22. Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closure robelief. I also certify that the closure complies with all applicable closure requirem	
Name (Print): Richard Wright	Title: Production Superintendent
Signature: Richard L. Whight	Date: December 23, 2013
e-mail address: rwright@cazapetro.com	Telephone: (432) 682-7472 (x-1006)

Start Leking Environmental Specialist

NMOCD-0157RICT 17/02/14

Form C-144.

...Oil Conservation Division...

-Page 6 of 6-

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505\(\overline{\text{Dis6}}\)-652013

December 23, 2013

RECEIVED

Mr. Geoffrey Leking NMOCD District 1 1625 French Drive Hobbs, New Mexico 88240 Via E-Mail and Mail

RE:

Caza Operating, Lennox "32" State 2H, API: 30-025-40451, Unit A Section 32,

T22S, R35E, Lea County, Temporary Pit Closure Report

Dear Geoffrey:

In keeping with the requirements of the approved C-144 closure plan for the temporary pit, this report includes the following information listed in Part 21 of the C-144 form:

Required Information	Location in Submission
Proof of closure Notice (to surface owner and Division)	Attachment 1
Proof of Deed Notice (required for on-site closure	State Land (no deed)
Plot Plan (for on-site closures and temporary pits)	C-105 and Attachment 2
Confirmation Sampling Analytical Results	Not Applicable
Waste Material Sampling Analytical Results (required for on-	Attachment 3
site closure)	
Disposal Facility Name and Permit Number	Not Applicable
Soil Backfilling and Cover Installation	Attachment 4
Re-vegetation Application and Seeding Technique	Attachment 5
Updated C-144 form	Attachment 6
Site Reclamation (Photo Documentation)	To follow later

On Site Closure Location (center of on-site burial area):

Latitude: N 32.354829°

Longitude: W -103.382782° (NAD27)

We understand that OCD cannot formally release the site under the current Rule until we document re-vegetation. As shown above, please expect documentation of burial marker and re-vegetation when it is established in accordance with subsections F and H of 19.15.17.13 NMAC.

Sincerely,

R.T. Hicks Consultants, Ltd.

Dale Littlejohn

Geologist

Copy: Caza Operating, LLC

New Mexico State Land Office

ATTACHMENT 1

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

September 9, 2013

Mr. Geoffrey Leking NMOCD District 1625 French Drive Hobbs, New Mexico 88240 Via E-mail and Regular Mail

RE: Caza Operating, Lennox 32 State No. 2H C-144 Permit Modification

Dear Geoffrey:

On behalf of Caza Operating, enclosed are:

- 1. A C-144 Form to modify the existing application (approved on January 7, 2013) to comply with the new Rule and
- 2. Updated (and recent OCD-approved) closure plans that are consistent with the new Rule.

The site-specific write-up, figures, plates, and appendix are unchanged from the earlier approved plan. We anticipate initiation of closure activities in the next few weeks.

Please contact me if you have any questions of need additional information.

Sincerely,

R.T. Hicks Consultants

Dale T. Litterson

Dale T. Littlejohn

Copy: Richard Wright, Caza Operating, LLC

Terry Warnell, NM State Land Office

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

September 25, 2013

Mr. Geoffrey Leking NMOCD District 1 1625 French Drive Hobbs, New Mexico 88240 Via E-mail

RE: Caza (

Caza Operating, Lennox "32" State 2H, API: 30-025-40451, Unit A Section 32 T22S

R35E, In-place Burial Notice

Dear Geoffrey:

The "In-place Burial" closure plan for the above referenced pit was approved on January 7, 2013 by the NMOCD, prior to the establishment of the June 2013 pit rule. Construction and operation of the temporary pit has been conducted to satisfy the rule under which it was approved as well as the June 2013 rule. A modified closure plan, prepared using the June 2013 rule was submitted to the NMOCD on September 11, 2013 and approved on September 16, 2013.

On August 16, 2013, once the waste in the pit had dried enough to allow sampling, a five-point composite sample was recovered and stabilized with the available mixing soil at a 3:1 ratio. Laboratory analyses were performed to determine the concentrations of the parameters listed in Table II of 19.15.17.13 NMAC.

The attached laboratory report of the stabilized waste sample (drilling waste mixed with the clean soil at a 3:1 ratio¹) and the table below shows that none of the constituents exceed the standards set forth in the Rule. The calculations suggest that the stabilized waste will meet the criteria for in-place burial at a stabilization ratio of approximately 1.63:1 with TPH by EPA method 418.1 being the limiting constituent.

Summary Comparison of Laboratory Results to Pit Rule Burial Standards	Sampling Date	Laboratory Results of Stabilized Waste Material (mg/kg)	19.15.17.13 NMAC Table II Depth to GW below waste > 100 Feet (mg/kg)	Estimated Maximum Mix Ratio Required To Achieve Pit Rule Burial Standard (must be <3:1)
GRO + DRO + MRO (EPA Method 8015M)	8/16/13	156	1,000	0.47 : 1
TPH (EPA Method 418.1)	8/16/13	1,360	2,500	1.63 : 1
Chloride (EPA Method 300.0)	8/16/13	15,400	80,000	0.58 : 1
Benzene (EPA Meth. 8021B or 8260B)	8/16/13	0.546	10	0.16 : 1
Total BTEX (EPA Meth. 8021B or 8260B)	8/16/13	19.3	50	1.16 : 1

^{1 (5)} The operator shall collect, at a minimum, a five point composite of the contents of the temporary pit or drying pad/tank associated with a closed-loop system to demonstrate that, after the waste is solidified or stabilized with soil or other non-waste material at a ratio of no more than 3:1 soil or other non-waste material to waste, the concentration of any contaminant in the stabilized waste is not higher than the parameters in Table II of 19.15.17.13 NMAC.

September 25, 2013 Page 2

RT Hicks Consultants is concerned that TPH by 418.1 may not be an accurate representation of actual petroleum hydrocarbons present in the waste as several mud additives and/or lose circulation materials are also detectable by EPA method 418.1. In order to provide additional data for this and future evaluations, we have also analyzed the stabilized waste by EPA method 8015B extended to included carbon numbers up to C35 (GRO+DRO+MRO). This analysis should include a complete range of purge-able and extractable hydrocarbons without also including the non-petroleum hydrocarbons that are measured by method 418.1.

Sincerely,

R.T. Hicks Consultants

Dale Littlejohn

Copy: Caza Operating, LLC

Dale T. Litteroln

New Mexico State Land Office

PO Box 1148

Santa Fe, NM 87504-1148

CERTIFIED MAIL - RETURN RECIEPT REQUEST

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

September 25, 2013

Mr. Geoffrey Leking NMOCD District 1 1625 French Drive Hobbs, New Mexico 88240 Via E-mail

RE: Caza Operating, Lennox "32" State 2H, API: 30-025-40451, Unit A Section 32 T22S

R35E, In-place Burial Notice

Dear Geoffrey:

was approved as well June 2013 rule was s September 16, 2013. On August 16, 2013, point composite samp 3:1 ratio. Laboratory parameters listed in 7 The attached laborate the clean soil at a 3:1 exceed the standards waste will meet the ci 1.63:1 with TPH by E 2. Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 1. Article 2. Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 1. Article 2. Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 1. Article 2. Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 2. Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 3:1 ratio. Laboratory parameters listed in 7 3:1 Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 3:1 Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 3:1 Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 3:1 Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 3:1 Article 3:1 composite samp 3:1 ratio. Laboratory parameters listed in 7 3:1 Article 3:1 composite samp 3:1 composite samp 3:1 Article 3:1 composite samp 3:1	R: COMPLETE THIS SENDIE THE SENDI	so complete desired. In the reverse to you. the mailpiece,	A. Signature X B. Received by Frinted Name) D. Is delivery address different from if YES, enter delivery address 3. Service Type Certified Mail Registered Insured Mail C.O.D. 4. Restricted Delivery? (Extra Fee	Agent Addressee C. Date of Delivery In item 1? Yes below: No S-Mail Receipt for Merchandise
Summary Comparison of Labo	3811, February 2004	Domestic	Return Receipt	102595-02-M-1540
Results to Pit Rule Burial Stan	Laboratory	Results Denth	to Cill had a second	
GRO + DRO + MRO (EPA Method 8015M) TPH (EPA Method 418.1) Chloride (EPA Method 300.0) Benzene (EPA Meth. 8021B or 8260B) Total BTEX (EPA Meth. 8021B or 8260B) (5) The operator shall collect, at a mit pad/tank associated with a closed-loop other non-waste material at a ratio of ne contaminant in the stabilized waste is necessary.	system to demonstrate that o more than 3:1 soil or other.	OSIL DE Restricte (Endorsen Total Politicus Sent To	Certified Fee In Receipt Fee Inent Required) Id Delivery Fee Inent Required) Instage & Fees	3/2-100
		or PO Be	ia, ZIP+4 Santa Fe	See Reverse for incirretions
		PS For	n 8800, August 2003	

From: "Leking, Geoffrey R, EMNRD" < Geoffrey R. Leking@state.nm.us> Subject: Caza Lennox "32" State 2H Temporary Pit Waste Stabilization

Date: September 30, 2013 8:24:06 AM CDT

To: "Randall Hicks (r@rthicksconsult.com)" <r@rthicksconsult.com>

Cc: "Dale Littlejohn (dale@rthicksconsult.com)" <dale@rthicksconsult.com>, "Martin,

Ed, EMNRD" <ed.martin@state.nm.us>

Randy

The five point composite waste stabilization sample data as submitted in the correspondence of September 25, 2013 meets the requirements of 19.15.17.13 NMAC. Caza is approved to proceed with closure field activities.

Geoffrey Leking Environmental Specialist NMOCD-Hobbs 1625 N. French Drive Hobbs, NM 88240

Office: (575) 393-6161 Ext. 113

Cell: (575) 399-2990

email: geoffreyr.leking@state.nm.us

ATTACHMENT 2

Submit To Appropr Two Copies			s OC) _{En}		State of Ne Minerals and				cources			-		Rev	Fo	rm C	
Two Copies <u>District I</u> 1625 N. French Dr. <u>District II</u>	Hobbs, 1	1M/88240	00	.43 .13							f	1. WELL	API N		-	4045		7
811 S. First St., Arte <u>District III</u> 1000 Rio Brazos Re		88210 11 11	102	7/2		Conservat					f	2. Type of Le						
Dietrict IV			1			20 South St Santa Fe, N				r.	-	3. State Oil &		Ease No		ED/INDI		
1220 S. St. Francis						ETION RE				LOG	-				VC	7908)	
4. Reason for fili		LETIG	NO VIC	KECC	/IVIP LI	ETIONINE	O	<u> </u>	IND	LOG	\dashv	5. Lease Name			ment Na	íme		<u> </u>
	ON DEI	P/1 D/T /E:	II in hove	#1 throu	ah #21 f	or State and Fee	well	s only)			-	6. Well Numb		State				
☐ C-144 CLOS	URE A	ITACHM	1ENT (Fi	II in boxe	s #1 thro	ough #9, #15 Da	te Rig	g Relea	sed a	nd #32 and/	-	o. Wen Nume	2F		/			
#33; attach this ar		at to the C	-144 closu	re report	in accor	dance with 19.1	5.17.	13.K N	MAC	C)								
∑ NEW \	VELL [□ WORK	OVER [DEEPI	ENING	□PLUGBACE		DIFFE	REN	T RESERV	OIR							
8. Name of Opera	tor Ca	za Op	erating	a. LLC	:/							9. OGRID	2490	99				
10. Address of O				-	_							11. Pool name	or Wi	ldcat				
200 N. I			ite 155			, Texas 7						Rock I						
12.Location	Unit Lti		tion	Towns	-	Range	Lot		_	Feet from th	1e	N/S Line		from the	+		County	$-\mathcal{H}$
Surface:	Α	32		22 :		35 E	_		_	330	-	N		60	†	<u> </u>	<u>Lea</u>	
13. Date Spudded	P	32 Date T.D.		22 3		35 E Released	L		16	4956	hete	N (Ready to Prod		<u> 506</u>		ions (DF	Lea and RK	
2/29/12		3/29/1		1	4/2/1	3				Date Compi		(iteady to 1 rod			T, GR, e		3525	
18. Total Measure	ed Depth	of Well		19. F	_	k Measured Dep	th		20.		onal	Survey Made?				c and Ot		s Run
15,914 22. Producing Int	erval(s),	of this co	mpletion -	Top, Bot	15,80 tom, Na			j		Yes				CNL,L	וט, וט.	LL,Son	iic	
			•					_										
23.						ING REC	OR	D (R			ing			2000	4.1	10111111	DV 11 1 12	
CASING SIZ 13-3/8	ZE	-	IGHT LB.		720	DEPTH SET		17	-1/2	LE SIZE		CEMENTIN 620 sks	G KEC	ORD		10UNT 225 sk		-
9-5/8) lb J &		492				2-1/4			4197 sks				135 sk		
7-0		29.0	lb P		11,5	35 ft		8-	-3/4	11		1300 sks			TOC	4900'	CBL	
24.		<u> </u>			LINE	ER RECORD				T	25.	T	UBIN	IG REC	ORD			
SIZE	TOP			TTOM		SACKS CEM	ENT	SCR	EEN		SIZ			PTH SE		PACKI	ER SET	
4-1/2	10,7	710	15	5,914		225		-					+-					
26. Perforation	record (interval, s	ize, and nu	ımber)		l		27.	ACI	D, SHOT,	FR.	ACTURE, CE	MEN	T, SQU	EEZE,	ETC.		
Lateral-15,80			-									AMOUNT A						
Vertical-10,54	15-50;	10467-	-72; 103	119-24	(2spf)	.42" EHD		15,80	06-11	1,688		679 bbls 15%		84K 40	70 +68	6K 20/40	0+1,092	<u>:K</u>
(30 holes)								10,5	50-1	0319		20/40 opti pr 2 bbls 15% h		K 40/70-	+99K 20	0/40+137	′K 20/4	0 opti
28.							PR	ODU	JCT	TION								$\overline{}$
Date First Produc	tion	_	Produc	tion Met	hod (Flo	wing, gas lift, p	umpir	ig - Siz	e ana	type pump)		Well Status	(Prod	or Shut-	-in)			
5-28-201						Pump						Produ						
Date of Test 7-2-2013	Hour 29	s Tested		ioke Size N/A		Prod'n For Test Period		1	Вы 04	. 1		- MCF 07	4	ter - Bbl. 37		Gas - C	oil Ratio •	
Flow Tubing		ng Pressur		lculated :	74-	Oil - Bbl.				MCF		Water - Bbl.			vity - Al	PI - (Cori		
Press. 250	55	15 1 1C33U1		our Rate		334			337			444		1	.6 Cor		,,	
29. Disposition of	Gas (So	ld, used fo	or fuel, ver	ited, etc.)								I	30. To	est Witne	ssed By			
Sold													Je	errod N	lorton			
31. List Attachme Logs, Wel		Scho	matic	Direc	tional	L C-102 (_14	∩⊿										
32. If a temporary	pit was	used at th	e well, att	ich a plat	with the	location of the	temp	orary p	it.			· · · · · · · · · · · · · · · · · · ·						
33. If an on-site b	urial was	used at t	he well, re	port the e	xact loc	ation of the on-s	ite bu	ırial:										\dashv
I hereby certif	y that t	he infor	mation	shown o			forn	n is tr	ue a	nd comple	ete i	Longitude to the best o	f my i	knowled	dge and	NAI d belief	D 1927	1983
Signature /	ila	not -	l.W)	igh		rinted Name Rich	ard	L. V	Vriç	ght Titl	e (peration	s Ma	anage	er	Date	7/5/20	013
E-mail Addres	s rwr	ght@	cazapi	etro.c	om							1/						_/
												11		MIO	V N	A 20	113'	T
											Y			IAC	A M	(d) 6.		1

INSTRUCTIONS

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

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

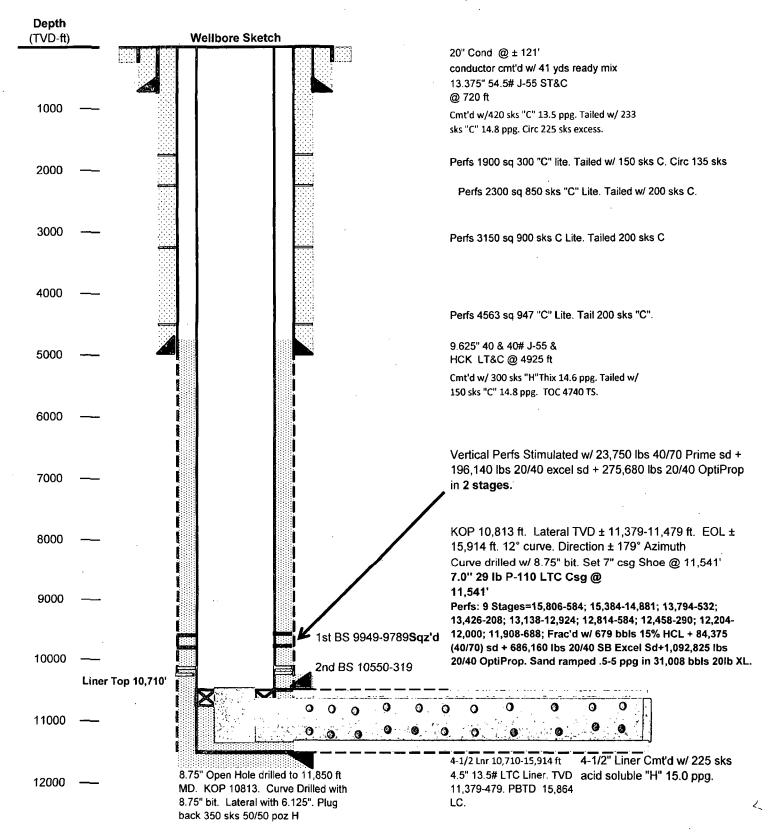
Southeas	tern New Mexico	Northy	vestern New Mexico
T. Anhy Castile 1390	T. Canyon	T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. Silurian	T. Menefee	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson	T. Mancos	T. McCracken
T. Glorieta	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger	Base Greenhorn	T.Granite
T. Blinebry	T. Gr. Wash	T. Dakota	
T.Tubb	T. Delaware Sand 8338	T. Morrison_	
T. Drinkard	T. Bone Springs 8734	T.Todilto	
T. Abo	T. Rustler 1932	T. Entrada	
T. Wolfcamp 11,435	T. Bell Canyon 5839'	T. Wingate	
T. Penn	T. 2nd Bone Springs 10314	T. Chinle	
T. Cisco (Bough C)	T. 3rd Bone Springs 11,220	T. Permian	

From	То	Thickness In Feet	Lithology	Fro	m	То	Thickness In Feet	Lithology
			,					
<u> </u> 								
	!				İ		'	
							,	
				}				
						Ì		

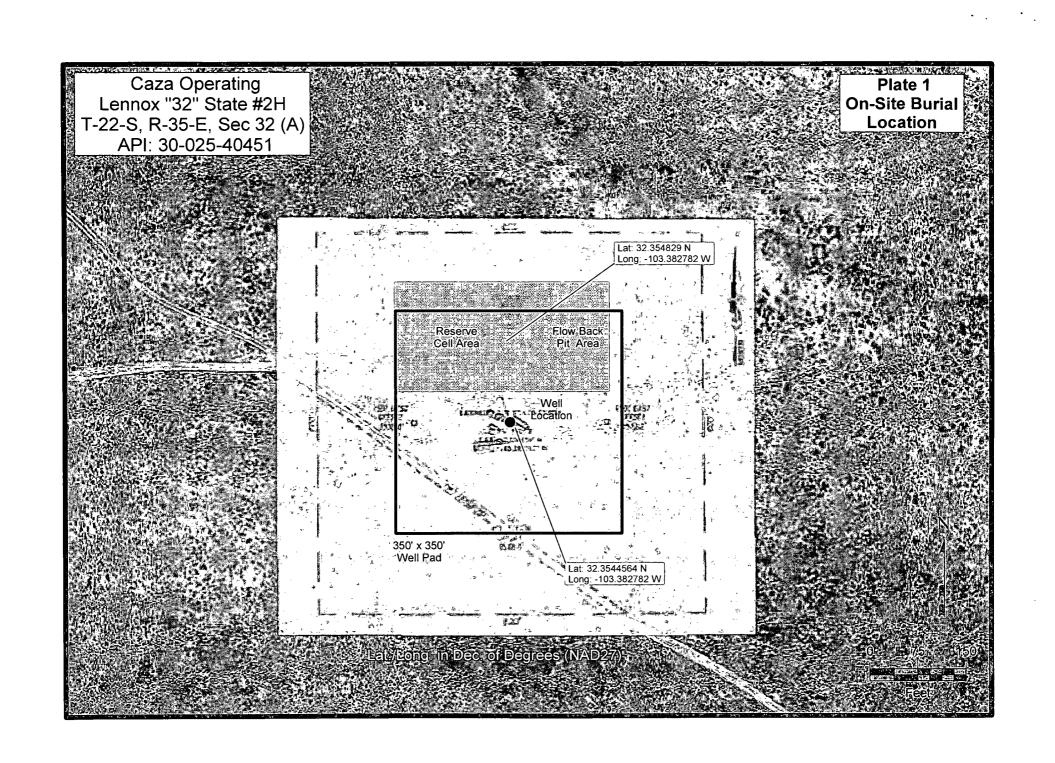
Lennox 32 State # 2H

Location: Section 32_T22S_R35E_Lea County, New Mexico





•															
Submit To Appropria Two Copies	ate District Of	ffice		•	State of No	ew N	1exico					-			orm C-105
District I 1625 N. French Dr.,	Hobbs, NM 8	8240	En	ergy,	Minerals an	d Na	tural Re	esources		1. WELL	ΔΡΙΝ	NO.	Re	vised A	ugust 1, 2011
District II 811 S. First St., Arter	sia, NM 8821	0		O	il Conserva	ition	Divisio					····	30-	025-40	1451
District III 1000 Rio Brazos Rd.	, Aztec, NM 8	37410	j		20 South S					2. Type of L		☐ FEE		ED/IND	IAN .
District IV 1220 S. St. Francis D	r., Santa Fe, I	NM 87505			Santa Fe, 1					3. State Oil					
			PECC	ZNADI	ETION RE) I OG						V	O-7969
4. Reason for filin		TION OI	· NEOC	<u> </u>	LIIONINL	.1 01	VI AIVE	-		5. Lease Nan	CHARLEST COLUMN	A NAME OF THE PARTY OF THE PART	SERVICE SPECIFICA		
□ COMPLETIC	ON REPOR	T (Fill in bo	kes #1 thro	ugh #31	for State and Fe	ee well:	s only)			6. Well Num	ber:			Lennox	"32' State
C-144 CLOSU									or			3	2Н		
7. Type of Comple	etion:				□PLUGBAC				OIR	R DOTHER					
8. Name of Operat						<u> </u>	21112			9. OGRID		249099	2		
10. Address of Op	erator		Caza Oper	ating, L	LC					11. Pool name	or W		9		
12.Bocation	Unit Ltr	Section	Town	ship	Range	Lot		Feet from the	ne	N/S Line	Feet	from the	E/W I	Line	County
Surface:															
BH:	T 14 Date 7	F.D. Darabas	Tir	D-4- D:	. Deleged		Lic	Data Carrel		1 (Deady to Dea	4		7. Flavor	in and (DE	and DVD
13. Date Spudded		T.D. Reached				/2/13				l (Ready to Pro	,	R	T, GR, e	etc.)	and RKB,
18. Total Measure	d Depth of V	Vell	19.	Plug Ba	ck Measured De	pth	20.	Was Directi	ona	al Survey Made	?	21. Typ	e Electr	ic and Of	ther Logs Run
22. Producing Inte	rval(s), of th	nis completion	ı - Top, Bo	ttom, N	ame		I								
23.				CAS	SING REC	OR	D (Rep	ort all str	ing	gs set in w	ell)				
CASING SIZ	Е	WEIGHT L	B./FT.		DEPTH SET		HC	DLE SIZE		CEMENTIN	IG RE	CORD	Al	MOUNT	PULLED
				 		1									
										<u> </u>					
24.				LIN	ER RECORD			T	25.		rubin	NG REC	ORD		
SIZE	TOP		BOTTOM		SACKS CEM		SCREE	N	SIZ			EPTH SE		PACK	ER SET
					 						-				
26. Perforation r	ecord (inter	val, size, and	number)				27. AC	ID, SHOT,	FR.	ACTURE, CI	EMEN	IT, SQU	EEZE,	ETC.	
ļ							DEPTH	INTERVAL		AMOUNT A	AND K	IND MA	TERIAI	USED	
		•													
28.				1 1 (5)			ODUC'			Luz n.c.	/D				
Date First Product	ion	Proc	luction Me	inod (F1	owing, gas lift, p	oumpin	g - Size an	id type pump)		Well Statu	s (Proc	a. or Shut	-in)		
Date of Test	Hours Te	sted	Choke Size	;	Prod'n For Test Period		Oil - Bb	·	Ga	s - MCF		ater - Bbl.		Gas - C	Dil Ratio
Flow Tubing	Casing Pr		Calculated	24-	Oil - Bbl.		Gas	- MCF		Water - Bbl.		Oil Gra	vity - A	PI - <i>(Cor</i>	r.)
Press. 29. Disposition of	Gas (Sold +		Hour Rate	,	<u></u>	_			\perp	<u></u>	<u> </u>	est Witne	essed Ru	,	
<u>_</u> .	•			<u></u>					_						
31. List Attachmer	nts	-					-								
32. If a temporary	•		•				٠.			SEE ATTA	CHED				
33. If an on-site bu	rial was use	d at the well,	report the	exact lo	cation of the on-	site bu	rial:			<u> </u>					
I hereby certify	that the i	informatio	n shown	on bot	h sides of this	s forn	is true	Latitud and comple	de N ete	N 32.354829° 1 to the best o	ongitu of mv	ide W -10 knowlei)3.38278 dge an	32° NA d beliei	AD 1927 f
1		Litte			Printed Name <u>Dale</u>	-							_	11-2	
E-mail Address	s dale@	nthicksco	nsult.cor	n											



ATTACHMENT 3



August 27, 2013

DALE LITTLEJOHN
R T HICKS CONSULTANTS
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE, NM 87104

RE: LENNOX #2H PIT

Enclosed are the results of analyses for samples received by the laboratory on 08/16/13 14:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

R T HICKS CONSULTANTS

Project: LENNOX #2H PIT

Reported:

901 RIO GRANDE BLVD SUITE F-142

Project Number: NONE GIVEN

27-Aug-13 14:25

ALBUQUERQUE NM, 87104

Project Manager: DALE LITTLEJOHN

Fax To: NONE

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
STABILIZED CUTTINGS	H301960-01	Soil	16-Aug-13 10:15	16-Aug-13 14:37

Cardinal Laboratories

*=Accredited Analyte

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

Celey & Keine



R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Project: LENNOX #2H PIT

Reported: 27-Aug-13 14:25 Project Number: NONE GIVEN

Project Manager: DALE LITTLEJOHN

Fax To: NONE

STABILIZED CUTTINGS

H301960-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
		Cardina	l Laborat	ories					
Inorganic Compounds									
Chloride	15400	16.0	mg/kg	4	3082011	AP	21-Aug-13	4500-C1-B	
Organic Compounds				· · · · · · · · · · · · · · · · · · ·					
TPH 418.1	1360	100	mg/kg	10	3082404	CK	27-Aug-13	418.1	
Volatile Organic Compounds by EPA Me	thod 8260B								S-04
Benzene*	0.546	0.050	mg/kg	50	3082304	MS	23-Aug-13	8260B	
Toluene*	5.26	0.050	mg/kg	50	3082304	MS	23-Aug-13	8260B	
Ethylbenzene*	2.53	0.050	mg/kg	50	3082304	MS	23-Aug-13	8260B	
Total Xylenes*	11.0	0.150	mg/kg	50	3082304	MS	23-Aug-13	8260B	
Total BTEX	19.3	0.300	mg/kg	50	3082304	MS	23-Aug-13	8260B	
Surrogate: Dibromofluoromethane		91.5 %	61.3-	142	3082304	MS	23-Aug-13	8260B	
Surrogate: Toluene-d8		134 %	71.3-	129	3082304	MS	23-Aug-13	8260B	
Surrogate: 4-Bromofluorohenzene		267 %	65.7-	141	3082304	MS	23-Aug-13	8260B	
Petroleum Hydrocarbons by GC FID									
GRO C6-C10	25.3	10.0	mg/kg	1	3082008	DW	21-Aug-13	8015B	
DRO >C10-C28	112	10.0	mg/kg	1	3082008	DW	21-Aug-13	8015B	
EXT DRO >C28-C35	18.5	10.0	mg/kg	1	3082008	DW	21-Aug-13	8015B	
Surrogate: 1-Chlorooctane		115 %	65.2-	140	3082008	DW	21-Aug-13	8015B	
Surrogate: 1-Chlorooctadecane		149 %	63.6-	154	3082008	DW	21-Aug-13	8015B	

Cardinal Laboratories *=Accredited Analyte

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

Celey D. Keene



R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104

Project: LENNOX #2H PIT

Reported: 27-Aug-13 14:25 Project Number: NONE GIVEN

Project Manager: DALE LITTLEJOHN

Fax To: NONE

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3082011 - 1;4 DI Water										
Blank (3082011-BLK1)				Prepared &	Analyzed:	20-Aug-13				
Chloride	ND	16.0	mg/kg							
LCS (3082011-BS1)				Prepared &	: Analyzed:	20-Aug-13				
Chloride	400	16.0	mg/kg	400		100	80-120		-	
LCS Dup (3082011-BSD1)				Prepared &	Analyzed:	20-Aug-13				
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

Cardinal Laboratories *=Accredited Analyte

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

Celeg & Keine



R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 Project: LENNOX #2H PIT

Reported: 27-Aug-13 14:25

Project Number: NONE GIVEN ALBUQUERQUE NM, 87104

Project Manager: DALE LITTLEJOHN

Fax To: NONE

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3082404 - Solvent Extraction										
Blank (3082404-BLK1)				Prepared &	Analyzed:	27-Aug-13		*		
TPH 418.1	ND	100	mg/kg							
LCS (3082404-BS1)				Prepared &	k Analyzed:	27-Aug-13	1			
TPH 418.1	5390	100	mg/kg	5000		108	80-120			
LCS Dup (3082404-BSD1)				Prepared &	k Analyzed:	27-Aug-13	<u> </u>			
TPH 418.1	5520	100	mg/kg	5000		110	80-120	2.46	20	

*=Accredited Analyte Cardinal Laboratories

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

Celey D. Keene

%REC



Analytical Results For:

R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 Project: LENNOX #2H PIT

Reported:

Reporting

Project Number: NONE GIVEN

Source

27-Aug-13 14:25

RPD

ALBUQUERQUE NM, 87104

Project Manager: DALE LITTLEJOHN

Fax To: NONE

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Cardinal Laboratories

		Reporting		Spike	Source		/orche		KI D	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3082304 - Volatiles										
Blank (3082304-BLK1)				Prepared: 2	22-Aug-13	Analyzed: 2	23-Aug-13			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: Dibromofluoromethane	0.527		mg/kg	0.500		105	61.3-142			
Surrogate: Toluene-d8	0.514		mg/kg	0.500		103	71.3-129			
Surrogate: 4-Bromofluorobenzene	0.516		mg/kg	0.500		103	65.7-141			
LCS (3082304-BS1)				Prepared: 2	22-Aug-13 A	Analyzed: 2	23-Aug-13			
Benzene	2.14	0.050	mg/kg	2.00		107	76.8-122			
Foluene Foluene	2.12	0.050	mg/kg	2.00		106	73.1-129			
Ethylbenzene	2.07	0.050	mg/kg	2.00		103	72.8-128			
n+p - Xylene	4.16	0.100	mg/kg			è	69.4-129			
Total Xylenes	6.21	0.150	mg/kg	6.00		103	72-127			
o-Xylene	2.05	0.050	mg/kg	2.00		102	70.3-126			
Surrogate: Dibromofluoromethane	0.518		mg/kg	0.500		104	61.3-142			
Surrogate: Toluene-d8	0.504		mg/kg	0.500		101	71.3-129			
Surrogate: 4-Bromofluorobenzene	0.504		mg/kg	0.500		101	65.7-141			
LCS Dup (3082304-BSD1)				Prepared: 2	22-Aug-13 A	Analyzed: 2	23-Aug-13			
Benzene	2.06	0,050	mg/kg	2.00		103	76.8-122	3.91	18.7	
Toluene	2.06	0.050	mg/kg	2.00		103	73.1-129	2.93	19.4	
Ethylbenzene	1.99	0.050	mg/kg	2.00		99.7	72.8-128	3.59	21.8	
m+p - Xylene	4.03	0.100	mg/kg				69.4-129	3.08	25.3	
o-Xylene	1.99	0.050	mg/kg	2.00		99.3	70.3-126	3.11	23.6	
Total Xylenes	6.02	0.150	mg/kg	6.00		100	72-127	3.09	23.2	
Surrogate: Dibromofluoromethane	. 0.504		mg/kg	0.500		101	61.3-142			
Surrogate: Toluene-d8	0.508		mg/kg	0.500		102	71.3-129			
Surrogate: 4-Bromofluorobenzene	0.512		mg/kg	0.500		102	65.7-141			

*=Accredited Analyte Cardinal Laboratories

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

Celeg D. Keine



R T HICKS CONSULTANTS

Project: LENNOX #2H PIT

Reported:

901 RIO GRANDE BLVD SUITE F-142

Project Number: NONE GIVEN

Project Manager: DALE LITTLEJOHN

27-Aug-13 14:25

ALBUQUERQUE NM, 87104

Fax To: NONE

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

	n .	Reporting		Spike	Source	0/555	%REC	D00	RPD	N.
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3082008 - General Prep - Organics								<u> </u>		
Blank (3082008-BLK1)				Prepared &	Analyzed:	20-Aug-13	3			
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	47.2		mg/kg	50.0		94.3	65.2-140			
Surrogate: 1-Chlorooctadecane	55.1		mg/kg	50.0		110	63.6-154			
LCS (3082008-BS1)				Prepared &	z Analyzed:	20-Aug-13	3			
GRO C6-C10	171	10.0	mg/kg	200	-	85.7	66.4-124			
DRO >C10-C28	182	10.0	mg/kg	200		90.9	61.6-132			
Total TPH C6-C28	353	10.0	mg/kg	400		88.3	69.7-122			
Surrogate: 1-Chlorooctane	50.4		mg/kg	50.0		101	65.2-140			
Surrogate: 1-Chlorooctadecane	60.0		mg/kg	50.0		120	63.6-154			
LCS Dup (3082008-BSD1)				Prepared &	Analyzed:	20-Aug-13	i			
GRO C6-C10	180	10.0	mg/kg	200		90.2	66.4-124	5.17	23.4	
DRO >C10-C28	191	10.0	mg/kg	200		95.6	61.6-132	5.05	23.1	
Total TPH C6-C28	372	10.0	mg/kg	400		92.9	69.7-122	5.11	20.6	
Surrogate: 1-Chlorooctane	52.8		mg/kg	50.0	_	106	65.2-140			
Surrogate: 1-Chlorooctadecane	60.4		mg/kg	50.0		121	63.6-154			

Cardinal Laboratories *=Accredited Analyte

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

Celey D. Keine



Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6° C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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

Celey D. Kerre



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: R T Hicks Consultants Ltd	BILL TO ANALYSIS REQUEST	
Project Manager: Dale Littlejohn	P.O. #:	
Address: 901 Rio Grande BLVD, Suite F-142	Company: RT Hicks Consult.	
City: Albuquerque State: NM Zip: 87104	Attn: Krista	
Phone #: (432) 528-3878 Fax #: dale@rthicksconsult.com	Address: 901 Rio G. F-142	
Project #: Project Owner: Caza Oper.	Address: 901 Rio G. F-142 City: Albuquerque State: NM zip: 87104	
Project Name: Lennox = 2 H	State: NM zip: 87104	
Project Location: Lea Court-		
Sampler Name: Dale Littlejohn	Phone #: (505) 266-5004 Fax #: k@rthicksconsult.com PRESERV SAMPLING R	
FOR LAB USE ONLY MATRIX	PRESERV SAMPLING 2 0 5 0	
Tab I.D	Or approved) TPH (418.1) MRO (8015M) DRO (8015M) PRESERV SAMPLING GRO (8015M) PRESERV 1000 (8015M) TIME TIME TIME 1000 (1000	
(Station Stablized CI V	V 8/16 1015 V V V V V	
PLEASE NOTE: Liability and Damages, Cardina's liability and dient's exclusive remedy for any claim arising whether based in or		

PLEASE NOTE: Liability and Damages. Cardina's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the citent for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: O/L	Received By:	111 231.02 1	Phone Result:	☐ Yes	□ No	Add'l Phone #:	
	3/16	100		Fax Result:	☐ Yes	□ No	Add'I Fax #:	
1 9-107 Tatto	Tippes 7 7	11/1/1 1/01/	1 10-11	REMARKS:				
me / megny	1 2 1	VICEN SUN				•		
Relinquished By:	Date:	Received By:					•	•
		J O				-		
	Time:					•		
				٠,	•	-		. *
Delivered By: (Circle One)		Sample Condition	CHECKED BY:					
1		Cool intact	/(Inivals)					•
Sampler - UPS - Bus - Other:	ι	☐ Yes ☐ Yes	/ HXT					•
		□ No □ No	CVY					
		. مسر خلي	KI .					



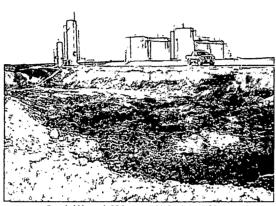
Protocols and Procedures used for the In-Place Burial

In accordance with to the requirements listed in Paragraph D of 19.15.17.13 NMAC, the operator employed the following steps for in-place burial of the waste material.

- 1. The closure notice letter was submitted to the NMOCD District 1 Office on September 25, 2013 and approved via email on September 30, 2013 (Attachment 1). In-place burial field activities began on October 2, 2013.
- 2. The waste burial location and depth is in compliance with the siting criteria presented in the C-144 application submitted to the NMOCD District 1 Office on September 9, 2013 and approved on September 16, 2013.
- 3. From May 29 to July 22, 2013, fresh water from the initial frac flow-back was used via the drainage system in the inner cell to reduce the salt concentration of the waste. All free liquids were removed from the inner cell, outer cell, and flow-back pit on July 23, 2013. The waste material was allowed to dry out until closure field activities began on October 2, 2013.
- 4. From October 2, to October 10, 2013 the temporary pit contents were stabilized to a capacity sufficient to support the final cover, as verified by a paint filter test conducted by a representative of RT Hicks Consultants on October 11, 2013. The final mixing ratio was greater than 2:1 but did not exceed 3:1 (clean soil to waste material).
- 5. On August 16, 2013, prior to the initiation of closure activities, five-point composite samples were recovered from both the inner and outer cells of the temporary pit. These samples were mixed together according to the relative volume of waste material in each cell. The resulting sample was mixed with clean soil from the walls and dividers surrounding the temporary pit at a ratio of 3 parts clean soil to 1 part waste material in order to create a "stabilized sample". The stabilized sample was submitted to Cardinal Laboratories for analyses of GRO, DRO, MRO (EPA method 8015M), TPH (EPA method 418.1), BTEX (EPA method 8260B), and Chloride (SM4500). The results, as noted in the September 25, 2013 Closure Notice letter, indicated that the waste material contaminant concentrations, stabilized at a ratio greater than 1.63:1 did not exceed the parameters listed in Table II of 19.15.17.13 NMAC (see letter in Attachment 1 and Lab report in Attachment 3)
- 6. Following the October 11, 2013 inspection, having achieved all applicable waste stabilization associated with in-place burial, the remaining outer edges of the temporary pit liner were folded over the waste material. A 20-mil string reinforced LLDPE liner was then installed above the waste material in a manner

that prevents the collection of infiltration water in the temporary pit and on the geomembrane cover after the soil cover is in place.

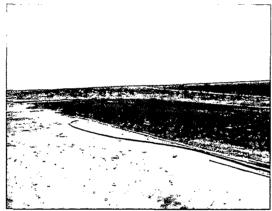
7. Once the geomembrane cover was in place, at least 4 feet of non-waste containing, uncontaminated, earthen material and topsoil was installed as prescribed in Paragraph (3) of Subsection H of 19.15.17.13 NMAC.



Stabilized Waste (10-11-13)



Paint Filter Test (10-11-13)



Final Cover and Topsoil (10-29-13)

ATTACHMENT 5

Site Reclamation and Soil Cover Plan

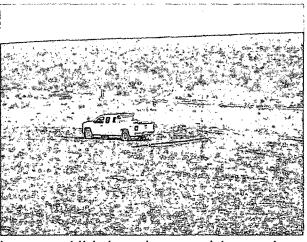
After the temporary pit was closed, topsoil and subsoil was replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability, and blend with the surrounding undisturbed area and topography according to Subsection H of 19.15.17.13 NMAC. There were no road or surface drainage features nearby that required restoration or preservation.

The soil cover consists of at least four feet of compacted, non-waste containing, earthen material. The uppermost topsoil is equal to the background thickness of about one foot. It is nowhere less than one foot of suitable material in order to establish vegetation at the site in accordance with Paragraph (5), Subsection H of 19.15.17.13 NMAC.

Re-vegetation Plan

Upon completion of the soil cover the surface of the topsoil contained small ripples from the bulldozer treads, therefore no additional soil preparation was required.

1. On October 29, 2013, Eagle Eye Excavation of Loving, NM seeded the pit area by hand broadcast spreading 24 lbs. of seed over the 1.26-acre reclamation area. The seed was covered with soil by dragging a heavy steel harrow across the area for several hours with a four-wheel drive pick-up truck.



- 2. The seed mix used for this site to reestablish the native perennial vegetative cover was BLM #2 assortment.
- 3. During the next two growing seasons to prove viability, there will be no artificial irrigation of the vegetation.
- 4. The operator will repeat seeding or planting until it successfully achieves the required vegetative cover.
- 5. If conditions are not favorable for the establishment of vegetation, such as periods of drought, the operator may request that the division allow a delay in additional seeding until soil moisture conditions become favorable. The operator will notify the division when it successfully achieves re-vegetation.

ATTACHMENT 6

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 "District II 811 S. First St., Artesia, NM 88210 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS OCD

State of New Mexico

DEC 2 6 2013 Energy Minerals and Natural Resources

Form C-144 Revised June 6, 2013

SEP 11 2013

Department Oil Conservation Division 1220 South St. Francis Dr. For temporary pits, below-grade tanks, and purchase third management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

RECEIVED Santa Fe, NM 87505

Pit, Below-Grade Tank, or					
Proposed Alternative Method Permit or Closure Plan Application					
Type of action: Below grade tank registration Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method Modification to an existing permit/or registration Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank,					
or proposed alternative method					
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.					
I. Operator: Caza Operating LLC OGRID #: 249099					
Address: 200 North Loraine, Suite 1550, Midland, Texas 79701					
Facility or well name: Lennox "32" State Well No. 2H					
API Number: 30-025-40451 OCD Permit Number: P1-04235					
U/L or Qtr/Qtr A Section 32 Township 22S Range 35E County: Lea					
Center of Proposed Design: Latitude 32.354456° N Longitude -103.382782° W NAD: ☐1927 ☑ 1983					
Surface Owner: Federal State Trivate Tribal Trust or Indian Allotment					
⊠ Pit: Subsection F, G or J of 19.15.17.11 NMAC Temporary: ☑ Drilling ☐ Workover ☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☒ no ☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other ☒ String-Reinforced ☐ Volume: 33,598 bbl Dimensions: L 142 x W 211 x D 6-11 ft (drilling) 10 ft (fluids cell)					
Below-grade tank: Subsection I of 19.15.17.11 NMAC					
Volume:bbl Type of fluid:					
Tank Construction material:					
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off					
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other					
Liner type: Thicknessmil					
4. Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Burcau office for consideration of approval.					
5.					
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)					
☐ Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church) ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet					

Alternate. Please specify

6.				
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)				
Screen Netting Other				
☐ Monthly inspections (If netting or screening is not physically feasible)				
7.				
Signs: Subsection C of 19.15.17.11 NMAC				
12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers				
☑ Signed in compliance with 19.15.16.8 NMAC				
8.				
Variances and Exceptions:				
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.				
Please check a box if one or more of the following is requested, if not leave blank: Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.				
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.				
Siting Criteria (regarding permitting): 19.15.17.10 NMAC				
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acce	ptable source			
material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.				
Cananal -iti	1			
General siting	1			
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.	Yes No			
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	⊠ NA			
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.	Yes No			
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells See Figure 2	□ NA			
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	☐ Yes ⊠ No			
adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) See Figure 5 - Written confirmation or verification from the municipality; Written approval obtained from the municipality				
Within the area overlying a subsurface mine. (Does not apply to below grade tanks) See Figure 7 - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☑ No			
Within an unstable area. (Does not apply to below grade tanks) See Figure 8 - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	☐ Yes 🖾 No			
Society; Topographic map				
Within a 100-year floodplain. (Does not apply to below grade tanks) See Figure 9	Yes 🛛 No			
- FEMA map				
Below Grade Tanks				
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured	Yes No			
from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site				
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes No			
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)				
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole,				
or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	Yes No			
Topographic map, visual inspection (certification) of the proposed site	Ì			
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes ☐ No			
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image				
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.	☐ Yes ☐ No			
NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site				

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
Temporary Pit Non-low chloride drilling fluid				
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). See Figure 3 - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☑ No			
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image. See Figure 4	☐ Yes ⊠ No			
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site See Figures 1 & 2	☐ Yes ⊠ No			
Within 300 feet of a wetland. See Figure 6 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No			
Permanent Pit or Multi-Well Fluid Management Pit				
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No			
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number:	nments are			
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC A List of wells with approved application for permit to drill associated with the pit. Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC				
Previously Approved Design (attach copy of design) API Number: or Permit Number:				

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the	documents are			
attached. ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC				
 □ Climatological Factors Assessment □ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC □ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC □ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC □ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC □ Quality Control/Quality Assurance Construction and Installation Plan □ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC □ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC □ Nuisance or Hazardous Odors, including H₂S, Prevention Plan □ Emergency Response Plan □ Oil Field Waste Stream Characterization □ Monitoring and Inspection Plan 				
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC				
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.				
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-well F. Alternative Proposed Closure Method: Waste Excavation and Removal	luid Management Pit			
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method				
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. □ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC □ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC □ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) □ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC □ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC				
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. I 19.15.17.10 NMAC for guidance.				
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☑ No ☐ NA			
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No			
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells				
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image				
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site				
Written confirmation or verification from the municipality; Written approval obtained from the municipality □ Yes ⋈ No				
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site ☐ Yes ☒ N				
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance				

adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtain	☐ Yes ⊠ No				
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division - Yes [
Within an unstable area.					
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map Yes Yes ✓					
Within a 100-year floodplain. FEMA map	☐ Yes ⊠ No				
16.		Diidit-			
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the follow by a check mark in the box, that the documents are attached.	ving items must be attached to the closure pl	an. Piease indicale,			
Siting Criteria Compliance Demonstrations - based upon the appropriate requirement					
Proof of Surface Owner Notice - based upon the appropriate requirements of Subsec	tion E of 19.15.17.13 NMAC	11.37344.0			
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriat ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - ba	sed upon the appropriate requirements of 19.17.19.	15.17.11 NMAC			
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13					
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirement					
 ✓ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.1 ✓ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cutt 		ot be achieved)			
Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.					
Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19	P.15.17.13 NMAC				
Site Reclamation Plan - based upon the appropriate requirements of Subsection H of	19.15.17.13 NMAC				
17.					
Operator Application Certification:					
I hereby certify that the information submitted with this application is true, accurate and or	omplete to the best of my knowledge and beli	lef.			
Name (Print): Richard Wright	Title: Production Superintenden	<u>t</u>			
Signature: Richard L. Wright	Data: Santambar 0 2012				
Signature: Date: Date: September 9, 2013					
e-mail address:rwright@cazapetro.com	Telephone: (432) 682-7472 (x1006)				
e-mail address: rwright@cazapetro.com	Telephone: (432) 682-7472 (x1006)				
e-mail address:rwright@cazapetro.com	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment)				
e-mail address: rwright@cazapetro.com 18. OCD Approval: Permit Application (including clickere.plan) Closere Plant(only) OCD Representative Signature:	Telephone: (432) 682-7472 (x1006)	3			
e-mail address:	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date: 91611	3			
e-mail address:	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment)	3			
e-mail address:rwright@cazapetro.com 18. OCD Approval: Permit Application (including clipture.plan)	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date: 91611	3			
e-mail address:	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date: 91611 Permit Number: P1-04235 menting any closure activities and submitting	the closure report.			
e-mail address:	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date: 9 16 1 Permit Number: Pl-04235 Tenting any closure activities and submitting letion of the closure activities. Please do not	the closure report.			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:91611 Permit Number:P - O4235 Tenting any closure activities and submitting detion of the closure activities. Please do not divities have been completed.	the closure report.			
e-mail address:	Telephone: (432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date: 9 16 1 Permit Number: Pl-04235 Tenting any closure activities and submitting letion of the closure activities. Please do not	the closure report.			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:91611 Permit Number:P - O4235 Tenting any closure activities and submitting detion of the closure activities. Please do not divities have been completed.	the closure report.			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:91611 Permit Number:P - O4235 Tenting any closure activities and submitting detion of the closure activities. Please do not divities have been completed.	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:91611 Permit Number:P - 04235 Telephone:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:91611 Permit Number: P1-04235 Tenning any closure activities and submitting detion of the closure activities. Please do not divities have been completed. Soure Completion Date:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:91611 Permit Number: P1-04235 Tenning any closure activities and submitting detion of the closure activities. Please do not divities have been completed. Soure Completion Date:	the closure report. complete this			
e-mail address:	Telephone:	the closure report. complete this			
e-mail address:	Telephone:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:916/1 Permit Number:P1 - 04235 Telephone:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:916/1 Permit Number:P1 - 04235 Telephone:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:916/1 Permit Number:P1 - 04235 Telephone:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:916/1 Permit Number:P1 - 04235 Telephone:	the closure report. complete this			
e-mail address:	Telephone:(432) 682-7472 (x1006) OCD Conditions (see attachment) Approval Date:916/1 Permit Number:P1 - 04235 Telephone:	the closure report. complete this pop systems only) dicate, by a check			

22. Operator Closure Certification:	·			
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.				
Name (Print): Richard Wright	Title: Production Superintendent			
Signature: Richard L. Whigh	Date: December 23, 2013			
e-mail address: rwright@cazapetro.com	Telephone: (432) 682-7472 (x-1006)			

approved

Environmental Specialist

NMOCD-DISTRICT 17/02/14