



**Layla 27 SWD #1**

**Sec 27, T23S, R28E,**

**API # 30-015-22638**

**Corrective Action Plan**

Release Date: March 27, 2016

**May 18, 2016**

Prepared by:

Zack Thomas

Environmental Representative

Mewbourne Oil Company

701 S. Cecil

Hobbs, NM 88240

Mike Bratcher  
Environmental Specialist, District 2  
Oil Conservation Division, EMNRD  
E-Mail: Mike.Bratcher@state.nm.us

**RE: Layla 27 SWD #1 Remediation Work Plan**

Mike,

The site is located southeast of Loving NM, in Eddy County. The leak site resulted from a produced water leak caused by a flange failure on the inlet side of an injection pump. A C-141 was submitted to the NMOCD on March 30, 2016.

**Site Assessment**

On March 30, 2016, four surface and BGS (below ground surface) sample points of the leak area were obtained. Each sample was tested for chloride levels. With exception to Sample point 4, which cleaned up at 2 feet bgs, the first round of sampling did not fully delineate the site for SP1, SP2, and SP3. On April 5, 2016 a second round of samples were obtained. Those samples are also attached. After a number of field sampling (field samples also attached), we achieved full delineation for SP1 at 12' bgs, SP2 and SP3 at 15' bgs.

Mewbourne has conducted a groundwater study of the area and has determined that according to the New Mexico Office of the State Engineer the average depth to groundwater for this area is 129 foot below ground surface. Therefore, no eminent danger of groundwater impact or threat to life is anticipated. Ground water study attached.

**Conclusion**

After careful review Mewbourne would like to propose the following:

Excavate entire pad area and stockpile clean material, excluding inside tank or separation berms on ours' or Chevrons side (green highlighted areas), to 4'bgs

and install 20 mil poly liner to entire area including leak area. In the areas of SP1, SP2, SP3, and SP4 (blue highlighted area) excavate the top 1' bgs and haul to disposal. After top foot is hauled off we propose to excavate down to 4', install liner (red highlighted area), and then blend contaminated leak area material with clean caliche then backfill. The poly liner along with berms around the pad will prevent any further migration of chlorides both above and below liner. Installing liner to entire pad will prevent any further pollution at this site.

Please feel free to contact me with any questions concerning this remediation closure request.

Sincerely,

A handwritten signature in cursive script, appearing to read "Z. Thomas".

Zack Thomas  
Environmental Representative  
Mewbourne Oil Company  
701 S. Cecil  
Hobbs, NM 88240  
Office: (575) 393-5905  
Mobile: (575) 602-2188  
Fax: (575) 393-7259  
Email: [zthomas@mewbourne.com](mailto:zthomas@mewbourne.com)







## **Layla 27 SWD #1**

04/15/2016

Blade Services was on site to sample over the spill area. Field samples will be obtained to determine Chloride content.

<b>Sample Points</b>	<b>Field Chlorides</b>
SP #1 1'	1,850
SP #1 2'	2000
SP #1 3'	2300
SP #1 9'	650
SP #1 10'	500
SP #1 12'	250

<b>Sample Points</b>	<b>Field Chlorides</b>
SP #2 4'	1,700
SP #2 5'	1,000
SP #2 6'	1,100
SP #2 8'	800
SP #2 10'	600
SP #2 12'	500
SP #2 15'	250

<b>Sample Points</b>	<b>Field Chlorides</b>
SP #3 4'	2,050
SP #3 5'	900
SP #3 6'	500
SP #3 9'	800
SP #3 10'	625
SP #3 12'	550
SP #3 15'	100

After each sample point it is determined that the vertical extent had been determined between 12'-15' below grade surface.

April 04, 2016

ZACK THOMAS

MEWBOURNE OIL COMPANY

P. O. BOX 5270

HOBBS, NM 88240

RE: LAYLA 27 SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 03/30/16 13:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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

**Analytical Results For:**

MEWBOURNE OIL COMPANY  
ZACK THOMAS  
P. O. BOX 5270  
HOBBS NM, 88240  
Fax To: (575) 937-6252

Received: 03/30/2016  
Reported: 04/04/2016  
Project Name: LAYLA 27 SWD #1  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 03/30/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 1 @ SURFACE (H600673-01)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8480	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP 1 @ 1' (H600673-02)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1880	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP 2 @ SURFACE (H600673-03)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9400	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP 2 @ 1' (H600673-04)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4400	16.0	03/31/2016	ND	432	108	400	3.77	

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, Lab Director/Quality Manager

**Analytical Results For:**

MEWBOURNE OIL COMPANY  
ZACK THOMAS  
P. O. BOX 5270  
HOBBS NM, 88240  
Fax To: (575) 937-6252

Received: 03/30/2016  
Reported: 04/04/2016  
Project Name: LAYLA 27 SWD #1  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 03/30/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 3 @ SURFACE (H600673-05)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4300	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP 3 @ 1' (H600673-06)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2360	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP4 @ SURFACE (H600673-07)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP 4 @ 1' (H600673-08)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2680	16.0	03/31/2016	ND	432	108	400	3.77	

**Sample ID: SP 4 @ 2' (H600673-09)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/31/2016	ND	432	108	400	3.77	

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, Lab Director/Quality Manager



### Notes and Definitions

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

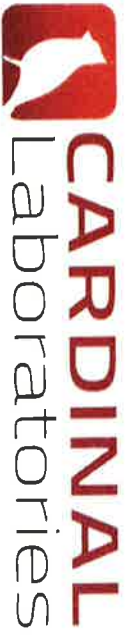
\*=Accredited Analyte

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, 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, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Melbourne</u>		P.O. #:		BILL TO												ANALYSIS REQUEST																									
Project Manager: <u>Zack Thomas</u>		Company:																																							
Address:		Attn:																																							
City:		Address:																																							
Phone #:		City:																																							
Fax #:		State:																																							
Project #:		Zip:																																							
Project Name:		Phone #:																																							
Project Location: <u>Layla 27 Sub #1</u>		Fax #:																																							
Sampler Name: <u>Zack Thomas</u>																																									
FOR LAB USE ONLY																																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER		ACID/BASE		ICE / COOL		OTHER		DATE		TIME													
H000673		SP 1 @ surface		1		1		✓																		3/29/16 10:30		ce													
1		SP 1 @ surface		1		1		✓																																	
2		SP 2 @ surface		1		1		✓																																	
3		SP 2 @ surface		1		1		✓																																	
4		SP 2 @ surface		1		1		✓																																	
5		SP 3 @ surface		1		1		✓																																	
6		SP 3 @ surface		1		1		✓																																	
7		SP 4 @ surface		1		1		✓																																	
8		SP 4 @ surface		1		1		✓																																	
9		SP 4 @ surface		1		1		✓																																	
10		SP 4 @ surface		1		1		✓																																	
11		SP 4 @ surface		1		1		✓																																	
12		SP 4 @ surface		1		1		✓																																	
13		SP 4 @ surface		1		1		✓																																	
14		SP 4 @ surface		1		1		✓																																	
15		SP 4 @ surface		1		1		✓																																	
16		SP 4 @ surface		1		1		✓																																	
17		SP 4 @ surface		1		1		✓																																	
18		SP 4 @ surface		1		1		✓																																	
19		SP 4 @ surface		1		1		✓																																	
20		SP 4 @ surface		1		1		✓																																	
21		SP 4 @ surface		1		1		✓																																	
22		SP 4 @ surface		1		1		✓																																	
23		SP 4 @ surface		1		1		✓																																	
24		SP 4 @ surface		1		1		✓																																	
25		SP 4 @ surface		1		1		✓																																	
26		SP 4 @ surface		1		1		✓																																	
27		SP 4 @ surface		1		1		✓																																	
28		SP 4 @ surface		1		1		✓																																	
29		SP 4 @ surface		1		1		✓																																	
30		SP 4 @ surface		1		1		✓																																	
31		SP 4 @ surface		1		1		✓																																	
32		SP 4 @ surface		1		1		✓																																	
33		SP 4 @ surface		1		1		✓																																	
34		SP 4 @ surface		1		1		✓																																	
35		SP 4 @ surface		1		1		✓																																	
36		SP 4 @ surface		1		1		✓																																	
37		SP 4 @ surface		1		1		✓																																	
38		SP 4 @ surface		1		1		✓																																	
39		SP 4 @ surface		1		1		✓																																	
40		SP 4 @ surface		1		1		✓																																	
41		SP 4 @ surface		1		1		✓																																	
42		SP 4 @ surface		1		1		✓																																	
43		SP 4 @ surface		1		1		✓																																	
44		SP 4 @ surface		1		1		✓																																	
45		SP 4 @ surface		1		1		✓																																	
46		SP 4 @ surface		1		1		✓																																	
47		SP 4 @ surface		1		1		✓																																	
48		SP 4 @ surface		1		1		✓																																	
49		SP 4 @ surface		1		1		✓																																	
50		SP 4 @ surface		1		1		✓																																	
51		SP 4 @ surface		1		1		✓																																	
52		SP 4 @ surface		1		1		✓																																	
53		SP 4 @ surface		1		1		✓																																	
54		SP 4 @ surface		1		1		✓																																	
55		SP 4 @ surface		1		1		✓																																	
56		SP 4 @ surface		1		1		✓																																	
57		SP 4 @ surface		1		1		✓																																	
58		SP 4 @ surface		1		1		✓																																	
59		SP 4 @ surface		1		1		✓																																	
60		SP 4 @ surface		1		1		✓																																	
61		SP 4 @ surface		1		1		✓																																	
62		SP 4 @ surface		1		1		✓																																	
63		SP 4 @ surface		1		1		✓																																	
64		SP 4 @ surface		1		1		✓																																	
65		SP 4 @ surface		1		1		✓																																	
66		SP 4 @ surface		1		1		✓																																	
67		SP 4 @ surface		1		1		✓																																	
68		SP 4 @ surface		1		1		✓																																	
69		SP 4 @ surface		1		1		✓																																	
70		SP 4 @ surface		1		1		✓																																	
71		SP 4 @ surface		1		1		✓																																	
72		SP 4 @ surface		1		1		✓																																	
73		SP 4 @ surface		1		1		✓																																	
74		SP 4 @ surface		1		1		✓																																	
75		SP 4 @ surface		1		1		✓																																	
76		SP 4 @ surface		1		1		✓																																	
77		SP 4 @ surface		1		1		✓																																	
78		SP 4 @ surface		1		1		✓																																	
79		SP 4 @ surface		1		1		✓																																	
80		SP 4 @ surface		1		1		✓																																	
81		SP 4 @ surface		1		1		✓																																	
82		SP 4 @ surface		1		1		✓																																	
83		SP 4 @ surface		1		1		✓																																	
84		SP 4 @ surface		1		1		✓																																	
85		SP 4 @ surface		1		1		✓																																	
86		SP 4 @ surface		1		1		✓																																	
87		SP 4 @ surface		1		1																																			

April 11, 2016

ZACK THOMAS

MEWBOURNE OIL COMPANY

P. O. BOX 5270

HOBBS, NM 88240

RE: LAYLA 27 SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 04/06/16 9:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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

**Analytical Results For:**

 MEWBOURNE OIL COMPANY  
 ZACK THOMAS  
 P. O. BOX 5270  
 HOBBS NM, 88240  
 Fax To: (575) 937-6252

 Received: 04/06/2016  
 Reported: 04/11/2016  
 Project Name: LAYLA 27 SWD #1  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/05/2016  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 2' BGS (H600726-01)**

Chloride, SM4500Cl-B mg/kg			Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2040	16.0	04/07/2016	ND	432	108	400	3.77	

**Sample ID: SP 1 3' BGS (H600726-02)**

Chloride, SM4500Cl-B mg/kg			Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2320	16.0	04/07/2016	ND	432	108	400	3.77	

**Sample ID: SP 2 2' BGS (H600726-03)**

Chloride, SM4500Cl-B mg/kg			Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	04/07/2016	ND	432	108	400	3.77	

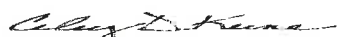
**Sample ID: SP 2 3' BGS (H600726-04)**

Chloride, SM4500Cl-B mg/kg			Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	04/07/2016	ND	432	108	400	3.77	

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, Lab Director/Quality Manager

**Analytical Results For:**

 MEWBOURNE OIL COMPANY  
 ZACK THOMAS  
 P. O. BOX 5270  
 HOBBS NM, 88240  
 Fax To: (575) 937-6252

 Received: 04/06/2016  
 Reported: 04/11/2016  
 Project Name: LAYLA 27 SWD #1  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/05/2016  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 4' BGS (H600726-05)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1720	16.0	04/07/2016	ND	432	108	400	3.77	

**Sample ID: SP 3 2' BGS (H600726-06)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1880	16.0	04/07/2016	ND	432	108	400	3.77	

**Sample ID: SP 3 3' BGS (H600726-07)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	04/07/2016	ND	432	108	400	3.77	

**Sample ID: SP 3 4' BGS (H600726-08)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	04/07/2016	ND	432	108	400	3.77	

**Sample ID: BACKGROUND SURFACE (H600726-13)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/07/2016	ND	416	104	400	0.00	

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, Lab Director/Quality Manager



### Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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, 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, Lab Director/Quality Manager



## Page 5 of 6

ANALYSIS REQUEST

**+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326**

April 28, 2016

ZACK THOMAS

MEWBOURNE OIL COMPANY

P. O. BOX 5270

HOBBS, NM 88240

RE: LAYLA 27 SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 04/21/16 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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

**Analytical Results For:**

 MEWBOURNE OIL COMPANY  
 ZACK THOMAS  
 P. O. BOX 5270  
 HOBBS NM, 88240  
 Fax To: (575) 937-6252

 Received: 04/21/2016  
 Reported: 04/28/2016  
 Project Name: LAYLA 27 SWD #1  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 04/21/2016  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP #1 - 12' BGS (H600869-01)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/26/2016	ND	416	104	400	3.92	

**Sample ID: SP #2 - 15' BGS (H600869-02)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/26/2016	ND	416	104	400	3.92	

**Sample ID: SP #3 - 15' BGS (H600869-03)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/26/2016	ND	416	104	400	3.92	

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, Lab Director/Quality Manager

### Notes and Definitions


QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

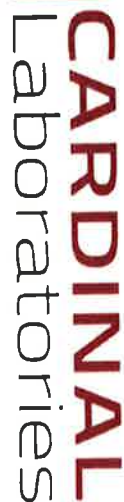
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived 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, 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, Lab Director/Quality Manager





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: **McBourne**

Project Manager: **Zach Thomas**

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_

Project Location: **Lowland 27510D #1**

Sample Name: **Rick Navaricche**

FOR LAB USE ONLY

P.O. #: \_\_\_\_\_

Company: \_\_\_\_\_

Attn: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D. **11000869**

Sample I.D. **\***

(G)RAB OR (C)OMP. \_\_\_\_\_

# CONTAINERS \_\_\_\_\_

MATRIX	PRESERV	SAMPLING
GROUNDWATER		
WASTEWATER		
SOIL		
OIL		
SLUDGE		
OTHER :		
ACID/BASE:		
ICE / COOL		
OTHER :		

DATE TIME **9/21/16 9:30**

Relinquished By: **prc**

Relinquished By: \_\_\_\_\_

Received By: **David Jensen**

Received By: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Delivered By: (Circle One) **24.4°C**

Sampler - UPS - Bus - Other: \_\_\_\_\_

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Checked By: **[Signature]**

REMARKS: **Zach Services returned as per Zach. 9/21/16 OK**



# New Mexico Office of the State Engineer

## Wells with Well Log Information

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

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

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

POD Number	POD	Code	Subbasin	County	Source	q q q			Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File	Depth		Driller	License Number
						Shallow	1	2	3								Well	Water		
<a href="#">C 00340</a>	C		ED	Shallow	1	1	27	23S	28E			586483	3572022*	08/11/1952	08/13/1952	08/25/1952	117	18	HOWARD HEMLER	122
<a href="#">C 00641</a>	C		ED	Shallow	2	2	27	23S	28E			586986	3572126*	03/20/1955	03/22/1955	04/07/1955	115	40	JOLLY, J.R.	171
<a href="#">C 03432 POD1</a>	C		ED	Shallow	1	2	27	23S	28E			587527	3572162	10/17/2009	10/25/2009	10/26/2009	115	75	MARK HAMMOND	1400
<a href="#">C 03732 POD1</a>	C		ED	Shallow	1	3	27	23S	28E			586321	3570929	04/12/2014	04/13/2014	08/13/2014	171	10	MALEY, JASON	1690

Record Count: 4

PLSS Search:

Section(s): 27

Township: 23S

Range: 28E

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/18/16 1:36 PM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

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

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

MAR 30 2016

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.  
**RECEIVED**

**Release Notification and Corrective Action**

NAB1609149408

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company: Mewbourne Oil Company	Contact: Zack Thomas
Address: PO Box 5270 Hobbs NM 88241	Telephone No. 575-393-5905
Facility Name: Layla 27 SWD #1	Facility Type: SWD

Surface Owner: Private	Mineral Owner: Fee	API No. 30-015-22638
------------------------	--------------------	----------------------

**LOCATION OF RELEASE**

Unit Letter H	Section 27	Township 23S	Range 28E	Feet from the 1980'	North/South Line North	Feet from the 990'	East/West Line East	County Eddy
------------------	---------------	-----------------	--------------	------------------------	---------------------------	-----------------------	------------------------	----------------

Latitude 32.278038 Longitude -104.0698242

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: Estimated 80 bbls.	Volume Recovered: PW (80 bbls)
Source of Release: Injection pump inlet	Date and Hour of Occurrence 3-27-16	Date and Hour of Discovery 3-27-16 10:00 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Flange failure on inlet of injection pump.		
Describe Area Affected and Cleanup Action Taken.* Affected area- Well pad surface East of tanks. Vacuum trucks were used to recover 80 bbls of produced water. Final remediation will be conducted in accordance with the NMOC's Guidelines for Remediation of Spills, Leaks and Releases.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC's rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOC's marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC's acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

Signature: <i>Z. Thomas</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Zack Thomas	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Rep.	Approval Date: 3/31/16	Expiration Date: N/A
E-mail Address: zthomas@mewbourne.com	Conditions of Approval:	
Date: 3-30-16	Attached <input type="checkbox"/>	

**Remediation per O.C.D. Rules & Guidelines**  
**SUBMIT REMEDIATION PROPOSAL NO**  
**LATER THAN: 4/1/2016**

2RP 3626