Penroc Oil Corporation Langlie Jal Unit #039 Injector Well - Flowline Failure

# Preliminary Delineation Report Case Number: 1R-4616

Section 04, T25S, R37E

Detailed coordinates in report.

Date of Incident 02/12/2017

# **Table of Contents**

Ι	Company Contacts
II	Background
III	Overview of Delineation Process
IV	Sampling
V	Depth to Groundwater Research
VI	Digital Mapping/Coordinates of Release/Sample Point Locations
VII	Conclusion
VIII	Copy of Initially Reviewed C-141
IX	Appendix (Photos)

### I Company Contacts

Representative	MY "Merch" Merchant, Penroc Oil Corporation (575)-631-7450 mymerch@penrocoil.com
Representative	Kyle Townsend, Consultant (713)-305-9886 kyle@pogooilandgas.com

### II Background

Per the C-141, the failure of the injector well's buried flowline caused an unauthorized release of produced water. This caused the produced water to surface and created a pool of fluid near the failure point, with runoff in a southern direction. The spill stayed within the caliche pad and caliche road leading up to the location. Resident, Buddy Hill, discovered the release and contacted the proper field personnel. Field personnel responded immediately by shutting well #039 along with the well's injection flowline that branches off the field's main injection line. This stopped the release. The area impacted was approximately 1,115 square feet. The NMOCD was notified on 2/15/2017 and the C-141 was filed 2/16/2017. NMOCD assigned remediation case number 1R-4617 to this event. NMOCD correspondence up to this point have been with Ms. Olivia Yu in Hobbs, New Mexico. The purpose of this document is to provide preliminary delineation workplan of the release to the NMOCD and BLM and provide a basis for moving forward with remediation processes and an eventual closure of this case once the sample results have been received and reviewed and complete delineation has been established.

#### **III** Overview of Delineation Process

Field personnel assessed the horizontal extent of the spill and took the appropriate photos and measurements. This collected data was then used to create the scaled digital maps seen in the latter portion of this report. To assess the vertical extent of this release, sample points around and inside the spill line have been identified and these samples will be taken and undergo third-party lab testing via Cardinal Labs in Hobbs to determine delineation and the proper remediation actions moving forward. A subsequent delineation report will be submitted once sample results have been returned. Along with this data, research regarding depth to groundwater in the area of the release was conducted and can be found in a latter portion of this report.

### **IV** Sampling Table

Sample ID	Lat (NAD83)	Long (NAD 83)	Depth	Chlorides	BTEX	ТРН
1	32.165558	-103.173123	3'	TBD	TBD	TBD
2	32.165599	-103.173152	2'	TBD	TBD	TBD

3	32.165579	-103.173073	2'	TBD	TBD	TBD
4	32.165443	-103.173095	2'	TBD	TBD	TBD
5	32.165376	-103.173069	2'	TBD	TBD	TBD
6	32.165548	-103.173182	2'	TBD	TBD	TBD

• TBD\*: To be determined once we receive results from Cardinal Labs

• Sample depths may be taken deeper during field collection if it appears visually necessary during process.

This table will be completed in the subsequent delineation report, and will include chain of command/possession of the samples. Please see section VI for Sample ID mapping.

#### **V** Depth to Groundwater Research

Using the New Mexico state search for groundwater research, no results were found for this area. However, the Chevron-Texaco mapping does have an evaluation. Conservatively, groundwater is located at 59' at the location of this release. There are no surface water bodies in the area of this release.

		lew Mexico Office of er Column/Avera	the State Engineer <b>ge Depth to Wate</b>	r
		No records found.		
Basin/Count	y Search:			
Basin: Jal		County: Lea		
UTMNAD83	Radius Search (in m	eters):		
Easting (X	): 672261.36	Northing (Y): 3560250	Radius: 3000	
			f the State Engineer	
		r Column/Avera	age Depth to Wat	e
			age Depth to Wat	eı
		r Column/Avera	age Depth to Wat	eı
Basin/County S	Wate		age Depth to Wat	er
Basin/County S Basin: Jal	Wate Bearch:		age Depth to Wat	eı
Basin: Jal	Wate Bearch:	No records found.	age Depth to Wat	eı

### VI Digital Mapping/Coordinates of Release/Sample Point Locations

Location of Flowline Failure: Latitude: 32.165570 Longitude: -103.173116 Google Earth Imagery Date: 11/22/2016





### VII Conclusion

Based on the C-141 documentation along with the preliminary delineation work provided above, Penroc Oil Corporation will provide a subsequent delineation report along with a proposed remediation workplan once sampling analyses has been completed. The operator respectfully request the NMOCD's to review the data provided to date and provide insight on remediation plans once the subsequent sampling report is submitted.

### VIII Initially Reviewed C-141

District II 811 S. First St. District III	, Ariesa, NM	88210	FEB 1	a 2017	inerais	s and Natur rvation Di	al resources	Subm	ut I Coov		Revised /	Form C-141 August 8, 2011 rict Office in
1000 Rio Braz <u>District IV</u> 1220 S. St. Fra		e, NM 87410 a Fe, NM 8750		1220	O Sout	th St. Fran e, NM 87.	cis Dr.		80	contance w	ith 19.1	5.29 NMAC.
					_	_	orrective A	Action				
				PENROC O	DIL C	ORPORA	TION		X Initia	al Report	П	Final Repor
		enroc Oil C		n		Contact M.	Y. Merchant					
And the second	service lateral service and service and service and	9, Hobbs, N ie Jal Unit #	or you an an an an an an an an an			and second state of the second state of the	No. 575-492-12 pc Injector We					
		worth Trus		Minarda	Onuran	Multiple O	And a second second second second		A DI NIG	10.025.1	1443	
Surface On	MILET WOOD	worta irus		and the second se					APT NO	. 30-025-1	1442	
Unit Letter	Section	Township	Range	Feet from the	A DESCRIPTION OF THE OWNER	N OF RE	LEASE Feet from the	East/We	ut Line	County		_
D	04	258	37E	330	Nort		990	West	ear rune	Lea		
			L	atitude 32.165	5418 L	ongitude -1	03.1731644 NA	D83				
				NAT	TURE	OF REL	and the second se					
Type of Rel-		ed Water ed flowline fa	ilure				f Release 25 bbl. Hour of Occurren			Recovered 0 Hour of Dis		of report
						2/12/17 at	approx. 4:15 PM			14:45 PM	ensell	
Was Immed	iate Notice (		Yes D	No D Not Re	ouired	If YES, To Maxey Br						
By Whom?	M.V. Mercl	1.00		104 B 104/04	dauran		Hour 2/12/17 at 4	45 PM				
Was a Water	rcourse Rea		1			If YES, V	olume Impacting		course.			
		L	] Yes X	DIG .		Not Appl	icable					
Not Applics	able	ipacted, Desci					<b>CEIVED</b> Olivia Yu		12 an	n. Feb	21. 2	017
Not Applies	able use of Probl	em and Reme cumentation					<b>CEIVED</b> Olivia Yu		12 an	n, Feb	21, 2	017
Not Applica Describe Ca Please see a Describe Ar	able use of Probl ttached doc ea Affected	em and Reme	dial Actio	n Taken.*					12 an	n, Feb	21, 2	2017
Not Applies Describe Ca Please see a Describe An Please see a	able use of Probl ttached doc ea Affected ttached doc	em and Reme somentation and Cleanup	dial Actio Action Tal	n Taken.* cen.*		By	Olivia Yu	at 11::				
Not Applies Describe Ca Please see a Describe An Please see a I hereby cert regulations a public healt should their of the enviro	able use of Probl ttached doc ea Affected ttached doc ify that the ill operators i or the envi operations h omment. In a	em and Reme amentation and Cleanup cumentation information g are required to ronment. The ave failed to	dial Action Action Tal iven above o report ar acceptance SCD accept	n Taken.* cen.* e is true and comp d/or file certain over file a C-141 rep investigate and i	release i ort by th remedia	the best of my sotifications a ne NMOCD n		at 11: understand ctive action teport" doe report" doe	that purs ns for rela es not reli and water	uant to NM cases which ever the open	OCD ru muş en rator of 1 iter, hun	les and Junger liability an health
Not Applies Describe Ca Please see a Describe An Please see a I hereby cert regulations a public healt should their of the enviro	able use of Probl ttached doc ea Affected ttached doc ify that the ill operators i or the envi operations h omment. In a	em and Reme sumentation and Cleanup sumentation are required to ronment. The lave failed to addition, NMC	dial Action Action Tal iven above o report ar acceptance SCD accept	n Taken.* cen.* e is true and comp d/or file certain over file a C-141 rep investigate and i	release i ort by th remedia	the best of my sotifications a ne NMOCD n	knowledge and a and perform ourse marked as "Final R ion that pose a th	at 11: anderstand tive action teport <sup>*</sup> does reat to grou responsibi	that purs is for rela is not rela is not rela if water if y for co	uant to NM cases which eve the oper surface wa ompliance w	OCD ru muş en rator of i ner, hun vith any	les and Junger liability an health
Not Applies Describe Ca Please see a Describe An Please see a I hereby cert regulations a public healt should their or the enviro federal, state Signature:	able use of Probl ttached doc ea Affected ttached doc iffy that the i all operators in or the envi operations in or ment. In a se, or local law	em and Reme comentation and Cleanup comentation are required to ronment. The ave failed to addition, NMC was and/or regr	dial Action Action Tal iven above o report ar acceptance SCD accept	n Taken.* cen.* e is true and comp d/or file certain over file a C-141 rep investigate and i	release i ort by th remedia	the best of my sotifications a te NMOCD does not reliev	knowledge and and perform correct and perform correct inter the operator of OIL CON	at 11: understand ctive action teport doe responsabi SERVA	that purs is for rela is not rela is not rela if water if y for co	uant to NM cases which eve the oper surface wa ompliance w	OCD ru muş en rator of i ner, hun vith any	les and Junger liability an health
Not Applies Describe Ca Please see a Describe An Please see a I hereby cert regulations a public heald should their or the enviro federal, state Signature:	able use of Probl ttached doc ea Affected ttached doc iffy that the i all operators in or the envi operations in or ment. In a se, or local law	em and Reme comentation and Cleanup comentation are required to ronment. The ave failed to addition, NMC was and/or regr	dial Action Action Tal iven above o report ar acceptance SCD accept	n Taken.* cen.* e is true and comp d/or file certain over file a C-141 rep investigate and i	release i ort by th remedia	the best of my sotifications a te NMOCD does not reliev	knowledge and i and perform corre- narked as "Final R ion that pose a th re the operator of <u>OIL CON</u> Environmental S	at 11: at 11:	that purs is for rela is not rela is not rela if water if y for co	uant to NM cases which eve the oper surface wa ompliance w	OCD ru muş en rator of i ner, hun vith any	les and Junger liability an health
Not Applies Describe Ca Please see a Describe An Please see a I hereby cert regulations a public heald should their or the enviro federal, state Signature: Printed Nam	able use of Probl ttached doc ea Affected ttached doc iffy that the i dl operators operations h onment. In a s, or local law e, Kyle Tow	em and Reme comentation and Cleanup comentation are required to ronment. The ave failed to addition, NMC was and/or regr	dial Action Action Tal iven above o report ar acceptance SCD accept	n Taken.* cen.* e is true and comp d/or file certain over file a C-141 rep investigate and i	release i ort by th remedia	the best of my sotifications a te NMOCD does not reliev	knowledge and a ind perform corre- narked as "Final R ion that pose a three the operator of <u>OIL CON</u> Environmental S	at 11: anderstand ctive action teport doe responsabi SERVA specialist:	that purs is for rela is not rela is not rela if water if y for co	upint to NM rases which eve the oper suffice we ompliance w DIVISIC	OCD ru muş en rator of i ner, hun vith any	les and Junger liability an health
Not Applies Describe Ca Please see a Describe An Please see a I hereby cert regulations a public health should their or the enviro federal, state Signature: Printed Nam Title: Agent E-mail Addr	able use of Probl ttached doc ea Affected ttached doc iffy that the i dl operators operations h noment. In a c, or local law e; Kyle Tow ess: kyle@p	em and Reme comentation and Cleanup comentation information g are required ronment. The ave failed to ddition, NMC ws and/or regi wnsend	dial Action Action Tak iven above o report ar acceptan adequately SCD acceptan alations.	n Taken.* ten.* ten.* tais true and comp ad/or file certain te of a C-141 rep v investigate and i tance of a C-141	release i ort by th remedia	the best of my sotifications a he NMOCD n te contaminat does not reliev Approved by Approval Da Conditions o	Veroweledge and o and perform corre- marked as "Final R ion that pose a the re the operator of OIL CON Converonmental S (2/21/20)	at 11: at 11:	that purs os for rele s not reli and water lity for o TION	upint to NM rases which eve the oper suffice we ompliance w DIVISIC	OCD ru muy en rator of r uter, hun vith any <u>DN</u>	les and Junger liability an health
Not Applies Describe Ca Please see a Describe Ar Please see a I hereby cert regulations a public healt should their of the enviro federal, state Signature: Printed Nam Title: Agent E-mail Addr Date:	able use of Probl ttached doc ea Affected ttached doc iffy that the ill operators n or the envi operations in operations in operations in the envi operations in the envi operations in the envi operations in the envi operations in the envi operations in the envi operations in the envi operations in the envi operations in	em and Reme comentation and Cleanup comentation information g are required ronment. The ave failed to ddition, NMC ws and/or regi wnsend	dial Action Action Tak iven above to report an acceptance acceptan	n Taken.* cen.* e is true and comp d/or file certain over file a C-141 rep investigate and i	release i ort by th remedia	the best of my sotifications a he NMOCD n te contaminat does not reliev Approved by Approval Da Conditions o	knowledge and i and perform corre- narked as "Final R ion that pose a th re the operator of <u>OIL CON</u> Environmental S te. 2/21/20 if Approval:	at 11: at 11:	that purs os for rele s not reli and water lity for o TION	upint to NM rases which eve the oper surface we ompliance we DIVISIC Date:	OCD ru muy en rator of r uter, hun vith any <u>DN</u>	les and Junger liability an health

#### Langlie Jal Unit #039 C-141 Attachment:

#### API 30-025-11442

#### Penroc Oil Corporation

#### 2/12/2017

#### Describe the cause of the problem and remedial action taken:

Langlie Jal Unit #039 has a steel flowline that is buried from the edge of the well pad to the wellhead where it resurfaces. Approximately thirty feet from the well head, a buried portion of this flowline ruptured causing a release of produced water. The produced water from this release created a typical crater seen with other buried flowline failures and fluid began to spread across the immediate area of the rupture until discovery and isolation occurred. There were no signs of valve-position misplacement along the flow path, so it appears the flowline was weathered from long-term use, resulting in this failure. To remediate future failures of this nature, field personnel will be continually urged to inspect the condition of flowlines visible on the surface and routinely pressure test lines that appear overly weathered or aged in anyway. The well will remain shut in to prevent any further releases until the needed repairs are completed, contaminated soil is removed and trucked to disposal site (Sundance), soil tested per NMOCD requirements, and clean soil is brought in to replace.

#### Describe the area affected and cleanup action taken:

The area affected was the caliche well-pad and the caliche road due south
of the well pad. The produced water ran down the caliche road until it
settled at the entrance of the caliche road. Clean up actions that need to be
taken are to remove the contaminated caliche on the well pad where the
crater occurred. The remaining appears to be hard-rock surface staining
and can be properly remediated with backhoe scraping. All contaminated
caliche will be taken to an approved disposal site (Sundance). After clean
up, clean caliche will replace what has been removed at the well-pad.

## IX Appendix

The following are photos taken immediately after the unauthorized release occurred and the wells in the area were shut in to prevent any further release of produced water.





