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 # 35761
Name: Banner Oil & Gas LLC
Address 1: 10011 S PENNSYLVANIA AVE
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73159 + 6905
Contact Person: Nathania Naftaly
Phone: (832) 377-5647
Lease Name: GREENGROUP
Well Number: 14A-SWD

API No.: 15-151-22421-00-00
Permit No: D31723.0
Reporting Year: 2020
(January 1 to December 31)

NW (Q/Q/Q/Q) - NE - NE - NW Sec. 14 Twp. 27 S. R. 12 ☐ E ☑ W
5141 feet from ☐ N / ☑ S Line of Section
2978 feet from ☑ E / ☐ W Line of Section
County: Pratt

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☑ Untreated Brine ☐ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 202281 mg/l Specific Gravity: 1.12 Additives:
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 1000 psi Injection Zone: ARBUCKLE
Maximum Authorized Injection Rate: 42000 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	160	0			31
August	240	0			30
September	160	0			30
October	240	0			31
November	240	0			30
December	160	0			31
TOTAL	1200		0		

Submitted Electronically

JACAM

DownHole R_X
WATER CHEMISTRY

K3 OIL & GAS
TYLER MORAN
PRATT KS

Meireis 1
BLEEDER

Report Date: 11-27-2019
Sample #: 5027

Sampled: 11-22-2019 at 0000
Sample ID: 244798

CATIONS		ANIONS	
Calcium (as Ca)	11080	Chloride (as Cl)	116800
Magnesium (as Mg)	2341	Sulfate (as SO_4)	50.00
Barium (as Ba)	4.36	Bromine (as Br)	0.00
Strontium (as Sr)	1160	Dissolved CO_2 (as CO_2)	180.00
Sodium (as Na)	57543	Bicarbonate (as HCO_3)	48.80
Potassium (as K)	569.10	Carbonate (as CO_3)	0.00
Lithium (as Li)	8.80	Oxalic acid (as C_2O_4)	0.00
Ammonia (as NH_3)	0.00	Silica (as SiO_2)	0.00
Aluminum (as Al)	0.00	Phosphate(as PO_4)	0.00
Iron (as Fe)	79.62	H_2S (as H_2S)	0.00
Manganese (as Mn)	1.68	Fluoride (as F)	0.00
Zinc (as Zn)	0.443	Nitrate (as NO_3)	0.00
Lead (as Pb)	0.00	Boron (as B)	11.41

PARAMETERS

Calculated T.D.S.	202281
Molar Conductivity	135491
Resistivity	7.38
Sp.Gr.(g/mL)	1.12
Pressure(atm)	1.00
pCO_2(atm)	0.0128
pH_2S(atm)	0.00
Temperature (^oF)	50.00
pH	6.20

CORROSION RATE PREDICTION

CO_2 - H_2S Rate(mpy)	0.0816

COMMENTS

PRATT KS

JACAM LABORATORIES
205 S. Broadway · P.O. Box 96 · Sterling, KS 67579-0096

DownHole SAT Water Analysis Report

JACAM

SYSTEM IDENTIFICATION

K3 OIL & GAS
Meireis 1
TYLER MORAN
BLEEDER
PRATT KS

Sample ID#: 5027
Sample ID: 244798
Sample Date: 11-22-2019 at 0000
Report Date: 11-27-2019

WATER CHEMISTRY

CATIONS		ANIONS	
Calcium(as Ca)	11080	Chloride(as Cl)	116800
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Strontium(as Sr)	1160	Dissolved CO_2(as CO_2)	180.00
Sodium(as Na)	57543	Bicarbonate(as HCO_3)	48.80
Potassium(as K)	569.10	Carbonate(as CO_3)	0.00
Lithium(as Li)	8.80	Silica(as SiO_2)	0.00
Iron(as Fe)	79.62	Phosphate(as PO_4)	0.00
Field Iron(as Fe)	0.00	H_2S (as H_2S)	0.00
Ammonia(as NH_3)	0.00	Fluoride(as F)	0.00
Aluminum(as Al)	0.00	Nitrate(as NO_3)	0.00
Manganese(as Mn)	1.68	Boron(as B)	11.41
Zinc(as Zn)	0.443		
Lead(as Pb)	0.00		
		PARAMETERS	
Temperature(°F)	50.00	Sample pH	6.20
Conductivity	135491	Sp.Gr.(g/mL)	1.12
Resistivity	7.38	T.D.S.	202281

SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (atm)	Calcite $CaCO_3$		Anhydrite $CaSO_4$		Gypsum $CaSO_4*2H_2O$		Barite $BaSO_4$		Celestite $SrSO_4$		Siderite $FeCO_3$		Mackawenite FeS		CO_2 (mpy)	pCO_2 (atm)
50.00	0.00	0.333	-0.00457	0.0402	-122.48	0.0552	-99.66	0.716	-0.807	0.0775	-76.32	0.850	>-0.001	0.00	-0.0653	0.0714	0.0128
65.45	0.00	0.327	-0.00407	0.0361	-127.09	0.0480	-107.29	0.433	-2.32	0.0674	-82.12	0.936	>-0.001	0.00	-0.0924	0.186	0.0128
80.91	0.00	0.330	-0.00363	0.0344	-124.69	0.0427	-113.20	0.278	-3.96	0.0623	-83.30	1.05	< 0.001	0.00	-0.123	0.110	0.0128
96.36	0.00	0.337	-0.00326	0.0346	-116.47	0.0387	-117.40	0.189	-5.66	0.0596	-81.96	1.19	< 0.001	0.00	-0.156	0.147	0.0128
111.82	0.00	0.343	-0.00296	0.0363	-104.18	0.0384	-111.36	0.135	-7.38	0.0579	-79.69	1.34	< 0.001	0.00	-0.192	0.153	0.0128
127.27	0.00	0.342	-0.00275	0.0398	-89.65	0.0403	-99.98	0.0972	-9.25	0.0561	-77.99	1.46	< 0.001	0.00	-0.237	0.133	0.0128
142.73	0.00	0.333	-0.00262	0.0452	-74.54	0.0421	-90.92	0.0711	-11.30	0.0541	-76.94	1.55	< 0.001	0.00	-0.295	0.115	0.0128
158.18	0.00	0.315	-0.00254	0.0531	-60.08	0.0435	-83.69	0.0525	-13.57	0.0521	-76.48	1.60	< 0.001	0.00	-0.368	0.112	0.0128
173.64	0.00	0.292	-0.00252	0.0643	-47.06	0.0448	-77.95	0.0391	-16.06	0.0500	-76.61	1.60	< 0.001	0.00	-0.462	0.112	0.0128
189.09	0.00	0.264	-0.00253	0.0800	-35.89	0.0458	-73.44	0.0295	-18.81	0.0479	-77.30	1.56	< 0.001	0.00	-0.582	0.0498	0.0128
204.55	0.00	0.233	-0.00257	0.102	-26.67	0.0466	-69.97	0.0224	-21.86	0.0457	-78.58	1.49	< 0.001	0.00	-0.735	0.00	0.0128
220.00	0.171	0.199	-0.00274	0.132	-20.00	0.0469	-69.80	0.0170	-25.69	0.0433	-83.12	1.36	< 0.001	0.00	-0.956	0.00	0.0150
		xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels	xSAT	Lbs per 1000 Barrels		

Saturation Levels (xSAT) are the ratio of ion activity to solubility, e.g. $\{Ca\}\{CO_3\}/K_{sp}$. pCO_2 (atm) is the partial pressure of CO_2 in the gas phase.
Lbs/1000 Barrels scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.