KOLAR Document ID: 1688447

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) 229-7689
Lease Name: POWERS
Well Number: 1-2 SWD

API No.: 15-063-21978-00-02
Permit No: D32771.0
Reporting Year: 2022
(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: 32423 mg/l Specific Gravity: 1.0201 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: 1 *(Include TA's)*

III.

Month:	Total Fluid Injected BBL	Maximum Fluid Pressure	Total Gas Injected MCF	Maximum Gas Pressure	# Days of Injection
January	7110				31
February	6209				28
March	6342				31
April	11731				23
May	9912				31
June	10597				30
July	12412				31
August	10895				31
September	9848				30
October	9369				31
November	8928				30
December	8963				31
TOTAL	112316		0		

Submitted Electronically

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

Upstream Chemicals

REPORT DATE: 2/27/2023

COMPLETE WATER ANALYSIS REPORT SSP v.2010

CUSTOMER:	US OIL	**ACCOUNT REP:**	BRETT J SUTER
DISTRICT:	KANSAS	**SAMPLE ID:**	202310002237
AREA/LEASE:	POWERS	**SAMPLE DATE:**	2/6/2023
SAMPLE POINT NAME	POWERS 1-2 SWD	**ANALYSIS DATE:**	2/27/2023
SITE TYPE:	WELL SITES	**ANALYST:**	BS
SAMPLE POINT DESCRIPTION:	TANK		
CUSTOMER SAMPLE POINT ID:			

US OIL, POWERS, POWERS 1-2 SWD

FIELD DATA

Initial Temperature (°F):	150
Final Temperature (°F):	75
Initial Pressure (psi):	100
Final Pressure (psi):	15
pH:	
pH at time of sampling:	6.9

ALKALINITY BY TITRATION:	**mg/L**	**meq/L**
Bicarbonate (HCO_3^-):	600.0	9.8
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

aqueous CO_2 (ppm):	160.0
aqueous H_2S (ppm):	25.0
aqueous O2 (ppb):	ND
Calculated TDS (mg/L):	32423
Density/Specific Gravity (g/cm³):	1.0201
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**
Chloride (Cl^-):	17865.0	503.9
Sulfate (SO_4^{2-}):	1951.0	40.6
Borate (H_3BO_3):	95.7	1.5
Fluoride (F^-):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	0.0	0.0
Silica (SiO_2):	ND	

ORGANIC ACIDS:	**mg/L**	**meq/L**
Formic Acid:	ND	
Acetic Acid:	ND	
Propionic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	

Anion/Cation Ratio:	1.02

CATIONS:	**mg/L**	**meq/L**
Sodium (Na^+):	9848.9	428.6
Potassium (K^+):	201.9	5.2
Magnesium (Mg^{2+}):	383.3	31.5
Calcium (Ca^{2+}):	1528.8	76.3
Strontium (Sr^{2+}):	43.6	1.0
Barium (Ba^{2+}):	0.0	0.0
Iron (Fe^{2+}):	0.5	0.0
Manganese (Mn^{2+}):	0.2	0.0
Lead (Pb^{2+}):	ND	
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	ND	
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	ND	
Molybdenum (Mo^{2+}):	ND	
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Lithium (Li):	ND	
Total Hardness:	5451	N/A

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)**
75°F	15 psi		0.000	0.87	92.215	-0.11	0.000	-0.37	0.000
83°F	24 psi		0.000	0.85	90.610	-0.11	0.000	-0.34	0.000
92°F	34 psi		0.000	0.86	91.857	-0.11	0.000	-0.30	0.000
100°F	43 psi		0.000	0.89	94.200	-0.11	0.000	-0.26	0.000
108°F	53 psi		0.000	0.93	97.027	-0.11	0.000	-0.22	0.000
117°F	62 psi		0.000	0.98	100.489	-0.10	0.000	-0.18	0.000
125°F	72 psi		0.000	1.03	104.295	-0.10	0.000	-0.13	0.000
133°F	81 psi		0.000	1.08	107.927	-0.09	0.000	-0.09	0.000
142°F	91 psi		0.000	1.14	111.390	-0.08	0.000	-0.04	0.000
150°F	100 psi		0.000	1.19	114.692	-0.07	0.000	0.01	17.328

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)**
75°F	15 psi	0.02	1.435	-2.58	0.000	1.34	0.251	-0.93	0.000
83°F	24 psi	0.02	1.411	-2.59	0.000	1.24	0.248	-0.92	0.000
92°F	34 psi	0.02	1.504	-2.60	0.000	1.20	0.246	-0.88	0.000
100°F	43 psi	0.02	1.716	-2.61	0.000	1.17	0.245	-0.82	0.000
108°F	53 psi	0.03	2.045	-2.62	0.000	1.16	0.245	-0.77	0.000
117°F	62 psi	0.04	2.490	-2.62	0.000	1.16	0.245	-0.70	0.000
125°F	72 psi	0.04	3.045	-2.63	0.000	1.18	0.245	-0.63	0.000
133°F	81 psi	0.05	3.703	-2.63	0.000	1.20	0.246	-0.56	0.000
142°F	91 psi	0.07	4.458	-2.64	0.000	1.22	0.247	-0.49	0.000
150°F	100 psi	0.08	5.298	-2.64	0.000	1.24	0.248	-0.43	0.000

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

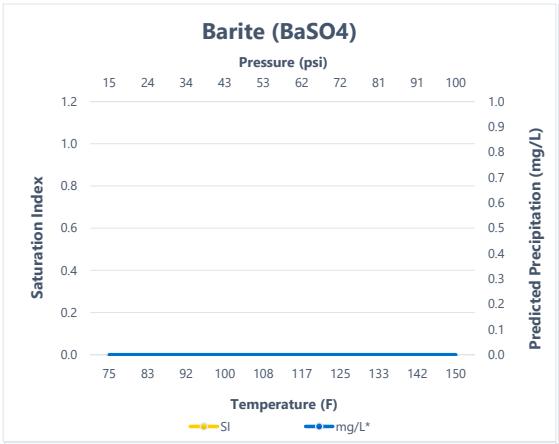
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

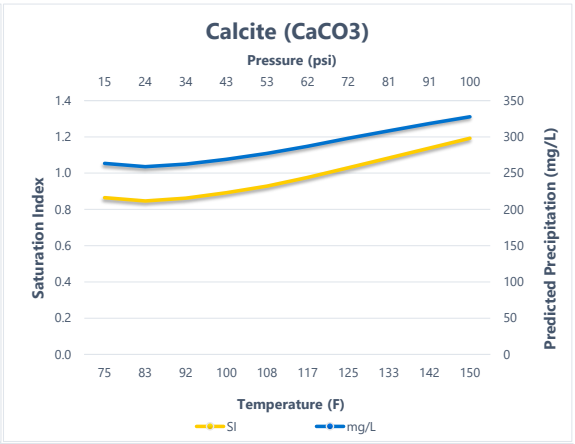
Note 3: Saturation Index predictions on this sheet use pH and alkalinity; $\%CO_2$ is not included in the calculations.

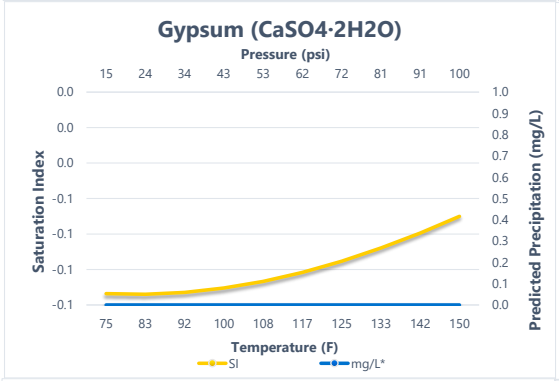
EESI ScaleSoftPitzer™ SSP2010

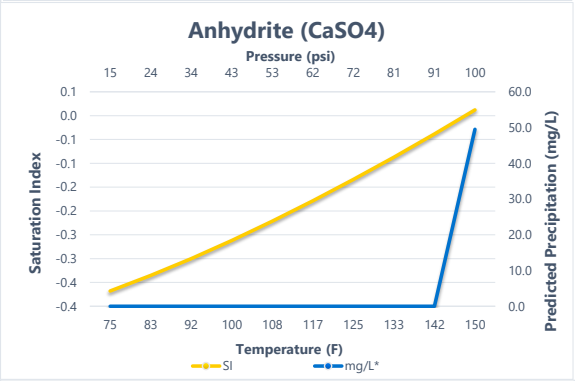
Comments:

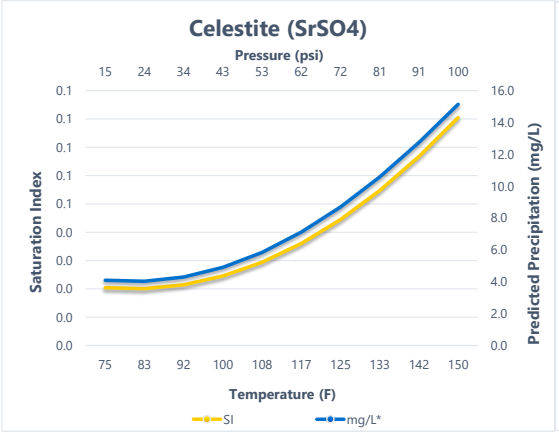
SAMPLE ID: 202310002237 US OIL, POWERS, POWERS 1-2 SWD

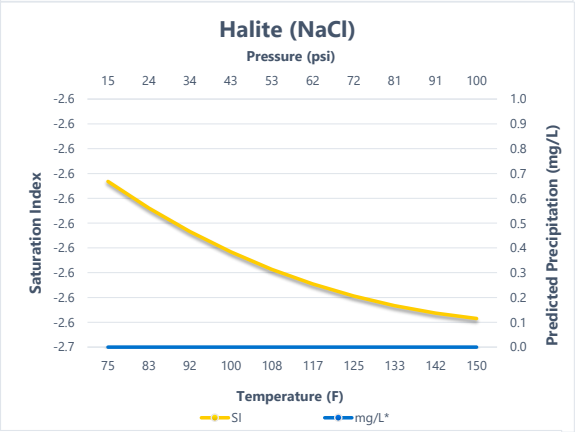


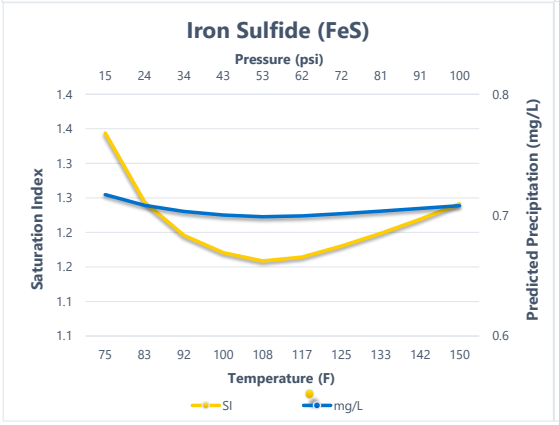


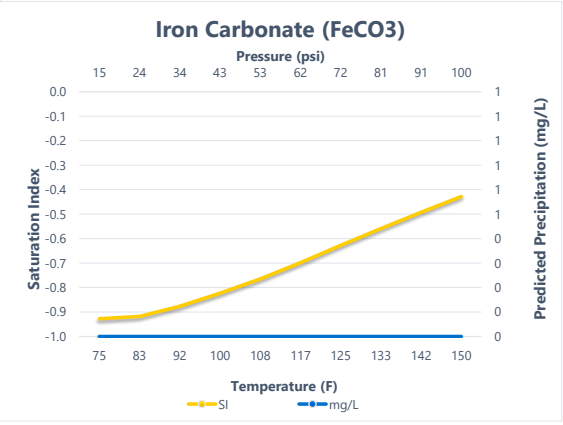












SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS.