

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

AUG 22 2019

RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMLC066438
2. Name of Operator KAISER FRANCIS OIL COMPANY Contact: CHARLOTTE VAN VALKENBURG E-Mail: Charlottv@kfoc.net		6. If Indian, Allottee or Tribe Name
3a. Address TULSA, OK 74121-1468	3b. Phone No. (include area code) Ph: 918-491-4314	7. If Unit or CA/Agreement, Name and/or No. 891001066X nmm 6092x
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 1 T23S R33E SWNW 2040FNL 1230FWL 32.335316 N Lat, 103.530632 W Lon		8. Well Name and No. BELL LAKE UNIT NORTH 202H
		9. API Well No. 30-025-45153-00-X1
		10. Field and Pool or Exploratory Area BELL LAKE-BONE SPRING, NORTH
		11. County or Parish, State LEA COUNTY, NM

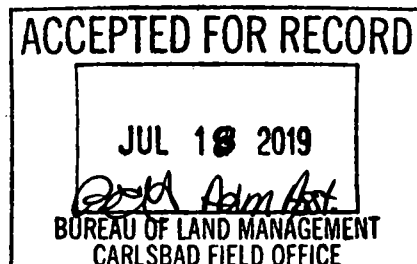
12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☒ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

This is to request approval to dispose of produced water from the above well.

1. Formation Bone Spring
2. Amount of water produced 1546 BWPD. ✓
3. See attached water analysis ✓
4. Storage method Multiple 1000 bbl coated steel tanks ✓
5. Method of removal from lease pipelined
6. Operator and disposal facility ✓
Oilfield Water Logistics
Madera SWD ✓ McCloy SWD ✓
14 24S 34E 15 24S 32E ✓
Lea Co., NM Lea Co., NM



14. I hereby certify that the foregoing is true and correct. Electronic Submission #473796 verified by the BLM Well Information System For KAISER FRANCIS OIL COMPANY, sent to the Hobbs Committed to AFMSS for processing by PRISCILLA PEREZ on 07/18/2019 (19PP2566SE)	
Name (Printed/Typed) CHARLOTTE VAN VALKENBURG	Title MGR., REGULATORY COMPLIANCE
Signature (Electronic Submission)	Date 07/17/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office _____

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

XJ NM OCD 8-26-19

FOR RECORD ONLY



DownHole SAT®
SURFACE WATER CHEMISTRY INPUT

Kaiser Francis

NBLU 202

Sep

Account Manager: Steve Tigert

Report Date: 05-10-2019

Sampled: 05-03-2019

Sample #: 4686

at 1244

CATIONS

Calcium (as Ca)	5234
Magnesium (as Mg)	524.10
Barium (as Ba)	1.10
Strontium (as Sr)	329.39
Sodium (as Na)	42325
Iron (as Fe)	27.80
Manganese (as Mn)	1.03

ANIONS

Chloride (as Cl)	76000
Sulfate (as SO ₄)	1063
Dissolved CO ₂ (as CO ₂)	50.00
Bicarbonate (as HCO ₃)	122.00
H ₂ S (as H ₂ S)	0.00

PARAMETERS

Calculated T.D.S.	123001
Molar Conductivity	175693
Resistivity	5.69
Sp.Gr.(g/mL)	1.10
Pressure(psia)	50.00
pCO ₂ (atm)	0.0213
pH ₂ S(atm)	0.00
Temperature (°F)	70.00
pH	6.40

COMMENTS

Analyst: Steven Kennedy

ROCKWATER ENERGY SOLUTIONS
7906 West Highway 80, Midland, TX 79706



DownHole SAT®
SURFACE WATER
DEPOSITION POTENTIAL INDICATORS

Kaiser Francis

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SATURATION LEVEL

Calcite (CaCO ₃)	0.530
Aragonite (CaCO ₃)	0.464
Witherite (BaCO ₃)	< 0.001
Strontianite (SrCO ₃)	0.0587
Magnesite (MgCO ₃)	0.0516
Anhydrite (CaSO ₄)	0.448
Gypsum (CaSO ₄ *2H ₂ O)	0.662
Barite (BaSO ₄)	5.70
Celestite (SrSO ₄)	1.10
Siderite (FeCO ₃)	2.46
Halite (NaCl)	0.0502
Iron sulfide (FeS)	0.00

MOMENTARY EXCESS (Lbs/1000 Barrels)

Calcite (CaCO ₃)	-0.0122
Aragonite (CaCO ₃)	-0.0159
Witherite (BaCO ₃)	-24.83
Strontianite (SrCO ₃)	-0.325
Magnesite (MgCO ₃)	-0.213
Anhydrite (CaSO ₄)	-245.73
Gypsum (CaSO ₄ *2H ₂ O)	-118.00
Barite (BaSO ₄)	0.537
Celestite (SrSO ₄)	12.55
Siderite (FeCO ₃)	0.00944
Halite (NaCl)	-136767
Iron sulfide (FeS)	-0.181

SIMPLE INDICES

Langelier	0.0754
Ryznar	6.25
Puckorius	5.29
Larson-Skold Index	1171
Stiff Davis Index	-0.554
Oddo-Tomson	-1.04

BOUND IONS

Calcium	5234
Barium	1.10
Carbonate	1.13
Sulfate	1063

TOTAL

FREE

OPERATING CONDITIONS

Temperature (°F)	70.00
Time(secs)	0.00

ROCKWATER ENERGY SOLUTIONS
7906 West Highway 80, Midland, TX 79706



DownHole SAT®
WATER CHEMISTRY VERSUS PRESSURE

Kaiser Francis

NBLU 202

Sep

Account Manager: Steve Tigert

Report Date: 05-10-2019

Sampled: 05-03-2019

Sample #: 4686

at 1244

	Pressure (psi)						
CATIONS	14.70	257.25	499.80	742.35	984.90	1227	1470
Calcium(as Ca)	5234	5234	5234	5234	5234	5234	5234
Magnesium(as Mg)	524.10	524.10	524.10	524.10	524.10	524.10	524.10
Barium(as Ba)	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Strontium(as Sr)	329.39	329.39	329.39	329.39	329.39	329.39	329.39
Sodium(as Na)	42325	42325	42325	42325	42325	42325	42325
Iron(as Fe)	27.80	27.80	27.80	27.80	27.80	27.80	27.80
Manganese (as Mn)	1.03	1.03	1.03	1.03	1.03	1.03	1.03
ANIONS							
Chloride(as Cl)	76000	76000	76000	76000	76000	76000	76000
Sulfate(as SO ₄)	1063	1063	1063	1063	1063	1063	1063
Acidity	102.94	502.43	972.84	1523.15	2191.64	2998.75	3958.95
"M" Alkalinity	85.91	83.16	72.22	44.71	23.89	13.11	7.42
Oxalic acid(as C ₂ O ₄)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H ₂ S(as H ₂ S)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PARAMETERS							
pH	6.84	5.51	5.18	4.97	4.80	4.67	4.55
Temperature(°F)	70.00	70.00	70.00	70.00	70.00	70.00	70.00
Pressure(psi)	14.70	257.25	499.80	742.35	984.90	1227	1470
Sp.Gr.(g/mL)	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Calculated TDS	122965.	123233.	123545.	123900.	124340.	124881.	125528.
Calc. Conductivity	175691.	175690.	175688.	175690.	175691.	175690.	175688.
Calc. Resistivity	5.69	5.69	5.69	5.69	5.69	5.69	5.69

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DEPOSITION POTENTIAL INDICATORS
VERSUS PRESSURE

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at 1244

SATURATION LEVEL	Pressure (psi)						
	14.70	257.25	499.80	742.35	984.90	1227	1470
Calcite	1.43	0.0675	0.0266	0.00986	0.00359	0.00147	< 0.001
Aragonite	1.26	0.0591	0.0233	0.00864	0.00314	0.00129	< 0.001
Witherite	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Strontianite	0.159	0.00757	0.00303	0.00114	< 0.001	< 0.001	< 0.001
Magnesite	0.139	0.00671	0.00271	0.00103	< 0.001	< 0.001	< 0.001
Anhydrite	0.451	0.430	0.410	0.391	0.372	0.354	0.337
Gypsum	0.666	0.638	0.611	0.585	0.560	0.535	0.512
Barite	5.74	5.47	5.21	4.96	4.72	4.49	4.27
Celestite	1.11	1.06	1.01	0.961	0.915	0.871	0.829
Siderite	6.63	0.319	0.129	0.0486	0.0180	0.00756	0.00361
Halite	0.0503	0.0494	0.0485	0.0476	0.0467	0.0459	0.0450
Iron sulfide	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SIMPLE INDICES							
Langelier	0.516	-0.822	-1.17	-1.40	-1.58	-1.73	-1.86
Ryznar	5.81	7.16	7.52	7.76	7.95	8.12	8.27
Oddo-Tomson	-0.599	-1.92	-2.26	-2.47	-2.64	-2.77	-2.89
Stiff-Davis	-0.116	-1.44	-1.77	-1.99	-2.15	-2.29	-2.41
Puckorius	5.27	5.32	5.44	5.77	6.20	6.61	7.00
Larson-Skold	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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DEPOSITION POTENTIAL INDICATORS
VERSUS PRESSURE

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Sep

Account Manager: Steve Tigert

Report Date: 05-10-2019

Sampled: 05-03-2019

Sample #: 4686

at 1244

		Pressure (psi)						
TOTAL VS FREE IONS		14.70	257.25	499.80	742.35	984.90	1227	1470
Ca	Total	5234	5234	5234	5234	5234	5234	5234
	Free	5062	5058	5057	5058	5059	5057	5054
Ba	Total	1.10	1.10	1.10	1.10	1.10	1.10	1.10
	Free	1.10	1.10	1.10	1.10	1.10	1.10	1.10
CO ₃	Total	3.05	0.150	0.0615	0.0237	0.00898	0.00384	0.00187
	Free	0.0637	0.00312	0.00128	< 0.001	< 0.001	< 0.001	< 0.001
PO ₄	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Free	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SO ₄	Total	1063	1063	1063	1063	1063	1063	1063
	Free	436.08	430.84	425.53	420.00	414.45	408.90	403.31

FREE ION MOMENTARY EXCESS (Lbs/1000 Barrels)

Calcite	0.0112	-0.0251	-0.0273	-0.0289	-0.0302	-0.0316	-0.0329
Aragonite	0.00753	-0.0289	-0.0312	-0.0330	-0.0345	-0.0360	-0.0376
Witherite	-24.75	-25.18	-25.58	-25.99	-26.40	-26.82	-27.25
Strontianite	-0.289	-0.350	-0.361	-0.372	-0.382	-0.393	-0.403
Magnesite	-0.193	-0.226	-0.231	-0.236	-0.240	-0.245	-0.249
Anhydrite	-243.14	-261.08	-279.45	-298.21	-317.67	-337.93	-358.94
Gypsum	-116.05	-129.52	-143.27	-157.28	-171.80	-186.88	-202.51
Barite	0.538	0.532	0.526	0.520	0.513	0.506	0.499
Celestite	13.43	7.40	1.23	-5.13	-11.63	-18.26	-25.03
Siderite	0.0364	-0.0044	-0.0058	-0.0065	-0.0068	-0.0070	-0.0072
Halite	-136531	-138165	-139815	-141478	-143157	-144854	-146566
Iron sulfide	-0.0688	-1.05	-1.85	-2.59	-3.31	-4.04	-4.79

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