Hole Size 17-1/2" 12-1/4" 8-3/4"	Casing Si 13-3/8° 9-5/8° 5-1/2"	<sup>21.</sup> Proposed ze Casin , , , , , , , , , , , , , , , , , , ,	~2542 fo d Casing and og Weight/ft 48 36/32 20/17 nt Program: / Current and F d Blowout Pr essure	Cement Pr Setting 4 4965 - Additional C Proposed W	g Depth 14 578 - 13798 Comment ellbore D ogram	Sacks of ( 37) 294 70 s iagrams sure	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place	
60' - We will be us Type Surface Intermed Production Double	Hole Size 17-1/2" 12-1/4" 8-3/4" Type /Pipe/Blinds	Casing Si 13-3/8" 9-5/8" 5-1/2"	<sup>21.</sup> Proposed ze Casin " Casing/Cemer Enclosures: C <sup>22.</sup> Proposed Working Pr 3000	~2542 fo d Casing and og Weight/ft 48 36/32 20/17 nt Program: 4 Current and F d Blowout Pr essure	Cement Pr Setting 4 4965 - Additional C Proposed W	g Depth 14 578 - 13798 Comment ellbore D ogram Test Press	Sacks of ( 37) 294 70 s iagrams sure	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer	
60' - We will be us Type Surface Intermed Production Double <sup>23.</sup> 1 hereby certifi best of my know	Hole Size 17-1/2" 12-1/4" 8-3/4" Type /Pipe/Blinds fy that the inform ledge and belief.	Casing Si 13-3/8" 9-5/8" 5-1/2"	Proposed     Ze Casin     Casing/Cemer     Enclosures: C     X. Proposed     Working Pr         3000     ovc is true and con	~2542 for d Casing and og Weight/ft 48 36/32 20/17 at Program: 4 Current and F d Blowout Pr essure )	Cement Pr Setting 4 4965 - Additional C Proposed W	g Depth 14 578 13798 Comment ellbore D ogram Test Press 3000	Sacks of ( 37) 294 70 s iagrams sure	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer heron/Schaffer	
60' - Type Surface Intermed Production Double <sup>23.</sup> 1 hereby certify best of my know I further certify 19.15.14.9 (B) N	Hole Size 17-1/2" 12-1/4" 8-3/4" Type Pipe/Blinds fy that the inform ledge and belief. that I have con MAC ⊠, if app	Casing Si 13-3/8° 9-5/8" 5-1/2" sation given about the second sec	<sup>21.</sup> Proposed ze Casin " Casing/Cemer Enclosures: C <sup>22.</sup> Proposed Working Pr 3000	~2542 for d Casing and og Weight/ft 48 36/32 20/17 at Program: 4 Current and F d Blowout Pr essure )	Cement Pr Setting 4 4965 - Additional C Proposed W	g Depth 14 578 - 13798 Commente colleve D cogram Test Press 3000 OIL	Sacks of ( 37) 294 70 8 iagrams sure )	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer heron/Schaffer	
60' - SWe will be us Type Surface Intermed Production Double 23. 1 hereby certify best of my know I further certify 19.15.14.9 (B) N Signature:	Hole Size 17-1/2" 12-1/4" 8-3/4" Type /Pipe/Blinds fy that the inform ledge and belief. that I have con	Casing Si 13-3/8" 9-5/8" 5-1/2" nation given about the second sec	Proposed     Ze Casin     Casing/Cemer     Enclosures: C     X. Proposed     Working Pr         3000     ovc is true and con	~2542 for d Casing and og Weight/ft 48 36/32 20/17 at Program: 4 Current and F d Blowout Pr essure )	Cement Pr Settin 4 4965 - Additional C Proposed W revention Pr	g Depth 14 578 - 13798 Commente colleve D cogram Test Press 3000 OIL	Sacks of ( 37) 294 70 8 iagrams sure )	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer heron/Schaffer	
60° - We will be us Type Surface Intermed Production Double <sup>23.</sup> 1 hereby certify 19.15.14.9 (B) N Signature: Printed name: D	Hole Size 17-1/2" 12-1/4" 8-3/4" Type /Pipe/Blinds fy that the inform ledge and belief. that I have consolid MAC ⊠, if app 2004 5 € € 5 5	Casing Si 13-3/8° 9-5/8" 5-1/2" sation given about the second sec	Proposed     Ze Casin     Casing/Cemer     Enclosures: C     X. Proposed     Working Pr         3000     ovc is true and con	~2542 for d Casing and og Weight/ft 48 36/32 20/17 at Program: 4 Current and F d Blowout Pr essure )	Cement Pr Settin 4 4965 - Additional C Proposed W revention Pr	g Depth 14 578 13798 Comment ellbore D ogram Test Press 3000 OIL y:	Sacks of ( 37) 294 70 s iagrams sure ) CONSERVA	Greater tha	n 1 mile Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer heron/Schaffer ISION	
60° - We will be us Type Surface Intermed Production Double <sup>23.</sup> 1 hereby certify 19.15.14.9 (B) N Signature: D Tritle: Agent for	Hole Size 17-1/2" 12-1/4" 8-3/4" Type /Pipe/Blinds fy that the inform ledge and belief. that I have consolid MAC ⊠, if app Data Consolid MAC I app Data Consolid	Casing Si 13-3/8° 9-5/8" 5-1/2" ation given abo uplied with 19. plicable.	Proposed     Ze Casin     Casing/Cemer     Enclosures: C     X. Proposed     Working Pr         3000     ovc is true and con	~2542 for d Casing and og Weight/ft 48 36/32 20/17 at Program: 4 Current and F d Blowout Pr essure )	Cement Pr Setting 4 4965 - Additional C Proposed W revention Pr Approved B Title:	g Depth 14 578 13798 Comment ellbore D ogram Test Press 3000 OIL y:	Sacks of ( 37) 294 70 s iagrams sure ) CONSERVA	Greater tha	Estimated TOC Surface – In Plac Surface – In Plac 8190' – In Place Manufacturer heron/Schaffer ISION	

30-025-20592

District J 1625 N. French Dr., Hobbs, NM 88240 Phone (375) 393-6161 Fax. (375) 393-0720 District II 811 S. Fara St., Artesia, NM 88210 Phone (375) 748-1283 Fax. (575) 748-9720 District III 1600 Rio Bravos Road, Actee, NM 87410

Phone (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S St. Francis Dr., Santa Fe, NM 87505

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax. (505) 476-3462 State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

Pl Number 025-2059								
378.7620			<sup>2</sup> Pool Coo	le		2 Pool Na		
ode	2		96173	<sup>5</sup> Property 1	Name	BSW; Sa	and a second section of the second section of the	* Well Number
				State 2	:7			001
D.			* Elevation 4201*					
				" Surface ]	location			
Section 27	Township 16S	Range 33E	Lot Idn	Feet from the 1980	North/South line S	Feet from the 660	East/West line W	County Lea
		" Bo	ttom He	le Location If	Different Fror	n Surface		Annen
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>15</sup> Joint or	Infill 24	Consolidation	Code 15 C		ing WQCC Disc	harge Permit B	W-38 approva	1)
						Assation parts owned, or to owly dered Signature Danny J, Printed Nam danny/a E-mail Addr	and to a constant with an of a reductive pending agreen we constant by the division Holcomb – Agent 1 e pwllc.net ess	ener of ach a montal or orten ann or a computery peeding 4/18/201 Date for Liano Disposal TIFICATION
980'						plat was p made by 1 same is tr See 0 Date of Su Signature a	olotted from field no. ne or under my supe ne and correct to th Original Survey dated Ney nd Scal of Professional	tes of actual surveys rvision, and that the e best of my belief. June 23, 1964 attached Surveyor:
	Section 27 Section	Section Township 27 16S Section Township <sup>13</sup> Joint or Infill <sup>14</sup> ill be assigned to t 32.890964511	Section Township Range 27 168 33E <sup>10</sup> BO Section Township Range <sup>10</sup> Joint or Infill <sup>14</sup> Consolidation ill be assigned to this comple 32.8909645,-103.657613	Section       Township       Range       Lot Idn         27       16S       33E       "Bottom Ho         Section       Township       Range       Lot Idn         ** Bottom Ho       Section       Township       Range       Lot Idn         ** Joint or Infill       ** Consolidation Cole       ** Consolidation Cole       ** Consolidation Cole       ** Consolidation Cole         ill be assigned to this completion until 4       32.8909645103.6576157 NAD8	a.       * Operator         Liano Dispos       * Surface I         Section       Township       Range       Lot Idn       Feet from the         27       16S       33E       1980       *         Bottom Hole Location If       Section       Township       Range       Lot Idn       Feet from the         Section       Township       Range       Lot Idn       Feet from the         ** Joint or Infill       ** Consolidation Code       ** Order No.       (Pend)         **Ill be assigned to this completion until all interests have       32.8909645,-103.6576157 NAD83 per OCD onl       Section         **Ill be assigned to this completion until all interests have       Section       Section       Section         **Ill be assigned to this completion until all interests have       Section       Section       Section         **Ill be assigned to this completion       Section       Section       Section       Section         **Ill be assigned to this       Section       Section       Section       Section       Section         **Ill be assigned to this       Section       Section       Section       Section       Section         **Ill be assigned       Section       Section       Section       Section       Section       Sec	a.       * Operator Name Liauo Disposal, LLC         Section       Township       Range       Lot Idn       Feet from the 1980       North/South line         27       16S       33E       1980       S         ** Bottom Hole Location If Different From Section         Township       Range       Lot Idn       Feet from the North/South line         19 Joint or Infill       ** Consolidation Code       ** Order Ne. (Pending WQCC Disc         ill be assigned to this completion until all interests have been consolidated 32.8909645103.6576157 NAD83 per OCD online well file	a.       **Operator Name Liano Disposal, LLC         **Surface Location       **Surface Location         Section       Township       Range       Lot Idn       Feet from the 1980       North/South line       Feet from the 660         27       168       33E       Lot Idn       Feet from the 1980       North/South line       Feet from the 660         28       Bottom Hole Location If Different From Surface       Feet from the North/South line       Feet from the Feet from the         10* Jeint or Infill       **Consolidation Code       **Order No.       (Pending WQCC Discharge Permit E         11/ be assigned to this completion until all interests have been consolidated or a non-standa 32.8909645.103.6576157 NAD83 per OCD online well file       **O         12       Image       Image       Image       Image       Image         13/ be assigned to this completion until all interests have been consolidated or a non-standa 32.8909645.103.6576157 NAD83 per OCD online well file       Image       Image         Image       Image       Image       Image       Image       Image         Image       Image       Image       Image       Image       Image         Image       Image       Image       Image       Image       Image         Image       Image       Image       Image	A

Submit 1 Copy To Appropriate District State of New Me	
District 1 - (575) 393-6161 Energy, Minerals and Natu	WELL API NO.
1625 N. French Dr., Hobbs, NM 88240           District II - (575) 748-1283           811 S. First St., Artesia, NM 88210           OIL CONSERVATION	
811 S. First St., Artesia, NM 88210 District III - (505) 334-6178 1220 South St. Fran	5. Indicate Type of Lease
1000 RIO BIEZOS RO., AZICC, NM STATU	305 State Oil & Gas Lease No.
District IV = (505) 476-3460 Santa FC, NM 1220 S. St. Francis Dr., Santa FC, NM 87505	5. Indicate Type of Lease       305       APR         5. Indicate Type of Lease       STATE       STATE       Gas Lease No.
Intervention of the state	7. Lease Name or Unit Agreement Name
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FO	DR SUCH State 27
1. Type of Well: Oil Well 🔲 Gas Well 🛛 Other - PxA Well	Re-entry 8. Well Number 1
2. Name of Operator	9. OGRID Number
Llano Disposal, LLC	370661 10. Pool name or Wildcat
<ol> <li>Address of Operator</li> <li>P.O. Box 190, Lovington, NM 88260</li> </ol>	BSW; Salado
4. Well Location	
Unit Letter L : 1980 feet from the Sou	
Section 27 Township 16S	Range 33E NMPM Lea County
11. Elevation (Show whether DR 4201	
4201	UL
12. Check Appropriate Box to Indicate N	lature of Notice, Report or Other Data
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON	
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:
OTHER: Re-entry to run CBL, CNL and caliper log	pertinent details, and give pertinent dates, including estimated date
of starting any proposed work). SEE RULE 19.15.7.14 NMA	C. For Multiple Completions: Attach wellbore diagram of
proposed completion or recompletion.	
In accordance with discussions with OCD Environmental Bureau, OCE P&A well to inspect casing for possible conversion to a brine supply w	ell pending WQCC Discharge Permit BW-38 approval:
1) Back drag/level location, set anchors, dig out around existing PxA r	narker, MI welder, cut off PxA marker, reveal good 13-3/8" and
9-5/8" casing, install new casing (if necessary) and well head at gro	und level.
<ol> <li>MIRU pulling unit, NU BOP, unload and tally 2-7/8" workstring, se and stripping head, RIH with 8-3/4" skirted MT bit, bit sub, four 4-3</li> </ol>	3/4" DCs and 2-7/8" workstring, drill cement plug #7 (surface to
30'), plug # 6 (465' - 198') and plug #5 (1600' - 1465') utilizing cl	osed loop system.
3) Tag plug #5 at 4505', circulate hole clean, close BOP, test casing to	300#, POOH & LD 2-7/8" workstring, DCs, bit sub and bit.
<ol> <li>MIRU WL, run CBL, CNL and casing caliper log from base of salt</li> <li>ND BOP, install B-1 adaptor, secure and close in well, RDMO pull</li> </ol>	at approximately 2606' to surface, RDMO WL.
<ol> <li>ND BOP, install B-1 adaptor, secure and close in wen, KDMO pun</li> <li>Submit CBL, CNL and caliper log to OCD Environmental Bureau (</li> </ol>	SF) and OCD District 1 (Hobbs) to determine if well is suitable for
brine well service. Suspend further well work until additional perm	itting is approved.
Spud Date: Rig Release D	ate:
- Landre - Contraction - Contr	
I hereby certify that the information above is true and complete to the h	sest of my knowledge and belief
Thereby certify that the information above is true and complete to the	As of my knowledge and benefit
SIGNATURE ARtoliomb TITLE_Age	ent for Llano Disposal, LLCDATE4/18/2018
Type or print name Danny J. Holcomb E-mail addre	ss: danny@pwllc.net PHONE:806-471-5628
Type or print nameDanny J. Holcomb E-mail addre For State Use Only	01
	Petroleum Engineer DATE 04/26/18
APPROVED BY:	Petroleum Engineer DATE 04/26/18
Conditions of Approval (II any):	
Attac	chment I