Appendix K: Formation Fluid Analyses



ANALYTICAL RESULTS FOR DCP MIDSTREAM ATTN: RUSSELL BENTLEY 11221 RICHMOND AVE., SUITE 107C HOUSTON, TX 77082

FAX TO:

Receiving Date: 12/26/07 Reporting Date: 01/07/08 Project Owner: LINAM

Project Name: LINAM RANCH AG1
Project Location: NOT GIVEN

Sampling Date: NOT GIVEN
Sample Type: GROUNDWATER
Sample Condition: INTACT
Sample Received By: ML

Analyzed By: HM/KS

Na Ca Mg Κ Conductivity T-Alkalinity (uS/cm) (mgCaCO<sub>3</sub>/L) LAB NUMBER SAMPLE ID (mg/L) (mg/L) (mg/L)(mg/L)ANALYSIS DATE: 01/02/08 01/02/08 01/02/08 01/02/08 12/27/07 12/27/07 1,360\* 98,500 160\* H13978-1 **FLOWBACK** 23,854 363\* 3,670\* H13978-2 DOWNHOLE 24,909 1,760\* 424\* 535\* 94,800 324 **Quality Control** NR 49.2 54.0 3.19 1,424 NR True Value QC NR 50.0 50.0 3.00 1,413 NR 98.5 108 106 NR % Recovery NR 101 Relative Percent Difference NR < 0.1 6.1 10.2 0.9 NR METHODS: SM3500-Ca-D 3500-Mg E 8049 120.1 310.1 CI SO<sub>4</sub>  $CO_3$ HCO<sub>3</sub> TDS pΗ (mg/L) (mg/L) (mg/L) (mg/L) (s.u.) (mg/L) ANALYSIS DATE: 12/27/07 01/07/08 12/31/07 12/31/07 12/27/07 12/27/07 **FLOWBACK** 2,720\* 72,480 H13978-1 41,500\* 0 195\* 6.46 H13978-2 DOWNHOLE 40.000\* 4.145 395 6.73 73,412 7.06 **Quality Control** 500 27.8 NR 1000 NR True Value QC 500 25.0 NR 1000 7.00 NR % Recovery 100 NR 111 100 101 NR Relative Percent Difference < 0.1 17.4 NR < 0.1 < 0.1 NR

SM4500-CI-B

Chemist Chemist

METHODS:

Date

310.1

150.1

160.1

Date

310.1

375.4

<sup>\*</sup> Note: Analyses performed on 1:10 v:v aqueous extracts. Results should therefore be considered approximate.



**ANALYTICAL RESULTS FOR** DCP MIDSTREAM ATTN: RUSSELL BENTLEY 11221 RICHMOND AVE., SUITE 107C HOUSTON, TX 77082 FAX TO:

Receiving Date: 12/26/07 Reporting Date: 01/16/08 Project Number: NOT GIVEN

Project Name: LINAM

Relative Percent Difference

Project Location: LINAM RANCH AG1

Sampling Date: NOT GIVEN Sample Type: GROUNDWATER Sample Condition: INTACT

Sample Received By: ML

Sr

1.7

Zn

1.2

Analyzed By: HM

Fe

0.4

LAB NUMBER	SAMPLE ID	(ppm)	(ppm)	(ppm)	(ppm)			
ANALYSIS DATE		01/11/08	01/11/08	240 * 203 *	01/11/08			
H13978-1	FLOWBACK	< 10.0 *	240 *	203 *	1.37 *			
H13978-2	DOWNHOLE	< 1.00	67.0	93.0	0.157			
,								
Quality Control		23.3	2.04	1.97	0.503			
True Value QC		25.0	2.00	2.00	0.500			
% Accuracy		93.2	102	98.5	101			

Ba

METHODS:	FPA 600/4-79-020	208.1	236.1	SW846-7780	289.1
THE THOO.	E17100011700E0		200.1	01104000	200.1

1.3

<sup>\*</sup>Note: Analysis performed on 1:10 v:v aqueous extract. Result should therefore be considered an approximation.



ANALYTICAL RESULTS FOR DCP MIDSTREAM ATTN: RUSSELL BENTLEY 11221 RICHMOND AVE., SUITE 107C HOUSTON, TX 77082 FAX TO:

Receiving Date: 12/26/07 Reporting Date: 01/11/08 Project Number: NOT GIVEN

Project Name: LINAM

Project Location: LINAM RANCH AG1

Sampling Date: NOT GIVEN
Sample Type: GROUNDWATER
Sample Condition: INTACT
Sample Received By: ML

Analyzed By: HM

LAB NUMBER SAMPLE ID (mg/L) (mg/L)

Analysis Date:		12/28/07	01/11/08
H13978-1	FLOWBACK	15.25	4.40 *
H13978-2	DOWNHOLE	0.62	6.63
Quality Control		2.11	1.05
True Value QC		2.00	1.00
% Recovery		106	105
Relative Percent D	ifference	14.2	4.9

METHOD: EPA 600/4-79-020	353.3 Hach8029	

\*Note: Analysis performed on 1:10 v:v aqueous extract. Result should therefore be considered an approximation.

Chémist

Date 7-11-08

## ARDINAL LABORATORIES

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FA					BILL TO						ANALYSIS REQUEST													
Project Manager: Russell Bentley					P.O. #:																	***		
Address: 1/221 Richmond AVE. Swite 1070					Company: Ops Group						] ~	1												
City: Houston State: Tx Zip: 17082				Attn: Rogan Wood						15		<u> </u>				į			1					
Phone #: Fax #:					Address:						1 2							İ						
Project #: Livoum Project Owner:					City:								0							ļ				
Project Name: Linaum Ranch DG1					State: Zip:							##	SS							İ				
Project Location:					Phone #:								0							8				
Sampler Name:						Fax #:						8	4	1			1				, ,			
FOR LAB USE ONLY MATRIX							PRE	SER	٧.	SAMPL	NG		FALL		ات سلد	٤ ا			ĺ	1 9	`.,I			
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Termonorities	THE STATE OF THE S	Cations	0.170	Bonin	SCL	Zime	الله الله	1 Lourid	Stronti		
13978-1 Flowback	77	Ť	N		1	-		7		_			M	July	~	سسا	-	-	<u></u>	~	~	レ		
-2 Downhole	G	T	N										账	W	V	<b>1</b>	1	-	-	-	1	_	<u> </u>	
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