



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289  
Est. 1970

Dave Nicholson  
Berry Petroleum Company - Denver, CO  
1999 Broadway, Suite 3700  
Denver, CO 80202

### Report Summary

Friday September 13, 2013

Report Number: L654871

Samples Received: 08/30/13

Client Project:

Description: Pit Reclamation

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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# REPORT OF ANALYSIS

September 13, 2013

Dave Nicholson  
Berry Petroleum Company - Denver, C  
1999 Broadway, Suite 3700  
Denver, CO 80202

ESC Sample # : 1654871-05

Date Received : August 30, 2013  
Description : Pit Reclamation

Site ID :

Sample ID : I-19 PIT BOTTOM

Project # :

Collected By : DK Nicholson  
Collection Date : 08/28/13 15:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	09/04/13	1
Chromium, Trivalent	30.	0.50	mg/kg	Calc.	09/12/13	1
ORP	160		mV	2580 B-2011	09/05/13	1
pH	8.5		su	9045D	09/07/13	1
Sodium Adsorption Ratio	21.			Calc.	09/07/13	1
Specific Conductance	2800		umhos/cm	9050AMod	09/05/13	1
Mercury	BDL	0.020	mg/kg	7471	09/04/13	1
Arsenic	9.0	1.0	mg/kg	6010B	09/12/13	1
Barium	880	0.25	mg/kg	6010B	09/12/13	1
Boron	19.	10.	mg/kg	6010B	09/12/13	1
Cadmium	BDL	0.25	mg/kg	6010B	09/12/13	1
Chromium	30.	0.50	mg/kg	6010B	09/12/13	1
Copper	14.	1.0	mg/kg	6010B	09/12/13	1
Lead	18.	0.25	mg/kg	6010B	09/12/13	1
Nickel	16.	1.0	mg/kg	6010B	09/12/13	1
Selenium	BDL	1.0	mg/kg	6010B	09/12/13	1
Silver	BDL	0.50	mg/kg	6010B	09/12/13	1
Zinc	46.	1.5	mg/kg	6010B	09/12/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	09/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	09/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	09/04/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	09/04/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	09/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene (FID)	93.5		% Rec.	8021/8015	09/04/13	5
a,a,a-Trifluorotoluene (PID)	96.6		% Rec.	8021/8015	09/04/13	5
TPH (GC/FID) High Fraction	77.	4.0	mg/kg	3546/DRO	09/03/13	1
Surrogate recovery(%)						
o-Terphenyl	62.1		% Rec.	3546/DRO	09/03/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
1654871-05 (PH) - 8.5@21.3c



YOUR LAB OF CHOICE

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REPORT OF ANALYSIS

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Berry Petroleum Company - Denver, C  
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Denver, CO 80202

September 13, 2013

Date Received : August 30, 2013  
Description : Pit Reclamation  
Sample ID : I-19 PIT BOTTOM  
Collected By : DK Nicholson  
Collection Date : 08/28/13 15:10

ESC Sample # : L654871-05

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	09/06/13	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	09/06/13	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Naphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
Phenanthrene	0.082	0.060	mg/kg	8270C-SIM	09/06/13	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
1-Methylnaphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
2-Methylnaphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
2-Chloronaphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
Surrogate Recovery						
Nitrobenzene-d5	104.		% Rec.	8270C-SIM	09/06/13	10
2-Fluorobiphenyl	89.6		% Rec.	8270C-SIM	09/06/13	10
p-Terphenyl-d14	96.2		% Rec.	8270C-SIM	09/06/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/12/13 17:51 Revised: 09/13/13 09:36  
L654871-05 (PH) - 8.5@21.3c



12065 Lebanon Rd.  
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1-800-761-5859  
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Tak I.D. 62-0814289

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# REPORT OF ANALYSIS

September 13, 2013

Dave Nicholson  
Berry Petroleum Company - Denver, C  
1999 Broadway, Suite 3700  
Denver, CO 80202

ESC Sample # : L654871-06

Date Received : August 30, 2013  
Description : Pit Reclamation

Site ID :

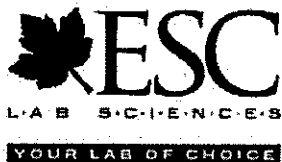
Sample ID : I-19 SPOILS

Project # :

Collected By : DK Nicholson  
Collection Date : 08/28/13 15:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	09/04/13	1
Chromium, Trivalent	26.	0.50	mg/kg	Calc.	09/12/13	1
ORP	150		mV	2580 B-2011	09/05/13	1
pH	8.5		su	9045D	09/07/13	1
Sodium Adsorption Ratio	19.			Calc.	09/07/13	1
Specific Conductance	2100		umhos/cm	9050AMod	09/05/13	1
Mercury	0.024	0.020	mg/kg	7471	09/04/13	1
Arsenic	6.8	1.0	mg/kg	6010B	09/12/13	1
Barium	770	0.25	mg/kg	6010B	09/12/13	1
Boron	18.	10.	mg/kg	6010B	09/12/13	1
Cadmium	0.34	0.25	mg/kg	6010B	09/12/13	1
Chromium	26.	0.50	mg/kg	6010B	09/12/13	1
Copper	15.	1.0	mg/kg	6010B	09/12/13	1
Lead	17.	0.25	mg/kg	6010B	09/12/13	1
Nickel	14.	1.0	mg/kg	6010B	09/12/13	1
Selenium	BDL	1.0	mg/kg	6010B	09/12/13	1
Silver	BDL	0.50	mg/kg	6010B	09/12/13	1
Zinc	47.	1.5	mg/kg	6010B	09/12/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	09/04/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	09/04/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	09/04/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	09/04/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	09/04/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene (FID)	93.8		% Rec.	8021/8015	09/04/13	5
a,a,a-Trifluorotoluene (PID)	96.6		% Rec.	8021/8015	09/04/13	5
TPH (GC/FID) High Fraction	220	20.	mg/kg	3546/DRO	09/04/13	5
Surrogate recovery(%)						
o-Terphenyl	76.7		% Rec.	3546/DRO	09/04/13	5
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
L654871-06 (PH) - 8.5821.0c



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September 13, 2013

Date Received : August 30, 2013  
Description : Pit Reclamation  
Sample ID : I-19 SPOILS  
Collected By : DK Nicholson  
Collection Date : 08/28/13 15:30

ESC Sample # : L654871-06

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	09/06/13	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	09/06/13	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
Naphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
Phenanthrene	0.076	0.060	mg/kg	8270C-SIM	09/06/13	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	09/06/13	10
1-Methylnaphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
2-Methylnaphthalene	0.25	0.20	mg/kg	8270C-SIM	09/06/13	10
2-Chloronaphthalene	BDL	0.20	mg/kg	8270C-SIM	09/06/13	10
Surrogate Recovery						
Nitrobenzene-d5	103.		% Rec.	8270C-SIM	09/06/13	10
2-Fluorobiphenyl	92.9		% Rec.	8270C-SIM	09/06/13	10
p-Terphenyl-d14	114.		% Rec.	8270C-SIM	09/06/13	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/12/13 17:51 Revised: 09/13/13 09:36  
L654871-06 (PR) - 8.5021.0c

