KOLAR Document ID: 1627712

# KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

Form U3C
June 2015
Form must be Typed
Form must be completed
on a per well basis

# ANNUAL REPORT OF PRESSURE MONITORING, FLUID INJECTION AND ENHANCED RECOVERY

Complete all blanks - add pages if needed. Copy to be retained for five (5) years after filing date.

OPE	RATOR: License # _			API No.:		
Name	e:			Permit No:		
Addre	ess 1:			Reporting Year:		
Addre	ess 2:				(January 1 to December	r 31)
		State: Zip:			Sec Twp S.	R 🔲 E 🔲 '
Conta	act Person:	·		(Q/Q/Q/Q)	feet from N /	S Line of Section
Phon	ne: ()				feet from E /	
	,			County:		
Well I	Number:			,		
	jection Fluid: Type (Pick one): Source: Quality: Total (Attach water analysis		Treated Brine Other (Attach list) mg/l Specific Grav	Untreated Brine vity: Additives:	☐ Water/Brine	
	Maximum Authorized	I Injection Pressure: I Injection Rate: anced Recovery Injection Wells	barrels per d	ay		
III.	Month:	Total Fluid Injected BBL	Maximum Fluid Pressure	Total Gas Injected MCF	Maximum Gas Pressure	# Days of Injection
	January					
	February					
	March	- <u></u>		- <u></u>		
	April					
	May					
	June					<u> </u>
	July					
	August					
	September					
	October					
	November					
	December					
	TOTAL					





December 22, 2021

Jacob (Jake) Dyson SCS Engineers 11120 E. 26th St N Wichita, KS 67226

RE: Project: MARCH EXPLORATION

Pace Project No.: 60388183

Dear Jacob (Jake) Dyson:

Enclosed are the analytical results for sample(s) received by the laboratory on December 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heather Wilson

heather.wilson@pacelabs.com

Markon M. Wilson

1(913)563-1407 Project Manager

Enclosures







### **CERTIFICATIONS**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

**Pace Analytical Services Kansas** 

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 20-020-0

Arkansas Drinking Water

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212020-2 Oklahoma Certification #: 9205/9935 Florida: Cert E871149 SEKS WET Texas Certification #: T104704407-19-12 Utah Certification #: KS000212019-9

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587 Missouri SEKS Micro Certification: 10070

(913)599-5665



# **SAMPLE SUMMARY**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60388183001	FALL OFF LINE	Water	12/06/21 16:52	12/09/21 12:00

(913)599-5665



# **SAMPLE ANALYTE COUNT**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60388183001	FALL OFF LINE	SM 2540C	BLA	1	PASI-K
		SM 4500-H+B	LDB	1	PASI-K
		EPA 300.0	MAW	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City



# **ANALYTICAL RESULTS**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

Date: 12/22/2021 04:01 PM

Sample: FALL OFF LINE	Lab ID: 603	88183001	Collected: 12/06/2	21 16:52	Received: 12	2/09/21 12:00 M	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	10C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	38200	mg/L	2000	1		12/13/21 06:27		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.3	Std. Units	0.10	1		12/13/21 11:12		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
	Pace Analytica	al Services -	Kansas City					
Chloride	18600	mg/L	2000	2000		12/22/21 13:40	16887-00-6	



### **QUALITY CONTROL DATA**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

QC Batch: 761224

QC Batch Method: SM 2540C

Analysis Method: SM 2540C

Analysis Description:

2540C Total Dissolved Solids

Laboratory:

Pace Analytical Services - Kansas City

Associated Lab Samples: 60388183001

METHOD BLANK: 3046135

Matrix: Water

Associated Lab Samples: 60388183001

Parameter

Parameter

Blank Result Reporting

Limit

Analyzed Qualifiers

Total Dissolved Solids mg/L ND 5.0 12/13/21 06:25

Units

Units

mg/L

LABORATORY CONTROL SAMPLE: 3046136

Spike Conc.

1000

LCS Result

1060

LCS % Rec

106

**RPD** 

% Rec Limits

80-120

Qualifiers

SAMPLE DUPLICATE: 3046137

Parameter

**Total Dissolved Solids** 

**Total Dissolved Solids** 

SAMPLE DUPLICATE:

Date: 12/22/2021 04:01 PM

603077440

Units

mg/L

60387711009 Dup Result Result

127

1

134

5460

Max RPD

5

1

Qualifiers

3046138

Parameter Units

Total Dissolved Solids mg/L

60387935001 Result

Dup Result RPD

Max RPD 10

10

Qualifiers

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

QC Batch: 761147 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60388183001

SAMPLE DUPLICATE: 3045725

Date: 12/22/2021 04:01 PM

 Parameter
 Units
 60387639002 Result
 Dup Result
 Max RPD
 Max RPD
 Qualifiers

 pH at 25 Degrees C
 Std. Units
 7.0
 7.1
 1
 5
 H6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

QC Batch: 762571 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60388183001

METHOD BLANK: 3050895 Matrix: Water

Associated Lab Samples: 60388183001

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Chloride mg/L ND 1.0 12/20/21 12:52

METHOD BLANK: 3053061 Matrix: Water

Associated Lab Samples: 60388183001

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Chloride mg/L ND 1.0 12/21/21 08:51

METHOD BLANK: 3054012 Matrix: Water

Associated Lab Samples: 60388183001

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Chloride mg/L ND 1.0 12/22/21 08:46

LABORATORY CONTROL SAMPLE: 3050896

Spike LCS LCS % Rec

 Parameter
 Units
 Conc.
 Result
 % Rec
 Limits
 Qualifiers

 Chloride
 mg/L
 5
 4.7
 93
 90-110

LABORATORY CONTROL SAMPLE: 3053062

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers 5 90-110 Chloride mg/L 4.7 94

LABORATORY CONTROL SAMPLE: 3054013

Date: 12/22/2021 04:01 PM

LCS LCS % Rec Spike Parameter Units Conc. Result % Rec Limits Qualifiers Chloride 5 4.8 96 90-110 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

80-120

111

(913)599-5665



# **QUALITY CONTROL DATA**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

Chloride

Date: 12/22/2021 04:01 PM

MATRIX SPIKE & MATRIX SF		CATE: 3050 0387879001	897 MS Spike	MSD Spike	3050898 MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	103	100	100	197	197	94	94	80-120	C	15	
MATRIX SPIKE SAMPLE:	30	050899										
Parameter		Units		8098006 esult	Spike Conc.	MS Result		MS Rec	% Rec		Qualif	

7360

5000

12900

mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALIFIERS**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### SAMPLE QUALIFIERS

Sample: 60388183001

[1] Samples requiring thermal preservation were received outside of recommended temperature limits of 0-6 degrees Celsius.

### **ANALYTE QUALIFIERS**

Date: 12/22/2021 04:01 PM

H6 Analysis initiated outside of the 15 minute EPA required holding time.



# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: MARCH EXPLORATION

Pace Project No.: 60388183

Date: 12/22/2021 04:01 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60388183001	FALL OFF LINE	SM 2540C	761224		
60388183001	FALL OFF LINE	SM 4500-H+B	761147		
60388183001	FALL OFF LINE	EPA 300.0	762571		



# Sample Condition Upon Receipt



Client Name:	RS	ı		
Courier: FedEx VIPS UPS VIA Clay P	EX 🗆	EC		Pace ☐ Xroads ☐ Client ☐ Other ☐
Tracking #: 7777777340 Pace	e Shippi	ng La	bel Use	d? Yes □ No
Custody Seal on Cooler/Box Present: Yes □ No 🗹	Seals	intact	: Yes [	□ No 🗹
Packing Material: Bubble Wrap 🗹 Bubble Bags 🗷	1	Fo	oam 🗆	None □ Other □
Thermometer Used: Type of	Ice: W	et B	lue (No	
Cooler Temperature (°C): As-read (C) Corr. Factor	O(O)	7	Correc	Date and initials of person
Temperature should be above freezing to 6°C				
Chain of Custody present:	⊠Yes	□No	□n/a	
Chain of Custody relinquished:	☐ Yes	□No	□n/A	
Samples arrived within holding time:	Yes	□No	□n/a	
Short Hold Time analyses (<72hr):	□Yes	□No	□n/a	A
Rush Turn Around Time requested:	□Yes		□n/a	OUT OF TRIMP
Sufficient volume:	□Yes	□No	□n/a	NO ICE CAME IN
Correct containers used:	☐ Yes	□No	□n/a	A CLARDPOARD BOX
Pace containers used:	ØYes	□No	□n/a	
Containers intact:	⊠Yes	□No	□n/a	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	□Yes	□No	⊡N/A	
Filtered volume received for dissolved tests?	□Yes	□No	□N/A	
Sample labels match COC: Date / time / ID / analyses	<b>Y</b> es	□No	□n/a	
Samples contain multiple phases? Matrix:	□Yes	<b>⊡</b> √0	□n/a	
Containers requiring pH preservation in compliance?	□Yes	□No	□N/A	List sample IDs, volumes, lot #'s of preservative and the
(HNO₃, H₂SO₄, HCI<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#				date/time added.
Cyanide water sample checks:				
Lead acetate strip turns dark? (Record only)	□Yes	□No		
Potassium iodide test strip turns blue/purple? (Preserve)	□Yes	□No		
Trip Blank present:	□Yes	□No	ØÑ/A	
Headspace in VOA vials ( >6mm):	□Yes	□No	ØN/A	
Samples from USDA Regulated Area: State:	□Yes	□No	□N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	□Yes	□No	<b>□</b> N/A	
Client Notification/ Resolution: Copy COC to	Client?	Y	/ N	Field Data Required? Y / N
Person Contacted: Date/Tir	me:			
Comments/ Resolution:				
e manuficial entre de la companya del companya de la companya del companya de la				
Project Manager Review:			Date	E

# Chain of Custody Record Control Chain of Custody Record

Finitionment thating

emost set idysonascsenamen Cox TAL-8210 2001 0H 7.06 toma 12.5°C Sample Specific Notes: 28183209 SOCS Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month For Lab Use Only: Job / SDG No.: Walk-in Client: Lab Sampling: Months ŏ Therm ID No Date/Time: Date/Time: Date/Time: COC No: Archive for Company: Corr'd Company: Company: Disposal by Lab Carrier: Cooler Temp. (°C): Obs'd: 15 Date: Received in Laborator by Other: Return to Client Hq Calaride 20T × Received by: Received by: Site Contact: 1 dysnh a scsengineers Lab Contact: RCRA Filtered Sample (Y / N )
Perform MS / MSD (Y / N ) Z 12/3 09:00 NPDES Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Analysis Turnaround Time うしゅう # of Cont. Date/Time: Date/Time: Date/Time: WORKING DAYS Project Manager: Sake Dysoh Matrix Maret Regulatory Program: Dw Type (C=Comp, G=Grab) Sample TAT if different from Below ೦ 2 weeks 1 week 2 days 1 day (6:5) Sample Time CALENDAR DAYS Preservation Used: 1= ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Custody Seal No. Poison B Tel/Email: Sample Company: Company: Company: 17/6 Date Ste. 1100 Thoop Skin Irritant Comments Section if the lab is to dispose of the sample. Special Instructions/QC Requirements & Comments: Project Name: Nove Englantion Ehgineer Sample Identification Orms Yes Client Contact | Flammable 14 20 1597.00 11120 E 26+1 Phone: 316-315-450 Possible Hazard Identification: Oity/State/Zip: Wir hi十山 Custody Seals Intact: egelinquished by: Company Name: Relinquished by: XNon-Hazard Address:

Address:

																	Thiosulfate															
	DC9M														Misc.	Wipe/Swab	120mL Coliform Na Thiosulfate	Ziploc Bag	Air Filter	Terracore Kit	Summa Can			10-6-15-	Matrix	Water	Solid	Non-aqueous Liquid	OIL	Wipe	Drinking Water	
	ZPLC																															
	Mekn															_	SP51	ZPLC	Ψ.	א כ	_	L				M⊤	SL	MAL	<u>ا</u>	3 8	3	_
	neEu																									pa.						
	Z£48																						ا <u>ڍ</u>	a		250mL HNO3 plastic - field filtered		<u>ن</u>		a) :	2	
	BP3C																		astic	) i:	ျှ	stic	ad plas	Acetat	ţic	tic - fie	읈	ed plas	stic	Acetat	od plas	atic
6	8678														Plastic	astic	astic	plastic	ved pl		3 plas	04 pla	eserve	H, Zn	H plas	33 plas	3 plas	eserve	8 음	H, 2n	eserve	24 S
Notes	BP3F														ä	1L NAOH plastic	1L HNO3 plastic	1L H2SO4 plastic	1L unpreserved plastic	500ml NAOH plastic	500mL HNO3 plastic	500mL H2SO4 plastic	500mL unpreserved plastic	500mL NaOH, Zn Acetate	250mL NaOH plastic	IL HNC	250mL HNO3 plastic	250mL unpreserved plastic	250mL H2SO4 plastic	250mL NaOH, Zn Acetate	125mL unpreserved plastic	125ml H2SO4 plastic
ñ	вьзи															1LN		=	1 n	5007	500	500m	500m	500rr	250rr	250rr	250rr	250r	2504	֖֡֝֟֓֓֓֓֟֓֓֟֓֟֓֓֓֓֟֓֓֓֓֓֟֓֓֓֓֓֓֟֓֓֓֓֟֓֓֓	1250	125m
	ычи																															
	US98															BP1C	BP1N	BP1S	BP10	BP2C	BP2N	BP2S	BP2U	BP2Z	BP3C	BP3F	BP3N	BP3U	BP3S	BF32	BP40	BP4S
	BP2U	۔۔۔																				lass										
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	NGĐĄ																		40z unpreserved amber wide	2 2	lass	1L Na Thiosulfate clear/amber glass	ber glass	500mL HNO3 amber glass	500mL H2SO4 amber glass	250mL H2SO4 amber glass	500mL unpres amber glass	250mL unpres amber glass	125mL unpres amber glass	100mL unpres amber glass		
	N⊅Đ∀															l jar	lar	<u>a</u>	rved a	er dlass	1L H2SO4 amber glass	Je o	ampe	3 amb	04 am∣	04 am	s amp	s amp	s amp	ss amc		
	SE5A															8oz clear soil jar	4oz clear soil jar	2oz clear soil jar	prese	1L HCl amber of	SO4 a	Thios	1liter unpres am	HNO	- H2S(	. H2SC	- unpre	nubre	- unpre			
	NGSU															8oz cle	40z cle	202 CK	402 UF	1	1L H2	1L Na	1liter L	500mL	500mL	250mL	500mL	250mL	125mL			
	UrəA											İ																				
	нгэ∀														SS	WGKL	WGFU	WG20		AG1H	AG1S	AG1T	AG10	AG2N	AG2S	AG3S	AG2U	AG3U	AG4U	AGSC		
	BG1U														Glass			Ī	Ī													
	De90																			l				ial						l		
	N69N											Z.				vial	a vial	<u>a</u>	<u>a</u>	rvial	erved		vial	dear vi	lass		lass	rglass				
	DG90															40mL bisulfate clear vial	40mL HCI amber voa vial	40mL MeOH clear vial	40mL 1SP amber vial	40mL Na Thio amber vial	40mL amber unpreserved	ar vial	40mL Na Thio. clear vial	40mL unpreserved clear vial	1liter H2SO4 clear glass	glass	250mL HCL Clear glass	250mL Unpres Clear glass				
Site:	реэн															isulfat	ICI am	AECH Security Securit	12 AC	la Thic	mber	40mL HCI clear vial	Va Thic	Inprese	2804	1liter unpres glass	된	Unpre				
Si Si	Н6ЭЛ															10mL to	10mC	L L		0 0 1	10mL a	10mL F	10mL	10mL u	liter H.	liter ur	250mL	250mL				
MeOH (only)	Ы															4			1	4	4	4	4	4	-		N	. 1				
11 ≤ Im X	XintsM													Sodes		DG98	DG9H	NG G	0690	DG9T	DG90	NG9H	VG9T	VG9U	BG1S	3610	BG3H	3630				
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Sample Container Count

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