

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.

OPERATOR: License # _____
Name: _____
Address 1: _____
Address 2: _____
City: _____ State: _____ Zip: _____ + _____
Contact Person: _____
Phone: (_____) _____
Lease Name: _____
Well Number: _____

API No.: _____
Permit No.: _____
Reporting Year: _____
(January 1 to December 31)
____ - ____ - ____ - ____ Sec. ____ Twp. ____ S. R. ____ E W
(a/a/a/a)
_____ feet from N / S Line of Section
_____ feet from E / W Line of Section
County: _____

I. Injection Fluid:

Type (Pick one): Fresh Water Treated Brine Untreated Brine Water/Brine
Source: Produced Water Other (Attach list)
Quality: Total Dissolved Solids: _____ mg/l Specific Gravity: _____ Additives: _____
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: _____ psi Injection Zone: _____
Maximum Authorized Injection Rate: _____ barrels per day
Total Number of Enhanced Recovery Injection Wells Covered by this Permit: _____ (Include TA's)

III.	Month:	Total Fluid Injected BBL	Maximum Fluid Pressure	Total Gas Injected MCF	Maximum Gas Pressure	# Days of Injection
	January	_____	_____	_____	_____	_____
	February	_____	_____	_____	_____	_____
	March	_____	_____	_____	_____	_____
	April	_____	_____	_____	_____	_____
	May	_____	_____	_____	_____	_____
	June	_____	_____	_____	_____	_____
	July	_____	_____	_____	_____	_____
	August	_____	_____	_____	_____	_____
	September	_____	_____	_____	_____	_____
	October	_____	_____	_____	_____	_____
	November	_____	_____	_____	_____	_____
	December	_____	_____	_____	_____	_____
	TOTAL	_____	_____	_____	_____	_____

Innospec
 2220 S. Prospect
 Oklahoma City, Ok 73129

Phone:
 Fax:

WATER ANALYSIS REPORT

Company:	Weinkauf	Lab ID Number:	
Water Source:	Frownfelter 1-20	Date Sampled:	6/28/18
Sample Point:	Well Head	Date Analyzed:	6/28/18

Production Data:	BOPD:	BWPD:	MMCFD:
pH:	6.40	Total Dissolved Solids (mg/L):	134,851
Dissolved H ₂ S:	0.0	Total Ionic Strength:	2.697
Dissolved CO ₂ :	130.0	Specific Gravity:	1.115
Resistivity @ 75°F (Ohm-Meters):	0.06140	Density, (lbs/gal):	9.30

Cations	mg/L	Meq/L	Anions	mg/L	Meq/L
Calcium:	8,467	423	Carbonate:	0	0
Magnesium:	980	80	Bicarbonate:	61	1
Sodium:	42,252	1,837	Chloride:	83,000	2,338
Barium:	11		Sulfate:	80	2
Strontium:	0		Total Hardness:	25.200	
Ferrous Iron:	0.0				
Total Dissolved Iron:	140.0				

PROBABLE MINERAL COMPOSITION

	mg/L	Meq/L
Calcium Bicarbonate:	81	1
Calcium Sulfate:	113	2
Calcium Chloride:	23,348	421
Magnesium Bicarbonate:	0	0
Magnesium Sulfate:	0	0
Magnesium Chloride:	3,824	80
Sodium Bicarbonate:	..	0
Sodium Sulfate:	0	0
Sodium Chloride:	107,392	1,837

Remarks

Hydro  *Pax*

Analyst: _____

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 Oklahoma City, Ok 73129

Phone:
 Fax:

SCALE DEPOSITION POTENTIAL ANALYSIS

Company:	Weinlauf	Lab ID Number:	
Water Source:	Frownfeller 1-20	Date Sampled:	6/28/18
Sample Point:	Well Head	Date Analyzed:	6/28/18

Brine Composition

pH:	6.40	Ca, mg/L:	8,467	Total Hardness, mg/L:	25,200
Specific Gravity:	1.115	Mg, mg/L:	980	Total Dissolved Solids, mg/L:	134,851
HCO ₃ , mg/L:	61	Na, mg/L:	42,252	Total Ionic Strength:	2,597
Cl, mg/L:	83,000	Ba, mg/L:	11		
SO ₄ , mg/L:	80	Sr, mg/L:	0	Total Dissolved Iron, mg/L:	140.0

Calcium Carbonate Scale Indices

	Specified Temperatures					
Temperature, °F:	75	100	125	150	40	180
Stiff-Davis Index:	-0.50	-0.22	0.16	0.60	...	1.22
Deposition, lbs/1,000 Bbls:	-81.0	-26.5	7.1	25.4	...	32.7

Calcium Sulfate Scale Indices

	Specified Temperatures					
Temperature, °F:	75	100	125	150	40	180
Supersaturation Ratio:	0.062	0.062	0.063	0.063	0.062	0.064
Deposition, lbs/1,000 Bbls:	-605.3	-602.1	-592.5	-588.0	-603.1	-582.6

Barium Sulfate Scale Indices

	Specified Temperatures					
Temperature, °F:	75	100	125	150	40	180
Supersaturation Ratio:	3.251	2.407	1.780	1.309	5.357	0.907
Deposition, lbs/1,000 Bbls:	4.5	3.8	2.9	1.6	5.3	-0.7

Strontium Sulfate Scale Indices

	Specified Temperatures					
Temperature, °F:	75	100	125	150	40	180
Supersaturation Ratio:	0.000	0.000	0.000	0.000	0.000	0.000
Deposition, lbs/1,000 Bbls:	-1.8	-2.5	-3.3	-4.6	-1.1	-6.6

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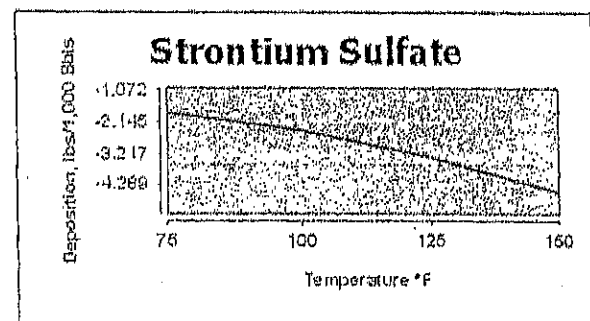
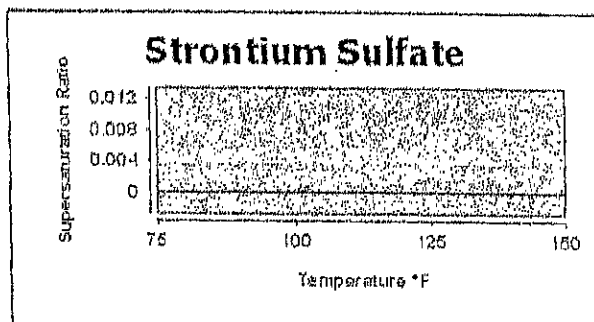
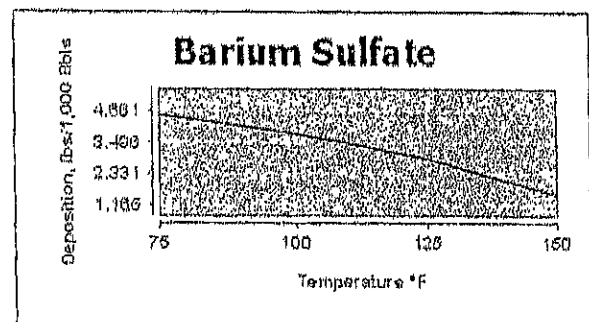
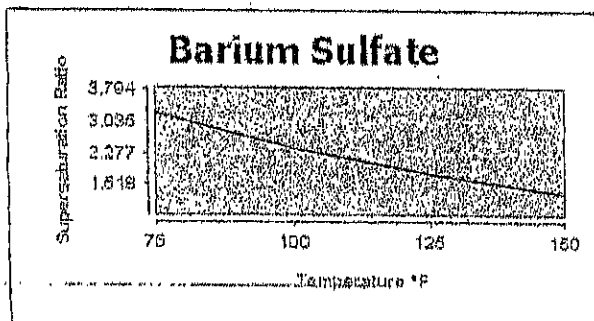
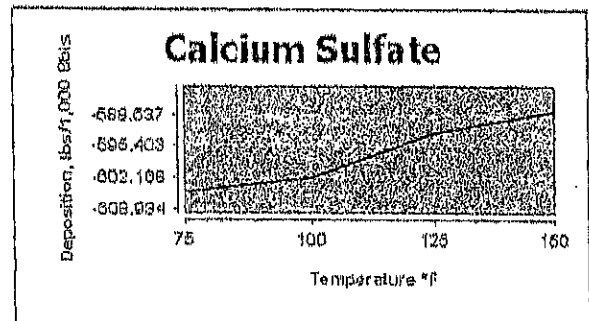
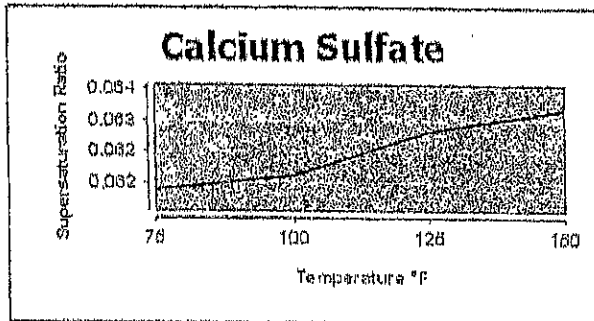
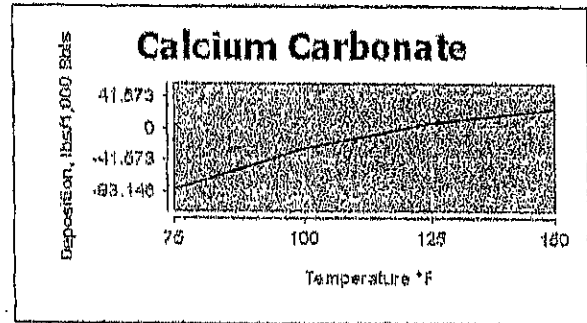
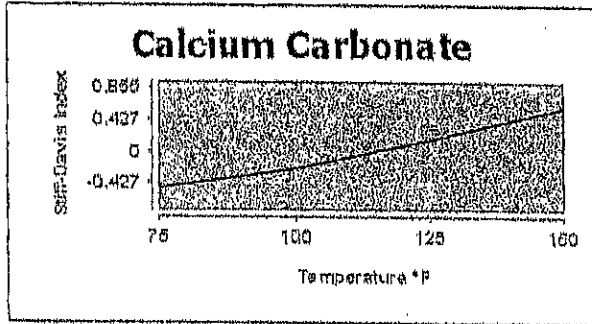
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SCALE DEPOSITION POTENTIAL TRENDS

Company: Weinkauf
 Water Source: Frownfelter 1-20
 Sample Point: Well Head

Lab ID Number:
 Date Sampled: 6/28/18
 Date Analyzed: 6/28/18



Attardo & Co