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January 30, 2018

Mr. Alex Fischer
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

Mr. Andy Hawk
BP America Production Company
380-A Airport Road
Durango, Colorado 81303

RE: 4M Operations and Maintenance Report
August 2016 through December 2017

Dear Mr. Fischer and Mr. Hawk:

LT Environmental, Inc. (LTE) is pleased to submit this Operations and Maintenance (O&M) Report for the 4M Outcrop Mitigation Project in La Plata County, Colorado, to the Colorado Oil and Gas Conservation Commission (COGCC) of the Department of Natural Resources (DNR) and BP America Production Company (BP America). This report includes the reporting period for August 26, 2016, to December 13, 2017.

Background

The objective of the 4M methane mitigation system is to demonstrate the technical viability to recover and use methane seepage at specific locations where methane seeps to the surface along the Fruitland Formation Outcrop. An additional goal of the mitigation system is to protect the environment, which includes reducing carbon emissions and improving plant growth. To accomplish these objectives, LTE designed and installed vapor collection and barrier systems for methane collection at the South Fork Texas Creek (SFTC) site (Figure 1) and the Pine River (PR) site (Figure 2). At the SFTC site, the recovered methane is used to fuel a turbine, which generates electricity to operate the collection system. The turbine returns the excess generated power to the local electrical grid for credit as a renewable energy resource. Methane concentrations are too low to combust at the PR site, so recovered methane is vented to the atmosphere. The initial design, installation, and startup of the 4M methane mitigation systems were completed in 2008 and 2009. O&M activities beginning May 2009 are detailed in previous O&M reports completed by LTE.

During June 2010, the SFTC system was expanded to increase methane collection. A collection liner designed to direct vapors into the existing collection system was installed beneath the creek, and 32 diagonal well points were installed along the creek and piped into the existing manifold. In addition, gas from a COGCC monitoring well was piped to the collection system. The monitoring well source was not sustainable, and the line was shut-in and the well returned to monitoring status in late 2010.

The PR system was changed to a passive venting system on July 6, 2012. The blower was shut down, and the valves were adjusted to allow recovered methane within the subsurface piping to vent. A wind-driven turbine ventilator was added to the system stack to assist with methane venting. Field instrumentation was used to monitor methane concentrations in the ventilation piping. The vegetation was observed for negative effects from methane seepage.

Mitigation System Operations and Maintenance

Routine system operations are conducted at both sites. O&M activities included maintaining the equipment per manufacturer instructions, collecting data used to evaluate system performance, and adjusting the operating parameters to optimize system effectiveness. Operational parameters were recorded and included methane and oxygen concentrations in the collected gas, operational hours for the blower and turbine generator, applied vacuum to the subsurface piping, and electrical generation by the turbine.

Activities conducted during the reporting period included:

- Conducting routine O&M activities to monitor and adjust system performance;
- Field screening the inlet gas quality;
- Reviewing gas quality measurements stored in the data loggers and obtaining weather station data;
- Changing oil, oil filters, an oil separator, and a coalescing filter in the gas compressor system;
- Changing the air and fuel filters on the turbine;
- Replacing the serpentine belt on the compressor;
- Installing a pneumatic auto drain for the desiccant dryer tank; and
- Conducting non-routine O&M services and troubleshooting as described below.

Non-routine O&M problems that decreased system efficiency at SFTC included periodic weather-related electrical grid power outages, a methane sensor malfunction, and excess water vapor in the gas stream.

In July 2016, a new type of desiccant was introduced to the system to counteract water vapor issues. This caused excess water in the dryer tank. The system was shut down on August 26, 2016, to prevent damage to the compressor. On November 11, 2016, the system was restarted. After the system was returned on line, the IR Industries methane sensor failed and caused a subsequent shut down. The sensor was removed on December 8, 2016, and shipped back to the manufacturer for repairs. The methane sensor was reinstalled on January 6, 2017. During the time the system was not running, a parameter on the controller changed and caused the system to shut down again. The controller issue was repaired on January 10, 2017, and the system was returned on line. The system ran consistently until it was shut down to install the auto drain for the dryer tank on March 13,

2017. The auto drain installation was completed on March 17, 2017. After the drain was installed, the system ran consistently until July 2017. Adjustments were made to the installation of the auto drain to fix issues that were causing the system to shut down. The system had periodic shutdowns due to the failing methane sensor from July 2017 to August 2017. On August 29, 2017, the methane sensor was replaced and the system was online consistently until October 2017 when a clogged fuel filter caused the system to shut down. On October 31, 2017, a new fuel filter was installed in the turbine fuel gas supply line. The system operated normally until November 17, 2017, when the belt on the compressor failed and put the system off-line. Once the belt was replaced, the system ran consistently through the end of 2017.

Operations Summary

During normal operations, gas composition and flow remained fairly consistent at both sites, with higher gas quality recorded at the SFTC system. During the reporting period, methane concentrations remained relatively stable (averaging 99 percent [%]) at the SFTC site (Figure 3). At the PR site, methane concentrations averaged 0.14% during the reporting year (Figure 4). O&M data are provided in Table 1 for the SFTC site, manifold gas concentrations for the SFTC site are provided in Table 2, and manifold gas concentrations for the PR site are provided in Table 3.

The percentage of methane gas recovered was measured at both sites. At the SFTC site, a methane flow rate was calculated using the methane concentrations and total metered flow. The average flow rate and cumulative recovered methane are plotted over time on Figure 5 for the SFTC site. The average collected gas flow for the reporting period was approximately 361 cubic feet per hour (cfh).

The SFTC system produces the gas needed to operate the turbine, and excess gas is re-circulated within the compression system. The turbine generator was set at 11 kilowatt (kW) output following operational difficulties encountered during 2011. With optimum system operations using approximately 6 kW of electrical power, the remaining 5 kW are distributed into the electrical grid for a net gain.

The system operations commenced on May 5, 2009, with an electrical meter reading of 51,540 kilowatt-hours (kW-h). From startup to March 2011, the electrical meter reading was reduced to zero then the meter rolled to 99,999 kW-h. In October 2013, the electric meter was reduced to zero then rolled over to 99,999 kW-h. In July 2015, a new meter was installed, which reset the reading to 99,999 kW-h. On December 13, 2017, the reading was 72,504 kW-h. These readings indicate that 255,028 kW-h have been returned to the grid since system operations commenced (Figure 6). The value of the electricity generated to date has been used to offset electrical usage at the PR site and to offset costs for administrative fees associated with the SFTC electrical service. The remainder of the net generation is held as a credit for the electrical service to the two facilities.

Vegetation Observations

Plant growth at both sites has occurred in areas previously devoid of vegetative growth. At the SFTC site, the edges of the liners are evident due to an absence of vegetation where excess methane seeps from beneath the liner. At the PR site, the location of the vent piping is not obvious, as an overall decrease in methane seepage and subsequent vegetation rebound has been observed.

During spring and early summer 2015, an improvement in drought conditions in the region allowed for some improved recovery in the vegetation at the SFTC site; this recovery continued during the 2016 summer. In 2017, recovery of the vegetation progressed even more as rainfall totals increased from previous years. The condition of vegetation in the wetland area is consistent with vegetation upstream and downstream of the site along the South Fork of Texas Creek showing signs of drought relief over the past three years.

Weather Data

The weather station currently in use was installed in June 2010. The weather station was installed to monitor conditions that may affect methane recovery and system operations. Currently, the system operations do not appear to be limited by the volume of methane recovered or affected by variable weather conditions. The daily maximum and minimum temperatures (Figure 7), monthly precipitation (Figure 8), and the daily barometric pressure values (Figure 9) are provided.

Other Monitoring Activities

On July 13, 2017, the annual Fruitland Formation Outcrop monitoring survey was completed in the area of the SFTC system, and on July 17, 2017, the survey was completed in the area of the PR site. The results from the 2017 survey are indicated on Figure 1 for SFTC and Figure 2 for PR. The data indicated seepage from areas surrounding the system collection area at SFTC.

Planned Activities

The electrical generation results, along with visual observations of vegetation growth, suggest the methane mitigation system is operating successfully. During the next reporting period, the SFTC system will continue operations to optimize electrical generation and monitoring hydrogen sulfide and methane concentrations. To help reduce the chances of a low-methane shutdown, LTE will add a constant flow regulator to the methane sensor to reduce the effect that fluctuations in discharge pressure have on the methane readings, which have resulted in periodic system shut downs. LTE will continue to exchange replaceable parts in accordance with the manufacture's specifications to maintain optimum efficiency of the system.

The PR system will continue to be monitored for methane concentrations within the collection lines and for any changes to the vegetation.

Continued evaluation of improvements to system performances will be accomplished.

LTE appreciates the opportunity to provide these services to the COGCC and BP America. Please call us at (303) 433-9788 if you have any questions or comments regarding this report.

Sincerely,

LT ENVIRONMENTAL, INC.

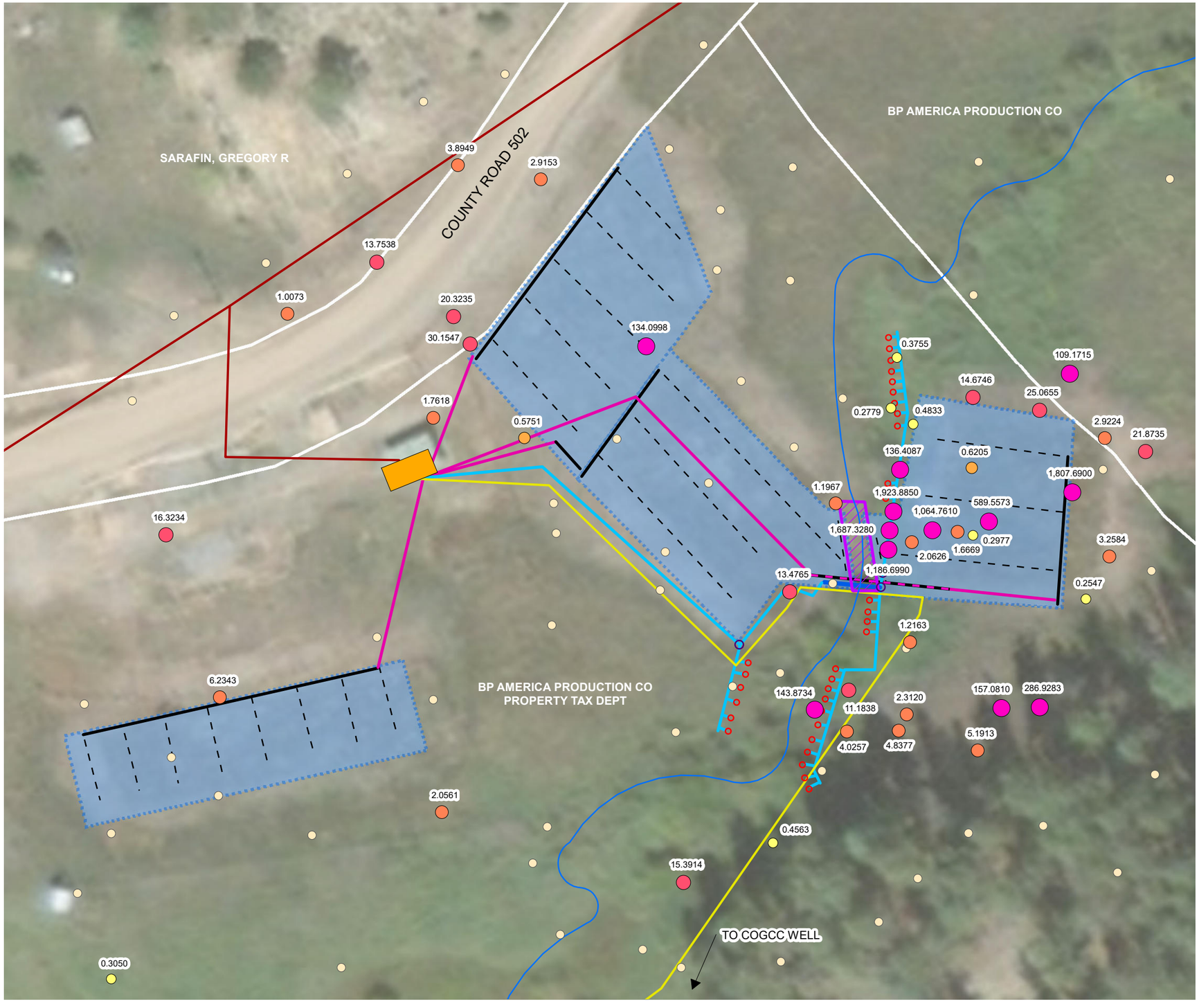
Devin Hencmann
Project Geologist

Christopher E. Shephard, P.E.
Project Manager

Attachments:

Figure 1 – Mitigation System Layout South Fork Texas Creek
Figure 2 – Mitigation System Layout Pine River
Figure 3 – South Fork Texas Creek Methane Concentrations
Figure 4 – Pine River Methane Concentrations
Figure 5 – South Fork Texas Creek Methane Gas Flow
Figure 6 – South Fork Texas Creek Surplus Electricity Generated
Figure 7 – Daily Minimum and Maximum Temperature
Figure 8 – Monthly Precipitation
Figure 9 – Daily Barometric Pressure
Table 1 – Operations and Maintenance Data South Fork Texas Creek
Table 2 – Gas Concentrations at Manifold South Fork Texas Creek
Table 3 – Gas Concentrations at Manifold Pine River

FIGURES



LEGEND

2017 METHANE FLUX MEASUREMENT (mol/m² • day)

- 0.000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 28,130.0000
- DIAGONAL COLLECTION WELL
- VAULT FOR CONTROL VALVE
- POWER LINE
- SOUTH FORK TEXAS CREEK
- 20 MIL IMPERVIOUS MEMBRANE
- EXTENDED METHANE COLLECTION (20 MIL BARRIER)
- PROCESS EQUIPMENT FOOTPRINT
- PARCEL BOUNDARY & OWNER (WHITE)

PIPING

- 2" SCH 40 PVC
- 2" SCH 80 PVC
- 3" SCH 40 PVC
- 3" SCH 80 PVC
- 4" ADS CORRUGATED PIPING (SLOTTED)
- 4" ADS CORRUGATED PIPING (SOLID)
- 1" HDPE

0 50 100
Feet

N

FIGURE 1
MITIGATION SYSTEM LAYOUT
SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
DURANGO, COLORADO

COLORADO OIL AND GAS CONSERVATION COMMISSION

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LEGEND

2017 METHANE FLUX MEASUREMENT (mol/m^2 • day)

- 0.000 - 0.1999
- 0.2000 - 0.5000
- 0.5001 - 1.0000
- 1.0001 - 10.0000
- 10.0001 - 50.0000
- 50.0001 - 100.0000
- 100.0001 - 28,130.0000
- VISIBLE METHANE SEEPS IN SURFACE WATER (2008)
- GAS MONITORING PROBES
- POWER POLE
- PROCESS EQUIPMENT FOOTPRINT
- PARCEL BOUNDARY & OWNER (WHITE)
- POWER LINE

PIPING

- 3" SCH 40 PVC
- 4" ADS CORRUGATED PIPING (SLOTTED) WITH 15 MIL IMPERVIOUS LINER
- 4" ADS CORRUGATED PIPING (SOLID)

0 60 120
Feet

N

FIGURE 2
MITIGATION SYSTEM LAYOUT
PINE RIVER
4M OUTCROP MITIGATION PROJECT
DURANGO, COLORADO

COLORADO OIL AND GAS CONSERVATION COMMISSION

P:\COGCC\GIS\MXD\005211003_4M OUTCROP MITIGATION\005211003_FIG02_PINE_RIVER_2017.mxd

FIGURE 3

SOUTH FORK TEXAS CREEK METHANE CONCENTRATIONS
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

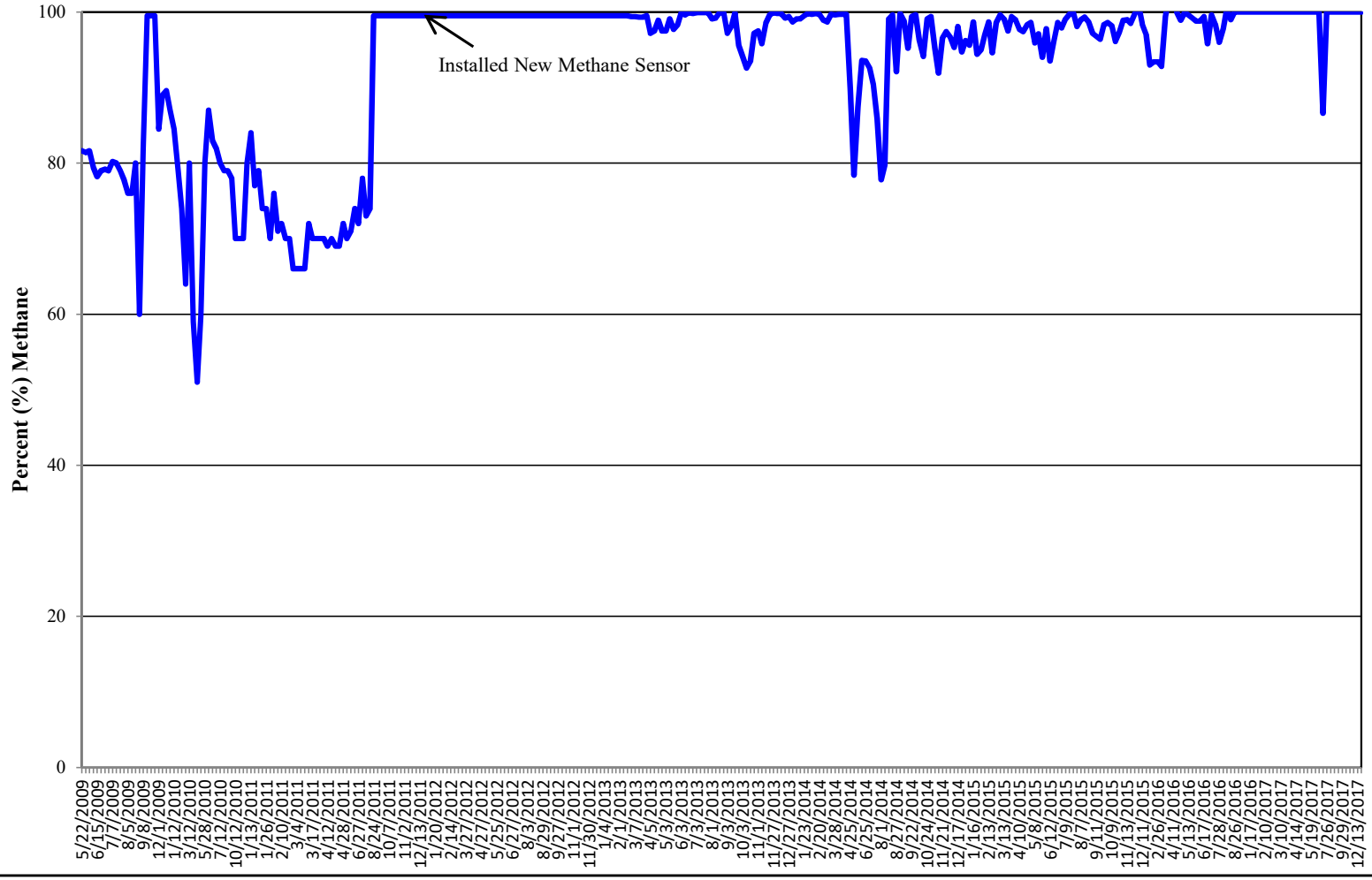


FIGURE 4

PINE RIVER METHANE CONCENTRATIONS
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

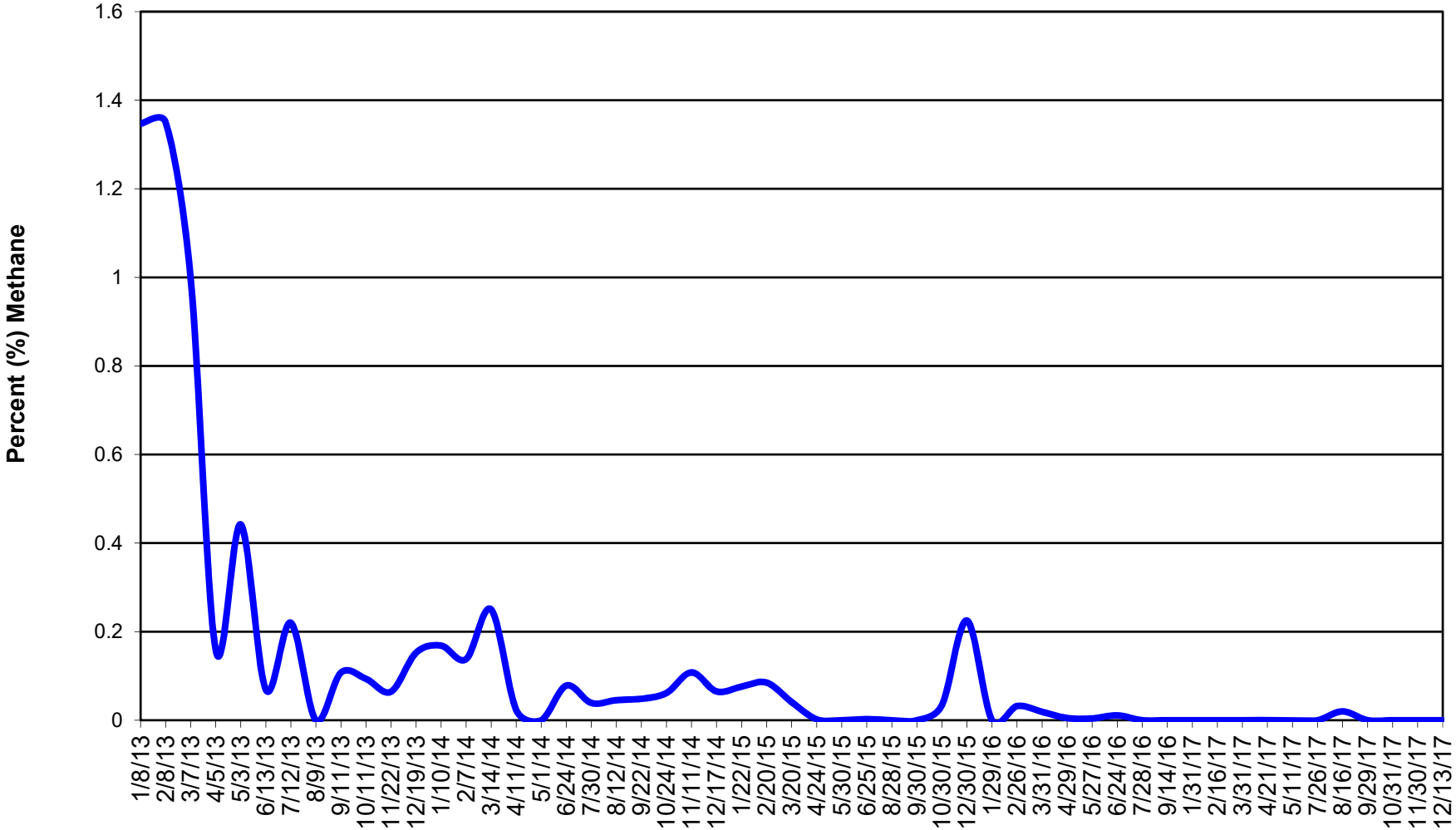


FIGURE 5

SOUTH FORK TEXAS CREEK METHANE GAS FLOW
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

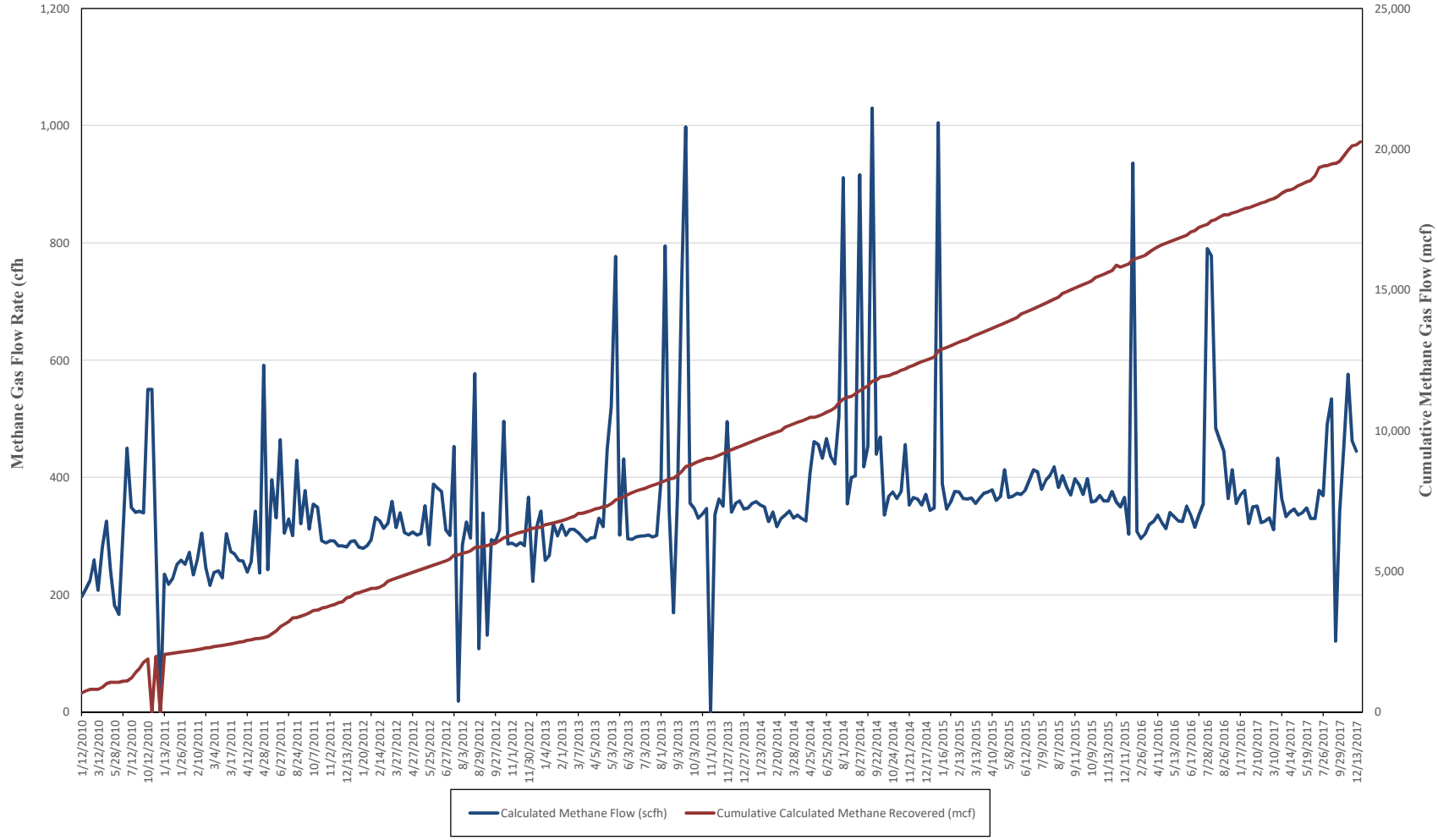


FIGURE 6

SOUTH FORK TEXAS CREEK
SURPLUS ELECTRICITY GENERATED
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

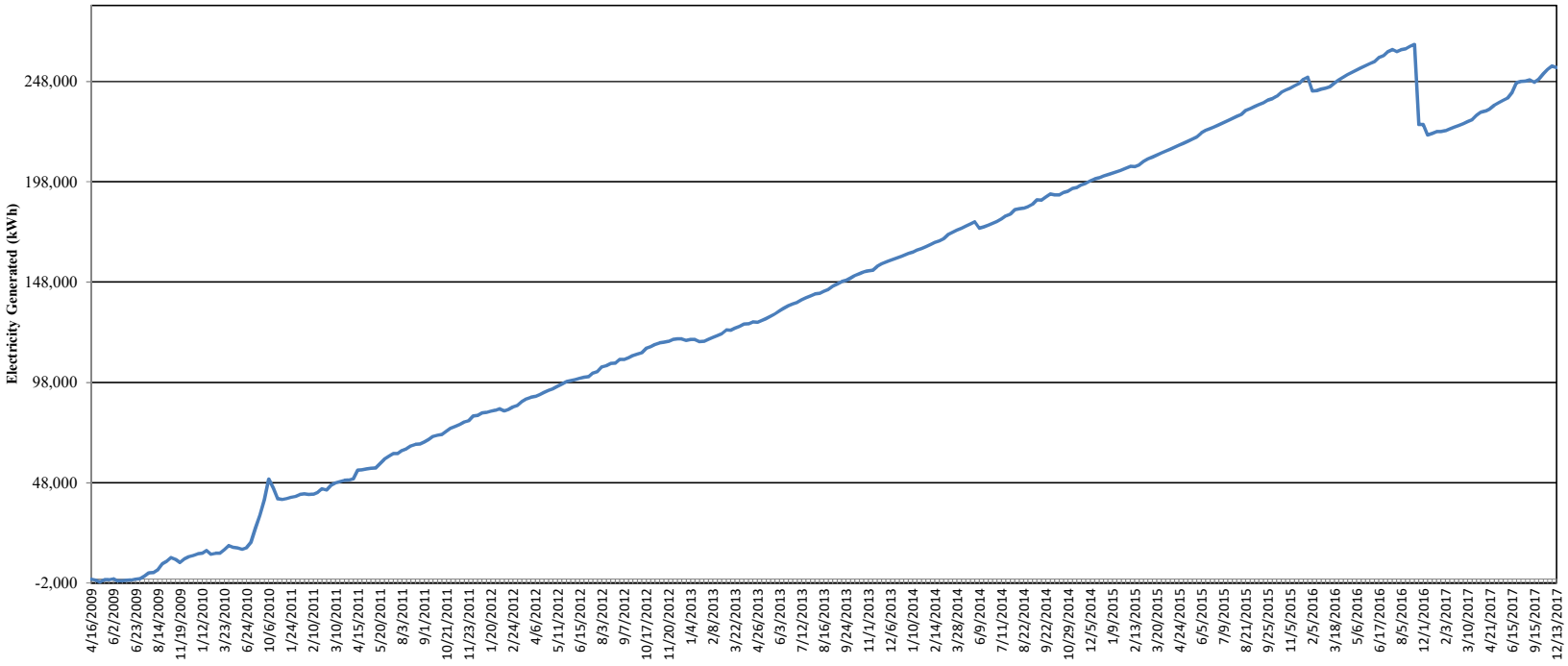


FIGURE 7

DAILY MINIMUM AND MAXIMUM TEMPERATURE
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

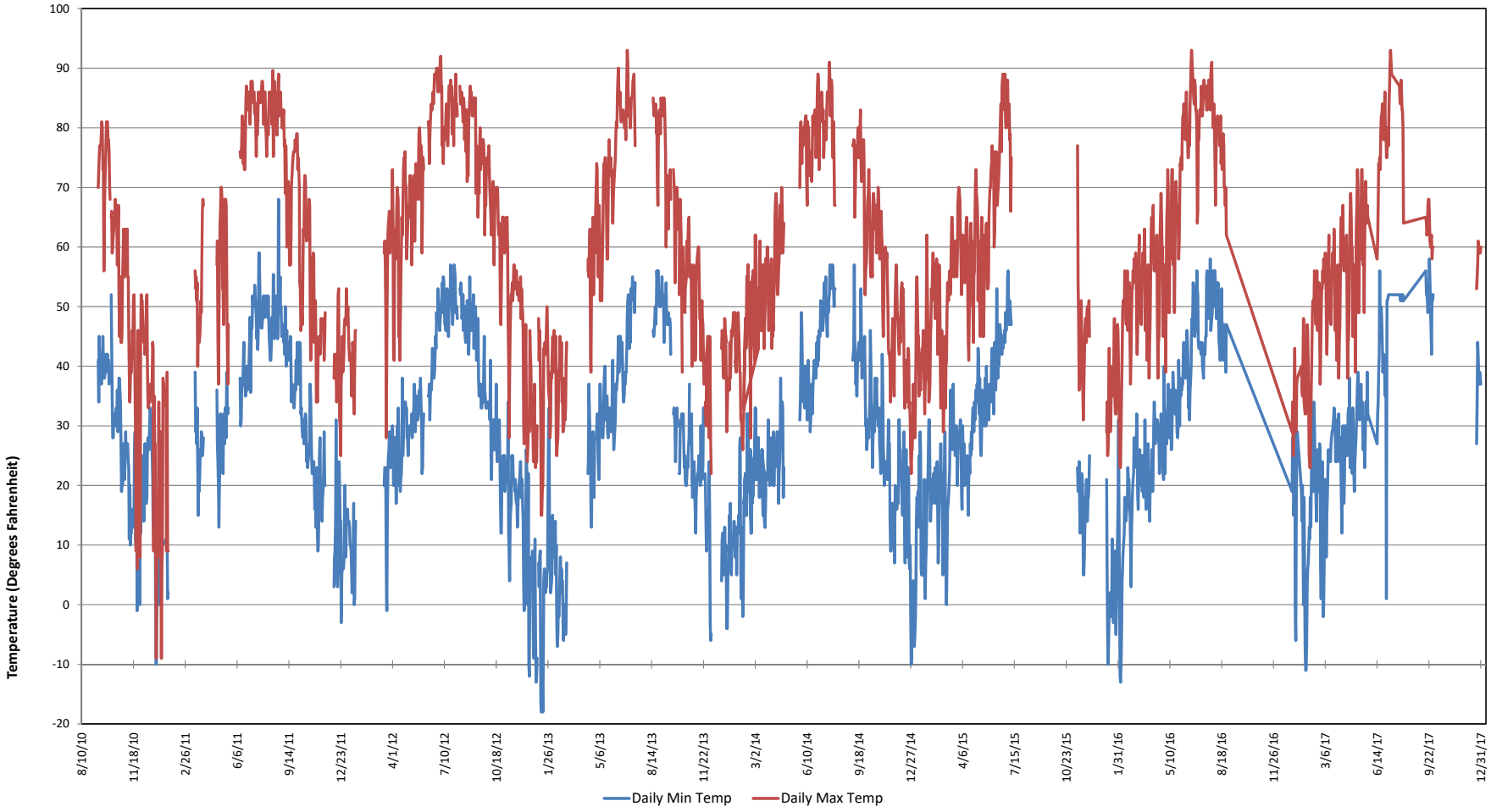


FIGURE 8

MONTHLY PRECIPITATION
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

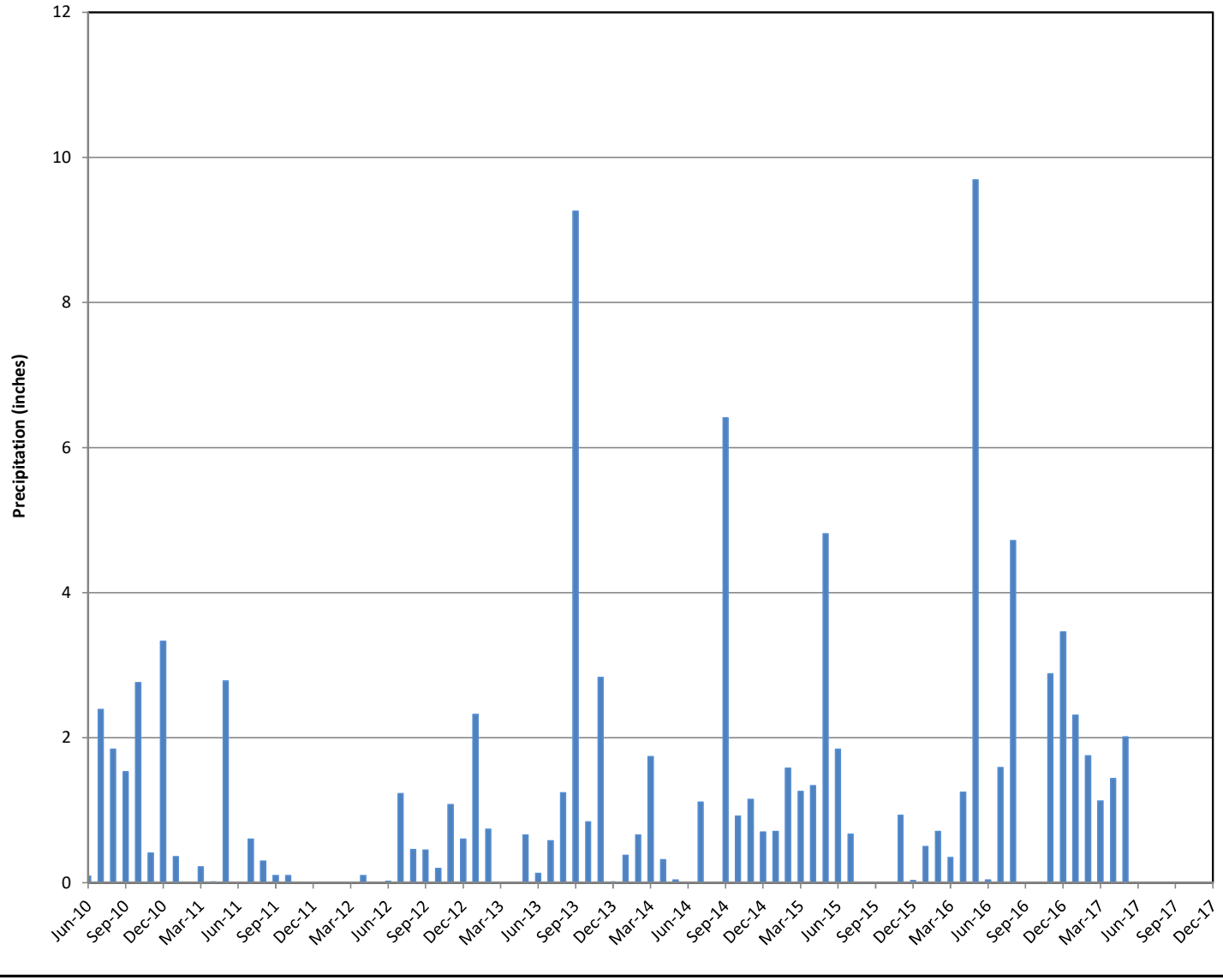
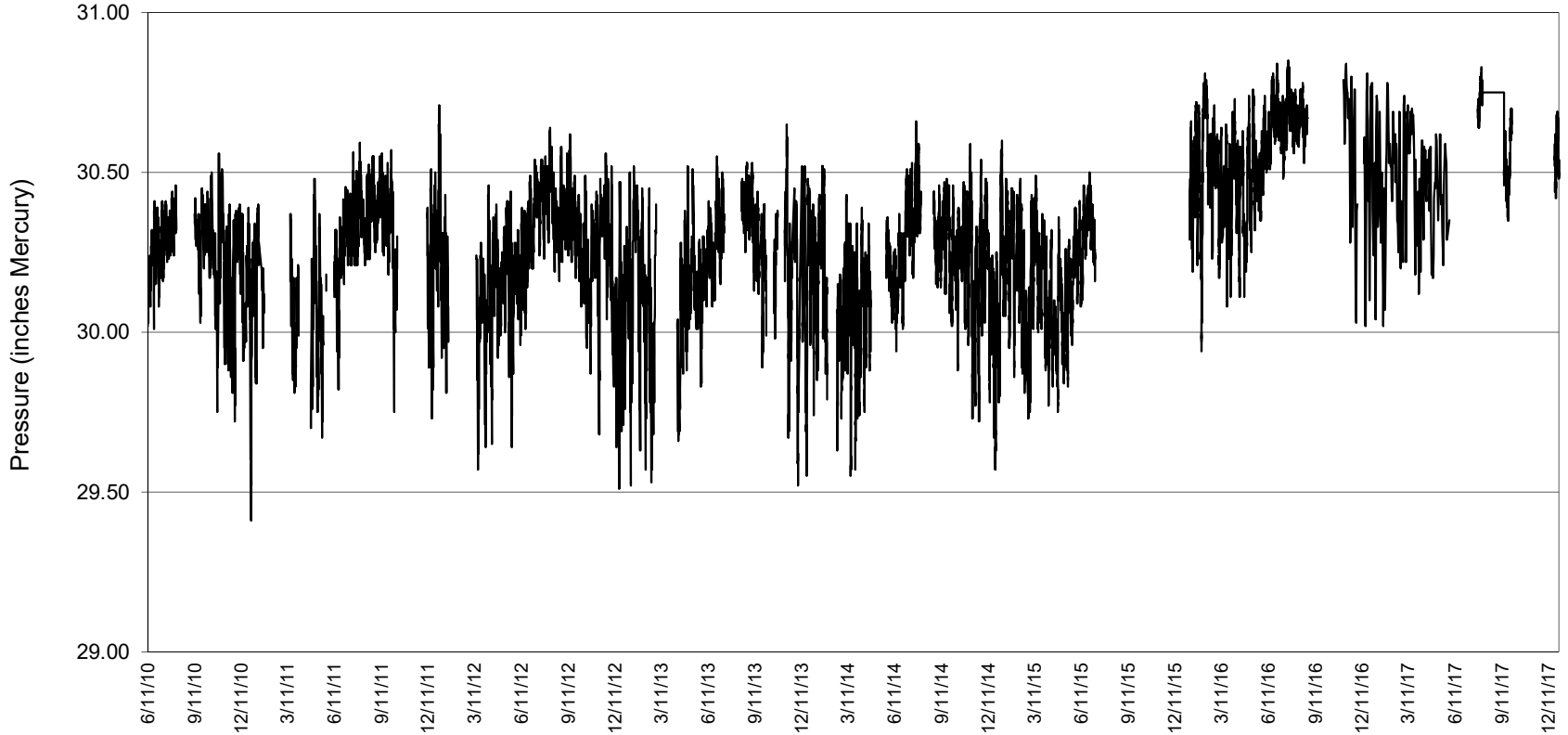


FIGURE 9

DAILY BAROMETRIC PRESSURE
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION



TABLES

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
5/22/2009	OFF	51,540	34	34	10	166,000	--	81.6	130	203	7
5/27/2009	OFF	50,355	90	90	10	166,000	--	81.4	33	204	18
5/29/2009	OFF	50,368	113	113	10	166,000	--	81.6	15.2	203	23
6/8/2009	OFF	50,967	192	192	10	166,000	--	79.4	14.9	209	40
6/15/2009	OFF	50,683	286	286	10	166,000	289	78.2	83	212	59
6/19/2009	OFF	50,510	305	305	10	166,000	308	79.0	19.8	210	63
6/23/2009	OFF	50,004	310	310	10	166,000	402	79.2	0.16	210	65
6/25/2009	OFF	--	318	318	10	166,000	411	79.0	--	--	--
7/7/2009	OFF	50,983	338	338	10	166,000	431	80.2	51.2	207	69
7/15/2009	ON	--	523	523	10 to 12	188,000	620	--	--	--	--
7/22/2009	OFF	50,519	558	558	12	188,000	659	79.0	48	238	121
7/24/2009	OFF	50,365	600	600	12	188,000	700	--	--	--	--
8/5/2009	ON	46,840	891	891	10	166,000	993	76.0	5.25	218	185
8/14/2009	ON	45,536	1,106	1,106	12	188,000	1,208	76.0	3.25	247	238
8/20/2009	ON	44,501	1,251	1,251	12	188,000	1,353	80.0	4.25	235	272
9/2/2009	OFF	42,246	1,538	1,538	14	209,000	1,602	60.0	0.39	348	372
9/8/2009	ON	41,236	1,666	1,666	14	209,000	1,779	82.0	0.1	255	404
9/21/2009	ON	39,298	1,934	1,934	14 to 16	209,000	2,101	99.5	0.1	210	461
10/5/2009	OFF For Repairs	40,322	2,009	2,009	OFF	166,000	2,332	--	2.75	--	--
11/19/2009	ON	41,776	1	1	12	166,000	--	99.5	93 ppm	167	461
12/1/2009	ON	39,960	286	286	12	166,000	2,623	84.5	1.9 ppm	196	517
12/11/2009	OFF	38,941	495	495	12	166,000	2,866	89.0	2.0 ppm	187	556
12/16/2009	ON	38,235	615	615	12	166,000	2,986	89.6	1.8 ppm	185	578
12/29/2009	OFF	37,548	876	876	12	166,000	3,321	87.0	3.0 ppm	191	628
1/12/2010	OFF	37,127	1,109	1,109	12	166,000	3,632	84.5	3.25 ppm	196	674
1/27/2010	ON	35,875	1,469	1,469	12	166,000	3,993	79.2	0.1	210	749
3/5/2010	OFF	37,586	1,722	1,722	12	166,000	4,246	74.0	0.16	224	806
3/11/2010	OFF	37,217	1,723	1,723	12	166,000	4,247	64.0	130 ppm	259	806
3/12/2010	ON	37,172	1,747	1,747	12	166,000	4,271	80.0	23.2 ppm	208	811
3/23/2010	ON	35,364	2,009	2,009	12	166,000	4,533	59.0	0.1	281	885
4/14/2010	--	33,275	2,379	2,379	12	166,000	4,900	51.0	52 ppm	325	1,005
5/21/2010	OFF	34,290	2,573	2,573	8	145,000	5,099	60.0	--	242	1,052

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
5/28/2010	OFF	34,589	2,573	2,573	8	145,000	5,099	80.0	--	181	1,052
6/16/2010	ON	35,119	2,574	2,574	8	145,000	5,101	87.0	0.1	167	1,052
6/24/2010	OFF *	34,436	2,720	2,720	18	253,000	5,249	83.0	0.1	305	1,097
6/29/2010	ON	34,412	2,733	2,733	20	274,000	5,262	82.0	0.1	450	1,102
7/12/2010	ON	31,780	3,035	3,035	20	274,000	5,576	80.0	0.1	349	1,208
8/6/2010	ON	24,587	3,613	3,613	19.2	265,000	6,171	79.0	0.1	341	1,405
8/24/2010	ON	18,172	4,035	4,035	19	265,000	6,605	79.0	0.1	342	1,549
9/21/2010	ON	10,437	4,690	4,690	18.1	253,000	7,279	78.0	0.1	340	1,771
10/12/2010	ON	8,260	4,900	4,900	18.0	253,000	8,154	70.0	0.1	550	1,887
12/2/2010	--	3,290	--	--	--	--	--	70	--	550	--
12/17/2010	OFF	4,901	5,246	5,246	12.0	166,000	8,364	70.0	0.1	281	1,984
1/3/2011	--	7,820	--	--	--	--	--	--	--	--	--
1/13/2011	OFF	10,209	5,592	5,592	8.0	145,000	8,574	84.0	0.1	235	2,050
1/17/2011	ON	10,102	5,684	5,684	8.0	145,000	8,668	77.0	0.1	218	2,070
1/20/2011	ON	9,869	5,758	5,758	9.9	166,000	8,741	79.0	0.1	227	2,087
1/24/2011	ON	9,269	5,854	5,854	13.0	199,000	8,838	74.0	0.1	251	2,111
1/26/2011	ON	8,856	5,898	5,898	14.9	220,000	8,884	74.0	0.1	259	2,122
1/31/2011	ON	7,872	6,013	6,013	14.5	209,000	9,000	70.0	0.1	252	2,151
2/3/2011	OFF	7,549	6,075	6,075	12.9	199,000	9,079	76.0	0.1	272	2,168
2/8/2011	ON	6,846	6,191	6,191	12.9	199,000	9,194	71.0	0.1	234	2,195
2/10/2011	OFF	6,694	6,240	6,240	13.9	209,000	9,247	72.0	0.1	262	2,208
2/18/2011	OFF	5,712	6,386	6,386	13.9	209,000	9,412	70.0	0.1	305	2,252
2/22/2011	ON	5,157	6,476	6,476	14.0	209,000	9,506	70.0	0.1	247	2,275
2/25/2011	ON	4,581	6,550	6,550	13.0	199,000	9,580	66.0	0.1	216	2,291
3/4/2011	ON	3,243	6,707	6,707	13.0	199,000	9,747	66.0	0.1	238	2,328
3/7/2011	ON	--	6,776	6,776	13.0	199,000	9,817	66.0	0.1	241	2,344
3/10/2011	ON	2,138	6,846	6,846	12.3	188,000	9,888	66.0	0.1	229	2,361
3/14/2011	ON	1,397	6,941	6,941	13.0	199,000	9,984	72.0	0.1	304	2,389
3/17/2011	ON	873	7,008	7,008	12.9	199,000	10,051	70.0	0.1	274	2,408
3/24/2011	ON	99,288	7,170	7,170	12.9	199,000	10,218	70.0	0.1	269	2,451
3/29/2011	ON	98,294	7,288	7,288	12.9	199,000	10,338	70.0	0.1	259	2,482
4/1/2011	ON	97,517	7,362	7,362	9.9	166,000	10,414	70.0	0.1	257	2,501
4/12/2011	ON	96,305	7,553	7,553	10.9	177,000	10,674	69.0	0.1	239	2,547

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
4/15/2011	ON	95,767	7,626	7,626	10.9	177,000	10,747	70.0	0.1	257	2,565
4/22/2011	ON	95,629	7,740	7,740	8.0	145,000	10,915	69.0	0.1	343	2,604
4/25/2011	ON	95,164	7,797	7,797	8.0	145,000	11,012	69.0	0.1	237	2,618
4/28/2011	ON	94,834	7,844	7,844	10.9	177,000	11,058	72.0	0.1	591	2,646
5/5/2011	ON	94,642	8,009	8,009	11.0	177,000	11,224	70.0	0.1	243	2,686
5/20/2011	ON	92,515	8,251	8,251	10.9	177,000	11,577	71.0	0.1	396	2,782
6/13/2011	ON	90,313	8,551	8,551	20.0	209,000	11,889	74.0	0.1	332	2,881
6/27/2011	ON	88,943	8,864	8,864	11.9	188,000	12,459	72.0	0.1	464	3,026
7/14/2011	ON	87502	9,148	9,148	13.0	199,000	12,866	78.0	0.1	305	3,113
8/3/2011	ON	86014	9,459	9,459	12.9	199,000	13,347	73.0	0.1	329	3,215
8/23/2011	ON	82,879	9,892	9,892	13.0	199,000	13,824	74.0	0.1	301	3,345
8/24/2011	ON	82753	9,908	9,908	12.9	199,000	13,831	99.5	0.1	429	3,352
9/1/2011	OFF	81745	10,062	10,062	13.0	199,000	14,036	99.5	0.1	321	3,402
9/8/2011	ON	80440	10,228	10,228	13.0	199,000	14,204	99.5	0.1	378	3,464
9/16/2011	ON	78926	10,419	10,419	13.0	199,000	14,396	99.5	0.1	312	3,524
10/7/2011	OFF	78343	10,646	10,646	13.0	199,000	14,893	99.5	0.1	355	3,605
10/12/2011	OFF	78065	10,713	10,713	10.0	166,000	15,012	99.5	0.1	349	3,628
10/21/2011	ON	77901	10,927	10,927	10.0	166,000	15,227	99.5	0.1	292	3,690
10/26/2011	ON	76,338	11,045	11,045	20.0	274,000	15,346	99.5	0.1	288	3,724
11/2/2011	ON	75,330	11,215	11,215	11.0	177,000	15,517	99.5	0.1	292	3,774
11/8/2011	ON	74,515	11,359	11,359	11.0	177,000	15,660	99.5	0.1	292	3,816
11/18/2011	ON	73,275	11,598	11,598	11.0	177,000	15,899	99.5	0.1	284	3,884
11/23/2011	ON	72,623	11,715	11,715	11.0	177,000	16,016	99.5	0.1	283	3,917
12/13/2011	ON	70,334	12,198	12,198	11.0	177,000	16,499	99.5	0.1	282	4,053
12/21/2011	OFF	70,062	12,338	12,338	11.0	177,000	16,691	99.5	0.1	291	4,094
1/6/2012	ON	68,872	12,721	12,721	11.0	177,000	17,075	99.5	0.1	292	4,206
1/11/2012	ON	68,481	12,840	12,840	11.0	177,000	17,193	99.5	0.1	281	4,239
1/20/2012	ON	67,814	13,057	13,057	11.0	177,000	17,410	99.5	0.1	279	4,300
1/25/2012	ON	67,382	13,179	13,179	11.0	177,000	17,532	99.5	0.1	284	4,334
2/3/2012	ON	66,646	13,391	13,391	11.0	177,000	17,744	99.5	0.1	294	4,397
2/9/2012	OFF	67,672	13,394	13,394	11.0	177,000	17,749	99.5	0.1	332	4,398
2/14/2012	ON	66,993	13,513	13,513	11.0	177,000	17,868	99.5	0.1	326	4,436
2/24/2012	ON	65,738	13,751	13,751	11.0	177,000	18,106	99.5	0.1	314	4,511

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
3/13/2012	ON	63,190	14,178	14,178	12.0	166,000	18,537	99.5	0.1	322	4,649
3/21/2012	ON	61,775	14,364	14,364	20.0	274,000	18,729	99.5	0.1	359	4,715
3/27/2012	ON	60,912	14,509	14,509	12.0	166,000	18,874	99.5	0.1	315	4,761
4/6/2012	OFF	60,519	14,657	14,657	11.0	177,000	19,111	99.5	0.1	340	4,811
4/12/2012	ON	59,661	14,800	14,800	11.0	177,000	19,254	99.5	0.1	306	4,855
4/20/2012	ON	58,486	14,993	14,993	11.0	177,000	19,447	99.5	0.1	302	4,913
4/27/2012	ON	57,475	15,161	15,161	11.0	177,000	19,615	99.5	0.1	307	4,965
5/3/2012	ON	56,611	15,306	15,306	11.0	177,000	19,760	99.5	0.1	302	5,009
5/11/2012	ON	55,460	15,499	15,499	11.0	177,000	19,953	99.5	0.1	305	5,068
5/17/2012	ON	54,358	15,634	15,634	11.0	177,000	20,094	99.5	0.1	352	5,115
5/25/2012	ON	53,228	15,826	15,826	11.0	177,000	20,287	99.5	0.1	285	5,170
5/30/2012	ON	52,627	15,945	15,945	11.0	177,000	20,405	99.5	0.1	389	5,216
6/8/2012	OFF	52,020	16,087	16,087	11.0	177,000	20,620	99.5	0.1	382	5,270
6/15/2012	OFF	51,512	16,210	16,210	11.0	177,000	20,789	99.5	0.1	376	5,316
6/27/2012	ON	51,039	16,392	16,392	10.0	166,000	21,070	99.5	0.1	311	5,373
7/6/2012	ON	50,712	16,611	16,611	11.0	177,000	21,289	99.5	0.1	301	5,439
7/19/2012	ON	48,930	16,923	16,923	11.0	177,000	21,601	99.5	0.1	453	5,580
7/26/2012	ON	48,136	17,092	17,092	11.0	177,000	21,770	99.5	0.1	18	5,583
8/3/2012	ON	45,832	17,293	17,293	11.0	177,000	21,961	99.5	0.1	285	5,640
8/8/2012	ON	45,132	17,402	17,402	11.0	177,000	22,080	99.5	0.1	324	5,676
8/17/2012	ON	44,033	17,592	17,592	11.0	177,000	22,270	99.5	0.1	297	5,732
8/24/2012	ON	43,879	17,785	17,785	11.0	177,000	22,463	99.5	0.1	577	5,844
8/29/2012	ON	42,152	17,928	17,928	11.0	177,000	22,606	99.5	0.1	108	5,859
9/7/2012	OFF	42,124	18,011	18,011	11.0	177,000	22,800	99.5	0.1	339	5,887
9/14/2012	ON	41,166	18,174	18,174	11.0	177,000	22,963	99.5	0.1	131	5,908
9/21/2012	ON	40,158	18,343	18,343	11.0	177,000	23,133	99.5	0.1	294	5,958
9/27/2012	ON	39,307	18,489	18,489	11.0	177,000	23,279	99.5	0.1	291	6,001
10/8/2012	ON	38,739	18,753	18,753	11.0	177,000	23,543	99.5	0.1	311	6,083
10/17/2012	ON	36,454	18,968	18,968	11.0	177,000	23,758	99.5	0.1	496	6,189
10/23/2012	ON	35,608	19,112	19,112	11.0	177,000	23,902	99.5	0.1	287	6,230
11/1/2012	ON	34,651	19,328	19,328	11.0	177,000	24,118	99.5	0.1	288	6,293
11/8/2012	ON	33,827	19,499	19,499	11.0	177,000	24,289	99.5	0.1	284	6,341
11/16/2012	OFF	33,502	19,644	19,644	11.0	177,000	24,481	99.5	0.1	289	6,383

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
11/20/2012	ON	33,142	19,739	19,739	11.0	177,000	24,576	99.5	0.1	284	6,410
11/30/2012	OFF	32,139	19,925	19,925	11.0	177,000	24,814	99.5	0.1	366	6,478
12/7/2012	ON	31,826	20,143	20,143	11.0	177,000	24,982	99.5	0.1	223	6,527
12/13/2012	OFF	31,763	20,216	20,216	11.0	177,000	25,126	99.5	0.1	316	6,550
12/21/2012	OFF	32,550	20,268	20,268	9.0	155,500	25,318	99.5	0.1	343	6,568
1/4/2013	ON	32,154	20,600	20,600	9.0	155,500	25,651	99.5	0.1	259	6,654
1/7/2013	ON	32,084	20,695	20,695	10.0	166,000	25,746	99.5	0.1	267	6,679
1/21/2013	OFF	33,216	20,814	20,814	11.0	177,000	25,993	99.5	0.1	320	6,717
1/25/2013	ON	33,024	20,911	20,911	11.0	177,000	26,089	99.5	0.1	301	6,746
2/1/2013	ON	31,930	21,073	21,073	11.5	177,000	26,255	99.5	0.1	319	6,798
2/8/2013	ON	31,044	21,241	21,241	11.5	177,000	26,423	99.5	0.1	301	6,849
2/15/2013	ON	30,155	21,411	21,411	12.0	188,000	26,593	99.5	0.1	311	6,902
2/22/2013	ON	29,261	21,577	21,577	12.0	188,000	26,759	99.4	0.1	311	6,953
3/7/2013	ON	27,392	21,914	21,914	12.0	188,000	27,096	99.4	0.1	306	7,056
3/14/2013	ON	27,502	21,923	21,923	11.0	177,000	27,105	99.3	0.1	298	7,059
3/22/2013	OFF	26,548	22,089	22,089	11.0	177,000	27,271	99.3	0.1	291	7,107
3/29/2013	ON	25,567	22,257	22,257	11.0	177,000	27,439	99.5	0.3	297	7,157
4/5/2013	ON	24,541	22,423	22,423	11.0	177,000	27,605	97.2	0.23	297	7,207
4/12/2013	OFF	24,374	22,518	22,518	11.1	177,000	27,775	97.5	0.31	330	7,238
4/19/2013	ON	23,359	22,688	22,688	11.1	177,000	27,944	98.9	0.3	316	7,292
4/26/2013	OFF	23,629	22,743	22,743	11.1	177,000	28,112	97.5	0.32	449	7,316
5/3/2013	ON	22,574	22,911	22,911	11.1	177,000	28,280	97.5	0.3	522	7,404
5/10/2013	ON	21,491	23,080	23,080	11.1	177,000	28,448	99.1	0.28	777	7,535
5/17/2013	ON	20,426	23,247	23,247	11.1	177,000	28,616	97.7	0.26	302	7,586
5/24/2013	ON	19,384	23,413	23,413	11.1	177,000	28,782	98.3	0.3	432	7,658
6/3/2013	ON	17,944	23,653	23,653	11.1	177,000	29,023	99.9	0.29	296	7,728
6/13/2013	ON	16,453	23,895	23,895	11.1	177,000	29,264	99.6	0.28	294	7,800
6/21/2013	ON	15,331	24,081	24,081	11.1	177,000	29,450	99.9	0.3	299	7,855
6/28/2013	ON	14,308	24,250	24,250	11.1	177,000	29,620	99.8	0.17	300	7,906
7/3/2013	ON	13,570	24,372	24,372	11.1	177,000	29,742	99.9	0.29	301	7,943
7/12/2013	ON	12,398	24,586	24,586	11.1	177,000	29,956	99.9	0.29	302	8,007
7/19/2013	ON	11,318	24,752	24,752	11.1	177,000	30,121	99.9	0.2	298	8,057
7/26/2013	ON	10,305	24,923	24,923	11.1	177,000	30,293	99.9	0.17	301	8,108

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
8/1/2013	ON	9,447	25,067	25,067	11.0	177,000	30,437	99.1	0.18	397	8,165
8/9/2013	ON	9,126	25,139	25,139	11.1	177,000	30,509	99.2	0.2	795	8,223
8/16/2013	ON	8,139	25,307	25,307	11.0	177,000	30,677	99.9	0.1	343	8,280
8/23/2013	ON	7,130	25,476	25,476	11.0	177,000	30,846	99.9	0.1	169	8,309
9/3/2013	ON	5,560	25,743	25,743	11.1	177,000	31,112	97.2	0.1	373	8,409
9/11/2013	ON	4,425	25,932	25,932	11.0	177,000	31,302	98.1	0.1	731	8,547
9/19/2013	OFF	3,304	26,104	26,104	11.0	177,000	31,474	99.9	0.1	998	8,718
9/24/2013	ON	2,666	26,227	26,227	11.0	177,000	31,597	95.5	0.1	356	8,762
10/3/2013	ON	1,414	26,442	26,442	11.0	177,000	31,812	94.0	0.1	348	8,837
10/11/2013	ON	257	26,632	26,632	11.0	177,000	32,062	92.6	0.1	330	8,900
10/18/2013	ON	99,265	26,799	26,799	10.9	177,000	32,169	93.5	0.1	338	8,956
10/25/2013	ON	98,342	26,965	26,965	11.0	177,000	32,335	97.2	0.1	347	9,014
11/1/2013	ON	97,992	27,131	27,131	10.9	177,000	32,501	97.5	0.1	0	9,014
11/7/2013	ON	97,642	27,280	27,280	10.9	177,000	32,650	95.8	0.1	337	9,064
11/14/2013	ON	95,637	27,445	27,445	11.0	177,000	32,815	98.5	0.19	363	9,124
11/22/2013	ON	94,483	27,642	27,642	11.0	177,000	33,012	99.6	0.1	351	9,193
11/27/2013	ON	93,488	27,758	27,758	20.0	209,000	33,131	99.9	0.1	495	9,250
12/6/2013	ON	92,568	27,974	27,974	11.0	177,000	33,347	99.8	0.1	341	9,324
12/13/2013	ON	91,854	28,141	28,141	11.0	177,000	33,515	99.8	0.1	356	9,383
12/19/2013	ON	91,104	28,286	28,286	11.0	177,000	33,659	99.2	0.1	360	9,436
12/27/2013	ON	90,108	28,478	28,478	11.0	177,000	33,851	99.4	0.1	346	9,502
1/3/2014	ON	89,226	28,644	28,644	11.0	177,000	34,017	98.7	0.13	348	9,560
1/10/2014	OFF	88,536	28,796	28,796	11.0	177,000	33,081	99.1	0.1	356	9,614
1/17/2014	ON	87,509	28,965	28,965	11.0	177,000	33,249	99.1	0.1	359	9,675
1/23/2014	ON	86,822	29,109	29,109	11.0	177,000	33,393	99.5	0.1	353	9,725
1/30/2014	ON	85,846	29,275	29,275	11.0	177,000	33,560	99.8	0.1	350	9,784
2/7/2014	ON	84,811	29,472	29,472	11.0	177,000	33,756	99.7	0.1	325	9,848
2/14/2014	ON	83,702	29,635	29,635	11.0	177,000	33,920	99.8	0.1	341	9,903
2/20/2014	ON	82,933	29,775	29,775	11.0	177,000	34,060	99.7	0.1	316	9,947
2/27/2014	ON	81,888	29,947	29,947	11.0	177,000	34,231	98.9	0.1	330	10,004
3/14/2014	ON	79,643	30,307	30,307	11.0	177,000	34,592	98.7	0.3	336	10,125
3/21/2014	ON	78,636	30,474	30,474	11.0	177,000	34,759	99.7	0.1	343	10,182
3/28/2014	ON	77,608	30,643	30,643	11.0	177,000	34,928	99.6	0.15	331	10,238

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
4/4/2014	ON	76,575	30,810	30,810	11.0	177,000	35,095	99.7	0.1	336	10,294
4/11/2014	ON	75,529	30,979	30,979	11.0	177,000	35,264	99.7	0.1	330	10,350
4/18/2014	ON	74,478	31,147	31,147	11.0	177,000	35,432	99.7	0.1	326	10,405
4/25/2014	ON	73,446	31,313	31,313	11.0	177,000	35,598	89.8	0.1	406	10,472
6/9/2014	ON	76,589	31,314	31,314	11.0	177,000	35,600	78.4	0.1	461	10,473
6/13/2014	ON	76,022	31,407	31,407	11.0	177,000	35,693	87.4	0.1	456	10,515
6/19/2014	ON	75,121	31,554	31,554	11.0	177,000	35,839	93.6	0.1	433	10,579
6/25/2014	ON	74,118	31,719	31,719	11.0	177,000	36,005	93.5	0.1	466	10,656
7/2/2014	ON	73,266	31,863	31,863	11.0	177,000	36,149	92.6	0.1	435	10,718
7/11/2014	ON	72,077	32,079	32,079	11.0	177,000	36,365	90.4	0.1	423	10,810
7/25/2014	ON	70,502	32,412	32,412	20.0	177,000	36,703	85.9	0.1	504	10,978
8/1/2014	ON	69,634	32,575	32,575	11.0	177,000	36,866	77.8	0.1	911	11,126
8/8/2014	ON	67,507	32,747	32,747	11.0	177,000	37,038	79.8	0.1	355	11,187
8/12/2014	ON	67,002	32,803	32,691	11.0	177,000	37,135	99.1	0.1	400	11,210
8/22/2014	ON	66,593	33,038	32,456	11.0	177,000	37,369	99.6	0.1	403	11,304
8/27/2014	ON	65,842	33,159	32,335	11.0	177,000	37,492	92.1	0.1	916	11,415
9/5/2014	ON	64,607	33,373	32,121	11.0	177,000	37,706	99.8	0.1	418	11,505
9/12/2014	ON	62,501	33,545	31,949	11.0	177,000	37,877	98.8	0.1	453	11,583
9/19/2014	ON	62,634	33,708	31,786	11.0	177,000	38,041	95.2	0.1	1030	11,750
9/22/2014	ON	61,192	33,785	31,709	11.0	177,000	38,118	99.4	0.1	440	11,784
10/3/2014	ON	59,625	34,047	31,447	11.0	177,000	38,379	99.6	0.1	469	11,907
10/10/2014	OFF	60,103	34,083	31,411	11.0	177,000	38,546	96.3	0.1	336	11,919
10/17/2014	ON	59,999	34,181	31,313	11.0	177,000	38,714	94.1	0.1	368	11,955
10/24/2014	ON	58,875	34,353	31,141	11.0	177,000	38,886	99.1	0.1	375	12,020
10/29/2014	ON	58,208	34,466	31,028	11.0	177,000	38,999	99.4	0.1	364	12,061
11/7/2014	ON	56,918	34,688	30,806	11.0	177,000	39,221	95.2	0.1	376	12,144
11/11/2014	ON	56,333	34,784	30,710	11.0	177,000	39,317	91.9	0.1	456	12,188
11/21/2014	ON	55,087	35,020	30,474	11.0	177,000	39,553	96.6	0.1	353	12,272
11/26/2014	ON	54,312	35,144	30,350	11.0	177,000	39,677	97.4	0.1	366	12,317
12/5/2014	ON	53,056	35,362	30,132	11.0	177,000	39,895	96.7	0.1	363	12,396
12/13/2014	ON	52,129	35,528	29,966	11.0	177,000	40,062	95.3	0.1	353	12,455
12/17/2014	ON	51,450	35,648	29,846	11.0	177,000	40,181	98.1	0.1	371	12,499
12/24/2014	ON	50,586	35,813	29,681	11.0	177,000	40,347	94.7	0.1	344	12,556

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
12/31/2014	ON	50,011	35,981	29,513	11.0	177,000	40,514	96.2	0.1	348	12,614
1/9/2015	ON	49,108	36,201	29,293	11.0	177,000	40,735	95.6	0.1	1005	12,835
1/16/2015	OFF	48,367	36,377	29,117	11.0	177,000	40,852	98.7	0.1	389	12,904
1/22/2015	ON	47,639	36,508	28,986	11.0	177,000	41,044	94.4	0.1	346	12,949
1/30/2015	ON	46,782	36,697	28,797	11.0	177,000	41,232	95.0	0.1	358	13,017
2/6/2015	ON	45,834	36,868	28,626	11.0	177,000	41,403	97.0	0.1	376	13,081
2/13/2015	ON	45,888	37,038	28,456	11.0	177,000	41,574	98.7		375	13,145
2/20/2015	ON	44,994	37,202	28,292	11.0	177,000	41,738	94.6	0.1	364	13,205
2/24/2015	ON	43,307	37,296	28,198	10.9	177,000	41,832	98.6	0.1	363	13,239
3/6/2015	ON	42,060	37,537	27,957	11.0	177,000	42,074	99.6	0.2	365	13,327
3/13/2015	ON	41,135	37,702	27,792	11.0	177,000	42,239	99.1	0.1	356	13,385
3/20/2015	ON	40,093	37,873	27,621	11.0	177,000	42,410	97.5	0.1	365	13,448
3/27/2015	ON	39,110	38,038	27,456	11.0	177,000	42,575	99.4	0.1	373	13,509
4/3/2015	ON	38,126	38,209	27,285	11.0	177,000	42,746	99.0	0.1	375	13,574
4/10/2015	ON	37,162	38,375	27,119	11.0	177,000	42,911	97.7	0.1	379	13,636
4/17/2015	ON	36,203	38,542	26,952	10.9	177,000	43,079	97.4	0.1	361	13,697
4/24/2015	ON	35,199	38,714	26,780	11.0	177,000	43,251	98.3	0.1	368	13,760
5/1/2015	ON	34,292	38,881	26,613	11.0	177,000	43,418	98.6	0.1	413	13,829
5/8/2015	ON	33,211	39,043	26,451	11.0	177,000	43,580	95.9	0.1	366	13,888
5/15/2015	ON	32,177	39,217	26,277	11.0	177,000	43,754	97.1	0.1	368	13,952
5/22/2015	ON	31,135	39,386	26,108	11.0	177,000	43,923	94.0	0.1	373	14,015
6/5/2015	ON	29,085	39,722	25,772	11.0	177,000	44,529	97.8	0.1	371	14,140
6/12/2015	ON	27,802	39,883	25,611	11.0	177,000	44,424	93.5	0.1	378	14,201
6/19/2015	ON	26,906	40,047	25,447	11.0	177,000	44,588	96.3	0.1	396	14,266
6/25/2015	ON	26,018	40,193	25,301	11.0	177,000	44,734	98.6	0.1	413	14,326
7/2/2015	ON	25,012	40,360	25,134	11.0	177,000	44,901	97.9	0.1	410	14,395
7/9/2015	ON	24,010	40,527	24,967	11.0	177,000	45,068	99.1	0.1	380	14,458
7/17/2015	ON	98,893	40,717	24,777	11.0	177,000	45,258	99.7	0.1	396	14,533
7/23/2015	ON	97,851	40,889	24,605	11.0	177,000	45,431	99.9	0.1	404	14,603
7/31/2015	ON	96,874	41,053	24,441	11.0	177,000	45,595	98.1	0.01	418	14,671
8/7/2015	ON	95,855	41,226	24,268	11.0	177,000	45,768	99.0	0.01	383	14,738
8/21/2015	ON	93,890	41,558	23,936	11.0	177,000	46,100	99.3	0.2	403	14,871
8/28/2015	ON	92,906	41,726	23,768	11.0	177,000	46,268	98.7	0.1	384	14,936

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
9/4/2015	ON	91,916	41,893	23,601	11.0	177,000	46,435	97.2	0.1	370	14,998
9/11/2015	ON	90,908	42,063	23,431	11.0	177,000	46,605	96.8	0.1	398	15,065
9/17/2015	ON	90,024	42,208	23,286	11.0	177,000	46,786	96.4	0.1	388	15,122
9/25/2015	ON	88,884	42,397	23,097	11.0	177,000	46,939	98.3	0.1	371	15,192
9/30/2015	ON	88,003	42,543	22,951	11.0	177,000	47,086	98.6	0.1	398	15,250
10/9/2015	ON	86,861	42,731	22,763	11.0	177,000	47,274	98.2	0.1	358	15,317
10/23/2015	ON	84,783	43,069	22,425	11.0	177,000	47,612	96.1	0.1	360	15,439
10/30/2015	ON	83,710	43,238	22,256	11.0	177,000	47,781	97.3	0.1	369	15,501
11/5/2015	ON	82,787	43,384	22,110	11.0	177,000	47,927	98.9	0.1	360	15,554
11/13/2015	ON	81,549	43,577	21,917	11.0	177,000	48,120	99.0	0.1	360	15,623
11/20/2015	ON	80,479	43,746	21,748	11.0	177,000	48,289	98.5	0.1	376	15,687
11/25/2015	ON	79,112	43,866	21,628	11.0	177,000	48,409	99.7	0.1	358	15,879
12/4/2015	ON	78,348	44,082	21,412	11.0	177,000	48,625	100.8	0.1	350	15,804
12/11/2015	ON	77,301	44,249	21,245	11.0	177,000	48,791	98.4	0.1	366	15,866
2/5/2016	OFF	84,304	44,427	21,067	11.0	177,000	49,036	97.0	0.2	303	15,919
2/12/2016	ON	84,021	44,593	20,901	11.0	177,000	49,202	93.0	0.1	936	16,075
2/19/2016	ON	83,385	44,761	20,733	11.0	177,000	49,370	93.4	0.1	308	16,127
2/26/2016	ON	82,813	44,927	20,567	11.0	177,000	49,537	93.4	0.1	296	16,176
3/4/2016	ON	82,075	45,098	20,396	11.0	177,000	49,707	92.8	0.1	304	16,228
3/18/2016	ON	80,193	45,435	20,059	11.0	177,000	50,044	99.4	0.1	320	16,336
3/31/2016	ON	78,714	45,742	19,752	11.0	177,000	50,352	100.0	0.1	325	16,435
4/11/2016	ON	77,286	46,009	19,485	11.0	177,000	50,618	100.0	0.1	336	16,525
4/20/2016	ON	76,047	46,222	19,272	11.0	177,000	50,832	100.0	0.3	323	16,594
4/30/2016	ON	74,695	46,437	19,057	11.0	177,000	51,047	98.9	0.1	313	16,661
5/6/2016	ON	73,717	46,604	18,890	11.0	177,000	51,215	99.9	0.1	340	16,718
5/13/2016	ON	72,624	46,774	18,720	11.0	177,000	51,384	99.6	0.1	333	16,775
5/20/2016	ON	71,590	46,941	18,553	11.0	177,000	51,551	99.2	0.1	326	16,829
5/27/2016	ON	70,580	47,106	18,388	11.0	177,000	51,717	98.8	0.1	325	16,883
6/3/2016	ON	69,545	47,277	18,217	11.0	177,000	51,888	98.8	0.1	351	16,943
6/17/2016	ON	67,556	47,611	17,883	11.0	177,000	52,221	99.4	0.1	336	17,055
6/24/2016	ON	66,552	47,781	17,713	11.0	177,000	52,392	95.8	0.1	315	17,108
7/8/2016	ON	64,597	48,113	17,381	11.0	177,000	52,724	99.6	0.1	336	17,220
7/15/2016	ON	63,584	48,285	17,209	11.0	177,000	52,896	98.4	0.1	355	17,281

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
7/28/2016	ON	64,632	48,341	17,153	11.0	177,000	53,299	96.0	0.6	790	17,325
8/5/2016	ON	63,650	48,508	16,986	11.0	177,000	53,396	97.8	0.2	778	17,455
8/11/2016	ON	63,151	48,600	16,894	11.0	177,000	53,488	100.0	0.1	484	17,500
8/19/2016	ON	62,020	48,790	16,704	11.0	177,000	53,678	99.0	0.1	464	17,588
8/26/2016	ON	61,013	48,959	16,535	11.0	177,000	53,847	100.0	0.1	445	17,663
11/15/2016	ON	100,992	48,960	16,534	11.0	177,000	53,848	100.0	0.2	364	17,663
12/1/2016	ON	100,891	49,133	16,361	11.0	177,000	54,022	100.0	0.1	413	17,735
1/10/2017	ON	106,134	49,230	16,264	11.0	177,000	54,121	100.0	0.1	356	17,769
1/17/2016	ON	105,396	49,383	16,111	11.0	177,000	54,274	100.0	0.1	370	17,826
1/24/2017	ON	104,505	49,549	15,945	11.0	177,000	54,440	100.0	0.1	378	17,889
1/27/2017	ON	104,455	49,624	15,870	11.0	177,000	54,514	100.0	0.1	321	17,913
2/3/2017	ON	103,947	49,793	15,701	11.0	177,000	54,683	100.0	0.1	350	17,972
2/10/2017	ON	103,052	49,960	15,534	11.0	177,000	54,851	100.0	0.1	351	18,031
2/17/2017	ON	102,119	50,127	15,367	11.0	177,000	55,018	100.0	0.1	323	18,085
2/23/2017	ON	101,328	50,268	15,226	11.0	177,000	55,159	100.0	0.1	326	18,130
3/3/2017	ON	100,456	50,463	15,031	11.0	177,000	55,354	100.0	0.1	331	18,195
3/10/2017	ON	99,419	50,624	14,870	11.0	177,000	55,515	100.0	0.1	311	18,245
3/17/2017	ON	98,419	50,785	14,709	11.0	177,000	55,676	100.0	0.1	433	18,315
3/31/2017	ON	96,299	51,118	14,376	11.0	177,000	56,009	100.0	0.1	364	18,436
4/10/2017	ON	94,734	51,361	14,133	11.0	177,000	56,253	100.0	0.1	333	18,517
4/14/2017	ON	94,158	51,453	14,041	11.0	177,000	56,344	100.0	0.1	341	18,548
4/21/2017	ON	93,101	51,621	13,873	11.0	177,000	56,513	100.0	0.1	346	18,606
5/3/2017	ON	91,256	51,911	13,583	11.0	177,000	56,803	100.0	0.1	336	18,704
5/11/2017	ON	90,074	52,101	13,393	11.0	177,000	56,992	100.0	0.1	340	18,768
5/19/2017	ON	88,870	52,292	13,202	11.0	177,000	57,184	100.0	0.1	348	18,835
5/26/2017	ON	87,825	52,458	13,036	11.0	177,000	57,350	100.0	0.1	330	18,890
6/15/2017	ON	84,907	52,935	12,559	11.0	177,000	57,827	86.6	0.1	330	19,047
7/21/2017	ON	80,133	53,741	11,753	11.0	177,000	58,634	100.0	0.1	378	19,352
7/26/2017	ON	79,414	53,860	11,634	11.0	177,000	58,753	100.0	0.1	369	19,396
8/4/2017	ON	79,394	53,892	11,602	11.0	177,000	58,785	100.0	0.1	491	19,411
8/11/2017	ON	78,754	54,006	11,488	11.0	177,000	58,899	100.0	0.1	534	19,472
9/15/2017	OFF	79,877	54,152	11,342	11.0	177,000	59,440	100.0	0.1	121	19,490
9/29/2017	ON	78,421	54,392	11,102	11.0	177,000	59,682	100.0	0.1	341	19,572

TABLE 1
OPERATIONS AND MAINTENANCE DATA

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
LA PLATA COUNTY, COLORADO
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

Date	System Status Upon Arrival	Electric Meter (kW)	Corrected Turbine (hours)	Turbine (hours)	Turbine Demand (kW)	From Chart, Btu/hr needed	Compressor (hours)	Methane (%)	Oxygen (% or ppm)	Calculated Methane Flow (scfh)	Cumulative Calculated Methane Recovered (mcf)
10/17/2017	ON	75,675	54,821	10,673	11.0	177,000	60,110	100.0	0.1	458	19,768
10/31/2017	ON	73,487	55,157	10,337	11.0	177,000	60,446	100.0	0.1	576	19,962
11/30/2017	ON	71,792	55,494	10,000	11.0	177,000	60,784	100.0	0.1	463	20,118
12/13/2017	ON	72,504	55,580	9,914	11.0	177,000	60,869	100.0	0.1	445	20,156

Notes:

kW - kilowatts

Btu/hr - British thermal units per hour

% - percent

mcf - 1,000 cubic feet

some kwh readings 1st qtr 2011 adjusted to correct meter readings compared to LPEA readings

ppm - parts per million

scfh - standard cubic feet per hour

-- reading not collected/not applicable

* - new flow meter was installed

TABLE 2
GAS CONCENTRATIONS AT MANIFOLD

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISION

	Manifold Line 1			Manifold Line 2			Manifold Line 3			Manifold Line 4			Manifold Line 5			Combined Lines			Zone 5 - East Side of Creek, North Pipe			Zone 5 - East Side of Creek, South Pipe			Zone 5 - West Side of Creek, South Pipe		
Date	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)
1/8/2013	100	0	1.5	100	0	1.2	100	0	0.7	100	0	1.1	100	0	0.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/8/2013	100	0	NM	100	0	NM	100	0	NM	100	0	NM	100	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
3/7/2013	100	0	NM	100	0	NM	100	0	NM	100	0	NM	100	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
4/5/2013	100	1.9	4.2	100	2.2	5.7	100	1.7	4.9	100	2.2	6.4	100	2.5	7.1	100	2.1	3.1	Line Broken			Shut off to system			100	7.2	6.2
5/3/2013	100	0	3.8	100	1.1	4.2	100	0.9	4.3	100	1.7	2.1	100	3	5.3	100	2.7	2.2	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/13/2013	100	0	1.2	100	0	1.4	100	0	1.3	100	0.6	1.4	100	13.5	1.6	100	3	1.2	NM	NM	NM	NM	NM	NM	NM	NM	NM
7/12/2013	100	1.5	0	100	1.4	0	100	1.4	0	100	1.1	0	100	8.4	0.5	100	3.4	0	100	10.9	0	100	16.7	0	100	13.1	0
8/9/2013	100	1.8	0	100	1.4	0	100	2.2	0	100	23.3	0	100	9.6	0	100	0	0	100	13.1	0	100	12.4	0	0	0	20.9
9/11/2013	100	0	11.1	100	1.1	0	100	1.1	0	100	0	0	100	6.1	0	100	0	10.5	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/11/2013	100	2.7	0.3	100	3.1	0	100	1.5	0.1	100	12.4	0	100	9.3	0	100	5.5	0.2	0	0	20.9	0	1.2	20.9	100	26.7	16.2
11/1/2013	100	1.4	0.4	100	1.7	0	100	1.2	0	100	3.4	0	100	7	0	100	4.8	0.1	100	5	1.1	100	1.1	1.2	100	10.1	2.3
12/19/2014	100	1.1	0.8	100	1.5	0	100	2	0	100	0	0	100	7.1	0	100	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/10/2014	100	3.1	1.7	100	2.1	2	100	0.7	1.7	100	2.4	1.9	100	7.3	1.9	100	3.1	1.7	100	8.5	1.5	100	1.2	1.9	100	9.6	1.8
2/27/2014	100	2.5	0.9	100	1.9	0	100	1.1	0	100	2.5	1.7	100	6.1	0	100	2.8	0.8	100	10.2	1.7	100	0.3	0.8	100	8.2	1.2
3/14/2014	100	1	0	100	0	0	100	1	0	100	0	0	100	5	0	100	3	0	100	9	0	100	3	0	100	7	0
4/11/2014	100	2.1	0.2	100	1.2	0	100	1.3	0	100	1.6	0.9	100	6.2	0.3	100	3.3	0.1	100	10.5	2	100	2.7	1.1	100	9.4	0.8
5/1/2014	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/1/2014	100	2.5	0.3	100	1.5	0	100	0.2	0.2	100	1.9	0	100	4.2	1.1	100	2.1	0.2	100	11.5	0	100	0.8	0.3	100	10.2	0
7/25/2014	100	0	0	100	1.4	0	100	1.4	0	100	0	1.5	100	9.6	0	100	2.4	0	100	12.5	0	100	0	0	100	12.4	0
8/1/2015	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
9/22/2014	100	0	0	100	1.6	0	100	1.2	0.5	100	0	2	100	8.9	0	100	3	0	100	11.8	0	100	1	0	100	10.7	0
10/24/2014	100	0.8	0	100	1.2	0	100	0	0	100	0	0	100	10.7	0	100	2.4	0	100	5.5	0	100	0	0	100	8.2	0
11/11/2014	100	1.3	0	100	2.2	0	100	0	0	100	1.3	0	100	1.9	0	100	2.5	0	100	0.9	0	100	0.9	0	100	0.2	0
12/17/2014	100	2.0	1.8	100	2.5	2.0	100	0.0	1.8	100	1.5	2.1	100	2	2.2	100	3.0	1.8	100	5.6	1.7	100	0.0	1.7	100	0.0	1.9
2/20/2015	100	0	6.7	100	0	7.5	100	0	7.7	100	0	6.9	100	1.1	15.5	100	1.7	6.9	100	2.1	7.3	100	2.2	7.8	100	1.6	8.3
3/20/2015	100	1.5	6.2	100	2.6	1.6	100	1.5	4.3	100	1.5	6.3	100	2.6	9.6	100	0.0	5.3	100	5.9	6.5	100	6.2	5.2	100	4.8	5.4
4/24/2015	100	0.0	6.4	100	0.0	5.3	100	0.0	6.2	100	0.0	6.6	100	1.1	6.2	100	0.0	5.3	100	1.6	7.8	100	0.0	7.0	100	0.00	6.8
5/30/2015	100	0.0	5.8	100	1.1	2.7	100	0.0	4.9	100	0.0	6.4	100	5.4	4.0	100	1.9	5.2	100	4.6	6.7	100	2.4	5.5	100	3.5	6.2
6/25/2015	100	0.0	3.1	100	1.5	2.1	100	0.0	3.3	100	1.3	2.3	100	7.6	2.4	100	2.3	2.4	100	1.5	1.9	100	9.1	2.1	100	3.0	2.0
8/28/2015	100	0.0	2.7	100	0.0	3.1	100	0.0	3.6	100	0.0	3.6	100	5.9	3.1	100	3.1	11.2	100	2.1	3.6	100	2.2	3.4	100	0.0	3.1
9/30/2015	100	0..0	1.6	100	0.0	1.5	100	0.0	1.4	100	0.7	2	100	8	1.8.	100	2.0	1.3	100	8.5	1.7	100	5.2	1.8	100	0.0	1.8
10/30/2015	100	0.0	2.1	100	1.3	2	100	0.0	2.3	100	6.2	1.9	100	7.5	1.8	100	0.0	18.9	100	10.4	2	100	3.3	2.9	100	0.0	1.9
12/30/2015	100	0.0	18.1	100	0.0	2.1	100	0.0	3.3	100	0.0	2.3	100	0.0	2.2	100	0.0	5	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/29/2016	100	1.2	3.3	100	1.2	3.2	100	1.2	2.4	100	2.0	0.0	100	2.0	2.1	100	2.0	0.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/26/2016	100	1.3	2.9	100	1.7	1.0	100	0.0	1.2	100	1.7	0.8	100	3.0	0.5	100	1.7	0.0	100	7.4	1.1	NM	NM	NM	100	0.0	20.8
3/31/2016	100	0.0	0	100	1.3	0	100	0.0	0	100	1.3	0	100	8	0	100	0.0	0	100	8	0	0	0	20.9	100	0.0	0

TABLE 2
GAS CONCENTRATIONS AT MANIFOLD

SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISION

	Manifold Line 1			Manifold Line 2			Manifold Line 3			Manifold Line 4			Manifold Line 5			Combined Lines			Zone 5 - East Side of Creek, North Pipe			Zone 5 - East Side of Creek, South Pipe			Zone 5 - West Side of Creek, South Pipe		
Date	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)
4/29/2016	100	1.5	1.4	100	1.4	1.8	100	0.0	4.4	100	0.0	14.5	100	0.0	18.5	100	0.0	1.7	100	9.1	3.1	100	3.6	1.7	100	0.0	2.1
5/27/2016	100	0.0	2.0	100	0.0	1.8	100	0.0	0.0	100	0.0	3.6	100	0.0	15.5	100	1.3	17.6	100	8.4	0.0	100	0.0	0.0	100.0	0.0	20.8
6/24/2016	100	0.0	2.3	100	0.0	1.9	100	0.0	2.6	100	0.0	7.6	100	0.0	13.7	100	0.8	6.2	100	10.5	0.6	100	1.3	0.9	100.0	0.0	5.8
7/28/2016	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	15.2	100	1.2	18.8	100	0.0	20.8	100	0.0	20.9	100	0.0	20.9	100.0	0.0	12.5
9/14/2016	100	0.0	4.0	100	0.0	6.4	100	0.0	5.0	100	0.0	14.5	100	1.9	0.0	100	1.6	0.0	100	6.1	4.1	100	5.2	3.8	100.0	100.0	7.3
1/31/2017	100	0.0	3.8	100	0.0	5.5	100	0.0	3.2	100	0.0	3.5	100	2.4	3.5	100	1.8	16.6	100	7.2	5.2	100	5.8	3.7	100.0	100.0	10.0
2/16/2017	100	0.0	3.0	100	1.3	0.0	100	0.0	0.0	100	0.0	0.0	100	4.1	2.1	100	1.9	0.4	100	3.8	2.5	0.0	0.0	20.9	0.0	0.0	20.7
3/31/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	1.4	0.0	100	4.6	0.0	100	2.7	0.0	100	2.5	5.0	0.0	0.0	20.9	0.0	0.0	20.9
4/21/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	1.4	0.0	100	4.9	0.4	100	1.7	6.7	100	6.2	0.0	100	2.6	20.9	0.0	0.0	20.9
5/11/2017	100	0.8	0.0	100	0.7	0.0	100	0.6	0.0	100	0.8	0.0	100	2.6	0.0	100	1.7	0.0	100	6.2	0.0	100	0.8	14.1	0.0	0.0	20.9
7/26/2017	100	0.0	9.6	100	0.0	8.7	100	0.0	4.7	100	0.0	1.4	100	4.0	1.8	100	0.8	19.4	15	0.0	19.7	0.0	0.0	20.9	0.0	0.0	20.9
8/16/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	3.5	0.0	100	0.0	19.6	50	0.0	19.4	0.0	0.0	20.9	0.0	0.0	20.9
9/29/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	3.3	0.5	100	1.3	0.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/31/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	3.2	0.0	100	1.7	19.6	100	6.7	0.0	0.0	0.0	20.9	0.0	0.0	20.9
11/30/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	3.8	0.5	100	0.0	0.0	100	0.0	0.0	100.0	0.0	3.6	100.0	0.0	3.5
12/13/2017	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	0.0	100	0.0	5.4	100	0.0	0.0	100	0.0	0.0	100.0	0.0	10.0	100.0	0.0	0.0

% - Percent
CH_4 - Methane
H_2S - Hydrogen sulfide
O_2 - Oxygen
NM - Not Measured

TABLE 3
GAS CONCENTRATIONS AT MANIFOLD

PINE RIVER
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

	Line 1			Line 2			Line 3			Line 4			Combined		
Date	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)
1/8/2013	5.0	0.0	14.5	19.0	0.0	13.4	80.0	0.0	7.6	3.8	0.0	18.3	NM	NM	NM
2/8/2013	4.0	0.0	14.0	22.0	0.0	12.6	78.0	0.0	8.0	4.0	0.0	20.0	NM	NM	NM
3/7/2013	25.0	0.0	14.0	15.0	0.0	12.9	31.0	0.0	7.7	3.8	0.0	19.0	25.0	0.0	19.0
4/5/2013	1.0	0.0	17.0	0.4	0.0	19.2	10.0	0.0	13.4	1.9	0.0	16.4	2.6	0.0	14.5
5/3/2013	1.1	0.0	16.8	0.5	0.0	19.0	21.0	0.0	12.4	18.0	0.0	14.1	3.6	0.0	15.0
6/13/2013	0.4	0.0	18.0	1.3	0.0	16.3	3.2	0.0	9.7	1.1	0.0	15.6	1.1	0.0	0.0
7/12/2013	8.0	0.0	20.9	0.0	0.0	17.4	11.0	0.0	14.3	0.0	0.0	18.0	3.0	0.0	17.2
8/9/2013	0.0	0.0	20.9	0.0	0.0	16.9	0.0	0.0	16.8	0.0	0.0	16.6	0.0	0.0	16.7
9/11/2013	2.5	0.0	9.9	0.4	0.0	13.5	5.0	0.0	7.2	0.6	0.0	13.0	2.3	0.0	11.9
10/11/2013	0.0	0.0	18.4	0.0	0.0	16.4	5.0	0.0	10.6	2.6	0.0	10.5	1.8	0.0	13.6
11/22/2013	0.0	0.0	13.1	0.5	0.0	17.2	4.0	0.0	8.0	0.0	0.0	15.0	2.0	0.0	16.9
12/19/2013	1.1	0.0	15.1	2.0	0.0	15.4	5.0	0.0	12.8	4.3	0.0	13.1	2.9	0.0	14.9
1/10/2014	0.3	0.0	13.4	4.2	0.0	12.0	5.0	0.0	9.3	5.0	0.0	7.5	2.4	0.0	12.3
2/7/2014	0.4	0.0	10.1	1.0	0.0	12.4	4.4	0.0	8.0	5.0	0.0	0.0	3.1	0.0	14.0
3/14/2014	5.0	0.0	6.9	5.0	0.0	0.0	5.0	0.0	0.0	5.0	4.4	0.0	5.0	0.0	0.0
4/11/2014	0.0	0.0	18.2	0.2	0.0	17.0	1.1	0.0	11.2	0.7	0.0	15.2	0.4	0.0	16.5
5/1/2014*	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/2014	0	0	16.6	0	0	18.2	0.83	0	11.3	0	0	16.8	7	0	15.2
7/30/2014	0.25	0	16.8	0	0	18.4	2.05	0	9.4	1.35	0	13.3	0.25	0	17.8
8/12/2014	0.3	0	16.5	0.25	0	18.9	2.1	0	10.2	1.65	0	15.2	0.25	0	18
9/22/2014	0.35	0	17.1	0	19	0	2.65	0	8.9	1.55	0	15	0.3	0	18.3
10/24/2014	0.75	0	15.4	0.35	0	17.2	1.9	0	14.9	2	0	15.8	1.15	0	17
11/11/2014	0.45	0	16.4	0	0	18.2	4.6	0	12.9	1.8	0	16.3	3.95	0	13.7
12/17/2014	0.5	0	17	0.25	0	17.8	3.6	0	14.4	1.35	0	16.8	0.8	0	17.2
1/22/2015	0.25	0	18.7	0.15	0	19.8	2.3	0	15.5	1.75	0	16.8	3.15	0	14.8
2/20/2015	0	0	16.9	2.35	0	15.5	4.25	0	12.9	0	0	19.6	1.9	0	16.5
3/20/2015	1.7	0	14.1	0	0	19.5	0	0	19.8	0	0	16.9	2.4	0	16.9
4/24/2015	0	0	18.3	0	0	19.5	0.2	0	17.3	0	0	18.6	0	0	18.1
5/30/2015	0	0	18.8	0	0	19.3	0	0	19.5	0	0	19.3	0	0	19.4
6/25/2015	0	0	18.5	0	0	18.3	0	0	14.8	0.25	0	16.6	0	0	17.9
8/28/2015	0	0	20.9	0	0	20.2	0	0	20.7	0	0	20.8	0	0	20.5
9/30/2015	0	0	20.9	0	0	19.9	0	0	17.1	0	0	20.9	0	0	20.9
10/30/2015	0.2	0.0	19.1	0	0.0	19.2	0.9	0.0	10.5	0.85	0.0	18	1.45	0.0	16.8
12/30/2015	5	0	19.4	4	0	19.4	>5	0	12.4	4	0	19.8	5	0	19

TABLE 3
GAS CONCENTRATIONS AT MANIFOLD

PINE RIVER
4M OUTCROP MITIGATION PROJECT
BP AMERICA PRODUCTION COMPANY & COLORADO OIL AND GAS CONSERVATION COMMISSION

	Line 1			Line 2			Line 3			Line 4			Combined		
Date	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)	CH_4 (%)	H_2S (%)	O_2 (%)
1/29/2016	0	0	20.9	0	0	20.9	0	0	20.8	0	0	20.9	0	0	20.9
2/26/2016	0	0	20.9	0	0	20.9	3.20	0	20.9	0	0	20.9	0	0	20.9
3/31/2016	0	0.0	20.9	0	0.0	19.3	0.75	0.0	14.6	0	0.0	18.0	1.15	0.0	15.1
4/29/2016	0	0.0	19.7	0	0.0	20.4	0.4	0.0	18.0	0.1	0.0	20.2	0	0.0	20.5
5/27/2016	0.0	0.0	20.8	0.0	0.0	20.8	0.0	0.0	20.8	0.0	0.0	20.8	0.4	0.0	17.8
6/24/2016	0.4	0.0	20.8	0.0	0.0	20.1	0.0	0.0	20.8	0.2	0.0	20.4	0.5	0.0	19.6
7/28/2016	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
9/14/2016	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
1/31/2017	0.0	0.0	20.2	0.0	0.0	18.7	0.0	0.0	19.9	0.0	0.0	20.0	0.0	0.0	20.9
2/16/2017	0.0	0.0	19.7	0.0	0.0	20.9	0.0	0.0	18.8	0.0	0.0	20.9	0.0	0.0	20.9
3/31/2017	0.0	0.0	20.9	0.0	0.0	20.1	0.0	0.0	20.9	0.0	0.0	17.6	0.0	0.0	20.9
4/21/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
5/11/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	19.2	0.0	0.0	20.9
7/26/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	18.7
8/16/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	17.6	2.0	0.0	19.8
9/29/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	19.5	0.0	0.0	19.8	0.0	0.0	20.9
10/31/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	19.7
11/30/2017	0.0	0.0	19.7	0.0	0.0	19.8	0.0	0.0	18.8	0.0	0.0	19.3	0.0	0.0	19.7
12/13/2017	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	19	0.0	0.0	19.5	0.0	0.0	19.8

Notes:

*May 2014 Data not collected due to operational shut down at Texas Creek

% - percent

CH_4 - Methane

H_2S - Hydrogen Sulfide

NM - Not Measured

O_2 - Oxygen