

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	_____	_____	_____	_____	_____

DownHole SAT™ Water Analysis Report



JACAM LABORATORIES

SYSTEM IDENTIFICATION

LINN OPERATING
SAUER A SWDW
DREW LOTT
DUMP VALVE
KEARNY KS

Sample ID#: 3076
ID: 145332
Report Date: 03-06-2017
Sample Date: 01-23-2017
at 0000

WATER CHEMISTRY

CATIONS

Calcium(as Ca)	10260
Magnesium(as Mg)	5843
Barium(as Ba)	0.204
Strontium(as Sr)	222.10
Sodium(as Na)	57953
Potassium(as K)	865.20
Lithium(as Li)	12.55
Iron(as Fe)	0.0510
Field Iron(as Fe)	15.00
Ammonia(as NH ₃)	0.00
Aluminum(as Al)	2.68
Manganese(as Mn)	2.92
Zinc(as Zn)	2.11
Lead(as Pb)	0.00

ANIONS

Chloride(as Cl)	137600
Sulfate(as SO ₄)	1425
Bromine(as Br)	0.00
Dissolved CO ₂ (as CO ₂)	55.00
Bicarbonate(as HCO ₃)	24.40
Carbonate(as CO ₃)	0.00
Silica(as SiO ₂)	0.00
Phosphate(as PO ₄)	0.00
H ₂ S (as H ₂ S)	0.0500
Fluoride(as F)	0.00
Nitrate(as NO ₃)	0.00
Boron(as B)	23.25

PARAMETERS

Temperature(°F)	51.00
T.D.S.	205568
Conductivity:	361208
Sample pH	7.20
Resistivity:	2.77

SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (atm)	Calcite CaCO ₃		Anhydrite CaSO ₄		Gypsum CaSO ₄ *2H ₂ O		Barite BaSO ₄		Celestite SrSO ₄		Siderite FeCO ₃		Mackawenite FeS		CO ₂ (mpy)	pCO ₂ (atm)
50.00	0.00	0.267	-0.00660	0.723	-46.08	1.00	0.0104	0.669	-0.0596	0.297	-136.58	< 0.001	-0.440	0.00250	-0.264	0.0255	< 0.001
65.45	0.00	0.353	-0.00513	0.631	-63.32	0.844	-22.73	0.392	-0.187	0.250	-155.03	< 0.001	-0.388	0.00198	-0.272	0.0477	< 0.001
80.91	0.00	0.439	-0.00398	0.583	-69.91	0.728	-41.48	0.244	-0.373	0.224	-163.78	< 0.001	-0.346	0.00158	-0.280	0.0127	< 0.001
96.36	0.00	0.509	-0.00316	0.568	-67.61	0.641	-56.47	0.161	-0.626	0.208	-166.99	0.00127	-0.311	0.00127	-0.287	0.0166	< 0.001
111.82	0.00	0.552	-0.00264	0.581	-58.84	0.619	-56.88	0.111	-0.956	0.196	-167.67	0.00151	-0.282	0.00104	-0.294	0.0174	< 0.001
127.27	0.00	0.567	-0.00236	0.619	-46.15	0.633	-49.22	0.0783	-1.40	0.185	-168.75	0.00169	-0.258	< 0.001	-0.301	0.0146	< 0.001
142.73	0.00	0.553	-0.00229	0.686	-31.80	0.644	-43.52	0.0558	-2.01	0.174	-170.46	0.00179	-0.238	< 0.001	-0.309	0.0119	< 0.001
158.18	0.00	0.513	-0.00236	0.787	-17.51	0.651	-39.29	0.0402	-2.81	0.163	-172.79	0.00179	-0.221	< 0.001	-0.316	0.0123	< 0.001
173.64	0.00	0.456	-0.00252	0.933	-4.37	0.655	-36.16	0.0293	-3.85	0.153	-175.74	0.00169	-0.207	< 0.001	-0.324	0.0128	< 0.001
189.09	0.00	0.391	-0.00273	1.14	6.99	0.657	-33.89	0.0217	-5.18	0.144	-179.34	0.00153	-0.196	< 0.001	-0.333	0.00644	< 0.001
204.55	0.00	0.327	-0.00294	1.43	16.40	0.657	-32.31	0.0162	-6.85	0.135	-183.65	0.00133	-0.186	< 0.001	-0.342	0.00540	< 0.001
220.00	0.171	0.260	-0.00329	1.82	24.50	0.652	-32.71	0.0121	-8.97	0.126	-192.73	0.00109	-0.181	< 0.001	-0.355	0.00735	0.00115

	Lbs per xSAT 1000 Barrels	Lbs per xSAT 1000 Barrels	Lbs per xSAT 1000 Barrels	Lbs per xSAT 1000 Barrels	Lbs per xSAT 1000 Barrels	Lbs per xSAT 1000 Barrels	Lbs per xSAT 1000 Barrels
50.00							
65.45							
80.91							
96.36							
111.82							
127.27							
142.73							
158.18							
173.64							
189.09							
204.55							
220.00							

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO₃}/K_{sp}. pCO₂ (atm) is the partial pressure of CO₂ in the gas phase. Lbs/1000 Barrels scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.

