



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	_____	_____	_____	_____	_____

Chemical Services Inc.

32 NE 40th Ave.
 P.O. Box 1113
 Great Bend, Kansas 67530

Office 620-792-6886
 Fax 620-792-6882

WATER ANALYSIS REPORT

Sample No.: 4871

Submitted : 04/22/14

Company : Orca Operating
 Location :
 Field :
 Lease/Unit: Alfred 1-36 H

Supplier : Chemical Services
 Sampler : Andy Kirkpatrick
 Sample Pt : Bleeder
 Sampled :

BWPD :

BOPD :

MMCF/day:

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	25319.2	1101.0	Chloride	45000.0	1268.5
Calcium	2440.0	121.8	Bicarbonate	122.0	2.0
Magnesium	608.0	50.0	Sulfate	125.0	2.6
Iron	2.0	0.1	Carbonate		
Barium	25.0	0.4	Hydroxide		
Strontium			Sulfide		
Manganese			Carbon dioxide	141.0	
			Oxygen		

pH 6.50

Specific Gravity 1.05178

Total Dissolved Solids : 73641.24 mg/l

Resistivity, ohm-meters 0.00000 at

°F Calc 0.10053

SCALING INDICES

Temp, °F	Calcium Carbonate CaCO3	Calcium Sulfate CaSO4	Barium Sulfate BaSO4
50	-1.03	-48.38	1.49
75	-0.85	-47.87	1.36
100	-0.55	-47.16	1.23
125	-0.17	-46.24	1.11
150	0.26	-45.11	0.98
175	0.72	-43.77	0.86
200	1.17	-42.20	0.73

A positive scaling index indicates scaling potential.

Remarks: