# R. T. HICKS CONSULTANTS, LTD.

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

May 14, 2015

Doctor Tomas Oberding NMOCD District 1 1625 French Drive Hobbs, NM 88240 Via E-Mail and US Mail

RE: Temporary Pit Closure Report Warrior "BRW" State Com. No. 1H API #30-025-40220 Unit D, Section 28, T23S, R35E, Lea County

Dear Dr. Oberding:

On behalf of Yates Petroleum Corporation, R.T. Hicks Consultants submits this closure report for the above-referenced temporary pit in accordance with the approved C-144 closure plan. This report includes the following information listed in Part 21 of the C-144 form:

Requirements	Location in this Submission
Proof of Closure Notice (to surface owner and	Attachment 1
Division)	
Proof of Deed Notice (on-site closure on private	Not applicable; State Land (no deed)
land only)	
Plot Plan, C-105 form (for on-site closures and	Attachment 2
temporary pits)	
Confirmation Sampling Analytical Results	Not applicable.
Waste Material Sampling Analytical Results	Attachment 3
(required for on-site closure)	
Disposal Facility Name and Permit Number	Not applicable; on-site closure
Soil Backfilling and Cover Installation	Attachment 4
Re-vegetation Application Rates and Seeding	Attachment 5
Technique	
Site Reclamation (photo documentation)	To follow
Updated C-144 form	Attachment 6

R.T. Hicks Consultants will notify NMOCD and provide photo-documentation when re-vegetation obligations described in subsection H of 19.15.17.13 NMAC are met.

Sincerely, R.T. Hicks Consultants

mise Sinlolfield

Mike Stubblefield Project Manager

**RECEIVED** By OCD; Dr. Oberding at 9:56 am, May 14, 2015

# R. T. HICKS CONSULTANTS, LTD.

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

January <u>6</u>, 2015

Dr. Tomáš Oberding NMOCD District 1 1625 French Drive Hobbs, New Mexico 88240 *VIA EMAIL* 

#### RE: Warrior BRW State Com. #1H Temporary Pit, In-place Burial Notice Unit D, Section 28, T23S, R35E, API #30-025-40220

Dr. Oberding:

On behalf of Yates Petroleum Corporation, R. T. Hicks Consultants is provides this notice to NMOCD with a copy to the State Land Office (certified, return receipt request) that closure operations at the above- referenced pit will begin on <u>Thursday</u>, <u>January 8 2015</u>. The closure process should require about two weeks, depending on the availability of machinery. The rig was released on October 27, 2014.

After hydraulic fracturing and flow-back were completed, 4-point composite samples were collected from the inner horseshoe cell, outer horseshoe cell, and from the clean soil of the berms (beneath the liner) of the pit on December 3, 2014 for laboratory analyses. The table below calculates the concentration for "3:1 stabilized" material to allow comparison with Table II the Pit Rule (Closure Criteria for Burial Trenches and Waste Left in Place in Temporary Pits). The formula use in the table below is:

3:1 Stabilized Solids =  $\frac{(Outer Composite*0.66)+)(+(0.34*Inner Composite)+(Mixing Dirt*3))}{(+(0.34*Inner Composite)+(Mixing Dirt*3))}$ 

4

Well Name	Sample Name	Sample Type	Sample Date	Chloride <i>80,000</i>	Benzene <u>10</u>	BTEX 50	GRO+DRO 1000	TPH 418.1 2500	GRO+DRO+ DROext	GRO	DRO	MRO	т	E	x	Lab	Report
Warrior 1H Pit	Outer Composite		12/3/2014	22000	1.2	16.8	1080	2100	1080	170	910	0	5.6	2.7	7.3	Hall	2
Warrior 1H Pit	Inner Composite		12/3/2014	76000	0	0	0	0	0	0	0	0	0	0	0	Hall	2
Warrior 1H Pit	Mixing Dirt Comp.		12/3/2014	0	0	0	0	0	0	0	0	0	0	0	0	Hall	2
	3:1 Stabilized	CALCULATE	)	14355.00	0.10	1.39	.89.10	173.25	89.10		I						_

The inner composite and outer composite ratio in the formula approximates the solids volume generated during drilling. The solids placed in the outer shoe are derived from drilling the surface casing string and production string. The inner shoe contains solids from drilling intermediate casing string.

Laboratory analyses <u>(attached)</u> of the component samples and the calculation of stabilized cuttings "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 listed in Table II of 19.15.17.13 NMAC."

This letter is being transmitted to the surface owner via email (return receipt) Mail. A variance request regarding this action is attached to this letter.

I will follow up this notice with a phone call the day before closure begins.

Sincerely, R.T. Hicks Consultants

Mile Sulppier

Mike Stubblefield Project Manager

,

Copy:

Yates Petroleum Corporation <u>Mr. Bill Angle</u> <u>Limestone Livestock LLC.</u> 76 Angle Road <u>Lovington</u>, NM <u>88260</u> CERTIFIED MAIL – RETURN RECIEPT REQUEST



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

December 17, 2014

Mike Stubblefield R.T. Hicks Consultants, LTD 901 Rio Grande Blvd. NW Suite F-142 Albuquerque, NM 87104 TEL: (505) 266-5004 FAX (505) 266-0745

RE: Warrior BRW State Com. 1H

OrderNo.: 1412356

Dear Mike Stubblefield:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/5/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** Lab Order 1412356

Date Reported: 12/17/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: Warrior BRW State Com. 1H

Client Sample ID: Outer Comp. Collection Date: 12/3/2014 10:37:00 AM Presived Date: 12/5/2014 1:00:00 PM

Lab ID: 1412356-001	Matrix:	SOIL		Received Date: 12/5/2014 1:00:00 PM					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D: DIESEL RANGE O	ORGANICS					Analys	st: BCN		
Diesel Range Organics (DRO)	910	99		mg/Kg	10	12/10/2014 10:15:50 A	M 16741		
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	12/10/2014 10:15:50 A	M 16741		
Surr: DNOP	0	63.5-128	S	%REC	10	12/10/2014 10:15:50 A	M 16741		
EPA METHOD 8015D: GASOLINE RANG	θE					Analys	st: NSB		
Gasoline Range Organics (GRO)	170	25		mg/Kg	5	12/11/2014 10:51:11 F	PM 16720		
Surr: BFB	173	80-120	S	%REC	5	12/11/2014 10:51:11 F	PM 16720		
EPA METHOD 8021B: VOLATILES						Analys	st: NSB		
Benzene	1.2	0.12		mg/Kg	5	12/11/2014 10:51:11 F	PM 16720		
Toluene	5.6	0.25		mg/Kg	5	12/11/2014 10:51:11 F	PM 16720		
Ethylbenzene	2.7	0.25		mg/Kg	5	12/11/2014 10:51:11 F	PM 16720		
Xylenes, Total	7.3	0.50		mg/Kg	5	12/11/2014 10:51:11 F	PM 16720		
Surr: 4-Bromofluorobenzene	124	80-120	S	%REC	5	12/11/2014 10:51:11 F	PM 16720		
EPA METHOD 300.0: ANIONS						Analys	st: Igp		
Chloride	22000	750		mg/Kg	500	12/10/2014 5:12:42 PM	M 16758		
EPA METHOD 418.1: TPH						Analys	st: JME		
Petroleum Hydrocarbons, TR	2100	200		mg/Kg	10	12/10/2014 12:00:00 F	PM 16737		

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	J	Analyte detected below quantitation limits
	0	RSD is greater than RSDlimit

- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit Page 1 of 9
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

**Analytical Report** Lab Order 1412356

Date Reported: 12/17/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: Warrior BRW State Com. 1H

Client Sample ID: Inner Comp. Collection Date: 12/3/2014 10:51:00 AM

Lab ID: 1412356-002	Matrix:	SOIL	Received	Received Date: 12/5/2014 1:00:00 PM					
Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analy	/st: BCN			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/10/2014 10:45:39	AM 16741			
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/10/2014 10:45:39	AM 16741			
Surr: DNOP	122	63.5-128	%REC	1	12/10/2014 10:45:39	AM 16741			
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	/st: NSB			
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/11/2014 11:18:30	PM 16720			
Surr: BFB	110	80-120	%REC	1	12/11/2014 11:18:30	PM 16720			
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB			
Benzene	ND	0.050	mg/Kg	1	12/11/2014 11:18:30	PM 16720			
Toluene	ND	0.050	mg/Kg	1	12/11/2014 11:18:30	PM 16720			
Ethylbenzene	ND	0.050	mg/Kg	1	12/11/2014 11:18:30	PM 16720			
Xylenes, Total	ND	0.099	mg/Kg	1	12/11/2014 11:18:30	PM 16720			
Surr: 4-Bromofluorobenzene	125	80-120	S %REC	1	12/11/2014 11:18:30	PM 16720			
EPA METHOD 300.0: ANIONS					Analy	/st: Igp			
Chloride	76000	15000	mg/Kg	1E	12/15/2014 6:44:04 F	PM 16758			
EPA METHOD 418.1: TPH					Analy	/st: JME			
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	12/10/2014 12:00:00	PM 16737			

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	-	

- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit Page 2 of 9
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

**Analytical Report** Lab Order 1412356

Date Reported: 12/17/2014

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: Warrior BRW State Com. 1H

**Client Sample ID:** Mixing soil Collection Date: 12/3/2014 10:30:00 AM

Lab ID: 1412356-003	Matrix:	SOIL	Received I	<b>Received Date:</b> 12/5/2014 1:00:00 PM				
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analy	st: BCN		
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/10/2014 11:15:21	AM 16741		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/10/2014 11:15:21	AM 16741		
Surr: DNOP	104	63.5-128	%REC	1	12/10/2014 11:15:21	AM 16741		
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB		
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/10/2014 3:31:39 A	M 16720		
Surr: BFB	90.9	80-120	%REC	1	12/10/2014 3:31:39 A	M 16720		
EPA METHOD 8021B: VOLATILES					Analy	st: NSB		
Benzene	ND	0.050	mg/Kg	1	12/10/2014 3:31:39 A	M 16720		
Toluene	ND	0.050	mg/Kg	1	12/10/2014 3:31:39 A	M 16720		
Ethylbenzene	ND	0.050	mg/Kg	1	12/10/2014 3:31:39 A	M 16720		
Xylenes, Total	ND	0.10	mg/Kg	1	12/10/2014 3:31:39 A	M 16720		
Surr: 4-Bromofluorobenzene	95.9	80-120	%REC	1	12/10/2014 3:31:39 A	M 16720		
EPA METHOD 300.0: ANIONS					Analy	st: Igp		
Chloride	ND	30	mg/Kg	20	12/10/2014 5:49:55 F	M 16758		
EPA METHOD 418.1: TPH					Analy	st: JME		
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	12/10/2014 12:00:00	PM 16737		

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	J	Analyte detected below quantitation limits
	0	RSD is greater than RSDlimit

- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н

Page 3 of 9

- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

WO#:	1412356
	17-Dec-14

Client: Project:		icks Consulta r BRW State									
Sample ID	MB-16758	SampTy	/pe: <b>ME</b>	BLK	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	ID: 16	758	F	RunNo: 23	3071				
Prep Date:	12/10/2014	Analysis Da	ate: 12	2/10/2014	S	SeqNo: 68	81701	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-16758	SampTy	/pe: <b>LC</b>	S	Tes	tCode: EF	PA Method	300.0: Anion	S		
Client ID:	LCSS	Batch	ID: 16	758	F	RunNo: 23	3071				
Prep Date:	12/10/2014	Analysis Da	ate: 12	2/10/2014	5	SeqNo: 68	81702	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	93.8	90	110			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH greater than 2.
  - RL Reporting Detection Limit

WO#:	1412356

17-Dec-14

	licks Consultants, LTD or BRW State Com. 1H			
Sample ID MB-16737	SampType: MBLK	TestCode: EPA Method	I 418.1: TPH	
Client ID: PBS	Batch ID: 16737	RunNo: 23041		
Prep Date: 12/9/2014	Analysis Date: 12/10/2014	SeqNo: 680758	Units: <b>mg/Kg</b>	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Petroleum Hydrocarbons, TR	ND 20			
Sample ID LCS-16737	SampType: LCS	TestCode: EPA Method	l 418.1: TPH	
Client ID: LCSS	Batch ID: 16737	RunNo: 23041		
Prep Date: 12/9/2014	Analysis Date: 12/10/2014	SeqNo: 680759	Units: <b>mg/Kg</b>	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Petroleum Hydrocarbons, TR	120 20 100.0	0 118 80	120	
Sample ID LCSD-16737	SampType: LCSD	TestCode: EPA Method	l 418.1: TPH	
Client ID: LCSS02	Batch ID: 16737	RunNo: 23041		
Prep Date: 12/9/2014	Analysis Date: 12/10/2014	SeqNo: 680769	Units: <b>mg/Kg</b>	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Petroleum Hydrocarbons, TR	120 20 100.0	0 115 80	120 2.55	20

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

Page 5 of 9

WO#:	1412356
	17-Dec-14

	ks Consulta BRW State	,								
Sample ID MB-16741	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID: PBS	Batch	ID: 167	741	R	unNo: 2	3048				
Prep Date: 12/9/2014	Analysis D	ate: 12	2/10/2014	S	eqNo: 6	81300	Units: <b>mg/K</b>	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	6.9		10.00		69.0	63.5	128			
Sample ID LCS-16741	SampT	ype: LC	S	Test	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID: LCSS	Batch	ID: 167	741	R	unNo: <b>2</b> :	3048				
Prep Date: 12/9/2014	Analysis D	ate: 12	2/10/2014	S	eqNo: 6	81301	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	113	68.6	130			
Surr: DNOP	4.8		5.000		95.9	63.5	128			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH greater than 2.
  - RL Reporting Detection Limit

- Page 6 of 9

WO#:	1412356
	17 Dec 14

	cks Consultants, LTD BRW State Com. 1H
Sample ID MB-16708	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 16708 RunNo: 23008
Prep Date: 12/8/2014	Analysis Date: 12/9/2014 SeqNo: 680441 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	880 1000 87.9 80 120
Sample ID LCS-16708	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 16708 RunNo: 23008
Prep Date: 12/8/2014	Analysis Date: 12/9/2014 SeqNo: 680442 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	1000 1000 103 80 120
Sample ID MB-16720	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 16720 RunNo: 23008
Prep Date: 12/8/2014	Analysis Date: 12/9/2014 SeqNo: 680463 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 920 1000 91.9 80 120
	920 1000 91.9 60 120
Sample ID LCS-16720	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 16720 RunNo: 23008
Prep Date: 12/8/2014	Analysis Date: 12/9/2014 SeqNo: 680464 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	23 5.0 25.00 0 90.1 65.8 139
Surr: BFB	1000 1000 99.7 80 120
Sample ID LCSD-16720	SampType: LCSD TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS02	Batch ID: 16720 RunNo: 23008
Prep Date: 12/8/2014	Analysis Date: 12/9/2014 SeqNo: 680465 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	1000 0 0

**Qualifiers:** 

\* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

17-Dec-14

WO#:	1412356
	17-Dec-14

	ks Consult BRW State									
Sample ID MB-16708	SampT	Гуре: МЕ	BLK	Test	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batch	h ID: 16	708	R	unNo: 2	3008				
Prep Date: 12/8/2014	Analysis D	Date: 12	2/9/2014	S	eqNo: 6	80477	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		93.3	80	120		-	
Sample ID LCS-16708	SampT	Гуре: <b>LC</b>	S	Test	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS		h ID: 16		R	unNo: <b>2</b> :	3008				
Prep Date: 12/8/2014	Analysis D	Date: 12	2/9/2014	S	eqNo: 6	80478	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0	TQL	1.000		104	80	120	70111 D		Quai
Sample ID MB-16720	SampT	Гуре: МЕ	BLK	Test	Code: El	PA Method	8021B: Vola	tiles		
Client ID: PBS		h ID: 16		R	unNo: <b>2</b> :	3008				
Prep Date: 12/8/2014	Analysis D	Date: 12	2/9/2014		eqNo: 6		Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050					5			
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.7	80	120			
Sample ID LCS-16720	SampT	Гуре: <b>LC</b>	S	Test	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batch	h ID: 16	720	R	unNo: 2	3008				
Prep Date: 12/8/2014	Analysis D	Date: 12	2/9/2014	S	eqNo: 6	80495	Units: mg/k	٨g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.050	1.000	0	87.9	80	120			
Toluene	0.85	0.050	1.000	0	85.2	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.8	80	120			
Xylenes, Total Surr: 4-Bromofluorobenzene	2.7 1.0	0.10	3.000 1.000	0	89.7 105	80 80	120 120			
				Tee				(II		
Sample ID LCSD-16720 Client ID: LCSS02		Гуре: <b>LC</b> h ID: <b>16</b>			unNo: 2		8021B: Vola	tiles		
Prep Date: 12/8/2014	Analysis D				eqNo: 6		Units: mg/k	٢g		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0	92.3	80	120	4.87	20	
Toluene	0.91	0.050	1.000	0	90.7	80	120	6.28	20	
Ethylbenzene	0.94	0.050	1.000	0	94.3	80	120	4.96	20	
,		0.10								

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

Page 8 of 9

WO#:	1412356
	17-Dec-14

Client:	R.T. Hi	cks Consulta	ints, L	ГD							
Project:	Warrio	BRW State	Com.	1H							
Sample ID	LCSD-16720	SampT	ype: LC	CSD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS02	Batch	n ID: 16	720	F	RunNo: 2	3008				
Prep Date:	12/8/2014	Analysis D	ate: 1	2/9/2014	5	SeqNo: 6	30496	Units: <b>mg/h</b>	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Brom	nofluorobenzene	1.1		1.000		106	80	120	0		

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

Client Name:RT HICKSWork Order Number:1412356Received by/date: $(1 \le 12 0 = 14)$ Logged By:Celina Sessa12/5/2014 1:00:00 PMCompleted By:Celina Sessa12/8/2014 11:16:44 AMReviewed By: $12 0 \$ 2014$ Chain of Custody1. Custody seals intact on sample bottles?Yes2. Is Chain of Custody complete?Yes3. How was the sample delivered?ClientLog In4. Was an attempt made to cool the samples?Yes5. Were all samples received at a temperature of >0° C to 6.0°CYes6. Sample(s) in proper container(s)?YesYes	lelim Sr lelim Sr No 🗆 No 🗆	RcptNo: 1
Received by/date.Celina Sessa $12/5/2014 \ 1:00:00 \ PM$ Completed By:Celina Sessa $12/8/2014 \ 11:16:44 \ AM$ Reviewed By: $TO$ $12 \ OS \ 2O \ IY$ Chain of Custody $I \ OS \ 2O \ IY$ 1. Custody seals intact on sample bottles?Yes2. Is Chain of Custody complete?Yes3. How was the sample delivered?ClientLog In4. Was an attempt made to cool the samples?Yes5. Were all samples received at a temperature of >0° C to $6.0^{\circ}C$ Yes	No 🗌	
Reviewed By:       I       <	No 🗌	
Chain of Custody         1. Custody seals intact on sample bottles?       Yes         2. Is Chain of Custody complete?       Yes         3. How was the sample delivered?       Client         Log In       Client         4. Was an attempt made to cool the samples?       Yes         5. Were all samples received at a temperature of >0° C to 6.0°C       Yes		Not Present 🗹
1. Custody seals intact on sample bottles?       Yes         2. Is Chain of Custody complete?       Yes         3. How was the sample delivered?       Client         Log In       Client         4. Was an attempt made to cool the samples?       Yes         5. Were all samples received at a temperature of >0° C to 6.0°C       Yes		Not Present 🗹
2. Is Chain of Custody complete?       Yes ▼         3. How was the sample delivered?       Client         Log In          4. Was an attempt made to cool the samples?       Yes ▼         5. Were all samples received at a temperature of >0° C to 6.0°C       Yes ▼	No 🗌	
3. How was the sample delivered?       Client         Log in       Yes ✔         4. Was an attempt made to cool the samples?       Yes ✔         5. Were all samples received at a temperature of >0° C to 6.0°C       Yes ✔		Not Present 🗌
<ul> <li>4. Was an attempt made to cool the samples? Yes ✓</li> <li>5. Were all samples received at a temperature of &gt;0° C to 6.0°C Yes ✓</li> </ul>		
5. Were all samples received at a temperature of >0° C to $6.0^{\circ}$ C Yes		
•••••••••••••••••••	No 🗌	
6. Sample(s) in proper container(s)? Yes ✓	No 🗌	
	No 🗌	
7. Sufficient sample volume for indicated test(s)? Yes	No 🗌	
8. Are samples (except VOA and ONG) properly preserved? Yes 🗹	No 🗋	_
9. Was preservative added to bottles? Yes	No 🗹	NA 🗌
10.VOA vials have zero headspace? Yes	No 🗌	No VOA Vials 🗹
11. Were any sample containers received broken? Yes	No 🗹	# of preserved bottles checked
12.Does paperwork match bottle labels? Yes Ves Ves	No 🗍	for pH: (<2 or >12 unless noted)
13 Are matrices correctly identified on Chain of Custody? Yes V	No 🗌	Adjusted?
14. Is it clear what analyses were requested? Yes V	No 🗌 🗌	
15.Were all holding times able to be met? Yes (If no, notify customer for authorization.)	No	Checked by:
Special Handling (if applicable)		
16. Was client notified of all discrepancies with this order? Yes	No 🗌	NA 🗹

Person Notified: Date: l 🗌 eMail 🔄 Phone 🔄 Fax 🔄 In Person Via: By Whom: Regarding: **Client Instructions:** 17. Additional remarks:

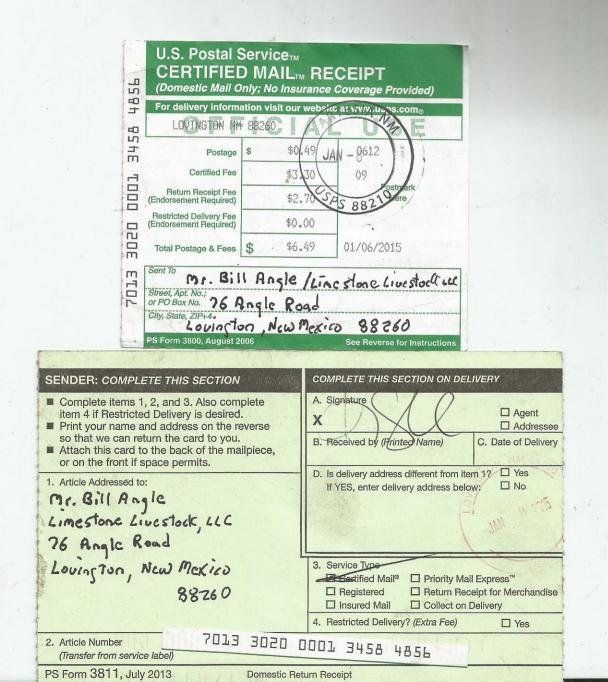
Signed By

18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Not Present

Good

1

HALL ENVIRONMENTA	ANALYSIS LABORATOF		1 H 4901 Hawki	Tell. 505-345-3975	Analysis Request	(lea (lea	0 S.P.C	988£	100 100 100 100 100 100 100 100 100 100	Aq 202 814 814 814 814 814 814 814 814 814 814	850 8 8 8 8 9 00 1 10 00 1 10 00 00 10 00 00 00 00 00	HEAL No. HEAL No. BITEX + MT BITEX + MT BITE			-00- -00-		-03				Date Time Remarks: Email results to mike@, R@rthicksconsult.com $\frac{2}{\sqrt{2}}$	Date Time 12/05/14 1300
ימווררויטעווט ווווטי	Standard 🗆 Rush_	Project Name:	Warrior BRW State Com.	Project #:		Project Manager:		Mike Stubblefield	Sampler: Mike Stubblefield		Sample Temperature: 3	Container Preservative Type and # Type	{ glass ice		1 glass ice	-	I g lass icc			 <	Received by: With Left / M	Received by: Olline Same
unain-or-custoay kecora			901 Rio Grande Blvd NW	Albuquerque, NM 87104	i6-5004	ult.com		Level 4 (Full Validation)				Sample Request ID	Outer Comp.		Inner Comp.		Miking Soil	N			Studpellend	(cull lof)
10-10-U	R. T. Hicks Consultants		I	Albuque	(505) 266-5004					D Other	(e)	Time Matrix	10:37 Soil		10:51A 5011	-	10:300 501					
Cha	Client: R. 1		Mailing Address		Phone #:	email or Fax#	QA/QC Package:	Z Standard	Accreditation:	O NELAP	C EDD (Type)	Date	2/3/14 10.	-	13/14 10:		01 41/2/2				2 4/14 /20	Date: Time: $\mathcal{L}/\mathcal{S}/\mathcal{H}$



#### Wed 1/7/2015 1:37 PM

Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

RE: In-place Burial Notice for Yates Petroleum Corporation Warrior BRW State Com. No.1H

To mike stubblefield

Cc 'Scott Pitts'; 'Randall Hicks'

You forwarded this message on 1/8/2015 3:49 PM.

#### Aloha Mr. Stubblefield et al,

Thank you for providing these sample summaries.

Based on the indicated levels OCD approves the in-place-burial of the pit as described. Please note final closure will be granted upon receipt of evidence of regrowth.

Mahalo all and be safe! -Doc

Tom Viboc' Oberding, PhD Senior Environmental Specialist New Mexico Oil Conservation Division, District 1 Energy, Minerals and Natural Resources Department (575) 393-6161 ext 111 E-Mail: tomas.oberding@state.nm.us

Submit To Appropriation Submit To Appropriation Submit Two Copies District I	riate Distri	ict Office		Fr		State of Ne Minerals and				sources					Rev		orm C-105 agust 1, 2011
1625 N. French Dr. District II	., Hobbs, N	NM 88240	)		cigy,	winerais and	u i ta	luiai	ne	sources		1. WELL A	API N	NO. 30-			
811 S. First St., Art District III	tesia, NM	88210			Oi	l Conserva	tion	Divi	isic	on		2. Type of Le	ase				
1000 Rio Brazos Rd., Aztec, NM 87410 1220 South St. Francis Dr.												ГЕ	FEE		ED/IND	IAN	
Districtive 1220 S. St. Francis Dr., Santa Fe, NM 87505Santa Fe, NM 875053. State Oil of VB-1073																	
WELL COMPLETION OR RECOMPLETION REPORT AND LOG																	
4. Reason for filing:       5. Lease Name or Unit Agreement Name Warrior BRW State Com.																	
COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only)																	
C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or     #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)																	
7. Type of Comp ⊠ NEW		WOR	KOVER	DEEF	ENING	PLUGBACI	к□і	DIFFE	EREN	NT RESERV	'OIF	R OTHER_					
8. Name of Opera		es Petrol	leum Cor	oration								9. OGRID	5575				
10. Address of O	perator											11. Pool name		ldcat			
105 S. 4 <sup>th</sup> Street, Artesia, New Mexico 88210 Wildcat; Bone Spring																	
12.Location	Unit Ltı	: Se	ection	Town	-	Range	Lot			Feet from the	he	N/S Line	Feet	from the			County
Surface:	D		28	T	38	R35E				330'		FNL	6	60'	FW	L	Lea
BH:																	
13. Date Spudded $10/31/2011$ 14. Date T.D. Reached $10/22/2014$ 15. Date Rig Released $10/27/2014$ 16. Date Completed (Ready to Produce) $3/6/2015$ 17. Elevations (DF and RKB RT, GR, etc.)																	
18. Total Measured Depth of Well       19. Plug Back Measured Depth       20. Was Directional Survey Made?       21. Type Electric and Other Logs Ru													her Logs Run				
22. Producing Interval(s), of this completion - Top, Bottom, Name																	
23. CASING RECORD (Report all strings set in well)																	
	23.     CASING RECORD (Report all strings set in well)       CASING SIZE     WEIGHT LB./FT.     DEPTH SET     HOLE SIZE     CEMENTING RECORD     AMOUNT PULLED													PULLED			
24. SIZE	TOP		F	OTTOM	LIN	ER RECORD SACKS CEM	ENT	SCR	FEN	J	25. SIZ			IG REC		PACK	ER SET
SILL	101			01101		briend chin		ben			512			A TH DE	1	men	
26. Perforation	record (i	interval,	size, and	number)						ID, SHOT, INTERVAL	FR.	ACTURE, CE					
								DEI	111	INTERVAL		AMOUNTA	ND K		TERIAL	USED	
28.	- <b>4</b> '		Duad		d 1 / El					ΓΙΟΝ		W-11 Ctatas	( <b>D</b>	1			
Date First Produc	cuon		Prod	uction Me		owing, gas lift, p	umping	g - Siz	e an	а туре ритр)	)	Well Status	(Proa	i. or shui	- <i>in)</i>		
Date of Test	Hour	s Tested		Choke Siz	•	Prod'n For Test Period		Oil -	Bbl		Ga	s - MCF	Wa	ater - Bbl		Gas - C	Dil Ratio
Flow Tubing	Casii	ng Pressu	ıre (	Calculated	24-	Oil - Bbl.			Gas ·	- MCF		Water - Bbl.		Oil Gra	wity - AF	PI - (Cor	r.)
Press.		-		Hour Rate													
29. Disposition o	f Gas (Sc	old, used	for fuel, v	vented, etc	)								30. T	est Witn	essed By		
31. List Attachm	31. List Attachments																
32. If a temporary	32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.																
<ul><li>33. If an on-site burial was used at the well, report the exact location of the on-site burial:</li></ul>																	
×1 ·	<u> </u>	1		Latitude			Longi						NA	D 1927	1983		0
I hereby certi	•	•	ormation			Printed				-		-	•				
Signature			1			Name Mike	Stub	blefi	eld	Title	R	.T. Hicks Co	nsult	ants, L'	TD D	ate 5/1	1/2015
E-mail Addre	ss mike	e@rthic	ckscons	ult.com													

# **INSTRUCTIONS**

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

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

Southeastern	n New Mexico	Northwestern	New Mexico
T. Anhy	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	T. Morrison	
T. Drinkard	T. Bone Springs	T.Todilto	
T. Abo	Т	T. Entrada	
T. Wolfcamp	Т	T. Wingate	
T. Penn	Т	T. Chinle	
T. Cisco (Bough C)	Т	T. Permian	

#### OIL OR GAS SANDS OR ZONES

No. 1, from	No. 3, fromtoto
No. 2, fromtoto	No. 4, fromto

### IMPORTANT WATER SANDS

include data on rate of water inflow and elevation to which water rose in noie.								
No. 1, from	to	.feet						
No. 2, from								
No. 3, from								

### LITHOLOGY RECORD (Attach additional sheet if necessary)

From	То	Thickness In Feet	Lithology	From	То	Thickness In Feet	Lithology

# 32.28202-103.37913 Middle drilling pit



736 ft

2 1997

© 2015 Google

Imagery Date: 2/13/2014 32º16'55.21" N 103º22'44.97" W elev 3380 ft eye alt 6592 ft 🔘

N

Google earth

# **SOIL BACKFILLING & COVER INSTALLATION**

In accordance with 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 from the temporary pit:

- 1. The on-site burial location and its depth is in compliance with the siting criteria presented in the C-144 application and the Pit Rule under which it was submitted to the NMOCD on August 12, 2014 and approved on August 12, 2014. After the rig was released on October 27, 2014, fluid contents in the pit were removed to be recycled for the drilling of other wells while the cuttings were allowed to dry.
- 2. On December 3, 2014, prior to the initiation of closure activities, composite samples from the inner and outer cells and clean soil from the berms of the pit below the liner were recovered from the pit. Samples were analyzed for Chloride, TPH, GRO, DRO, MRO, Benzene, and BTEX at Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. The results, as noted in the subsequent closure notice, demonstrate that the mathematic mixed pit contents would not exceed the parameter limits listed in Table II of the new Pit Rule (June 2013).
- 3. On August 12, 2014, R.T. Hicks Consultants submitted a C-144 form and closure plan to NMOCD for approval to close the pit under the June 2013 Pit Rule. NMOCD granted approval on August 12, 2014, a closure notice was submitted on January 7, 2015 to the NMOCD, District 1 office in Hobbs and to the Landowner Bill Angell on the same day. Verbal notice in the form of a phone call to NMOCD followed on January 7, 2015. Dr. Tomas Oberding granted approval by email on the closure notice to Mike Stubblefield on January 7, 2015.
- 4. On January 8, 2015, closure activities commenced and stabilization of the pit contents was achieved by mixing the pit contents with the dry soil beneath the liner of the pit. Stabilization continued until April 20, 2015 when a paint filter test was performed by R.T. Hicks Consultants that confirmed that the process was complete and that the resultant floor of the excavation was at least 4 feet deep.
- 5. Following the April 20, 2015 inspection, having achieved all applicable stabilization requirements associated with in-place burial, a 20 Mil. geomembrane liner was installed to completely cover the stabilized cuttings on April 20, 2015. The pit contents and liner were shaped to shed infiltrating water, sloping from west to east.

#### Closure Letter Attachment 4 Yates Petroleum Corporation – Warrior "BRW" State Com. 1H API #30-025-40220

- 6. Once the geomembrane cover was in place, 4 feet or more of non-waste containing, uncontaminated, earthen material and the reserved topsoil were replaced to their relative positions in accordance with Subsection (3) of Paragraph H of 19.15.17.13 NMAC. 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 at least one foot.
- 7. The surface was contoured to blend with the surrounding topography and to prevent erosion and the ponding of water over the on-site closure. This work was completed on April 25, 2015.

Closure Letter Attachment 4 Yates Petroleum Corporation – Warrior "BRW" State Com. 1H API #30-025-40220



Paint filter test on 4/20/2015



Liner Installation completed on 4/20/2015. Viewing from North to South.



# **RE-VEGETATION PROCEDURES**

There were no roads or surface drainage features nearby that required restoration or preservation.

- 1. In June when the ambient ground temperature are more favorable to support new vegetation, Morgan tool of Artesia will seed the topsoil on the on-site burial and interim reclamation areas using a seed drill pulled by a tractor that prepared the seedbed in the same pass using discs. The seed furrows will be oriented perpendicular to the prevailing western wind to minimize erosion.
- 2. Approximately 70 pounds of a seed mixture consisting of BLM #2 seed will be applied in accordance with the supplier's instructions to approximately 1 acre of the former temporary pit area. Species constituents of BLM #2 blend are listed below and are appropriate for the soil type and conditions at this site. Note that Plains Bristlegrass, a majority component of the BLM #2 assortment, was unavailable so appropriate substitute species approved by the BLM were used.

### *BLM #2* Sideoats Grama Little Bluestem Sand Dropseed

- Indian Ricegrass Plains Coreopsis
- 3. The seeded area will be monitored for growth and the operator will repeat seeding until a successful vegetative cover is achieved as outlined in Subsection (5) of Paragraph H of 19.15.17.13 NMAC.
- 4. 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 and provide photo-documentation when it successful re-vegetation is achieved.

Labels on seed sacks describing composition species