

# Exhibit B



October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for Dallas Dome Tank Battery (FID F003333)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax<sup>®</sup> 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 27.99 tpy (3.54 tpy from fugitives) to 3.66 tpy (3.26 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (wells drilled in October/November of 2014 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The wells drilled were an effort to mitigate declining production; however, the data illustrates that after drilling, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

A handwritten signature in blue ink that reads "RJ Redweik".

Robert J. Redweik  
Director EHS/Regulatory

Attachments

**FILED**

**JUL 06 2020**

**Jim Ruby, Executive Secretary  
Environmental Quality Council**

Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
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ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027427 )  
Dallas Dome Tank Battery (F003333) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027427 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 3, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027427. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027427. A copy of Permit No. P0027427 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the Dallas Dome Tank Battery (F003333) located in Fremont County, Wyoming. In its application, Citation noted:

Pursuant to the audit discourses of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

Dallas Dome Tank Battery (F003333), *Purpose of Application.*

6. On June 3, 2020, the DEQ issued Permit No. P0027427. Permit No. P0027427 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027427 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See Exhibit A, Conditions 7-13, 22.*

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, Dallas Dome Tank Battery (F003333) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to Dallas Dome Tank Battery (F003333), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) under Wyoming guidance remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027427 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027427.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027427, and that the Council modify Permit No. P0027427 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



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ATTORNEYS FOR PETITIONER

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on:

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002



## EXHIBIT A

# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Mark Gordon, Governor



Todd Parfitt, Director

Date: June 3, 2020

Ms. Lee Ann Elsom  
Regulatory Compliance Manager  
Citation Oil & Gas Corporation  
14077 Cutten Road  
Houston, TX 77002

Permit No. **P0027427**

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the Dallas Dome Tank Battery (F003333) by updating the equipment list, with two smokeless flares to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and gunbarrel separator, located in the SE1/4SW1/4 of Section 13, T32N, R99W, approximately eight (8) miles southeast of Lander, in Fremont County, Wyoming.

Following this agency's proposed approval of the request as published April 28, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the Dallas Dome Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.



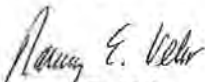
6. Effective upon permit issuance, this permit shall supersede Air Quality Authorization Letter wv-9347 for the Dallas Dome Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks, including tank flash and S/W/B vapors, shall be routed to the common flares to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the devices by at least ninety-eight percent (98%) by weight.
15. All gunbarrel flash gas which is not used as fuel for process burners and is not routed into a gas collection line or system, shall be routed to the common flares to reduce the mass content of VOCs and HAPs in the produced gas vented to the device by at least ninety-eight percent (98%) by weight.

16. The smokeless flares under Conditions 14 and 15 shall be operational for at least one (1) year following the date of installation of the control devices, after which time the devices may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized combined VOC emission rates from the oil tanks and gunbarrel separator is less than, and will remain less than four (4) tons per year.
17. The presence of the common flare pilot flames shall be monitored using thermocouples and continuous recording devices or any other equivalent devices to detect and record the presence of the flames. Records shall be maintained noting periods during active well site operation when any of the pilot flames are not present. The records shall contain a description of the reason(s) for absence of the pilot flames and steps taken to return the pilot flames to proper operation.
18. The continuous pilot monitoring systems under Condition 17 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring systems.
19. The common flares shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
20. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
21. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the common flares is at least ninety-eight percent (98%).
22. Citation Oil & Gas Corporation shall comply with all applicable requirements of 40 CFR part 60, subpart OOOO.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

NV/hb

**Wells Producing to Dallas Dome Tank Battery**

Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
Fourt 3	NW NE	24	32	99	42.73939	-108.62077	9/14/1950
W J Patented 5-T	NW NE	24	32	99	42.73929	-108.60984	9/30/1951
Barber D-244 65-T	NE NE	24	32	99	42.73918	-108.60392	7/21/1949
Barber D-244 17-T	SE SW	13	32	99	42.74024	-108.62014	12/16/1987
Barber D-244 60-T	SE SW	13	32	99	42.74047	-108.60447	4/30/1948
Barber D-244 64	SE SW	13	32	99	42.74137	-108.60400	6/19/1949
W J Fourte 1-E	SW SE	13	32	99	42.74145	-108.61117	1/19/1951
Barber D-244 Patent 46-E	SE SW	13	32	99	42.74115	-108.62152	9/27/1920
Barber D-244 Patent 51-E	SE SW	13	32	99	42.74152	-108.62002	10/29/1920
W J Fourt Patented 4-E	SW SE	13	32	99	42.74016	-108.61017	1/29/1951
W J Fourt Patented 6-T	SW SE	13	32	99	42.74215	-108.62082	8/23/1951
Barber D-244 Patent 50-T	SW SW	13	32	99	42.74181	-108.61731	11/18/1966
Barber D-244 Patent 63-T	SW SW	13	32	99	42.74255	-108.61264	7/31/1948
W J Fourt Patented 7-T	SW SE	13	32	99	42.74259	-108.62016	9/18/1953
Barber D-244 Patent 33-T	SE SW	13	32	99	42.74306	-108.61451	5/31/1973
W J Fourt Patented 2-T	SW SE	13	32	99	42.74296	-108.61151	1/17/1949
Barber D-244 Patent 66-T	SE SW	13	32	99	42.74306	-108.61651	3/6/1957
Barber D-244 Patent 57-T	NE SW	13	32	99	42.74350	-108.61805	12/29/1930
W J Fourt Patented 8-T	NW SE	13	32	99	42.74395	-108.61126	1/28/1966
Barber D-244 Patent 31-T	NE SW	13	32	99	42.74018	-108.61940	4/1/1927
Barber D-244 Patent 26-T	NE SW	13	32	99	42.74466	-108.61533	2/5/1931
Barber D-244 Patent 37-T	NW SW	13	32	99	42.74411	-108.61814	5/19/1965
Barber D-244 Patent 45-T	NW SW	13	32	99	42.74484	-108.62006	1/2/1967
Barber D-244 Patent 35-E	NW SW	13	32	99	42.74096	-108.61718	3/15/1932
Barber D-244 Patent 55-T	NE SW	13	32	99	42.74526	-108.60783	3/15/1932
Barber D-244 Patent 28-T	NE SW	13	32	99	42.74163	-108.61965	6/28/1910
Barber D-244 Patent 30-T	NE SW	13	32	99	42.74496	-108.61197	11/5/1927
Barber D-244 Patent 36-T	NW SW	13	32	99	42.74579	-108.61851	9/1/1932
Dallas 40	NW SW	13	32	99	42.74306	-108.61727	6/21/1920
W J Fourt Patented 10-E	NW SE	13	32	99	42.7466	-108.61117	6/2/1960
Barber D-244 Patent 58-T	SW NW	13	32	99	42.74708	-108.61814	11/8/1930
W J Fourt Patented 42-E	SE NW	13	32	99	42.74029	-108.62113	7/22/1920
W J Fourt Patented 9-T	NW SE	13	32	99	42.74512	-108.6111	2/4/1960
Barber D-244 Patent 19-T	SW NW	13	32	99	42.74207	-108.61751	11/30/1959
W J Fourt Patented 1-T	SE SW	13	32	99	42.74116	-108.61147	8/1/1948
Barber D-244 Patent 69-T	NE SW	13	32	99	42.74445	-108.61302	5/7/1966
Barber 70	NE SW	13	32	99	42.74583	-108.61435	6/23/1966
Barber D-244 Patent 71-T	NE SW	13	32	99	42.74639	-108.61578	11/11/1966
Barber D-244 Patent 68-T	SE SW	13	32	99	42.74221	-108.61409	11/29/1966

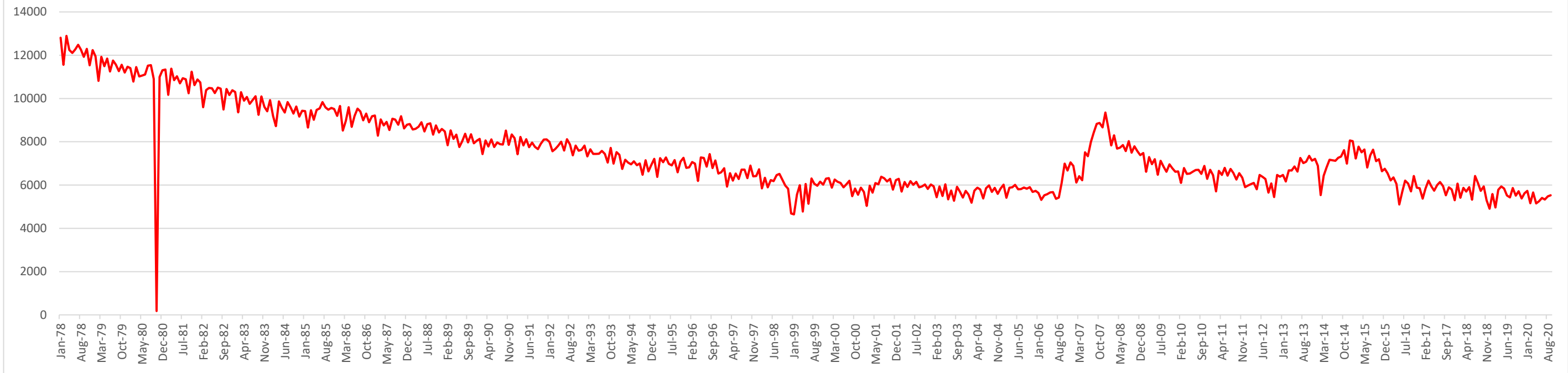
**Wells Producing to Dallas Dome Tank Battery**

Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
Barber D-244 Patent 44-E	NE SW	13	32	99	42.74027	-108.62148	8/26/1920
Barber D-244 Patent 61-E	SE SW	13	32	99	42.74055	-108.61857	5/1/1948
Barber D-244 Patent 53-T	SW SW	13	32	99	42.74310	-108.61890	5/28/1967
Barber D-244 Patent 9-A	SW NW	13	32	99	42.74744	-108.62007	5/17/1967
Barber D-244 Patent 40-A	NW SW	13	32	99	42.74666	-108.61761	6/27/1967
Barber 72	SE NW	13	32	99	42.74739	-108.61611	8/7/1967
Barber D-244 Patent 47-A	NW SW	13	32	99	42.74612	-108.62006	8/9/1967
Barber D-244 Patent 73-T	SW NW	13	32	99	42.74813	-108.61916	9/2/1967
Barber 74	NE NW	24	32	99	42.73952	-108.61471	6/15/1968
Barber D-244 Patent 76-T	NE SW	13	32	99	42.74660	-108.61468	10/6/1967
Barber D-244 Patent 75-T	SW NW	13	32	99	42.74778	-108.61759	9/26/1967
Barber D-244 78	SE NW	13	32	99	42.74825	-108.61637	4/26/1968
Barber D-244 Patent 81-T	SE SW	13	32	99	42.74046	-108.61253	5/11/1968
Barber D-244 Patent 79-T	SW NW	13	32	99	42.74722	-108.61489	8/23/1968
W J Fourt Patented 12-T	SW SE	13	32	99	42.74012	-108.61143	7/16/1969
Barber D-244 82	SW SW	13	32	99	42.74321	-108.61258	7/10/1969
Barber D-244 Patent 83	NE SW	13	32	99	42.74531	-108.61286	3/25/1971
Barber D-244 Patent 84-T	SE NW	13	32	99	42.74821	-108.61528	12/21/1971
Barber Fee 85	NE NW	24	32	99	42.73849	-108.61244	10/6/1989
Barber 87-T	SW NW	13	32	99	42.74924	-108.61844	12/15/1990
Barber 86-T	SE NW	13	32	99	42.74723	-108.61324	1/19/1991
Barber 49R	SW NW	13	32	99	42.74851	-108.61895	11/1/2014
Barber 89	SE SW	13	32	99	42.74221	-108.61703	10/1/2014
Barber 88	SW SW	13	32	99	42.74341	-108.61873	11/1/2014

**EQUIPMENT LIST**

- one (1) gunbarrel separator
- one (1) 1000-bbl, one (1) 500-bbl and one (1) 400-bbl oil storage tanks
- two (2) smokeless flares w/ continuous pilot monitoring systems (oil tank and gunbarrel separator control)

Dallas Dome Battery - Oil Production (BBL/month) Over Time











Month/Year	Cumulative Oil Production (BBL)	3	5-T	65-T	17-T	60-T	64	1-E	46-E	51-E	4-E	6-T	50-T	63-T	7-T	33-T	2-T	66-T	57-T	8-T	31-T	26-T	37-T	45-T	35-E	55-T	28-T	30-T	36-T	40	10-E	58-T	42-E	9-T	19-T	1-T	69-T	70	71-T	68-T	44-E	61-E	53-T	9-A	40-A	72	47-A	73-T	74	76-T	75-T	78	81-T	79-T	12-T	82	83	84-T	85	87-T	86-T	49R	89	88
Jul-19	5428	72	72	121	218	140	121	24	48	48	48	48	48	242	24	218	96	96	121	48	48	72	48	0	48	234	48	48	48	0	0	193	48	48	48	48	48	96		96	24	72	24	72	48	121	48	72	121	121		211	96	72	121	48	169	72	96	96	48	290	193	121
Aug-19	5864	76	79	131	235	158	131	26	53	53	53	53	262	26	235	105	105	131	53	53	79	53	0	53	253	53	53	53	0	0	210	53	53	53	53	53	105		105	26	79	26	79	53	131	53	79	131	131		235	105	79	131	53	184	79	105	105	53	253	210	131	
Sep-19	6310	73	73	122	221	147	122	24	49	49	49	49	246	24	221	98	98	122	49	49	73	49	0	49	246	49	49	49	0	0	186	49	49	49	49	49	98		98	24	73	24	73	49	122	49	73	122	122		220	98	73	122	49	171	73	98	98	49	285	198	122	
Oct-19	5713	76	76	127	227	152	127	25	51	51	51	51	252	25	227	101	101	127	51	51	76	51	0	51	244	51	51	51	0	0	203	51	51	51	51	51	101		101	25	76	25	76	51	127	51	76	127	127		227	101	76	127	51	177	76	101	101	51	303	202	127	
Nov-19	5383	72	72	120	217	144	120	24	48	48	48	48	241	24	217	72	72	120	48	48	72	48	0	48	241	48	48	48	0	0	193	48	48	48	48	48	96		96	24	72	24	72	48	120	48	72	120	120		217	96	72	120	48	169	72	96	96	48	285	192	120	
Dec-19	6616	76	76	128	228	151	128	25	50	50	50	50	253	25	228	76	76	128	50	50	76	50	0	50	253	24	50	50	0	0	203	50	50	50	50	50	101		101	25	76	25	76	50	128	50	76	128	128		221	101	76	128	50	177	76	101	101	50	278	202	128	
Jan-20	5732	77	77	128	230	154	128	26	51	51	51	51	256	26	230	77	77	128	51	51	77	51	0	51	257	51	51	51	0	0	205	51	51	51	51	51	102		102	26	77	26	77	51	128	51	77	128	128		230	102	77	128	51	179	77	102	102	51	282	205	128	
Feb-20	5160	69	69	115	209	138	115	23	46	46	46	46	232	23	209	69	69	115	46	46	69	46	0	46	232	46	46	46	0	0	185	46	46	46	46	46	92		92	23	69	23	69	46	115	46	69	115	115		209	92	69	115	46	161	69	92	92	46	255	185	115	
Mar-20	5656	73	75	126	225	152	126	25	51	51	51	51	252	25	225	75	75	126	51	51	75	51	0	51	252	51	51	51	0	0	201	51	51	51	51	51	101		101	25	75	25	75	51	126	51	75	126	126		225	101	75	126	51	177	75	101	101	51	277	201	126	
Apr-20	5150	70	70	112	210	140	116	23	46	46	0	46	46	233	23	210	70	70	112	46	46	70	46	0	46	233	46	46	46	0	0	187	46	46	46	46	46	93		93	23	70	23	70	46	116	46	70	116	116		210	93	70	116	46	164	70	93	93	46	267	187	117
May-20	5349	72	72	121	218	145	121	24	48	48	0	48	48	242	24	218	72	72	121	48	48	72	48	0	48	242	48	48	48	0	0	193	48	48	48	48	48	97		97	24	72	24	72	48	121	48	72	121	121		218	97	72	121	48	169	72	97	97	48	267	194	121
Jun-20	5402	71	73	122	220	147	122	24	49	49	0	49	49	245	24	220	73	73	122	49	49	73	49	0	49	245	49	49	49	0	0	186	49	49	49	49	49	98		98	24	73	24	73	49	122	49	73	122	122		220	98	73	122	49	171	73	98	98	49	270	196	122
Jul-20	5329	70	73	121	218	145	121	24	48	48	0	48	48	242	24	218	73	73	121	48	48	73	48	0	48	244	37	48	48	0	0	187	48	48	48	48	48	97		97	24	73	24	73	48	121	48	73	121	121		218	97	73	121	48	169	73	94	97	48	266	193	117
Aug-20	5477	74	74	123	223	148	123	25	49	49	0	49	49	246	25	223	74	74	123	49	49	74	49	0	49	246	49	49	49	0	0	197	49	49	49	49	49	99		99	25	74	25	74	49	123	49	74	123	123		223	99	74	123	49	173	74	99	99	49	272	198	123
Sep-20	5523	75	75	124	224	149	124	25	50	50	0	50	50	248	25	224	75	75	124	50	50	75	50	0	50	248	50	50	50	0	0	199	50	50	50	50	50	99		99	25	75	25	75	50	124	50	75	124	124		224	99	75	124	50	174	75	99	99	50	273	199	124



October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for Embar 1 Tank Battery (FID F004573)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax® 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 98.35 tpy (5.49 tpy from fugitives) to 4.71 tpy (4.50 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (well drilled in September of 2008 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The well drilled was an effort to mitigate declining production; however, the data illustrates that after drilling, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

*RJ Redweik*

Robert J. Redweik  
Director EHS/Regulatory

Attachments

**FILED**

**JUL 06 2020**

**Jim Ruby, Executive Secretary  
Environmental Quality Council**

Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
HOLLAND & HART LLP  
2515 Warren Avenue, Suite 450  
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Facsimile: (307) 778-8175  
mjnicheli@hollandhart.com  
mmjerabek@hollandhart.com

ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027433 )  
Embar 1 Tank Battery (F004573) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027433 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 9, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027433. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027433. A copy of Permit No. P0027433 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by the AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the Embar 1 Tank Battery (F004573) located in Park County, Wyoming. In its application, Citation noted:

Pursuant to the audit discourses of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

NWD 1 Tank Battery (F004577), *Purpose of Application.*

6. On June 9, 2020, the DEQ issued Permit No. P0027433. Permit No. P0027433 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027433 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See Exhibit A, Conditions 7-13.*

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, Embar 1 Tank Battery (F004573) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to Embar 1 Tank Battery (F004573), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027433 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027433.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027433, and that the Council modify Permit No. P0027433 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
HOLLAND & HART LLP  
2515 Warren Avenue, Suite 450  
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mjmicheli@hollandhart.com  
mmjerabek@hollandhart.com

ATTORNEYS FOR PETITIONER



**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on:

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002

A handwritten signature in black ink, appearing to read "James Kaste", is written over a horizontal line.



Mark Gordon, Governor

EXHIBIT A

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Todd Parfitt, Director

Date: June 9, 2020

Ms. Lee Ann Elsom
Regulatory Compliance Manager
Citation Oil & Gas Corporation
14077 Cutten Road
Houston, TX 77002

Permit No. P0027433

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the Embar 1 Tank Battery (F004573) by updating the equipment list, with two smokeless flares to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and active produced water tanks, located in the NE1/4SW1/4 of Section 12, T47N, R100W, approximately seven (7) miles south-southeast of Meeteetse, in Park County, Wyoming.

Following this agency's proposed approval of the request as published April 30, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the Embar 1 Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

- 1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through https://airimpact.wyo.gov to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

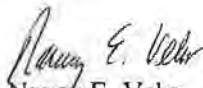
6. Effective upon permit issuance, this permit shall supersede Air Quality Permit wv-289 for the Embar 1 Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks and all active produced water tanks, including tank flash and S/W/B vapors, shall be routed to the flares to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the devices by at least ninety-eight percent (98%) by weight for at least one (1) year following the date of installation of the control devices, after which time the devices may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized VOC emission rate from the oil tanks is less than, and will remain less than four (4) tons per year.

15. The presence of the flare pilot flames shall be monitored using thermocouples and continuous recording devices or any other equivalent devices to detect and record the presence of the flames. Records shall be maintained noting periods during active well site operation when any of the pilot flames are not present. The records shall contain a description of the reason(s) for absence of the pilot flames and steps taken to return the pilot flames to proper operation.
16. The continuous pilot monitoring systems under Condition 15 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring systems.
17. The flares shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
18. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
19. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the flares is at least ninety-eight percent (98%).

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

NV/hb

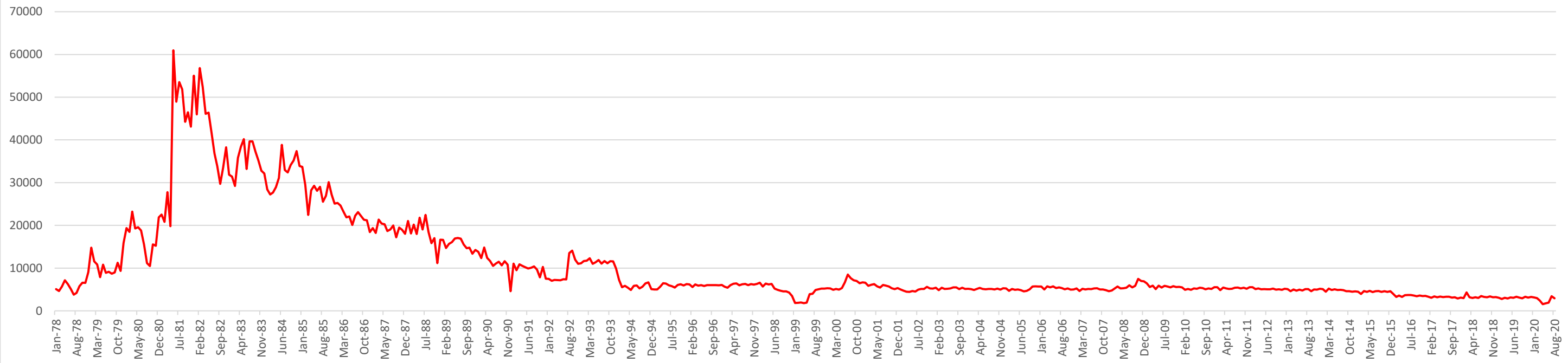
**Wells Producing to Embar 1 Tank Battery**

Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
LBB DSU Unit 265	SWSW	6	47	99	44.06534	-108.79255	2/9/83
LBB DSU C-045855 312	SENW	7	47	99	44.06079	-108.78639	2/14/84
LBB DSU C-045855 87	SESW	1	47	100	44.06539	-108.80583	12/21/70
LBB DSU 115	NESW	12	47	100	44.05583	-108.80899	2/11/73
LBB DSU 143	SENW	12	47	100	44.0575	-108.80539	6/18/75
LBB DSU 157	SENE	12	47	100	44.05649	-108.79849	3/7/77
Little Buffalo Basin 158	SENW	12	47	100	44.0575	-108.80667	1/30/77
LBB DSU C-044187 159	SWNE	12	47	100	44.05917	-108.80201	11/1/07
LBB DSU 160	NENE	12	47	100	44.06111	-108.79889	4/12/77
LBB DSU C-045855 190	SENW	12	47	100	44.05959	-108.80909	7/2/79
LBB DSU 212H	SESW	12	47	100	44.05307	-108.80364	8/31/87
Little Buffalo Basin 208	NWNW	12	47	100	44.0613	-108.8101	6/16/00
Unit C-045855 242	SWNW	12	47	100	44.05917	-108.81021	1/5/82
LBB DSU Unit 245	SWSE	1	47	100	44.06511	-108.80051	1/29/82
Unit C-044187 244	NWNE	12	47	100	44.06306	-108.80259	1/24/82
Unit C-045855 243	NENW	12	47	100	44.06151	-108.80541	1/25/82
Cheyenne 045855 246	C-SE	1	47	100	44.06759	-108.79667	2/12/82
LBB Unit C-045855 247	NWNW	12	47	100	44.06278	-108.80972	12/1/82
LBB 386	NENW	12	47	100	44.06344	-108.80815	9/20/08

**EQUIPMENT LIST**

- three (3) heater treaters w/ 1.25 MMBtu/hr heaters
- one (1) heater treater w/ 0.75 MMBtu/hr heater
- three (3) 400-bbl oil storage tanks
- one (1) 3000-bbl and one (1) 400-bbl produced water tanks
- two (2) smokeless flares w/ continuous pilot monitoring systems (oil tank and active produced water tank control)

Embar 1 Battery - Oil Production (BBL/month) Over Time



Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Jan-78	5078			0	0	2544	990	680	289	575									
Feb-78	4620			0	0	2300	866	635	299	520									
Mar-78	5683			0	0	3827	874	522	234	226									
Apr-78	7154			0	0	4915	894	857	275	213									
May-78	6253			0	0	3082	439	1335	180	1217									
Jun-78	5131			0	0	2475	631	509	184	1332									
Jul-78	3797			0	0	2189	629	572	175	232									
Aug-78	4195			0	0	2554	684	596	115	246									
Sep-78	5788			0	0	2217	598	709	500	1764									
Oct-78	6595			0	0	2625	683	781	553	1953									
Nov-78	6523			0	0	2775	633	740	525	1850									
Dec-78	9072			0	0	2941	994	2585	564	1988									
Jan-79	14795			0	0	5447	876	2380	3046	3046	0	0							
Feb-79	11584			0	0	3600	817	2238	3185	1744	0	0							
Mar-79	10831			0	0	3890	769	1436	2899	1837	0	0							
Apr-79	7894			0	0	3654	559	438	0	3243	0	0							
May-79	10807			0	0	4770	732	2328	0	2977	0	0							
Jun-79	8886			0	0	3105	808	2139	0	2834	0	0							
Jul-79	9137			0	0	3797	782	1836	0	2722	0	0							
Aug-79	8679			0	0	3869	748	1458	0	2604	0	0							
Sep-79	8993			0	0	2492	2908	1149	0	2444	0	0							
Oct-79	11258			0	0	2213	1752	3005	0	3934	354	0							
Nov-79	9325			0	0	1657	1852	2015	0	3801	0	0							
Dec-79	15855			0	0	0	1980	2114	0	3797	0	7964							
Jan-80	19367			0	0	0	2312	4440	0	5747	0	6868	0						
Feb-80	18483			30	0	0	2088	4012	0	5819	0	6534	0						
Mar-80	23211			163	0	0	2508	4817	0	6666	0	9057	0						
Apr-80	19300			149	0	0	2276	3837	0	6050	0	6988	0						
May-80	19565			155	0	0	2387	4661	0	4768	0	7594	0						
Jun-80	18803			151	0	0	2292	4404	0	5602	0	6354	0						
Jul-80	15524			1441	980	0	3365	180	0	1704	0	7854	0						
Aug-80	11158			1664	619	0	3943	1273	0	1567	0	2071	21						
Sep-80	10491			1667	555	0	3891	1263	0	785	0	2330	0						
Oct-80	15539			4732	713	0	2530	776	0	2260	0	4077	451						
Nov-80	15206			2928	656	0	2848	1290	1172	2181	0	3767	364						
Dec-80	21867			4341	2646	0	4750	870	1360	2045	0	3869	1986						
Jan-81	22518			4339	2787	0	4739	729	1402	2036	139	4087	2260						
Feb-81	20835			4119	2620	0	4209	771	1306	1964	162	3850	1834						
Mar-81	27756			6301	3993	18	4911	599	2465	2869	471	4056	2073						
Apr-81	19814			7281	0	0	5672	688	2853	3320	0	0	0						
May-81	60965			16487	15636	3026	4987	749	2483	2426	6274	6855	2042						
Jun-81	48956			14301	10729	2317	4494	953	2154	2002	6149	3817	2040						
Jul-81	53511			14142	10222	3126	4481	945	2136	2275	8453	5619	2112						
Aug-81	51828			14875	10142	3097	4230	100	1841	1595	8307	5622	2019						
Sep-81	44219			11458	17302	2947	2074	0	1555	2051	1989	3190	1653						

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Oct-81	46464			12523	18090	3081	2280	65	1701	2241	2080	2950	1453						
Nov-81	43105			12835	17612	2899	468	0	1743	2287	2025	1544	1692						
Dec-81	55046			12920	26815	2147	0	0	1755	2312	4845	2432	1820						
Jan-82	45979			17215	9000	2419	0	0	1917	3539	5385	4697	1807	0	0	0	0		
Feb-82	56816			15784	3436	2332	0	0	2947	4198	1380	2705	2235	21799	0	0	0		
Mar-82	52443			9014	4840	2910	0	0	2746	3911	669	2886	2344	23123	0	0	0		
Apr-82	46113			4014	4560	2113	0	0	2822	4022	351	2632	1953	23646	0	0	0		
May-82	46389			3987	4748	1805	0	0	3060	4277	415	1640	2074	24383	0	0	0		
Jun-82	41699			3923	2741	2803	0	0	1838	2247	945	4251	2716	17577	0	0	2658		
Jul-82	36795			6431	2246	3195	4099	0	1158	1769	669	3723	0	10263	89	0	3153		
Aug-82	33852			6580	1638	3033	4223	0	884	1604	402	3090	0	10541	98	0	1759		
Sep-82	29711			2119	2639	3273	3902	0	764	1429	654	3177	0	8113	280	358	3003		
Oct-82	33569			2907	2893	1988	3357	0	752	1409	2485	3221	0	9656	910	1911	2080		
Nov-82	38288			4919	3110	2013	4286	0	687	891	2537	3316	0	7693	917	1553	6366		
Dec-82	31843			1911	3245	2167	3541	0	694	1180	2417	2679	0	8871	1011	1718	2409		
Jan-83	31398	0		4153	4798	1921	260	0	739	1385	2379	2782	0	8064	277	1877	2763	0	
Feb-83	29211	0		4461	3071	1811	10	0	788	1476	1497	2272	0	8946	291	1995	2593	0	
Mar-83	35778	0		5452	3089	1980	317	0	808	1318	2078	2256	0	12668	198	1296	4318	0	
Apr-83	38388	3051		6878	4215	1525	1269	0	1123	1243	1153	1621	2478	8029	199	1345	4259	0	
May-83	40176	2616		7203	3709	1384	4651	0	1094	1192	1043	2491	2381	8392	937	14	2843	226	
Jun-83	33198	1593		5435	1542	1234	3583	0	711	1127	1383	2566	2111	6800	1471	15	3627	0	
Jul-83	39660	1920		2724	8749	1325	2993	0	988	1257	1723	2200	2280	7184	299	1647	3263	1108	
Aug-83	39670	5936		2550	6368	1166	2354	0	1008	1110	1009	1673	2223	6708	280	1541	4455	1289	
Sep-83	37247	6182		2206	4984	911	2439	0	958	1175	2992	1396	1728	4541	157	1597	4615	1366	
Oct-83	35177	5652		1995	1950	1880	2220	0	847	1141	3416	1547	1937	5029	266	1831	4219	1247	
Nov-83	32779	4643		1656	2425	2424	2027	0	719	937	3568	1803	2046	4140	222	1504	3641	1024	
Dec-83	32126	4944		1764	2189	1981	2460	0	766	998	2377	1474	1893	4433	0	1601	4155	1091	
Jan-84	28423	4348	0	3164	2108	1908	1613	0	673	796	2676	1419	0	3900	1164	1306	2878	470	
Feb-84	27254	4170	734	3034	1830	2125	1547	0	289	764	2315	1526	0	3368	1116	1272	2760	404	
Mar-84	27695	4254	1438	2856	1553	907	1578	0	659	779	3440	1318	0	3435	1139	1298	2597	444	
Apr-84	28955	5429	0	3645	1567	111	2040	0	841	943	1519	587	0	4588	1453	1453	3977	802	
May-84	31079	4379	1898	4093	1483	1037	1643	0	612	703	3898	1066	0	4128	1177	706	3226	1030	
Jun-84	38828	1921	1568	5782	2517	1731	1391	0	927	1037	7015	1034	0	7659	1170	1390	2627	1059	
Jul-84	32938	1406	1651	3742	1423	1373	1405	0	759	915	8669	910	0	4641	1072	934	3124	914	
Aug-84	32399	2638	2559	2978	1529	1018	2731	0	1037	1383	7151	802	0	3388	1729	2039	0	1417	
Sep-84	34136	3020	2318	2715	0	987	2288	0	838	1251	7009	2362	0	2806	1525	1800	2624	2593	
Oct-84	35191	3164	2537	2834	1668	1466	1764	0	491	1351	6855	1001	0	2933	1647	1813	2834	2833	
Nov-84	37369	3398	2565	2866	1872	1069	2685	0	1299	1166	6570	1108	0	2965	1443	1833	1866	4664	
Dec-84	33871	3290	1943	2224	1967	608	1598	0	940	1284	7145	1165	0	2882	1222	1723	3446	2434	
Jan-85	33699	851	1637	2978	770	504	3240	0	1080	1047	7327	717	0	2683	1571	1800	4483	3011	
Feb-85	29452	2111	850	2440	672	334	3098	0	823	932	6872	683	0	2029	1507	1617	1536	3948	
Mar-85	22448	1104	1500	1219	585	337	2604	0	544	577	6867	1095	0	1170	923	643	1072	2208	
Apr-85	28193	3816	1859	3315	860	1748	1727	0	836	808	2178	1129	0	2145	1309	1755	2062	2646	
May-85	29276	2763	2890	3017	118	1859	1597	0	837	887	4201	941	0	2028	1344	1470	2687	2637	
Jun-85	28090	2578	3255	2779	619	1512	2529	0	826	1026	2836	866	0	2078	1327	1477	2003	2379	



Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Jul-85	29005	2513	2683	2810	897	2101	2966	0	781	854	2761	1369	0	1952	1293	1537	2098	2390	
Aug-85	25516	1785	1504	2667	1040	958	2581	0	604	838	2872	821	0	2312	792	1549	2730	2463	
Sep-85	26897	2338	1549	2373	1097	1871	2822	0	257	849	2918	1022	0	2023	1835	1498	2198	2247	
Oct-85	30122	2438	2802	2578	301	2652	3278	0	813	1009	1960	1120	0	2385	1793	1681	2465	2847	
Nov-85	27187	2258	2143	2443	760	2402	3111	0	599	761	0	935	0	3364	1336	1314	2926	2835	
Dec-85	25090	2136	1914	2273	626	2674	2750	0	682	728	0	626	0	2864	1409	1339	2864	2205	
Jan-86	25227	2610	2007	2319	796	2885	3123	0	580	713	0	299	0	2978	1316	1208	2811	1582	
Feb-86	24633	2384	1788	2235	611	3128	2618	0	532	787	0	229	0	2830	1128	1489	2618	2256	
Mar-86	23200	2153	1762	2241	0	3013	2371	0	522	675	0	0	0	2893	652	1349	3002	2567	
Apr-86	21891	2022	1654	2104	0	3030	2226	0	490	634	0	0	0	2717	612	1267	2725	2410	
May-86	22081	1921	1446	2639	0	3309	2270	0	486	659	0	0	0	2385	1184	1164	2503	2115	
Jun-86	20097	1708	1284	2347	0	3336	2019	0	431	587	0	0	0	2191	1053	1035	2226	1880	
Jul-86	22293	2907	2120	1073	0	3480	1475	0	698	670	0	0	0	3245	1341	1502	2709	1073	
Aug-86	23082	3143	2217	1122	0	3298	1543	0	730	702	0	0	0	3396	1404	1571	2834	1122	
Sep-86	22201	3066	2162	1095	0	2905	1506	0	711	684	0	0	0	3312	1369	1532	2764	1095	
Oct-86	21318	1606	1491	2203	0	2386	2295	0	574	665	0	0	0	3672	1171	1124	2524	1607	
Nov-86	21175	1615	1249	2215	0	2393	2307	0	577	669	0	0	0	3692	1176	1130	2537	1615	
Dec-86	18422	1945	1858	1204	0	1834	1715	0	658	887	0	0	0	2859	1230	1430	2373	429	
Jan-87	19372	1736	1602	1159	0	1666	1793	0	580	689	0	0	0	4139	1620	1297	2263	828	
Feb-87	18213	1601	1499	1296	0	1534	1525	0	417	661	0	0	0	4116	1397	1194	2694	279	
Mar-87	21364	1677	1621	1594	0	1824	1817	0	671	699	0	0	0	5535	1482	1202	2935	307	
Apr-87	20404	1766	1518	1545	0	1418	1711	0	745	828	0	0	0	5105	1462	1215	2732	359	
May-87	20261	1660	1603	1546	0	1677	1833	0	687	1002	0	0	0	4613	1174	1260	2691	515	
Jun-87	18664	1611	1497	1300	0	1599	1668	0	621	933	0	0	0	4239	904	1215	2568	509	
Jul-87	19044	961	1444	1203	0	1575	1925	0	632	962	0	0	0	4091	1830	1293	2677	451	
Aug-87	19968	1941	1676	1462	0	1700	1797	0	640	944	0	0	0	4051	1645	792	2711	609	
Sep-87	17219	1753	1442	1357	0	1689	1273	0	593	0	0	0	0	3826	1554	707	2601	424	
Oct-87	19479	1672	1361	1360	0	1667	1502	0	595	879	0	155	0	4393	1474	1304	2607	510	
Nov-87	18960	1452	1279	1335	0	1487	1474	0	612	667	0	251	0	4395	1530	1196	2614	668	
Dec-87	18040	1468	1259	1258	0	1370	1179	0	551	733	0	288	0	4613	1363	1075	2254	629	
Jan-88	21030	1695	1532	1695	0	2189	815	0	587	847	0	228	0	5672	1336	1207	2803	424	
Feb-88	18097	1358	1172	1492	0	2756	400	0	639	666	0	187	0	4607	1278	959	2344	239	
Mar-88	20187	1423	1391	1708	0	2347	285	0	791	696	0	316	0	5757	1582	1107	2341	443	
Apr-88	17981	1261	1081	1652	0	2511	150	0	721	780	0	6	0	4354	1441	1021	2553	450	
May-88	21814	1610	1109	1896	0	2098	1323	0	859	715	0	78	0	5294	1681	1252	3434	465	
Jun-88	19048	1378	886	1707	0	2023	656	0	820	689	0	95	0	4790	1509	1083	3150	262	
Jul-88	22434	1581	1802	2059	0	1693	919	0	809	551	0	79	0	5441	1580	1177	3162	1581	
Aug-88	18485	1199	1414	1691	0	2106	153	0	707	403	0	114	0	4396	1383	984	2521	1414	
Sep-88	15846	959	1162	1464	0	1926	126	0	606	530	0	80	0	3838	1111	808	2075	1161	
Oct-88	17001	1021	1283	1634	0	1806	730	0	583	0	0	56	0	3821	1284	875	2654	1254	
Nov-88	11172	497	725	91	0	2038	808	0	415	0	0	170	0	2965	912	0	1804	747	
Dec-88	16646	1237	1087	0	0	2192	1650	0	712	0	0	209	0	3786	1649	0	2887	1237	
Jan-89	16583	1123	987	0	0	2196	1828	0	768	0	0	212	0	3656	1316	0	3145	1352	
Feb-89	14677	1096	871	0	0	1973	1612	0	677	0	0	198	0	3224	1161	0	2673	1192	
Mar-89	15680	1099	1167	0	0	1986	1407	0	652	549	0	67	0	3295	1304	0	2575	1579	

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Apr-89	16085	947	1340	392	0	1828	1307	0	621	490	0	0	0	2940	1242	764	2711	1503	
May-89	16916	1020	1371	0	0	2131	1758	0	492	423	0	120	0	3271	1196	773	2884	1477	
Jun-89	17058	967	1468	0	0	1987	1243	0	794	725	0	173	0	3211	1139	1001	3003	1347	
Jul-89	16871	713	1496	0	0	2009	1105	0	783	784	0	246	0	4240	926	329	2958	1282	
Aug-89	15513	818	1373	180	0	1265	1048	0	723	831	0	278	0	3830	1229	0	2782	1156	
Sep-89	14658	948	847	0	0	1361	1016	0	644	881	0	155	0	3454	1016	813	2676	847	
Oct-89	14760	834	807	105	0	1792	1043	0	660	661	0	29	0	3615	1078	695	2259	1182	
Nov-89	13338	672	770	105	0	1604	1050	0	735	525	0	175	0	2941	1050	665	2100	946	
Dec-89	14235	650	764	115	0	1647	1606	0	688	535	0	128	0	2943	841	726	2293	1299	
Jan-90	13804	930	737	110	0	1619	1435	0	516	247	0	93	0	3498	921	606	2172	920	
Feb-90	12336	891	660	99	0	1292	1187	0	429	363	0	159	0	2935	857	693	1913	858	
Mar-90	14836	991	957	956	0	1299	1264	0	513	171	0	141	0	3349	957	820	2324	1094	
Apr-90	12397	841	777	938	0	1174	1100	0	550	250	0	175	0	2071	842	670	2103	906	
May-90	11650	739	771	740	0	1138	1079	0	493	279	0	89	0	1849	802	835	2034	802	
Jun-90	10527	680	587	763	0	976	1056	0	411	171	0	130	0	1497	734	763	1878	881	
Jul-90	11081	924	616	739	0	1004	1139	0	400	240	0	187	0	1430	801	769	1816	1016	
Aug-90	11487	914	652	782	0	984	1206	0	423	150	0	180	0	1564	847	788	1922	1075	
Sep-90	10620	840	638	504	0	1035	1108	0	369	202	0	148	0	1612	739	638	1813	974	
Oct-90	11605	907	1011	767	0	1110	907	0	383	209	0	0	0	1673	802	593	2301	942	
Nov-90	10809	499	866	533	0	1047	1033	0	566	300	0	135	0	1599	766	500	2032	933	
Dec-90	4581	333	566	0	0	1198	0	0	599	267	0	120	0	0	799	699	0	0	
Jan-91	11038	575	595	496	0	1499	1057	0	562	331	0	206	0	1586	727	793	1652	959	
Feb-91	9516	564	490	423	0	1317	903	0	479	282	0	179	0	1354	620	677	1411	817	
Mar-91	10866	1027	410	544	0	1884	876	0	514	272	0	22	0	1450	725	786	1510	846	
Apr-91	10526	858	663	536	0	1599	820	0	410	379	0	111	0	1515	694	732	1483	726	
May-91	10207	770	590	578	0	1602	867	0	385	321	0	146	0	1540	706	745	1219	738	
Jun-91	9905	752	568	568	0	1643	748	0	509	299	0	179	0	1437	688	689	1286	539	
Jul-91	10080	1036	485	583	0	1597	809	0	486	130	0	0	0	1554	906	713	1263	518	
Aug-91	10392	1402	431	691	0	1348	758	0	428	164	0	0	0	1580	955	725	1317	593	
Sep-91	9682	1340	426	639	0	1250	700	0	396	152	0	0	0	1461	882	670	1218	548	
Oct-91	7848	223	0	637	0	1253	828	0	446	159	0	0	0	0	701	701	2135	765	
Nov-91	10260	3524	0	407	0	1229	842	0	331	203	0	0	0	0	610	661	1785	668	
Dec-91	7524	0	0	525	0	1224	896	0	658	269	0	0	0	0	680	649	1850	773	
Jan-92	7468	577	0	462	0	1245	962	0	497	310	0	0	0	0	642	589	1587	597	
Feb-92	7013	509	0	452	0	1133	848	0	424	283	0	0	0	0	565	537	1555	707	
Mar-92	7237	466	0	128	0	1202	902	0	404	218	0	31	0	0	653	591	1772	870	
Apr-92	7192	485	0	485	0	1155	880	0	334	182	0	0	0	0	607	546	1638	880	
May-92	7148	461	0	491	0	1158	983	0	369	154	0	0	0	0	645	522	1536	829	
Jun-92	7389	216	0	576	0	1053	972	0	396	252	0	0	0	0	540	432	1944	1008	
Jul-92	7356	187	0	224	0	1045	859	0	672	373	0	0	0	0	672	336	2017	971	
Aug-92	13499	293	0	49	0	216	1274	0	878	341	0	0	0	5034	1122	244	2731	1317	
Sep-92	14102	220	0	491	221	1252	825	0	398	275	0	0	0	6634	611	143	2423	609	
Oct-92	11958	336	0	244	1175	1144	825	0	503	55	0	0	0	3941	519	153	2566	497	
Nov-92	11007	264	0	304	953	1102	699	0	456	0	0	0	0	3766	577	152	2035	699	
Dec-92	11114	261	0	311	914	1028	869	0	497	0	0	0	0	3633	559	155	2049	838	

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Jan-93	11649	315	0	350	906	986	352	0	524	0	0	0	0	3706	734	524	2308	944	
Feb-93	11736	315	524	280	833	906	0	0	524	0	0	0	0	4090	629	384	2307	944	
Mar-93	12281	334	538	148	884	939	890	0	593	0	0	0	0	3744	404	323	2483	1001	
Apr-93	11008	0	365	178	909	882	678	0	481	0	0	0	0	3627	412	524	2347	605	
May-93	11369	357	486	292	930	900	0	0	439	0	412	0	0	3047	454	810	2367	875	
Jun-93	11896	283	440	251	879	750	0	0	471	0	1754	0	0	2827	408	660	2356	817	
Jul-93	11038	366	14	335	880	742	0	0	457	0	1660	0	0	2347	427	640	2286	884	
Aug-93	11649	317	477	339	1163	766	0	0	431	0	1961	0	0	2373	431	586	2065	740	
Sep-93	11118	276	345	235	667	796	0	0	288	0	1575	0	0	2945	376	556	2150	909	
Oct-93	11622	291	502	212	852	830	0	0	435	0	1510	0	0	3412	450	476	2222	430	
Nov-93	11567	429	407	333	612	878	0	0	444	0	1466	0	0	2296	592	703	2592	815	
Dec-93	9857	340	387	352	444	464	400	0	563	0	1467	0	0	2007	528	493	1987	425	
Jan-94	7238	0	342	232	0	0	0	0	308	0	1455	0	0	1828	419	333	2207	114	
Feb-94	5514	0	274	274	0	0	0	0	239	0	1478	0	0	477	293	346	1979	154	
Mar-94	5846	0	144	302	0	0	0	0	234	0	1577	0	0	22	193	378	2421	575	
Apr-94	5383	0	34	292	0	0	0	0	97	0	1526	0	0	285	64	308	2072	705	
May-94	4861	0	28	241	0	178	0	0	229	0	0	0	0	1128	0	461	1823	773	
Jun-94	5844	0	154	266	0	0	0	0	312	0	1168	0	0	1311	0	433	1535	665	
Jul-94	5946	0	336	218	0	0	0	0	466	0	1168	0	0	522	0	451	1857	928	
Aug-94	5229	0	287	205	0	0	0	0	412	0	1469	0	0	87	43	404	1546	776	
Sep-94	5633	0	282	188	0	0	0	0	413	0	1547	0	0	405	54	460	1565	719	
Oct-94	6413	0	341	62	0	1130	0	0	352	0	1548	0	0	561	0	267	1523	629	
Nov-94	6676	0	330	0	0	551	0	0	323	0	1523	0	0	1644	0	338	1406	561	
Dec-94	5094	0	380	0	0	0	0	0	362	0	1574	0	0	316	0	384	1441	637	
Jan-95	5006	0	364	0	0	0	0	0	321	0	1646	0	0	81	0	417	1577	600	
Feb-95	5015	0	374	0	0	0	0	0	324	0	1810	0	0	218	0	369	1348	572	
Mar-95	5666	0	351	0	0	214	0	0	379	0	1820	0	0	394	0	391	1489	628	
Apr-95	6442	0	285	153	0	1084	0	0	299	0	1089	0	0	1291	0	380	1285	576	
May-95	6366	0	344	232	0	1001	0	0	322	0	1152	0	0	1074	0	437	1242	562	
Jun-95	5975	0	375	227	0	1045	0	0	324	0	1112	0	0	646	0	416	1281	549	
Jul-95	5751	0	361	132	0	1107	0	0	287	0	1142	0	0	546	0	373	1251	552	
Aug-95	5435	0	328	239	0	786	0	0	259	0	1175	0	0	672	0	328	1150	498	
Sep-95	6043	0	366	281	0	782	0	0	309	0	1013	0	0	675	0	366	1688	563	
Oct-95	6216	0	356	297	0	789	0	0	297	0	1097	0	0	623	0	385	1690	682	
Nov-95	5940	0	426	312	0	788	0	0	284	0	1050	0	0	596	0	383	1505	596	
Dec-95	6239	0	438	321	0	811	0	0	409	0	1138	0	0	584	0	409	1604	525	
Jan-96	6159	0	352	352	0	857	0	0	322	0	1084	0	0	615	0	439	1611	527	
Feb-96	5555	0	347	320	0	775	0	0	294	0	988	0	0	534	0	401	1389	507	
Mar-96	6184	0	436	319	0	898	0	0	319	0	1075	0	0	610	0	436	1568	523	
Apr-96	5875	0	413	313	0	850	0	0	285	0	1082	0	0	541	0	370	1537	484	
May-96	6017	0	409	321	0	879	0	0	292	0	1109	0	0	584	0	409	1547	467	
Jun-96	5824	0	424	311	0	845	0	0	283	0	1075	0	0	594	0	424	1444	424	
Jul-96	5999	0	409	322	0	839	0	0	292	0	1111	0	0	643	0	424	1491	468	
Aug-96	6024	0	434	318	0	856	0	0	290	0	1129	0	0	637	0	420	1477	463	
Sep-96	5995	0	398	313	0	824	0	0	256	0	1165	0	0	710	0	426	1448	455	

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Oct-96	6027	0	398	274	0	874	0	0	312	0	1134	0	0	681	0	397	1503	454	
Nov-96	5957	0	387	315	0	849	0	0	258	0	1144	0	0	658	0	429	1459	458	
Dec-96	6056	0	438	350	0	862	0	0	263	0	1138	0	0	700	0	408	1459	438	
Jan-97	5647	0	400	343	0	446	0	0	374	0	1085	0	0	771	0	400	1428	400	
Feb-97	5405	0	363	311	0	738	0	0	311	0	985	0	0	700	0	363	1245	389	
Mar-97	6019	0	380	760	0	810	0	0	298	0	1058	0	0	651	0	380	1275	407	
Apr-97	6343	725	333	306	0	811	0	0	306	0	1084	0	0	722	0	361	1306	389	
May-97	6411	570	399	342	0	769	0	0	342	0	1083	0	0	741	0	399	1339	427	
Jun-97	5956	547	383	301	0	567	0	0	301	0	1067	0	0	711	0	383	1258	438	
Jul-97	6227	514	276	332	0	791	0	0	286	0	1114	0	0	743	0	400	1314	457	
Aug-97	6277	487	375	315	0	778	0	0	286	0	1088	0	0	773	0	372	1374	429	
Sep-97	6014	434	353	299	0	749	0	0	271	0	1058	0	0	760	0	353	1330	407	
Oct-97	6270	456	399	314	0	765	0	0	314	0	1084	0	0	799	0	371	1369	399	
Nov-97	6125	441	386	303	0	754	0	0	248	0	1074	0	0	826	0	358	1322	413	
Dec-97	6315	456	399	313	0	778	0	0	256	0	1111	0	0	838	0	370	1367	427	
Jan-98	6567	452	396	311	0	771	0	0	311	0	1074	0	0	1131	0	368	1329	424	
Feb-98	5683	403	352	277	0	673	0	0	277	0	957	0	0	906	0	327	1133	378	
Mar-98	6395	432	403	317	0	781	0	0	288	0	1123	0	0	979	0	374	1266	432	
Apr-98	6157	424	367	311	0	759	0	0	283	0	1074	0	0	933	0	367	1243	396	
May-98	6310	419	359	329	0	834	0	0	299	0	1107	0	0	928	0	359	1257	419	
Jun-98	5190	361	389	306	0	270	0	0	278	0	973	0	0	806	0	334	1112	361	
Jul-98	4899	389	418	299	0	0	0	0	269	0	927	0	0	867	0	297	985	448	
Aug-98	4731	467	351	292	0	0	0	0	263	0	788	0	0	789	0	351	992	438	
Sep-98	4536	428	371	257	0	0	0	0	314	0	770	0	0	770	0	371	827	428	
Oct-98	4533	442	383	285	0	0	0	0	265	0	797	0	0	768	0	354	797	442	
Nov-98	4277	376	376	260	0	0	0	0	260	0	779	0	0	751	0	347	694	434	
Dec-98	3449	438	380	234	0	0	0	0	234	0	759	0	0	760	0	85	91	468	
Jan-99	1850	398	337	245	0	0	0	0	276	0	0	0	0	0	0	134	0	460	
Feb-99	1877	359	331	193	0	0	0	0	221	0	0	0	0	0	0	359	0	414	
Mar-99	1967	363	363	212	0	0	0	0	242	0	0	0	0	0	0	333	0	454	
Apr-99	1785	247	357	192	0	0	0	0	220	0	0	0	0	0	0	357	0	412	
May-99	1933	404	346	202	0	0	0	0	231	0	0	0	0	0	0	317	0	433	
Jun-99	3907	404	373	218	0	0	0	0	218	0	643	0	0	1274	0	311	0	466	
Jul-99	3965	444	355	237	0	0	0	0	237	0	917	0	0	1065	0	296	0	414	
Aug-99	4871	397	340	227	0	0	0	0	227	0	964	0	0	1164	0	255	900	397	
Sep-99	5026	426	312	227	0	0	0	0	227	0	1022	0	0	1164	0	256	994	398	
Oct-99	5194	379	321	233	0	0	0	0	263	0	992	0	0	1226	0	292	1138	350	
Nov-99	5191	373	315	287	0	0	0	0	229	0	975	0	0	1263	0	258	1147	344	
Dec-99	5268	374	317	259	0	0	0	0	288	0	1008	0	0	1238	0	259	1180	345	
Jan-00	5246	410	322	264	0	0	0	0	234	0	997	0	0	1231	0	264	1172	352	
Feb-00	4903	359	359	248	0	0	0	0	221	0	938	0	0	1131	0	213	1103	331	
Mar-00	5112	375	318	260	0	0	0	0	231	0	1011	0	0	1184	0	173	1213	347	
Apr-00	4974	365	337	253	0	0	0	0	253	0	927	0	0	1096	0	197	1209	337	
May-00	5314	319	348	261	458	0	0	0	232	0	795	0	0	1073	0	232	1248	348	
Jun-00	6661	329	329	269	1346	0	0	0	179	0	1196	0	112	1077	0	209	1256	359	

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Jul-00	8470	438	344	313	1722	0	0	0	205	0	1190	0	1221	1096	0	219	1315	407	
Aug-00	7643	370	339	308	1356	0	0	0	277	0	1202	0	924	1017	0	216	1202	432	
Sep-00	7152	365	310	256	1182	0	0	0	227	0	1154	0	788	1041	0	253	1126	450	
Oct-00	6973	381	352	264	1143	0	0	0	235	0	1172	0	791	817	0	264	1173	381	
Nov-00	6465	298	325	216	1109	0	0	0	243	0	1055	0	703	866	0	243	1055	352	
Dec-00	6679	348	348	232	987	0	0	0	203	0	1192	0	697	900	0	261	1104	407	
Jan-01	6561	358	328	268	895	0	0	0	209	0	1163	0	596	895	0	268	1163	418	
Feb-01	5863	326	299	217	787	0	0	0	190	0	1059	0	516	814	0	217	1085	353	
Mar-01	6111	334	304	243	608	0	0	0	152	0	1217	0	547	851	0	274	1186	395	
Apr-01	6257	365	365	243	669	0	0	0	213	0	1095	0	539	913	0	243	1156	456	
May-01	5723	330	330	240	659	0	0	0	270	0	1138	0	1	899	0	300	1137	419	
Jun-01	5452	339	310	198	677	0	0	0	147	0	1044	0	226	818	0	226	1072	395	
Jul-01	6068	321	321	233	729	0	0	0	233	0	1080	0	554	876	0	233	1080	408	
Aug-01	5899	359	329	240	659	0	0	0	210	0	1108	0	449	868	0	210	1078	389	
Sep-01	5689	316	316	230	573	0	0	0	201	0	1121	0	460	862	0	201	1035	374	
Oct-01	5296	327	327	238	2	0	0	0	238	0	1100	0	446	922	0	238	1071	387	
Nov-01	5058	318	289	231	0	0	0	0	231	0	1012	0	405	925	0	231	1069	347	
Dec-01	5325	333	333	242	0	0	0	0	182	0	1029	0	454	1059	0	212	1088	393	
Jan-02	4977	254	283	226	0	0	0	0	254	0	933	0	424	1047	0	198	990	368	
Feb-02	4714	298	298	217	0	0	0	0	217	0	840	0	352	975	0	190	975	352	
Mar-02	4452	299	329	209	0	0	0	0	209	0	896	0	0	1046	0	209	956	299	
Apr-02	4421	304	304	243	280	0	0	0	182	0	766	0	0	1004	0	182	852	304	
May-02	4629	337	307	245	307	0	0	0	215	0	858	0	0	1041	0	215	797	307	
Jun-02	4501	237	296	207	563	0	0	0	207	0	829	0	0	889	0	207	770	296	
Jul-02	4964	335	335	213	731	0	0	0	183	0	883	0	0	944	0	183	761	396	
Aug-02	5135	369	307	246	646	0	0	0	215	0	922	0	0	1016	0	215	861	338	
Sep-02	5127	368	338	246	706	0	0	0	215	0	921	0	0	951	0	184	860	338	
Oct-02	5612	303	303	212	880	0	0	0	182	0	971	0	334	1001	0	182	880	364	
Nov-02	5231	327	327	208	773	0	0	0	208	0	891	0	327	981	0	208	654	327	
Dec-02	5198	296	25	207	680	0	0	0	207	0	887	0	325	1152	0	266	828	325	
Jan-03	5422	277	277	216	709	0	0	0	185	0	924	0	308	1078	0	154	955	339	
Feb-03	4815	274	246	164	575	0	0	0	164	0	821	0	301	930	0	164	875	301	
Mar-03	5395	287	318	159	669	0	0	0	173	0	955	0	318	1051	0	191	924	350	
Apr-03	5123	237	326	207	533	0	0	0	237	0	888	0	326	977	0	178	888	326	
May-03	5157	236	295	206	560	0	0	0	177	0	884	0	324	1002	0	177	972	324	
Jun-03	5241	265	324	206	648	0	0	0	177	0	854	0	353	971	0	177	942	324	
Jul-03	5486	270	300	210	689	0	0	0	180	0	899	0	360	1049	0	180	989	360	
Aug-03	5499	268	297	208	743	0	0	0	208	0	922	0	327	1070	0	178	951	327	
Sep-03	5077	261	290	203	667	0	0	0	116	0	841	0	290	988	0	174	957	290	
Oct-03	5404	272	302	211	664	0	0	0	151	0	906	0	332	1087	0	211	936	332	
Nov-03	5118	286	286	200	772	0	0	0	172	0	858	0	343	829	0	200	886	286	
Dec-03	5168	267	297	208	535	0	0	0	178	0	861	0	327	1129	0	178	921	267	
Jan-04	5074	267	267	207	533	0	0	0	207	0	889	0	296	1154	0	155	918	181	
Feb-04	4891	276	359	166	525	0	0	0	166	0	829	0	276	1024	0	137	857	276	
Mar-04	5100	269	299	209	556	0	0	0	150	0	897	0	359	1138	0	87	897	239	

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Apr-04	5375	267	267	178	772	0	0	0	178	0	891	0	327	1099	0	178	921	297	
May-04	5110	268	162	179	626	0	0	0	149	0	864	0	328	1133	0	179	894	328	
Jun-04	5030	262	291	174	611	0	0	0	174	0	843	0	291	1047	0	174	901	262	
Jul-04	5131	239	298	209	597	0	0	0	179	0	865	0	298	1074	0	179	895	298	
Aug-04	5128	267	296	178	622	0	0	0	178	0	889	0	296	1038	0	178	860	326	
Sep-04	4977	270	289	173	520	0	0	0	173	0	866	0	318	1040	0	144	866	318	
Oct-04	5198	327	297	178	654	0	0	0	178	0	891	0	297	1069	0	178	832	297	
Nov-04	4976	312	284	179	539	0	0	0	170	0	852	0	312	1051	0	170	852	255	
Dec-04	5274	362	271	181	663	0	0	0	181	0	904	0	241	1145	0	151	874	301	
Jan-05	5233	323	235	176	735	0	0	0	176	0	882	0	294	1148	0	147	823	294	
Feb-05	4670	272	190	190	570	0	0	0	163	0	788	0	244	1113	0	136	760	244	
Mar-05	5103	297	267	208	475	0	0	0	178	0	890	0	237	1216	0	208	890	237	
Apr-05	4913	262	262	204	523	0	0	0	204	0	843	0	233	1192	0	85	872	233	
May-05	5009	299	209	209	538	0	0	0	179	0	867	0	299	1225	0	104	811	269	
Jun-05	4816	225	253	169	563	0	0	0	169	0	789	0	225	1183	0	169	789	282	
Jul-05	4561	243	304	213	393	0	0	0	183	0	852	0	243	791	0	152	913	274	
Aug-05	4688	138	267	208	311	0	0	0	148	0	830	0	208	1274	0	148	889	267	
Sep-05	5049	235	264	205	734	0	0	0	176	0	793	0	235	1203	0	147	822	235	
Oct-05	5674	236	295	207	768	0	0	446	148	0	827	0	295	1211	0	148	857	236	
Nov-05	5733	237	267	207	534	0	130	622	207	0	831	0	207	1246	0	178	800	267	
Dec-05	5701	241	271	181	664	0	0	513	121	0	905	0	211	1297	0	151	905	241	
Jan-06	5685	238	268	179	625	0	0	446	179	0	863	0	208	1310	0	149	893	327	
Feb-06	4988	246	180	164	546	0	0	382	137	0	792	0	191	1147	0	137	820	246	
Mar-06	5726	268	268	179	746	0	0	418	179	0	865	0	268	1253	0	149	865	268	
Apr-06	5495	255	255	170	680	0	0	368	142	0	821	0	283	1302	0	142	850	227	
May-06	5730	240	300	210	720	0	0	360	180	0	870	0	210	1350	0	150	870	270	
Jun-06	5310	230	259	173	663	0	0	346	67	0	807	0	202	1267	0	144	864	288	
Jul-06	5479	237	267	178	652	0	0	296	207	0	859	0	237	1302	0	148	829	267	
Aug-06	5307	235	264	205	586	0	0	264	147	0	880	0	205	1260	0	176	821	264	
Sep-06	5043	220	276	165	496	0	0	276	138	0	799	0	248	1184	0	138	827	276	
Oct-06	5254	246	246	215	522	0	0	215	154	0	860	0	246	1290	0	123	860	277	
Nov-06	4945	258	258	143	516	0	0	229	172	0	831	0	258	1118	0	73	860	229	
Dec-06	5006	218	187	155	684	0	0	187	124	0	777	0	187	1181	0	187	839	280	
Jan-07	5226	241	271	181	693	0	0	227	120	0	813	0	271	1174	0	151	843	241	
Feb-07	4615	187	240	187	534	0	0	240	107	0	720	0	240	1067	0	133	747	213	
Mar-07	5152	298	238	89	626	0	0	238	179	0	774	0	209	1221	0	238	774	268	
Apr-07	4997	268	238	119	535	0	0	238	149	0	773	0	268	1219	0	149	803	238	
May-07	5110	239	299	120	687	0	0	179	120	0	807	0	299	1194	0	120	807	239	
Jun-07	5098	222	285	127	602	0	0	190	95	0	823	0	253	1234	0	127	918	222	
Jul-07	5253	249	280	125	716	0	0	145	156	0	810	0	218	1308	0	125	872	249	
Aug-07	5300	234	264	88	703	0	0	264	176	0	761	0	205	1347	0	146	878	234	
Sep-07	4991	239	269	149	598	0	0	209	149	0	807	0	239	1137	0	149	807	239	
Oct-07	4987	245	275	122	612	0	0	245	183	0	795	0	214	1103	0	92	856	245	
Nov-07	4819	194	250	111	563	0	0	194	139	0	649	0	250	1331	0	139	777	222	
Dec-07	4584	229	258	115	0	0	0	201	143	0	745	0	258	1432	0	172	802	229	

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Jan-08	4752	236	266	118	0	0	0	236	148	0	738	0	177	1564	0	177	856	236	0
Feb-08	5256	220	248	138	498	0	0	220	138	0	714	0	330	1622	0	138	797	193	0
Mar-08	5669	236	266	177	709	0	0	177	177	0	709	0	443	1682	0	89	797	207	0
Apr-08	5251	290	185	132	660	0	0	211	132	0	686	0	211	1424	0	132	1003	185	0
May-08	5281	172	201	143	689	31	0	230	115	0	717	0	230	1606	0	143	803	201	0
Jun-08	5410	231	259	69	692	231	0	202	115	0	807	0	288	1499	0	115	700	202	0
Jul-08	5963	217	280	155	745	342	0	186	124	0	839	0	217	1585	0	155	901	217	0
Aug-08	5492	206	235	176	705	323	0	176	147	0	646	0	294	1438	0	147	793	206	0
Sep-08	5835	211	242	151	695	332	0	181	121	0	634	0	181	1481	0	121	654	211	620
Oct-08	7469	208	268	149	714	327	0	179	119	0	714	0	149	1309	0	119	744	208	2262
Nov-08	6974	222	250	139	639	306	0	194	139	0	639	0	278	1223	0	167	722	194	1862
Dec-08	6901	231	259	202	721	317	0	173	144	0	778	0	186	1182	0	115	807	202	1584
Jan-09	6434	234	292	146	731	234	0	175	146	0	702	0	0	1287	0	117	614	205	1551
Feb-09	5570	174	249	149	622	199	0	174	124	0	572	0	0	1069	0	124	721	124	1269
Mar-09	5884	177	266	148	503	266	0	148	118	0	680	0	0	1064	0	148	680	207	1479
Apr-09	5074	169	226	141	480	254	0	141	113	0	593	0	237	960	0	141	621	226	772
May-09	5870	208	145	148	534	237	0	148	119	0	623	0	178	949	0	148	682	208	1543
Jun-09	5442	223	0	140	586	223	0	140	112	0	558	0	195	865	0	140	502	307	1451
Jul-09	5864	267	237	148	622	207	0	148	118	0	592	0	207	918	0	148	563	237	1452
Aug-09	5672	182	243	152	546	212	0	182	121	0	637	0	212	1000	0	34	606	212	1333
Sep-09	5493	229	258	201	488	229	0	115	115	0	602	0	201	947	0	129	602	201	1176
Oct-09	5757	237	237	148	534	267	0	148	119	0	653	0	178	1009	0	178	653	237	1159
Nov-09	5567	233	233	146	583	233	0	175	117	0	670	0	204	962	0	117	612	204	1078
Dec-09	5604	209	238	149	507	268	0	149	119	0	656	0	209	1103	0	119	596	209	1073
Jan-10	5465	242	242	151	574	242	0	181	151	0	664	0	58	1027	0	121	604	181	1027
Feb-10	4898	225	225	140	433	197	0	168	112	0	646	0	0	955	0	112	618	140	927
Mar-10	5121	209	269	150	539	124	0	150	90	0	658	0	0	957	0	120	628	180	1047
Apr-10	4905	202	260	144	519	0	0	202	115	0	664	0	0	952	0	115	606	173	953
May-10	5240	240	269	150	569	0	0	180	120	0	689	0	0	1047	0	150	659	180	987
Jun-10	5167	263	292	146	671	0	0	146	88	0	671	0	0	1051	0	117	642	175	905
Jul-10	5396	274	274	152	579	0	0	152	91	0	732	0	0	1129	0	152	701	183	977
Aug-10	5335	240	240	150	569	0	0	240	90	0	719	0	0	1199	0	120	689	180	899
Sep-10	5045	232	203	140	551	0	0	145	87	0	697	0	0	1132	0	145	697	174	842
Oct-10	5224	237	237	119	564	0	0	148	119	0	712	0	0	1218	0	119	712	178	861
Nov-10	5108	248	221	138	525	0	0	166	110	0	718	0	0	1187	0	138	690	166	801
Dec-10	5538	240	240	150	631	0	0	101	120	0	751	0	0	1353	0	180	751	150	871
Jan-11	5512	238	238	119	596	0	0	179	89	0	745	0	0	1431	0	149	745	149	834
Feb-11	4854	241	188	134	483	0	0	134	107	0	644	0	0	1341	0	134	697	0	751
Mar-11	5442	241	210	150	571	0	0	150	120	0	722	0	0	1504	0	120	812	0	842
Apr-11	5242	254	226	113	593	0	0	141	73	0	650	0	0	1469	0	141	763	0	819
May-11	5138	241	241	150	511	0	0	150	90	0	536	0	0	1505	0	120	752	0	842
Jun-11	5174	223	223	139	584	0	0	139	82	0	724	0	0	1474	0	139	696	0	751
Jul-11	5389	182	213	121	577	0	0	152	74	0	759	0	0	1579	0	152	790	0	790
Aug-11	5433	264	235	117	558	0	0	176	117	0	734	0	0	1558	0	147	734	0	793
Sep-11	5239	204	204	146	582	0	0	146	116	0	728	0	0	1512	0	146	698	0	757

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Oct-11	5384	237	237	118	621	0	0	118	118	0	740	0	0	1538	0	148	740	0	769
Nov-11	5154	230	202	115	547	0	0	144	115	0	720	0	0	1468	0	115	749	0	749
Dec-11	5529	242	212	121	635	0	0	151	121	0	755	0	0	1600	0	151	786	0	755
Jan-12	5505	239	239	90	598	0	0	150	90	0	748	0	0	1645	0	150	778	0	778
Feb-12	5081	221	193	138	552	0	0	193	83	0	663	0	0	1492	0	138	718	0	690
Mar-12	5257	203	203	116	610	0	0	174	87	0	726	0	0	1569	0	87	756	0	726
Apr-12	5047	203	203	116	522	0	0	145	87	0	725	0	0	1509	0	87	725	0	725
May-12	5094	240	234	118	528	0	0	146	90	0	734	0	0	1528	0	97	675	0	704
Jun-12	5035	200	200	143	572	0	0	172	86	0	715	0	0	1459	0	114	687	0	687
Jul-12	5042	217	228	133	544	0	0	173	117	0	687	0	0	1462	0	78	716	0	687
Aug-12	5209	212	212	121	576	0	0	182	91	0	697	0	0	1517	0	147	727	0	727
Sep-12	4957	231	173	115	519	0	0	202	115	0	692	0	0	1382	0	144	692	0	692
Oct-12	5045	232	203	116	551	0	0	174	116	0	696	0	0	1391	0	145	725	0	696
Nov-12	4924	200	200	115	544	0	0	143	115	0	687	0	0	1403	0	143	716	0	658
Dec-12	5149	205	205	117	556	0	0	176	88	0	702	0	0	1374	0	146	878	0	702
Jan-13	5067	205	205	117	527	0	0	205	117	0	703	0	0	1406	0	176	732	0	674
Feb-13	4571	185	185	106	476	0	0	159	106	0	634	0	0	1267	0	132	687	0	634
Mar-13	4989	205	235	117	499	0	0	176	117	0	675	0	0	1380	0	176	734	0	675
Apr-13	4700	231	231	115	433	0	0	144	87	0	663	0	0	1326	0	115	692	0	663
May-13	4953	209	209	119	507	0	0	179	90	0	686	0	0	1403	0	149	716	0	686
Jun-13	4769	173	188	115	490	0	0	144	86	0	663	0	0	1384	0	115	720	0	691
Jul-13	5088	180	209	120	539	0	0	150	90	0	658	0	0	1556	0	150	718	0	718
Aug-13	5097	179	209	119	537	0	0	179	89	0	686	0	0	1549	0	119	745	0	686
Sep-13	4578	186	186	106	479	0	0	160	80	0	611	0	0	1382	0	133	617	0	638
Oct-13	4983	175	219	117	555	0	0	117	88	0	672	0	0	1520	0	146	702	0	672
Nov-13	4974	200	229	114	543	0	0	143	86	0	657	0	0	1516	0	143	686	0	657
Dec-13	5168	236	236	118	531	0	0	177	88	0	678	0	0	1592	0	126	708	0	678
Jan-14	5060	231	193	145	550	0	0	145	87	0	665	0	0	1621	0	64	694	0	665
Feb-14	4472	211	166	87	475	0	0	132	79	0	608	0	0	1427	0	98	608	0	581
Mar-14	5220	208	237	119	712	0	0	119	119	0	652	0	0	1572	0	148	682	0	652
Apr-14	4856	263	225	113	507	0	0	141	56	0	648	0	0	1494	0	141	648	0	620
May-14	5026	208	238	119	476	0	0	149	89	0	684	0	0	1546	0	149	714	0	654
Jun-14	4872	195	251	139	501	0	0	139	84	0	640	0	0	1476	0	139	696	0	612
Jul-14	4902	177	236	148	502	0	0	118	89	0	679	0	0	1417	0	148	738	0	650
Aug-14	4838	178	267	119	505	0	0	119	89	0	683	0	0	1335	0	148	742	0	653
Sep-14	4600	172	230	115	489	0	0	115	86	0	661	0	0	1266	0	144	690	0	632
Oct-14	4606	178	222	119	475	0	0	119	20	0	653	0	0	1337	0	148	712	0	623
Nov-14	4455	227	199	114	426	0	0	114	77	0	654	0	0	1223	0	142	682	0	597
Dec-14	4568	234	234	117	410	0	0	146	59	0	644	0	0	1230	0	176	703	0	615
Jan-15	4488	203	232	116	376	0	0	174	58	0	608	0	0	1186	0	203	724	0	608
Feb-15	3933	208	182	104	287	0	0	156	26	0	547	0	0	1095	0	156	651	0	521
Mar-15	4647	233	262	116	407	0	0	175	79	0	611	0	0	1192	0	204	757	0	611
Apr-15	4425	225	225	141	394	0	0	197	62	0	563	0	0	1154	0	169	704	0	591
May-15	4664	236	236	118	443	0	0	177	89	0	590	0	0	1240	0	207	708	0	620
Jun-15	4397	199	199	142	425	0	0	142	85	0	539	0	0	1219	0	170	681	0	596



Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Jul-15	4605	180	240	150	420	0	0	139	90	0	569	0	0	1289	0	210	719	0	599
Aug-15	4638	207	236	118	443	0	0	177	89	0	561	0	0	1271	0	207	709	0	620
Sep-15	4423	225	225	113	366	0	0	169	85	0	535	0	0	1240	0	197	676	0	592
Oct-15	4580	236	236	118	384	0	0	148	89	0	561	0	0	1271	0	207	709	0	621
Nov-15	4441	202	202	115	375	0	0	144	115	0	548	0	0	1269	0	202	692	0	577
Dec-15	4579	208	238	119	357	0	0	149	89	0	565	0	0	1308	0	208	714	0	624
Jan-16	3927	231	231	115	318	0	0	144	87	0	88	0	0	1154	0	231	722	0	606
Feb-16	3250	191	191	109	160	0	0	109	82	0	0	0	0	931	0	219	684	0	574
Mar-16	3559	189	220	126	0	0	0	220	94	0	0	0	0	946	0	252	788	0	724
Apr-16	3247	177	207	89	0	0	0	207	89	0	0	0	0	767	0	266	649	0	796
May-16	3652	203	203	116	0	0	0	232	87	0	408	0	0	695	0	290	637	0	781
Jun-16	3683	227	198	113	0	0	0	198	57	0	595	0	0	652	0	283	652	0	708
Jul-16	3692	205	234	88	0	0	0	176	88	0	557	0	0	732	0	264	645	0	703
Aug-16	3574	229	229	75	0	0	0	172	57	0	516	0	0	689	0	287	660	0	660
Sep-16	3415	225	197	113	0	0	0	141	56	0	507	0	0	647	0	282	599	0	648
Oct-16	3578	210	180	90	0	0	0	120	90	0	541	0	0	692	0	301	692	0	662
Nov-16	3462	202	202	115	0	0	0	144	58	0	519	0	0	635	0	260	606	0	721
Dec-16	3502	206	206	118	0	0	0	118	88	0	530	0	0	618	0	265	648	0	705
Jan-17	3275	192	198	113	0	0	0	142	85	0	362	0	0	595	0	312	567	0	709
Feb-17	3045	184	184	105	394	0	0	131	79	0	0	0	0	499	0	289	603	0	577
Mar-17	3390	205	205	117	409	0	0	146	85	0	0	0	0	585	0	322	673	0	643
Apr-17	3174	192	192	109	410	0	0	109	82	0	0	0	0	602	0	274	602	0	602
May-17	3336	207	207	118	384	0	0	148	89	0	0	0	0	648	0	266	649	0	620
Jun-17	3220	172	201	115	374	0	0	115	86	0	0	0	0	633	0	259	633	0	632
Jul-17	3303	211	241	151	362	0	0	121	91	0	0	0	0	663	0	272	557	0	634
Aug-17	3277	204	191	116	349	0	0	116	87	0	0	0	0	641	0	233	700	0	640
Sep-17	3070	192	164	110	356	0	0	110	82	0	0	0	0	603	0	219	658	0	576
Oct-17	3185	179	208	119	298	0	0	119	60	0	0	0	0	655	0	268	654	0	625
Nov-17	2906	166	194	111	194	0	0	111	83	0	0	0	0	581	0	249	636	0	581
Dec-17	3070	181	211	120	181	0	0	120	90	0	0	0	0	632	0	271	602	0	662
Jan-18	2951	201	201	143	201	0	0	115	86	0	0	0	0	601	0	258	544	0	601
Feb-18	4325	291	291	166	291	0	0	166	125	0	0	0	0	999	0	374	790	0	832
Mar-18	3183	180	210	120	210	0	0	120	90	0	0	0	0	902	0	270	480	0	601
Apr-18	3003	173	202	116	202	0	0	116	87	0	0	0	0	837	0	260	433	0	577
May-18	3176	202	173	116	231	0	0	144	87	0	0	0	0	923	0	260	462	0	578
Jun-18	3006	192	192	110	275	0	0	137	82	0	0	0	0	853	0	247	413	0	505
Jul-18	3440	209	209	120	269	0	0	90	90	0	0	0	0	1017	0	269	389	0	778
Aug-18	3268	196	196	112	279	0	0	84	84	0	0	0	0	1005	0	223	363	0	726
Sep-18	3182	195	167	112	223	0	0	140	84	0	0	0	0	1005	0	223	335	0	698
Oct-18	3363	210	180	120	180	0	0	120	90	0	0	0	0	1052	0	240	390	0	781
Nov-18	3160	194	194	111	194	0	0	139	111	0	0	0	0	914	0	249	333	0	721
Dec-18	3215	238	208	119	387	0	0	89	89	0	0	0	0	775	0	238	357	0	715
Jan-19	3045	207	207	118	266	0	0	59	59	0	0	0	0	857	0	237	355	0	680
Feb-19	2747	190	190	108	136	0	0	81	37	0	0	0	0	894	0	217	298	0	596
Mar-19	3064	208	208	119	149	0	0	119	0	0	0	0	0	952	0	268	357	0	684

Month/Year	Cummulative Oil Production (BBL)	265	312	87	115	143	157	158	159	160	190	212	208	242	245	244	246	247	386
Apr-19	2877	225	169	113	141	0	0	113	0	0	0	0	0	900	0	203	338	0	675
May-19	3142	208	178	119	208	0	0	119	51	0	0	0	0	951	0	267	357	0	684
Jun-19	3035	227	199	114	199	0	0	114	51	0	0	0	0	937	0	256	313	0	625
Jul-19	3297	211	211	120	211	0	0	211	77	0	0	0	0	1022	0	241	331	0	662
Aug-19	3089	238	208	119	179	0	0	89	54	0	0	0	0	982	0	238	327	0	655
Sep-19	2939	224	168	111	140	0	0	111	96	0	0	0	0	999	0	224	279	0	587
Oct-19	3292	226	169	113	169	0	0	85	76	0	0	0	0	1326	0	254	282	0	592
Nov-19	3081	236	206	147	177	0	0	29	75	0	0	0	0	1091	0	236	295	0	589
Dec-19	3236	236	207	118	148	0	0	148	78	0	0	0	0	1150	0	236	325	0	590
Jan-20	3135	230	230	115	173	0	0	115	54	0	0	0	0	1066	0	230	317	0	605
Feb-20	2985	218	190	109	163	0	0	136	74	0	0	0	0	1061	0	218	299	0	517
Mar-20	2398	241	210	90	90	0	0	90	87	0	0	0	0	628	0	180	181	0	601
Apr-20	1554	191	191	109	82	0	0	109	56	0	0	0	0	0	0	218	0	0	598
May-20	1755	212	182	121	91	0	0	61	57	0	0	0	0	0	0	273	0	0	758
Jun-20	1928	234	205	88	88	0	0	234	27	0	0	0	0	0	0	292	0	0	760
Jul-20	3429	215	153	92	123	0	0	276	56	0	0	0	0	1379	0	307	0	0	828
Aug-20	2916	201	201	86	115	0	0	258	46	0	0	0	0	919	0	344	0	0	746



October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for Embar 3 Tank Battery (FID F006413)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax® 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 23.60 tpy (7.04 tpy from fugitives) to 6.68 tpy (5.91 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (well workover in July of 2011 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The well workover was an effort to mitigate declining production; however, the data illustrates that after the workover, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

A handwritten signature in blue ink that reads "RJ Redweik".

Robert J. Redweik  
Director EHS/Regulatory

Attachments

**FILED**

**JUL 06 2020**

**Jim Ruby, Executive Secretary  
Environmental Quality Council**

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ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027428 )  
Embar 3 Tank Battery (F006413) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027428 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 9, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027428. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027428. A copy of Permit No. P0027428 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by the AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the Embar 3 Tank Battery (F006413) located in Park County, Wyoming. In its application, Citation noted:

Pursuant to the audit disclosures of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

Embar 3 Tank Battery (F006413), *Purpose of Application*.

6. On June 9, 2020, the DEQ issued Permit No. P0027428. Permit No. P0027428 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027428 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See Exhibit A, Conditions 7 through 13.*

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, Embar 3 Tank Battery (F006413) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to Embar 3 Tank Battery (F006413), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027428 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027428.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027428, and that the Council modify Permit No. P0027428 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



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ATTORNEYS FOR PETITIONER

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on::

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002







Mark Gordon, Governor

# EXHIBIT A Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Todd Parfitt, Director

Date: June 9, 2020

Ms. Lee Ann Elsom  
Regulatory Compliance Manager  
Citation Oil & Gas Corporation  
14077 Cutten Road  
Houston, TX 77002

Permit No. **P0027428**

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the Embar 3 Tank Battery (F006413) by updating the equipment list, with three smokeless flares to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and active produced water tanks, located in the NW1/4SW1/4 of Section 1, T47N, R100W, approximately seven (7) miles south-southeast of Meeteetse, in Park County, Wyoming.

Following this agency's proposed approval of the request as published April 30, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the Embar 3 Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

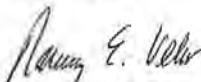
6. Effective upon permit issuance, this permit shall supersede Air Quality Permit CT-1485 for the Embar 3 Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks, all oil overflow tanks, all oil pop tanks and all active produced water tanks, including tank flash and S/W/B vapors, shall be routed to the flares to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the devices by at least ninety-eight percent (98%) by weight for at least one (1) year following the date of installation of the control devices, after which time the devices may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized VOC emission rate from the oil tanks is less than, and will remain less than four (4) tons per year.

15. The presence of the flare pilot flames shall be monitored using thermocouples and continuous recording devices or any other equivalent devices to detect and record the presence of the flames. Records shall be maintained noting periods during active well site operation when any of the pilot flames are not present. The records shall contain a description of the reason(s) for absence of the pilot flames and steps taken to return the pilot flames to proper operation.
16. The continuous pilot monitoring systems under Condition 15 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring systems.
17. The flares shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
18. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
19. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the flares is at least ninety-eight percent (98%).

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

NV/hb

**Wells Producing to Embar 3 Tank Battery**

Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
LBB DSU 146	NW SW	6	47	99	44.06943	-108.79132	2/9/77
LBB DSU C-045855 281	SW NW	6	47	99	44.07570	-108.79281	10/28/83
C-045855 LBB 70	NE SE	1	47	100	44.06799	-108.79819	1/27/69
LBB DSU 86	NE SW	1	47	100	44.07039	-108.80929	7/26/70
LBB DSU 92	NE SW	1	47	100	44.06861	-108.80591	3/8/71
LBB DSU 95	SW NW	1	47	100	44.07171	-108.81061	3/4/71
LBB DSU 99	NE SE	1	47	100	44.07039	-108.79799	7/11/71
LBB DSU C-045855 100	SW SE	1	47	100	44.06667	-108.80209	7/30/71
LBB DSU Unit 121	NE SW	1	47	100	44.06851	-108.80841	11/30/82
LBB DSU C-045855 207	NE SE	1	47	100	44.06881	-108.79491	6/24/79
LBB DSU 211 <sup>1</sup>	SE NW	1	47	100	44.07417	-108.80849	11/29/05
LBB DSU 216	NW SW	1	47	100	44.07083	-108.81417	5/30/80
LBB DSU C-045855 215	NE NW	1	47	100	44.07569	-108.80583	5/2/80
LBB DSU 223	SE SW	1	47	100	44.065	-108.80667	4/19/80
LBB DSU 225	SE NE	1	47	100	44.07401	-108.79799	9/28/02
LBB 250	SW SW	1	47	100	44.06681	-108.80944	1/13/83
LBB 253	SE NE	1	47	100	44.07199	-108.79881	12/29/82
LBB 254	NW SW	1	47	100	44.06901	-108.81229	2/17/83
LBB 255	NW SW	1	47	100	44.07083	-108.80951	12/12/82
LBB DSU C-045855 252	SW NE	1	47	100	44.07149	-108.80167	1/29/83
LBB DSU Unit 251	NE SW	1	47	100	44.06911	-108.80551	1/16/83
LBB C-045855 248	NE SE	1	47	100	44.06889	-108.79944	12/21/82
LBB DSU C-045855 273	NE NE	1	47	100	44.075	-108.79929	7/12/83
Cheyenne 274	SW SW	1	47	100	44.06694	-108.81417	7/28/83
LBB DSU 277	NE NE	2	47	100	44.07222	-108.81649	5/26/88
LBB DSU 279	NWNW	1	47	100	44.07610	-108.81017	10/11/88

<sup>1</sup> the LBB DSU 211 well was recompleted in 2005 and worked over in 2011

**EQUIPMENT LIST**

- two (2) heater treaters w/ 1.25 MMBtu/hr heaters
- two (2) heater treaters w/ 0.75 MMBtu/hr heaters
- one (1) 1000-bbl oil storage tank
- two (2) 1000-bbl and one (1) 400-bbl oil overflow tanks
- one (1) 2000-bbl produced water tank
- one (1) 400-bbl oil pop tank
- three (3) smokeless flares w/ continuous pilot monitoring systems (oil tank, active produced water tank, oil overflow tank and oil pop tank control)

Embar 3 Battery - Oil Production (BBL/month) Over Time





Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Oct-83	46847	943	0	0	753	46	3284	6289	556	0	1089	1322	1437	819	0	462	6474	1115	2441	7457	2069	522	0	4948	4738	83	0
Nov-83	59957	1981	10916	0	1214	111	5296	5165	458	0	399	1808	2353	1434	0	447	4737	1255	2847	6018	2908	341	0	3777	6375	117	0
Dec-83	67692	2268	3552	0	1123	113	5426	5324	487	0	396	1673	2412	1469	0	452	7094	2013	192	9012	4506	528	1726	5656	8245	527	3498
Jan-84	72835	2062	15005	0	1142	104	4984	6125	429	0	3296	1640	2214	1176	0	767	5708	1620	0	7252	3509	0	1389	4552	6634	219	3008
Feb-84	71207	1978	7046	0	608	101	4243	5873	411	0	2852	1629	2138	449	0	749	5189	1508	3470	6591	4837	5619	1262	7046	6416	350	842
Mar-84	71008	1562	5986	0	1322	120	5090	5991	420	0	3720	2125	2565	1512	0	368	4910	1446	3330	8105	4506	5583	937	4166	6155	282	807
Apr-84	65549	2574	0	0	1409	146	6023	2702	535	0	456	1949	3109	1831	0	447	5514	1624	3739	8157	5060	6269	1668	4834	5967	177	1359
May-84	61518	1115	4905	0	1335	0	5342	1812	514	0	542	2372	2154	3489	0	307	4906	1444	3326	6321	4502	5577	691	4301	5308	202	1053
Jun-84	54936	1037	4398	0	1507	181	3496	2205	1655	0	569	1576	1597	3135	0	446	3675	1416	2861	6507	3238	4251	663	4950	4036	241	1296
Jul-84	60043	1049	4498	0	1398	93	3604	2387	1406	0	834	2156	1616	4163	0	499	3759	1325	2187	6933	4375	5576	1401	5238	4128	216	1202
Aug-84	50484	1180	3679	0	1104	85	3709	3020	1037	0	877	1671	1472	3342	0	596	3240	1181	1290	5408	4008	3459	298	4667	3899	82	1180
Sep-84	49252	1173	3328	0	786	175	2473	3001	1556	0	1526	1484	1571	3636	0	628	3220	1174	1282	5375	3983	2701	939	4329	3219	136	1557
Oct-84	36414	839	1843	0	1034	0	3869	2087	1944	0	1572	1237	1391	2561	0	537	1639	838	917	3317	2849	1931	800	2380	1854	136	839
Nov-84	34482	776	1858	0	964	0	3725	1929	2365	0	168	1367	1126	3028	0	917	1515	776	847	3066	2632	1785	739	2200	1713	67	919
Dec-84	39022	455	1956	0	1029	86	3975	2021	3972	0	1361	1318	1201	3232	0	973	1803	816	893	3226	2771	1879	892	2316	1803	76	968
Jan-85	46219	1171	2714	0	1153	96	2915	2995	2193	0	455	1938	1346	3523	0	1217	2586	1171	1279	4738	3648	2587	653	3240	3213	109	1279
Feb-85	43754	994	3283	0	922	222	4021	2544	1398	0	977	2279	1665	3432	0	949	2266	1087	994	4602	3468	2105	555	2290	2451	93	1157
Mar-85	49163	684	4271	0	1068	267	4658	2838	841	0	1291	2728	1929	3530	0	1101	2705	1123	1338	4158	4158	2705	683	2705	3019	138	1225
Apr-85	48431	1346	4295	0	1027	257	5051	2851	1373	0	430	2483	2340	3453	0	342	2267	2033	619	4181	4180	2033	859	2835	2630	86	1460
May-85	48575	504	3777	0	1045	268	5283	4709	1534	0	1104	2513	2597	3999	0	627	1788	1788	856	3677	3676	1788	1184	1929	2871	76	982
Jun-85	45607	516	3150	0	987	254	5019	2660	748	0	664	4230	3045	3440	0	184	1833	1213	1214	2660	4390	1834	1214	2220	3047	78	1007
Jul-85	46426	656	3881	0	963	284	4840	2634	1244	0	817	4434	2046	3383	0	71	1878	1285	1284	3116	4756	1393	1285	1940	3225	55	956
Aug-85	34071	1014	3233	0	705	72	1659	1946	1854	0	832	1451	740	906	0	88	1946	641	1151	2823	4960	1480	795	2302	2551	82	840
Sep-85	44458	743	3080	0	1090	125	5792	1738	976	0	828	5016	2635	3646	0	34	1816	935	1046	2613	4456	1292	770	2146	2062	79	1540
Oct-85	47436	934	2730	0	814	1096	6510	0	1373	0	981	6338	2741	3803	97	0	1663	1050	966	2889	4348	1371	963	2684	2539	117	1429
Nov-85	48184	1035	2780	0	1222	835	5725	0	1175	0	0	5875	5516	3012	8	0	1361	1745	1124	3313	4170	1420	1923	2218	2455	89	1183
Dec-85	52176	746	5903	0	1214	1062	5706	0	1091	0	0	6131	5311	2924	438	182	1881	1524	1492	3390	4087	1329	1524	2228	2562	57	1394
Jan-86	52518	293	4184	0	1373	1139	6677	0	1350	0	0	6465	6197	3079	102	204	1300	1347	946	3854	3287	993	1300	5248	2175	59	946
Feb-86	46715	1458	4099	0	828	1009	5926	0	1128	0	0	4771	4229	5161	0	96	1409	1306	948	3792	3203	1050	0	3202	2178	128	794
Mar-86	52868	848	4424	0	0	1274	7245	0	1022	0	0	6026	5344	7020	0	125	1600	1474	502	3578	4111	1287	0	3034	2604	157	1193
Apr-86	54094	481	4430	0	0	1075	5876	0	960	0	0	5089	4486	12669	0	60	1603	1477	285	3582	3842	730	0	3488	2608	158	1195
May-86	55275	0	4946	0	0	1029	6022	0	912	0	0	4868	4291	12120	0	0	1776	1205	0	4217	6120	0	0	3869	2473	190	1237
Jun-86	51091	765	4271	0	0	961	5621	0	811	0	0	4544	4005	11313	0	0	1586	1077	0	3767	5467	0	0	3456	2209	170	1068
Jul-86	46163	975	2895	0	0	1259	4995	0	1153	0	0	4979	4392	8588	0	0	1713	1211	0	3692	3988	0	0	3002	1831	118	1372
Aug-86	44802	940	2792	0	0	1229	5419	0	1207	0	0	4078	4289	8385	0	0	1652	1168	0	3560	3845	0	0	2991	1766	114	1367
Sep-86	42242	906	2691	0	0	1013	5125	0	1138	0	0	4451	3925	7676	0	0	1593	1126	0	2975	3706	0	0	2787	1702	110	1318
Oct-86	44719	1300	2778	0	0	1346	5892	0	918	0	0	5204	4665	7567	0	0	1389	1331	0	3281	3429	0	0	2455	2010	119	1035
Nov-86	43497	1287	2749	0	0	1265	5535	0	922	0	0	4889	4383	7109	0	0	1375	1317	0	3247	3393	0	0	2896	1989	117	1024
Dec-86	44156	1465	2782	0	0	1621	6328	0	572	0	0	5611	3234	7793	0	0	1347	1318	0	2958	3280	0	0	2713	1933	293	908
Jan-87	41551	1469	2527	0	0	1286	5687	0	1021	0	0	4593	3692	6316	0	0	1410	1263	0	3128	3115	0	0	2929	1969	264	882
Feb-87	43443	1276	2128	0	0	1201	5514	0	940	0	240	4368	3576	6306	0	0	1063	1016	0	2234	2435	0	6585	2151	1654	189	567
Mar-87	46978	1606	2666	0	1182	1418	5701	0	1118	0	1005	4745	4006	7119	0	0	1424	1423	235	2908	2818	0	1666	2636	2151	424	727
Apr-87	40993	1414	2540	0	1327	1391	6052	0	1159	0	924	5308	3980	1994	0	0	1241	1242	354	2338	2425	0	1588	2339	2309	375	693
May-87	46031	1303	2429	0	1328	1361	5993	0	1174	0	607	4697	3887	8974	0	0	1363	1244	0	2222	2518	0	1629	2399	1778	385	740
Jun-87	42339	1193	2272	0	325	1268	5073	0	1102	0	0	4780	3869	9007	0	0	1153	1108	0	1702	2500	0	1761	2414	1761	341	710
Jul-87	43498	1163	2060	0	0	1219	6095	0	1113	0	0	5282	3894	9007	0	0	1220	1249	0	1816	2780	0	1561	2230	1759	369	681
Aug-87	43102	1299	2137	0	0	1251	5871	0	1066	0	0	4845	3593	9176	0	0	1213	1156	0	1819	2715	0	1704	2340	1820	375	722
Sep-87	40151	1395	1925	0	0	1170	5563	0	989	0	0	4678	3601	7971	0	0	1172	1200	0	1786	2622	0	1311	2034	1702	334	698
Oct-87	41812	1396	2049	0	0	1171	6085	0	964	0	0	4654	3775	8005	0	0	1128	1306	0	2167	2791	0	1841	1569	1782	417	712
Nov-87	40771	1489	2249	0	0	1025	5365	0	918	0	0	4340	3466	6993	0	0	1173	1331	0	2535	3010	0	1806	1997	1869	412	793
Dec-87	45373	1199	2430	0	0	1145	6363	0	839	0	1106	4646	3804	7643	0	0	1140	1260	0	2430	2669	0	2100	2070	1769	300	2460
Jan-88	37804	1136	2129	0	0	1173	4802	0	978	0																	

Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Jul-89	33297	625	1531	0	0	1048	3729	0	748	0	1156	3328	3636	5486	0	0	1468	906	0	756	1469	0	2187	1250	1749	1330	895
Aug-89	34430	499	1402	0	0	1126	4301	0	759	0	973	3960	3994	5939	0	0	1688	643	0	715	1373	0	2060	1173	1602	1384	839
Sep-89	32349	425	1361	0	0	1073	4088	0	711	0	766	3310	3677	5241	0	0	1446	879	0	539	1417	0	2524	1134	1673	1267	818
Oct-89	33763	611	1443	0	0	1087	4539	0	973	0	777	3324	3868	5114	0	0	1831	888	0	721	1610	0	2331	1193	1637	1025	791
Nov-89	33601	474	1043	0	0	1184	5098	0	1120	0	687	3157	3716	5295	0	0	1803	972	0	711	1660	0	2110	1162	1541	867	1001
Dec-89	33527	469	1291	0	0	1164	5046	0	1452	0	727	2943	3506	5013	0	0	1807	1009	0	751	1689	0	2159	1079	1572	885	965
Jan-90	34003	554	1282	0	0	1181	4821	0	1509	0	905	2820	3607	5018	0	0	1810	1056	0	616	1937	0	2364	1182	1585	806	950
Feb-90	30970	513	1259	0	0	1073	4261	0	1385	0	747	2443	3129	4380	0	0	1679	1050	0	769	1842	0	2029	1096	1469	898	948
Mar-90	34588	579	1330	860	0	1117	4642	0	1709	0	818	2615	3555	4760	0	0	1723	1125	0	998	1995	0	2148	1176	1560	812	1066
Apr-90	34109	0	1312	1327	0	1034	4359	0	1845	0	906	2347	3269	4247	0	0	3319	1026	0	922	1860	0	1884	1026	1454	743	1229
May-90	35218	0	1386	1294	0	1030	4561	0	1701	0	932	2413	3193	4385	0	0	3527	1033	0	1058	1990	0	2041	1083	1512	812	1267
Jun-90	33431	0	1342	1204	0	1007	4223	0	1908	0	968	2097	3273	3915	0	0	3193	994	0	943	1807	0	2199	1021	1439	750	1148
Jul-90	34674	0	1562	1263	0	1016	4325	0	1341	0	1229	2119	3396	4064	0	0	3522	1130	0	1163	2425	0	1449	1263	1446	797	1164
Aug-90	32257	48	1258	1133	0	1011	4304	0	1702	0	990	2108	3379	4044	0	0	2931	940	0	968	1953	0	1438	1051	1244	777	978
Sep-90	31485	463	1340	999	0	946	4044	0	1008	0	609	2352	3155	3757	0	0	2729	853	0	1097	2218	0	2145	927	1389	478	976
Oct-90	33121	520	1483	1066	0	969	4268	0	1011	0	677	2452	3148	3784	0	0	2783	910	0	1197	2445	0	2211	1118	1483	506	1090
Nov-90	31428	577	1545	1074	0	961	4019	0	800	0	629	2243	2448	3670	0	0	2803	864	0	1100	2358	0	2279	1126	1415	460	1057
Dec-90	15423	0	0	1312	0	918	3842	0	0	0	489	2150	1892	3613	0	0	0	0	0	0	0	0	0	0	0	597	610
Jan-91	31246	407	1447	1498	0	984	4122	0	1256	0	381	2246	3166	3414	0	0	2540	787	0	1143	2362	0	1854	1016	1422	241	960
Feb-91	27505	358	1276	1321	0	854	3578	0	1072	0	336	1950	2937	2964	0	0	2239	694	0	1007	2081	0	1634	895	1254	209	846
Mar-91	30465	613	1435	1252	0	944	3934	0	1053	0	395	2140	3242	3336	0	0	2350	792	0	1151	2070	0	2070	946	1431	280	1031
Apr-91	28225	586	1123	1221	0	833	3583	0	1041	0	439	2028	2889	3166	0	0	1999	708	0	1098	1953	0	1758	830	1343	732	895
May-91	28753	597	1212	1196	0	852	3663	0	1027	0	423	2045	2868	3124	0	0	2292	722	0	1096	1968	0	1943	946	1395	643	741
Jun-91	27689	582	1221	971	0	850	3579	0	958	0	486	2024	2904	3227	0	0	2185	704	0	1044	1760	0	1723	850	1335	576	710
Jul-91	27458	608	1293	989	0	862	3474	0	1036	0	481	1952	2757	2986	0	0	2231	710	0	1014	1825	0	1648	862	1445	595	690
Aug-91	27212	674	1297	948	0	844	3291	0	955	0	599	2236	2708	3000	0	0	2095	748	0	1048	1721	0	1596	848	1322	603	679
Sep-91	25404	616	1187	867	0	789	3072	0	883	0	548	2310	2529	2800	0	0	1917	684	0	958	1575	0	1460	775	1210	561	663
Oct-91	30579	819	1462	1053	0	938	3492	0	1020	0	790	2910	2846	2846	0	0	2311	660	0	1316	1960	0	2047	1082	1638	453	936
Nov-91	27446	733	1572	981	0	907	2919	0	866	0	729	2783	2539	2569	0	0	1920	645	0	1152	1739	0	1681	925	1413	364	1009
Dec-91	26513	779	1372	1079	0	966	3146	0	896	0	801	2679	0	2741	0	0	2267	779	0	1312	1664	0	1998	986	1611	396	1041
Jan-92	29072	691	1321	1155	0	939	3070	0	992	0	642	2695	2332	2604	0	0	2462	931	0	1460	1797	0	2072	1027	1651	449	782
Feb-92	25414	723	1201	901	0	860	2580	0	763	0	437	2666	2064	2322	0	0	2211	819	0	771	1583	0	1911	873	1556	409	764
Mar-92	27169	970	1485	909	0	895	2870	0	1057	0	485	2685	2253	2407	0	0	2576	909	0	0	1758	0	2031	879	1697	394	909
Apr-92	25747	845	1295	845	0	807	2738	0	849	0	670	2651	2104	2075	0	0	2622	903	0	0	1690	0	1952	845	1661	321	874
May-92	25463	821	1261	851	0	893	2739	0	952	0	499	2441	2143	2114	0	0	2360	733	0	0	1760	0	2112	909	1701	323	851
Jun-92	21073	582	1280	669	0	862	2643	0	540	0	320	2126	1983	1954	0	0	0	731	0	330	1862	0	1584	902	1571	320	814
Jul-92	27503	772	1397	772	0	947	2867	0	598	0	37	2032	1837	1921	0	0	1875	772	0	1140	2022	0	4285	1140	2022	37	1030
Aug-92	24398	757	1122	789	0	881	2329	0	634	0	489	1848	1763	2015	0	0	978	757	0	600	1798	0	3881	883	1672	347	855
Sep-92	23051	688	1188	851	0	889	2173	0	952	0	281	1941	1646	1942	0	0	969	781	0	0	1531	0	3875	875	1688	312	469
Oct-92	28696	665	1148	574	0	930	2392	3505	886	0	272	1927	2026	1661	0	0	604	967	0	0	1662	2840	2981	846	1602	302	906
Nov-92	23510	969	1116	646	0	897	1172	2202	820	0	411	1645	1765	1945	0	0	793	939	0	0	1615	2172	1055	793	1556	265	734
Dec-92	23365	348	1099	594	0	930	1605	2167	869	0	327	1894	1677	1733	0	0	802	742	0	0	1633	2197	1395	802	1633	235	683
Jan-93	22530	0	1163	612	0	904	1653	2234	620	0	612	1746	1810	1933	0	0	796	765	0	0	1163	1836	1377	796	1561	306	643
Feb-93	18971	0	1024	647	0	793	1615	1590	769	0	512	1445	1473	1813	0	0	701	728	0	0	1024	1536	1024	593	1374	270	40
Mar-93	22270	0	754	633	560	901	1593	2217	1186	0	708	1502	1562	1923	0	0	693	723	0	0	1011	1748	1361	784	1507	271	633
Apr-93	21855	0	1215	677	810	840	1020	2126	996	0	1015	1469	1589	1949	0	0	601	805	0	0	1044	1675	1353	677	1675	319	0
May-93	23618	0	1201	719	741	834	1574	1666	2172	0	882	1605	1371	2038	0	0	550	915	0	0	1503	1764	1339	751	1601	392	0
Jun-93	23790	0	1162	484	916	1128	1797	1323	2010	0	452	1833	1727	2432	0	0	421	842	0	0	1517	1582	1388	775	1614	387	0
Jul-93	22870	0	1013	1096	848	1043	1663	1287	1768	0	712	1695	1598	1858	0	0	657	794	552	0	1260	1342	1178	630	1370	302	204
Aug-93	22818	0	1052	474	702	1037	1739	1355	1726	0	865	1571	1327	2274	0	0	692	778	404	0	1269	1499	1067	663	1355	374	595
Sep-93	20262	0	1052	471	946	852	1672	1301	1065	0	803	1189	1262	2113	0	0	637	665	360	0	1274	1384	669	637	1384	332	194
Oct-93	20752	0	976	501	1142	864	1575	1240	767	0	237	1791	1513	1544	0	0	633	844	343	0	1214	1293	1135	607	1399	343	791
Nov-93	19550	0	1120	460	1173	838	1368	992	592	0	916	1340	1273	2312	0	0	632	611	373	0	1235	1350	484</				



Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Apr-95	13590	0	1020	329	1136	0	1776	0	2312	0	466	1893	641	0	0	0	0	0	0	0	1243	0	864	758	1152	0	0
May-95	13397	0	1181	389	1140	0	1679	0	2216	0	543	1799	660	0	0	0	0	0	0	0	1217	0	601	789	1183	0	0
Jun-95	14016	0	1191	375	1221	0	1767	0	2396	0	535	1896	610	0	0	0	0	0	0	0	1172	0	813	804	1236	0	0
Jul-95	13535	0	1089	312	994	0	1732	0	2195	0	509	1828	673	0	0	0	0	0	0	0	1305	0	794	684	1193	227	0
Aug-95	12846	0	1477	106	1091	0	1861	0	2003	0	512	1765	674	0	0	0	0	0	0	0	1460	0	0	636	1055	206	0
Sep-95	12641	0	1054	342	969	0	1567	684	2362	0	399	1567	790	0	0	0	0	0	0	0	627	0	0	741	1254	285	0
Oct-95	13554	0	991	330	1021	0	1622	901	2461	0	523	1531	871	0	0	0	0	0	0	0	1171	0	0	631	1291	210	0
Nov-95	12806	0	971	257	971	0	1512	828	2358	0	514	1484	657	0	0	0	0	0	0	0	1170	0	0	657	1170	257	0
Dec-95	13057	0	1007	379	951	0	1511	783	2479	0	379	1652	783	0	0	0	0	0	0	0	1175	0	0	643	1119	196	0
Jan-96	13300	0	1013	298	983	0	1637	923	2490	0	536	1607	893	0	0	0	0	0	0	0	685	0	0	715	1251	269	0
Feb-96	13427	0	967	332	939	0	1465	884	2111	0	497	1326	774	0	0	0	0	0	0	0	1161	926	0	691	1078	276	0
Mar-96	15172	0	1007	308	840	0	1483	896	2440	0	560	1315	783	0	0	0	0	0	0	0	1203	2322	0	644	1119	252	0
Apr-96	14473	0	941	269	914	0	1399	861	2362	0	511	1210	672	0	0	0	0	0	0	0	968	2314	62	645	1103	242	0
May-96	15486	0	908	312	964	0	1447	908	2422	0	454	1333	737	0	0	0	343	0	0	0	1078	1985	567	637	1135	256	0
Jun-96	14907	0	823	265	941	0	1470	853	2321	0	500	1059	794	0	0	0	353	0	0	0	1029	1999	618	500	1088	294	0
Jul-96	15342	0	892	316	921	0	1295	949	2339	0	489	1323	777	0	0	0	604	0	0	0	1323	1668	518	489	1180	259	0
Aug-96	15489	0	1003	345	1035	0	1285	909	2259	0	502	1160	815	0	0	0	752	0	0	0	502	2195	752	470	1223	282	0
Sep-96	14977	0	920	326	950	0	1751	772	2158	0	475	1039	861	0	0	0	682	0	0	0	712	1691	712	504	1157	267	0
Oct-96	15153	0	909	246	938	0	1348	762	2184	0	425	1026	674	0	0	0	615	0	0	0	996	2375	645	615	1114	281	0
Nov-96	14869	0	894	317	923	0	1269	808	2175	0	519	1125	606	0	0	0	606	0	0	0	1154	2020	606	606	981	260	0
Dec-96	15037	0	894	298	924	0	1312	805	2187	0	507	1163	626	0	0	0	626	0	0	0	1133	2057	626	626	984	269	0
Jan-97	14937	0	896	269	896	0	1284	836	2113	0	448	1165	657	0	0	0	597	0	0	0	1195	2062	568	636	1046	269	0
Feb-97	13371	0	803	214	803	0	1124	696	1841	0	428	1043	508	0	0	0	562	0	0	0	1230	1845	535	615	883	241	0
Mar-97	14523	0	875	292	845	0	1224	758	1900	0	466	1108	641	0	0	0	583	0	0	0	1341	2012	554	612	1050	262	0
Apr-97	13816	0	807	259	836	0	1210	749	1945	0	519	1095	605	0	0	0	576	0	0	0	922	1959	576	576	922	260	0
May-97	14298	0	852	264	852	0	1233	764	1993	0	470	1116	617	0	0	0	587	0	0	0	1087	1996	587	646	969	265	0
Jun-97	14067	0	812	290	812	0	1219	754	1914	0	435	1103	638	0	0	0	551	0	0	0	1131	2003	580	609	957	259	0
Jul-97	15893	0	829	267	829	0	1125	711	1942	0	503	375	622	2827	0	0	503	0	0	0	918	2044	592	592	948	266	0
Aug-97	16197	0	814	211	784	0	1025	753	1975	0	482	0	723	3223	0	0	573	0	0	0	1205	2019	603	542	994	271	0
Sep-97	15831	0	816	233	758	0	1136	728	1818	0	408	0	699	3118	0	0	553	0	0	0	1253	1981	553	583	932	262	0
Oct-97	16309	0	835	238	775	0	1192	715	1882	0	447	0	656	3219	0	0	596	0	0	0	1312	2027	566	596	984	269	0
Nov-97	15824	0	767	256	767	0	1137	710	1872	0	426	0	568	3183	0	0	625	0	0	0	1194	1933	568	568	966	284	0
Dec-97	16163	0	823	235	794	0	1176	705	1937	0	441	0	676	3292	0	0	588	0	0	0	1205	1940	558	647	911	235	0
Jan-98	16483	0	810	270	810	0	1171	720	1895	0	420	0	720	3423	0	0	630	0	0	0	1141	2042	570	630	961	270	0
Feb-98	14457	0	739	211	712	0	1055	660	1636	0	343	0	580	3060	0	0	580	0	0	0	950	1820	501	528	844	238	0
Mar-98	16352	0	829	237	829	0	1155	711	1812	0	415	0	681	3228	0	0	681	0	0	0	1303	2102	563	622	918	266	0
Apr-98	15694	0	802	200	773	0	1117	659	1752	0	401	0	687	3206	0	0	659	0	0	0	1174	2061	515	573	858	257	0
May-98	14788	0	771	267	771	0	0	653	1797	0	386	0	771	3352	0	0	712	0	0	0	1127	2165	564	534	622	296	0
Jun-98	11958	0	713	192	741	0	0	658	0	0	329	0	543	3156	0	0	686	0	0	0	1070	1812	494	384	933	247	0
Jul-98	12958	0	864	238	804	0	0	685	0	0	328	0	655	3337	0	0	775	0	0	0	1370	1787	566	387	923	239	0
Aug-98	12482	0	771	229	800	0	0	657	0	0	400	0	714	3255	0	0	743	0	0	0	1228	1542	457	486	943	257	0
Sep-98	12245	0	813	224	729	0	0	644	0	0	364	0	701	3278	0	0	756	0	0	0	1177	1345	364	701	897	252	0
Oct-98	12377	0	796	236	737	0	0	619	0	0	413	0	737	3093	0	0	796	0	0	0	1266	1326	472	619	972	295	0
Nov-98	11840	0	772	200	715	0	0	572	0	0	286	0	715	3261	0	0	772	0	0	0	1201	1230	458	572	829	257	0
Dec-98	11927	0	764	176	705	0	0	558	0	0	264	0	734	3260	0	0	823	0	0	0	1233	1205	441	588	911	265	0
Jan-99	11237	0	773	208	713	0	0	0	0	0	238	0	713	3152	0	0	862	0	0	0	1309	1189	327	565	951	237	0
Feb-99	9992	0	636	159	610	0	0	0	0	0	265	0	610	3020	0	0	742	0	0	0	1166	1034	212	504	795	239	0
Mar-99	11016	0	706	184	767	0	0	0	0	0	245	0	675	3069	0	0	859	0	0	0	1381	1166	276	491	921	276	0
Apr-99	10822	0	703	176	733	0	0	182	0	0	29	0	616	3224	0	0	850	0	0	0	1290	1026	381	498	879	235	0
May-99	11348	0	654	178	713	0	0	624	0	0	30	0	624	3119	0	0	832	0	0	0	1337	1040	475	564	891	267	0
Jun-99	10859	0	635	202	664	0	0	606	0	0	58	0	635	2976	0	0	809	0	0	0	1242	1011	433	462	866	260	0
Jul-99	13797	0	641	204	641	0	630	554	2899	0	87	0	612	2771	0	0	845	0	0	0	1284	933	408	122	933	233	0
Aug-99	13294	0	749	180	659	0	898	569	2185	0	90	0	599	2753	0	0	868	0	0	0	1258	928	419	1	898	240	0
Sep-99	13207	0	689	157	627	0	1097	470	1987	0	63	0	595	2914	0	0	878	0	0	0	1222	972	407	0	909	220	0
Oct-99	13924	0	746	155	622	0	1243	497	1926	0	62	0	559	2830	0	0	870	0	0	0	1244	1119	342	528	901	280	0
Nov-99	12837	0	744	149	596	0	1191	476	1664	0	119	0	536	2650	0	0	804	0	0	0	1102	1102	387	274	834	209	0
Dec-99	13190	0	705	184	582	0	1165	460	1642	0	153																

Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Jan-01	16620	0	657	149	478	0	1194	687	1819	0	149	0	508	2150	657	0	747	657	0	1075	717	3224	378	418	747	209	0
Feb-01	15361	0	609	111	443	0	997	692	1655	0	138	0	443	1994	554	0	692	609	0	997	692	2881	388	332	803	193	138
Mar-01	17098	0	673	153	490	0	1224	765	1795	0	92	0	459	2173	581	0	765	643	0	1041	765	3275	459	398	765	214	368
Apr-01	16197	0	654	208	446	0	1130	773	1187	0	178	0	446	2081	505	0	713	594	0	981	921	3064	416	356	832	267	445
May-01	16277	0	650	177	414	0	1094	768	1795	0	148	0	502	2098	502	0	709	562	0	916	946	2957	414	325	680	207	413
Jun-01	15609	0	686	171	429	0	1057	714	1694	0	143	0	486	1915	457	0	570	572	0	886	829	2801	429	371	714	228	457
Jul-01	16152	0	704	176	440	0	1203	734	1693	0	235	0	440	2054	469	0	522	646	0	851	939	2816	440	352	734	235	469
Aug-01	16059	0	526	181	423	0	966	785	1646	0	211	0	453	2023	453	0	694	664	0	845	966	2929	392	362	755	241	544
Sep-01	15313	0	583	172	373	0	1120	718	1640	0	144	0	459	1951	431	0	632	632	0	775	833	2812	373	373	660	201	431
Oct-01	15427	0	676	176	382	0	1030	735	1636	0	147	0	441	1971	412	0	617	676	0	794	1000	2853	353	235	676	206	411
Nov-01	15011	0	705	176	382	0	998	764	1561	0	147	0	411	1791	382	0	646	617	0	764	998	2673	382	382	675	146	411
Dec-01	16084	0	756	126	378	0	1102	787	1632	0	157	0	441	2078	409	0	661	724	0	819	1071	2834	441	346	724	220	378
Jan-02	14683	0	702	175	322	0	1023	760	1471	0	146	0	497	1900	351	0	643	468	0	877	906	2542	351	351	702	146	350
Feb-02	13691	0	567	129	309	0	1003	824	1407	0	103	0	386	1673	309	0	567	644	0	670	953	2445	361	335	567	129	310
Mar-02	14783	0	722	150	361	0	872	902	1463	0	120	0	451	1955	361	0	661	722	0	1082	1233	2256	331	0	631	150	360
Apr-02	14462	0	663	144	346	0	951	720	1520	0	115	0	432	1844	346	0	634	720	0	864	1152	2133	403	323	691	144	317
May-02	14872	0	689	120	360	0	1049	779	1532	0	150	0	450	1949	360	0	630	719	0	779	1139	2158	390	360	749	150	360
Jun-02	14133	0	734	147	352	0	1027	704	1363	0	147	0	470	1850	352	0	646	675	0	763	1027	2056	352	323	646	147	352
Jul-02	14712	0	749	210	329	0	1138	719	1431	0	150	0	449	1856	329	0	749	629	0	749	1168	2155	389	314	689	150	360
Aug-02	14213	0	696	203	377	0	1104	696	1415	0	116	0	435	1800	290	0	696	667	0	696	1017	2090	348	377	726	116	348
Sep-02	14353	0	656	171	314	0	999	685	1411	0	114	0	428	1798	285	559	685	514	0	685	1056	2139	342	371	656	143	342
Oct-02	17232	0	707	147	354	0	513	678	1426	0	147	0	442	1827	265	3684	648	501	0	707	972	2387	354	383	678	118	294
Nov-02	15829	0	667	145	319	0	725	638	1455	0	145	0	435	1680	290	2781	638	435	0	580	839	2375	319	406	551	116	290
Dec-02	15893	0	684	119	297	0	803	773	1408	0	119	0	416	1756	268	2470	535	744	0	684	922	2351	357	357	443	119	268
Jan-03	15622	0	781	150	300	0	841	721	1509	0	150	0	390	1712	240	2162	601	420	0	661	961	2282	330	360	691	120	240
Feb-03	13590	0	565	81	242	0	619	673	1313	0	108	0	377	1615	215	1885	565	350	0	592	727	2020	296	323	727	81	216
Mar-03	15298	0	556	154	309	0	741	710	1498	0	154	0	401	1852	278	1883	648	463	0	648	926	2378	340	340	587	93	339
Apr-03	13868	0	588	140	224	0	811	699	1390	0	140	0	336	1566	252	1650	616	364	0	616	838	2042	308	364	532	112	280
May-03	14769	0	510	120	270	0	840	690	1355	0	150	0	420	1741	300	1591	600	395	0	895	870	2222	360	360	630	150	300
Jun-03	14310	0	593	119	267	0	830	711	1383	0	148	0	415	1659	178	1570	682	166	0	889	859	2222	285	356	533	119	326
Jul-03	14773	0	579	91	220	0	854	732	1378	0	122	0	427	1648	274	1495	762	396	0	946	884	2197	335	305	610	122	396
Aug-03	15077	0	604	151	634	0	845	694	1339	0	91	0	453	1661	272	1479	725	302	0	936	1027	2203	332	302	634	91	302
Sep-03	12938	0	539	142	624	0	823	652	1336	0	199	0	397	1560	255	0	766	255	0	738	964	2071	369	312	567	85	284
Oct-03	14869	0	607	152	637	0	849	728	1420	70	182	0	394	1668	243	1335	758	273	0	758	940	2185	334	364	607	61	304
Nov-03	14230	0	575	144	575	0	834	690	1343	376	173	0	374	1582	230	1265	604	259	0	719	834	2129	316	288	575	86	259
Dec-03	14395	0	605	151	605	0	817	696	1368	0	182	0	394	1635	242	1523	727	242	0	757	787	2241	394	91	575	91	272
Jan-04	14368	0	575	151	605	0	847	665	1332	0	181	0	393	1633	212	1512	696	212	0	756	817	2208	363	272	575	91	272
Feb-04	13347	0	568	114	625	0	824	653	1272	0	170	0	369	1506	227	1364	625	199	0	625	795	2017	313	256	540	57	228
Mar-04	14001	0	536	119	625	0	834	685	1347	0	149	0	387	1578	238	1399	655	208	0	685	804	2173	328	298	596	89	268
Apr-04	13402	0	439	117	615	0	791	615	1307	0	146	0	381	1523	234	1347	644	264	0	674	820	2109	293	205	556	59	263
May-04	14372	0	442	149	597	0	777	657	1341	0	179	0	388	1583	239	2255	657	239	0	657	687	2122	299	179	567	90	268
Jun-04	14274	0	509	117	614	0	877	673	1337	0	175	0	380	1550	234	2223	614	175	0	614	702	2077	351	175	526	117	234
Jul-04	14620	0	504	148	623	0	860	623	1311	0	148	0	356	1541	237	2163	652	208	0	682	860	2133	326	296	534	119	296
Aug-04	14640	0	559	147	530	0	795	648	1364	0	177	0	383	1472	235	2061	648	206	0	618	1030	2060	294	442	559	118	294
Sep-04	13942	0	522	145	522	0	812	638	1299	0	174	0	377	1508	232	1972	580	261	0	609	754	2029	319	319	522	116	232
Oct-04	14060	0	541	150	571	0	842	485	1367	0	150	0	391	1533	241	2016	631	210	0	601	722	2106	241	301	571	120	270
Nov-04	13840	144	588	147	500	0	618	618	1250	0	206	0	383	1442	206	1942	647	177	0	618	794	2060	294	294	559	59	294
Dec-04	14337	627	568	120	478	0	807	657	1327	0	90	0	329	1524	239	1941	627	179	0	657	747	2120	299	269	403	60	269
Jan-05	13973	371	525	124	494	0	803	587	1236	0	62	0	371	1512	216	1976	649	185	0	679	741	2130	340	309	323	62	278
Feb-05	12623	381	545	109	381	0	735	599	1142	0	54	0	327	1390	170	1662	545	191	0	545	681	1880	272	225	490	54	245
Mar-05	13843	391	511	90	481	0	812	631	1275	0	90	0	391	1533	241	1925	601	210	0	601	782	2076	331	0	541	90	240
Apr-05	13188	371	513	106	485	0	741	627	1220	0	86	0	371	1426	228	1768	570	171	0	570	827	1967	285	0	513	57	286
May-05	13645	387	536	149	447	0	774	655	1286	0	60	0	357	1459	238	1817	596	208	0	596	804	2054	298	0	596	60	268
Jun-05	13046	126	544	143	515	0	773	630	1183	0	86	0	344	1403	200	1718	573	229	0	601							

Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Oct-06	13675	297	445	119	386	0	653	594	1106	1158	59	0	386	1366	267	1485	416	119	0	1086	534	2108	297	0	445	119	230
Nov-06	13168	298	446	89	417	0	714	625	1147	1191	46	0	357	1399	208	1250	417	10	0	982	506	1905	298	0	476	149	238
Dec-06	13682	307	430	123	338	0	522	614	1336	1136	61	0	276	1413	246	1290	369	246	0	1044	645	2181	276	0	491	92	246
Jan-07	13373	306	490	123	460	0	613	643	1264	1072	61	0	285	1287	306	1133	398	184	0	858	674	2082	306	0	521	92	215
Feb-07	12529	227	425	113	369	0	596	539	1201	1049	85	0	210	1305	228	1191	369	170	0	794	737	1928	227	0	454	57	255
Mar-07	13640	299	449	120	389	0	628	598	1252	1197	150	0	419	1406	269	1257	389	209	0	808	688	1975	329	0	389	150	270
Apr-07	12655	234	438	117	198	0	671	555	1277	1022	88	0	409	1343	263	1138	379	175	0	788	525	1925	350	0	438	88	234
May-07	13444	303	455	30	485	0	697	546	1284	1213	91	0	394	1304	243	1152	425	182	0	849	607	1970	425	0	516	61	212
Jun-07	12267	298	447	30	536	0	169	536	982	1163	89	0	417	1282	238	1132	358	119	0	894	596	1879	298	0	507	89	208
Jul-07	13138	303	393	121	514	0	424	575	1340	1209	121	0	333	1300	242	1089	363	151	0	817	666	1875	303	0	575	91	333
Aug-07	12867	269	449	120	449	0	479	539	1288	1167	90	0	329	1345	299	1107	359	180	0	718	688	1824	329	0	449	120	270
Sep-07	12579	265	383	118	442	0	501	560	1286	1092	88	0	413	1298	295	1032	354	206	0	796	619	1770	295	0	442	59	265
Oct-07	12897	274	366	152	427	0	549	579	1283	1158	122	0	366	1341	305	1006	366	183	0	823	671	1830	274	0	457	61	304
Nov-07	12491	260	405	145	491	0	520	578	1220	1069	145	0	405	1271	289	954	347	173	0	780	665	1733	289	0	462	58	232
Dec-07	12705	275	366	122	519	0	580	580	1204	1128	153	0	427	1189	305	945	397	183	0	823	702	1738	275	0	458	61	275
Jan-08	12693	270	390	120	450	0	570	600	1328	1109	90	0	480	1288	270	930	390	210	0	780	630	1678	300	0	480	60	270
Feb-08	11977	256	369	85	483	0	540	540	1127	994	142	0	369	1278	284	909	341	199	0	738	682	1590	284	0	454	57	256
Mar-08	12582	270	390	120	480	0	570	570	1180	1050	150	0	420	1351	300	930	390	210	0	750	750	1651	270	0	420	60	300
Apr-08	12014	259	374	86	518	0	576	518	1108	1036	115	0	403	1237	288	892	374	173	0	719	777	1553	288	0	374	58	288
May-08	12465	300	390	120	510	0	570	540	1205	1022	150	0	390	1262	300	902	390	210	0	751	691	1652	270	0	480	60	300
Jun-08	11982	288	374	58	518	0	547	420	1210	951	115	0	403	1296	288	864	300	230	0	720	663	1585	346	0	432	86	288
Jul-08	12594	270	415	120	540	0	570	638	1399	929	120	0	390	1288	232	900	330	240	0	750	645	1648	330	0	450	60	330
Aug-08	12569	286	413	95	572	0	604	636	1203	1017	127	0	445	1335	286	954	445	191	0	795	179	1750	286	123	477	64	286
Sep-08	11509	279	391	84	559	0	475	559	1298	894	112	0	335	1201	252	755	391	252	0	727	235	1564	279	168	391	56	252
Oct-08	12054	273	394	91	576	0	606	394	1280	1030	121	0	364	1303	242	848	394	212	0	727	606	1637	47	121	424	91	273
Nov-08	11770	256	398	85	483	0	569	597	1167	910	142	0	370	1223	284	824	370	199	0	711	625	1592	284	27	313	85	256
Dec-08	12164	307	368	61	552	0	613	644	1095	950	92	0	399	1287	276	889	460	215	0	736	797	1685	337	0	33	92	276
Jan-09	11928	267	356	59	534	0	593	622	1199	860	89	0	385	1274	267	830	415	207	0	741	711	1570	237	0	415	89	208
Feb-09	10731	160	321	80	481	0	535	562	995	749	107	0	348	1124	241	749	401	160	0	642	776	1338	267	0	294	187	214
Mar-09	11941	296	326	89	593	0	622	622	1124	859	59	0	385	1245	267	771	445	178	0	711	948	1452	296	0	356	59	238
Apr-09	11561	281	337	112	534	0	562	619	1215	815	112	0	337	1154	225	759	506	197	0	675	844	1351	253	0	365	84	224
May-09	12153	270	390	120	540	0	600	660	1127	869	120	0	390	1288	232	750	450	210	0	810	869	1438	360	0	360	60	240
Jun-09	11268	253	366	112	478	0	562	619	1032	675	84	0	366	1182	225	703	422	197	0	815	928	1295	309	0	337	84	224
Jul-09	11635	231	375	87	520	0	606	635	1097	751	87	0	375	1242	231	693	404	173	0	837	1010	1300	346	0	346	87	202
Aug-09	11817	264	381	88	469	0	586	615	1122	791	117	0	440	1172	234	733	410	205	0	850	938	1289	322	0	469	88	234
Sep-09	11297	281	366	112	506	0	534	619	1090	815	141	0	394	1209	197	675	422	169	0	731	844	1209	309	0	337	84	253
Oct-09	11110	294	353	147	512	0	559	647	1099	690	147	0	412	1236	206	735	382	176	0	794	823	1223	294	0	294	29	58
Nov-09	10995	285	370	57	456	0	570	598	1106	712	57	0	370	1255	228	742	370	228	0	712	799	1226	342	0	313	57	142
Dec-09	11477	265	353	88	500	0	588	618	1163	824	59	0	382	1293	206	706	500	206	0	765	853	1264	324	0	353	20	147
Jan-10	11307	267	357	89	416	0	594	594	1116	951	89	0	386	1219	149	802	386	149	0	920	743	1338	267	0	327	0	148
Feb-10	10351	187	374	53	454	0	534	560	1039	881	107	0	400	1067	133	667	320	133	0	774	720	1174	267	0	320	0	187
Mar-10	11311	271	361	90	452	0	572	602	1106	993	90	0	421	1235	120	722	361	211	0	813	813	1326	271	0	301	0	180
Apr-10	13943	263	410	59	410	3095	556	586	1069	908	88	0	410	1170	146	703	381	176	0	761	703	1229	293	0	351	0	176
May-10	13924	329	359	90	419	2875	599	599	1107	838	90	0	359	1168	150	719	419	240	0	719	719	1318	299	0	329	0	180
Jun-10	13113	350	438	117	467	2190	584	555	1080	789	88	0	350	1139	146	701	409	175	0	818	701	1256	263	0	321	0	176
Jul-10	13195	329	478	60	448	2209	567	538	1099	896	90	0	358	1194	149	717	388	209	0	747	747	1165	299	0	358	0	150
Aug-10	12997	269	448	90	478	2120	568	538	1109	866	90	0	358	1224	149	717	388	239	0	747	717	1134	299	0	329	0	120
Sep-10	12229	288	490	86	432	1845	548	548	1074	807	86	0	375	1124	144	663	375	173	0	692	663	1066	317	0	317	0	116
Oct-10	12375	329	508	90	419	1853	568	538	1039	808	120	0	269	1167	150	718	359	179	0	718	688	1047	329	0	329	0	150
Nov-10	11968	374	490	86	346	1843	605	490	994	720	86	0	317	1123	144	720	346	144	0	720	720	1008	259	0	317	0	116
Dec-10	12070	304	457	122	426	1735	578	517	1082	791	122	0	304	1218	152	670	365	152	0	731	700	974	244	0	274	0	152
Jan-11	11996	308	431	92	431	1661	615	523	1102	831	92	0	308	1199	123	708	339	185	0	677	739	1016	154	0	308	0	154
Feb-11	10900	306	445	83	334	1504	529	501	965	751	83	0	278	1059	139	640	306	139	0	696	640	863	195	0	278	0	166
Mar-11	11880	182	394	91	394	1668	546	546	1052	819	91	0	3														

Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Jul-12	10534	208	387	89	447	1222	566	506	1003	685	89	0	357	1163	119	566	268	149	0	596	655	745	268	0	357	89	0
Aug-12	10540	180	419	90	509	1197	435	509	1000	779	90	0	389	1108	120	569	270	150	0	599	569	779	300	0	359	120	0
Sep-12	10540	184	368	61	399	1226	486	521	979	765	92	0	368	1164	123	613	276	153	0	613	613	796	249	0	368	123	0
Oct-12	10445	179	388	60	358	1254	477	567	956	716	119	0	298	1194	119	597	269	149	0	597	686	746	269	0	328	119	0
Nov-12	10292	178	404	59	358	1135	507	507	973	717	68	0	388	1135	119	567	268	178	0	567	657	776	254	0	358	119	0
Dec-12	10513	182	408	30	304	1123	551	546	994	758	91	0	399	1153	152	576	364	152	0	637	606	758	213	0	395	121	0
Jan-13	10358	0	395	32	334	1127	548	548	996	757	124	0	395	1158	154	578	365	182	0	578	639	761	253	0	365	69	0
Feb-13	9237	0	360	22	333	1053	471	471	872	665	139	0	360	1053	139	527	305	111	0	499	554	693	222	0	305	83	0
Mar-13	10249	0	415	237	356	1127	504	504	998	712	89	0	385	1097	148	563	297	148	0	563	623	741	267	0	356	119	0
Apr-13	10015	0	432	201	374	1180	489	518	952	662	86	0	374	1065	144	518	345	144	0	547	633	719	230	0	316	86	0
May-13	10442	0	455	152	364	1211	546	546	985	697	182	0	394	1090	152	546	303	152	0	546	667	727	242	0	364	121	0
Jun-13	10042	0	441	147	382	1178	500	530	980	677	147	0	382	1059	147	530	294	147	0	530	588	706	265	0	324	88	0
Jul-13	10225	0	450	120	390	1138	510	510	987	659	150	0	406	1049	150	539	290	180	0	539	629	749	210	0	450	120	0
Aug-13	10243	0	449	150	390	1079	539	509	1014	719	150	0	420	1108	150	539	300	150	0	539	629	689	240	0	360	120	0
Sep-13	9329	0	445	111	334	1028	500	473	877	667	139	0	361	1001	139	473	306	139	0	500	584	612	195	0	334	111	0
Oct-13	10020	0	460	123	368	1164	552	521	965	674	123	0	398	1103	153	521	337	215	0	552	460	674	166	0	368	123	0
Nov-13	9727	0	438	88	350	992	496	496	943	700	146	0	350	1051	175	467	321	146	0	525	642	671	263	0	350	117	0
Dec-13	10010	0	502	148	354	1092	502	502	973	709	148	0	354	1034	148	502	266	177	0	532	650	679	266	0	354	118	0
Jan-14	9881	0	391	150	314	1084	511	541	956	692	150	0	361	1054	150	511	241	120	0	541	580	782	241	0	361	150	0
Feb-14	8942	0	408	70	381	886	463	463	872	571	102	0	354	979	73	463	272	136	0	490	680	626	218	0	299	136	0
Mar-14	10039	0	424	121	364	1062	515	545	1008	636	152	0	424	1122	0	485	333	121	0	545	697	667	273	0	394	151	0
Apr-14	9496	0	412	118	353	1060	442	530	930	648	118	0	383	1059	0	500	294	118	0	530	618	648	235	0	383	117	0
May-14	9952	0	424	121	394	1031	485	546	981	697	182	0	424	1092	0	515	333	121	0	546	636	667	242	0	364	151	0
Jun-14	9557	0	414	118	326	976	474	533	974	622	207	0	414	1005	0	503	326	148	0	533	622	651	237	0	355	119	0
Jul-14	9595	0	392	90	332	1025	482	512	974	663	181	0	392	1085	0	512	301	151	0	543	543	633	271	0	362	151	0
Aug-14	9699	0	331	120	361	993	541	511	950	631	150	0	391	1083	0	511	331	150	0	541	601	661	271	0	421	150	0
Sep-14	9538	0	412	147	324	941	500	500	977	618	147	0	412	1029	0	500	324	147	0	530	677	618	235	0	353	147	0
Oct-14	9801	0	424	152	333	1000	546	515	980	606	152	0	424	1061	0	546	333	152	0	515	697	637	243	0	364	121	0
Nov-14	9304	0	379	117	321	932	525	525	938	612	146	0	408	1019	0	466	321	146	0	525	554	641	233	0	350	146	0
Dec-14	8802	0	419	120	359	987	509	509	966	628	150	0	419	1047	0	31	329	130	0	538	628	628	239	0	46	120	0
Jan-15	8879	0	447	104	358	984	537	507	955	626	179	0	417	1012	0	0	358	130	0	537	715	656	238	0	0	119	0
Feb-15	7903	0	386	8	331	910	497	469	861	607	138	0	386	965	0	0	303	0	0	469	690	579	193	0	0	111	0
Mar-15	8718	0	448	90	388	924	567	537	931	656	149	0	418	1043	0	0	298	0	0	507	746	627	269	0	0	120	0
Apr-15	8407	0	460	115	374	890	518	489	873	633	144	0	403	977	0	0	316	0	0	489	690	604	230	0	0	202	0
May-15	8708	0	438	117	409	934	525	496	915	613	175	0	409	1138	0	0	292	0	0	496	759	613	233	0	0	146	0
Jun-15	8412	0	438	88	380	964	496	496	907	613	146	0	409	1022	0	0	292	0	0	409	759	613	234	0	0	146	0
Jul-15	8547	0	443	89	384	973	531	502	899	590	148	0	413	1002	0	0	325	0	0	561	742	620	177	0	0	148	0
Aug-15	8614	0	446	208	386	892	505	505	886	624	89	0	416	1011	0	0	327	0	0	535	803	624	238	0	0	119	0
Sep-15	7744	0	426	142	369	852	511	483	845	199	142	0	397	937	0	0	284	0	0	539	681	568	227	0	0	142	0
Oct-15	8231	0	425	152	395	911	546	516	916	273	152	0	425	1001	0	0	304	0	0	577	728	577	212	0	0	121	0
Nov-15	7852	0	406	116	406	870	522	492	894	203	116	0	405	986	0	0	290	0	0	522	696	580	232	0	0	116	0
Dec-15	7618	0	422	90	422	904	543	513	922	211	121	0	392	964	0	0	302	0	0	573	694	123	241	0	0	181	0
Jan-16	6361	0	464	116	406	813	84	464	895	174	87	0	435	1017	0	0	290	0	0	101	667	0	232	0	0	116	0
Feb-16	5219	0	396	113	396	792	0	296	821	123	41	0	367	666	0	0	185	0	0	0	706	0	148	0	0	169	0
Mar-16	3569	0	470	134	503	969	0	0	0	0	117	0	402	0	0	0	0	0	0	0	806	0	0	0	0	168	0
Apr-16	3759	0	396	113	424	790	0	0	707	0	113	0	396	0	0	0	0	0	0	0	707	0	0	0	0	113	0
May-16	4157	0	449	60	449	809	0	156	779	0	150	0	419	17	0	0	0	0	0	0	719	0	0	0	0	150	0
Jun-16	4089	0	420	140	392	757	0	364	728	0	112	0	392	0	0	0	0	0	0	0	644	0	0	0	0	140	0
Jul-16	4355	0	447	119	447	866	0	388	806	0	119	0	388	0	0	0	0	0	0	0	656	0	0	0	0	119	0
Aug-16	4244	0	410	117	410	849	0	410	761	0	117	0	351	0	0	0	0	0	0	0	673	0	0	0	0	146	0
Sep-16	4197	0	400	143	400	827	0	428	771	0	86	0	371	0	0	0	0	0	0	0	628	0	0	0	0	143	0
Oct-16	4297	0	412	88	383	883	0	471	795	0	118	0	383	0	0	0	0	0	0	0	647	0	0	0	0	117	0
Nov-16	3792	0	405	116	376	839	0	0	811	0	116	0	405	0	0	0	0	0	0	0	608	0	0	0	0	116	0
Dec-16	3897	0	407	116	378	932	0	0	872	0	87	0	378	0	0	0	0	0	0	0	611	0	0	0	0	116	0
Jan-17	3840	0	417	119	387	804	0	0	923	0	89	0	387	0	0	0	0	0	0	0	595	0	0	0	0	119	0
Feb-17	3537	0	384	110	384	768	0	0	796	0	82	0	356	0	0	0	0	0	0	0	548	0	0	0	0	109	0
Mar-17	5619	0	391	112	419	754	0	0	810</																		

Month/Year	Total Production	146	281	70	86	92	95	99	100	121	207	211	216	215	223	225	250	253	254	255	252	251	248	273	274	277	279
Apr-18	5485	0	360	90	420	599	390	0	839	0	120	0	270	928	0	0	0	0	0	599	450	0	300	0	0	120	0
May-18	5868	0	364	121	394	636	424	0	849	0	152	0	273	940	0	0	170	0	0	576	485	0	333	0	0	151	0
Jun-18	5606	0	372	86	372	629	429	0	772	0	86	0	229	915	0	0	257	0	0	572	458	0	343	0	0	86	0
Jul-18	5628	0	391	90	421	632	451	0	814	0	120	0	0	964	0	0	271	0	0	572	421	0	331	0	0	150	0
Aug-18	5606	0	407	145	436	639	465	0	784	0	116	0	0	959	0	0	261	0	0	523	436	0	290	0	0	145	0
Sep-18	5327	0	342	142	370	627	456	0	769	0	114	0	0	884	0	0	285	0	0	513	427	0	285	0	0	113	0
Oct-18	5469	0	386	119	416	654	476	0	803	0	119	0	0	891	0	0	238	0	0	535	416	0	297	0	0	119	0
Nov-18	5315	0	368	113	396	679	424	0	792	0	85	0	0	847	0	0	254	0	0	509	452	0	283	0	0	113	0
Dec-18	5360	0	390	90	420	660	434	0	811	0	90	0	0	901	0	0	244	0	0	510	420	0	300	0	0	90	0
Jan-19	4691	0	363	91	393	636	0	0	817	0	91	0	0	998	0	0	0	0	0	514	424	0	303	0	0	61	0
Feb-19	4128	0	303	83	385	413	0	0	743	0	28	0	0	990	0	0	0	0	0	440	385	0	275	0	0	83	0
Mar-19	4937	0	309	93	370	894	0	0	802	0	31	0	0	1110	0	0	0	0	0	525	432	0	309	0	0	62	0
Apr-19	4793	0	327	89	357	804	0	0	774	0	60	0	0	1131	0	0	0	0	0	506	417	0	298	0	0	30	0
May-19	5229	0	323	88	352	793	323	0	793	0	59	0	0	941	0	0	352	0	0	470	440	0	264	0	0	31	0
Jun-19	5257	0	337	112	337	730	533	0	730	0	28	0	0	897	0	0	309	0	0	477	393	0	309	0	0	65	0
Jul-19	5416	0	298	119	357	774	446	0	774	0	60	0	0	922	0	0	327	0	0	476	387	0	327	0	0	149	0
Aug-19	5379	0	327	89	357	743	416	0	802	0	89	0	0	952	0	0	327	0	0	475	386	0	297	0	0	119	0
Sep-19	5064	0	295	89	324	706	412	0	764	0	30	0	0	940	0	0	295	0	0	471	354	0	295	0	0	89	0
Oct-19	5290	0	306	122	367	703	428	0	795	0	61	0	0	949	0	0	336	0	0	489	336	0	306	0	0	92	0
Nov-19	5095	0	293	88	322	703	410	0	761	0	88	0	0	907	0	0	293	0	0	469	351	0	293	0	0	117	0
Dec-19	5281	0	276	92	338	706	399	0	829	0	92	0	0	983	0	0	307	0	0	461	368	0	307	0	0	123	0
Jan-20	5180	0	269	90	359	689	419	0	809	0	90	0	0	929	0	0	299	0	0	479	329	0	299	0	0	120	0
Feb-20	4920	0	232	87	318	666	405	0	752	0	87	0	0	927	0	0	318	0	0	434	318	0	260	0	0	116	0
Mar-20	3682	0	246	92	185	705	236	0	438	0	92	0	0	539	0	0	185	0	0	236	338	0	267	0	0	123	0
Apr-20	1269	0	0	115	0	692	0	0	0	0	58	0	0	0	0	0	0	0	0	288	0	0	0	0	0	116	0
May-20	1313	0	0	119	0	656	0	0	0	0	60	0	0	0	0	0	0	0	0	358	0	0	0	0	0	120	0
Jun-20	1270	0	0	89	0	620	0	0	0	0	59	0	0	0	0	0	0	0	0	354	0	0	0	0	0	148	0
Jul-20	1319	0	0	120	0	659	0	0	0	0	60	0	0	0	0	0	0	0	0	360	0	0	0	0	0	120	0
Aug-20	1333	0	0	113	0	625	0	0	0	0	57	0	0	0	0	0	0	0	0	340	0	0	0	0	0	198	0
Sep-20	1133	0	0	89	0	556	0	0	0	0	51	0	0	0	0	0	0	0	0	283	0	0	0	0	0	154	0



October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for NWD 1 Tank Battery (FID F004577)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax<sup>®</sup> 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 75.55 tpy (6.49 tpy from fugitives) to 5.48 tpy (4.03 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (drilling a well in May of 2014 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The well drilled was an effort to mitigate declining production; however, the data illustrates that after drilling, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

A handwritten signature in blue ink that reads "RJ Redweik".

Robert J. Redweik  
Director EHS/Regulatory

Attachments

Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
HOLLAND & HART LLP  
2515 Warren Avenue, Suite 450  
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Facsimile: (307) 778-8175  
mjmiceli@hollandhart.com  
mnjerabek@hollandhart.com

**FILED**

**JUL 06 2020**

**Jim Ruby, Executive Secretary**  
**Environmental Quality Council**

ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027429 )  
NWD 1 Tank Battery (F004577) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027429 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 9, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027429. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027429. A copy of Permit No. P0027429 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by the AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the NWD 1 Tank Battery (F004577) located in Park County, Wyoming. In its application, Citation noted:



Pursuant to the audit discourses of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

NWD 1 Tank Battery (F004577), *Purpose of Application.*

6. On June 9, 2020, the DEQ issued Permit No. P0027429. Permit No. P0027429 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027429 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See Exhibit A, Conditions 7-13, 20.*

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, NWD 1 Tank Battery (F004577) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to NWD 1 Tank Battery (F004577), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027429 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027429.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027429, and that the Council modify Permit No. P0027429 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



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Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
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2515 Warren Avenue, Suite 450  
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mmjerabek@hollandhart.com

ATTORNEYS FOR PETITIONER

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on:

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002





Mark Gordon, Governor

# EXHIBIT A Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Todd Parfitt, Director

Date: June 9, 2020

Ms. Lee Ann Elsom  
Regulatory Compliance Manager  
Citation Oil & Gas Corporation  
14077 Cutten Road  
Houston, TX 77002

Permit No. **P0027429**

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the NWD 1 Tank Battery (F004577) by updating the equipment list, with one smokeless combustion device and one smokeless flare to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and active produced water tanks, located in the SE1/4NW1/4 of Section 34, T48N, R100W, approximately five (5) miles south-southeast of Meeteetse, in Park County, Wyoming.

Following this agency's proposed approval of the request as published April 30, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the NWD 1 Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

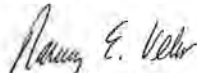
6. Effective upon permit issuance, this permit shall supersede Air Quality Permit wv-239 for the NWD 1 Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks and all active produced water tanks, including tank flash and S/W/B vapors, shall be routed to the combustion device and flare to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the devices by at least ninety-eight percent (98%) by weight for at least one (1) year following the date of installation of the control devices, after which time the devices may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized VOC emission rate from the oil tanks is less than, and will remain less than four (4) tons per year.

15. The presence of the combustion device and flare pilot flames shall be monitored using thermocouples and continuous recording devices or any other equivalent devices to detect and record the presence of the flames. Records shall be maintained noting periods during active well site operation when any of the pilot flames are not present. The records shall contain a description of the reason(s) for absence of the pilot flames and steps taken to return the pilot flames to proper operation.
16. The continuous pilot monitoring systems under Condition 15 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring systems.
17. The combustion device and flare shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
18. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
19. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the combustion device and flare is at least ninety-eight percent (98%).
20. Citation Oil & Gas Corporation, LLC shall comply with all applicable requirements of 40 CFR part 60, subpart OOOO.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

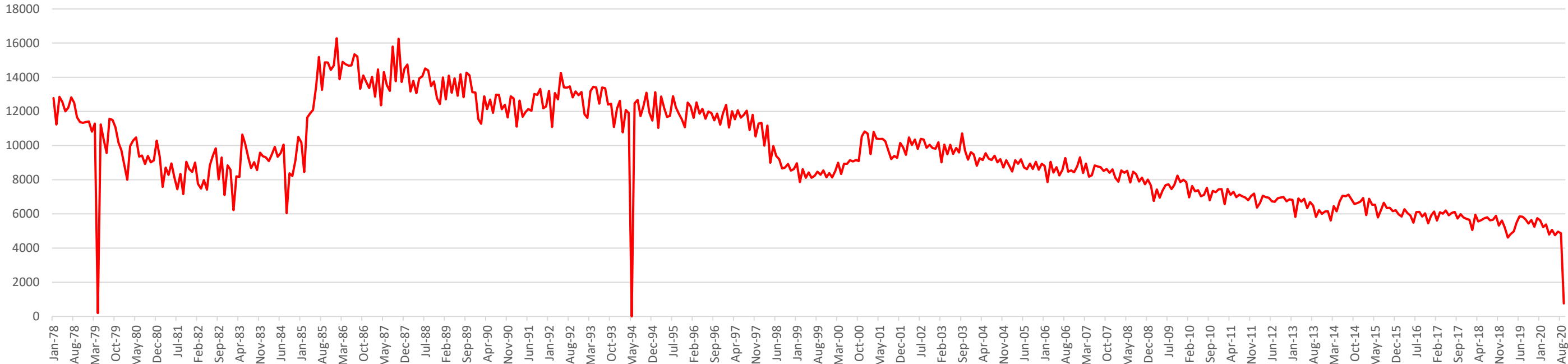
**Wells Producing to NWD 1 Tank Battery**

Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
NW Dome DS Unit 4	SE NW	34	48	100	44.08771	-108.84709	3/27/1967
LBB Unit 5	SE SW	27	48	100	44.095	-108.84722	8/30/1967
LBB DSU C-044193 6	NW NE	3	47	100	44.07611	-108.84231	1/4/1968
LBB DSU C-052237 7	SE NW	3	47	100	44.07278	-108.84701	6/29/1968
NWD 9	NW SE	3	47	100	44.06929	-108.84222	10/20/1969
NW Dome C-045633 18	NW NE	34	48	100	44.08361	-108.8425	11/1/1970
LBB DSU C-044193 16	SE NE	3	47	100	44.07269	-108.83639	9/9/1970
LBB DSU C-045633 19	SE SE	34	48	100	44.07989	-108.83722	4/21/1971
LBB DSU C-052235 22	NW SW	34	48	100	44.08320	-108.85212	9/30/1984
LBB DSU C-052235 25	SW SW	34	48	100	44.07831	-108.85017	6/16/1985
Little Buffalo Basin 36	SW NW	2	47	100	44.07431	-108.83417	10/6/1987
NW Dome C-044193 38	SE ME	3	47	100	44.0726	-108.83791	3/6/1993
North West Dome 40	SE SE	34	48	100	44.08045	-108.83782	8/22/1997
NWD 42	SW SE	34	48	100	44.08223	-108.84195	5/31/2014

**EQUIPMENT LIST**

- two (2) heater treaters w/ 1.25 MMBtu/hr heaters
- two (2) heater treaters w/ 0.75 MMBtu/hr heaters
- one (1) heater treater w/ 0.5 MMBtu/hr heater
- four (4) 400-bbl oil storage tanks
- one (1) 1000-bbl and one (1) 400-bbl produced water tanks
- one (1) smokeless combustion device and one (1) smokeless flare w/ continuous pilot monitoring systems (oil tank and active produced water tank control)

NWD 1 Battery - Oil Production (BBL/month) Over Time





Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
Jan-78	12776	585	125	2021	1171	2782	264	3749	2079						
Feb-78	11230	535	142	1678	931	2529	187	3369	1859						
Mar-78	12854	508	163	2201	991	3411	160	3494	1926						
Apr-78	12556	518	192	2196	988	3200	192	3486	1784						
May-78	12003	512	231	2109	838	2905	216	3407	1785						
Jun-78	12213	522	199	2120	987	2816	227	3513	1829						
Jul-78	12819	730	227	2110	963	2889	234	3751	1915						
Aug-78	12511	321	288	2423	1063	2777	177	3630	1832						
Sep-78	11651	513	23	2016	867	2509	213	3984	1526						
Oct-78	11375	498	82	2118	960	2542	190	3413	1572						
Nov-78	11324	492	309	1896	867	2458	0	3256	2046						
Dec-78	11380	577	0	1838	918	2336	497	3718	1496						
Jan-79	11408	485	0	1965	225	2182	785	3554	2212						
Feb-79	10813	451	178	1783	394	2030	705	3298	1974						
Mar-79	11287	465	257	1887	407	2091	725	3488	1967						
Apr-79	197	0	197	0	0	0	0	0	0						
May-79	11234	453	201	1775	530	2306	657	3457	1855						
Jun-79	10385	490	166	1644	490	2087	613	3214	1681						
Jul-79	9568	300	204	1639	490	2129	611	2482	1713						
Aug-79	11566	159	134	2150	963	2407	673	2833	2247						
Sep-79	11500	877	33	1958	877	2426	641	3110	1578						
Oct-79	11072	783	172	1837	675	2203	540	3538	1324						
Nov-79	10177	778	75	1691	321	1878	670	3449	1315						
Dec-79	9730	689	167	1601	275	1740	633	3380	1245						
Jan-80	8891	234	104	1356	609	1939	840	2778	1031						
Feb-80	8002	206	72	1256	637	1819	718	2339	955						
Mar-80	9977	267	183	1689	714	2134	853	3017	1120						
Apr-80	10297	295	117	1730	796	2358	918	2996	1087						
May-80	10475	277	88	2113	714	2224	885	3007	1167						
Jun-80	9352	224	117	1874	651	1994	761	2684	1047						
Jul-80	9412	80	214	2177	1673	1248	462	2524	1034						
Aug-80	8925	717	201	1680	1584	1753	312	2016	662						
Sep-80	9391	559	176	1923	921	2180	427	2034	1171						
Oct-80	9014	233	208	1919	310	1673	585	2664	1422						
Nov-80	9130	453	178	1965	333	1713	666	2223	1599						
Dec-80	10293	509	183	1888	407	2435	632	2611	1628						
Jan-81	9347	455	134	1758	364	2243	604	2334	1455						
Feb-81	7575	386	202	1496	309	1828	496	1849	1009						
Mar-81	8716	684	215	1826	326	2054	587	1857	1167						
Apr-81	8280	634	399	1692	302	1904	544	1723	1082						
May-81	8955	557	156	1406	78	2120	439	2749	1450						
Jun-81	8118	539	0	1337	89	2249	456	1933	1515						
Jul-81	7444	226	0	1256	86	2128	420	1850	1478						
Aug-81	8345	286	167	711	143	2470	524	2242	1802						
Sep-81	7163	412	128	2323	0	473	637	1909	1281						
Oct-81	9048	460	179	2439	0	1575	315	2776	1304						
Nov-81	8630	410	159	2158	0	1600	695	2455	1153						
Dec-81	8462	390	133	2112	0	1566	728	2404	1129						
Jan-82	9005	375	228	1959	0	2056	274	2938	1175						
Feb-82	7756	573	235	1546	0	2091	516	1879	916						
Mar-82	7484	76	332	1811	0	840	652	2615	1158						
Apr-82	7981	0	315	1795	0	1561	618	2620	1072						

Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
May-82	7422	0	308	1547	0	2534	617	1149	1267						
Jun-82	8839	18	298	1829	0	2012	659	2853	1170						
Jul-82	9407	1119	365	2173	0	2043	523	2136	1048						
Aug-82	9837	1123	310	2220	572	2104	256	2181	1071						
Sep-82	8016	1865	295	1458	437	1224	37	2332	368						
Oct-82	9298	1892	318	1478	769	1508	334	2112	887						
Nov-82	7101	1503	308	1173	611	797	314	1690	705						
Dec-82	8837	1951	319	1524	511	1003	426	2189	914						
Jan-83	8585	1452	307	1482	463	1558	421	2007	895						
Feb-83	6218	1393	279	1316	445	594	415	917	859						
Mar-83	8198	1382	295	1413	441	1501	401	1912	853						
Apr-83	8170	1651	230	1144	843	703	387	2283	929						
May-83	10650	2080	289	1504	840	1620	319	2599	1399						
Jun-83	10110	1679	218	1958	595	1294	799	2518	1049						
Jul-83	9309	1673	260	1600	836	1782	182	2140	836						
Aug-83	8682	1569	204	1501	785	1671	170	1997	785						
Sep-83	9025	1518	350	2205	542	1193	180	1844	1193						
Oct-83	8567	1547	382	1951	538	1216	185	1717	1031						
Nov-83	9583	1715	136	2243	572	1348	327	2098	1144						
Dec-83	9379	1435	281	1809	767	1673	170	2287	957						
Jan-84	9315	1419	276	1792	790	1657	169	2265	947	0					
Feb-84	9096	1599	249	1810	1066	1524	228	2551	69	0					
Mar-84	9469	1722	241	1909	1048	1558	188	2658	145	0					
Apr-84	9919	1511	217	1873	1049	2208	194	2712	155	0					
May-84	9347	1404	236	2036	1088	1766	175	2563	79	0					
Jun-84	9565	1399	286	2174	550	1915	368	2799	74	0					
Jul-84	10062	1409	273	2188	1001	1928	371	2818	74	0					
Aug-84	6043	915	234	1397	545	1036	86	1734	96	0					
Sep-84	8380	1225	235	1258	894	1523	0	2649	596	0					
Oct-84	8223	1174	325	1205	856	1459	317	2538	349	0					
Nov-84	9135	1175	235	2702	794	1556	176	2115	382	0					
Dec-84	10508	1339	269	3081	725	1775	201	2411	435	272					
Jan-85	10188	1247	181	2776	998	1652	187	2525	405	217	0				
Feb-85	8445	1106	240	1962	745	1659	166	2184	359	0	24				
Mar-85	11640	1119	283	2272	480	1919	864	2239	1471	0	993				
Apr-85	11883	1025	240	2281	513	1983	862	3043	1385	55	496				
May-85	12083	1194	261	2248	878	2072	668	3125	1580	0	57				
Jun-85	13430	1058	171	1993	778	2024	572	2864	1143	560	2267				
Jul-85	15182	1053	184	2138	803	2143	384	3166	1254	956	3101				
Aug-85	13264	1006	80	937	1410	1993	335	2657	1147	838	2861				
Sep-85	14870	1136	42	2114	1707	1814	284	2897	1293	618	2965				
Oct-85	14856	1295	185	2168	744	781	345	4465	1240	592	3041				
Nov-85	14432	1089	112	1824	735	2859	544	2995	1252	463	2559				
Dec-85	14686	1126	182	1858	647	2957	394	1799	1267	479	3977				
Jan-86	16280	1188	269	2180	443	2675	463	3995	1155	477	3435				
Feb-86	13877	1076	211	1814	443	2419	567	3196	1195	388	2568				
Mar-86	14898	1097	278	1921	793	2469	579	3506	1220	413	2622				
Apr-86	14760	1062	241	1837	812	2530	593	3436	1219	344	2686				
May-86	14676	1154	298	2375	164	2639	560	3562	1319	363	2242				
Jun-86	14691	1258	194	1668	138	2265	611	3739	1438	180	3200				
Jul-86	15339	1032	161	1652	826	2685	550	3614	1377	379	3063				
Aug-86	15221	1091	151	2251	579	2421	614	3614	1466	648	2386				

Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
Sep-86	13329	778	0	2092	539	2218	571	3360	1299	349	2123				
Oct-86	14100	845	0	2078	443	2323	599	3695	1513	387	2217				
Nov-86	13737	894	0	2313	310	2305	551	3579	1376	241	2168				
Dec-86	13363	914	0	2675	304	2269	542	3691	1252	271	1445				
Jan-87	14017	1028	0	2279	199	2122	564	3482	1359	166	2818	0			
Feb-87	12864	915	0	2449	177	1888	413	3157	1210	148	2507	0			
Mar-87	14462	900	0	2730	610	1975	610	3513	1307	261	2556	0			
Apr-87	12357	401	133	2247	602	1950	602	2349	1291	258	2524	0			
May-87	14300	462	250	3108	694	1521	694	3008	1488	165	2910	0			
Jun-87	13548	619	170	3421	791	1732	151	3238	1581	38	1807	0			
Jul-87	13199	669	214	3548	0	1838	167	3284	1755	42	1682	0			
Aug-87	15792	732	214	4300	0	2242	159	5216	1007	0	1922	0			
Sep-87	13767	609	156	3582	229	1989	762	3582	838	0	2020	0			
Oct-87	16262	551	268	2649	963	1995	689	4266	756	310	2546	1269			
Nov-87	13729	462	80	2402	308	2501	523	3326	1232	462	2433	0			
Dec-87	14515	421	159	2019	1262	2243	533	2804	1177	561	2271	1065			
Jan-88	14739	393	105	2268	1088	2268	363	3326	1300	423	2147	1058			
Feb-88	13168	41	0	2727	123	2375	532	3071	1187	164	2907	41			
Mar-88	13786	179	0	2785	1273	2785	716	3143	836	159	1910	0			
Apr-88	13066	464	0	1809	510	2366	464	3386	1160	93	2597	217			
May-88	13931	431	0	2539	860	2054	645	3615	1076	86	2410	215			
Jun-88	14055	272	0	2096	815	3303	544	3260	1242	233	2290	0			
Jul-88	14515	427	0	2212	932	3104	427	3687	1281	310	2019	116			
Aug-88	14398	579	0	2317	910	2896	662	3310	1283	248	2152	41			
Sep-88	13488	617	0	2292	794	3129	573	3526	1367	88	1102	0			
Oct-88	13751	645	0	2214	784	3052	646	3597	1383	92	1153	185			
Nov-88	12765	504	0	2134	699	1474	582	3026	1242	78	2017	1009			
Dec-88	12433	634	0	2127	953	1036	635	2603	1397	63	2096	889			
Jan-89	13987	680	0	1980	928	2295	619	2907	1268	371	2134	805			
Feb-89	12703	627	0	1759	741	2023	599	2622	1140	371	2080	741			
Mar-89	14096	684	0	2053	933	1994	569	2830	1337	524	2394	778			
Apr-89	13096	614	0	1981	781	2315	474	2567	1116	446	2077	725			
May-89	13940	728	0	1892	1071	2300	582	2649	1194	699	2097	728			
Jun-89	12915	624	0	1741	883	1897	494	2573	1429	338	2287	649			
Jul-89	14180	749	0	2154	968	1998	624	2997	1100	375	2435	780			
Aug-89	12827	593	0	1932	880	1583	483	2698	1278	341	2215	824			
Sep-89	14275	741	0	1931	965	2060	547	3058	1448	436	2059	1030			
Oct-89	14118	809	0	1915	779	2664	748	2754	1227	319	2275	628			
Nov-89	13124	668	0	1974	929	2178	320	2613	1190	406	2149	697			
Dec-89	13108	668	0	1975	930	2178	299	2614	1191	407	2149	697			
Jan-90	11547	864	0	2055	923	188	536	2591	1073	447	2144	726			
Feb-90	11273	821	0	1955	878	396	510	2464	1020	425	2039	765			
Mar-90	12889	718	0	1944	897	1465	748	2572	1136	449	2153	807			
Apr-90	12134	769	0	1687	621	1480	710	2279	770	769	2072	977			
May-90	12693	766	0	1939	736	1208	589	2770	1385	412	2240	648			
Jun-90	11914	713	0	1867	741	1345	549	2334	1290	384	2087	604			
Jul-90	12981	730	0	2097	882	1459	456	2645	1216	456	2310	730			
Aug-90	12966	847	0	1997	696	1483	666	2632	1317	424	2178	726			
Sep-90	12129	838	0	1849	722	1503	405	2484	1358	347	1872	751			
Oct-90	12390	1058	0	2023	934	1401	498	2614	1432	407	1494	529			
Nov-90	11643	1021	0	1894	922	296	626	2767	1383	494	1581	659			
Dec-90	12879	1096	0	2439	989	319	671	2969	1485	530	1697	684			

Month/Year	Cummulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
Jan-91	12757	1083	0	2412	978	315	664	2936	1468	524	1678	699			
Feb-91	11110	886	0	1717	775	1219	404	2150	1135	305	1965	554			
Mar-91	12634	1016	0	1968	762	1302	635	2666	1206	349	2095	635			
Apr-91	11684	1019	0	1850	247	1235	556	2500	1266	418	2037	556			
May-91	11955	1075	0	1564	260	1303	586	2639	1336	456	2150	586			
Jun-91	12136	1032	0	2633	961	1495	605	2527	1459	356	249	819			
Jul-91	12033	992	0	2339	1028	1488	673	2588	1488	480	248	709			
Aug-91	13022	999	0	2353	1034	2515	678	2602	1497	428	249	667			
Sep-91	12971	931	0	2048	838	2296	435	2079	1210	341	2172	621			
Oct-91	13320	812	0	2167	873	2036	512	2407	1279	361	2091	782			
Nov-91	12177	846	0	1793	648	1889	544	2416	1115	403	2009	514			
Dec-91	12295	838	0	1642	569	2006	539	2395	1422	399	1991	494			
Jan-92	13209	862	0	2232	918	2086	493	2433	1232	339	1937	677			
Feb-92	11090	806	0	2049	989	2007	481	2148	1014	311	663	622			
Mar-92	13078	866	0	1939	975	1934	712	2382	1330	248	2011	681			
Apr-92	12704	708	0	1698	853	1652	623	1869	1165	217	3404	515			
May-92	14265	709	0	3205	766	1730	454	2070	1219	298	3332	482			
Jun-92	13407	982	0	2040	877	1659	400	2117	1230	300	3361	441			
Jul-92	13386	956	0	1972	807	1554	508	2659	1225	388	2749	568			
Aug-92	13459	920	0	1839	856	1685	539	2505	1289	381	2822	623			
Sep-92	12821	815	0	2052	875	1630	634	2173	1575	332	2200	535			
Oct-92	13164	956	0	2458	1024	2014	546	2527	1502	327	1400	410			
Nov-92	12952	860	0	1843	1158	1474	553	2457	1290	276	2519	522			
Dec-92	13139	876	0	1886	1022	1811	526	2249	1197	350	2657	565			
Jan-93	11837	292	0	1723	844	1829	535	2055	1237	310	2505	507	0		
Feb-93	11621	837	0	2261	1005	1647	359	1720	1296	307	1742	447	0		
Mar-93	13184	887	0	2233	830	1574	487	2090	1259	286	2547	321	670		
Apr-93	13445	867	0	2067	1040	1474	164	2283	1387	335	2458	607	763		
May-93	13401	945	0	2005	886	1653	30	1860	1240	295	2657	649	1181		
Jun-93	12453	848	0	2222	848	1228	263	1695	1315	351	2163	555	965		
Jul-93	13403	940	0	2028	970	1706	323	1705	1499	323	2557	529	823		
Aug-93	13352	951	0	2139	891	1578	386	1753	1322	356	2644	500	832		
Sep-93	12399	853	0	2103	881	1563	370	1677	1194	313	2200	478	767		
Oct-93	12442	863	0	2220	925	1819	493	1973	1357	295	1264	370	863		
Nov-93	11086	1054	0	1213	721	1208	257	1954	1028	283	2185	463	720		
Dec-93	12167	1039	0	2187	875	1367	328	1559	1258	328	2023	492	711		
Jan-94	12626	925	0	1766	914	1547	505	1639	1373	297	2277	417	966		
Feb-94	10776	768	0	2001	833	1078	304	983	1031	244	1814	396	1324		
Mar-94	12090	915	0	1968	991	1383	377	2193	1194	277	1349	414	1029		
Apr-94	11902	912	0	1954	902	1235	435	1719	1125	177	2222	373	848		
May-94	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jun-94	12475	751	0	1805	849	1470	889	1846	1251	272	1979	437	926		
Jul-94	12673	901	0	1878	942	1571	525	1936	1352	384	1974	439	771		
Aug-94	11730	697	0	2023	902	1412	421	1806	1131	302	1761	465	810		
Sep-94	12300	1012	0	2029	1015	1514	436	1766	1222	236	1780	484	806		
Oct-94	13093	1716	0	2137	989	1568	395	1583	1379	216	1819	487	804		
Nov-94	11937	1721	0	1536	962	1200	401	1443	1363	253	1935	475	648		
Dec-94	11461	1725	0	1791	960	810	373	1456	868	324	1995	474	685		
Jan-95	13128	1673	0	1973	880	1608	241	1793	1490	260	1821	480	909		
Feb-95	11030	1396	0	1603	800	1448	248	1368	1286	220	1524	389	748		
Mar-95	12876	1686	0	1876	993	1469	364	1690	1506	251	1769	453	819		
Apr-95	12195	1561	0	1893	797	1048	387	1920	1402	195	1676	465	851		

Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
May-95	11678	1240	0	2121	803	1232	150	1642	1428	170	1692	433	767		
Jun-95	11735	1176	0	1950	804	1649	255	1487	1317	160	1632	428	877		
Jul-95	12896	1385	0	2278	843	1498	297	1583	1508	178	1841	504	981		
Aug-95	12232	1388	0	1861	935	1377	284	1950	1401	170	1911	334	621		
Sep-95	11851	1239	0	1885	852	1265	284	1756	1317	181	1859	413	800		
Oct-95	11536	1617	0	1001	1011	1675	51	1733	1155	202	1734	462	895		
Nov-95	11072	1557	0	1321	822	1380	0	1645	1292	206	1644	441	764		
Dec-95	12520	1561	0	2225	810	1446	0	1966	1157	202	1851	463	839		
Jan-96	12296	1404	0	2236	888	1232	0	1950	1376	172	1892	401	745		
Feb-96	11623	1050	0	1895	933	1488	453	1604	1400	146	1517	408	729		
Mar-96	12525	1276	0	1840	950	1365	623	1930	1454	208	1721	416	742		
Apr-96	11868	1251	0	1803	873	1338	524	1833	1367	116	1687	349	727		
May-96	12151	1333	0	1705	868	1426	465	1798	1395	217	1735	403	806		
Jun-96	11574	1111	0	1790	833	1389	494	1636	1358	154	1790	309	710		
Jul-96	11993	1306	0	1821	850	1215	547	1700	1397	152	1851	304	850		
Aug-96	11903	1380	0	1718	859	1258	491	1780	1411	153	1688	429	736		
Sep-96	11479	1210	0	1711	826	1298	502	1505	1505	148	1652	443	679		
Oct-96	11878	1215	0	1761	820	1336	516	1734	1367	213	1762	425	729		
Nov-96	11226	1237	0	1727	752	1266	489	1583	1266	144	1726	345	691		
Dec-96	11907	1367	0	1763	850	1276	516	1640	1397	182	1823	364	729		
Jan-97	12375	1463	0	2195	853	1219	549	1555	1402	213	1859	366	701		
Feb-97	11051	1316	0	1783	768	1069	466	1481	1289	192	1645	384	658		
Mar-97	12016	1480	0	1716	829	1273	562	1628	1421	237	1804	326	740		
Apr-97	11537	1324	0	1766	765	1207	500	1560	1383	206	1767	353	706		
May-97	12061	1367	0	1884	790	1276	486	1732	1367	243	1822	365	729		
Jun-97	11636	1329	0	1802	768	1122	502	1683	1358	207	1832	354	679		
Jul-97	11794	1497	0	1766	748	1138	509	1617	1437	210	1795	359	718		
Aug-97	12042	1490	0	1614	807	1179	528	1614	1490	248	1986	372	714		
Sep-97	10912	1244	0	1583	735	1131	537	1470	1385	198	1696	311	622		
Oct-97	11807	1468	0	1621	765	1254	459	1560	1529	245	1866	428	612		
Nov-97	10531	1076	0	1509	740	972	512	1537	1252	199	1737	342	655		
Dec-97	11289	1101	0	1616	748	1646	521	1556	1078	239	1826	359	599		
Jan-98	11329	1263	0	1601	801	1448	524	1693	1140	56	1940	339	524		
Feb-98	9996	1165	0	1517	704	1165	515	1382	975	0	1652	352	569		
Mar-98	11171	1408	0	1653	765	1316	551	1561	1102	0	1867	367	581		
Apr-98	9000	304	0	1474	671	886	549	1416	1098	0	1735	347	520		
May-98	9973	0	0	1620	731	1366	603	1652	1016	0	1937	445	603		
Jun-98	9395	0	0	1546	743	1338	595	1516	1011	0	1784	297	565		
Jul-98	9201	0	0	1579	804	1131	566	1429	1131	0	1698	357	506		
Aug-98	8661	0	0	1485	685	1095	542	1342	1028	0	1656	343	485		
Sep-98	8715	0	0	1417	724	1206	573	1598	1086	0	1206	332	573		
Oct-98	8924	0	0	1467	719	1108	509	1617	1018	0	1618	359	509		
Nov-98	8531	0	0	1377	718	1108	479	1467	868	0	1586	389	539		
Dec-98	8633	0	0	1363	727	1090	515	1424	1151	0	1454	424	485		
Jan-99	8967	0	0	1448	709	1171	493	1510	1109	0	1602	370	555		
Feb-99	7861	0	0	1218	664	969	443	1384	886	0	1467	332	498		
Mar-99	8623	0	0	1401	716	996	498	1494	1027	0	1620	342	529		
Apr-99	8116	0	0	1328	649	1003	384	1417	944	0	1417	354	620		
May-99	8424	0	0	1255	687	1016	388	1791	986	0	1464	329	508		
Jun-99	8114	0	0	1294	677	1000	141	1500	1059	0	1472	441	530		
Jul-99	8228	0	0	1249	731	1006	244	1554	945	0	1615	335	549		
Aug-99	8472	555	0	1306	733	1019	18	1465	892	0	1561	350	573		

Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
Sep-99	8293	600	0	1302	666	969	0	1484	848	0	1546	363	515		
Oct-99	8549	641	0	1313	768	961	0	1441	928	0	1601	352	544		
Nov-99	8150	661	0	1234	705	910	0	1351	969	0	1527	294	499		
Dec-99	8387	693	0	1229	538	977	221	1482	914	0	1513	284	536		
Jan-00	8137	633	0	1205	663	995	332	1115	904	0	1537	241	512	0	
Feb-00	8501	705	0	1235	705	1058	323	1477	764	0	1411	294	529	0	
Mar-00	8998	851	0	1307	730	973	304	1551	942	0	1520	334	486	0	
Apr-00	8333	796	0	1326	678	943	171	1356	825	0	1413	295	530	0	
May-00	8929	844	0	1219	750	1024	375	1407	938	121	1500	313	438	0	
Jun-00	8931	829	0	1155	681	1037	133	1511	859	326	1541	385	474	0	
Jul-00	9144	895	0	1356	745	865	363	1342	835	179	1580	447	537	0	
Aug-00	9073	958	0	1288	749	1048	389	1258	898	120	1587	299	479	0	
Sep-00	9154	927	0	1303	637	927	348	1331	1014	290	1595	319	463	0	
Oct-00	9086	975	0	1462	640	944	396	1462	588	183	1613	305	518	0	
Nov-00	10537	995	0	1493	673	878	381	1288	1024	234	1434	293	498	1346	
Dec-00	10830	1052	0	1238	774	990	433	1361	990	186	1579	278	557	1392	
Jan-01	10695	921	0	1248	743	980	386	1248	1070	267	1545	386	564	1337	
Feb-01	9501	871	0	1124	646	927	337	1180	815	309	1518	225	341	1208	
Mar-01	10806	918	0	1203	696	1013	380	1266	1044	253	1772	348	521	1392	
Apr-01	10400	982	0	1271	664	896	317	1271	924	231	1734	260	491	1359	
May-01	10385	987	0	1317	361	898	389	1257	1017	239	1735	329	509	1347	
Jun-01	10398	1028	0	1351	646	852	352	1204	1057	176	1617	235	558	1322	
Jul-01	10254	998	0	1331	726	907	363	1240	907	181	1513	212	514	1362	
Aug-01	9707	520	0	1318	340	820	352	1201	967	264	1611	322	498	1494	
Sep-01	9202	0	0	1319	521	859	337	1258	1012	123	1534	337	491	1411	
Oct-01	9400	0	0	1247	608	882	487	1217	882	243	1583	395	487	1369	
Nov-01	9279	0	0	1237	530	825	353	1178	972	295	1621	412	471	1385	
Dec-01	10152	630	0	1250	673	962	385	1250	962	128	1668	256	481	1507	
Jan-02	9903	1089	0	1118	677	765	220	1148	883	177	1737	294	471	1324	
Feb-02	9464	1042	0	1100	666	781	260	984	666	260	1708	289	463	1245	
Mar-02	10476	1177	0	1295	647	765	353	1118	971	147	1590	471	500	1442	
Apr-02	10040	989	0	1139	689	809	360	1139	989	270	1557	300	480	1319	
May-02	10354	1060	0	1181	757	817	363	1090	1060	121	1665	363	454	1423	
Jun-02	9808	1060	0	1208	677	707	383	1149	1001	88	1532	295	471	1237	
Jul-02	10399	988	0	1249	610	784	378	1423	1017	174	1539	320	435	1482	
Aug-02	10350	1044	0	1167	676	799	399	1382	860	154	1627	338	553	1351	
Sep-02	9868	1034	0	1123	620	768	384	1270	798	266	1507	266	473	1359	
Oct-02	10052	952	0	1167	676	829	369	1290	805	184	1568	307	461	1444	
Nov-02	9861	934	0	1109	729	817	379	1196	934	117	1458	263	525	1400	
Dec-02	9821	1020	0	1200	490	750	390	1200	840	270	1561	330	480	1290	
Jan-03	10194	1033	0	1233	666	899	366	1199	933	67	1666	333	500	1299	
Feb-03	9013	904	0	933	613	846	321	1079	875	175	1458	204	438	1167	
Mar-03	10060	1041	0	1261	568	883	315	1072	915	158	1608	378	473	1388	
Apr-03	9495	1004	0	1119	545	832	344	1119	918	258	1405	287	316	1348	
May-03	10050	983	0	1168	584	830	369	1168	983	154	1568	307	584	1352	
Jun-03	9515	898	0	1107	628	778	389	1047	898	180	1466	299	449	1376	
Jul-03	9853	871	0	1112	601	928	391	1172	871	270	1474	270	451	1442	
Aug-03	9592	1045	0	1107	553	922	62	1137	922	246	1569	154	461	1414	
Sep-03	10708	1143	0	1210	605	1008	422	1176	975	269	1748	168	471	1513	
Oct-03	9714	925	0	1164	597	865	388	1164	806	239	1462	239	462	1403	
Nov-03	9171	900	0	1013	534	731	366	872	985	225	1464	281	422	1378	
Dec-03	9614	956	0	1100	550	753	376	1129	1014	232	1564	232	405	1303	

Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
Jan-04	9479	959	0	1016	621	901	367	959	875	198	1552	282	451	1298	
Feb-04	8821	935	0	989	493	742	357	989	852	192	1320	247	440	1265	
Mar-04	9257	848	0	1060	636	818	229	969	939	151	1546	303	394	1364	
Apr-04	9153	936	0	1024	585	819	439	965	702	205	1520	234	409	1315	
May-04	9551	967	0	1025	644	732	381	964	1014	205	1464	264	410	1481	
Jun-04	9239	849	0	929	468	761	351	1112	1053	263	1464	234	380	1375	
Jul-04	9156	887	0	1109	285	760	317	1141	824	317	1520	253	412	1331	
Aug-04	9407	965	0	1025	513	724	452	1055	874	151	1478	271	452	1447	
Sep-04	9016	896	0	896	462	665	405	1127	954	173	1445	144	433	1416	
Oct-04	9210	939	0	1085	323	675	381	1115	1056	147	1524	264	469	1232	
Nov-04	8715	898	0	898	521	637	405	1013	898	145	1331	261	463	1245	
Dec-04	9145	973	0	973	590	619	413	1003	1091	177	1358	236	413	1299	
Jan-05	8808	1040	0	1137	585	683	423	1008	683	98	1494	195	358	1104	
Feb-05	8480	972	0	1001	501	766	383	883	883	147	1354	236	353	1001	
Mar-05	9147	990	120	1019	540	660	420	1020	960	120	1469	240	420	1169	
Apr-05	8933	986	179	1016	538	568	388	956	956	149	1405	239	388	1165	
May-05	9195	946	193	1068	519	671	336	915	976	153	1525	214	458	1221	
Jun-05	8724	869	150	1019	480	660	330	869	959	180	1499	210	360	1139	
Jul-05	8620	913	206	1031	471	547	354	678	854	295	1415	265	412	1179	
Aug-05	8941	983	317	1015	571	430	233	825	888	190	1460	444	285	1300	
Sep-05	8627	1003	177	974	456	649	204	1033	885	148	1386	295	325	1092	
Oct-05	9044	791	253	980	443	664	379	1044	885	221	1455	316	411	1202	
Nov-05	8582	900	150	930	510	660	390	960	810	150	1261	330	390	1141	
Dec-05	8930	938	125	969	363	625	438	1063	875	156	1502	250	406	1220	
Jan-06	8803	908	91	938	484	605	363	938	877	151	1451	303	484	1210	
Feb-06	7863	903	113	875	508	536	327	847	847	113	1298	226	367	903	
Mar-06	9044	864	93	957	525	556	432	1019	926	123	1389	247	432	1481	
Apr-06	8423	809	60	959	510	540	420	929	809	90	1319	180	420	1378	
May-06	8729	820	85	978	473	599	379	1009	820	158	1452	284	315	1357	
Jun-06	8251	772	89	891	564	654	416	891	438	149	1248	297	564	1278	
Jul-06	8575	804	89	923	506	655	387	774	863	179	1340	298	417	1340	
Aug-06	9269	894	99	960	563	728	430	728	960	199	1491	331	463	1423	
Sep-06	8474	850	117	1026	528	586	411	909	733	117	1291	293	411	1202	
Oct-06	8541	891	149	1010	429	624	386	891	773	178	1308	267	416	1219	
Nov-06	8437	885	118	974	354	619	354	885	796	206	1269	324	413	1240	
Dec-06	8775	919	127	1395	476	634	349	1014	824	190	1395	190	57	1205	
Jan-07	9308	989	124	1608	311	557	371	958	866	124	1360	216	649	1175	
Feb-07	8394	942	114	1429	485	542	314	828	685	114	1285	200	400	1056	
Mar-07	8940	1015	123	1445	492	584	400	861	707	215	1353	146	461	1138	
Apr-07	8179	1092	115	1237	517	575	345	632	690	144	1237	72	431	1092	
May-07	8257	1055	128	1247	543	509	384	139	831	160	1310	384	448	1119	
Jun-07	8836	1051	131	1248	558	624	361	953	788	164	1381	263	230	1084	
Jul-07	8778	890	35	1208	459	636	382	1304	763	159	1304	254	208	1176	
Aug-07	8736	914	32	1166	473	630	354	1134	756	158	1354	221	473	1071	
Sep-07	8516	895	62	1173	494	617	401	1049	741	185	1264	216	370	1049	
Oct-07	8628	885	95	1201	474	600	379	1043	759	126	1327	190	506	1043	
Nov-07	8410	897	62	1144	495	587	371	989	711	186	1299	247	402	1020	
Dec-07	8607	935	64	1225	484	612	387	999	774	193	1322	193	355	1064	
Jan-08	8116	920	66	1215	526	558	361	887	821	164	609	197	477	1315	
Feb-08	7879	907	63	1188	469	532	406	750	719	156	1094	188	313	1094	
Mar-08	8550	855	165	1217	493	559	362	789	756	164	1513	164	395	1118	
Apr-08	8413	838	248	1055	497	559	373	869	776	155	1367	217	373	1086	

Month/Year	Cummulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
May-08	8527	898	224	1154	481	513	385	866	737	192	1346	256	417	1058	
Jun-08	7839	408	219	1092	500	531	375	843	718	187	1310	219	375	1062	
Jul-08	8470	626	231	1153	527	560	396	923	758	198	1383	231	396	1088	
Aug-08	8326	602	190	1107	697	538	380	855	791	127	1329	285	380	1045	
Sep-08	7896	614	258	1066	614	517	388	646	711	48	1355	291	355	1033	
Oct-08	8129	578	257	1060	514	546	353	964	739	161	1286	257	386	1028	
Nov-08	7736	566	314	1039	472	503	314	943	723	94	1227	220	346	975	
Dec-08	8012	665	299	1064	499	532	332	798	731	166	1330	266	299	1031	
Jan-09	7663	670	302	1105	225	503	335	804	737	134	1306	235	302	1005	
Feb-09	6755	745	171	983	0	417	298	775	655	149	1162	119	328	953	
Mar-09	7427	833	233	1032	0	500	333	766	733	167	1298	167	333	1032	
Apr-09	6948	792	93	1014	90	399	317	728	697	127	1203	158	348	982	
May-09	7370	832	224	1023	352	544	352	588	736	160	1247	160	288	864	
Jun-09	7688	829	223	957	415	447	383	1052	798	128	1211	160	351	734	
Jul-09	7734	928	186	990	402	464	371	959	712	155	1206	186	340	835	
Aug-09	7456	831	192	990	479	520	416	352	735	128	1278	192	448	895	
Sep-09	7701	840	180	901	390	931	324	754	720	80	1261	120	300	900	
Oct-09	8242	869	217	900	372	672	403	1117	745	155	1272	186	248	1086	
Nov-09	7863	877	181	877	423	696	393	969	665	151	1180	181	302	968	
Dec-09	7995	878	188	941	439	752	376	909	721	157	1223	157	282	972	
Jan-10	7857	767	192	926	447	671	351	894	671	160	1277	192	319	990	
Feb-10	6968	764	176	794	412	559	323	794	588	118	1146	176	265	853	
Mar-10	7628	851	164	917	426	655	360	851	622	164	1276	196	229	917	
Apr-10	7331	835	155	866	402	619	340	773	650	155	1144	217	309	866	
May-10	7392	836	161	867	418	643	354	707	579	161	1285	193	321	867	
Jun-10	7035	747	156	840	405	591	374	623	591	156	1245	156	311	840	
Jul-10	7113	865	192	897	417	641	384	417	577	128	1282	160	320	833	
Aug-10	7524	746	195	876	324	681	357	941	616	130	1296	162	357	843	
Sep-10	6797	753	151	813	362	542	362	813	410	151	1265	151	301	723	
Oct-10	7348	850	170	960	306	504	408	850	476	170	1328	136	340	850	
Nov-10	7273	832	154	1172	401	462	370	740	647	154	1109	154	308	770	
Dec-10	7445	855	164	1085	329	559	362	822	658	80	1282	164	296	789	
Jan-11	7453	783	163	978	424	522	359	848	718	147	1271	163	294	783	
Feb-11	6565	696	145	1010	348	464	348	696	566	145	1161	145	232	609	
Mar-11	7464	766	167	1066	433	533	400	766	733	133	1300	200	267	700	
Apr-11	7112	695	158	980	411	537	348	759	695	158	1201	158	348	664	
May-11	7296	758	126	979	505	505	379	758	663	158	1233	190	347	695	
Jun-11	6975	642	153	948	520	489	337	734	612	122	1164	153	367	734	
Jul-11	7130	736	160	961	279	512	384	800	672	128	1250	160	384	704	
Aug-11	7027	671	31	958	351	543	383	799	639	160	1214	160	383	735	
Sep-11	6963	669	182	912	578	456	365	699	608	152	1126	182	365	669	
Oct-11	6804	642	23	898	513	513	269	674	674	128	1186	193	353	738	
Nov-11	7050	647	185	892	493	493	369	770	616	154	1169	185	369	708	
Dec-11	7192	767	160	863	479	511	416	799	639	96	1183	192	352	735	
Jan-12	6367	768	160	865	480	495	384	768	672	160	431	160	384	640	
Feb-12	6640	697	152	849	424	485	364	758	667	121	940	182	364	637	
Mar-12	7068	708	161	838	451	515	386	773	676	112	1225	193	354	676	
Apr-12	6977	631	158	884	474	505	347	789	663	158	1136	158	379	695	
May-12	6947	708	161	836	482	515	354	740	675	161	1093	193	386	643	
Jun-12	6737	660	157	818	503	503	346	755	660	38	1099	189	314	695	
Jul-12	6708	650	155	805	496	384	372	743	619	130	1115	217	341	681	
Aug-12	6911	603	201	804	503	478	335	637	670	201	1172	134	402	771	



Month/Year	Cumulative Oil Production (BBL)	4	5	6	7	9	18	16	19	22	25	36	38	40	42
Sep-12	6960	719	163	752	425	654	327	686	654	131	1208	163	392	686	
Oct-12	6987	484	208	865	553	657	346	657	623	138	1107	208	380	761	
Nov-12	6737	685	196	816	522	620	244	489	653	98	1109	163	326	816	
Dec-12	6851	709	203	877	507	507	265	507	642	68	1282	135	338	811	
Jan-13	6825	654	187	810	499	530	312	686	623	93	1153	156	343	779	
Feb-13	5823	597	128	679	434	516	272	570	509	81	1005	136	299	597	
Mar-13	6906	694	181	754	483	513	302	663	724	121	1115	181	332	843	
Apr-13	6719	660	180	780	480	480	330	630	660	150	1139	150	330	750	
May-13	6885	682	186	776	496	496	341	682	651	124	1211	155	341	744	
Jun-13	6334	627	119	746	418	394	298	657	627	90	1165	149	328	716	
Jul-13	6695	670	183	760	426	609	304	609	609	122	1155	213	335	700	
Aug-13	6483	676	154	737	430	584	307	645	615	123	1106	184	307	615	
Sep-13	5827	574	144	631	373	488	287	574	574	115	1005	172	287	603	
Oct-13	6226	692	157	660	377	535	314	597	566	126	1164	157	252	629	
Nov-13	6000	660	150	690	360	480	300	540	600	120	1080	150	240	630	
Dec-13	6137	651	155	651	403	465	310	589	589	93	1146	155	279	651	
Jan-14	6163	698	152	668	395	425	304	577	607	121	1122	152	304	638	0
Feb-14	5616	666	116	608	347	434	261	550	521	58	1042	116	289	608	0
Mar-14	6451	731	127	699	413	508	318	636	604	127	1176	127	318	667	0
Apr-14	6145	659	150	748	419	458	299	599	509	120	1107	120	269	688	0
May-14	6733	709	161	774	419	484	290	645	580	161	1162	129	290	709	220
Jun-14	7065	627	149	716	418	448	298	657	597	119	1074	179	239	597	947
Jul-14	7030	610	153	732	427	441	305	671	549	92	1189	183	305	702	671
Aug-14	7130	625	156	751	437	594	312	687	687	113	1157	219	281	688	423
Sep-14	6862	605	151	695	393	453	302	665	695	121	1088	212	272	605	605
Oct-14	6581	652	155	809	404	196	311	683	590	72	1181	155	162	683	528
Nov-14	6634	637	159	765	414	573	255	669	542	127	1116	159	277	637	304
Dec-14	6714	492	89	701	397	519	214	641	519	122	1067	153	336	641	823
Jan-15	6931	605	151	726	424	666	242	666	545	121	1059	151	303	636	636
Feb-15	5926	603	131	603	393	452	236	577	472	105	808	131	341	550	524
Mar-15	6882	658	150	748	449	598	239	688	539	150	957	180	269	688	569
Apr-15	6535	566	141	707	424	594	255	622	481	141	1048	113	311	594	538
May-15	6543	607	144	665	433	549	260	636	520	144	1155	87	347	578	418
Jun-15	5791	564	128	590	359	538	231	512	461	102	1000	102	333	538	333
Jul-15	6221	630	143	631	401	554	229	601	516	172	1175	143	286	601	139
Aug-15	6657	647	147	647	382	559	265	620	559	118	1147	147	294	647	478
Sep-15	6338	594	141	651	368	538	226	566	538	141	1075	170	283	566	481
Oct-15	6356	641	146	641	379	525	262	583	525	87	1138	146	321	612	350
Nov-15	6163	580	77	637	377	522	261	580	493	116	1100	145	290	608	377
Dec-15	6212	581	0	639	377	493	232	581	552	87	1161	145	261	610	493
Jan-16	5978	592	0	649	367	479	226	536	592	113	1127	141	282	564	310
Feb-16	5843	556	0	668	362	501	223	556	501	83	1058	111	278	556	390
Mar-16	6275	592	0	710	385	503	237	592	503	89	1154	148	296	622	444
Apr-16	6043	590	0	703	365	450	225	562	562	112	1097	141	281	590	365
May-16	5903	579	0	724	376	463	260	550	579	87	1099	145	289	608	144
Jun-16	5486	544	0	625	353	462	272	544	348	29	1059	136	272	625	217
Jul-16	6102	575	117	673	374	394	288	575	575	0	1092	144	288	604	403
Aug-16	6120	559	196	727	363	475	279	559	587	0	1062	140	307	531	335
Sep-16	5846	567	20	709	356	482	255	567	538	0	1076	142	227	567	340
Oct-16	6038	563	0	741	356	504	258	563	563	0	1156	119	267	563	385
Nov-16	5447	548	0	685	356	155	274	548	521	0	1043	110	302	576	329
Dec-16	5885	563	0	733	394	309	253	563	591	0	1071	141	282	591	394





October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for NWD 2 Tank Battery (FID F004576)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax<sup>®</sup> 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 66.88 tpy (6.50 tpy from fugitives) to 4.34 tpy (3.66 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (drilling a well in March of 2014 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The well drilled was an effort to mitigate declining production; however, the data illustrates that after drilling, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

A handwritten signature in blue ink that reads "RJ Redweik".

Robert J. Redweik  
Director EHS/Regulatory

Attachments

Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
HOLLAND & HART LLP  
2515 Warren Avenue, Suite 450  
P.O. Box 1347  
Cheyenne, WY 82003-1347  
Telephone: (307) 778-4200  
Facsimile: (307) 778-8175  
mjnicheli@hollandhart.com  
mmjerabek@hollandhart.com

**FILED**

**JUL 06 2020**

Jim Ruby, Executive Secretary  
Environmental Quality Council

ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027430 )  
NWD 2 Tank Battery (F004576) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027430 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 9, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027430. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027430. A copy of Permit No. P0027430 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by the AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the NWD 2 Tank Battery (F004576) located in Park County, Wyoming. In its application, Citation noted:

Pursuant to the audit discourses of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

NWD 2 Tank Battery (F004576), *Purpose of Application.*

6. On June 9, 2020, the DEQ issued Permit No. P0027430. Permit No. P0027430 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027430 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See Exhibit A, Conditions 7-13, 20.*

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, NWD 2 Tank Battery (F004576) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to NWD 2 Tank Battery (F004576), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027430 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027430.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027430, and that the Council modify Permit No. P0027430 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
HOLLAND & HART LLP  
2515 Warren Avenue, Suite 450  
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mmjerabek@hollandhart.com

ATTORNEYS FOR PETITIONER

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on:

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002

A handwritten signature in black ink, appearing to read "James Kaste", is written over a horizontal line.





Mark Gordon, Governor

## EXHIBIT A

# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Todd Parfitt, Director

Date: June 9, 2020

Ms. Lee Ann Elsom  
Regulatory Compliance Manager  
Citation Oil & Gas Corporation  
14077 Cutten Road  
Houston, TX 77002

Permit No. **P0027430**

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the NWD 2 Tank Battery (F004576) by updating the equipment list, with one smokeless flare to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and active produced water tanks, located in the SE1/4SE1/4 of Section 3, T47N, R100W, approximately seven (7) miles south-southeast of Meeteetse, in Park County, Wyoming.

Following this agency's proposed approval of the request as published April 30, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the NWD 2 Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

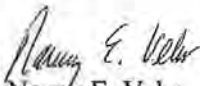
6. Effective upon permit issuance, this permit shall supersede Air Quality Permit wv-229 for the NWD 2 Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks and all active produced water tanks, including tank flash and S/W/B vapors, shall be routed to the flare to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the device by at least ninety-eight percent (98%) by weight for at least one (1) year following the date of installation of the control device, after which time the device may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized VOC emission rate from the oil tanks is less than, and will remain less than four (4) tons per year.

15. The presence of the flare pilot flame shall be monitored using a thermocouple and continuous recording device or any other equivalent device to detect and record the presence of the flame. Records shall be maintained noting periods during active well site operation when the pilot flame is not present. The records shall contain a description of the reason(s) for absence of the pilot flame and steps taken to return the pilot flame to proper operation.
16. The continuous pilot monitoring system under Condition 15 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring system.
17. The flare shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
18. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
19. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the flare is at least ninety-eight percent (98%).
20. Citation Oil & Gas Corporation, LLC shall comply with all applicable requirements of 40 CFR part 60, subpart OOOO.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

NV/hb

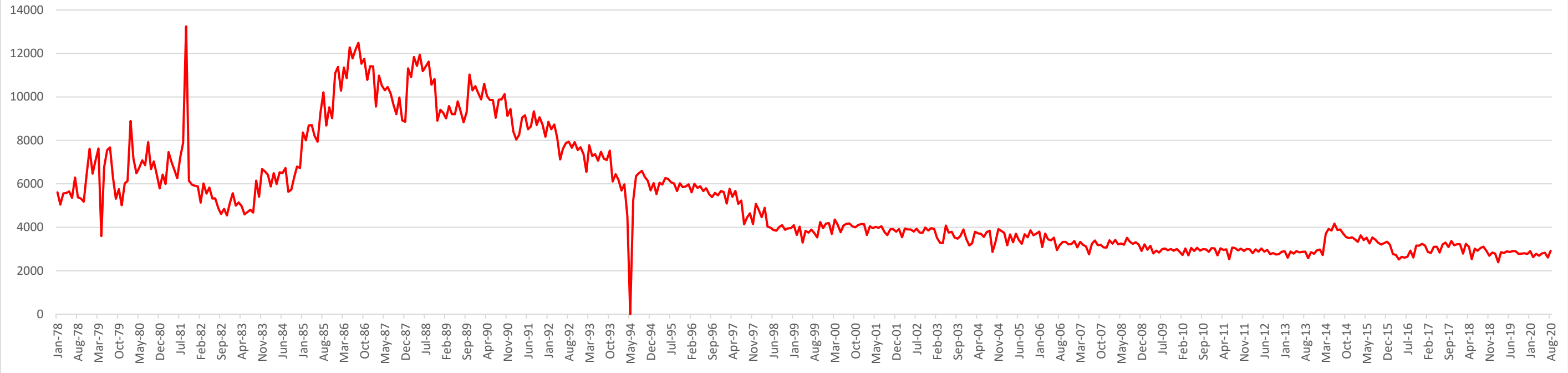
**Wells Producing to NWD 2 Tank Battery**

Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
LBB DSU C-052236A 26	SE SE	3	47	100	44.06611	-108.83771	2/8/71
NW Dome C-052236A 28	SE SW	3	47	100	44.06556	-108.84667	3/28/71
NW Dome C-064382 29	NW NE	10	47	100	44.0625	-108.84139	9/14/71
NWD State 33	NW SW	2	47	100	44.07056	-108.83278	12/31/84
NWD DSU C-045633 34	SW SW	2	47	100	44.06556	-108.83209	11/28/78
LBB NWD 35	NE SW	2	47	100	44.06931	-108.82722	1/10/80
LBB NWD C-045633 10	SE SW	2	47	100	44.06521	-108.82701	2/16/80
NWD 43	NW SW	2	47	100	44.06916	-108.8334	3/24/14

**EQUIPMENT LIST**

- one (1) heater treater w/ 1.25 MMBtu/hr heater
- two (2) heater treaters w/ 0.75 MMBtu/hr heaters
- one (1) heater treater w/ 0.5 MMBtu/hr heater
- three (3) 400-bbl oil storage tanks
- two (2) 400-bbl produced water tanks
- one (1) 400-bbl water knockout tank
- one (1) smokeless flare w/ continuous pilot monitoring system (oil tank, active produced water tank and water knockout tank control)

NWD 2 Battery - Oil Production (BBL/month) Over Time



Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Jan-78	5606	1911	1139	1518	1038	0			
Feb-78	5042	1745	974	1392	931	0			
Mar-78	5560	1851	905	1775	1029	0			
Apr-78	5572	1921	899	1770	982	0			
May-78	5647	1973	822	1847	1005	0			
Jun-78	5352	1870	775	1705	1002	0			
Jul-78	6288	1933	913	2654	788	0			
Aug-78	5383	1781	926	1694	982	0			
Sep-78	5319	1848	780	1771	920	0			
Oct-78	5177	1784	775	1688	930	0			
Nov-78	6485	1773	827	1927	779	1179			
Dec-78	7613	1693	972	2140	878	1930			
Jan-79	6468	1520	533	1506	802	2107			
Feb-79	7061	1740	861	2030	875	1555			
Mar-79	7624	1877	836	1932	896	2083			
Apr-79	3597	1497	642	1458	0	0			
May-79	6768	1618	539	1777	776	2058			
Jun-79	7556	2924	489	1613	573	1957			
Jul-79	7675	2750	487	1714	754	1970			
Aug-79	6281	1267	541	1773	692	2008			
Sep-79	5312	1355	455	1479	502	1521			
Oct-79	5756	803	568	1859	636	1890			
Nov-79	5012	1503	664	1095	0	1750			
Dec-79	6017	1161	587	1561	917	1791			
Jan-80	6129	1033	752	1076	655	1658	955	0	
Feb-80	8895	4016	935	1415	372	1455	702	0	
Mar-80	7161	1294	789	1296	462	1326	1006	988	
Apr-80	6479	1162	749	1164	388	1675	833	508	
May-80	6746	1277	771	1244	406	1716	917	415	
Jun-80	7076	1047	867	1407	442	1612	939	762	
Jul-80	6860	1324	885	1322	373	1363	802	791	
Aug-80	7922	1446	871	1364	699	1667	893	982	
Sep-80	6679	1030	854	1213	446	1880	1061	195	
Oct-80	7026	1104	564	1423	487	1792	1010	646	
Nov-80	6408	1055	503	943	503	1709	1175	520	
Dec-80	5788	772	783	1181	406	1757	889	0	
Jan-81	6428	669	598	1346	562	1782	1047	424	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Feb-81	5989	764	388	1285	503	1734	902	413	
Mar-81	7465	1110	529	1748	739	2008	887	444	
Apr-81	7019	1048	451	1523	755	1978	897	367	
May-81	6636	765	648	1370	666	1932	859	396	
Jun-81	6253	783	484	1109	646	1830	1065	336	
Jul-81	7229	926	749	1430	561	1877	1352	334	
Aug-81	7876	928	728	1331	703	1642	882	1662	
Sep-81	13243	917	637	1133	731	8819	681	325	
Oct-81	6136	868	783	1335	438	1799	744	169	
Nov-81	5960	905	626	1078	600	1678	729	344	
Dec-81	5908	876	680	1399	435	1716	487	315	
Jan-82	5876	879	802	1221	433	1732	442	367	
Feb-82	5132	512	768	999	820	1380	352	301	
Mar-82	6020	678	852	1108	841	1643	547	351	
Apr-82	5553	636	770	1035	401	1659	735	317	
May-82	5826	676	776	1118	591	1644	745	276	
Jun-82	5324	532	823	1076	477	1362	748	306	
Jul-82	5330	677	849	1167	303	1651	410	273	
Aug-82	4887	519	841	744	386	1504	561	332	
Sep-82	4608	555	663	1152	218	1503	275	242	
Oct-82	4846	521	677	637	460	1445	793	313	
Nov-82	4545	525	615	1085	180	1537	327	276	
Dec-82	5124	803	531	1081	350	1578	758	23	
Jan-83	5567	729	607	1388	536	1524	733	50	
Feb-83	4995	712	560	988	511	1390	732	102	
Mar-83	5143	0	759	1242	508	1646	696	292	
Apr-83	4973	0	635	1270	561	1397	826	284	
May-83	4597	0	723	1175	716	844	765	374	
Jun-83	4702	0	865	893	607	1199	876	262	
Jul-83	4805	0	547	1253	518	1181	1035	271	
Aug-83	4675	0	141	1731	427	1285	854	237	
Sep-83	6146	1340	646	1446	719	1172	613	210	
Oct-83	5402	0	916	1196	734	1448	795	313	
Nov-83	6679	1224	831	1347	588	1387	1082	220	
Dec-83	6571	1342	0	2142	574	1337	901	275	
Jan-84	6419	1228	803	1108	786	1352	881	261	
Feb-84	5875	739	799	1266	597	1325	958	191	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Mar-84	6490	1058	743	1331	686	1428	1037	207	
Apr-84	5993	1185	879	948	609	1171	1021	180	
May-84	6531	1330	1095	953	622	1368	994	169	
Jun-84	6492	1367	962	1038	618	1244	1079	184	
Jul-84	6731	1357	1096	936	750	1452	927	213	
Aug-84	5636	916	1372	780	0	1321	1079	168	
Sep-84	5734	1237	1216	1042	0	1302	937	0	
Oct-84	6293	1105	1163	930	602	1396	962	135	
Nov-84	6796	1326	790	1580	578	1200	947	375	
Dec-84	6731	1276	669	1627	482	1237	1177	263	
Jan-85	8364	2360	1037	1752	624	1502	823	266	
Feb-85	8006	1837	853	1739	1114	1172	1017	274	
Mar-85	8679	2277	946	1567	1312	1478	916	183	
Apr-85	8703	2462	1073	1737	923	1294	947	267	
May-85	8209	1487	993	1646	1370	1460	932	321	
Jun-85	7939	1991	870	1616	785	1461	933	283	
Jul-85	9264	2071	672	2556	923	1521	1165	356	
Aug-85	10210	2542	799	1998	838	1852	1380	801	
Sep-85	8684	2147	590	1945	1073	1368	1019	542	
Oct-85	9519	2222	686	2392	938	1595	1244	442	
Nov-85	9017	1727	712	1998	1280	1257	1422	621	
Dec-85	11083	3265	632	2303	1323	1597	1386	577	
Jan-86	11374	3462	958	2443	991	1639	1484	397	
Feb-86	10282	2872	529	2008	1442	1533	1283	615	
Mar-86	11352	3236	385	2262	1534	1728	1539	668	
Apr-86	10866	3010	555	2103	1499	1607	1431	661	
May-86	12273	3579	740	2315	1715	1712	1534	678	
Jun-86	11770	3345	813	2188	1726	2032	1313	353	
Jul-86	12176	3058	916	2352	1652	1986	1283	929	
Aug-86	12490	3406	893	2372	1353	2578	1337	551	
Sep-86	11523	2886	878	2510	1490	1819	1318	622	
Oct-86	11754	2869	710	2580	1584	1935	1483	593	
Nov-86	10784	2679	775	2259	1514	1614	1356	587	
Dec-86	11412	3067	775	1931	1490	2032	1294	823	
Jan-87	11403	2463	704	2710	1592	1900	1478	556	
Feb-87	9554	1949	610	2000	1534	1571	1368	522	
Mar-87	10977	2839	861	2010	1510	1723	1499	535	



Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Apr-87	10519	2592	608	2079	1491	1696	1407	646	
May-87	10308	2339	582	2146	1719	1713	1223	586	
Jun-87	10455	2176	741	2155	1893	1710	1255	525	
Jul-87	10149	2914	626	1942	585	2036	1441	605	
Aug-87	9632	2321	619	2322	869	1610	1300	591	
Sep-87	9201	2133	787	2231	507	1586	1378	579	
Oct-87	9969	2859	848	2042	633	1539	1446	602	
Nov-87	8921	2519	326	2303	113	1943	1583	134	
Dec-87	8853	2392	839	2325	1262	0	1361	674	
Jan-88	11312	2935	822	1846	1965	1526	1320	898	
Feb-88	10910	2250	697	1988	2457	1552	1394	572	
Mar-88	11834	2551	862	2002	2506	1724	1551	638	
Apr-88	11425	2364	732	2130	2251	1831	1498	619	
May-88	11938	2426	1054	2460	2410	1406	1582	600	
Jun-88	11184	2123	980	2286	2135	1862	1241	557	
Jul-88	11393	2218	979	2446	2212	1696	1203	639	
Aug-88	11624	2473	721	2473	2151	1820	1374	612	
Sep-88	10561	1820	621	2568	2336	1605	1006	605	
Oct-88	10824	3480	687	2670	1183	1902	288	614	
Nov-88	8899	2331	591	2298	0	1642	1478	559	
Dec-88	9405	2502	548	2433	0	1748	1508	666	
Jan-89	9272	2602	449	2362	0	1780	1438	641	
Feb-89	9005	2280	698	2092	0	1607	1758	570	
Mar-89	9583	2597	617	1980	0	1721	2013	655	
Apr-89	9207	2316	735	2009	0	1532	1976	639	
May-89	9203	2814	523	1767	0	1701	1735	663	
Jun-89	9791	2860	586	1827	0	1792	2034	692	
Jul-89	9310	2850	613	1804	0	1732	1728	583	
Aug-89	8831	2653	583	1544	0	1650	1670	731	
Sep-89	9293	2737	608	1960	57	1588	1724	619	
Oct-89	11029	2778	549	1718	1587	1645	2120	632	
Nov-89	10297	2516	463	1514	1539	1490	2152	623	
Dec-89	10495	2569	474	1549	1539	1521	2197	646	
Jan-90	10162	2457	381	1384	1578	1488	2188	686	
Feb-90	9880	2358	366	1328	1501	1428	2324	575	
Mar-90	10602	2667	540	1486	1585	1486	2161	677	
Apr-90	10039	2441	441	1298	1568	1594	2035	662	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
May-90	9854	2805	422	601	1561	1670	2104	691	
Jun-90	9858	2605	434	1209	1455	1551	1954	650	
Jul-90	9041	2437	449	1218	912	1603	1770	652	
Aug-90	9873	2338	377	1301	1029	1712	2088	1028	
Sep-90	9880	1722	646	1364	953	1651	2261	1283	
Oct-90	10125	2053	570	2481	1027	1483	1825	686	
Nov-90	9126	2380	476	1096	1054	1523	2031	566	
Dec-90	9443	2433	487	1201	1131	1558	2077	556	
Jan-91	8415	2252	450	1039	1118	1441	1612	503	
Feb-91	8033	2088	501	1089	803	1353	1618	581	
Mar-91	8255	1881	600	1024	921	1342	1881	606	
Apr-91	9050	2444	534	1031	864	1413	2176	588	
May-91	9158	2474	541	1044	912	1430	2204	553	
Jun-91	8507	2243	576	849	961	1364	1896	618	
Jul-91	8642	2306	592	872	892	1402	2087	491	
Aug-91	9332	1831	632	931	1901	1629	1930	478	
Sep-91	8708	2093	558	837	1303	1570	2093	254	
Oct-91	9061	2226	518	926	1354	1537	1961	539	
Nov-91	8725	2150	521	959	1343	1451	1834	467	
Dec-91	8167	1836	491	950	1198	1298	1836	558	
Jan-92	8851	2004	521	963	1232	1473	2095	563	
Feb-92	8509	2079	469	1183	1131	1333	1746	568	
Mar-92	8733	2086	552	1126	1129	1374	1921	545	
Apr-92	8138	1889	603	1127	989	1243	1856	431	
May-92	7119	1854	660	669	908	922	1823	283	
Jun-92	7622	1637	398	1730	915	969	1646	327	
Jul-92	7879	1820	626	1450	702	1052	1706	523	
Aug-92	7938	1698	576	1425	920	1031	1819	469	
Sep-92	7658	1728	441	1352	845	911	1852	529	
Oct-92	7921	1825	517	1430	956	973	1764	456	
Nov-92	7551	1811	517	1288	860	948	1753	374	
Dec-92	7683	1859	510	1380	905	990	1619	420	
Jan-93	7365	1789	575	1268	844	1086	1420	383	
Feb-93	6548	1602	432	1042	865	890	1398	319	
Mar-93	7772	1763	785	1205	1088	925	1681	325	
Apr-93	7276	1705	517	1271	838	961	1674	310	
May-93	7365	1610	1133	1060	797	954	1551	260	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Jun-93	7064	1703	536	1158	760	946	1677	284	
Jul-93	7471	1884	406	1293	715	1145	1921	107	
Aug-93	7151	1762	375	1201	778	1163	1763	109	
Sep-93	7093	1606	607	1114	796	1114	1687	169	
Oct-93	7527	1826	517	1430	863	974	1461	456	
Nov-93	6107	1318	505	1010	668	981	1204	421	
Dec-93	6439	1410	540	930	711	958	1530	360	
Jan-94	6179	1232	534	925	801	952	1469	266	
Feb-94	5686	1311	494	884	595	760	1369	273	
Mar-94	5972	1372	487	1059	646	891	1230	287	
Apr-94	4507	827	356	791	648	757	906	222	
May-94	0	0	0	0	0	0	0	0	
Jun-94	5239	896	499	455	745	942	1385	317	
Jul-94	6362	986	246	1146	786	1106	1698	394	
Aug-94	6494	1750	459	1016	716	944	1269	340	
Sep-94	6594	2505	636	0	739	1234	1038	442	
Oct-94	6321	1470	484	1037	722	964	1385	259	
Nov-94	6139	1374	469	924	721	976	1397	278	
Dec-94	5694	1511	524	508	776	1016	1095	264	
Jan-95	6036	1395	556	965	679	963	1244	234	
Feb-95	5527	1251	441	843	689	951	1134	218	
Mar-95	6049	1282	457	978	710	1007	1342	273	
Apr-95	5969	1212	587	889	785	949	1312	235	
May-95	6269	1395	554	895	817	984	1374	250	
Jun-95	6223	1380	661	878	761	972	1333	238	
Jul-95	6068	1303	569	874	826	957	1320	219	
Aug-95	6019	1505	503	748	791	975	1307	190	
Sep-95	5669	1311	456	855	826	940	1082	199	
Oct-95	6022	1394	575	878	693	999	1241	242	
Nov-95	5847	1323	500	793	705	1087	1175	264	
Dec-95	5878	1366	496	869	665	962	1272	248	
Jan-96	5978	1475	513	834	688	962	1314	192	
Feb-96	5610	1272	473	769	700	917	1183	296	
Mar-96	6000	1363	476	856	801	1014	1300	190	
Apr-96	5814	1321	471	754	785	1037	1257	189	
May-96	5890	1363	465	864	806	997	1196	199	
Jun-96	5665	1372	469	737	710	937	1239	201	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Jul-96	5794	1390	464	762	759	961	1259	199	
Aug-96	5526	1345	394	689	736	951	1214	197	
Sep-96	5391	1282	447	716	708	895	1134	209	
Oct-96	5581	1346	385	734	759	949	1163	245	
Nov-96	5466	1308	426	699	691	943	1156	243	
Dec-96	5662	1354	304	778	790	1049	1184	203	
Jan-97	5624	1318	405	743	793	980	1182	203	
Feb-97	5096	1217	395	638	658	881	1125	182	
Mar-97	5773	1314	481	705	710	961	1378	224	
Apr-97	5403	1258	368	675	677	890	1320	215	
May-97	5672	1326	398	696	699	961	1393	199	
Jun-97	5079	939	391	662	679	903	1294	211	
Jul-97	5230	1142	400	742	689	914	1172	171	
Aug-97	4141	1296	454	314	0	972	995	110	
Sep-97	4454	1216	395	501	0	882	1247	213	
Oct-97	4640	1244	479	766	0	862	1097	192	
Nov-97	4149	399	741	456	0	721	721	1111	
Dec-97	5075	1609	660	1403	0	1238	0	165	
Jan-98	4793	1633	558	1202	0	1288	0	112	
Feb-98	4467	1671	505	971	0	1126	0	194	
Mar-98	4894	1645	535	1110	0	1316	0	288	
Apr-98	4035	2279	778	324	0	376	0	278	
May-98	3981	1316	429	766	0	0	1286	184	
Jun-98	3877	1242	454	757	0	0	1273	151	
Jul-98	3847	1230	410	757	0	0	1324	126	
Aug-98	4017	1454	380	759	0	0	1297	127	
Sep-98	4100	1367	390	781	0	0	1432	130	
Oct-98	3880	1326	356	744	0	0	1357	97	
Nov-98	3951	1317	345	784	0	0	1380	125	
Dec-98	3960	1289	409	754	0	0	1382	126	
Jan-99	4093	1364	409	750	0	0	1434	136	
Feb-99	3645	1166	408	671	0	0	1283	117	
Mar-99	4030	1287	373	745	0	0	1490	135	
Apr-99	3295	1249	352	705	0	0	893	96	
May-99	3831	1336	351	703	0	0	1300	141	
Jun-99	3753	1240	392	685	0	0	1273	163	
Jul-99	3892	1438	351	666	0	0	1402	35	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Aug-99	3725	1299	273	649	0	0	1470	34	
Sep-99	3535	1178	370	539	0	0	1381	67	
Oct-99	4246	1225	390	668	0	405	1521	37	
Nov-99	3955	1137	325	520	0	479	1364	130	
Dec-99	4170	1211	336	605	0	504	1379	135	
Jan-00	4195	1112	318	572	0	667	1399	127	
Feb-00	3699	964	271	512	0	602	1205	145	
Mar-00	4357	1179	295	516	0	820	1510	37	
Apr-00	4121	1101	378	344	0	791	1411	96	
May-00	3772	928	448	480	0	800	924	192	
Jun-00	4080	980	443	538	0	791	1138	190	
Jul-00	4159	1007	422	520	0	845	1138	227	
Aug-00	4176	832	496	576	0	928	1249	95	
Sep-00	4048	893	431	492	0	923	1201	108	
Oct-00	3995	867	403	496	0	836	1176	217	
Nov-00	4105	1156	365	426	0	730	1215	213	
Dec-00	4145	1139	348	475	0	759	1171	253	
Jan-01	4143	911	470	558	0	881	1088	235	
Feb-01	3650	885	387	415	0	664	1050	249	
Mar-01	4044	1025	373	435	0	839	1210	162	
Apr-01	3957	935	436	467	0	779	1215	125	
May-01	4023	1005	389	422	0	876	1234	97	
Jun-01	3972	931	385	449	0	803	1179	225	
Jul-01	4049	949	411	443	0	823	1202	221	
Aug-01	3782	943	325	423	0	846	1050	195	
Sep-01	3640	898	353	385	0	561	1283	160	
Oct-01	3912	922	350	509	0	763	1209	159	
Nov-01	3917	1062	365	432	0	697	1228	133	
Dec-01	3791	971	402	435	0	803	1080	100	
Jan-02	3913	895	398	398	0	796	1327	99	
Feb-02	3539	833	327	476	0	714	1040	149	
Mar-02	3942	923	487	428	0	822	1150	132	
Apr-02	3903	1109	409	332	0	785	1087	181	
May-02	3902	945	427	396	0	793	1189	152	
Jun-02	3805	943	409	377	0	755	1132	189	
Jul-02	3934	958	376	445	0	855	1197	103	
Aug-02	3759	995	320	427	0	889	1021	107	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Sep-02	3737	959	364	496	0	860	959	99	
Oct-02	3992	951	460	408	0	849	1188	136	
Nov-02	3855	924	382	414	0	828	1148	159	
Dec-02	3954	954	375	375	0	852	1228	170	
Jan-03	3922	921	341	341	0	955	1228	136	
Feb-03	3514	863	308	339	0	801	1080	123	
Mar-03	3286	886	296	329	0	822	854	99	
Apr-03	3269	617	269	369	0	839	1108	67	
May-03	4082	1057	328	401	0	911	1276	109	
Jun-03	3754	942	336	370	0	841	1211	54	
Jul-03	3795	1037	346	384	0	691	1268	69	
Aug-03	3535	976	273	234	151	937	925	39	
Sep-03	3472	896	287	247	0	824	1110	108	
Oct-03	3601	834	300	533	0	700	1134	100	
Nov-03	3899	888	329	460	281	756	1086	99	
Dec-03	3471	937	291	387	261	936	562	97	
Jan-04	3166	943	349	454	254	803	293	70	
Feb-04	3264	860	350	414	165	733	646	96	
Mar-04	3794	863	398	398	242	797	963	133	
Apr-04	3724	864	332	399	234	764	1031	100	
May-04	3707	862	321	398	205	762	1026	133	
Jun-04	3553	850	366	396	234	701	884	122	
Jul-04	3781	882	346	441	285	819	882	126	
Aug-04	3843	853	361	459	271	820	984	95	
Sep-04	2860	833	276	368	231	735	337	80	
Oct-04	3336	814	313	407	264	752	598	188	
Nov-04	3913	792	330	396	347	759	1190	99	
Dec-04	3824	787	308	411	265	856	1129	68	
Jan-05	3746	817	284	355	228	817	1174	71	
Feb-05	3174	657	233	333	118	733	1000	100	
Mar-05	3672	856	223	335	210	819	1155	74	
Apr-05	3310	553	240	309	239	823	1064	82	
May-05	3706	906	302	378	244	831	982	63	
Jun-05	3417	788	274	240	360	856	762	137	
Jul-05	3241	550	270	303	265	809	977	67	
Aug-05	3677	1000	269	308	254	846	923	77	
Sep-05	3538	802	279	279	295	802	1011	70	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Oct-05	3862	831	302	340	348	831	1134	76	
Nov-05	3627	740	303	269	330	807	1111	67	
Dec-05	3713	814	331	415	313	743	1026	71	
Jan-06	3799	912	421	421	363	771	771	140	
Feb-06	3093	744	275	330	310	661	635	138	
Mar-06	3710	835	278	371	370	773	928	155	
Apr-06	3442	732	322	322	390	762	820	94	
May-06	3402	720	327	295	284	753	949	74	
Jun-06	3527	671	275	275	416	884	884	122	
Jul-06	2950	197	296	384	387	710	828	148	
Aug-06	3183	524	283	368	397	678	792	141	
Sep-06	3325	686	257	371	411	686	771	143	
Oct-06	3328	654	267	357	416	713	772	149	
Nov-06	3212	648	236	383	324	678	855	88	
Dec-06	3234	583	246	368	349	737	828	123	
Jan-07	3368	749	240	390	371	689	779	150	
Feb-07	3078	691	221	359	343	635	718	111	
Mar-07	3332	725	221	410	430	726	725	95	
Apr-07	3192	754	225	392	402	664	664	91	
May-07	3119	822	221	380	50	823	696	127	
Jun-07	2755	703	214	367	361	673	314	123	
Jul-07	3236	723	220	346	254	755	781	157	
Aug-07	3394	716	187	404	252	747	932	156	
Sep-07	3183	711	208	326	278	711	860	89	
Oct-07	3192	719	188	281	253	719	907	125	
Nov-07	3073	685	208	298	155	685	893	149	
Dec-07	3070	697	212	243	129	758	879	152	
Jan-08	3400	715	228	390	280	748	909	130	
Feb-08	3249	668	174	436	344	668	814	145	
Mar-08	3417	672	214	397	362	703	886	183	
Apr-08	3213	658	209	389	341	718	778	120	
May-08	3252	717	218	405	385	686	716	125	
Jun-08	3201	669	213	365	343	699	760	152	
Jul-08	3520	739	202	370	396	773	872	168	
Aug-08	3333	674	193	353	412	738	835	128	
Sep-08	3237	657	219	376	388	657	846	94	
Oct-08	3309	667	222	349	450	699	795	127	

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Nov-08	3207	676	184	338	440	676	770	123	
Dec-08	2915	590	225	337	245	646	760	112	
Jan-09	3214	649	260	357	390	682	714	162	
Feb-09	2966	577	220	302	384	604	742	137	
Mar-09	3147	642	204	350	346	642	817	146	
Apr-09	2797	655	208	357	0	655	803	119	
May-09	2927	623	218	374	0	685	871	156	
Jun-09	2835	636	203	347	0	694	839	116	
Jul-09	2991	651	207	355	0	740	919	119	
Aug-09	3022	665	212	363	0	755	906	121	
Sep-09	2944	641	175	350	0	729	903	146	
Oct-09	2998	690	210	360	0	750	838	150	
Nov-09	2922	659	201	344	0	716	859	143	
Dec-09	2999	672	214	425	0	650	885	153	
Jan-10	2882	642	214	346	0	639	919	122	
Feb-10	2723	590	188	310	0	697	804	134	
Mar-10	3026	676	184	321	0	799	954	92	
Apr-10	2708	593	189	323	0	607	861	135	
May-10	3047	687	209	388	0	717	927	119	
Jun-10	2915	611	194	361	0	722	888	139	
Jul-10	3057	666	182	363	0	726	969	151	
Aug-10	2929	638	174	348	0	725	928	116	
Sep-10	2993	635	181	363	0	726	937	151	
Oct-10	2985	640	213	366	0	731	913	122	
Nov-10	2874	616	176	323	0	733	909	117	
Dec-10	3044	615	184	338	0	769	984	154	
Jan-11	3027	636	182	363	0	726	969	151	
Feb-11	2708	547	164	328	0	656	876	137	
Mar-11	3033	643	184	337	0	766	980	123	
Apr-11	2957	615	176	351	0	761	937	117	
May-11	2981	614	175	351	0	731	935	175	
Jun-11	2526	515	172	294	0	662	760	123	
Jul-11	3063	643	245	306	0	766	980	123	
Aug-11	3045	615	215	338	0	738	985	154	
Sep-11	2939	617	206	353	0	705	911	147	
Oct-11	3015	633	211	362	0	724	934	151	
Nov-11	2908	605	202	288	0	749	920	144	



Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Dec-11	3003	589	206	353	0	765	943	147	
Jan-12	2989	586	205	381	0	762	938	117	
Feb-12	2802	544	190	326	0	735	871	136	
Mar-12	2983	584	185	369	0	800	922	123	
Apr-12	2881	593	169	367	0	734	905	113	
May-12	3025	611	214	397	0	794	887	122	
Jun-12	2879	578	202	307	0	751	896	145	
Jul-12	2962	598	209	329	0	778	898	150	
Aug-12	2767	591	177	325	0	739	787	148	
Sep-12	2817	569	180	300	0	749	899	120	
Oct-12	2752	609	183	304	0	730	851	75	
Nov-12	2767	611	183	275	0	734	888	76	
Dec-12	2877	608	183	383	0	730	882	91	
Jan-13	2894	630	183	315	0	788	883	95	
Feb-13	2602	537	170	283	0	707	820	85	
Mar-13	2889	621	186	311	0	777	901	93	
Apr-13	2790	600	210	330	0	720	840	90	
May-13	2905	612	214	336	0	734	887	122	
Jun-13	2842	611	122	336	0	764	887	122	
Jul-13	2869	604	211	302	0	785	876	91	
Aug-13	2879	626	219	313	0	782	845	94	
Sep-13	2578	554	166	305	0	693	777	83	
Oct-13	2855	614	184	307	0	829	829	92	
Nov-13	2783	557	176	322	0	762	849	117	
Dec-13	2938	575	212	333	0	757	879	182	
Jan-14	2977	576	242	340	0	758	879	182	0
Feb-14	2721	517	163	327	0	708	790	191	25
Mar-14	3697	568	179	359	0	747	866	269	709
Apr-14	3928	592	207	355	0	740	858	118	1058
May-14	3848	604	181	302	0	755	876	242	888
Jun-14	4171	564	169	310	0	705	817	141	1465
Jul-14	3875	590	186	311	0	776	645	155	1212
Aug-14	3903	540	180	300	0	721	901	180	1081
Sep-14	3706	496	175	292	0	730	817	146	1050
Oct-14	3551	520	173	260	0	722	722	115	1039
Nov-14	3496	505	172	267	0	712	712	178	950
Dec-14	3537	514	181	272	0	726	726	151	967

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Jan-15	3441	516	182	273	0	729	759	10	972
Feb-15	3332	476	168	252	0	672	728	196	840
Mar-15	3633	523	185	308	0	739	770	185	923
Apr-15	3406	487	183	305	0	731	731	183	786
May-15	3524	507	179	298	0	745	716	179	900
Jun-15	3257	467	165	275	0	660	687	137	866
Jul-15	3535	503	69	296	0	710	716	148	1093
Aug-15	3427	497	0	249	0	746	839	196	900
Sep-15	3284	503	0	266	0	710	740	207	858
Oct-15	3207	544	0	286	0	687	716	172	802
Nov-15	3275	497	0	263	0	702	760	175	878
Dec-15	3334	530	0	280	0	748	779	156	841
Jan-16	3199	504	0	296	0	711	770	148	770
Feb-16	2765	448	0	237	0	632	659	127	662
Mar-16	2733	524	0	308	0	174	740	154	833
Apr-16	2519	510	0	300	0	0	780	150	779
May-16	2638	534	0	314	0	0	817	188	785
Jun-16	2597	502	0	295	0	0	797	177	826
Jul-16	2651	524	0	308	0	0	832	216	771
Aug-16	2929	579	0	307	0	0	919	238	886
Sep-16	2609	499	0	294	0	23	823	206	764
Oct-16	3156	531	0	312	0	531	782	187	813
Nov-16	3153	485	0	273	0	637	788	182	788
Dec-16	3238	519	0	305	0	703	794	153	764
Jan-17	3155	506	0	298	0	714	744	179	714
Feb-17	2861	463	0	272	0	681	682	136	627
Mar-17	2823	491	0	307	0	570	736	153	566
Apr-17	3096	501	0	295	0	708	708	147	737
May-17	3107	531	0	281	0	734	687	156	718
Jun-17	2841	512	0	271	0	752	462	181	663
Jul-17	3214	494	0	262	0	697	860	116	785
Aug-17	3293	514	0	302	0	725	966	121	665
Sep-17	3089	480	0	180	0	720	899	150	660
Oct-17	3373	468	0	375	0	750	968	156	656
Nov-17	3172	445	0	326	0	711	919	148	623
Dec-17	3220	491	0	337	0	705	890	153	644
Jan-18	3225	456	0	369	0	699	941	152	608

Month/Year	Cummulative Oil Production (BBL)	26	28	29	33	34	35	10	43
Feb-18	2785	402	0	321	0	616	803	107	536
Mar-18	3238	493	0	339	0	678	957	154	617
Apr-18	3107	461	0	338	0	708	893	123	584
May-18	2537	381	0	254	0	533	735	127	507
Jun-18	3020	449	0	329	0	628	866	150	598
Jul-18	2923	454	0	303	0	636	878	151	501
Aug-18	3051	451	0	271	44	662	811	120	692
Sep-18	3105	448	0	280	252	587	755	84	699
Oct-18	2908	480	0	270	150	630	808	150	420
Nov-18	2694	410	0	264	146	586	790	88	410
Dec-18	2840	432	0	247	154	618	834	123	432
Jan-19	2785	419	0	240	150	599	808	150	419
Feb-19	2392	401	0	231	0	535	669	155	401
Mar-19	2852	444	0	349	0	665	823	127	444
Apr-19	2812	449	0	329	0	658	747	120	509
May-19	2899	427	0	366	0	610	794	153	549
Jun-19	2859	451	0	331	0	602	783	150	542
Jul-19	2907	424	0	303	0	606	817	212	545
Aug-19	2902	458	0	305	0	641	795	153	550
Sep-19	2775	393	0	302	0	633	783	121	543
Oct-19	2791	425	0	273	0	637	788	152	516
Nov-19	2805	436	0	281	0	655	778	125	530
Dec-19	2771	431	0	277	0	647	770	123	523
Jan-20	2902	443	0	306	0	696	792	127	538
Feb-20	2624	413	0	295	0	590	707	118	501
Mar-20	2779	406	0	312	0	624	750	156	531
Apr-20	2690	407	0	282	0	626	750	125	500
May-20	2800	414	0	286	0	636	796	127	541
Jun-20	2826	381	0	286	0	667	857	127	508
Jul-20	2610	408	0	282	0	659	878	125	258
Aug-20	2921	307	0	277	0	646	861	123	707



October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for Tensleep 1 Tank Battery (FID F004571)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax® 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 27.98 tpy (5.09 tpy from fugitives) to 5.73 tpy (5.07 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (redrilling a well in September of 2012 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The well redrill was an effort to mitigate declining production; however, the data illustrates that after redrilling, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

*RJ Redweik*

Robert J. Redweik  
Director EHS/Regulatory

Attachments

**FILED**

**JUL 06 2020**

**Jim Ruby, Executive Secretary  
Environmental Quality Council**

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ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027431 )  
Tensleep 1 Tank Battery (F004571) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027431 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 9, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027431. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027431. A copy of Permit No. P0027431 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by the AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the Tensleep 1 Tank Battery (F004571) located in Park County, Wyoming. In its application, Citation noted:

Pursuant to the audit discourses of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

Tensleep 1 Tank Battery (F004571), *Purpose of Application*.

6. On June 9, 2020, the DEQ issued Permit No. P0027431. Permit No. P0027431 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027431 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See* Exhibit A, Conditions 7-13, 20.

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, Tensleep 1 Tank Battery (F004571) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to Tensleep 1 Tank Battery (F004571), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027431 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027431.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027431, and that the Council modify Permit No. P0027431 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



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ATTORNEYS FOR PETITIONER



**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on:

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002

A handwritten signature in black ink, appearing to read 'James Kaste', is written over a horizontal line.



Mark Gordon, Governor

EXHIBIT A

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Todd Parfitt, Director

Date: June 9, 2020

Ms. Lee Ann Elsom
Regulatory Compliance Manager
Citation Oil & Gas Corporation
14077 Cutten Road
Houston, TX 77002

Permit No. P0027431

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the Tensleep 1 Tank Battery (F004571) by updating the equipment list, with three smokeless flares to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and active produced water tanks, located in the SW1/4NE1/4 of Section 12, T47N, R100W, approximately eight (8) miles south-southeast of Meeteetse, in Park County, Wyoming.

Following this agency's proposed approval of the request as published April 30, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the Tensleep 1 Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

- 1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through https://airimpact.wyo.gov to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

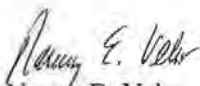
6. Effective upon permit issuance, this permit shall supersede Air Quality Permit wv-WQ9 for the Tensleep 1 Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks, all oil pop tanks and all active produced water tanks, including tank flash and S/W/B vapors, shall be routed to the flares to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the devices by at least ninety-eight percent (98%) by weight for at least one (1) year following the date of installation of the control devices, after which time the devices may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized VOC emission rate from the oil tanks is less than, and will remain less than four (4) tons per year.

15. The presence of the flare pilot flames shall be monitored using thermocouples and continuous recording devices or any other equivalent devices to detect and record the presence of the flames. Records shall be maintained noting periods during active well site operation when any of the pilot flames are not present. The records shall contain a description of the reason(s) for absence of the pilot flames and steps taken to return the pilot flames to proper operation.
16. The continuous pilot monitoring systems under Condition 15 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring systems.
17. The flares shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
18. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
19. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the flares is at least ninety-eight percent (98%).
20. Citation Oil & Gas Corporation shall comply with all applicable requirements of 40 CFR part 60, subpart OOOO.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

NV/hb

**Wells Producing to Tensleep 1 Tank Battery**

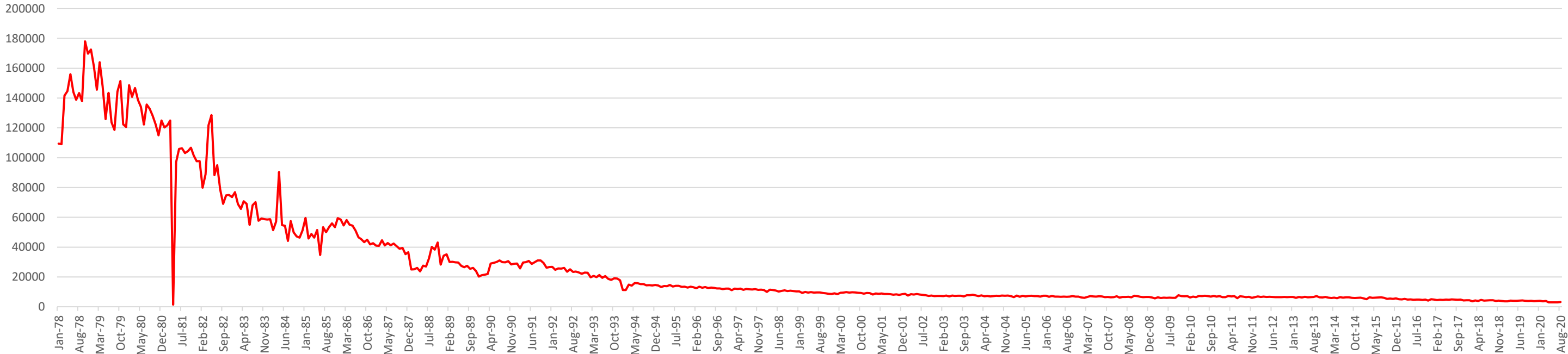
Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
LBB DSU 129	SW NW	7	47	99	44.05999	-108.79207	10/6/75
LBB DSU 134	NW SW	7	47	99	44.05545	-108.77356	8/3/88
LBB DSU 163	SW SW	7	47	99	44.05299	-108.78911	1/5/78
LBB DSU C-045855 164	NWNW	7	47	99	44.06397	-108.79199	6/8/88
LBB 178H <sup>1</sup>	SW NW	7	47	99	44.05830	-108.78870	4/19/86
LBB DSU 175	NWNW	7	47	99	44.06193	-108.78972	9/22/78
LBB DSU 174	NWNW	7	47	99	44.06450	-108.78835	10/21/88
LBB DSU 214	SW NW	7	47	99	44.05804	-108.78912	3/27/80
LBB Unit 395	NWNW	7	47	99	44.06380	-108.79154	1/29/88
LBB DSU 65	SW SE	1	47	100	44.06519	-108.80009	6/3/68
LBB DSU C-045855 116	SW NE	12	47	100	44.05917	-108.80301	3/29/73
Little Buffalo Basin 127	NE NE	12	47	100	44.06083	-108.79481	8/4/75
LBB DSU 130	SW NE	12	47	100	44.05741	-108.80039	7/21/75
LBB DSU C-045855 131	SE NE	12	47	100	44.05729	-108.79479	9/19/88
C-044187 LBB 128	SE NE	12	47	100	44.05879	-108.79731	8/20/75
LBB DSU Unit 126	NW NE	12	47	100	44.06091	-108.80049	11/30/87
LBB DSU C-045855 161	SE SE	1	47	100	44.06459	-108.79589	7/15/88
LBB DSU C-044187 162	NW NE	12	47	100	44.06211	-108.80417	9/14/88
LBB DSU C-044187 236	SE NE	12	47	100	44.05931	-108.79583	11/15/80
LBB DSU C-044187 314	SE NE	12	47	100	44.05725	-108.79424	11/12/83
LBB Unit 393	NW NE	12	47	100	44.06281	-108.7986	1/22/88
LBB DSU 394	NE NE	12	47	100	44.06179	-108.79791	1/27/88
LBB DSU 396	SE SE	12	47	100	44.06509	-108.79437	4/13/88

<sup>1</sup> the LBB 178H well was worked over in 2012

**EQUIPMENT LIST**

- two (2) heater treaters w/ 1.25 MMBtu/hr heaters
- two (2) 1000-bbl and two (2) 300-bbl oil storage tanks
- one (1) 1000-bbl produced water tank
- one (1) 90-bbl oil pop tank
- three (3) smokeless flares w/ continuous pilot monitoring systems (oil tank, active produced water tank and oil pop tank control)

Tensleep 1 Battery - Oil Production (BBL/month) Over Time



Month/Year	Cummulative Oil Production (BBL)	129	134	163	164	178H	175	174	214	395	65	116	127	130	131	128	126	161	162	236	314	393	394	396
Jan-78	109377	8210	10863	26	0						770	3008	15279	23870	10713	20058	13384	268	2928					
Feb-78	109076	7413	9930	0	0						730	2679	20264	23376	9451	20751	11718	267	2497					
Mar-78	141687	9719	15471	1605	0						1144	3231	23291	22748	17000	28692	16467	294	2025					
Apr-78	144620	8361	13597	1416	975						911	3164	30349	24036	16648	26931	16127	0	2105					
May-78	155962	9272	14437	1570	1855						1411	3000	24246	20128	25638	32593	12737	7392	1683					
Jun-78	144083	9183	9336	1617	1896						1765	3049	21695	21042	18822	33626	13022	7348	1682					
Jul-78	138888	9309	15587	1280	2068						1682	3154	11627	13581	24727	30000	15992	7478	2403					
Aug-78	143361	7943	13228	1321	1653						1767	4613	21189	21472	26238	22932	11920	6216	2869					
Sep-78	137855	7981	17257	1241	1713						2101	5745	17139	13124	26500	25967	12417	5314	1356					
Oct-78	178072	9470	21561	1511	1786						2629	6897	28728	15846	36080	31353	14179	6421	1611					
Nov-78	169755	9307	21175	1418	1717						2543	6538	24331	18475	29458	30819	14937	6206	2831					
Dec-78	172601	9409	26040	1497	2050						2783	2992	23673	20566	28263	29737	14970	7990	2631					
Jan-79	161170	11543	18745	1845	812	0		0			2633	3302	23514	16346	28073	31583	12227	8210	2337					
Feb-79	145576	11317	18528	2050	800	0		0			2638	1794	9772	16156	34150	31216	10583	4261	2311					
Mar-79	164032	11683	18971	1929	816	0		0			2701	1268	27863	16452	34730	30631	10486	4118	2384					
Apr-79	147995	11126	17968	2076	777	0		0			2558	2214	26535	15668	31915	21513	9462	3912	2271					
May-79	125912	13447	21539	4142	737	0		0			3092	2676	32069	18067	8524	2262	12404	4209	2744					
Jun-79	143549	11314	18272	3910	487	0		0			2308	2276	26983	15202	33678	13880	9382	3547	2310					
Jul-79	123751	5529	9696	3686	572	0		0			2670	2311	27694	4874	34565	16571	9557	3655	2371					
Aug-79	118684	6830	6121	3564	816	0		0			2671	2376	24733	6362	34919	17621	6453	3780	2438					
Sep-79	144299	12010	15805	6402	947	0		2091			2649	5939	22384	15380	24172	17390	12791	2716	3623					
Oct-79	151487	11824	14664	5080	840	323		19799			2982	3498	22541	15171	26620	20360	15	4575	3195					
Nov-79	122397	10368	14730	5000	815	316		1650			3731	3367	22064	10457	26143	7780	8575	4297	3104					
Dec-79	120582	20339	0	5334	1328	514		2027			6260	5841	0	18029	42852	12942	0	0	5116					
Jan-80	148641	17517	0	3132	1477	443		0	0		5435	8997	0	35953	29451	41828	0	0	4408	0				
Feb-80	140864	16492	0	2779	1373	420		0	0		4805	8471	0	33849	29146	39380	0	0	4149	0				
Mar-80	146825	23197	0	1795	1937	584		6190	220		6768	11915	4646	20717	10399	52716	0	0	5741	0				
Apr-80	138751	17771	0	1649	1503	450		4796	1045		5178	9128	14855	2679	26196	40221	8783	0	4497	0				
May-80	134049	13618	0	1788	1633	490		5162	1107		5605	9097	17140	0	30972	30231	12394	0	4812	0				
Jun-80	122291	3286	6726	1689	1378	409		4336	766		4709	7969	14273	0	25722	36404	11042	0	3582	0				
Jul-80	135686	1610	15486	3564	377	0		0	1185		6006	1756	13709	0	31201	44778	10515	482	5017	0				
Aug-80	132931	9253	2875	3207	1538	0		0	6260		1232	7744	23739	0	26825	33469	10410	5218	1161	0				
Sep-80	128211	5272	9298	3242	411	0		0	12693		3571	5006	20238	0	30748	21765	8041	4863	3063	0				
Oct-80	122489	11371	5432	3678	483	0		0	8586		2040	1798	24202	0	23290	18456	5563	10370	7220	0				
Nov-80	115010	10480	5314	3576	449	0		0	7923		2362	1672	22125	0	21227	18357	5225	9015	7285	0				
Dec-80	124921	13507	9539	4775	441	0		0	6608		6397	1644	20307	0	23972	19225	7475	9051	1411	569				
Jan-81	120293	14303	8007	4773	464	0	0	0	6733		7153	1726	23373	0	13118	20278	7862	10433	1503	567				
Feb-81	121803	12457	9394	3478	433	0	0	0	6611		6777	775	20389	0	23800	19070	7315	9353	1403	548				
Mar-81	124928	9410	12088	526	660	0	0	0	7114		6233	2920	23737	0	22729	20619	7284	9381	1539	688				
Apr-81	1405	0	0	609	0	0	0	0	0		0	0	0	0	0	0	0	0	0	796				
May-81	97021	6715	9520	4365	316	406	0	0	3468		3075	1820	16242	7249	17811	6443	10403	7251	1245	692				
Jun-81	105895	6303	8621	4485	532	4	0	0	3399		6056	3986	13101	8158	18540	7597	9919	6930	7664	600				
Jul-81	106313	6407	5274	4446	619	4	0	0	3564		4757	3584	16345	11828	17848	8118	10387	4595	8025	512				
Aug-81	103086	6185	7111	3305	1581	4	0	0	2926		4567	3952	18203	9129	18562	7988	7452	3881	7726	514				
Sep-81	104425	9153	8148	3333	1586	588	2289	4382	1743		5364	3621	14964	7495	13831	9280	6866	2521	6514	2747				
Oct-81	106691	9352	7178	586	1658	570	2396	4582	2291	1658	5480	3792	15667	7593	16646	9717	7189	2633	6308	3053				
Nov-81	101424	9408	8307	1737	592	375	2333	4461	2168		5461	3692	15254	7640	16407	4415	6998	2407	6640	3129				
Dec-81	97668	8537	5444	3728	1381	871	587	2811	2377		5597	1435	13751	6697	21215	0	8512	5185	6390	3150				
Jan-82	97688	4907	2509	5407	1533	1160	1886	3123	2647		5280	2865	14829	7457	23625	0	9453	5807	1978	3222				
Feb-82	79925	8189	9996	4602	2578	1085	1862	2605	4087		4690	2084	6398	7229	8663	0	9188	3647	802	2220				
Mar-82	88836	8366	9610	5567	2341	0	1830	2659	1287		3423	2099	7453	7163	20763	0	8998	3813	1395	2069				
Apr-82	121751	57618	6637	3364	1955	911	1861	1996	1040		2455	1634	9560	5808	13973	0	7183	3702	8	2046				
May-82	128588	61252	7596	3652	2079	0	1978	2079	751		3024	1772	9931	6174	14854	0	7513	3857	0	2076				
Jun-82	88269	6774	5345	2959	2079	0	2744	2641	1114		4630	2557	12394	7547	17818	5053	8409	5922	283	0				
Jul-82	94975	7196	4949	3057	2435	0	2309	3748	1505		4510	2692	12017	7527	18070	8251	7890	6423	279	2117				
Aug-82	78700	5540	8370	3110	1881	0	2881	2995	977		3725	2725	12448	6823	5492	7825	4847	6005	273	2783				
Sep-82	69008	3075	5969	1111	1902	1716	2119	2547	1801		4075	2702	12483	5515	5012	6963	3493	5682	263	2580				
Oct-82	74797	3115	6048	3680	2055	1132	2230	2596	1955		4509	2424	9743	5590	12248	7514	2817	4178	425	2538				
Nov-82	74938	3753	7866	1890	2117	677	2396	3488	2364		4643	2075	10060	5771	9814	7770	3881	3996	442	1935				
Dec-82	73561	6832	6504	3879	1869	183	2431	2581	1717		4102	2200	10435	7030	12534	8469	0	0	523	2272				
Jan-83	76880	6604	6938	3551	2381	10	3020	2578	1553		4641	2825	6709	7098	16244	11264	0	0	632	832				
Feb-83	68946	5281	7031	3559	799	673	2812	3929	1402		4487	2456	5833	5483	12988	10807	0	0	521	885				
Mar-83	65622	5782	7730	5222	876	424	3105																	

Month/Year	Cumulative Oil Production (BBL)	129	134	163	164	178H	175	174	214	395	65	116	127	130	131	128	126	161	162	236	314	393	394	396
Apr-83	70758	4140	6034	1308	840	398	2187	2461	1158		3345	1998	8733	4661	11232	9466	4260	5674	1563	1300				
May-83	69008	3959	1591	2353	775	2137	1819	2242	1107		6643	1993	8553	4429	10739	9051	3045	4623	1688	2261				
Jun-83	54899	3020	3368	1294	916	1958	1757	1705	668		4357	1646	6857	3217	7532	7374	2656	4579	206	1789				
Jul-83	68130	2295	4162	1796	1326	423	2068	9227	1644		4613	3407	7609	4163	8979	8622	1765	3818	477	1736				
Aug-83	70189	3111	4069	3610	1166	4370	2048	9020	751		4491	3131	5851	4069	9228	6273	2518	3551	1167	1765				
Sep-83	57688	2702	2945	2699	791	427	5568	7060	2435		3526	2536	6274	3185	6004	4649	2655	2409	0	1823				
Oct-83	59264	3626	4223	2402	1367	450	6294	7902	2134		2207	2158	7233	2912	4331	5548	2232	2573	0	1672				
Nov-83	58772	3520	1798	2328	737	451	5450	7449	1691		2736	2261	7279	3520	5828	4692	3663	3996	0	1373				
Dec-83	58500	1958	2856	4596	682	358	7593	7659	535		3500	2092	6471	2928	5392	3603	3390	3425	0	1462				
Jan-84	58761	2205	1375	4083	768	121	8548	3965	464		3940	2355	7285	3295	4896	4337	3815	4981	1042	1286	0			
Feb-84	51449	1908	1532	2771	665	113	7396	3430	890		3409	2038	6302	2851	5252	3752	3074	3418	1543	1105	0			
Mar-84	57116	2489	790	3615	542	133	3924	4475	1054		2820	1623	7132	3076	8139	4579	2797	6908	1762	1258	0			
Apr-84	90332	1756	1189	4495	884	286	9831	1160	1006		33910	2707	8720	3191	4814	4815	4388	5727	0	1453	0			
May-84	54840	2609	1253	3538	1118	300	2439	2643	1340		2328	2712	8335	3381	4550	5930	3388	5151	2134	1201	490			
Jun-84	54293	1576	1192	202	559	284	2236	2440	2411		4981	2008	5498	2643	16190	4257	533	3354	2491	1236	202			
Jul-84	44128	4034	854	0	765	370	2574	3164	124		5251	2608	5748	4347	3996	2781	313	4347	1669	1183	0			
Aug-84	57463	1607	0	2592	840	350	3507	3031	888		7494	2739	10081	3798	4197	7817	986	4274	1534	1728	0			
Sep-84	49868	3517	0	1033	664	388	2820	2754	398		4811	2455	8262	3351	5408	6237	1094	3318	1957	1401	0			
Oct-84	47159	2016	0	1270	615	413	2905	2836	410		4955	897	8234	3451	4492	4887	2939	3110	2016	1713	0			
Nov-84	46417	0	1231	1075	1309	321	1880	907	403		4466	2619	2500	3391	13365	4600	2490	2518	1176	2166	0			
Dec-84	51307	0	0	2156	990	352	2887	1114	64		4250	415	2739	2930	16419	11221	578	2818	619	1755	0			
Jan-85	59576	0	0	2296	570	354	3456	646	66		6723	860	13407	912	17129	8849	798	1140	341	2029	0			
Feb-85	45832	0	150	1775	543	281	2099	992	434		5752	174	9551	1411	14568	3148	0	3001	253	1700	0			
Mar-85	48825	0	149	2614	587	282	3443	1018	39		6221	470	10329	3482	14085	2181	0	2757	195	973	0			
Apr-85	46387	4333	0	2707	215	205	3223	394	0		5693	0	8522	2113	11673	1647	0	4011	322	1329	0			
May-85	51487	1105	1739	2305	1416	236	3257	1954	2322		4786	142	6400	5211	10421	3851	0	4276	494	1572	0			
Jun-85	34706	1159	1734	2503	1211	311	1892	1346	1636		2608	85	5130	818	5658	2915	1141	2369	562	1628	0			
Jul-85	53433	2084	1086	2452	1817	342	1745	2140	394		4252	732	9039	2815	8403	4787	2084	6105	1717	1439	0			
Aug-85	50005	861	1614	3153	1865	330	1779	2467	0		0	688	8911	2782	8606	4790	1951	5663	2123	1422	1000			
Sep-85	53406	0	1197	3708	1035	207	1631	2199	2588		3105	699	7788	2406	7892	4451	1734	7504	1346	1298	2618			
Oct-85	56004	32	1230	3600	1275	210	2186	2883	760		246	792	8870	2851	9345	4942	2217	9504	1299	1401	2361			
Nov-85	53325	14	0	2289	1810	217	2357	2767	410		888	646	8813	3074	9667	5738	2426	6901	1742	1025	2541			
Dec-85	59479	0	0	2451	1599	270	2398	3452	618		5014	1054	9193	3161	10284	4825	2434	7085	1934	780	2927			
Jan-86	58544	0	0	1741	1601	265	1711	3366	35		4576	873	8628	2759	11387	5309	3737	6707	1886	1517	2446			
Feb-86	54556	0	0	4775	2232	205	4867	4222	4		3034	1022	5943	1747	7073	4760	2205	4947	3281	1341	2898			
Mar-86	58174	0	0	4772	2069	258	5180	4493	0		3348	1087	6324	1860	7527	5066	2347	5265	3492	1240	3846			
Apr-86	55012	0	0	4666	2692	250	1346	4427	0		3291	781	6611	2333	7867	5414	2573	5145	2692	1164	3760			
May-86	54439	0	0	5852	2643	263	1322	4346	0		3230	793	6490	2290	7724	5315	2614	5051	2472	1067	2967			
Jun-86	51211	0	0	5641	2486	268	1242	4088	0		3038	423	6104	2154	7265	5000	2458	4750	2486	949	2859			
Jul-86	46630	0	0	1982	3627	214	916	5382	0		3588	776	7062	1374	1374	5268	2901	5268	2863	993	3042			
Aug-86	45334	0	0	1932	3561	208	899	5286	0		3523	736	6934	1350	1349	5173	2849	5173	2358	1038	2965			
Sep-86	43385	0	0	1746	3382	192	855	5020	0		3346	748	6586	1239	1282	4913	2706	4913	2671	1013	2773			
Oct-86	44926	0	0	1635	2356	222	979	4006	0		2600	367	5169	2089	9695	3915	2019	3640	2171	964	3099			
Nov-86	41769	0	0	1610	2161	206	898	3678	0		2386	337	4744	2049	8899	3593	1853	3340	1993	969	3053			
Dec-86	42643	0	0	1829	2400	223	68	3076	0		2772	406	5714	1217	10143	3652	2367	4799	1556	1144	1277			
Jan-87	41003	0	0	1785	4266	227	40	4426	0		3299	436	6800	1449	805	4386	2687	6719	1402	938	1338			
Feb-87	40908	0	0	1942	2684	221	1384	2905	0		4953	830	4455	1993	7498	3265	1798	4206	637	966	1171			
Mar-87	44650	0	0	2021	3894	194	0	2370	0		6249	879	5118	2103	7913	3768	1916	4301	1413	1174	1337			
Apr-87	41103	0	0	1886	3727	164	1531	1726	0		6240	92	4593	1993	7164	3495	1618	3842	693	1094	1245			
May-87	42781	0	0	1950	3176	182	1558	3029	0		6057	676	4528	1878	7203	3381	1529	3851	1235	1145	1403			
Jun-87	41285	0	0	1932	2904	196	1620	2456	0		6059	754	4328	1759	6674	3183	1459	3518	1899	1130	1414			
Jul-87	42351	0	0	1791	2938	194	1525	2633	0		6791	638	4435	1719	6319	3132	1400	3438	2023	1053	2322			
Aug-87	40712	0	0	1855	3028	170	1286	2570	0		5513	486	4656	1686	6027	3370	972	3399	2171	1188	2335			
Sep-87	38856	339	0	1625	2985	177	1267	2535	0		5183	253	4422	1661	6168	2986	986	3352	1972	989	1956			
Oct-87	39497	283	0	1715	2538	182	1269	2011	0		5787	479	4704	1732	6406	3342	815	3528	1887	987	1832			
Nov-87	35260	185	0	1755	2546	205	1190	1521	0		2314	760	4860	1818	6711	3332	991	3603	1917	0	1552			
Dec-87	36593	209	0	1521	2620	173	1099	2458	0		5886	809	4301	1746	6015	3493	1068	3238	1196	0	761			
Jan-88	25040	0	0	1513	1622	162	723	1841	0	0	3791	460	2849	1183	3879	1728	420	2301	1206	0	1288	56	0	18
Feb-88	25143	187	0	1729	1839	144	749	1975	0	726	3927	477	1730	1158	2997	1728	0	2219	749	0	1217	1282	310	0
Mar-88	26072	193	0	1504	2615	102	892	2123	0	523	472	646	0	2153	4246	0	0	5322	585	0	2314	1367	1015	0
Apr-88	23739	240	0																					













Month/Year	Cumulative Oil Production (BBL)	129	134	163	164	178H	175	174	214	395	65	116	127	130	131	128	126	161	162	236	314	393	394	396
Oct-14	5893	0	297	24	642	0	0	401	0	0	0	0	481	0	588	455	0	695	775	106	121	534	0	774
Nov-14	5932	0	333	0	628	0	0	366	0	0	0	0	576	0	707	393	0	680	732	78	183	497	0	759
Dec-14	6085	0	283	0	641	0	0	390	0	0	0	0	614	0	754	391	0	725	725	84	223	530	0	725
Jan-15	5677	0	296	0	622	0	0	306	0	0	0	0	568	0	677	377	0	703	730	54	244	488	0	612
Feb-15	5072	0	294	0	595	0	0	106	0	0	0	0	425	0	619	159	0	644	669	148	173	546	0	694
Mar-15	6380	0	348	0	703	0	0	324	0	0	0	0	703	0	757	433	0	703	730	162	135	596	0	786
Apr-15	6013	0	292	0	630	0	0	368	0	0	0	0	577	0	682	394	0	682	735	104	262	551	0	736
May-15	6137	0	287	0	656	0	0	382	0	0	0	0	630	0	656	382	0	739	710	82	273	546	0	794
Jun-15	6207	0	309	0	658	0	0	384	0	0	0	0	658	0	686	412	0	741	713	82	247	521	0	796
Jul-15	6309	0	284	0	771	0	0	342	0	0	0	0	657	0	657	428	0	743	771	86	257	543	0	770
Aug-15	6000	0	295	0	657	0	0	355	0	0	0	0	602	0	629	371	0	711	765	82	246	520	0	767
Sep-15	5311	0	282	0	652	0	0	380	0	0	0	0	598	0	653	0	0	544	734	27	217	490	0	734
Oct-15	5555	0	289	0	682	0	0	382	0	0	0	0	628	0	682	0	0	627	709	54	246	492	0	764
Nov-15	5320	0	250	0	667	0	0	320	0	0	0	0	560	0	667	0	0	613	694	54	240	480	0	775
Dec-15	5661	0	260	0	696	0	0	390	0	0	0	0	585	0	779	0	0	640	696	84	251	502	0	778
Jan-16	5096	0	269	0	670	0	0	60	0	0	0	0	589	0	669	0	0	589	696	81	241	482	0	750
Feb-16	4957	0	246	0	666	0	0	0	0	0	0	0	586	0	667	0	0	586	693	47	240	480	0	746
Mar-16	5342	0	309	0	739	0	0	0	0	0	0	0	654	0	711	0	0	654	654	0	256	597	0	768
Apr-16	4861	0	0	0	675	0	0	0	0	0	0	0	648	0	729	0	0	621	675	0	243	567	0	703
May-16	4903	0	0	0	696	0	0	0	0	0	0	0	641	0	808	0	0	668	641	0	167	558	0	724
Jun-16	4738	0	0	0	681	0	0	0	0	0	0	0	599	0	817	0	0	626	626	0	163	517	0	709
Jul-16	4808	0	0	0	689	0	0	0	0	0	0	0	634	0	799	0	0	662	634	0	149	524	0	717
Aug-16	4803	0	0	0	675	0	0	0	0	0	0	0	594	0	782	0	0	648	648	0	189	567	0	700
Sep-16	4640	0	0	0	660	0	0	0	0	0	0	0	581	0	713	0	0	686	633	0	153	554	0	660
Oct-16	4788	0	0	0	672	0	0	0	0	0	0	0	588	0	812	0	0	644	700	0	168	504	0	700
Nov-16	4160	0	0	0	637	0	0	0	0	0	0	0	610	0	769	0	0	233	663	0	133	478	0	637
Dec-16	4995	0	0	0	698	0	0	0	0	0	0	0	614	0	838	0	0	837	669	0	167	446	0	726
Jan-17	4849	0	0	0	657	0	0	0	0	0	0	0	603	0	822	0	0	767	657	0	192	466	0	685
Feb-17	4513	0	0	0	620	0	0	0	0	0	0	0	525	0	693	0	0	692	573	168	215	406	0	621
Mar-17	4749	0	0	0	667	0	0	0	0	0	0	0	587	0	641	0	0	800	614	80	240	453	0	667
Apr-17	4595	0	0	0	792	0	0	0	0	0	0	0	536	0	612	0	0	766	587	52	204	408	0	638
May-17	4851	0	0	0	689	0	0	0	0	0	0	0	574	0	718	0	0	775	631	86	258	460	0	660
Jun-17	4658	0	0	0	621	0	0	0	0	0	0	0	565	0	791	0	0	706	649	84	169	452	0	621
Jul-17	4898	0	0	0	671	0	0	0	0	0	0	0	583	0	817	0	0	729	641	87	175	524	0	671
Aug-17	4816	0	0	0	659	0	0	0	0	0	0	0	545	0	774	0	0	688	659	86	172	602	0	631
Sep-17	4675	0	0	0	612	0	0	0	0	0	0	0	557	0	779	0	0	696	640	84	167	500	0	640
Oct-17	4776	0	0	0	654	0	0	0	0	0	0	0	569	0	796	0	0	682	626	85	171	483	0	710
Nov-17	4213	0	0	0	590	0	0	0	0	0	0	0	514	0	591	0	0	642	539	77	180	437	0	643
Dec-17	4375	0	0	0	589	0	0	0	0	0	0	0	486	0	639	0	0	691	563	77	230	435	0	665
Jan-18	4327	0	0	0	603	0	0	0	0	0	0	0	472	0	629	0	0	682	551	104	236	420	0	630
Feb-18	3610	0	0	0	523	0	0	0	0	0	0	0	431	0	522	0	0	591	386	90	204	364	0	499
Mar-18	4191	0	0	0	613	0	0	0	0	0	0	0	507	0	614	0	0	667	454	106	240	428	0	562
Apr-18	3844	0	0	0	549	0	0	0	0	0	0	0	449	0	549	0	0	624	425	100	200	400	0	548
May-18	4529	0	0	0	654	0	0	0	0	0	0	0	483	0	683	0	0	682	455	114	256	484	0	718
Jun-18	4149	0	0	0	551	0	0	0	0	0	0	0	426	0	552	0	0	653	401	150	201	436	0	779
Jul-18	4187	0	0	0	542	0	0	0	0	0	0	0	491	0	543	0	0	672	336	130	207	466	0	800
Aug-18	4306	0	0	0	589	0	0	0	0	0	0	0	508	0	535	0	0	669	428	133	214	428	0	802
Sep-18	4316	0	0	0	594	0	0	0	0	0	0	0	512	0	567	0	0	647	405	108	243	432	0	808
Oct-18	3859	0	0	0	545	0	0	0	0	0	0	0	470	0	569	0	0	569	371	50	148	396	0	741
Nov-18	4069	0	0	0	589	0	0	0	0	0	0	0	537	0	614	0	0	614	409	77	179	358	0	692
Dec-18	3934	0	0	0	541	0	0	0	0	0	0	0	541	0	457	0	0	670	438	52	232	360	0	643
Jan-19	3604	0	0	0	511	0	0	0	0	0	0	0	457	0	511	0	0	511	431	81	188	322	0	592
Feb-19	3595	0	0	0	489	0	0	0	0	0	0	0	391	0	563	0	0	562	392	73	122	342	0	661
Mar-19	4074	0	0	0	536	0	0	0	0	0	0	0	482	0	643	0	0	590	429	81	161	402	0	750
Apr-19	4040	0	0	0	558	0	0	0	0	0	0	0	478	0	665	0	0	611	398	54	159	372	0	745
May-19	4031	0	0	0	548	0	0	0	0	0	0	0	548	0	678	0	0	601	351	104	157	340	0	704
Jun-19	4082	0	0	0	540	0	0	0	0	0	0	0	515	0	669	0	0	592	480	77	154	334	0	721
Jul-19	4185	0	0	0	542	0	0	0	0	0	0	0	517	0	671	0	0	620	542	78	155	362	0	698
Aug-19	4056	0	0	0	563	0	0	0	0	0	0	0	483	0	643	0	0	590	510	81	125	364	0	697
Sep-19	3926	0	0	0	514	0	0	0	0	0	0	0	488	0	539	0	0	564	513	77	154	436	0	641
Oct-19	3944	0	0	0	526	0	0	0	0	0	0	0	500	0	526	0	0	578	499	79	158	420	0	658
Nov-19	3783	0	0	0	501	0	0	0	0	0	0	0	477	0	526	0	0	551	526	75	150	375	0	602
Dec-19	3921	0	0	0	520	0	0	0	0	0	0	0	493	0	597	0	0	545	520	104	156	364	0	622

Month/Year	Cummulative Oil Production (BBL)	129	134	163	164	178H	175	174	214	395	65	116	127	130	131	128	126	161	162	236	314	393	394	396
Jan-20	3949	0		0	537		0	0	0	0		0	457	0	565	0	0	564	510	108	161	403	0	644
Feb-20	3687	0		0	491		0	0	0	0		0	467	0	590	0	0	541	467	74	147	344	0	566
Mar-20	3847	0		0	551		0	0	0	0		0	494	0	668	0	0	580	287	48	145	406	0	668
Apr-20	2990	0		0	0		0	0	0	0		0	531	0	614	0	0	587	0	0	140	392	0	726
May-20	2906	0		0	0		0	0	0	0		0	574	0	292	0	0	661	0	0	144	460	0	775
Jun-20	3001	0		0	509		0	0	0	0		0	509	0	0	0	0	670	0	81	27	455	0	750
Jul-20	2925	0		0	290		0	0	0	0		0	505	0	0	0	0	701	0	112	56	476	0	785
Aug-20	3135	0		0	0		0	0	0	0		0	484	0	0	0	0	807	484	92	92	507	0	669



October 20, 2020

Wyoming Department of Environmental Quality  
Air Quality Division - New Source Review Program  
200 West 17<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Application for Revised NSR Permit for Tensleep 2 Tank Battery (FID F004572)

Dear NSR Program Manager,

Citation Oil & Gas Corp. (Citation) is submitting to the Air Quality Division ("Division") an application for a revised NSR permit for this facility pursuant to our audit disclosures, including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, including our most recent meeting on August 12, 2020 to discuss our audit and permitting status. Of further note, on July 6, 2020, Citation filed a petition for review of this facility's current permit with the Wyoming Environmental Quality Counsel ("EQC") and this review is ongoing. A copy of that petition is included with this letter. The issues for EQC review relate to applicability of Chapter 6, Section 2 of the Wyoming Air Quality Regulations to this Facility and the Division's reliance on guidance to impose conditions associated with leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting.

As discussed at the August 12, 2020 meeting, Citation has determined that the methods and data used to calculate the facility's emissions as submitted with the previous NSR application significantly overestimated the facility's potential to emit. The emissions calculations used in this NSR application have been updated and reflect more reliable and accurate values derived from a ProMax® 5.0 simulation, which uses an extended hydrocarbon liquid study and an extended sulfur analysis of hydrocarbon liquids. Furthermore, the process used for the simulation included with this NSR application more accurately reflects the actual operational aspects and conditions of the facility. As a result of this update, the emissions from this facility are substantially lower than originally calculated. Specifically, VOC emissions for this facility dropped from 17.12 tpy (6.43 tpy from fugitives) to 5.97 tpy (5.45 tpy from fugitives) as a result of the more accurate emission calculation methodology and controls are therefore no longer required.

Additionally, Citation is providing historic oil production data for this facility (see attached graph and data table) that clearly demonstrates the most recent activity (fracture treating a well in August of 2010 that produces to this facility), did not trigger affected facility status under NSPS Subpart OOOO and Subpart OOOOa and did not result in a modification under applicable State of Wyoming regulations. Wyoming regulations define "modification" to include a "physical change in, or change in the method of operation" of a facility that "increases the amount of any air pollutant" or results in "the emission of any such air pollutant not previously emitted" (Wyoming Air Quality Regulations, Ch. 1, Sec. 3). In this case, no increase in the amount of a regulated pollutant resulted from the physical change and no emissions of air pollutants not previously emitted resulted from the change. The well refracturing was an effort to mitigate declining production; however, the data illustrates that after fracture treating, production did not approach historic oil production rates and quickly declined again. Because emissions track production, the post-activity emissions therefore did not increase above previous annual emissions associated with the historic oil production rates and the refracturing did not result in a modification to the facility as set forth in the Wyoming Air Quality Regulations. Application of the Best Available Control Technology under Wyoming Air Quality Regulations Chapter 6, Section 2 is therefore not applicable. Furthermore, Citation reiterates that this facility does not meet any of the applicability criteria provided in 40 CFR part 60, Subpart OOOO or 40 CFR part 60, Subpart OOOOa.

Please do not hesitate to contact Ben Shoup at (307) 299-5950 or myself at (281) 891-1550 if you should have questions or require any additional information pertaining to this application.

Very truly yours,

*RJ Redweik*

Robert J. Redweik  
Director EHS/Regulatory

Attachments



Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
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**FILED**

**JUL 06 2020**

**Jim Ruby, Executive Secretary  
Environmental Quality Council**

ATTORNEYS FOR PETITIONER

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Citation Oil & Gas Corp. ) Docket No. 20-2601  
Air Quality Permit No. P0027432 )  
Tensleep 2 Tank Battery (F004572) )

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**PETITION FOR REVIEW AND REQUEST FOR HEARING**

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Citation Oil & Gas Corp. (“Citation”) appeals Permit No. P0027432 issued by the Wyoming Department of Environmental Quality (the “DEQ”), Air Quality Division (“AQD”), on June 9, 2020. Citation petitions the Wyoming Environmental Quality Council (the “Council”) to review the DEQ’s Permit Conditions adopted in Permit No. P0027432. DEQ acted outside of its statutory and regulatory authority, arbitrarily and capriciously, without substantial evidence, and failed to follow applicable process and procedure in adopting several Permit Conditions in Permit No. P0027432. A copy of Permit No. P0027432 is attached to this Petition as **Exhibit A**. In compliance with the DEQ’s General Rules of Practice and Procedure, Chapter 2, Section 4, Citation sets forth the following in this Petition:

## STATEMENT OF FACTS

1. Citation is an oil and gas acquisition, development, and production company operating out of Houston, Texas. Citation maintains a Rocky Mountain Regional Office in Gillette, Wyoming at 1016 East Lincoln Gillette, WY 82716. Citation's legal counsel is Matthew J. Micheli and Macrina M. Jerabek, Holland & Hart LLP, 2515 Warren Avenue, Suite 450, Cheyenne, Wyoming 82001.

2. In March 2018, Citation voluntarily disclosed to the DEQ potential areas of noncompliance discovered during an audit conducted pursuant to the Audit Privilege and Immunity Provisions in the Wyoming Environmental Quality Act (Wyo. Stat. Ann. §§ 35-11-1105 through 1106), and set forth the corrective actions and a schedule for completing these actions.

3. Following Citation's voluntary disclosure, Citation met with the AQD to discuss the results of the audit and potential corrective action. During that meeting, the AQD agreed to treat the facilities at issue as existing facilities with no modifications. Unfortunately, no written audit term agreement was prepared for this particular audit.

4. Following that meeting and in a continued effort to resolve the matter in accordance with Wyo. Stat. Ann. §§ 35-11-1105 through 1106, in April 2018 Citation supplemented its voluntary disclosure, including a proposed Compliance Plan as requested by the AQD.

5. Consistent with the commitments made in the Audit and voluntary disclosure, Citation submitted several permit applications, including an application for a minor source air permit for the Tensleep 2 Tank Battery (F004572) located in Park County, Wyoming. In its application, Citation noted:

Pursuant to the audit discourses of Citation Oil & Gas Corp. (Citation), including without limitation the initial audit disclosure of March 21, 2018 and subsequent correspondence and meetings, Citation is submitting this New Source Review air permit application for the approval of an existing site. As a result of Citation's audit and the State of Wyoming's approval, this application authorizes the site based on operations as existing today; no construction applications or modifications to existing permits are being proposed. Existing equipment that is on site but out of service is not included in this application and will remain out of service unless and until authorized.

Tensleep 2 Tank Battery (F004572), *Purpose of Application.*

6. On June 9, 2020, the DEQ issued Permit No. P0027432. Permit No. P0027432 includes several improper Permit Conditions which Citation now petitions the Council to review. Specifically, Permit No. P0027432 includes various improper Conditions relating to evaluations of facility leaks, fugitive emissions, monitoring, training, inspections, notification, and reporting requirements. *See Exhibit A, Conditions 7-13.*

7. The DEQ acted outside of its authority, arbitrarily and capriciously, without substantial evidence, and in violation of applicable process and procedure in adopting these Permit Conditions.

8. As indicated in the March 2018 commitment and reflected in Citation's permit application, Tensleep 2 Tank Battery (F004572) is an existing site that has not been modified. Citation's application sought approval of the existing site, based on operations as existing at the time of application; indeed, Citation specifically provided that no modifications to the Tank Battery that would trigger additional requirements had occurred and no construction applications or modifications to existing permits were proposed.

9. Absent a modification to Tensleep 2 Tank Battery (F004572), 40 CFR part 60, subpart OOOO, 40 CFR part 60, subpart OOOOa, and Best Available Control Technology

(BACT) remain inapplicable. Any Permit Condition requiring compliance with the same is improper.

10. The Council is authorized, pursuant to Wyoming Statute § 35-11-112(a)(iv), to hear appeals arising the issuance of air quality permits and has the power under W.S. § 35-11-112(c)(ii) to modify Permit No. P0027432 and remove any inappropriate Permit Conditions.

11. Citation, therefore, requests that the Council review and set for hearing its appeal of the improper Permit Conditions in Permit No. P0027432.

### **RELIEF REQUESTED**

Citation respectfully requests that the Council review the DEQ's improper requirements and Conditions in Permit No. P0027432, and that the Council modify Permit No. P0027432 by vacating the improper Permit Conditions noted above. Citation further reserves the right to amend this Petition, clarify, and/or supplement additional grounds for review.

Dated July 6, 2020.



Matt J. Micheli, P.C., WY Bar No. 6-3839  
Macrina M. Jerabek, WY Bar No. 7-5757  
HOLLAND & HART LLP  
2515 Warren Avenue, Suite 450  
P.O. Box 1347  
Cheyenne, WY 82003-1347  
Telephone: (307) 778-4200  
Facsimile: (307) 778-8175  
mjmicheli@hollandhart.com  
mmjerabek@hollandhart.com

ATTORNEYS FOR PETITIONER

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on this 6th day of July, 2020, in accordance with the requirements of Chapter 2, Section 4(a) of the Department of Environmental Quality Rules of Practice and Procedure, this Petition for Review and Request for Hearing, was filed via hand delivery on:

Chairman of the Environmental Quality Council,  
2300 Capitol Ave.  
Hathaway Bldg. 1st, Room 136  
Cheyenne, WY 82002

and served via registered mail, return receipt requested, on the following, and delivered by hand as well:

Todd Parfitt  
Director of the Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

Nancy E. Vehr  
Administrator of the Air Quality Division  
Department of Environmental Quality  
200 West 17th Street  
Cheyenne, WY 82002

James Kaste  
Deputy Attorney General State of Wyoming  
123 Capitol Building  
Cheyenne, WY 82002

A handwritten signature in black ink, appearing to read 'James Kaste', is written over a horizontal line.



Mark Gordon, Governor

# EXHIBIT A Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Todd Parfitt, Director

Date: June 9, 2020

Ms. Lee Ann Elsom  
Regulatory Compliance Manager  
Citation Oil & Gas Corporation  
14077 Cutten Road  
Houston, TX 77002

Permit No. **P0027432**

Dear Ms. Elsom:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Citation Oil & Gas Corporation's (CMP000177) application to modify the Tensleep 2 Tank Battery (F004572) by updating the equipment list, with three smokeless flares to control volatile organic compound and hazardous air pollutant emissions associated with the oil tanks and active produced water tanks, located in the NE1/4SE1/4 of Section 12, T47N, R100W, approximately eight (8) miles south-southeast of Meeteetse, in Park County, Wyoming.

Following this agency's proposed approval of the request as published April 30, 2020 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to modify the Tensleep 2 Tank Battery as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. Authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rule, regulation, standard, permit or order.
2. All substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as a condition of this permit.
3. A permit to operate in accordance with WAQS&R Chapter 6, Section 2(a)(iii) is required after a 120-day start-up period in order to operate this facility.
4. All notifications, reports and correspondence required by the permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

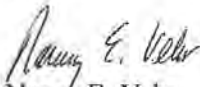
6. Effective upon permit issuance, this permit shall supersede Air Quality Permit MD-466 for the Tensleep 2 Tank Battery.
7. Periodic training on the proper operation of equipment, systems and devices used to contain, control, eliminate or reduce pollution shall be provided to company personnel whose primary job is to regularly ensure that facility production equipment is functional. The training shall provide these personnel with the ability to recognize, correct and report all instances of malfunctioning equipment, systems and devices associated with air pollution control. These equipment, systems and devices include, but are not limited to combustion units, reboiler overheads condensers, hydrocarbons liquids storage tanks, drip tanks, vent lines, connectors, fittings, valves, relief valves, hatches and any other appurtenance employed to, or involved with, eliminating, reducing, containing or collecting vapors and transporting them to a pollution control system or device.
8. Trained personnel shall perform, at a minimum, a quarterly site evaluation of the operation of the air pollution control equipment, systems and devices under Condition 7. The first quarterly site evaluation shall be conducted within the second quarter after permit issuance.
9. At least one of the quarterly evaluations per calendar year under Condition 8 shall include an evaluation of the facility for leaks from the equipment, systems and devices under Condition 7 using an optical gas imaging instrument. Monitoring utilizing the no detectable emissions test methods and procedures in 40 CFR §60.5416(b)(1) through (8) may be utilized to satisfy the requirements of this condition for the equipment, systems, and devices under Condition 7 in lieu of using an optical gas imaging instrument.
10. Notification shall be provided to the Division at least fifteen (15) days prior to the quarterly evaluation under Condition 8.
11. An annual preventative maintenance program shall be instituted to inspect and replace equipment, systems and devices under Condition 7 as necessary to ensure their proper operation.
12. Results of all inspections, evaluations and periodic monitoring shall be documented and maintained for review by the Division upon request. Digital files of any optical gas imaging instrument evaluations need not be maintained.
13. Citation Oil & Gas Corporation shall follow the fugitive emission monitoring requirements under 40 CFR part 60, Subpart OOOOa for fugitive VOC emissions from a production site as published in the federal register on June 3, 2016 (Federal Register Vol. 81 pg. 35824-35941).
14. Vapors from all oil tanks, all oil pop tanks and all active produced water tanks, including tank flash and S/W/B vapors, shall be routed to the flares to reduce the mass content of VOCs, HAPs and H<sub>2</sub>S in the tank vapors vented to the devices by at least ninety-eight percent (98%) by weight for at least one (1) year following the date of installation of the control devices, after which time the devices may be removed upon Division approval without permit modification provided it can be demonstrated that the current, uncontrolled, annualized VOC emission rate from the oil tanks is less than, and will remain less than four (4) tons per year.

15. The presence of the flare pilot flames shall be monitored using thermocouples and continuous recording devices or any other equivalent devices to detect and record the presence of the flames. Records shall be maintained noting periods during active well site operation when any of the pilot flames are not present. The records shall contain a description of the reason(s) for absence of the pilot flames and steps taken to return the pilot flames to proper operation.
16. The continuous pilot monitoring systems under Condition 15 shall be installed and operational within sixty (60) days of permit issuance. Citation Oil & Gas Corporation shall notify the Division within fifteen (15) days of installation of the continuous pilot monitoring systems.
17. The flares shall be designed, constructed, operated and maintained to be smokeless, per Chapter 3, Section 6(b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR part 60, appendix A, Method 22.
18. Emission control equipment, including the VOC and HAP emission control system or device, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the well is producing such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any VOC or HAP emissions control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
19. Citation Oil & Gas Corporation shall maintain records that the manufacturer-designed VOC destruction efficiency of the flares is at least ninety-eight percent (98%).

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within thirty (30) days of permit issuance per Section 8, Chapter 1, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

  
Nancy E. Vehr  
Administrator  
Air Quality Division

  
Todd Parfitt  
Director  
Dept. of Environmental Quality

NV/hb



**Wells Producing to Tensleep 2 Tank Battery**

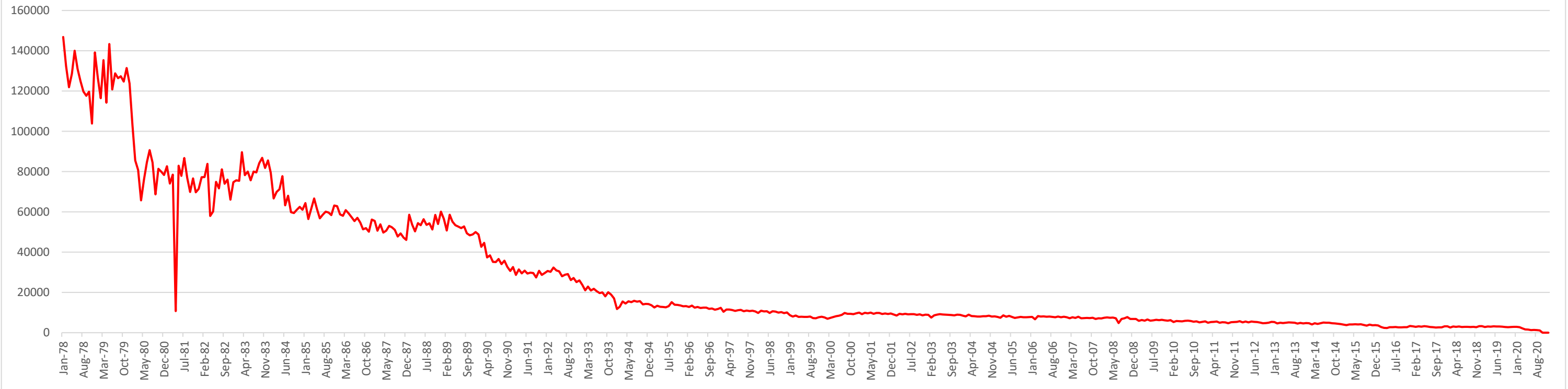
Facility	¼ ¼	Section	Township (N)	Range (W)	Latitude	Longitude	Startup
LBB DSU 66	NW SW	7	47	99	44.05417	-108.78990	9/22/68
LBB DSU Unit 179	NW SW	7	47	99	44.05633	-108.78759	5/10/88
Federal C-045855 263	NE SW	7	47	99	44.05592	-108.78614	2/27/83
Little Buffalo Basin 373	SW SW	7	47	99	44.05080	-108.79010	2/9/85
LBB DSU C-045855 369	SW SW	7	47	99	44.05288	-108.79221	6/9/88
LBB DSU C-045855 380	SW NW	18	47	99	44.04432	-108.78782	7/12/85
LBB DSU C-045855 21	NW NE	13	47	100	44.04868	-108.80044	2/9/88
LBB DSU C-045855 12	SE SE	12	47	100	44.05182	-108.79541	6/4/58
LBB DSU C-045855 64	NE SE	12	47	100	44.05341	-108.79681	5/24/68
LBB DSU 72	NW NE	13	47	100	44.04679	-108.80278	7/18/68
LBB DSU C-045855 71	NE NE	13	47	100	44.04667	-108.79839	8/8/68
LBB DSU 141	SE SW	12	47	100	44.0520	-108.80833	10/21/75
LBB DSU C-045855 142	NE SW	12	47	100	44.05429	-108.80551	3/22/88
LBB DSU C-045855 132	NW SW	12	47	100	44.05570	-108.80347	1/9/88
LBB DSU 135	NW SE	12	47	100	44.05369	-108.80167	1/15/88
LBB DSU 133	NE SE	12	47	100	44.05541	-108.79839	2/9/88
LBB DSU C-045855 152	SW NE	13	47	100	44.04417	-108.79981	2/24/77
LBB DSU C-045855 153	NE NE	13	47	100	44.04694	-108.79667	3/25/77
LBB DSU C-045855 155	NW SE	12	47	100	44.05161	-108.79991	3/11/77
Little Buffalo Basin 156	NW SE	12	47	100	44.055	-108.8025	2/21/77
LBB DSU C-052236 172 <sup>1</sup>	NW SE	13	47	100	44.04701	-108.80491	11/20/78
LBB DSU 184	SE NE	13	47	100	44.04222	-108.79791	6/12/79
LBB DSU 183	SW NE	13	47	100	44.04349	-108.80049	5/11/79
LBB DSU 182	SE NE	13	47	100	44.04381	-108.79528	3/28/79
LBB DSU 194	SE SW	12	47	100	44.05071	-108.80489	7/18/79
LBB DSU C-052236 189	NW SE	13	47	100	44.04222	-108.80222	12/6/79
LBB DSU 286	SW SE	12	47	100	44.04979	-108.80351	12/31/83
LBB DSU C-045855 297	NW NE	13	47	100	44.04806	-108.79931	12/1/83
LBB DSU C-052236 301	NE SE	13	47	100	44.04083	-108.79729	10/31/83
LBB DSU 305	SE SE	12	47	100	44.04989	-108.79639	10/21/83
LBB DSU 392	NW SE	12	47	100	44.05472	-108.79944	2/17/88

<sup>1</sup> the LBB DSU C-052236 172 well was fracture treated in 2010

**EQUIPMENT LIST**

- three (3) heater treaters w/ 1.25 MMBtu/hr heaters
- three (3) 1000-bbl oil storage tanks
- one (1) 5000-bbl produced water tank
- one (1) 400-bbl oil pop tank
- three (3) smokeless flares w/ continuous pilot monitoring systems (oil tank, active produced water tank and oil pop tank control)

Tensleep 2 Battery - Oil Production (BBL/month) Over Time



Month/Year	Cummulative Oil Production (BBL)	66	179	263	373	369	380	21	12	64	72	71	141	142	132	135	133	152	153	155	156	172	184	183	182	194	189	286	297	301	305	392		
Jan-78	146825	4543						5971	19694	22647	13598	14103	802	5340	10801	17734	26493	1287	2277	908	627													
Feb-78	132365	4168						6155	17296	21420	11905	11174	720	6340	9579	15664	23336	1050	2063	927	568													
Mar-78	121867	3476						1169	18443	17383	11557	15484	1187	3895	10919	11277	22505	1150	1817	939	666													
Apr-78	128599	3336						10721	18057	16688	13081	14946	1179	3584	10512	10587	21011	1534	1829	1033	501													
May-78	139984	3427						10281	15523	16612	10742	17021	1101	3210	10915	12623	33371	1378	1954	1249	577													
Jun-78	130958	3429						10216	16767	13717	11685	15196	998	3007	11375	8389	30884	1364	2029	1236	666													
Jul-78	124971	3686						7800	17238	14628	11803	12493	942	3817	11462	8654	27580	1254	1924	1137	553													
Aug-78	119742	4630						8270	15604	7394	10428	10659	1164	3006	10815	7764	34719	1505	1936	1233	615													
Sep-78	117638	5379						7342	15306	11439	10339	14494	990	2997	11118	2594	30059	1418	1920	1832	411													
Oct-78	119660	4707						8846	2666	13249	11579	17252	1194	3619	12899	2510	33763	1577	2135	2037	1627													
Nov-78	103846	4526						7780	0	13663	11415	7124	1050	3236	12606	2416	33158	1414	2005	1912	1541													
Dec-78	139178	4441						11451	0	16150	10176	30959	267	4087	14433	10313	30770	1226	2287	2055	563													
Jan-79	126571	4624	0					10795	0	14124	9103	29246	0	3819	12958	8548	26844	1376	2202	2170	762	0	0	0	0	0	0	0	0	0	0	0		
Feb-79	116410	5406	0					9516	0	9910	7749	22333	0	2890	15408	9664	29087	1336	0	2269	842	0	0	0	0	0	0	0	0	0	0	0		
Mar-79	135333	5343	0					9756	0	22690	7983	23834	965	3117	15944	9895	29869	1447	1737	1961	792	0	0	0	0	0	0	0	0	0	0	0		
Apr-79	114193	5508	0					9139	0	22425	7560	21831	1178	2852	14999	9373	12511	1566	2536	2312	403	0	0	0	0	0	0	0	0	0	0	0		
May-79	143327	4985	0					11259	0	21125	9138	31573	1630	3718	18496	11327	22073	1848	2328	3503	279	0	45	0	0	0	0	0	0	0	0	0		
Jun-79	120751	4685	0					9489	0	17922	7688	23763	1058	2837	15933	9530	22218	1759	1419	1694	693	2	61	0	0	0	0	0	0	0	0	0		
Jul-79	128811	4318	0					9263	0	18543	7440	28374	1985	2382	16194	9862	21527	377	1844	3255	654	19	51	0	0	2723	0	0	0	0	0	0		
Aug-79	126363	4701	0					7502	0	18917	7127	28794	1681	3259	9957	10061	20821	1616	2036	3046	561	13	64	0	0	6237	0	0	0	0	0	0		
Sep-79	127367	2658	866					6504	6099	19370	3129	27373	2254	3165	13192	3799	24142	1124	2077	3299	880	1325	61	0	0	6020	0	0	0	0	0	0		
Oct-79	124660	2983	977					2523	10422	16785	6850	23250	2067	2849	10249	6628	20899	2013	2355	3961	988	913	1318	1327	5303	0	0	0	0	0	0	0		
Nov-79	131373	5876	973					4945	18200	16128	5359	24057	1215	3131	10607	4787	20306	420	2317	4061	1073	1257	1052	1368	4241	0	0	0	0	0	0	0		
Dec-79	123780	7037	2012					0	26436	0	39995	2211	0	0	0	32918	514	2418	4168	1114	0	0	0	0	4370	587	0	0	0	0	0	0		
Jan-80	103006	3849	1708					5081	0	21190	0	21740	1584	0	0	28288	821	1916	3255	1315	2016	1773	1440	6432	598	0	0	0	0	0	0	0		
Feb-80	85544	3316	1651					3636	0	20243	0	9738	1084	0	0	27471	720	1573	2941	1394	1971	1512	1705	6323	266	0	0	0	0	0	0	0		
Mar-80	80811	4466	2289					9288	0	13236	0	13236	1528	0	0	22487	890	2079	3511	1762	2523	2337	2138	8765	432	0	0	0	0	0	0	0	0	
Apr-80	65712	3975	1617					6395	0	8206	0	5887	1765	0	0	19895	796	1758	3125	1582	796	1376	1616	6744	639	0	0	0	0	0	0	0	0	
May-80	76020	4284	1918					6399	0	8797	0	9749	1838	0	0	21063	862	1849	3284	1525	2490	1949	2124	7291	598	0	0	0	0	0	0	0	0	
Jun-80	84583	3791	1561					5351	0	6630	5759	10581	1143	294	13851	0	17527	778	1855	2663	1163	2084	1084	1791	6149	528	0	0	0	0	0	0	0	
Jul-80	90655	3736	1973					5068	0	5895	5841	6462	2118	3690	13293	0	28124	402	1614	2851	1351	2582	2575	2202	169	709	0	0	0	0	0	0	0	
Aug-80	84563	3143	0					2704	0	12009	6721	4064	4435	1464	13230	0	21740	994	1231	5422	2075	1960	1967	577	214	613	0	0	0	0	0	0	0	
Sep-80	68679	1794	0					2607	0	9743	3005	7097	3587	1602	7703	0	15846	1502	1528	5394	1024	1809	1905	527	3915	431	0	0	0	0	0	0	0	
Oct-80	81408	4040	222					67	0	10629	4953	5448	3564	2251	14980	0	18904	2278	1712	4756	647	1988	1256	278	3095	340	0	0	0	0	0	0	0	
Nov-80	79940	3385	188					956	0	10151	5441	5284	3289	2207	13843	0	17378	2668	3425	2849	1983	1824	1399	269	2956	445	0	0	0	0	0	0	0	
Dec-80	78338	2686	205					943	0	9597	9644	6088	2952	1675	9996	0	17081	2428	2337	2643	759	1790	1702	469	4843	500	0	0	0	0	0	0	0	
Jan-81	82671	3030	216					479	0	10123	10186	6996	3684	1333	10526	0	18018	2470	2336	2636	793	1888	1796	526	5108	527	0	0	0	0	0	0	0	
Feb-81	74071	2944	206					0	0	9520	9492	6521	3414	1452	9794	0	13264	2425	2293	2588	772	1801	1711	502	4870	502	0	0	0	0	0	0	0	
Mar-81	78436	4249	252					33	0	13663	7839	6516	3463	2023	8871	0	14071	162	1093	2913	1578	1920	2078	850	6327	535	0	0	0	0	0	0	0	
Apr-81	10769	4120	0					0	0	0	0	0	0	0	0	0	188	1264	3371	1826	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May-81	82873	3440	2017					248	0	15163	6148	5453	4036	4350	5737	0	14911	1750	2850	2650	1954	1923	3090	567	6050	536	0	0	0	0	0	0	0	
Jun-81	77871	1126	1730					61	0	15358	6026	5438	3863	2270	9116	0	13009	1518	2005	1706	1801	608	2781	680	8652	123	0	0	0	0	0	0	0	
Jul-81	86727	1580	1797					1288	0	16082	6310	6083	4141	1741	11535	0	13438	1502	2135	2415	1961	1974	2912	631	9202	0	0	0	0	0	0	0	0	
Aug-81	76908	1349	2096					1099	0	13325	5078	5897	4042	3329	6832	0	11605	1301	2145	2425	1850	1914	2820	734	9067	0	0	0	0	0	0	0	0	
Sep-81	69872	3065	894					6254	0	11947	5793	5643	1461	2758	5851	0	11242	1451	1343	2033	2073	1140	2742	500	3682	0	0	0	0	0	0	0	0	
Oct-81	76566	2573	276					6530	6926	12508	6008	5951	1433	2889	5321	0	11770	1584	0	2568	1646	1237	2976	526	3844	0	0	0	0	0	0	0	0	
Nov-81	69678	2358	70					5739	6743	8524	5897	5794	1486	2821	5948	0	11459	1624	0	2654	2324	1205	2897	513	1622	0	0	0	0	0	0	0	0	
Dec-81	71424	2352	0					4840	10276	8955	5444	5777	1403	3620	5897	0	8433	1635	0	2672	2486	1202	2888	409	3135	0	0	0	0	0	0	0	0	
Jan-82	77177	1309	218					5778	1																									

Month/Year	Cummulative Oil Production (BBL)	66	179	263	373	369	380	21	12	64	72	71	141	142	132	135	133	152	153	155	156	172	184	183	182	194	189	286	297	301	305	392
Oct-86	51960	3036	0	1084	380	532	1122	3193	4332	10055	1423	3826	1929	1897	3288	1265	2426	799	836	1464	1079		1139	1201	1676	1106	0	133	1312	286	1141	
Nov-86	50098	2945	0	1067	375	525	1105	3098	4203	9756	1380	3712	1871	1350	3191	1228	2431	787	824	1442	1084		1104	1166	1626	1074	0	57	1292	281	1124	
Dec-86	56171	2686	0	1307	610	784	1451	3549	5110	9205	1278	4455	1802	2719	3210	1114	1933	1364	2003	900	1487		950	1474	1605	1081	0	0	2090	291	1713	
Jan-87	55512	2418	0	1250	654	684	1487	3456	4874	9287	1296	4843	1758	2222	3332	1265	1975	1399	1963	833	1491		895	1265	1697	957	0	77	2082	297	1755	
Feb-87	50620	2143	0	1199	657	486	1399	3069	4110	8539	956	4545	1564	2026	2837	1331	1853	1370	1799	856	1225		898	1187	1534	781	0	200	2028	400	1628	
Mar-87	53837	2351	0	1369	750	126	1597	3216	4550	9186	928	4763	1640	1766	2938	1360	2042	1597	1956	978	1326		928	1268	1608	866	0	33	2282	489	1924	
Apr-87	49755	2372	0	1366	716	0	1562	2927	4129	8412	1047	4077	1572	1548	2619	1448	1972	1464	1635	716	1297		771	1109	1448	832	0	98	2276	585	1757	
May-87	50673	2266	0	1197	753	0	1642	2918	4252	8723	1149	4904	1459	1707	3322	1292	1986	1539	1664	821	1259		528	1000	901	807	0	171	2155	513	1745	
Jun-87	53067	2275	0	1794	754	0	1587	3014	4644	8520	2614	4798	1446	1722	2906	1322	3107	1518	1795	483	1158		523	1138	830	800	0	138	2140	448	1553	
Jul-87	52533	2303	0	1393	663	1187	1525	3041	4944	8292	1689	3218	1321	2027	4085	1689	3163	1426	1558	663	873		277	1136	706	1229	0	298	2056	364	1227	
Aug-87	51114	2086	0	1133	618	1133	1580	3157	4917	7922	1578	3491	1244	1821	3407	1670	2975	1476	1510	666	1158		213	1123	1184	911	0	309	2129	465	1218	
Sep-87	47764	2180	0	1204	572	722	1384	2916	4268	7952	1412	2794	1566	1750	3777	1412	2886	1023	1475	572	1187		907	952	768	1013	0	211	1655	451	1355	
Oct-87	49308	2234	0	1358	583	1100	1488	3101	4402	8537	1401	2867	1601	1901	3868	1500	3068	970	1553	420	907		100	534	833	1101	0	226	1812	485	1358	
Nov-87	47266	2185	0	1540	644	1218	1303	2762	4370	7435	1456	2641	1578	1730	3520	1396	2731	1074	1719	752	807		59	546	729	880	0	251	2006	537	1397	
Dec-87	46032	2103	0	1248	517	883	1156	2837	4366	8255	1498	2772	1530	2008	3628	1275	2805	882	1308	822	564		160	637	351	702	317	213	1552	457	1186	
Jan-88	58573	3596	1273	1352	547	869	1159	2513	7025	12218	2393	4327	2291	3105	33	484	4316	934	1416	772	1369		255	1222	560	1171	163	65	1641	249	1255	
Feb-88	53746	4135	1149	1185	448	800	1153	0	7581	13495	50	5168	2756	2872	1230	0	1394	833	1377	835	932		229	1264	229	1148	213	32	1633	289	1217	
Mar-88	50309	2587	1106	1735	578	0	1273	0	7244	13272	0	3184	2710	714	1044	3301	2436	1003	1736	926	1075		53	387	56	995	348	116	694	347	1389	
Apr-88	54380	3686	891	1735	542	0	1192	2399	7158	11721	1519	0	2777	1502	3804	134	4156	904	1517	759	961		470	1442	1015	1122	300	144	723	325	1482	
May-88	53407	3214	0	1225	364	0	886	3686	5535	9152	2124	0	2321	2473	4966	2999	5985	573	991	521	1145		491	1116	449	1116	250	78	521	183	1043	
Jun-88	56352	3184	0	1050	310	49	787	3987	4820	9770	1988	3756	2539	2372	4526	2671	6406	549	859	478	1017		603	860	732	990	92	143	597	286	931	
Jul-88	53508	2702	1104	1242	343	1264	899	3271	4071	9437	1784	3505	1981	2056	4200	2325	5850	608	977	554	1140		282	865	36	792	0	212	713	291	1004	
Aug-88	54318	3252	4079	1041	295	0	770	4219	3267	9364	1997	3492	2016	2444	2235	2858	6179	521	815	476	892		0	672	45	1120	502	136	589	249	793	
Sep-88	51282	2633	3892	1200	320	774	907	3643	4205	6524	1919	3524	1002	2218	3371	2669	5995	613	961	534	732		0	590	39	590	480	53	613	294	987	
Oct-88	58458	4438	3791	1323	281	4756	901	3452	3935	6860	1810	3317	1321	2323	3820	2587	6645	619	1013	563	0		0	136	397	758	525	36	1528	310	1013	
Nov-88	53970	2758	1921	1185	272	5097	903	2899	4037	5236	1966	3754	2078	2457	3595	2464	6222	620	988	508	0		0	0	1143	800	311	0	1044	310	987	
Dec-88	60081	3009	1963	1283	328	5613	954	3887	4341	5630	1545	3499	2252	2232	4495	2513	8102	656	895	537	0		0	0	1419	989	525	0	1014	328	835	
Jan-89	56487	2998	1952	1181	302	5548	939	3774	4265	6967	1183	3487	633	2402	4329	2624	6461	667	908	575	0		0	0	122	760	548	0	1151	333	908	
Feb-89	50758	2694	1776	1099	282	5018	873	3417	3832	6260	1069	3182	569	2169	3873	2397	5764	620	845	535	0		0	0	0	422	683	483	0	1032	288	845
Mar-89	58539	3212	2029	1238	267	5946	636	4097	3804	6846	1763	3725	2916	1991	4028	2346	6417	736	1137	435	0		0	0	0	676	549	0	1204	268	1003	
Apr-89	55126	3157	1913	1182	266	5449	887	3131	3614	6729	1120	3318	2742	2681	3576	2701	5375	680	1005	384	0		0	0	0	789	523	414	1034	266	916	
May-89	53383	0	2093	1200	291	6009	900	3610	2935	7670	860	3214	3125	2164	3237	2699	6143	680	960	391	0		0	0	0	852	562	240	1080	150	931	
Jun-89	52720	3649	1998	1178	316	5317	890	3773	0	7451	1195	2996	2890	1856	3149	2680	6114	488	977	775	0		0	0	0	722	552	288	1005	258	891	
Jul-89	51885	0	2095	1079	339	5457	863	3569	0	9437	1072	3024	3224	2061	3035	3083	6320	616	987	524	0		0	0	0	654	570	216	1017	339	924	
Aug-89	52810	4189	0	1517	979	317	4870	780	3263	0	8518	1326	2811	2825	2030	2644	2687	7341	604	893	518	0		0	0	717	614	144	975	259	835	
Sep-89	49336	3135	1535	1049	309	4845	864	3453	0	7590	1434	2719	2599	2052	2879	1453	6878	648	957	586	0		0	0	0	619	440	185	1111	278	566	
Oct-89	48323	3094	1565	943	324	4467	914	3030	442	7691	1080	2679	2666	2261	3028	2241	5730	589	885	236	0		0	0	0	656	487	118	1003	147	795	
Nov-89	48771	2128	1241	846	292	4074	846	2858	3287	6799	719	2378	2521	2050	4937	2052	5829	641	875	233	0		0	0	0	649	491	116	992	175	620	
Dec-89	49974	3498	1322	735	320	4235	927	2329	4096	6506	1107	2580	2811	1766	2619	2202	6446	703	863	575	0		0	0	0	522	497	11	923	192	927	
Jan-90	48816	3679	1394	742	312	4308	935	2291	3670	6359	1016	2465	2409	1817	2680	2053	6242	672	903	387	0		0	0	0	593	516	0	1065	233	968	
Feb-90	42692	3048	1210	608	265	3357	740	2335	3192	5073	655	2128	2060	1710	2692	1641	6365	582	639	507	0		0	0	0	492	462	0	820	230	740	
Mar-90	44606	3171	1282	846	253	3486	617	2783	3880	5098	911	2034	2467	1807	2763	1831	6036	620	761	480	0		0	0	0	552	478	0	874	226	25	
Apr-90	37395	2371	1255	819	263	3071	851	2407	2660	4610	819	198	2934	1662	2612	1751	4618	614	790	380	0		0	0	0	391	485	11	877	176	0	
May-90	38426	2783	1347	560	295	2836	1534	2149	2581	4474	720	270	4578	1591	2276	1900	3795	531	767	561	0		0	0	0	413	417	148	767	177	0	
Jun-90	35201	2707	1133	699	259	1744	957	2060	2292	4137	746	618	4523	1467	2181	1341	4216	466	621	466</												

Month/Year	Cummulative Oil Production (BBL)	66	179	263	373	369	380	21	12	64	72	71	141	142	132	135	133	152	153	155	156	172	184	183	182	194	189	286	297	301	305	392	
Jul-95	13225	0	0	445	0	1626	621	1057	1156	1872	369	737	0	957	1250	0	516	607	336	354						0	1056	0	0	266	0	0	
Aug-95	15161	0	0	546	0	1869	661	1222	1278	2193	398	824	0	1020	1502	0	568	683	469	428						0	1197	0	0	303	0	0	
Sep-95	13898	0	0	468	468	1781	624	1132	1186	2114	351	620	0	944	1455	0	539	593	437	375						0	468	0	0	343	0	0	
Oct-95	13842	0	0	565	369	1526	645	1183	1297	2028	395	818	0	902	1380	0	563	523	523	307						0	461	0	0	357	0	0	
Nov-95	13542	0	0	458	331	1325	458	1126	1239	1998	394	816	0	957	1407	0	563	458	306	204						0	380	0	0	1122	0	0	
Dec-95	13154	0	0	552	338	1657	523	1119	1174	2069	392	840	0	923	1342	0	336	581	465	203						0	378	0	0	262	0	0	
Jan-96	13166	0	0	545	401	1518	688	1116	1201	1858	401	887	0	1000	1286	0	401	602	459	172						0	344	0	0	287	0	0	
Feb-96	12759	0	0	553	325	1629	582	955	1111	1936	361	852	0	826	1162	0	517	582	466	204						0	349	0	0	349	0	0	
Mar-96	13431	0	0	544	372	1633	516	982	1150	2160	449	758	0	1038	1319	0	589	602	430	201						0	344	0	0	344	0	0	
Apr-96	12455	0	0	500	333	1608	500	829	1063	2046	372	744	0	930	1222	0	532	555	444	167						0	305	0	0	305	0	0	
May-96	12795	0	0	478	309	1633	478	958	1066	2023	427	799	0	959	1332	0	533	563	450	169						0	309	0	0	309	0	0	
Jun-96	12279	0	0	488	287	1606	488	898	1003	1981	343	792	0	844	1241	0	528	545	402	201						0	316	0	0	316	0	0	
Jul-96	12418	0	0	497	322	1609	468	974	1055	2002	352	785	0	865	1218	0	514	527	410	205						0	293	0	0	322	0	0	
Aug-96	12468	0	0	478	309	1685	450	882	1213	2014	386	745	0	827	1213	0	524	534	393	225						0	281	0	0	309	0	0	
Sep-96	11861	0	0	494	302	1510	439	876	1036	1807	346	717	0	876	1142	0	504	494	357	412						0	220	0	0	329	0	0	
Oct-96	11972	0	0	442	306	1502	359	902	1071	1973	367	704	0	817	1212	0	535	528	338	333						0	250	0	0	333	0	0	
Nov-96	11417	0	0	450	264	1455	384	850	977	1775	360	669	0	772	1158	0	541	503	423	291						0	238	0	0	307	0	0	
Dec-96	11783	0	0	483	211	1539	452	890	1120	1953	373	718	0	805	919	0	631	543	332	241						0	211	0	0	362	0	0	
Jan-97	12326	0	0	453	283	1502	453	910	1110	1963	369	825	0	825	1194	0	569	538	482	255						0	255	0	0	340	0	0	
Feb-97	10355	0	0	401	251	1328	351	811	959	1599	221	664	0	689	1033	0	443	476	401	201						0	226	0	0	301	0	0	
Mar-97	11541	0	0	462	260	1474	405	837	1026	1834	243	810	0	783	1134	0	540	549	462	202						0	202	0	0	318	0	0	
Apr-97	11466	0	0	473	266	1511	331	757	974	1812	270	650	0	757	1110	0	541	562	426	237						0	207	0	0	256	326	0	0
May-97	11287	0	0	508	269	1524	418	713	959	1701	247	631	0	795	1151	0	548	537	328	239						0	179	0	0	212	328	0	0
Jun-97	10808	0	0	469	248	1406	386	735	1008	1742	300	299	0	762	1116	0	545	496	414	165						0	221	0	0	193	303	0	0
Jul-97	11177	0	0	439	264	1495	439	763	1045	1780	311	311	0	791	1159	0	565	527	439	146						0	205	0	0	205	293	0	0
Aug-97	11295	0	0	692	277	1412	415	723	1029	1750	333	500	0	750	1167	0	528	443	415	332						0	166	0	0	59	304	0	0
Sep-97	10661	0	0	461	272	1438	380	749	1017	1658	267	509	0	723	1017	0	508	434	380	299						0	163	0	0	114	272	0	0
Oct-97	10975	0	0	445	278	1419	389	710	1010	1665	273	601	0	738	1065	0	518	473	417	306						0	195	0	0	195	278	0	0
Nov-97	10694	0	0	480	310	1468	367	679	1024	1616	270	593	0	728	1052	0	512	339	310	310						0	198	0	0	184	254	0	0
Dec-97	10937	0	0	451	310	1437	366	860	1000	1666	278	639	0	750	1055	0	528	423	394	310						0	169	0	0	19	282	0	0
Jan-98	10549	0	0	490	245	1581	354	854	381	1651	303	633	0	744	1046	0	523	436	409	300						0	136	0	0	218	245	0	0
Feb-98	9766	0	0	407	263	1223	311	721	864	1443	288	552	0	649	1009	0	456	407	359	287						0	96	0	0	168	263	0	0
Mar-98	10876	0	0	480	254	1356	339	781	1060	1590	307	642	0	753	1060	0	530	452	396	339						0	57	0	0	169	311	0	0
Apr-98	10564	0	0	466	274	1261	329	759	1030	1574	298	623	0	733	1030	0	515	438	383	301						0	140	0	0	164	246	0	0
May-98	10684	0	0	506	238	1221	357	744	1042	1518	327	625	0	804	923	0	506	416	357	357						0	268	0	0	178	297	0	0
Jun-98	9792	0	0	485	234	1095	269	681	1014	1389	284	596	0	567	1106	0	483	377	323	296						0	189	0	0	162	242	0	0
Jul-98	10655	0	0	507	269	1134	328	705	1012	1565	337	644	0	736	1135	0	522	448	358	328						0	149	0	0	179	299	0	0
Aug-98	10439	0	0	460	230	1110	288	784	995	1589	361	634	0	754	1055	0	482	431	374	345						0	144	0	0	173	230	0	0
Sep-98	9940	0	0	488	230	1091	287	716	954	1343	357	596	0	775	1074	0	477	431	345	230						0	115	0	0	172	259	0	0
Oct-98	10184	0	0	506	238	1159	268	736	888	1409	398	613	0	797	1073	0	491	446	298	298						0	89	0	0	179	298	0	0
Nov-98	9727	0	0	446	268	1132	268	691	841	1383	330	600	0	781	992	0	480	416	327	297						0	59	0	0	178	238	0	0
Dec-98	10064	0	0	367	225	1154	253	703	978	1438	367	611	0	795	1009	0	489	422	337	269						0	225	0	0	169	253	0	0
Jan-99	8691	0	0	320	248	1237	248	729	1047	98	349	634	0	825	765	0	507	464	371	291						0	124	0	0	217	217	0	0
Feb-99	8045	0	0	441	184	1056	207	664	966	0	363	574	0	814	1116	0	483	322	276	234						0	46	0	0	138	161	0	0
Mar-99	8521	0	0	340	265	1534	265	619	914	0	324	560	0	767	1003	0	442	383	324	396						0	91	0	0	147	147	0	0
Apr-99	7809	0	0	379	254	1582	254	593	302	0	311	593	0	734	932	0	452	367	226	460						0	88	0	0	141	141	0	0
May-99	7967	0	0	373	318	1558	260	635	0	0	318	578	0	750	953	0	462	404	289	517						0	90	0	0	173	289	0	0
Jun-99	7829	0	0	390	229	1664	229	630	0	0	315	573	0	773	945	0	488	372	287	474						0	59	0	0	172	229	0	0
Jul-99	7858	0	0	375	284	1590	313	626	0	0	284	569	0	739	966	0	455	455	284	432						0	88	0	0	142	256	0	0
Aug-99	8046	0	0	407	295	1652	236	620	0	0	295	561	0	768	974	0	473	413	325	523						0	91	0	0	177			

Month/Year	Cumulative Oil Production (BBL)	66	179	263	373	369	380	21	12	64	72	71	141	142	132	135	133	152	153	155	156	172	184	183	182	194	189	286	297	301	305	392	
Apr-04	8277	0	0	352	176	764	176	440	440	909	0	470	0	499	734	529	499	235	264	264	0	0	294	0	0	0	587	117	176	205	147	0	
May-04	8158	0	0	347	174	752	174	463	405	896	0	491	0	492	666	492	521	231	260	260	0	0	289	0	0	0	579	116	174	231	145	0	
Jun-04	8045	0	0	535	198	846	158	423	424	761	0	480	0	452	621	508	508	226	226	226	0	0	367	0	0	0	508	113	169	198	98	0	
Jul-04	8031	0	0	441	235	588	206	529	471	675	0	530	6	500	705	471	529	176	206	265	0	0	382	0	0	0	528	88	176	206	118	0	
Aug-04	8159	0	0	495	175	728	146	525	466	759	0	495	56	466	671	524	495	175	233	262	0	0	379	0	0	0	584	58	117	175	175	0	
Sep-04	8197	0	0	385	237	770	178	533	503	739	0	474	0	474	711	503	503	207	266	266	0	0	414	0	0	0	561	59	30	266	118	0	
Oct-04	8434	0	0	371	174	836	124	557	495	803	0	465	0	556	742	495	495	217	217	248	0	0	432	0	0	0	587	62	155	248	155	0	
Nov-04	8019	0	0	352	176	764	147	529	441	823	0	470	0	499	675	529	470	176	235	206	0	0	382	0	0	0	558	29	235	235	88	0	
Dec-04	8104	0	0	409	189	818	189	534	471	817	0	471	0	534	691	534	373	157	189	251	0	0	346	0	0	0	597	63	157	220	94	0	
Jan-05	7866	0	0	254	190	762	190	508	476	826	0	444	0	539	700	571	386	184	123	254	0	0	349	0	0	0	604	63	159	190	94	0	
Feb-05	7438	0	0	364	168	730	168	504	392	786	0	392	0	477	645	420	420	168	140	252	0	207	0	0	0	477	56	140	196	28	0		
Mar-05	8597	0	0	326	163	848	196	587	457	815	0	456	0	555	750	489	489	196	196	261	0	293	0	0	0	587	65	183	261	65	0		
Apr-05	7941	0	0	304	152	852	182	517	487	761	0	426	0	456	699	487	425	152	213	243	0	274	0	0	0	456	61	152	304	34	0		
May-05	8320	0	0	322	161	836	193	515	514	805	0	514	0	482	741	547	514	161	193	257	0	0	322	0	0	0	482	64	193	322	150	0	
Jun-05	7811	0	0	327	164	852	229	557	491	820	0	458	0	491	722	491	278	229	164	229	0	0	327	0	0	0	492	65	65	229	98	0	
Jul-05	7342	0	0	359	196	816	163	490	425	686	0	458	0	523	679	457	0	163	229	261	0	0	294	0	0	0	425	65	163	261	196	0	
Aug-05	7585	0	0	358	163	814	260	455	391	747	0	456	0	585	679	488	73	130	228	260	0	0	33	0	0	0	585	98	163	228	98	0	
Sep-05	7836	0	0	433	186	836	186	403	403	711	0	341	0	557	712	496	434	186	217	217	0	0	31	0	0	0	557	62	217	217	155	0	
Oct-05	7676	0	0	341	186	744	217	496	403	714	0	434	0	558	691	496	434	186	217	186	0	0	19	0	0	0	497	93	186	175	155	0	
Nov-05	7633	0	0	282	188	784	188	501	407	720	0	438	0	470	689	470	408	125	188	251	0	0	31	0	0	0	532	63	157	333	157	0	
Dec-05	7781	0	0	283	220	756	220	504	377	787	0	440	0	441	756	472	441	126	189	283	0	0	31	102	0	0	504	31	157	283	126	0	
Jan-06	7817	0	0	255	192	766	192	383	383	797	0	446	0	479	734	479	415	32	192	287	0	0	32	383	0	0	511	29	160	192	223	0	
Feb-06	6679	0	0	317	118	738	148	384	355	508	0	354	0	389	650	443	384	118	118	177	0	0	30	266	0	0	473	59	89	207	118	0	
Mar-06	8274	0	0	294	131	750	163	425	391	620	776	392	0	522	685	457	424	98	228	196	0	0	33	221	0	0	522	65	196	228	196	0	
Apr-06	8045	0	0	321	128	738	192	449	384	642	513	448	0	481	674	448	480	160	192	256	0	0	32	224	0	0	418	32	192	192	128	0	
May-06	8082	0	0	263	131	722	197	362	328	757	509	460	0	493	657	493	493	164	164	230	0	0	16	329	0	0	493	66	164	164	197	0	
Jun-06	7921	0	0	355	97	710	226	484	387	645	452	321	0	484	709	419	483	161	193	226	0	0	54	226	0	0	484	64	226	193	129	0	
Jul-06	7992	0	0	283	157	757	252	377	377	662	472	220	0	473	725	535	472	157	220	346	0	0	27	220	0	0	505	63	157	189	126	0	
Aug-06	7807	0	0	309	186	741	124	279	372	711	402	434	0	464	711	433	464	155	217	217	0	0	42	247	0	0	494	62	155	155	155	0	
Sep-06	7669	0	0	249	186	684	186	248	373	654	435	404	0	466	715	435	435	218	186	311	0	0	31	249	0	0	497	62	155	186	124	0	
Oct-06	8042	0	0	374	156	686	250	375	312	748	437	686	0	436	655	468	437	94	281	156	0	0	25	218	0	0	530	31	125	250	125	0	
Nov-06	7657	0	0	395	152	728	182	364	364	669	394	424	0	425	728	394	395	61	273	212	0	0	51	212	0	0	486	137	121	227	121	0	
Dec-06	7957	0	0	307	153	736	184	399	368	614	430	430	0	337	675	399	522	92	123	491	0	0	40	215	0	0	583	153	184	246	123	0	
Jan-07	7695	0	0	241	150	722	210	361	360	663	421	512	0	451	601	421	421	60	180	116	0	0	39	120	0	0	663	22	180	210	120	0	
Feb-07	7131	0	0	279	140	670	140	280	336	586	335	392	0	419	586	391	419	140	140	168	0	0	35	140	0	0	725	56	168	223	112	0	
Mar-07	7684	0	0	387	161	774	146	323	355	647	388	420	0	484	679	452	485	161	129	194	0	0	52	161	0	0	484	27	97	258	129	0	
Apr-07	7356	0	0	217	155	618	155	371	372	618	371	375	0	463	649	434	434	186	155	248	0	0	52	144	0	0	472	31	186	248	124	0	
May-07	7943	0	0	291	162	680	259	420	389	647	324	421	0	485	809	421	485	194	97	194	0	0	47	227	0	0	615	32	129	227	97	0	
Jun-07	7180	0	0	264	235	470	206	412	323	618	265	382	0	441	705	411	440	176	147	176	0	0	39	206	0	0	647	29	176	235	59	0	
Jul-07	7220	0	0	192	128	544	192	384	352	737	288	448	0	512	563	448	448	160	288	192	0	0	21	224	0	0	363	32	192	224	128	0	
Aug-07	7301	0	0	209	150	730	209	359	330	658	329	418	0	479	599	419	478	90	209	150	0	0	19	209	0	0	568	30	180	239	90	0	
Sep-07	7253	0	0	240	150	510	180	359	300	598	300	450	0	449	628	449	420	210	180	180	0	0	32	210	0	0	808	60	180	60	150	0	
Oct-07	7436	0	0	229	131	556	164	425	295	688	360	425	0	523	688	425	458	98	164	153	0	0	84	196	0	0	654	33	131	327	131	0	
Nov-07	6799	0	0	211	91	514	302	363	332	574	333	392	0	423	634	249	393	91	151	302	0	0	64	211	0	0	453	36	151	332	76	0	
Dec-07	7142	0	0	239	90	508	299	389	329	599	299	418	0	449	599	448	448	60	150	209	0	0	77	179	0	0	689	36	239	239	90	0	
Jan-08	7078	0	0	253	158	538	285	348	317	666	316	316	0	506	664	443	443	95	190	158	0	0	0	190	0	0	792	21	63	158	95	0	
Feb-08	7382	0	0	259	115	548	202	374	317	605	289	346	0	461	605	375	404	58	115	231	0	0	8	173	0	0	715	634	29	173	173	115	0
Mar-08	7601	0	0	307	215	614	215	430	307	616	245	399	0	461	616	461	430	123	123	246	0	0	8	215	0	0	524	647	31	92	61	123	0

Month/Year	Cumulative Oil Production (BBL)	66	179	263	373	369	380	21	12	64	72	71	141	142	132	135	133	152	153	155	156	172	184	183	182	194	189	286	297	301	305	392
Jan-13	5315	0	0	245	70	525	210	386	175	526	247	0	0	0	666	0	315	105	105	210	0	280	70	0	0	0	316	70	109	210	230	245
Feb-13	4572	0	0	277	61	460	123	338	153	461	245	0	0	0	492	0	276	92	153	153	0	184	92	0	0	0	245	61	92	184	215	215
Mar-13	4986	0	0	264	132	496	165	363	165	430	231	0	0	0	562	0	297	99	132	165	0	231	99	0	0	0	264	33	132	264	231	231
Apr-13	4751	0	0	261	98	554	98	359	56	488	228	0	0	0	554	0	326	163	130	196	0	196	98	0	0	0	293	33	130	196	98	196
May-13	4982	0	0	251	107	574	143	429	0	502	251	0	0	0	573	0	358	72	143	215	7	251	107	0	0	0	358	36	139	215	72	179
Jun-13	5125	0	0	232	99	530	132	397	0	529	199	0	0	0	562	0	331	166	166	166	0	199	463	0	0	0	298	33	99	232	93	199
Jul-13	5074	0	0	248	124	557	279	433	0	495	217	0	0	0	526	0	310	155	155	186	87	186	278	0	0	0	248	62	93	217	63	155
Aug-13	4957	0	0	266	67	600	166	400	0	498	267	0	0	0	565	0	333	100	67	200	97	233	133	0	0	0	332	67	67	233	100	166
Sep-13	4531	0	0	237	89	562	118	356	0	445	207	0	0	0	504	0	296	148	148	178	89	178	118	0	0	0	296	59	59	178	118	148
Oct-13	4863	0	0	151	127	572	178	413	0	444	223	0	0	0	539	0	318	159	127	191	95	191	191	0	0	0	318	64	95	222	86	159
Nov-13	4602	0	0	239	136	580	205	443	0	30	239	0	0	0	581	0	341	171	102	205	68	205	136	0	0	0	341	34	68	205	102	171
Dec-13	4769	0	0	354	97	709	161	387	0	0	225	0	0	0	581	0	354	161	161	193	97	193	129	0	0	0	322	32	97	258	97	161
Jan-14	4693	0	0	296	131	758	164	393	0	0	64	0	0	0	592	0	361	164	131	197	98	197	98	0	0	0	295	33	164	295	98	164
Feb-14	4131	0	0	221	95	725	126	473	0	0	0	0	0	0	535	0	347	126	158	189	63	221	126	0	0	0	158	32	126	221	63	126
Mar-14	4701	0	0	292	109	802	182	474	0	0	0	0	0	0	619	0	401	146	146	219	73	255	109	0	0	0	182	36	146	255	109	146
Apr-14	4387	0	0	332	100	664	133	465	0	0	0	0	0	0	566	0	332	166	133	199	66	233	100	0	0	0	266	33	133	233	100	133
May-14	4661	0	0	303	76	720	189	455	0	0	0	0	0	0	644	0	379	152	189	227	76	227	152	0	0	0	265	38	152	189	76	152
Jun-14	5060	0	0	168	101	772	134	1267	0	0	0	0	0	0	571	0	369	134	168	235	34	201	67	0	0	0	235	34	134	235	67	134
Jul-14	4938	0	0	299	166	729	232	828	0	0	0	0	0	0	563	0	332	133	133	166	66	199	133	0	0	0	265	29	133	299	100	133
Aug-14	4934	0	0	338	101	778	203	845	0	0	0	0	0	0	574	0	372	169	169	169	34	237	135	0	0	0	270	34	101	169	101	135
Sep-14	4734	0	0	511	128	736	192	831	0	0	0	0	0	0	512	0	288	96	160	192	64	192	128	0	0	0	192	32	96	160	96	128
Oct-14	4622	0	0	255	159	733	191	764	0	0	0	0	0	0	510	0	319	128	128	191	32	159	128	0	0	0	255	32	191	223	96	128
Nov-14	4443	0	0	282	125	688	219	782	0	0	0	0	0	0	469	0	251	157	219	188	31	157	125	0	0	0	282	31	61	188	63	125
Dec-14	4250	0	0	242	138	762	138	830	0	0	0	0	0	0	519	0	167	138	138	208	0	208	104	0	0	0	311	35	0	173	104	35
Jan-15	4026	0	0	252	189	692	157	692	0	0	0	0	0	0	472	0	189	220	189	189	0	189	94	0	0	0	283	31	126	157	94	0
Feb-15	3771	0	0	226	169	620	141	705	0	0	0	0	0	0	451	0	113	226	169	169	0	169	85	0	0	0	254	28	113	169	85	48
Mar-15	4126	0	0	267	119	682	178	712	0	0	0	0	0	0	505	0	119	208	178	178	0	178	89	0	0	0	297	30	208	148	89	119
Apr-15	4069	0	0	263	98	690	164	723	0	0	0	0	0	0	525	0	131	164	197	197	0	197	98	0	0	0	295	33	98	164	98	131
May-15	4150	0	0	272	102	748	136	715	0	0	0	0	0	0	545	0	136	170	204	204	0	204	102	0	0	0	272	34	102	170	102	136
Jun-15	4106	0	0	403	135	674	135	672	0	0	0	0	0	0	538	0	101	135	236	236	0	202	101	0	0	0	269	34	101	168	67	135
Jul-15	4225	0	0	239	170	716	170	717	0	0	0	0	0	0	512	0	102	170	205	205	0	170	136	0	0	0	375	34	136	205	102	66
Aug-15	3829	0	0	298	81	630	166	697	0	0	0	0	0	0	499	0	99	166	133	133	0	199	99	0	0	0	365	33	99	166	99	0
Sep-15	3477	0	0	305	61	642	122	610	0	0	0	0	0	0	488	0	92	122	118	118	0	183	92	0	0	0	275	30	92	153	92	0
Oct-15	3982	0	0	409	170	714	136	716	0	0	0	0	0	0	511	0	102	136	136	136	0	204	102	0	0	0	272	34	102	170	68	0
Nov-15	3689	0	0	424	65	652	131	653	0	0	0	0	0	0	490	0	98	98	131	131	0	196	98	0	0	0	261	33	98	163	98	0
Dec-15	3745	0	0	298	99	662	133	629	0	0	0	0	0	0	498	0	166	166	166	166	0	166	99	0	0	0	265	33	133	166	66	0
Jan-16	3564	0	0	286	127	636	159	574	0	0	0	0	0	0	446	0	159	159	95	95	0	159	127	0	0	0	255	32	127	159	64	0
Feb-16	2839	0	0	311	124	364	124	591	0	0	0	0	0	0	255	0	93	124	62	62	0	109	93	0	0	0	248	31	155	93	62	0
Mar-16	2428	0	0	353	117	0	157	745	0	0	0	0	0	0	0	0	157	117	78	78	0	0	117	0	0	0	235	39	117	157	39	0
Apr-16	2330	0	0	285	123	0	123	775	0	0	0	0	0	0	0	0	164	123	41	41	0	0	82	0	0	0	164	41	164	204	41	0
May-16	2761	0	0	271	116	0	116	734	0	0	0	0	0	0	402	0	116	116	39	39	0	0	116	0	0	0	271	39	155	193	77	0
Jun-16	2748	0	0	344	137	0	137	688	0	0	0	0	0	0	309	0	137	103	103	103	0	0	103	0	0	0	240	69	137	172	69	0
Jul-16	2847	0	0	351	141	0	176	633	0	0	0	0	0	0	456	0	141	176	105	105	0	0	141	0	0	0	211	35	105	141	35	0
Aug-16	2674	0	0	376	136	0	171	581	0	0	0	0	0	0	443	0	102	136	68	68	0	0	136	0	0	0	171	68	102	171	13	0
Sep-16	2611	0	0	372	102	0	170	610	0	0	0	0	0	0	440	0	102	136	34	34	0	0	170	0	0	0	169	34	102	170	0	0
Oct-16	2697	0	0	431	108	0	144	646	0	0	0	0	0	0	468	0	108	144	72	72	0	0	108	0	0	0	180	36	108	144	0	0
Nov-16	2708	0	0	420	105	0	140	629	0	0	0	0	0	0	455	0	140	140	154	154	0	0	70	0	0	0	140	35	105	175	0	0
Dec-16	3343	0	0	431	144	468	144	647	0	0	0	0	0	0	504	0	72	108	360	360	0	0	108	0	0	0	180	36	108	33	0	0
Jan-17	3129	0	0	275	103	448	103	584	0	0	0	0	0	0	481	0	103	241	206	206	0	0	103	0	0	0	241	34	69	138	0	0
Feb-17	2944	0	0	188	125	376	94	532	0	0	0	0	0	0	438	0	94	94	157	157	0	0	157	94	0	0	250	31	157			