From: Vanessa Neal
To: McClure, Dean, EMNRD
Subject: [EXTERNAL] Withdrawal of C-107a Applications
Date: Monday, August 29, 2022 1:50:42 PM
Attachments: image001.png

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hi Dean,

We would like to formally withdraw the following C-107a applications:

PO Number	ID	Well Name	API
D9G92-220207-C-107A	pDM2210437721	Saltmount #001	30-025-10819
K6DG3-220208-C-107A	pDM2210860768	C E Lamunyon #045	30-025-25919
JEF0N-220207-C-107A	pDM2210437234	C E Lamunyon #049	30-025-26177
CNQLC-220330-C-107A		E C Hill B Federal #011	30-025-32586

Thank you,

Vanessa Neal |Sr Reservoir Engineer

forty acres energy

11757 Katy Freeway, Suite 725 | Houston, TX 77079

O 832.219.0990 (ext 165)

C 979.255.3476

E vanessa@faenergyus.com

LABORATORY SERVICES Natural Gas Analysis
www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

Sample Point Code	Sample Point Name	Sample Point Location
14050G	Casing Gas	Casing Gas

Source Laboratory	Lab File No	Container Identity	Sampler
Laboratory Services	2022052854	1138	Client - Spot

District	Area Name	Field Name	Facility Name
USA	USA	USA	New Mexico

Date Sampled	Date Effective	Date Received	Date Reported
Mar 31, 2022 15:35	Mar 31, 2022 15:35	Apr 4, 2022 11:41	Apr 4, 2022

Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
		System Administrator	20 @

Operator	Lab Source Description
Imperative	FAE II

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	2.4090	2.409	
CO2 (CO2)	0.6200	0.62	
Methane (C1)	80.7070	80.706	
Ethane (C2)	9.9880	9.988	2.6700
Propane (C3)	3.3600	3.36	0.9250
I-Butane (IC4)	0.4490	0.449	0.1470
N-Butane (NC4)	1.0830	1.083	0.3410
I-Pentane (IC5)	0.3390	0.339	0.1240
N-Pentane (NC5)	0.3420	0.342	0.1240
Hexanes Plus (C6+)	0.7030	0.703	0.3050
TOTAL	100.0000	99.9990	4.6360

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Gross Heating Values (Real, BTU/ft³)

14.696 PSI @ 60.00 Â°F		14.73 PSI @ 60.00 Â°F	
Dry	Saturated	Dry	Saturated
1,193.9	1,174.5	1,196.7	1,177.2

Calculated Total Sample Properties

GPA2145-16 *Calculated at Contract Conditions

Relative Density Real	Relative Density Ideal
0.7069	0.7048

Molecular Weight
20.4169

C6+ Group Properties

Assumed Composition

C6 - 60.000% C7 - 30.000% C8 - 10.000%

Field H2S
0 PPM

PROTREND STATUS:
Passed By Validator on Apr 5, 2022

DATA SOURCE:
Imported

PASSED BY VALIDATOR REASON:
First sample taken @ this point, composition looks reasonable

VALIDATOR:
Luis Cano

VALIDATOR COMMENTS:
ok

Analyzer Information

Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Jan 24, 2022

Released to Imaging: 9/12/2022 4:29:46 PM

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Vanessa Neal		Sr Reservoir Engineer	28 Jan 2022
Print or Type Name	Signature	Title	Date

vanessa@faenergyus.com
e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-107A
Revised August 1, 2011

APPLICATION TYPE
_X_Single Well
____Establish Pre-Approved Pools
EXISTING WELLBORE
_X_ Yes ____No

APPLICATION FOR DOWNHOLE COMMINGLING

FAE II Operating LLC — Operator
11757 Katy Freeway, Suite 725 Houston, TX 77079 — Address

C E LAMUNYON — Lease
#049 — Well No.
H-21-23S-37E — Unit Letter-Section-Township-Range
LEA — County

OGRID No. 329326 Property Code 330686 API No. 30-025-26177 Lease Type: _X_Federal ____State ____Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	TEAGUE; PADDOCK-BINEBRY	IMPERIAL; TUBB-DRINKARD	TEAGUE; DEVONIAN
Pool Code	58300	33600	58360
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5168' - 5192'	5890' - 6509'	7282' - 7550'
Method of Production (Flowing or Artificial Lift)	ARTIFICAL LIFT	ARTIFICAL LIFT	ARTIFICAL LIFT
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)	35 API / 1.189 BTU	35 API / 1.189 BTU	35 API / 1.189 BTU
Producing, Shut-In or New Zone	PRODUCING	SHUT-IN	SHUT-IN
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: Rates: SEE ATTACHED	Date: Rates: SEE ATTACHED	Date: Rates: SEE ATTACHED
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil 26 % Gas 31 %	Oil 43 % Gas 19 %	Oil 31 % Gas 35 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes_X_ No____
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes____ No____

Are all produced fluids from all commingled zones compatible with each other? Yes_X_ No____

Will commingling decrease the value of production? Yes____ No_X_

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes_X_ No____

NMOCD Reference Case No. applicable to this well: _____

Attachments:
- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools
List of all operators within the proposed Pre-Approved Pools
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE ____ TITLE Sr Reservoir Engineer DATE 07 FEB 2022

TYPE OR PRINT NAME Vanessa Neal TELEPHONE NO. (832) 219-0990

E-MAIL ADDRESS vanessa@faenergyus.com

FAE II Operating LLC
11757 Katy Fwy #725, Houston, TX 77079
(832) 220-9188
steven@faenergyus.com

fae II operating

February 7, 2022

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Dr
Santa Fe, NM 87505

Re: C E Lamunyon #049
API: 30-025-26177
[58300] Teague; Paddock-Blinebry
[33600] Imperial; Tubb-Drinkard
[58360] Teague; Devonian, North

Dear Mr. McClure:

FAE II Operating, LLC, as operator, will be filing applications with the New Mexico Oil Conservation Division for approval of the aforementioned downhole commingling project. After a review of internal records, this letter serves as notice that the operator and interest owners are identical for the pools listed above.

If you have any questions, please feel free to contact the undersigned.

Thank you for your attention to this matter.

Respectfully,

Steven Lehrbass
Director of Land

FAE II Operating LLC
11757 Katy Fwy #725, Houston, TX 77079
(832) 219-0990
vanessa@faenergyus.com

Received by OCD: 9/12/2022 4:26:14 PM

February 7, 2022

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Dr
Santa Fe, NM 87505

Re: C E Lamunyon #049
API: 30-025-26177
[58300] Teague; Paddock-Blinebry
[33600] Imperial; Tubb-Drinkard
[58360] Teague; Devonian, North

Dear Mr. McClure:

FAE II Operating LLC, OGRID: 329326, requests administrative approval for downhole commingling of oil and gas production from the aforementioned well and pools. This well's surface location is described below and the downhole locations of each pool are shown in the attached C-102's.

Surface Location: H-21-23S-37E 2150 FNL 550 FEL
Lat/Long: 32.291214,-103.1611099 NAD83

The well is currently producing from the **[58300] Teague; Paddock-Blinebry** pool; Exhibit A shows the well's historical production from this pool. It is proposed to downhole commingle this pool with the **[33600] Imperial; Tubb-Drinkard** and **[58360] Teague; Devonian, North** pools. While there is no recent production for the proposed pool in this well, there are multiple offset wells that are currently producing from the proposed pool. The average historical production of the surrounding analog wells producing from the proposed pool are shown in Exhibit B.

Decline curve analysis was used to create forecasts for each pool with a heavy weighting toward the last five years of production as it should most heavily influence future performance. Historical monthly volumes for each pool for the last five years as wells as a forecast of the combined pools are shown in Exhibit C. After comparing the forecasts generated from the historical production of the **C E Lamunyon #049** and the offset analogs for each pool, pool allocations were calculated on a proportional volume basis. This allocation, along with estimated IP rates for each pool after the comingling work is complete, are displayed in the table in Exhibit D.

After a review of internal records, the interest owners are identical for the aforementioned wells. As such, notification to the relevant parties of our intent to commingle production will not be necessary.

This proposed commingling of production is in the interest of conservation and will not result in reduced royalty or improper measurement of production. If you have any questions, please feel free to contact the undersigned. Thank you for your attention to this matter.

Respectfully,

Vanessa Neal
Sr Reservoir Engineer

Released to Imaging: 9/12/2022 4:29:46 PM

Exhibit A – Historical Production of Current Pool

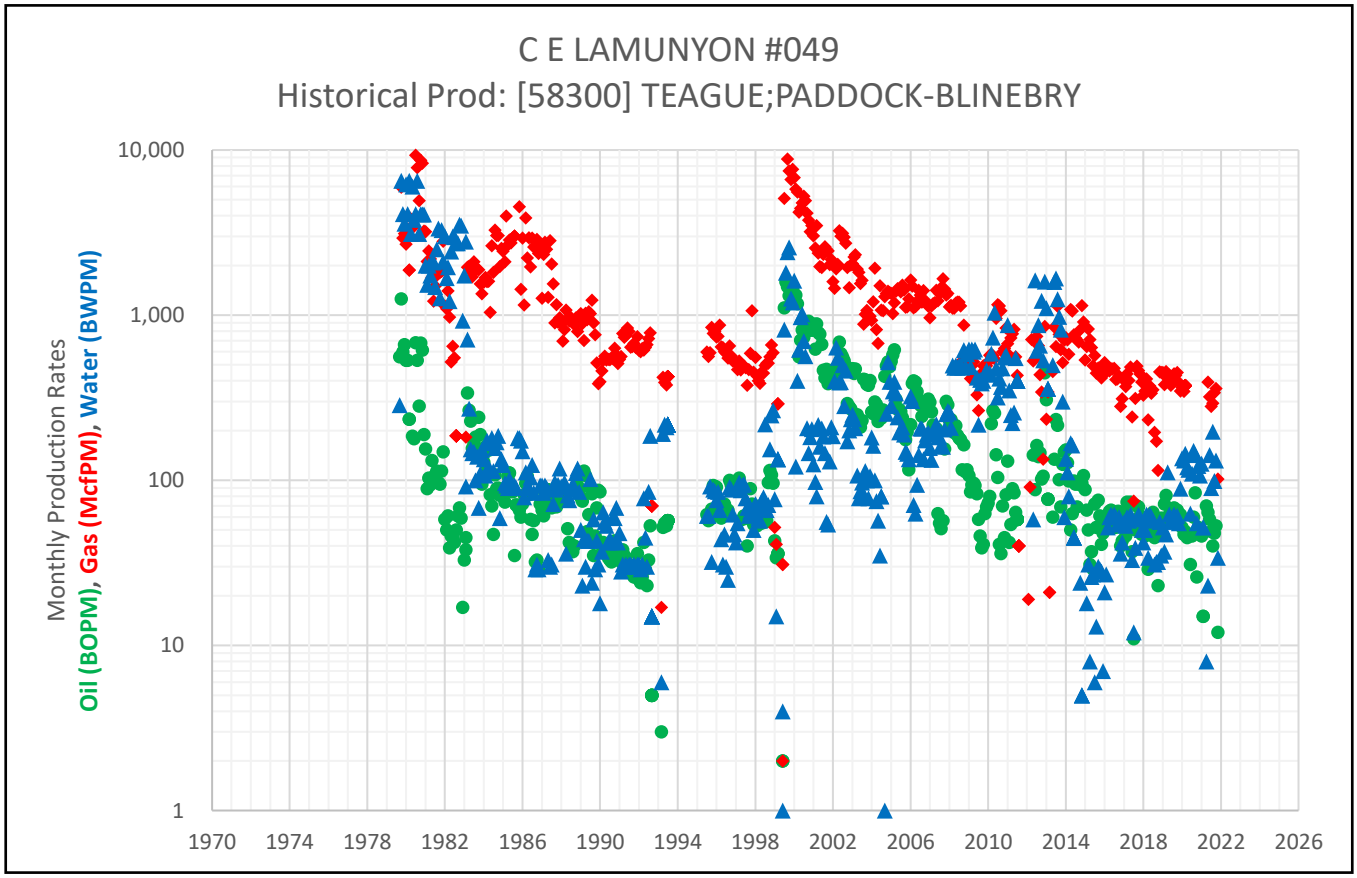


Exhibit B – Average Historical Production of Offset Analog Wells

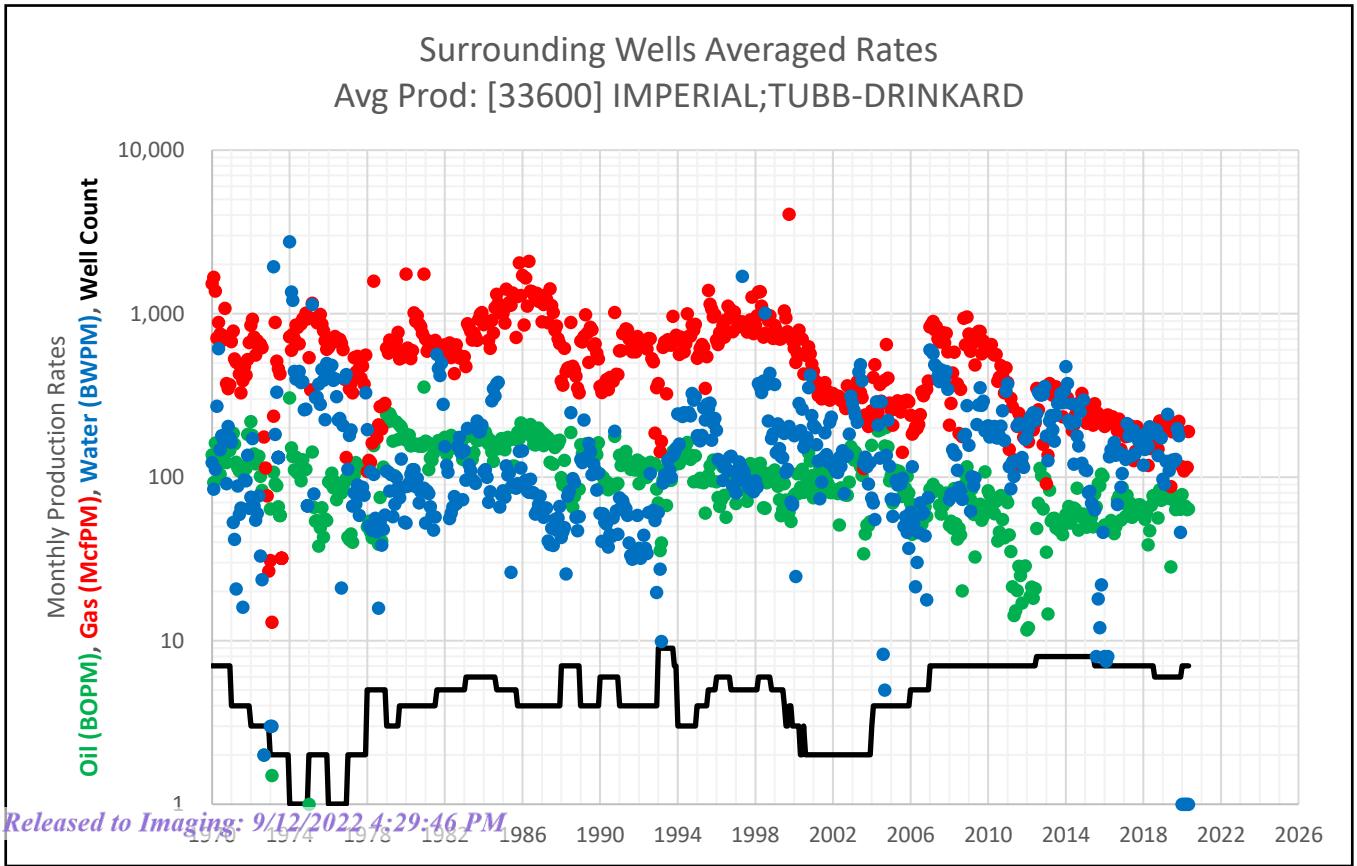
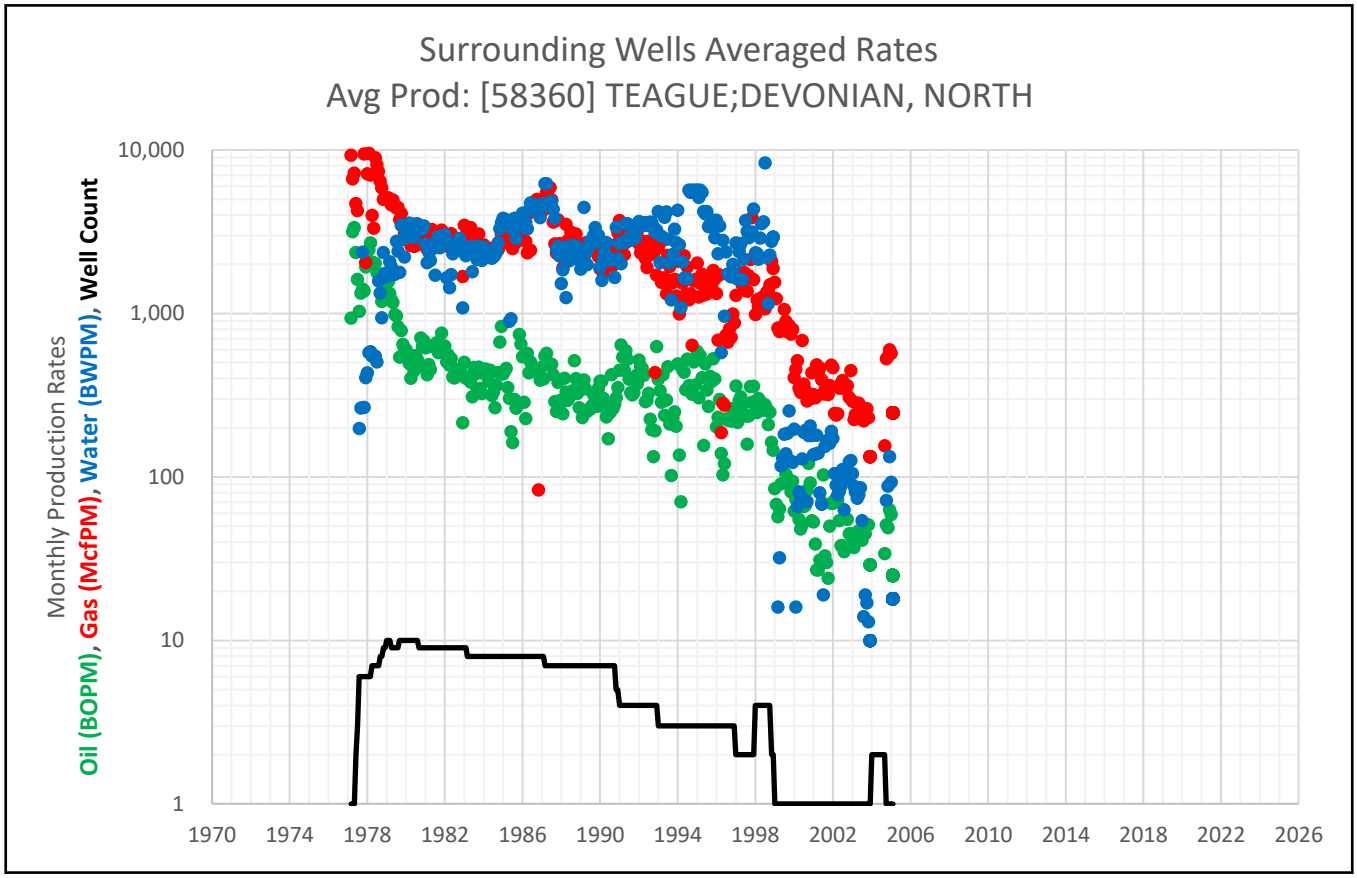


Exhibit B – Average Historical Production of Offset Analog Wells, cont



fae II operating

Exhibit C – Historical Production from Last 5 Years for Each Pool & Combined Future Forecast

Surrounding Wells Averaged Rates
Avg Prod: [33600] IMPERIAL;TUBB-DRINKARD

Date	Avg Oil (BOPM)	Avg Gas (McfPM)	Avg Water (BWPM)	Well Count
5/1/2016	55	234	148	7
6/1/2016	53	234	146	7
7/1/2016	45	214	164	7
8/1/2016	50	206	137	7
9/1/2016	73	192	68	7
10/1/2016	77	227	142	7
11/1/2016	55	148	87	7
12/1/2016	87	207	106	7
1/1/2017	69	191	137	7
2/1/2017	58	177	129	7
3/1/2017	78	211	213	7
4/1/2017	60	185	179	7
5/1/2017	69	206	189	7
6/1/2017	57	132	135	7
7/1/2017	63	126	194	7
8/1/2017	59	144	140	7
9/1/2017	64	204	181	7
10/1/2017	68	181	167	7
11/1/2017	68	165	172	7
12/1/2017	65	163	152	7
1/1/2018	65	165	119	7
2/1/2018	55	150	148	7
3/1/2018	61	180	186	7
4/1/2018	39	118	156	7
5/1/2018	47	150	204	7
6/1/2018	67	163	186	7
7/1/2018	77	169	189	7
8/1/2018	78	197	194	6
9/1/2018	78	199	195	6
10/1/2018	56	148	136	6
11/1/2018	84	221	177	6
12/1/2018	72	221	174	6
1/1/2019	74	218	97	6
2/1/2019	75	202	91	6
3/1/2019	81	226	125	6
4/1/2019	75	209	243	6
5/1/2019	78	222	110	6
6/1/2019	28	88	121	6
7/1/2019	73	190	128	6
8/1/2019	77	201	125	6
9/1/2019	63	199	129	6
10/1/2019	69	202	199	6
11/1/2019	65	220	180	6
12/1/2019	64	189	46	6
1/1/2020	79	116	1	7
2/1/2020	65	109	1	7
3/1/2020	67	114	1	7
4/1/2020	64	115	1	7
5/1/2020	64	190	1	7
6/1/2020	63	260	1	7
7/1/2020	54	302	1	7
8/1/2020	69	159	1	7
9/1/2020	62	325	1	7
10/1/2020	56	17	107	7
11/1/2020	64	298	2	7
12/1/2020	66	137	1	7
1/1/2021	134	109	0	8
2/1/2021	87	92	29	8
3/1/2021	153	78	0	8
4/1/2021	244	163	0	8
5/1/2021	282	203	41	8
6/1/2021	87	115	49	8
7/1/2021	128	99	151	8
8/1/2021	138	103	681	8
9/1/2021	261	136	510	8
10/1/2021	233	177	383	8

Surrounding Wells Averaged Rates
Avg Prod: [58360] TEAGUE;DEVONIAN, NORTH

Date	Avg Oil (BOPM)	Avg Gas (McfPM)	Avg Water (BWPM)	Well Count
7/1/1998	277	1,070	8,341	4
8/1/1998	262	1,349	2,195	4
9/1/1998	209	1,369	1,151	4
10/1/1998	250	1,499	2,275	4
11/1/1998	163	2,088	2,759	2
12/1/1998	146	1,882	2,935	2
1/1/1999	85	1,550	-	1
2/1/1999	68	1,234	-	1
3/1/1999	57	816	16	1
4/1/1999	64	775	32	1
5/1/1999	91	787	117	1
6/1/1999	117	831	130	1
7/1/1999	128	1,060	183	1
8/1/1999	104	897	139	1
9/1/1999	98	772	185	1
10/1/1999	90	845	254	1
11/1/1999	81	749	125	1
12/1/1999	94	802	123	1
1/1/2000	62	406	196	1
2/1/2000	73	455	16	1
3/1/2000	77	515	66	1
4/1/2000	55	350	81	1
5/1/2000	48	330	75	1
6/1/2000	51	685	129	1
7/1/2000	66	371	188	1
8/1/2000	67	338	193	1
9/1/2000	83	292	71	1
10/1/2000	121	303	179	1
11/1/2000	92	301	205	1
12/1/2000	54	433	179	1
1/1/2001	53	320	137	1
2/1/2001	39	305	138	1
3/1/2001	27	486	180	1
4/1/2001	27	437	140	1
5/1/2001	31	464	80	1
6/1/2001	70	393	68	1
7/1/2001	103	322	19	1
8/1/2001	33	340	154	1
9/1/2001	30	327	167	1
10/1/2001	24	319	160	1
11/1/2001	50	363	161	1
12/1/2001	69	483	190	1
1/1/2002	69	467	172	1
2/1/2002	72	245	105	1
3/1/2002	74	239	89	1
4/1/2002	72	244	78	1
5/1/2002	54	349	82	1
6/1/2002	38	373	88	1
7/1/2002	38	389	111	1
8/1/2002	35	369	63	1
9/1/2002	37	343	98	1
10/1/2002	55	363	105	1
11/1/2002	45	307	124	1
12/1/2002	45	447	126	1
1/1/2003	43	291	105	1
2/1/2003	37	225	88	1
3/1/2003	43	241	81	1
4/1/2003	45	283	74	1
5/1/2003	47	283	78	1
6/1/2003	42	243	86	1
7/1/2003	41	252	54	1
8/1/2003	46	221	14	1
9/1/2003	45	254	19	1
10/1/2003	51	262	17	1
11/1/2003	51	231	13	1
12/1/2003	29	133	10	1

C E LAMUNYON #049
Historical Prod: [58300] TEAGUE;PADDOCK-BLINEBRY

Date	Avg Oil (BOPM)	Avg Gas (McfPM)	Avg Water (BWPM)
5/1/2016	66	474	62
6/1/2016	57	472	60
7/1/2016	57	477	62
8/1/2016	52	408	60
9/1/2016	65	412	54
10/1/2016	65	428	60
11/1/2016	40	280	36
12/1/2016	43	312	42
1/1/2017	64	403	56
2/1/2017	46	369	53
3/1/2017	74	442	60
4/1/2017	56	403	57
5/1/2017	74	486	62
6/1/2017	37	242	33
7/1/2017	11	75	12
8/1/2017	50	314	39
9/1/2017	70	492	58
10/1/2017	69	461	62
11/1/2017	61	439	59
12/1/2017	47	393	50
1/1/2018	48	328	42
2/1/2018	46	348	50
3/1/2018	59	411	62
4/1/2018	29	232	34
5/1/2018	49	373	62
6/1/2018	52	336	60
7/1/2018	64	353	57
8/1/2018	45	195	31
9/1/2018	46	172	32
10/1/2018	23	115	32
11/1/2018	49	454	56
12/1/2018	59	450	35
1/1/2019	58	450	52
2/1/2019	72	379	37
3/1/2019	81	456	47
4/1/2019	58	414	112
5/1/2019	62	434	62
6/1/2019	56	376	56
7/1/2019	59	387	60
8/1/2019	68	442	62
9/1/2019	60	433	58
10/1/2019	66	449	61
11/1/2019	57	392	55
12/1/2019	62	348	89
1/1/2020	52	365	136
2/1/2020	47	345	132
3/1/2020	49	374	145
4/1/2020	45	-	120
5/1/2020	47	-	116
6/1/2020	31	-	63
7/1/2020	46	-	110
8/1/2020	60	-	151
9/1/2020	84	-	142
10/1/2020	26	-	55
11/1/2020	52	-	122
12/1/2020	47		107
1/1/2021	46	-	126
2/1/2021	15	-	52
3/1/2021	-	-	-
4/1/2021	70	-	8
5/1/2021	64	393	23
6/1/2021	58	321	142
7/1/2021	49	280	90
8/1/2021	40	293	197
9/1/2021	48	340	99
10/1/2021	53	360	132

Synthetic Decline Curve

Month	Avg Oil (BOPM)	Avg Gas (McfPM)	Avg Water (BWPM)
1	111.7	737.2	176.4
2	111.2	735	176
3	110.7	733	175
4	110.1	732	175
5	109.6	730	174
6	109.1	728	174
7	108.6	726	173
8	108.0	724	172
9	107.5	723	172
10	107.0	721	171
11	106.5	719	171
12	106.0	717	170
13	105.5	715	170
14	105.0	714	169
15	104.5	712	168
16	104.0	710	168
17	103.5	708	167
18	103.0	706	167
19	102.5	705	166
20	102.0	703	166
21	101.5	701	165
22	101.0	699	165
23	100.5	698	164
24	100.1	696	164
25	99.6	694	163
26	99.1	693	162
27	98.6	691	162
28	98.2	689	161
29	97.7	687	161
30	97.2	686	160
31	96.8	684	160
32	96.3	682	159
33	95.8	680	159
34	95.4	679	158
35	94.9	677	158
36	94.5	675	157
37	94.0	674	157
38	93.6	672	156
39	93.1	670	156
40	92.7	669	155
41	92.2	667	155
42	91.8	665	154
43	91.4	664	154
44	90.9	662	153
45	90.5	660	153
46	90.1	659	152
47	89.6	657	152
48	89.2	655	151
49	88.8	654	151
50	88.3	652	150
51	87.9	651	150
52	87.5	649	149
53	87.1	647	149
54	86.7	646	148
55	86.3	644	148
56	85.8	642	147
57	85.4	641	147
58	85.0	639	146
59	84.6	638	146
60	84.2	636	145

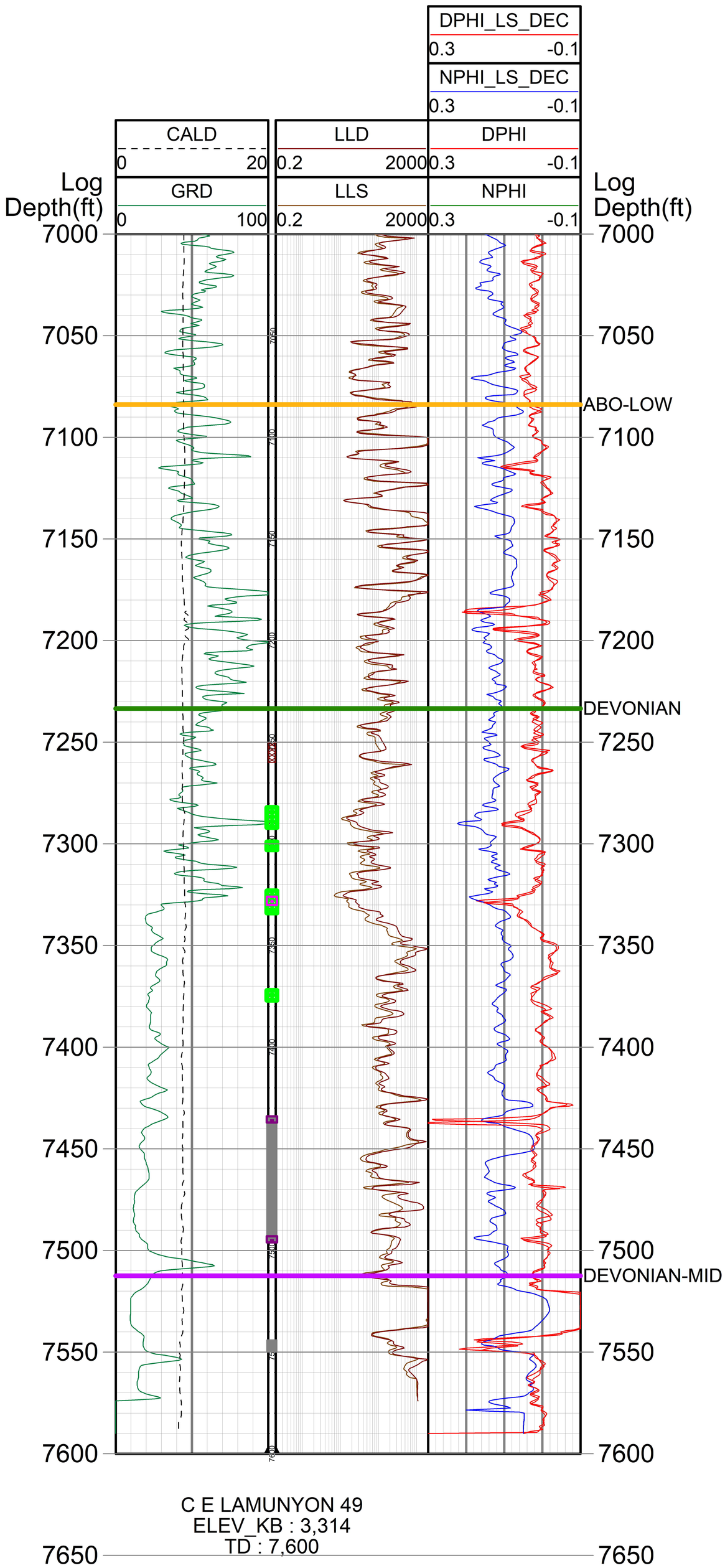
Released to Imaging: 9/12/2022 4:29:26 PM

Exhibit D – Pool Allocations & Post Workover IP Rates

	OIL	GAS	WATER	POOL
5 yr Cum	3,071	16,731	4,249	**[58300] Teague: Paddock-Blinebry**
Allocated %	26%	31%	23%	
IP Rate	1.7	9.2	2.3	
5 yr Cum	5,037	10,297	7,793	**[33600] Imperial: Tubb-Drinkard**
Allocated %	43%	19%	42%	
IP Rate	2.8	5.6	4.3	
5 yr Cum	3,636	27,510	6,356	**[58360] Teague; Devonian, North**
Allocated %	31%	50%	35%	
IP Rate	2.0	15.1	3.5	
IP Rate	**6.5**	**29.9**	**10.1**	**Commingled (Total)**

30025261770000
FAE

C E LAMUNYON 49
SPUD_DATE : 7/18/1979
T23S R37E S21



API14	SOURCE	STATUS	FMNAME	TOP PERF	BASE PERF	INTERVAL
30025261770000	OCD	ACTIVE		5168	5192	
30025261770000	OCD	BRIDGEPLUG		5940	5950	
30025261770000	OCD	ACTIVE		5979	5983	
30025261770000	OCD	ACTIVE		6017	6021	
30025261770000	OCD	ACTIVE		6061	6065	
30025261770000	OCD	ACTIVE		6090	6094	
30025261770000	OCD	ACTIVE		6227	6229	
30025261770000	OCD	ACTIVE		6259	6261	
30025261770000	OCD	BRIDGEPLUG		6355	6365	
30025261770000	OCD	ACTIVE		6383	6385	
30025261770000	OCD	ACTIVE		6396	6406	
30025261770000	OCD	ACTIVE		6413	6417	
30025261770000	OCD	ACTIVE		6439	6441	
30025261770000	OCD	ACTIVE		6444	6448	
30025261770000	OCD	ACTIVE		6457	6459	
30025261770000	OCD	ACTIVE		6471	6473	
30025261770000	OCD	ACTIVE		6476	6480	
30025261770000	OCD	ACTIVE		6507	6509	
30025261770000	OCD	BRIDGEPLUG		7250	7260	
30025261770000	CJH	PROPOSED	DVNN	7282	7292	10
30025261770000	CJH	PROPOSED	DVNN	7299	7303	4
30025261770000	CJH	PROPOSED	DVNN	7323	7334	11
30025261770000	OCD	ACTIVE		7326	7330	
30025261770000	CJH	PROPOSED	DVNN	7372	7377	5
30025261770000	OCD	INACTIVE		7434	7437	
30025261770000	OCD	SQUEEZED		7434	7496	
30025261770000	OCD	INACTIVE		7493	7496	
30025261770000	OCD	SQUEEZED		7544	7550	
					SUM	**30**

Well Name:	C E LAMUNYON # 049			**Lease No:**		**Lease Type:**	Federal
Township:	23-S	**Range:**	37-E	**Sec:**	21-H	**Location:**	2150' FNL & 550' FEL
County:	Lea	**State:**	NM	**API:**	30-025-26177	**Formation:**	DHC: [58300] Teague; Paddock-Blinebry, [33600] Imperial; Tubb-Drinkard, [58360] Teague; Devonian, North

PROPOSED

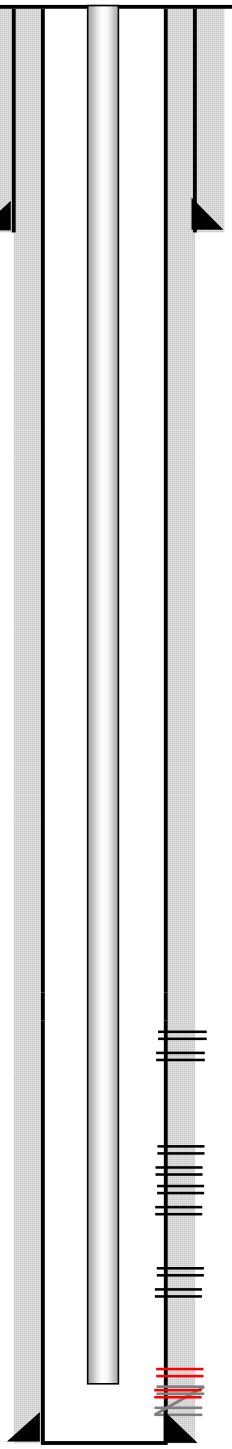
Surface Csg

Size:	8-5/8"
Wt.&Thrd:	24#
Grade:	
Set @:	1117'
Sxs cmt:	500 sxs
Circ:	Circ
TOC:	Surface
Hole Size:	12-1/4"

KB:	
DF:	
GL:	3303'
Spud Date:	7/18/1979
Compl. Date:	9/5/1979

History - Highlights

Proposed: MIRU. DO cmt & BPs. CO to TD. Add Perfs & Acidize DEVONIAN. DHC PADDOCK-BLINEBRY-TUBB-DRINKARD-DEVONIAN.



PADDOCK-BLIENBRY (Top @ ###')

5168-92' - Jun 1999

Acidized w/ 1000 gal 15% HCL acid; Frac w/ 22,640 gal + 34,000# sand

SN	7269'
EOT	7305'

TUBB (Top @ 6000')

5890-92', 6010-12', 6032-34', 6072-74', 6082-84', 6227-29' - Oct 1982

Stimulated w/ DRINKARD. Acidized w/ 2000 gal 15% NEFE HCL acid; Acid Frac w/ 10,000 gal gel + 10,000 gal 28% NEFE acid

Production Csg

Size:	5-1/2"
Wt.&Thrd:	15.5#
Grade:	
Set @:	7600'
Sxs Cmt:	2000 sxs
Circ:	Circ
TOC:	Surface
Hole Size:	7-7/8"

DRINKARD (Top @ 6240')

6259-61', 6275-77', 6295-97', 6315-17', 6383-85', 6439-41', 6457-59', 6471-73', 6507-09' - Oct

Stimulated w/ TUBB.

DEVONIAN (Top @ 7270')

7282-7292', 7299-7303', 7323-7334', 7372-7377' (2 SPF) - Proposed

Acidize w/ 5000 gals 15% NEFE HCL acid, 1500# rocksalt & flush w/ 500 bbls 2% KCL

7326-30', 7434-37', 7493-96', 7544-50' - Sep 1979 [SQUEEZED]

Acidized w/ 1000 gals 15% acid

PBTD 7600'

TD 7600'

Tubulars - Capacities and Performance

2-7/8" 6.4# J-55 EUE 8rd Tubing (225 jts 2-7/8" tbg, SN, 4' perf sub, MA w/ bull plug)

Well Name:	C E LAMUNYON # 049			**Lease No:**		**Lease Type:**	FEDERAL
Township:	23-S	**Range:**	37-E	**Sec:**	21-H	**Location:**	2150' FNL & 550' FEL
County:	Lea	**State:**	NM	**API:**	30-025-26177	**Formation:**	Teague; Paddock-Blinebry

CURRENT

Surface Csg

Size:	8-5/8"
Wt.&Thrd:	24#
Grade:	
Set @:	1117'
Sxs cmt:	500 sxs
Circ:	Circ
TOC:	Surface
Hole Size:	12-1/4"

KB:	
DF:	
GL:	3303'
Spud Date:	7/18/1979
Compl. Date:	9/5/1979

History - Highlights

All info from OCD well files ONLY

EOT	5067'
Cmt on top	5940'
CIBP	5950'
Cmt on top	6355'
CIBP	6365'
Cmt on top	7215'
CIBP	7250'

Production Csg

Size:	5-1/2"
Wt.&Thrd:	15.5#
Grade:	
Set @:	7600'
Sxs Cmt:	2000 sxs
Circ:	Circ
TOC:	Surface
Hole Size:	7-7/8"

PBTD 5940'
TD 7600'

PADDOCK-BLIENBRY (Top @ ###')
5168-92' - Jun 1999
Acidized w/ 1000 gal 15% HCL acid; Frac w/ 22,640 gal + 34,000# sand

TUBB (Top @ 6000') [ISOLATED]
5890-92', 6010-12', 6032-34', 6072-74', 6082-84', 6227-29' - Oct 1982
Stimulated w/ DRINKARD. Acidized w/ 2000 gal 15% NEFE HCL acid; Acid Frac w/ 10,000 gal gel + 10,000 gal 28% NEFE acid

DRINKARD (Top @ 6240') [ISOLATED]
6259-61', 6275-77', 6295-97', 6315-17', 6383-85', 6439-41', 6457-59', 6471-73', 6507-09' - Oct 1982
Stimulated w/ TUBB.

DEVONIAN (Top @ 7270')
7326-30', 7434-37', 7493-96', 7544-50' - Sep 1979 [SQUEEZED]
Acidized w/ 1000 gals 15% acid

Tubulars - Capacities and Performance

2-7/8" Tubing

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-26177	33600	IMPERIAL; TUBB-DRINKARD

[4] Property Code	[5] Property Name	[6] Well Number
330686	C E LAMUNYON	#049

[7] OGRID No.	[8] Operator Name	[9] Elevation
329326	FAE II OPERATING, LLC	3305’

[10] Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	21	23S	37E		2150	N	550	E	LEA

[11] Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	21	23S	37E		2150	N	550	E	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

SE/4 NE/4
Sec 21 (40 acres)

2150’

550’

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 2/7/2022 Date

VANESSA NEAL
Printed Name

vanessa@faenergyus.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-26177	58360	TEAGUE; DEVONIAN, NORTH

[4] Property Code	[5] Property Name	[6] Well Number
330686	C E LAMUNYON	#049

[7] OGRID No.	[8] Operator Name	[9] Elevation
329326	FAE II OPERATING, LLC	3305’

[10] Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	21	23S	37E		2150	N	550	E	LEA

[11] Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	21	23S	37E		2150	N	550	E	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

SE/4 NE/4
Sec 21 (40 acres)

2150’

550’

[17] OPERATOR CERTIFICATION

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1/28/2022

Signature Date

VANESSA NEAL
Printed Name

vanessa@faenergyus.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-26177	58300	TEAGUE; PADDOCK-BLINEBRY

[4] Property Code	[5] Property Name	[6] Well Number
330686	C E LAMUNYON	#049

[7] OGRID No.	[8] Operator Name	[9] Elevation
329326	FAE II OPERATING, LLC	3305’

[10] Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	21	23S	37E		2150	N	550	E	LEA

[11] Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	21	23S	37E		2150	N	550	E	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

SE/4 NE/4
Sec 21 (40 acres)

2150’

550’

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 1/28/2022 Date

VANESSA NEAL
Printed Name

vanessa@faenergyus.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

Received by OCD: 9/12/2022 4:26:14 PM

Well Name: CE LA MUNYON	**Well Location:** T23S / R37E / SEC 21 / SENE / 32.291212 / -103.161115	**County or Parish/State:** LEA / NM
Well Number: 49	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMLC030187	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 3002526177	**Well Status:** Producing Oil Well	**Operator:** FAE II OPERATING LLC

Notice of Intent

Sundry ID: 2655968

Type of Submission: Notice of Intent

Type of Action: Commingling (Subsurface)

Date Sundry Submitted: 02/07/2022

Time Sundry Submitted: 02:42

Date proposed operation will begin: 03/21/2022

Procedure Description: FAE II intends to submit an application with the New Mexico Oil Conservation Division for approval of this DHC project. Proposed - MIRU. DO Cmt & BPs. CO to TD. Add Perfs & Acidize DEVONIAN. DHC PADDOCK-BLINEBRY-TUBBDRINKARD-DEVONIAN.

NOI Attachments

Procedure Description

C_107a_Pkg_C_E_LAMUNYON_049_DHC_2022_02_07_20220207144229.pdf

CONFIDENTIAL

Released to Imaging: 9/12/2022 4:29:46 PM

Well Name: CE LA MUNYON

Well Location: T23S / R37E / SEC 21 / SENE / 32.291212 / -103.161115

County or Parish/State: LEA / NM

Well Number: 49

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMLC030187

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002526177

Well Status: Producing Oil Well

Operator: FAE II OPERATING LLC

Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: VANESSA NEAL

Signed on: FEB 07, 2022 02:42 PM

Name: FAE II OPERATING LLC

Title: Reservoir Engineer

Street Address: 11757 KATY FREEWAY, SUITE 1000

City: HOUSTON

State: TX

Phone: (832) 219-0990

Email address: VANESSA@FAENERGYUS.COM

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

CONFIDENTIAL

From: Vanessa Neal
To: McClure, Dean, EMNRD
Subject: [EXTERNAL] downhole commingling application (Submission ID# 79196)
Date: Monday, April 11, 2022 2:09:54 PM
Attachments: image001.png
ECHillA-7_ECHillA-7_3-31-22.pdf
FAE E C Hill A 7 806c1a77.pdf
Lamunyon_30_Lamunyon_30_3-31-22.pdf
FAE Ce Lamunyon 30 54becf74.pdf
FAE Ce Lamunyon 72 955fa4d3.pdf
CasingGas_CasingGas_3-31-22.pdf

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Mr. McClure,

Attached are the current and proposed wellbore diagrams for the C E Lamunyon #049 (30-025-26177).

The proposed pools are not commonly DHC, so I have attached gas & water analysis samples for compatibility analysis.

- The C E Lamunyon #030 samples are of the currently completed TEAGUE; PADDOCK-BLINEBRY pool.
- The C E Lamunyon #072 (Casing Gas) samples are of the proposed IMPERIAL; TUBB-DRINKARD pool we would like to DHC.
- The E C Hill A #007 samples are of the proposed DEVONIAN formation we would like to DHC.

Please let me know if you are in need of any additional documentation/information for this permit application.

Thank you,

Vanessa Neal |Sr Reservoir Engineer
forty acres energy
11757 Katy Freeway, Suite 725 | Houston, TX 77079
O 832.219.0990 (ext 165)
C 979.255.3476
E vanessa@faenergyus.com

From: Engineer, OCD, EMNRD
To: Vanessa Neal
Cc: McClure, Dean, EMNRD
Subject: downhole commingling application DHC-5178
Date: Monday, September 12, 2022 2:12:02 PM

Downhole commingling application DHC-5178 which involves the commingling of pools within the well bore of the C E Lamunyon #49 (30-025-26177) and is operated by FAE II Operating, LLC (329326) has been withdrawn at the applicant's request.

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

LABORATORY SERVICES Natural Gas Analysis
www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

Sample Point Code	Sample Point Name	Sample Point Location
12989G	EC Hill A-7	EC Hill A-7

Source Laboratory	Lab File No	Container Identity	Sampler
Laboratory Services	2022052857	2296	J Garcia - Spot

District	Area Name	Field Name	Facility Name
USA	USA	USA	New Mexico

Date Sampled	Date Effective	Date Received	Date Reported
Mar 31, 2022 12:40	Mar 31, 2022 12:40	Apr 4, 2022 12:00	Apr 4, 2022

Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
		Luis	30 @

Operator	Lab Source Description
Imperative	NG

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	1.5990	1.59898	
CO2 (CO2)	1.3780	1.37767	
Methane (C1)	67.1400	67.13879	
Ethane (C2)	14.3960	14.39612	3.8490
Propane (C3)	8.4170	8.41724	2.3180
I-Butane (IC4)	0.8300	0.82996	0.2720
N-Butane (NC4)	3.1240	3.12412	0.9850
I-Pentane (IC5)	0.6280	0.62842	0.2300
N-Pentane (NC5)	0.9410	0.94143	0.3410
Hexanes Plus (C6+)	1.5470	1.54727	0.6710
TOTAL	100.0000	100.0000	8.6660

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Gross Heating Values (Real, BTU/ft³)

14.696 PSI @ 60.00 Â°F		14.73 PSI @ 60.00 Â°F	
Dry	Saturated	Dry	Saturated
1,420.8	1,397.5	1,424.1	1,400.7

Calculated Total Sample Properties

GPA2145-16 *Calculated at Contract Conditions

Relative Density Real	Relative Density Ideal
0.8581	0.8541

Molecular Weight
24.7374

C6+ Group Properties

Assumed Composition

C6 - 60.000% C7 - 30.000% C8 - 10.000%

Field H2S
0 PPM

PROTREND STATUS:
Passed By Validator on Apr 5, 2022

DATA SOURCE:
Imported

PASSED BY VALIDATOR REASON:
Close enough to be considered reasonable.

VALIDATOR:
Luis Cano

VALIDATOR COMMENTS:
ok

Analyzer Information

Device Type:	Device Make:
Device Model:	Last Cal Date:

Released to Imaging: 9/12/2022 4:29:46 PM

IMPERATIVE
CHEMICAL PARTNERS

Complete Water Analysis Report

Company	FAE II	Report Date	4/1/2022
Location Name	CE Lamunyon 30	Sample Date	4/1/2022
Site Type	Site	Sample ID	54becf74
Sample Point	Wellhead		

Sample Analysis

Cations

Sodium	Na^+	56210.22	mg/L
Potassium	K^+	416.52	mg/L
Magnesium	Mg^{2+}	774.07	mg/L
Calcium	Ca^{2+}	2885.60	mg/L
Strontium	Sr^{2+}	74.45	mg/L
Barium	Ba^{2+}	0.04	mg/L
Iron	Fe^{2+}	0.42	mg/L
Manganese	Mn^{2+}	0.00	mg/L
Phosphate	PO_4^{3-}	0.00	mg/L
Zinc	Zn^{2-}	0.00	mg/L
Lead	Pb^{2-}	0.00	mg/L
Silicon	Si	4.14	mg/L

Properties

Initial Temperature	250.00	°F
Final Temperature	70.00	°F
Initial Pressure	2000.00	psi
Final Pressure	15.00	psi
pH	6.24	

Dissolved Gases

Aqueous CO_2	190.00	mg/L
Aqueous H_2S	34.20	mg/L

Anions

Chlorides	Cl^-	64,100.00	mg/L
Sulfates	SO_4^{2-}	1,096.00	mg/L
Bicarbonate	HCO_3^-	597.80	mg/L
Carbonate	CO_3^{2-}	0.00	mg/L

Calculated Values

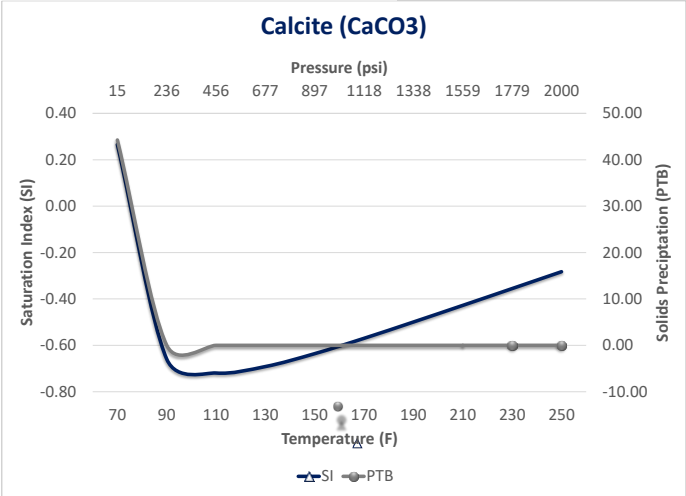
Specific Gravity (@ 25°C)	1.089	
Total Dissolved Solids (TDS)	125,565.28	mg/L

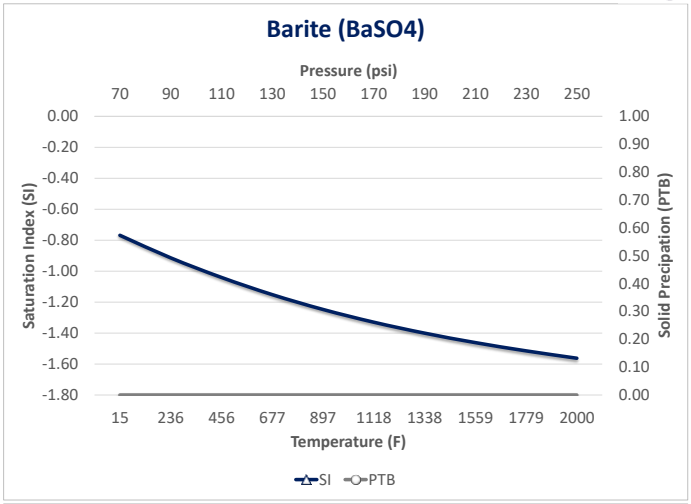
Scale Modeling (Scalesoft Pitzer)

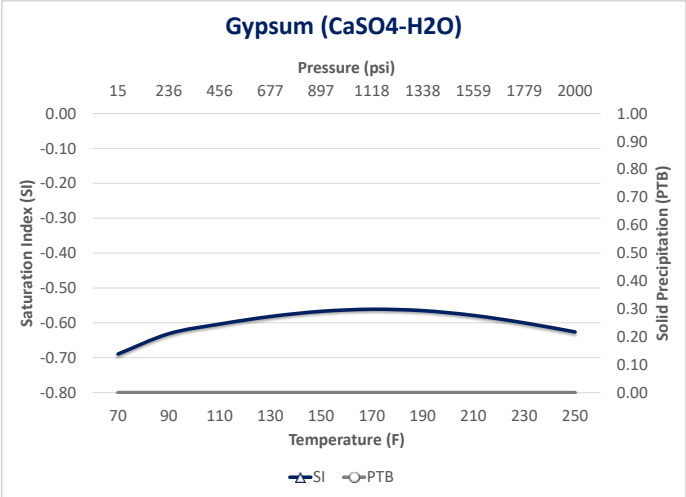
Conditions		Calcite $CaCO_3$		Barite $BaSO_4$		Gypsum $CaSO_4 \cdot H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$	
Temp	Psi	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	15	0.27	44.27	-0.77	0.00	-0.69	0.00	-0.94	0.00	-0.53	0.00
90	236	-0.66	0.00	-0.91	0.00	-0.63	0.00	-0.80	0.00	-0.49	0.00
110	456	-0.72	0.00	-1.04	0.00	-0.60	0.00	-0.69	0.00	-0.43	0.00
130	677	-0.69	0.00	-1.15	0.00	-0.58	0.00	-0.58	0.00	-0.37	0.00
150	897	-0.64	0.00	-1.25	0.00	-0.57	0.00	-0.47	0.00	-0.31	0.00
170	1118	-0.57	0.00	-1.33	0.00	-0.56	0.00	-0.36	0.00	-0.25	0.00
190	1338	-0.50	0.00	-1.40	0.00	-0.57	0.00	-0.26	0.00	-0.19	0.00
210	1559	-0.43	0.00	-1.46	0.00	-0.58	0.00	-0.16	0.00	-0.13	0.00
230	1779	-0.36	0.00	-1.51	0.00	-0.60	0.00	-0.06	0.00	-0.07	0.00
250	2000	-0.28	0.00	-1.56	0.00	-0.63	0.00	0.04	41.27	-0.01	0.00

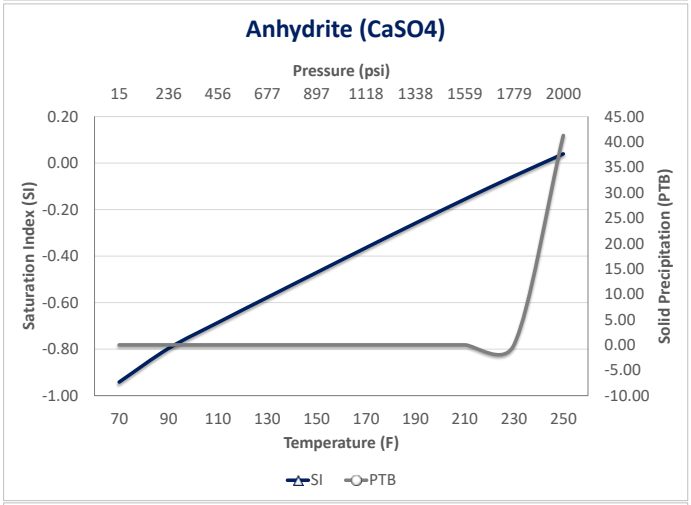
Conditions		Halite NaCl		Siderite $FeCO_3$		Mackinawite FeS		Sphalerite ZnS		Galena PbS	
Temp	Psi	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	15	-1.22	0.00	-2.21	0.00	-0.12	0.00	0.00	0.00	0.00	0.00
90	236	-1.24	0.00	-3.06	0.00	-1.19	0.00	0.00	0.00	0.00	0.00
110	456	-1.25	0.00	-3.07	0.00	-1.33	0.00	0.00	0.00	0.00	0.00
130	677	-1.26	0.00	-3.00	0.00	-1.35	0.00	0.00	0.00	0.00	0.00
150	897	-1.27	0.00	-2.93	0.00	-1.32	0.00	0.00	0.00	0.00	0.00
170	1118	-1.27	0.00	-2.86	0.00	-1.26	0.00	0.00	0.00	0.00	0.00
190	1338	-1.28	0.00	-2.80	0.00	-1.19	0.00	0.00	0.00	0.00	0.00
210	1559	-1.28	0.00	-2.76	0.00	-1.12	0.00	0.00	0.00	0.00	0.00
230	1779	-1.28	0.00	-2.74	0.00	-1.04	0.00	0.00	0.00	0.00	0.00
250	2000	-1.28	0.00	-2.72	0.00	-0.97	0.00	0.00	0.00	0.00	0.00

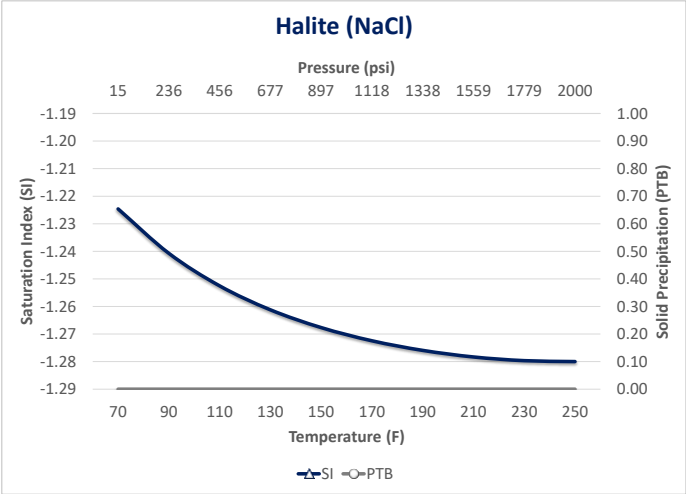
**Please note default production volumes of 100 mcfd, 50 bopd, and 50 bwpd were used for modeling calculations.*
**Please note default temperatures and pressures of 250 °F, 50 psi, and 5000 psi were used for modeling calculations.*
SI = Saturation Index
PTB = Pounds per Thousand Barrels
NA = Not Applicable

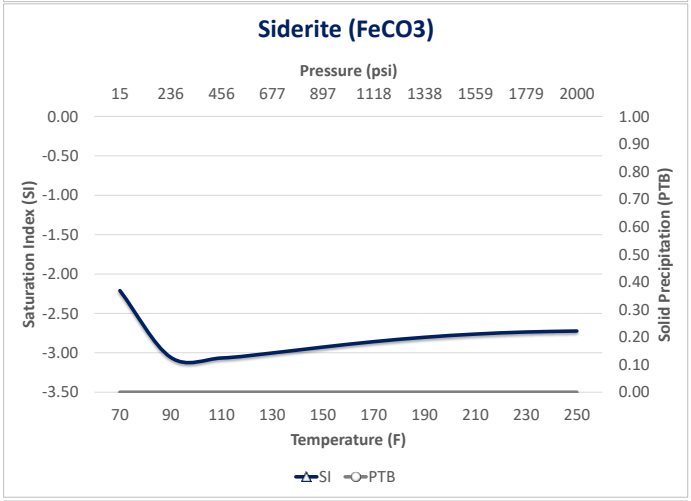

Calcite (CaCO3)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.40 0.20 0.00 -0.20 -0.40 -0.60 -0.80
Solids Precipitation (PTB)
50.00 40.00 30.00 20.00 10.00 0.00 -10.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB

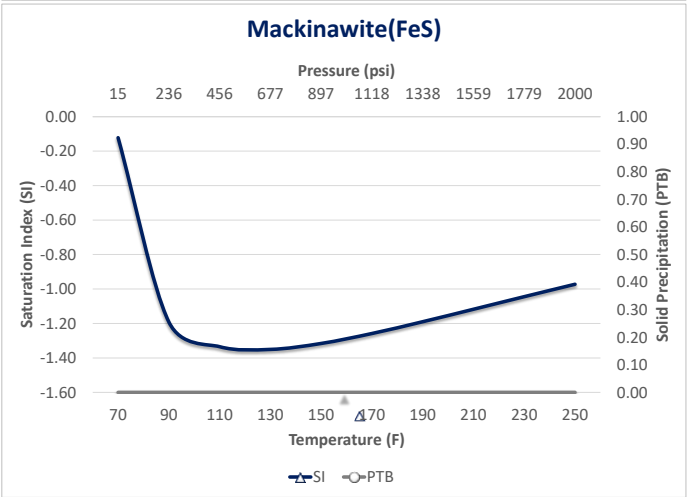

Barite (BaSO4)
Pressure (psi)
70 90 110 130 150 170 190 210 230 250
Saturation Index (SI)
0.00 -0.20 -0.40 -0.60 -0.80 -1.00 -1.20 -1.40 -1.60 -1.80
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
15 236 456 677 897 1118 1338 1559 1779 2000
Temperature (F)
SI PTB

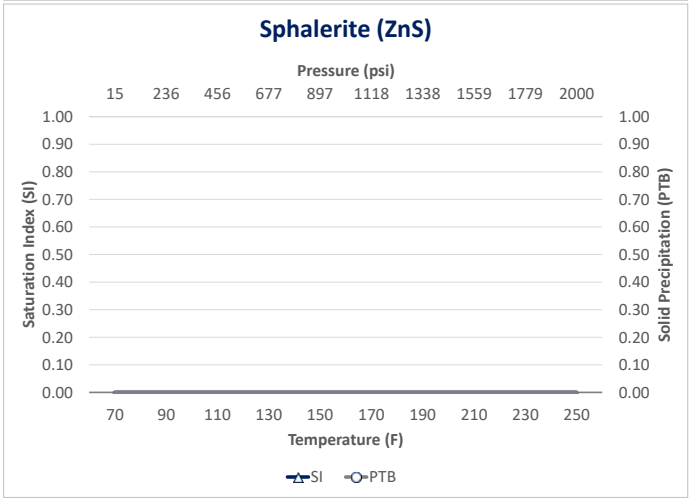

Gypsum (CaSO4-H2O)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.00 -0.10 -0.20 -0.30 -0.40 -0.50 -0.60 -0.70 -0.80
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Anhydrite (CaSO4)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.20 0.00 -0.20 -0.40 -0.60 -0.80 -1.00
Solid Precipitation (PTB)
45.00 40.00 35.00 30.00 25.00 20.00 15.00 10.00 5.00 0.00 -5.00 -10.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Halite (NaCl)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
-1.19 -1.20 -1.21 -1.22 -1.23 -1.24 -1.25 -1.26 -1.27 -1.28 -1.29
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Siderite (FeCO3)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.00 -0.50 -1.00 -1.50 -2.00 -2.50 -3.00 -3.50
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Mackinawite(FeS)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.00 -0.20 -0.40 -0.60 -0.80 -1.00 -1.20 -1.40 -1.60
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Sphalerite (ZnS)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB

IMPERATIVE
CHEMICAL PARTNERS

Complete Water Analysis Report

Company	FAE II	Report Date	4/1/2022
Location Name	CE Lamunyon 72	Sample Date	4/1/2022
Site Type	Site	Sample ID	955fa4d3
Sample Point	Wellhead		

Sample Analysis

Cations

Sodium	Na^+	34752.64	mg/L
Potassium	K^+	205.47	mg/L
Magnesium	Mg^{2+}	367.67	mg/L
Calcium	Ca^{2+}	1454.22	mg/L
Strontium	Sr^{2+}	39.70	mg/L
Barium	Ba^{2+}	0.00	mg/L
Iron	Fe^{2+}	56.19	mg/L
Manganese	Mn^{2+}	0.20	mg/L
Phosphate	PO_4^{3-}	0.00	mg/L
Zinc	Zn^{2-}	0.00	mg/L
Lead	Pb^{2-}	0.00	mg/L
Silicon	Si	5.93	mg/L

Properties

Initial Temperature	250.00	°F
Final Temperature	70.00	°F
Initial Pressure	2000.00	psi
Final Pressure	15.00	psi
pH	6.32	

Dissolved Gases

Aqueous CO_2	950.00	mg/L
Aqueous H_2S	34.20	mg/L

Anions

Chlorides	Cl^-	38,800.00	mg/L
Sulfates	SO_4^{2-}	1,269.00	mg/L
Bicarbonate	HCO_3^-	1,976.40	mg/L
Carbonate	CO_3^{2-}	0.00	mg/L

Calculated Values

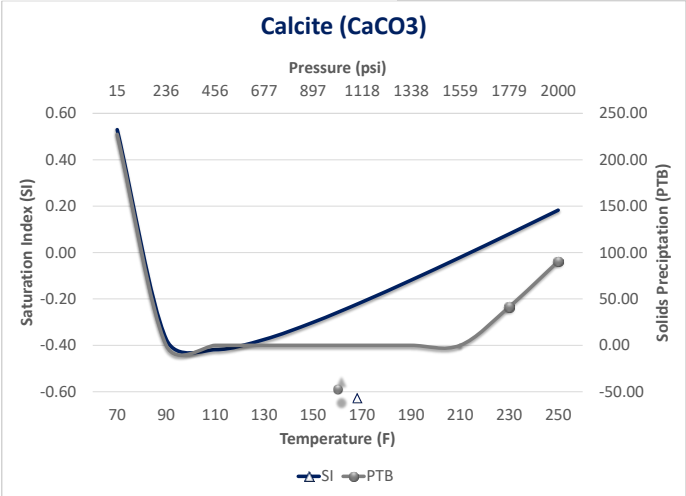
Specific Gravity (@ 25°C)	1.055	
Total Dissolved Solids (TDS)	76,951.90	mg/L

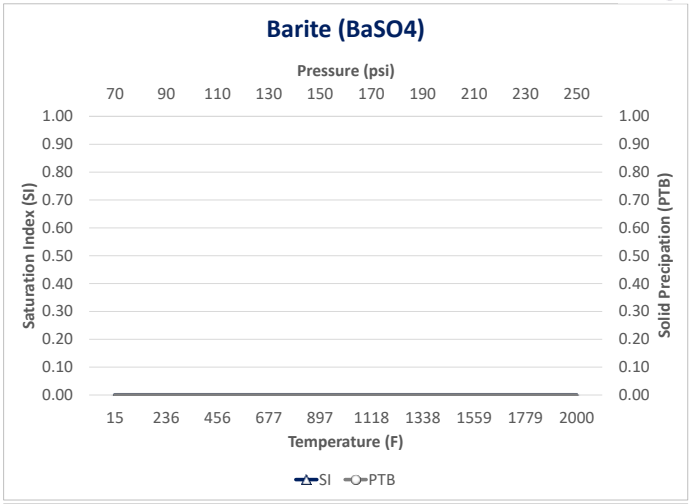
Scale Modeling (Scalesoft Pitzer)

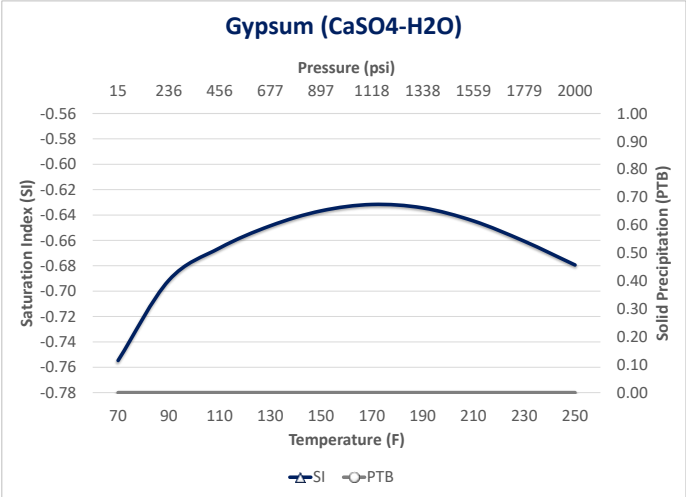
Conditions		Calcite $CaCO_3$		Barite $BaSO_4$		Gypsum $CaSO_4 \cdot H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$	
Temp	Psi	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	15	0.53	227.49	0.00	0.00	-0.75	0.00	-1.04	0.00	-0.61	0.00
90	236	-0.37	0.00	0.00	0.00	-0.69	0.00	-0.89	0.00	-0.57	0.00
110	456	-0.42	0.00	0.00	0.00	-0.67	0.00	-0.78	0.00	-0.52	0.00
130	677	-0.37	0.00	0.00	0.00	-0.65	0.00	-0.67	0.00	-0.48	0.00
150	897	-0.30	0.00	0.00	0.00	-0.64	0.00	-0.57	0.00	-0.43	0.00
170	1118	-0.21	0.00	0.00	0.00	-0.63	0.00	-0.46	0.00	-0.37	0.00
190	1338	-0.12	0.00	0.00	0.00	-0.63	0.00	-0.36	0.00	-0.32	0.00
210	1559	-0.02	0.00	0.00	0.00	-0.64	0.00	-0.25	0.00	-0.26	0.00
230	1779	0.08	41.42	0.00	0.00	-0.66	0.00	-0.15	0.00	-0.20	0.00
250	2000	0.18	90.43	0.00	0.00	-0.68	0.00	-0.04	0.00	-0.14	0.00

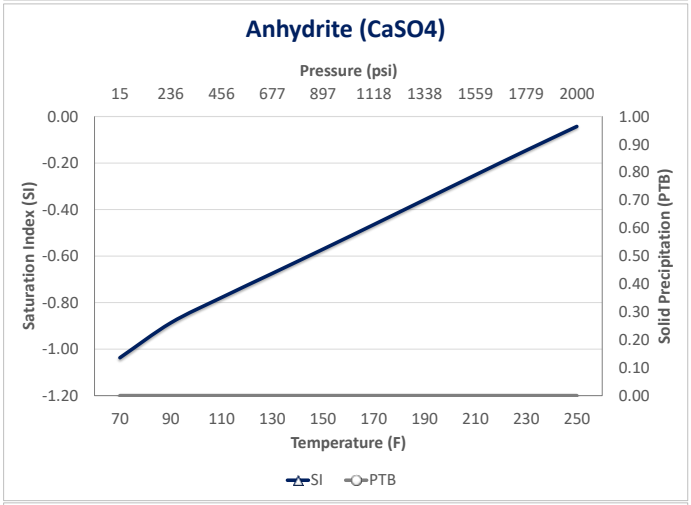
Conditions		Halite NaCl		Siderite $FeCO_3$		Mackinawite FeS		Sphalerite ZnS		Galena PbS	
Temp	Psi	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	15	-1.70	0.00	0.64	27.10	2.03	14.69	0.00	0.00	0.00	0.00
90	236	-1.72	0.00	-0.17	0.00	1.07	14.35	0.00	0.00	0.00	0.00
110	456	-1.74	0.00	-0.16	0.00	0.94	13.05	0.00	0.00	0.00	0.00
130	677	-1.75	0.00	-0.09	0.00	0.93	14.92	0.00	0.00	0.00	0.00
150	897	-1.75	0.00	0.00	0.00	0.98	14.69	0.00	0.00	0.00	0.00
170	1118	-1.76	0.00	0.08	5.78	1.05	14.01	0.00	0.00	0.00	0.00
190	1338	-1.76	0.00	0.15	9.51	1.13	13.48	0.00	0.00	0.00	0.00
210	1559	-1.76	0.00	0.20	11.47	1.21	13.03	0.00	0.00	0.00	0.00
230	1779	-1.75	0.00	0.23	12.10	1.29	12.56	0.00	0.00	0.00	0.00
250	2000	-1.75	0.00	0.25	11.73	1.36	12.01	0.00	0.00	0.00	0.00

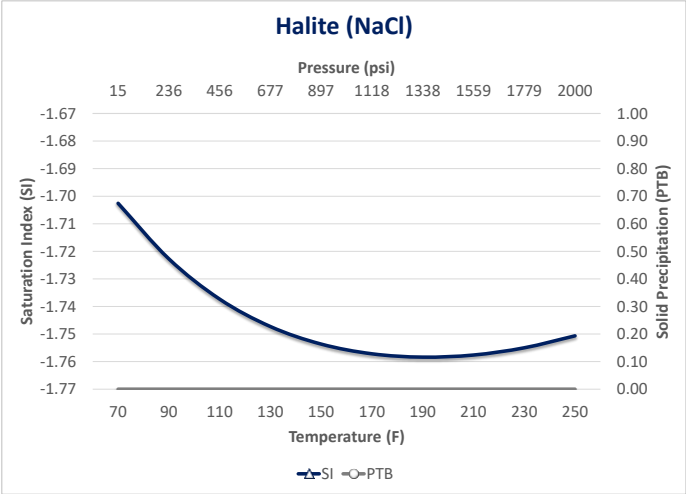
**Please note default production volumes of 100 mcfd, 50 bopd, and 50 bwpd were used for modeling calculations.*
**Please note default temperatures and pressures of 250 °F, 50 psi, and 5000 psi were used for modeling calculations.*
SI = Saturation Index
PTB = Pounds per Thousand Barrels
NA = Not Applicable

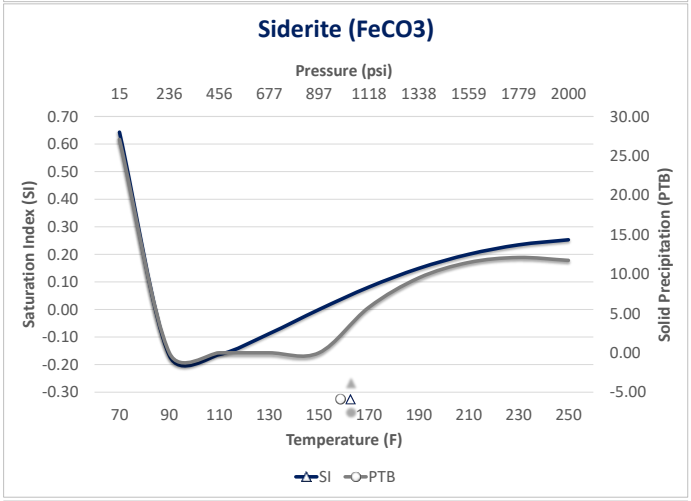

Calcite (CaCO3)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.60 0.40 0.20 0.00 -0.20 -0.40 -0.60
Solids Precipitation (PTB)
250.00 200.00 150.00 100.00 50.00 0.00 -50.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB

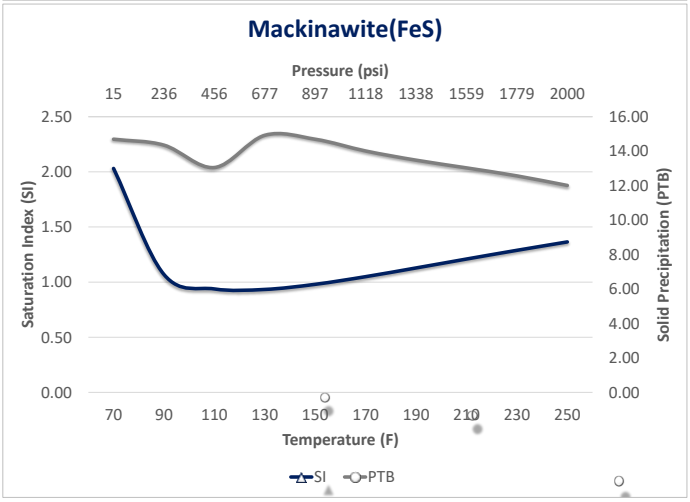

Barite (BaSO4)
Pressure (psi)
70 90 110 130 150 170 190 210 230 250
Saturation Index (SI)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
15 236 456 677 897 1118 1338 1559 1779 2000
Temperature (F)
SI PTB

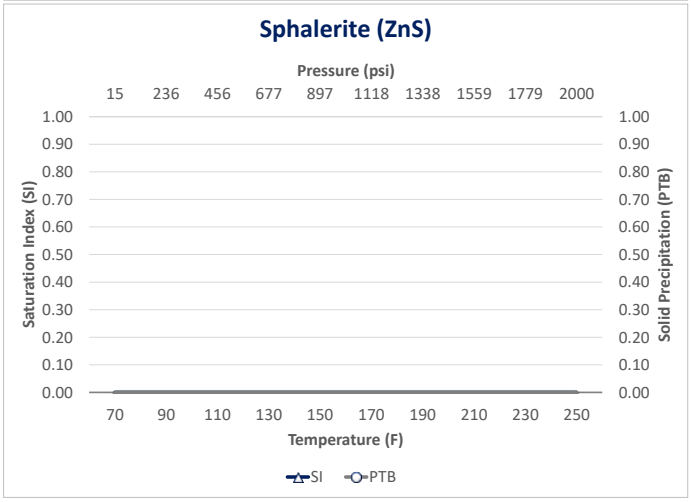

Gypsum (CaSO4-H2O)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
-0.56 -0.58 -0.60 -0.62 -0.64 -0.66 -0.68 -0.70 -0.72 -0.74 -0.76 -0.78
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Anhydrite (CaSO4)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.00 -0.20 -0.40 -0.60 -0.80 -1.00 -1.20
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Halite (NaCl)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
-1.67 -1.68 -1.69 -1.70 -1.71 -1.72 -1.73 -1.74 -1.75 -1.76 -1.77
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Siderite (FeCO3)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00 -0.10 -0.20 -0.30
Solid Precipitation (PTB)
30.00 25.00 20.00 15.00 10.00 5.00 0.00 -5.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Mackinawite(FeS)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
2.50 2.00 1.50 1.00 0.50 0.00
Solid Precipitation (PTB)
16.00 14.00 12.00 10.00 8.00 6.00 4.00 2.00 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB


Sphalerite (ZnS)
Pressure (psi)
15 236 456 677 897 1118 1338 1559 1779 2000
Saturation Index (SI)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
Solid Precipitation (PTB)
1.00 0.90 0.80 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00
70 90 110 130 150 170 190 210 230 250
Temperature (F)
SI PTB

IMPERATIVE
CHEMICAL PARTNERS

Complete Water Analysis Report

Company	FAE II	Report Date	4/1/2022
Location Name	E C Hill A 7	Sample Date	4/1/2022
Site Type	Site	Sample ID	806c1a77
Sample Point	Wellhead		

Sample Analysis

Cations

Sodium	Na^+	36441.04	mg/L
Potassium	K^+	249.58	mg/L
Magnesium	Mg^{2+}	736.04	mg/L
Calcium	Ca^{2+}	2226.09	mg/L
Strontium	Sr^{2+}	56.37	mg/L
Barium	Ba^{2+}	0.00	mg/L
Iron	Fe^{2+}	77.68	mg/L
Manganese	Mn^{2+}	4.00	mg/L
Phosphate	PO_4^{3-}	0.00	mg/L
Zinc	Zn^{2-}	0.00	mg/L
Lead	Pb^{2-}	0.00	mg/L
Silicon	Si	8.96	mg/L

Properties

Initial Temperature	250.00	°F
Final Temperature	70.00	°F
Initial Pressure	2000.00	psi
Final Pressure	15.00	psi
pH	6.49	

Dissolved Gases

Aqueous CO_2	270.00	mg/L
Aqueous H_2S	0.26	mg/L

Anions

Chlorides	Cl^-	42,900.00	mg/L
Sulfates	SO_4^{2-}	1,214.00	mg/L
Bicarbonate	HCO_3^-	610.00	mg/L
Carbonate	CO_3^{2-}	0.00	mg/L

Calculated Values

Specific Gravity (@ 25°C)	1.060	
Total Dissolved Solids (TDS)	3,918.89	mg/L

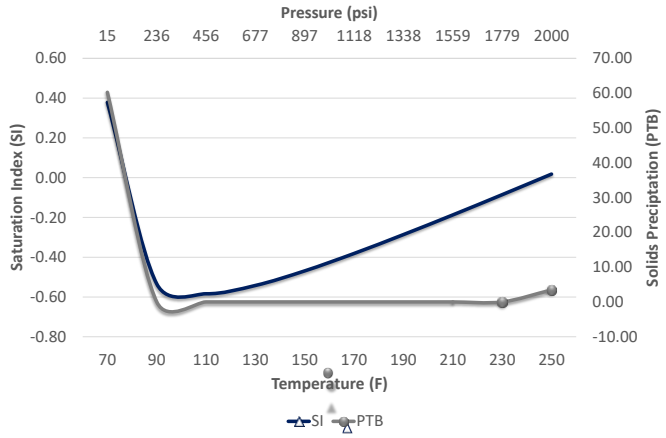
Scale Modeling (Scalesoft Pitzer)

Conditions		Calcite $CaCO_3$		Barite $BaSO_4$		Gypsum $CaSO_4 \cdot H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$	
Temp	Psi	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	15	0.38	60.25	0.00	0.00	-0.63	0.00	-0.91	0.00	-0.51	0.00
90	236	-0.53	0.00	0.00	0.00	-0.59	0.00	-0.79	0.00	-0.49	0.00
110	456	-0.58	0.00	0.00	0.00	-0.57	0.00	-0.68	0.00	-0.45	0.00
130	677	-0.54	0.00	0.00	0.00	-0.55	0.00	-0.58	0.00	-0.40	0.00
150	897	-0.47	0.00	0.00	0.00	-0.54	0.00	-0.47	0.00	-0.35	0.00
170	1118	-0.38	0.00	0.00	0.00	-0.53	0.00	-0.36	0.00	-0.29	0.00
190	1338	-0.29	0.00	0.00	0.00	-0.53	0.00	-0.25	0.00	-0.24	0.00
210	1559	-0.19	0.00	0.00	0.00	-0.54	0.00	-0.15	0.00	-0.18	0.00
230	1779	-0.09	0.00	0.00	0.00	-0.56	0.00	-0.04	0.00	-0.12	0.00
250	2000	0.02	3.45	0.00	0.00	-0.58	0.00	0.06	61.36	-0.06	0.00

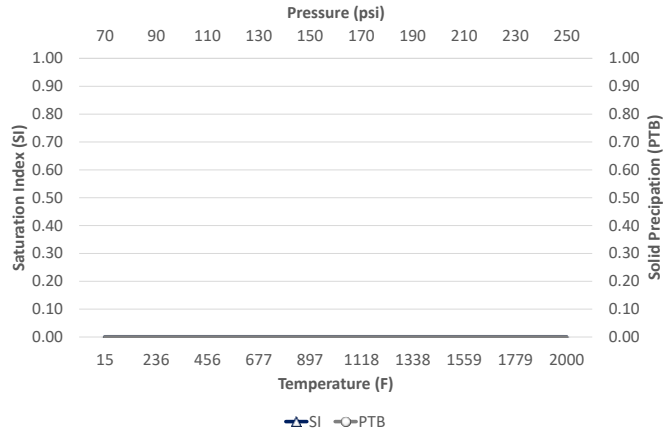
Conditions		Halite NaCl		Siderite $FeCO_3$		Mackinawite FeS		Sphalerite ZnS		Galena PbS	
Temp	Psi	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	15	-1.63	0.00	0.43	28.27	0.08	3.90	0.00	0.00	0.00	0.00
90	236	-1.65	0.00	-0.44	0.00	-0.85	0.00	0.00	0.00	0.00	0.00
110	456	-1.66	0.00	-0.43	0.00	-0.98	0.00	0.00	0.00	0.00	0.00
130	677	-1.67	0.00	-0.35	0.00	-0.98	0.00	0.00	0.00	0.00	0.00
150	897	-1.68	0.00	-0.25	0.00	-0.92	0.00	0.00	0.00	0.00	0.00
170	1118	-1.68	0.00	-0.16	0.00	-0.84	0.00	0.00	0.00	0.00	0.00
190	1338	-1.68	0.00	-0.06	0.00	-0.74	0.00	0.00	0.00	0.00	0.00
210	1559	-1.68	0.00	0.02	1.47	-0.64	0.00	0.00	0.00	0.00	0.00
230	1779	-1.68	0.00	0.09	7.13	-0.53	0.00	0.00	0.00	0.00	0.00
250	2000	-1.68	0.00	0.15	11.58	-0.42	0.00	0.00	0.00	0.00	0.00

**Please note default production volumes of 100 mcfd, 50 bopd, and 50 bwpd were used for modeling calculations.*
**Please note default temperatures and pressures of 250 °F, 50 psi, and 5000 psi were used for modeling calculations.*
SI = Saturation Index
PTB = Pounds per Thousand Barrels
NA = Not Applicable

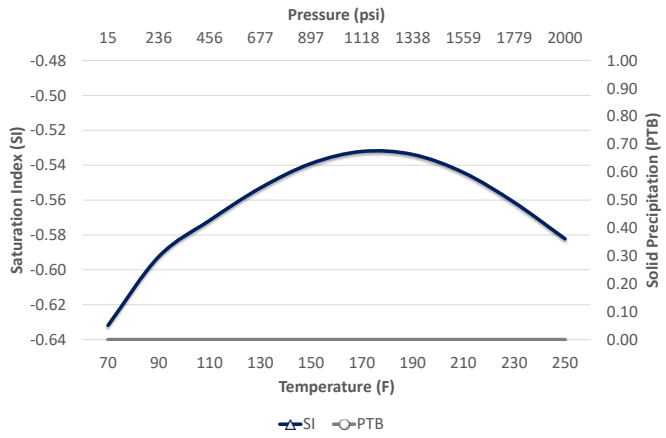
Calcite (CaCO3)



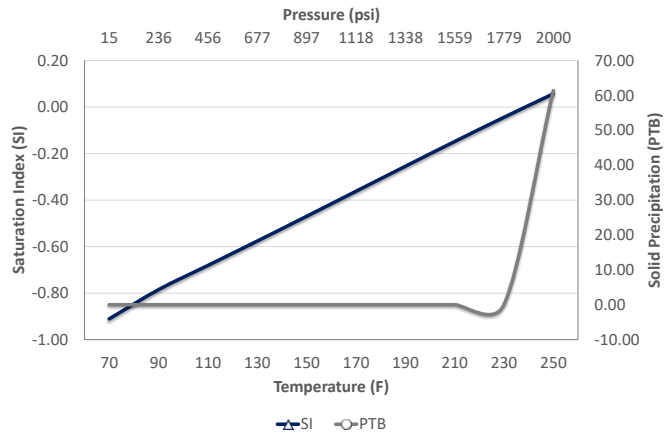
Barite (BaSO4)



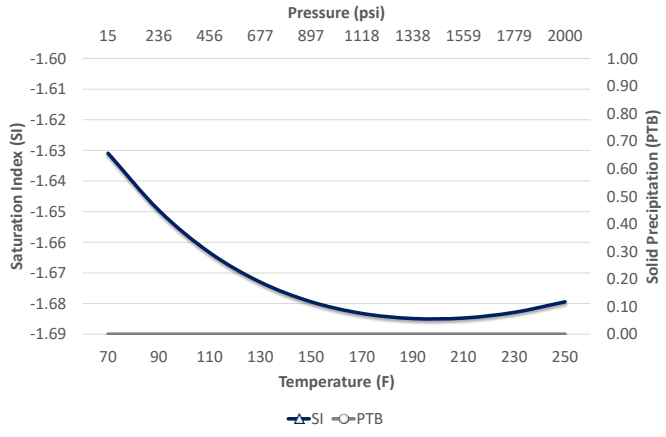
Gypsum (CaSO4-H2O)



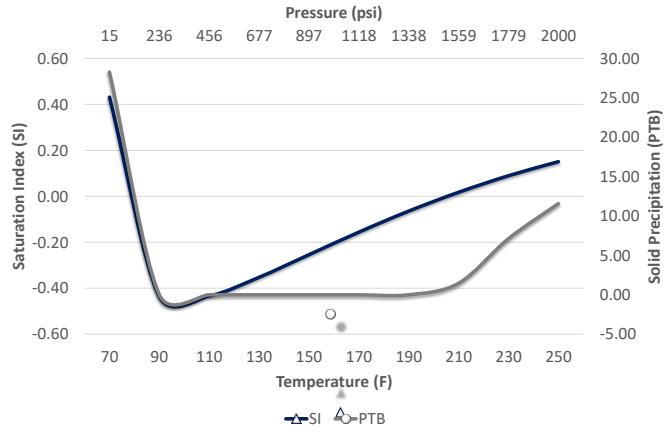
Anhydrite (CaSO4)



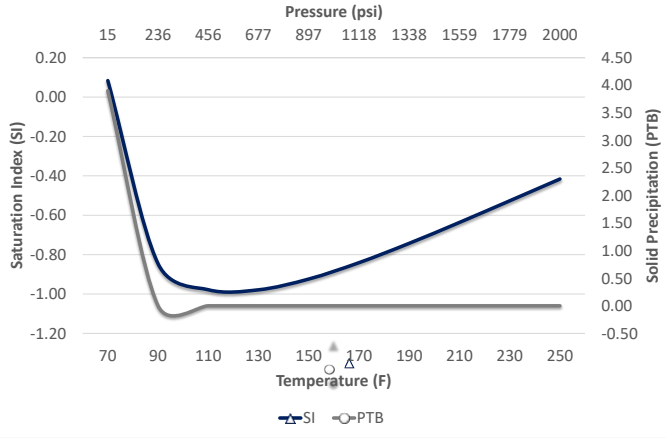
Halite (NaCl)



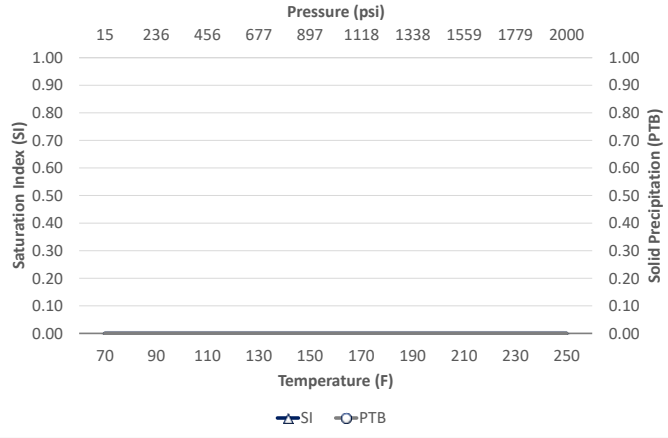
Siderite (FeCO3)



Mackinawite(FeS)



Sphalerite (ZnS)



LABORATORY SERVICES Natural Gas Analysis
www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

Sample Point Code	Sample Point Name	Sample Point Location
14054G	Lamunyon #30	Lamunyon #30

Source Laboratory	Lab File No	Container Identity	Sampler
Laboratory Services	2022052859	0600	Client - Spot

District	Area Name	Field Name	Facility Name
USA	USA	USA	New Mexico

Date Sampled	Date Effective	Date Received	Date Reported
Mar 31, 2022 15:15	Mar 31, 2022 15:15	Apr 4, 2022 12:07	Apr 4, 2022

Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
		Torrance	

Operator	Lab Source Description
Imperative	FAE II

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	1.0690	1.0687	
CO2 (CO2)	2.4400	2.43982	
Methane (C1)	68.4750	68.4742	
Ethane (C2)	14.9700	14.97019	4.0030
Propane (C3)	7.5980	7.5985	2.0930
I-Butane (IC4)	0.8320	0.83236	0.2720
N-Butane (NC4)	2.2180	2.21789	0.6990
I-Pentane (IC5)	0.5560	0.55569	0.2030
N-Pentane (NC5)	0.6460	0.64641	0.2340
Hexanes Plus (C6+)	1.1960	1.19625	0.5190
TOTAL	100.0000	100.0000	8.0230

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Gross Heating Values (Real, BTU/ft³)

14.696 PSI @ 60.00 Â°F		14.73 PSI @ 60.00 Â°F	
Dry	Saturated	Dry	Saturated
1,361.4	1,339.1	1,364.5	1,342.2

Calculated Total Sample Properties

GPA2145-16 *Calculated at Contract Conditions

Relative Density Real	Relative Density Ideal
0.8311	0.8275

Molecular Weight
23.9646

C6+ Group Properties

Assumed Composition

C6 - 60.000% C7 - 30.000% C8 - 10.000%

Field H2S
0 PPM

Analyzer Information

Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Jan 24, 2022

PROTREND STATUS:
Passed By Validator on Apr 5, 2022

DATA SOURCE:
Imported

PASSED BY VALIDATOR REASON:
First sample taken @ this point, composition looks reasonable

VALIDATOR:
Luis Cano

VALIDATOR COMMENTS:
ok

Released to Imaging: 9/12/2022 4:29:46 PM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 142565

COMMENTS

Operator: FAE II Operating LLC 11757 Katy Freeway, Suite 725 Houston, TX 77079	OGRID: 329326
	Action Number: 142565
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

COMMENTS

Created By	Comment	Comment Date
dmcclure	Attached is the withdrawn application and its supporting documents	9/12/2022

District I
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CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
dmcclure	Application DHC-5178 (Action ID: 79196) has been withdrawn at the applicant's request	9/12/2022