KOLAR Document ID: 1543650

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 # 35233
Name: US Oil Resources LLC
Address 1: 6727 W. PRENTICE AVE
Address 2:
City: LAKEWOOD State: CO Zip: 80123 + 2691
Contact Person: Rick Parks
Phone: (303) 2297689
Lease Name: POWERS
Well Number: 1-2 SWD

API No.: 15-063-21978-00-02
Permit No: D32771.0
Reporting Year: 2020
(January 1 to December 31)

__ - __ - SE - SE Sec. 2 Twp. 14 S. R. 29 ☐ E ☑ W
(Q/Q/Q/Q)
660 feet from ☐ N / ☑ S Line of Section
660 feet from ☑ E / ☐ W Line of Section
County: Gove

I. Injection Fluid:

Type *(Pick one)*: ☐ Fresh Water ☐ Treated Brine ☑ Untreated Brine ☐ Water/Brine
Source: ☑ Produced Water ☐ Other *(Attach list)*
Quality: Total Dissolved Solids: 30335 mg/l Specific Gravity: 1.0188 Additives: N/A
(Attach water analysis, if available)

II. Well Data:

Maximum Authorized Injection Pressure: 0 psi Injection Zone: CEDAR HILLS
Maximum Authorized Injection Rate: 500 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	4439	0			31
February	3522	0			28
March	3676	0			31
April	3365	0			30
May	471	0			25
June	4799	0			30
July	4592	0			31
August	4442	0			31
September	4283	0			30
October	4570	0			31
November	4483	0			30
December	4371	0			31
TOTAL	47013		0		

Submitted Electronically

Central Area Laboratory
12701 N. Santa Fe Ave, Suite 151
Oklahoma City, Oklahoma 73114

Upstream Chemicals

REPORT DATE: 1/23/2021

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	US OIL	**ACCOUNT REP:**	BRETT J SUTER
DISTRICT:	KANSAS	**SAMPLE ID:**	202110000452
AREA/LEASE:	POWERS	**SAMPLE DATE:**	1/7/2021
SAMPLE POINT NAME	POWERS 12 SWD	**ANALYSIS DATE:**	1/22/2021
SITE TYPE:	WELL SITES	**ANALYST:**	BS
SAMPLE POINT DESCRIPTION:	WELL HEAD		

US OIL, POWERS, POWERS 12 SWD

FIELD DATA		
Initial Temperature (°F):		150
Final Temperature (°F):		52
Initial Pressure (psi):		100
Final Pressure (psi):		15
pH:		
pH at time of sampling:		7.0
SI Residual:	mg/L	
Compound:	Total PO4	
Residual (ppm):	0.5	
ALKALINITY BY TITRATION:	mg/L	meq/L
Bicarbonate (HCO_3^-):	144.0	2.4
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	
aqueous CO_2 (ppm):		40.0
aqueous H_2S (ppm):		10.0
aqueous O2 (ppb):		ND
Calculated TDS (mg/L):		30335
Density/Specific Gravity (g/cm³):		1.0188
Measured Specific Gravity		ND
Conductivity (mmhos):		ND
Resistivity:		ND
MCF/D:		No Data
BOPD:		No Data
BWPD:		No Data

ANALYSIS OF SAMPLE					
ANIONS:	**mg/L**	**meq/L**	**CATIONS:**	**mg/L**	**meq/L**
Chloride (Cl^-):	16997.0	479.5	**Sodium (Na^+):**	9000.0	391.6
Sulfate (SO_4^{2-}):	1849.0	38.5	**Potassium (K^+):**	194.8	5.0
Borate (H_3BO_3):	90.5	1.5	**Magnesium (Mg^{2+}):**	450.7	37.1
Fluoride (F^-):	ND		**Calcium (Ca^{2+}):**	1655.0	82.6
Bromide (Br^-):	ND		**Strontium (Sr^{2+}):**	43.1	1.0
Nitrite (NO_2^-):	ND		**Barium (Ba^{2+}):**	0.0	0.0
Nitrate (NO_3^-):	ND		**Iron (Fe^{2+}):**	0.8	0.0
Phosphate (PO_4^{3-}):	0.5	0.0	**Manganese (Mn^{2+}):**	0.6	0.0
Silica (SiO_2):	ND		**Lead (Pb^{2+}):**	ND	
			Zinc (Zn^{2+}):	ND	
			Aluminum (Al^{3+}):	ND	
			Chromium (Cr^{3+}):	ND	
			Cobalt (Co^{2+}):	ND	
ORGANIC ACIDS:	**mg/L**	**meq/L**	**Copper (Cu^{2+}):**	ND	
Formic Acid:	ND		**Molybdenum (Mo^{2+}):**	ND	
Acetic Acid:	ND		**Nickel (Ni^{2+}):**	ND	
Propionic Acid:	ND		**Tin (Sn^{2+}):**	ND	
Butyric Acid:	ND		**Titanium (Ti^{2+}):**	ND	
Valeric Acid:	ND		**Vanadium (V^{2+}):**	ND	
			Zirconium (Zr^{2+}):	ND	
			Lithium (Li):	ND	
			Total Hardness:	6044	N/A
Anion/Cation Ratio:	1.01		**ND = Not Determined**		

SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.

Conditions		Barite ($BaSO_4$)		Calcite ($CaCO_3$)		Gypsum ($CaSO_4 \cdot 2H_2O$)		Anhydrite ($CaSO_4$)	
Temp	**Press.**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**
52°F	15 psi		0.000	0.19	5.616	-0.09	0.000	-0.43	0.000
63°F	24 psi		0.000	0.19	5.837	-0.09	0.000	-0.39	0.000
74°F	34 psi		0.000	0.22	6.811	-0.10	0.000	-0.36	0.000
85°F	43 psi		0.000	0.27	8.077	-0.10	0.000	-0.31	0.000
96°F	53 psi		0.000	0.32	9.481	-0.10	0.000	-0.27	0.000
106°F	62 psi		0.000	0.37	11.156	-0.09	0.000	-0.21	0.000
117°F	72 psi		0.000	0.44	12.850	-0.08	0.000	-0.16	0.000
128°F	81 psi		0.000	0.50	14.492	-0.07	0.000	-0.10	0.000
139°F	91 psi		0.000	0.57	16.077	-0.06	0.000	-0.04	0.000
150°F	100 psi		0.000	0.63	17.602	-0.05	0.000	0.03	43.295

Conditions		Celestite ($SrSO_4$)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate ($FeCO_3$)	
Temp	**Press.**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**	**Index**	**Amt (ptb)**
52°F	15 psi	0.02	1.115	-2.60	0.000	1.29	0.430	-1.51	0.000
63°F	24 psi	0.01	0.691	-2.62	0.000	1.18	0.423	-1.46	0.000
74°F	34 psi	0.01	0.464	-2.64	0.000	1.12	0.418	-1.39	0.000
85°F	43 psi	0.01	0.447	-2.65	0.000	1.08	0.415	-1.31	0.000
96°F	53 psi	0.01	0.646	-2.67	0.000	1.06	0.412	-1.23	0.000
106°F	62 psi	0.02	1.059	-2.68	0.000	1.05	0.412	-1.14	0.000
117°F	72 psi	0.02	1.682	-2.68	0.000	1.06	0.413	-1.05	0.000
128°F	81 psi	0.04	2.500	-2.69	0.000	1.07	0.414	-0.97	0.000
139°F	91 psi	0.05	3.496	-2.69	0.000	1.09	0.416	-0.89	0.000
150°F	100 psi	0.07	4.647	-2.70	0.000	1.11	0.418	-0.81	0.000

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

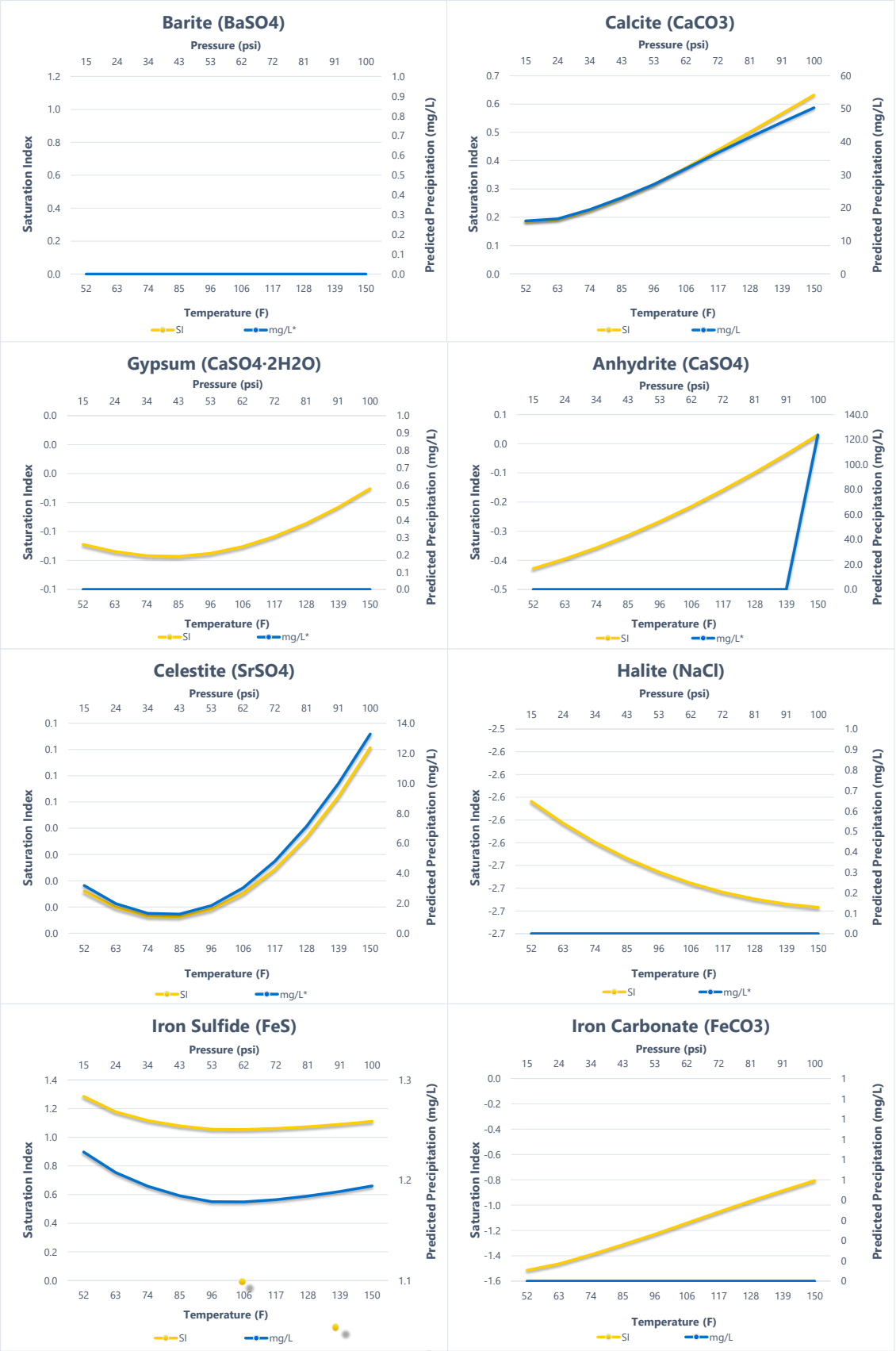
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation Index predictions on this sheet use pH and alkalinity; $\%CO_2$ is not included in the calculations.

ScaleSoftPitzer™ SSP2010

Comments:

SAMPLE ID: 44203 US OIL, POWERS, POWERS 12 SWD



SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.