COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.
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T 303.433.9788 / F 303.433.1432

September 21, 2009

Ms. Karen Spray
Colorado Oil & Gas Conservation Commission
P.O. Box 2651
Durango, CO 81302-2651

RE: 4M Installation and Startup Report

Ms. Spray:

LT Environmental, Inc. (LTE) is pleased to submit the Installation and Startup Report for the 4M Outcrop Mitigation Project in La Plata County Colorado to the Colorado Department of Natural Resources (DNR) Colorado Oil & Gas Conservation Commission (COGCC).

Background

The objective of the 4M methane mitigation system is to demonstrate the economical and technical viability to recover and use the uncontrolled methane along the Outcrop. Additional system goals are to operate while helping protect the environment, including reducing carbon emissions and improving plant growth. To accomplish these objectives, LTE designed and installed vapor collection and barrier systems for methane collection at both the South Fork Texas Creek and Pine River sites. At the South Fork Texas Creek site, the recovered methane is being used to run a turbine, which is generating electricity to operate the collection system. The turbine is also returning any excess power to the local electrical grid for credit as a renewable energy resource. The design, installation, and startup of the 4M methane mitigation system was completed in 2008 and 2009 as detailed in this report.

Mitigation System Design

LTE completed a soil vapor survey over the planned methane collection areas in 2008. The survey included use of a flux meter to measure the rate of methane seepage (mole/m2/day). Using the results of the survey, including field measurements and vegetation observations, the mitigation system layout was adjusted to optimize methane collection. Figure 1 and Figure 2 display the methane readings and the system layout for the South Fork Texas Creek site and Pine River site, respectively.

Site 1 for this project is located near the South Fork Texas Creek. To address the seep and optimize recovery of methane, the design for the Texas Creek seep area included installation of a reverse french drain and vapor barrier methane collection system over a 0.8 acre area. The designed collection area focused on areas where methane seepage was more prevalent as identified by previous field studies. Four collection areas were utilized.

Site 2 for this project is located near the Pine River. To address the seep and optimize recovery of methane, the design for the Pine River seep area included installation of a reverse french drain methane collection system over 0.7 acres utilizing four collection areas. In an effort to focus on areas where methane seepage was more prevalent and minimize oxygen recovery, some lengths of piping were solid while others were slotted, depending on the data collected during previous field studies.

Mitigation System Installation

In each of the South Fork Texas Creek collection areas, soil was removed to a depth of approximately 18-inches. Corrugated slotted drain piping was installed on 20-25 foot centers throughout the collection areas. The entire collection area was filled with approximately 9 inches of 3/8-1/2 inch gravel, and a 15-mil vapor barrier was installed over the rock. On top of the vapor barrier, soil was replaced and the area was seeded with a native mix.

At the Pine River collection areas, soil was removed to a depth of approximately 18-inches, where piping (both slotted and solid) was installed on 15 foot centers. Only the trenches where the piping was laid were filled with approximately 9 inches of 3/8-1/2 inch gravel under a 15-mil vapor barrier. On top of the vapor barrier, soil was replaced and the area was seeded with a native mix.

The horizontal collection piping at both sites was connected to header piping, which was connected to a valve manifold. Sampling ports allow for collection and analytical testing of the gas for each of the four collection areas. The valves allow for flow adjustment, making it possible to focus on the more productive areas for gas collection.

At both sites, the gas mixture is treated to remove moisture and filtered before being compressed. The process equipment is located in a small building on a concrete pad. At the South Fork Texas Creek site, the turbine is located in a separate building to isolate the gas collection and use components for safety. Each system includes a continuous methane and oxygen concentration detector. The sensors are connected to controls and are utilized to shut down the process equipment if the gas mixture is not able to be safely used to power the turbine or if the gas quality falls near the upper explosive range. A list of major equipment components is provided on Table 1.

At the South Fork Texas Creek site, a 30 kilowatt (kW) turbine fueled by the collected gas is utilized to create enough electricity to operate the collection equipment. The system is connected to the power grid allowing for the excess generated electricity to be returned to the grid.

The subsurface piping and vapor barriers were installed and the concrete building pads were poured during October 2008. The installation area was then seeded and straw covered in November 2008, prior to winter weather. Work was discontinued while mineral rights clarification and approval of the final access and use agreement by British Petroleum (BP) and the COGCC was accomplished. Over the winter months (November 2008 through March 2009), equipment was ordered. Installation of the remediation system equipment was completed from April 8, 2009 through May 7, 2009. The As-Built Drawings for both sites are included as Attachment 1.

Mitigation System Startup

Startup testing was accomplished May 5, 2009 through May 7, 2009 at both the South Fork Texas Creek and Pine River sites.

South Fork Texas Creek

During the startup, the turbine was gradually ramped up from the initial 2 kilowatt (KW) setting on May 5 to a rate of 10 KW on May 7. The system was able to sustain operation without disruption due to vacuum/pressure or gas quality issues with the turbine running at 10 KW. Normal system operation utilizes approximately 6 KW of electrical power, allowing the remaining 4 KW to be placed back into the grid for a net gain with regards to electrical consumption.

During startup, gas quality was observed to consist of approximately 80% methane in three of the four collection zones, with zone four having readings of approximately 60% methane. However, after allowing the system to operate constantly over the startup period, the gas quality in all four zones exhibited methane levels of approximately 80%. At the conclusion of startup, all four zones were utilized for gas collection.

During startup activities, LTE personnel identified grass growing in areas previously prohibitive of vegetative growth. Visual observations also identified that the level of gas bubbling through the South Fork Texas Creek had seemingly increased since the installation of the subsurface system. The observed increase in both the vegetative growth and the escaping gas is believed to be due to the installation of the vapor barrier in the four collection areas.

Pine River

Gas quality was observed to fluctuate between 30% and 40% methane in the four collection zones during startup. Because lower methane concentrations are not conducive to combustion, the mitigation system blower was utilized to vent the methane to the atmosphere. If future operations show higher methane levels, electrical generation equipment similar to that at the South Fork Texas Creek site could be installed.

Summary and Conclusions

Current operation suggests that the design, installation, and startup of the methane mitigation system were successful. Visual observations (vegetation and creek) and field readings (gas quality and electrical generation) lend credence to the success of the mitigation system. The next phase of the methane mitigation system will consist of operation and continued monitoring. During that time, normal operation and maintenance activities will be performed, as well as system optimization.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Matthew R. Vielhaber, P.E.
Project Engineer

Christopher E. Shephard, P.E.
Principal/Group Manager

Attachments: Table 1 – Major Equipment List
Figure 1 – South Fork Texas Creek Site Layout
Figure 2 – Pine River Site Layout
As-Built Drawings

TABLE

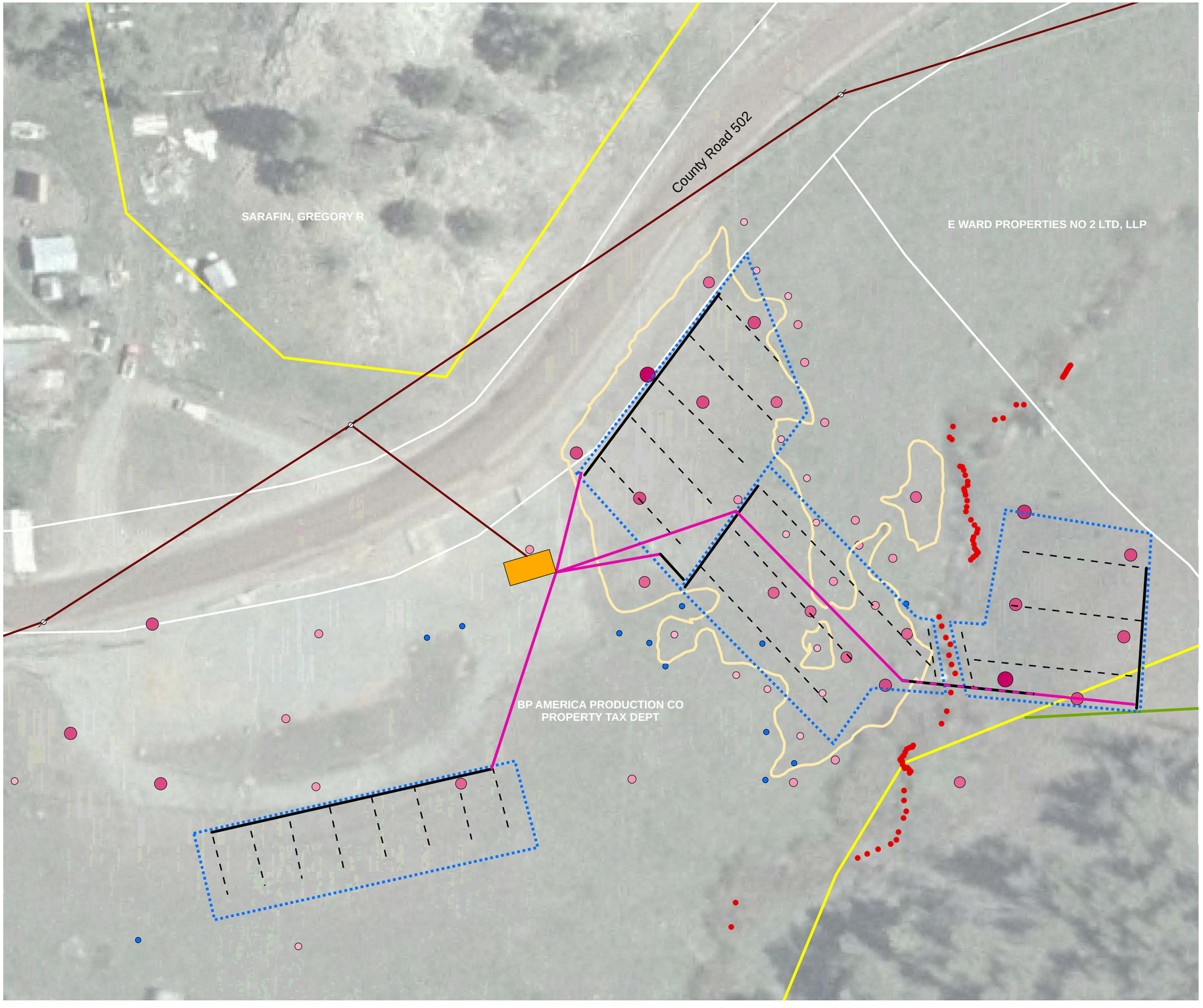
TABLE 1
MAJOR EQUIPMENT LIST

	Equipment	As-Built Drawing	Quanitity	Manufacturer	Model	Specifications
South Fork Texas Creek	KO Tank	P100	1	Busch	U8	
	Gas Compressor (M-1)	P100	1	Capstone	Gas-Pac	16 cfm @ 80 psig
	Dryer	P100	1	N/A	N/A	
	Electrical Generator (M-2)	P100	1	Capstone	C30	Natural Gas, Grid Connect, 30 kW, Turbine Driven, Industrial Package
Pine River	KO Tank	P200	1	N/A	N/A	
	Gas Blower (M-3)	P200	1	Gast	R3105N-50	28 in wc max vacuum, 1/3 Hp

NOTE:

cfm - cubic feet per minute
in wc - inches water column
psig - pounds per square inch gauge
Hp - horsepower
kW - kilowatt
N/A - not available

FIGURES



LEGEND

- Visible Methane Seeps in Surface Water
- Gas Monitoring Probes
- Process Equipment Footprint

Methane Flux Results (mole/m^2/day)

- 0.00000
- 0.00001 - 0.10000
- 0.10001 - 0.50000
- 0.50001 - 1.00000
- 1.00001 - 10.00000
- 10.00001 - 50.00000
- 50.00001 - 100.00000
- 100.00001 - 1175.00000
- Overhead Electrical Line
- 15 mil Impervious Membrane
- Parcel Boundary & Owner (white)
- Stressed Vegetation

Piping

- 3" SCH 40 PVC
- 3" SCH 80 PVC
- 4" ADS Corrugated Piping (Slotted)
- 4" ADS Corrugated Piping (Solid)

Geology

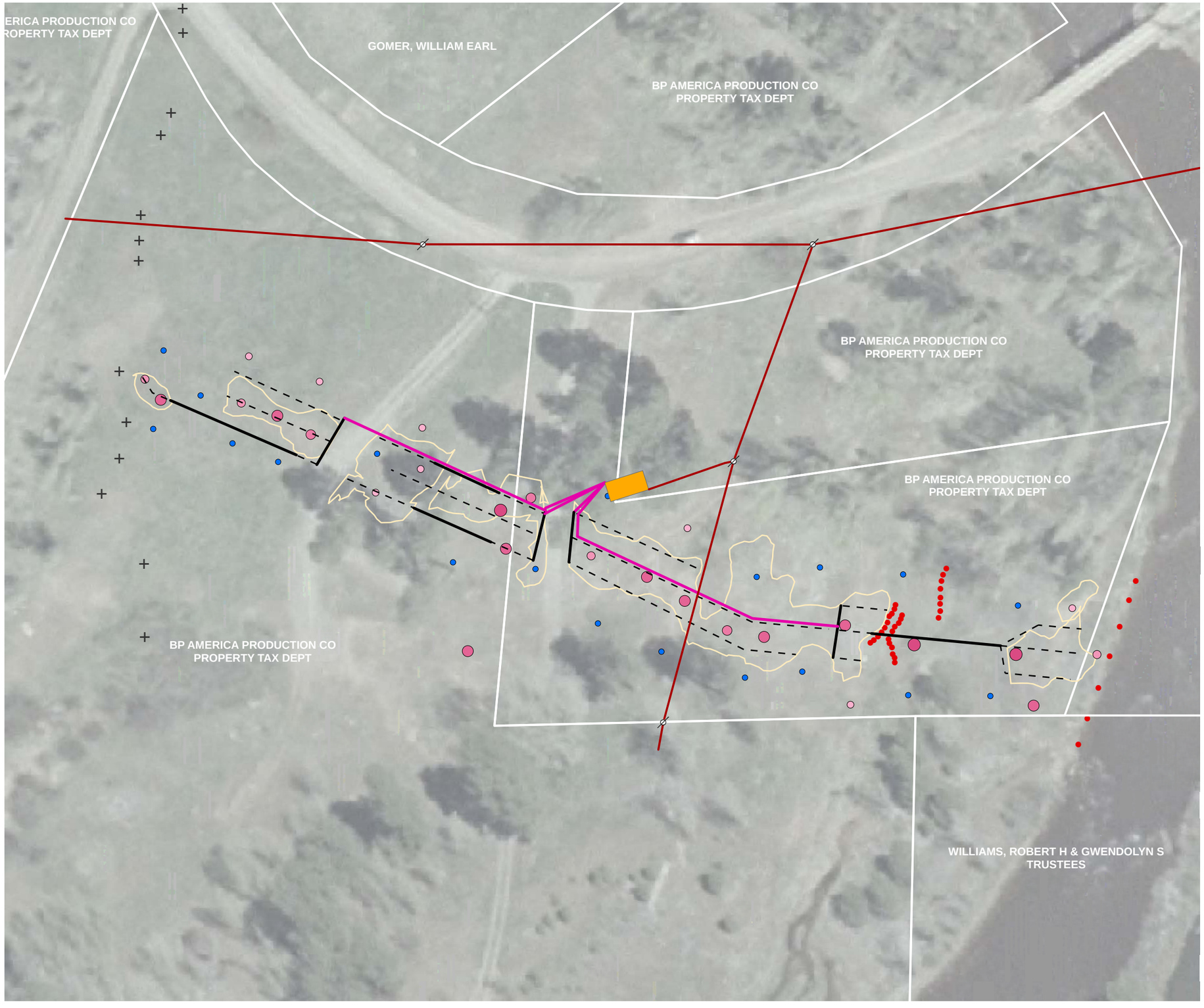
- Fruitland Formation (Kf)
- Fruitland Formation Tongue (Kft)
- Kirtland Formation (Kk)
- Pictured Cliffs Formation (Kpc)
- Pictured Cliffs Formation Tongue (Kpct)
- Quaternary Alluvium (Qa)
- Quaternary Gravel (Qg)

0 50 100
Feet

N

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

P:\COGCC\4M Outcrop Mitigation\GIS\MXD\App2_CH4_FLUX_SFTC_07032008_zoom1.mxd



LEGEND

- Visible Methane Seeps in Surface Water
- Gas Monitoring Probes
- Power Pole
- Process Equipment Footprint
- Stressed Vegetation
- Parcel Boundary & Owner (white)
- Power Line

Methane Flux Results (mole/m^2/day)

- 0.00000
- 0.00140 - 0.10000
- 0.16615 - 0.50000
- 0.52514 - 1.00000
- 1.09969 - 10.00000
- 10.98770 - 50.00000
- 100.00000
- 1175.00000

Piping

- 3" SCH 40 PVC
- 4" ADS Corrugated Piping (Slotted)
- 4" ADS Corrugated Piping (Solid)

Geology

- Fruitland Formation (Kf)
- Fruitland Formation Tongue (Kft)
- Kirtland Formation (Kk)
- Pictured Cliffs Formation (Kpc)
- Pictured Cliffs Formation Tongue (Kpct)
- Quaternary Alluvium (Qa)
- Quaternary Gravel (Qg)

0 60 120
Feet

N

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

P:\COGCC\4M Outcrop Mitigation\GIS\MXD\App2_CH4_FLUX_PINE_RIVER_07032008_zoom1.mxd

AS-BUILT DRAWINGS

COLORADO OIL AND GAS CONSERVATION COMMISSION
4M OUTCROP MITIGATION
DURANGO, CO

AS–BUILT DRAWINGS

NO.	REVISIONS	BY	APPROVED	DATE
C	AS–BUILT	MRV	CES	9/4/09
B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

DRAWING INFORMATION	BY	DATE
DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS–BUILT\G100		
SCALE: AS SHOWN		

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Denver, Colorado
Compliance • Engineering • Remediation

TITLE SHEET AND INDEX OF DRAWINGS
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. G100

SARAFIN, GREGORY R

COUNTY ROAD 502

E WARD PROPERTIES NO 2 LTD, LLP

ZONE 4

ZONE 3

ZONE 2

ZONE 1

2 C101

3 C101

1 C101

2 C102

1 C102

PROCESS EQUIPMENT FOOTPRINT

SOUTH FORK TEXAS CREEK

BP AMERICA PRODUCTION CO PROPERTY TAX DEPT

0 12.5 25 50
FEET

LEGEND

- 4" ADS CORRUGATED PIPING (SLOTTED) WITH GEOTEXTILE SOCK
- 3" SCH 40 PVC
- 4" ADS CORRUGATED PIPING (SOLID)
- 3" SCH 80 PVC
- 15 MIL IMPERVIOUS MEMBRANE
- x — SILT FENCE
- OHE — EXISTING OVERHEAD ELECTRICAL LINE
- E — PROPOSED BURIED ELECTRICAL LINE (APPROXIMATELY 300 FEET)
- ⌀ POWER POLE
- ⊠ ELECTRICAL PEDASTAL

NOTE:
–REMOVE TOPSOIL TO 9–INCHES
–EXCAVATE TRENCHES FOR PIPING
–PROVIDE AND INSTALL GRAVEL BEDDING AND INSTALL PIPING
–PROVIDE AND INSTALL VAPOR BARRIER
–REPLACE TOPSOIL AND SEED

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS–BUILT	MRV	CES	9/4/09
B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

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DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS–BUILT\C100		
SCALE: AS SHOWN		

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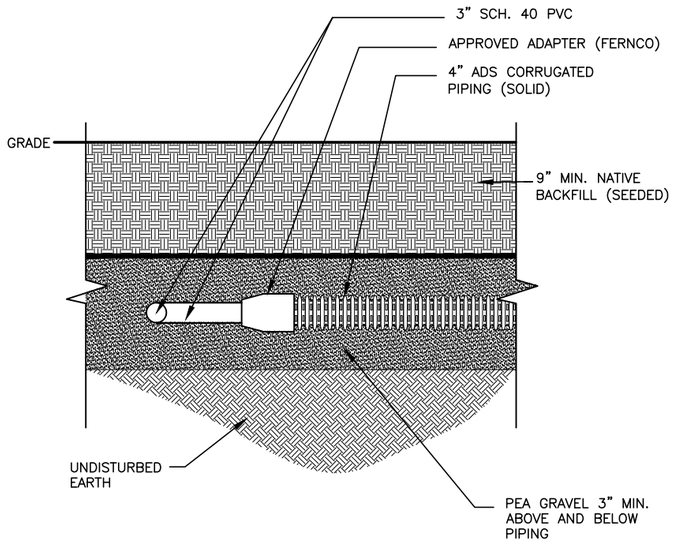
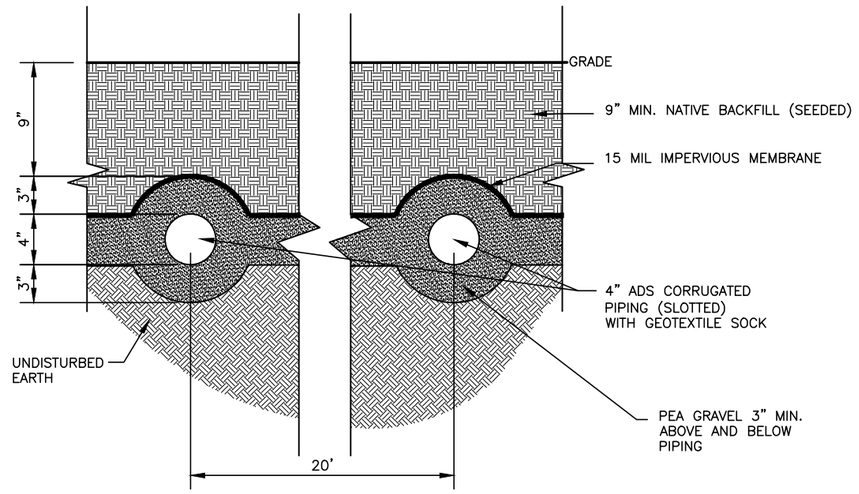
MITIGATION PIPING LAYOUT
SITE 1 – SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

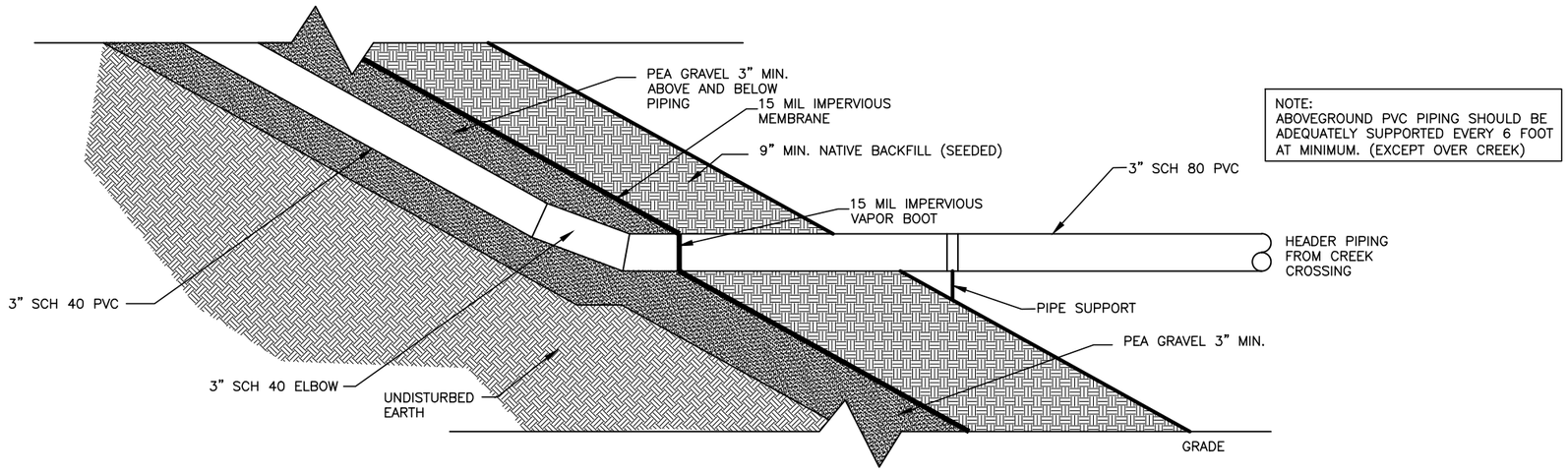
PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C100



1 / C101 PIPING CONNECTION AT HEADER
SCALE: 1" = 1'-0"



2 / C101 HORIZONTAL VENT LINE CROSS SECTION
SCALE: 1" = 1'-0"



NOTE:
ABOVEGROUND PVC PIPING SHOULD BE ADEQUATELY SUPPORTED EVERY 6 FOOT AT MINIMUM. (EXCEPT OVER CREEK)

3 / C101 HEADER CONNECTION FROM CREEK CROSSING
SCALE: 1" = 1'-0"

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS-BUILT	MRV	CES	9/4/09
B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

DRAWING INFORMATION	BY	DATE
DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\ C101		
SCALE: AS SHOWN		

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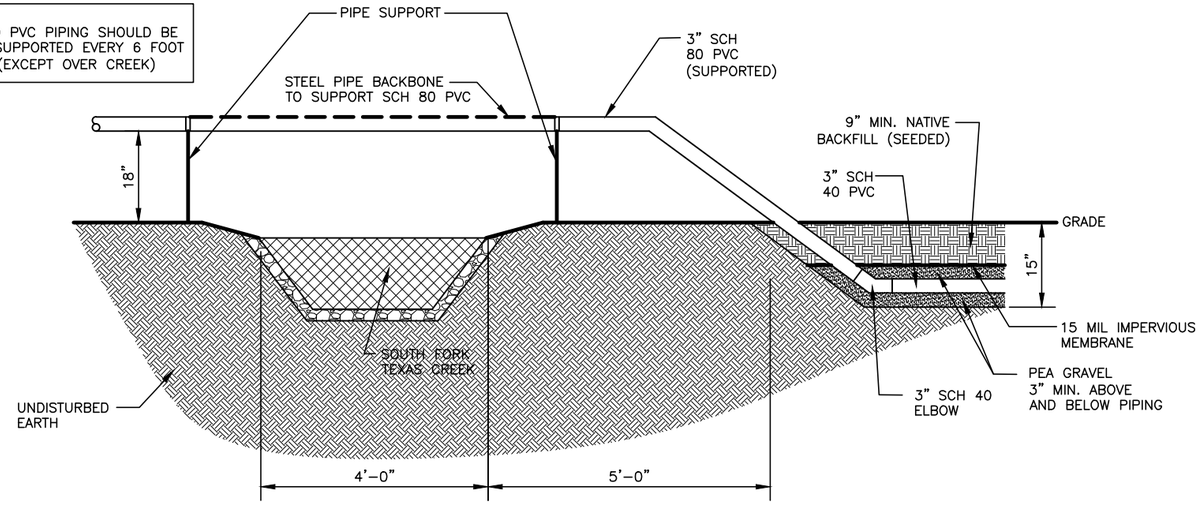
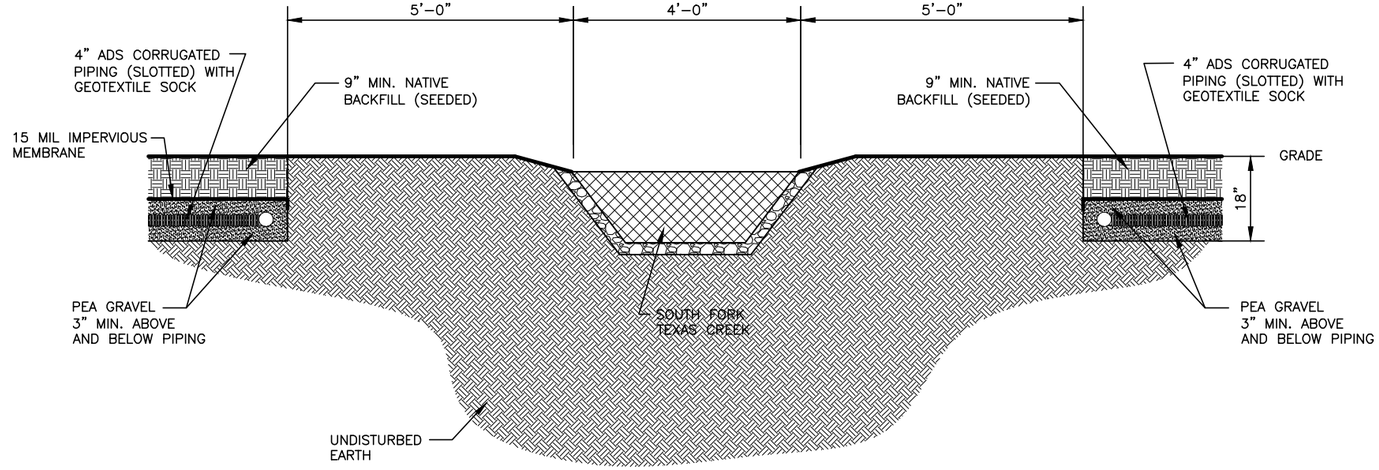
PIPING DIAGRAM
SITE 1 - SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C101

NOTE:
ABOVEGROUND PVC PIPING SHOULD BE ADEQUATELY SUPPORTED EVERY 6 FOOT AT MINIMUM. (EXCEPT OVER CREEK)



1 / C102 **HEADER PIPING AT CREEK CROSSING**
SCALE: NOT TO SCALE



2 / C102 **HORIZONTAL VENT LINE AT CREEK CROSSING**
SCALE: NOT TO SCALE

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
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B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

DRAWING INFORMATION	BY	DATE
DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\C101		
SCALE: AS SHOWN		

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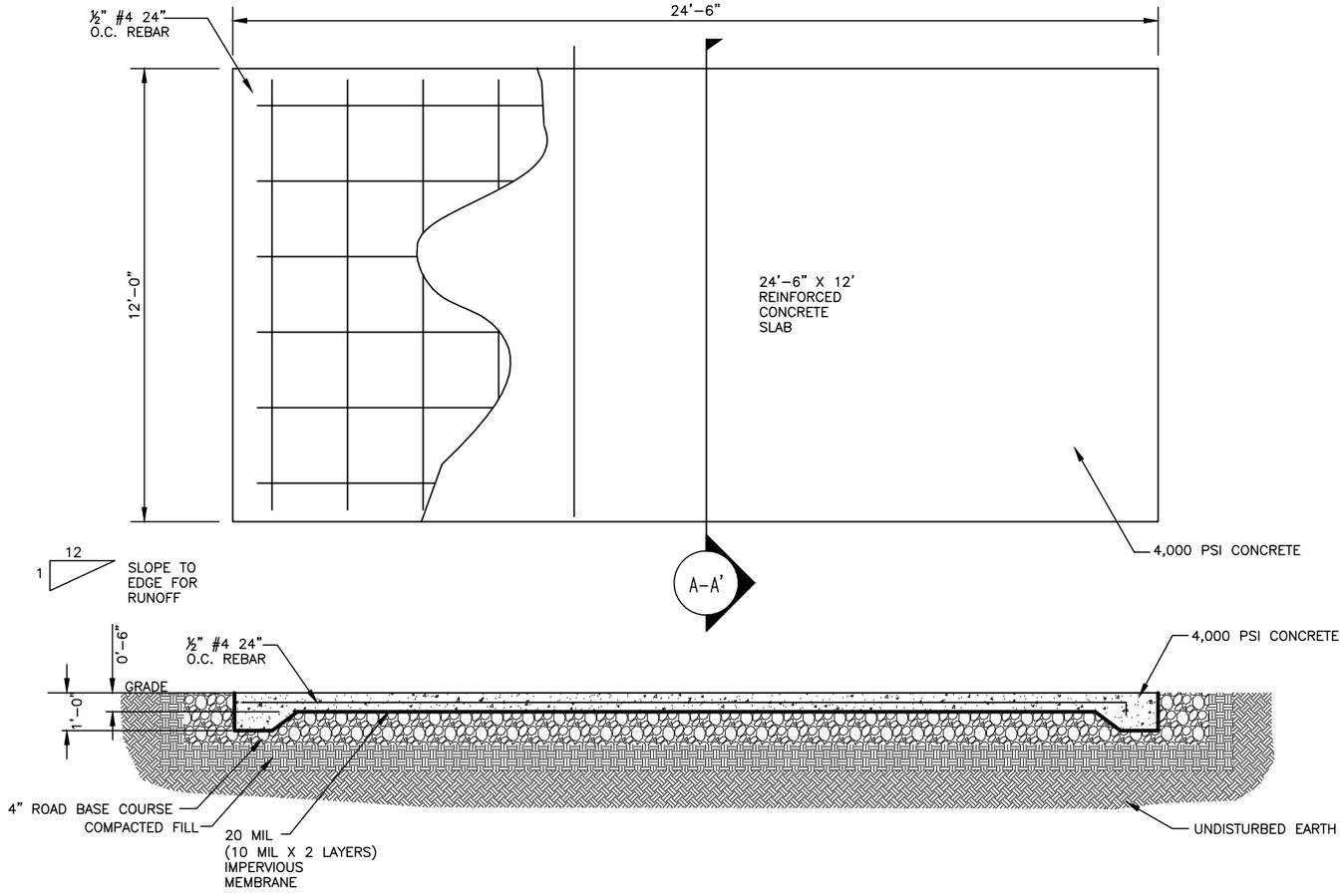
PIPING AT CREEK CROSSING
SITE 1 – SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C102



A-A'

1 / C103 CONCRETE PADS DETAILS

SCALE: 1/4" = 1'-0"

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	REVISIONS			
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B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

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REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\ C102		
SCALE: AS SHOWN		

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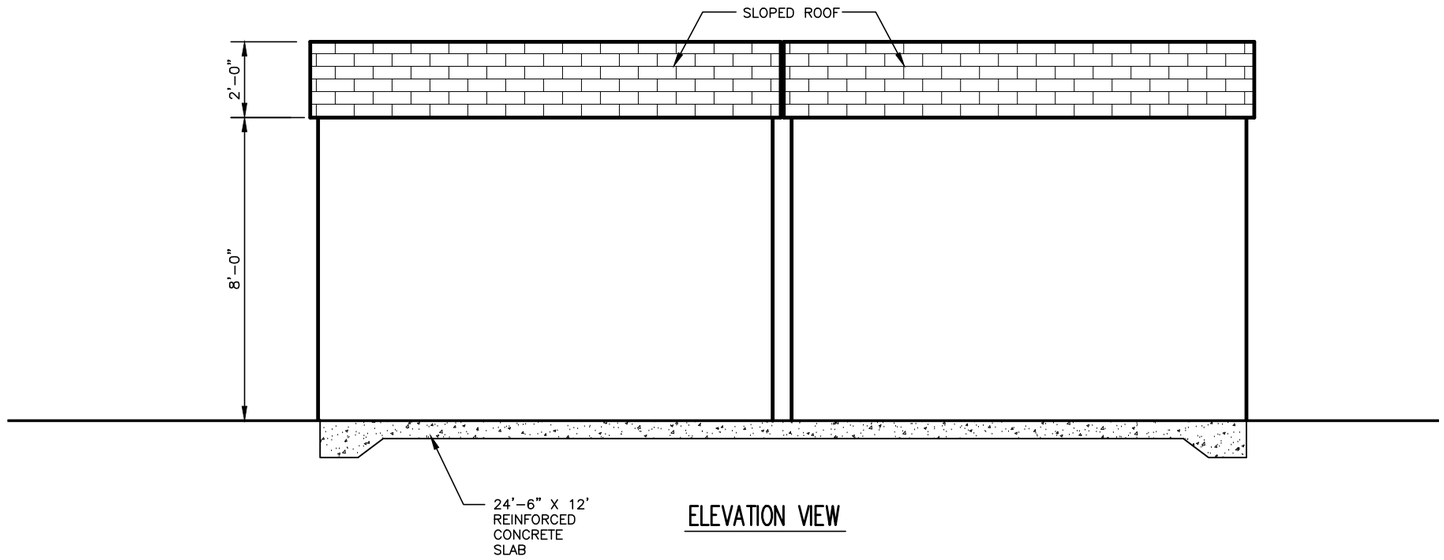
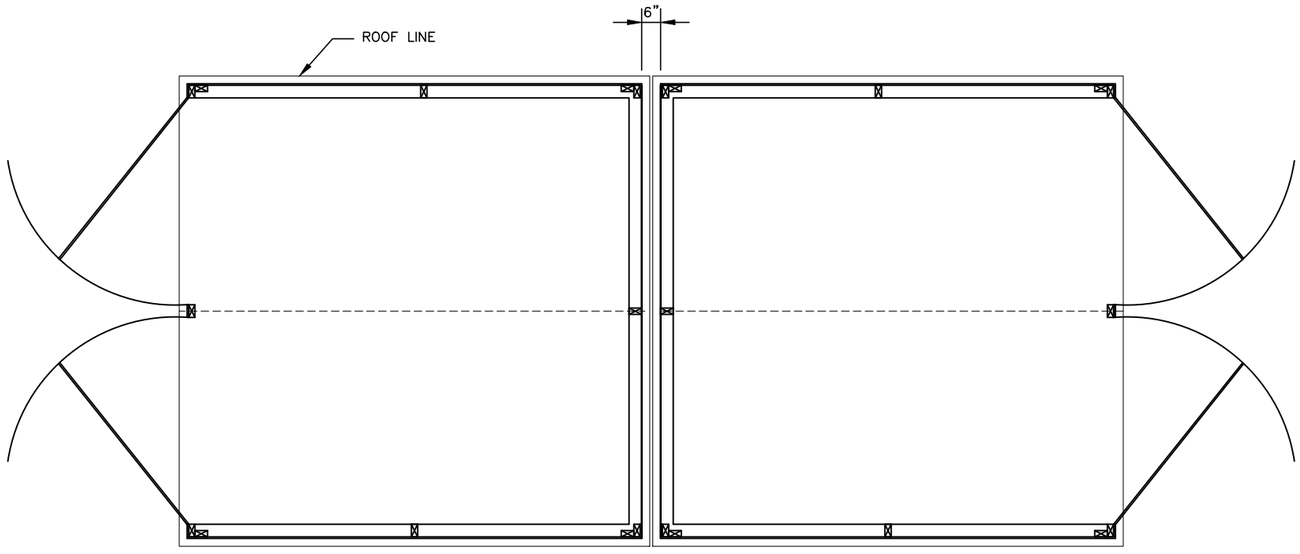
CONCRETE PAD DETAILS
SITE 1 - SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C103



ELEVATION VIEW



PLAN VIEW

2 / C104 EQUIPMENT BUILDING
SCALE: 1/4" = 1'-0"

NOTE:
-PROVIDE AND ATTACH "NO SMOKING" SIGNAGE TO BUILDING
-PROVIDE APPROPRIATE FIRE EXTINGUISHER FOR SITE
-PROVIDE INSULATION FOR ACOUSTICAL DAMPENING
-ANCHOR BUILDINGS TO CONCRETE PER MANUFACTURER RECOMMENDATIONS
-ADEQUATE VENTILATION SHALL BE PROVIDED FOR BOTH BUILDINGS

NO.	DESCRIPTION	BY	APPROVED	DATE
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FILE: OGCC081\AS-BUILT\ C103		
SCALE: AS SHOWN		

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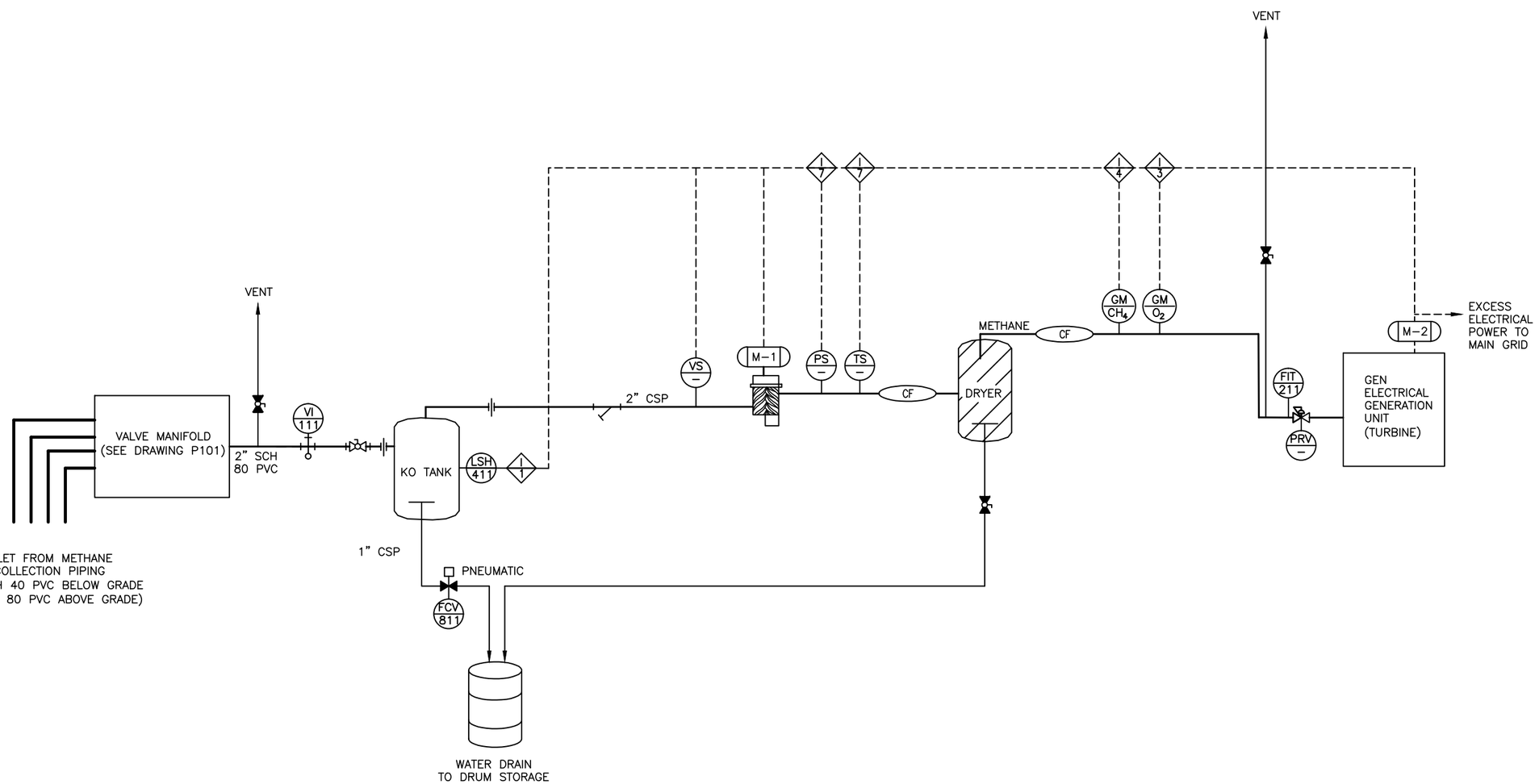
EQUIPMENT BUILDING DETAILS
SITE 1 - SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C104

LEGEND

- BALL VALVE (NO)
- BALL VALVE (NC)
- SOLENOID VALVE (NO)
- SOLENOID VALVE (NC)
- PRESSURE REGULATING VALVE
- 1/2" PLUGGED SAMPLING PORT
- UNION
- KNOCKOUT TANK
- CF — COALESCING FILTER
- CSP — CARBON STEEL PIPE
- PVC — POLYVINYL CHLORIDE PIPE
- M-1 — MOTOR
- VI — VACUUM INDICATOR
- TS — TEMPERATURE SWITCH
- LSH — HIGH LEVEL SWITCH
- FIT — FLOW INDICATOR/TOTALIZER
- GM — GAS MONITOR
- PS — PRESSURE SWITCH
- VS — VACUUM SWITCH
- ELECTRICAL CONNECTION
- DRYER
- COMPRESSOR
- 1 — INTERLOCK ELECTRICAL CONTROL



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REVISIONS

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APPROVED	CES	9/4/09

FILE: OGCC081\AS-BUILT\ P100

SCALE: AS SHOWN

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Denver, Colorado

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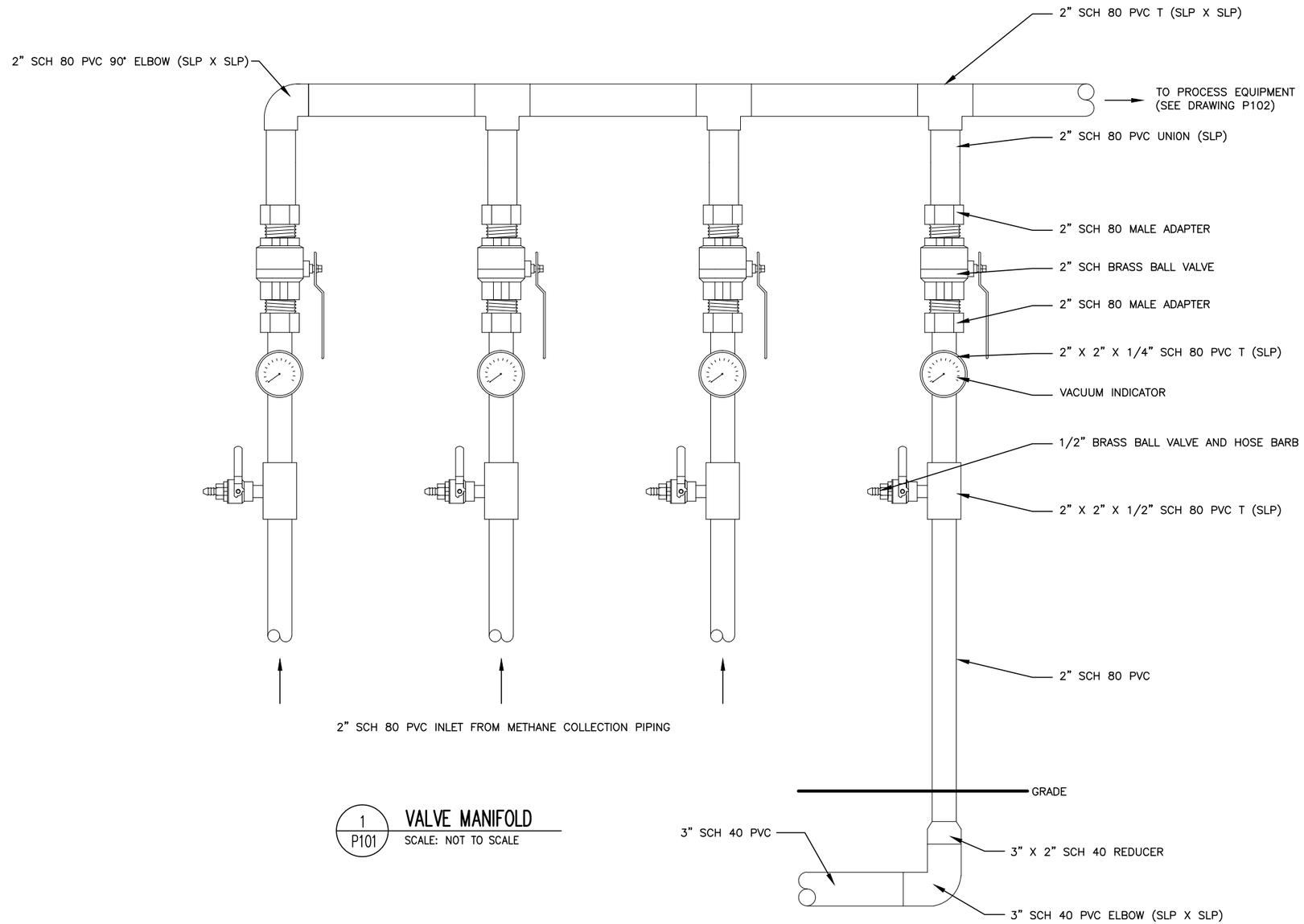
PROCESS FLOW AND INSTRUMENTATION DIAGRAM
SITE 1 – SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. P100



1 / P101 **VALVE MANIFOLD**
SCALE: NOT TO SCALE

	REVISIONS			
C	AS-BUILT	MRV	CES	9/4/09
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APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\ P101		
SCALE: AS SHOWN		

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VALVE MANIFOLD
SITE 1 - SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

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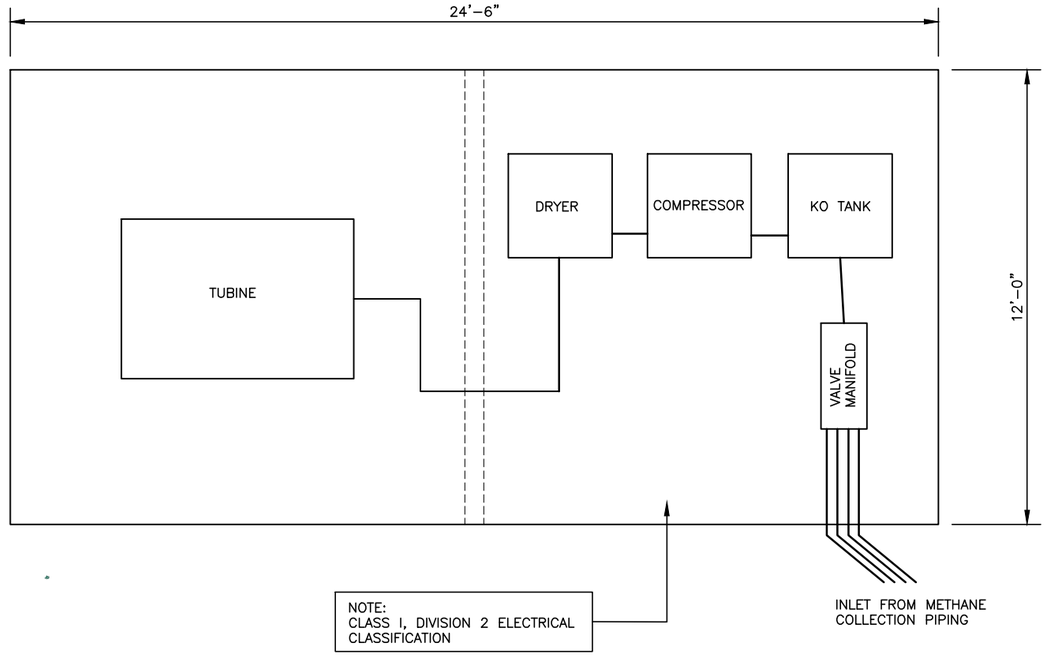

1 / P102 PROCESS EQUIPMENT LAYOUT

SCALE: NOT TO SCALE

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS-BUILT	MRV	CES	9/4/09
B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

DRAWING INFORMATION	BY	DATE
DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\P102		
SCALE: AS SHOWN		

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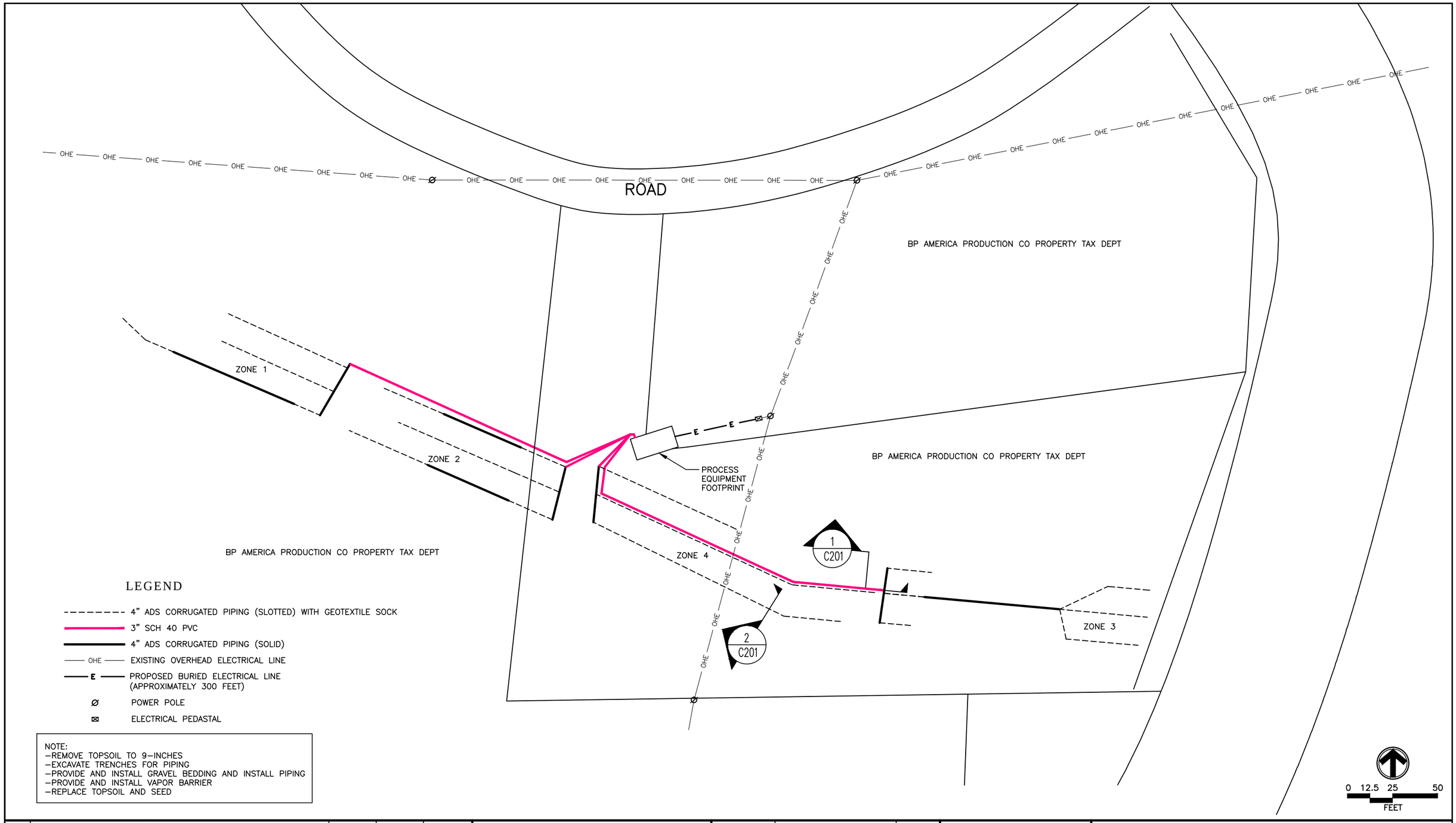
PROCESS EQUIPMENT LAYOUT
SITE 1 - SOUTH FORK TEXAS CREEK
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. P102



LEGEND

- 4" ADS CORRUGATED PIPING (SLOTTED) WITH GEOTEXTILE SOCK
- 3" SCH 40 PVC
- 4" ADS CORRUGATED PIPING (SOLID)
- OHE — EXISTING OVERHEAD ELECTRICAL LINE
- E — PROPOSED BURIED ELECTRICAL LINE (APPROXIMATELY 300 FEET)
- ⌀ POWER POLE
- ⊠ ELECTRICAL PEDASTAL

NOTE:
–REMOVE TOPSOIL TO 9–INCHES
–EXCAVATE TRENCHES FOR PIPING
–PROVIDE AND INSTALL GRAVEL BEDDING AND INSTALL PIPING
–PROVIDE AND INSTALL VAPOR BARRIER
–REPLACE TOPSOIL AND SEED

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS–BUILT	MRV	CES	9/4/09
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A	PRELIMINARY DESIGN	MRV	CES	7/14/08

DRAWING INFORMATION	BY	DATE
DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS–BUILT\ C100		
SCALE: AS SHOWN		

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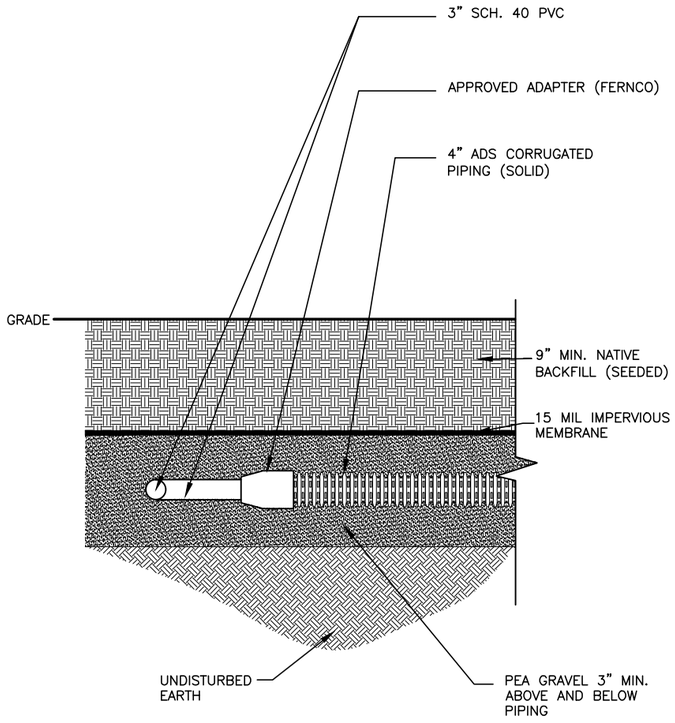
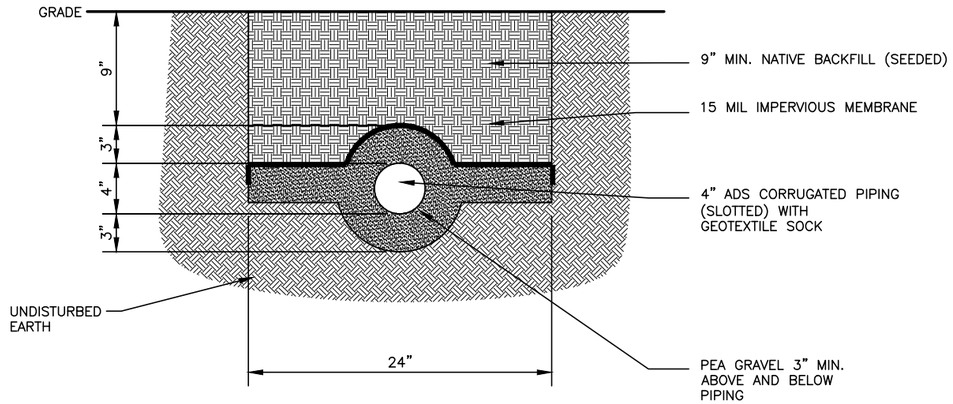
MITIGATION PIPING LAYOUT
SITE 2 – PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C200



1 / C201 PIPING CONNECTION AT HEADER

SCALE: 1" = 1'-0"



2 / C201 HORIZONTAL VENT LINE CROSS SECTION

SCALE: 1" = 1'-0"

NO.	REVISIONS	BY	APPROVED	DATE
C	AS-BUILT	MRV	CES	9/4/09
B	FINIAL DESIGN	MRV	CES	10/1/08
A	PRELIMINARY DESIGN	MRV	CES	7/14/08

DRAWING INFORMATION	BY	DATE
DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\C201		
SCALE: AS SHOWN		

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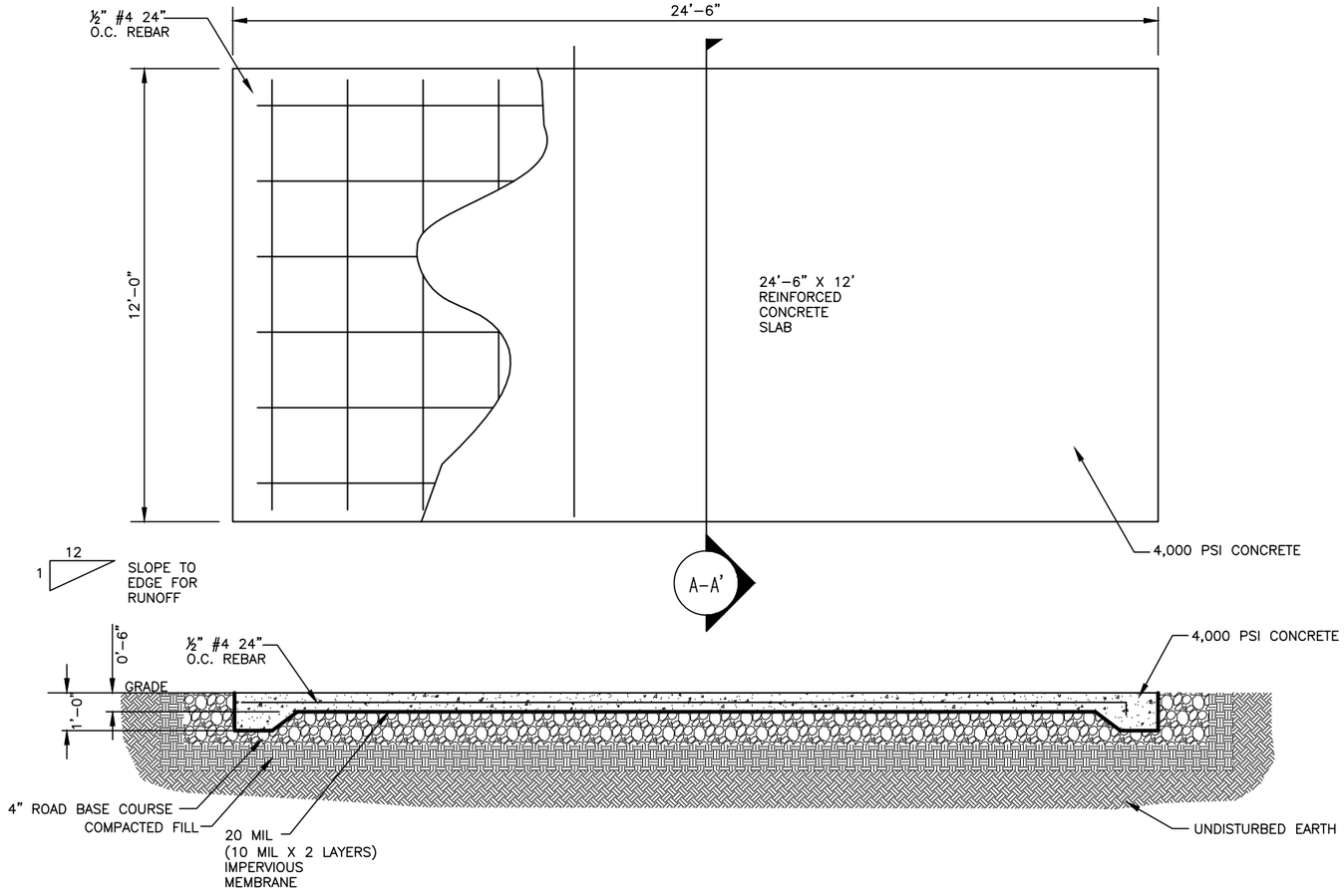
PIPING DIAGRAM
SITE 2 - PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C201



A-A'

1 / C202 CONCRETE PADS DETAILS

SCALE: 1/4" = 1'-0"

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS-BUILT	MRV	CES	9/4/09
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A	PRELIMINARY DESIGN	MRV	CES	7/14/08

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DESIGNED	MRV	9/4/09
DRAWN	GVM	9/4/09
CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\ C202		
SCALE: AS SHOWN		

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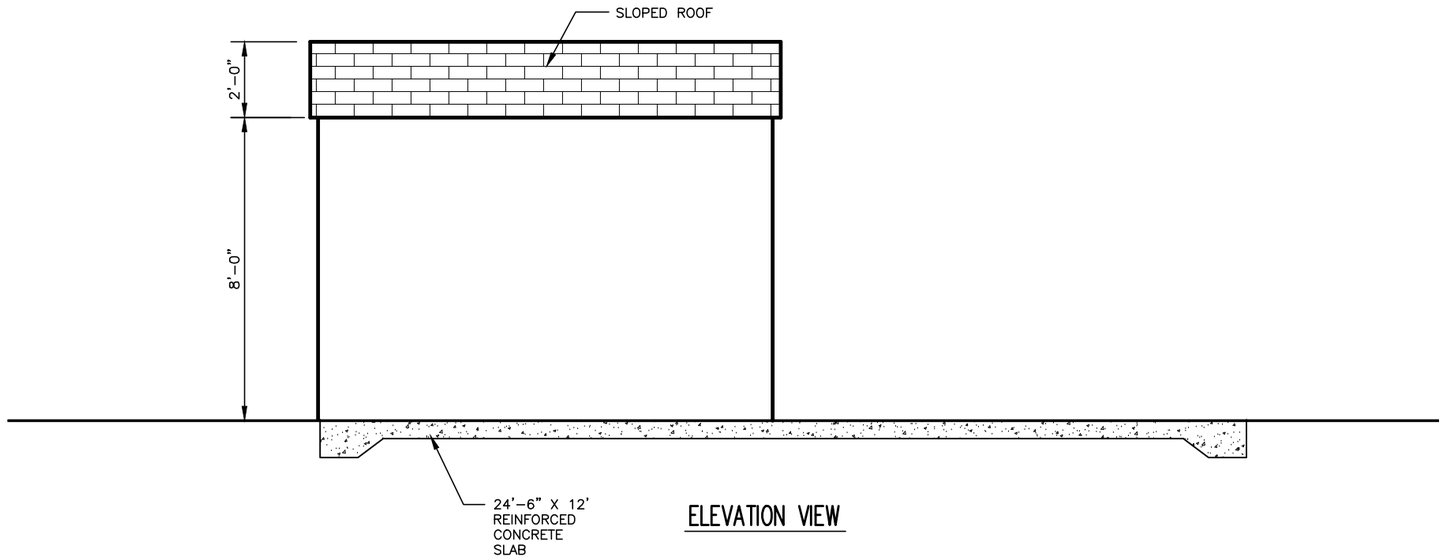
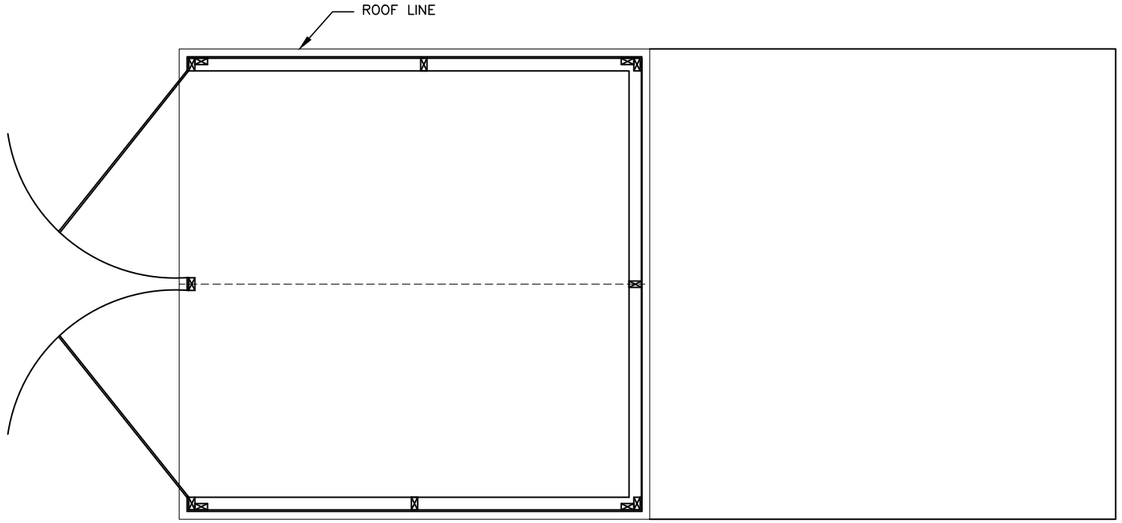
CONCRETE PAD DETAILS
SITE 2 - PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C202



ELEVATION VIEW

2 / C203 EQUIPMENT BUILDING
SCALE: 1/4" = 1'-0"



NOTE:
–PROVIDE AND ATTACH "NO SMOKING" SIGNAGE TO BUILDING
–PROVIDE APPROPRIATE FIRE EXTINGUISHER FOR SITE
–PROVIDE INSULATION FOR ACOUSTICAL DAMPENING
–ANCHOR BUILDING TO CONCRETE PER MANUFACTURER RECOMMENDATIONS
–ADEQUATE VENTILATION SHALL BE PROVIDED FOR BUILDING

PLAN VIEW

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
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DRAWN	GVM	9/4/09
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REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS–BUILT\ C203		
SCALE: AS SHOWN		

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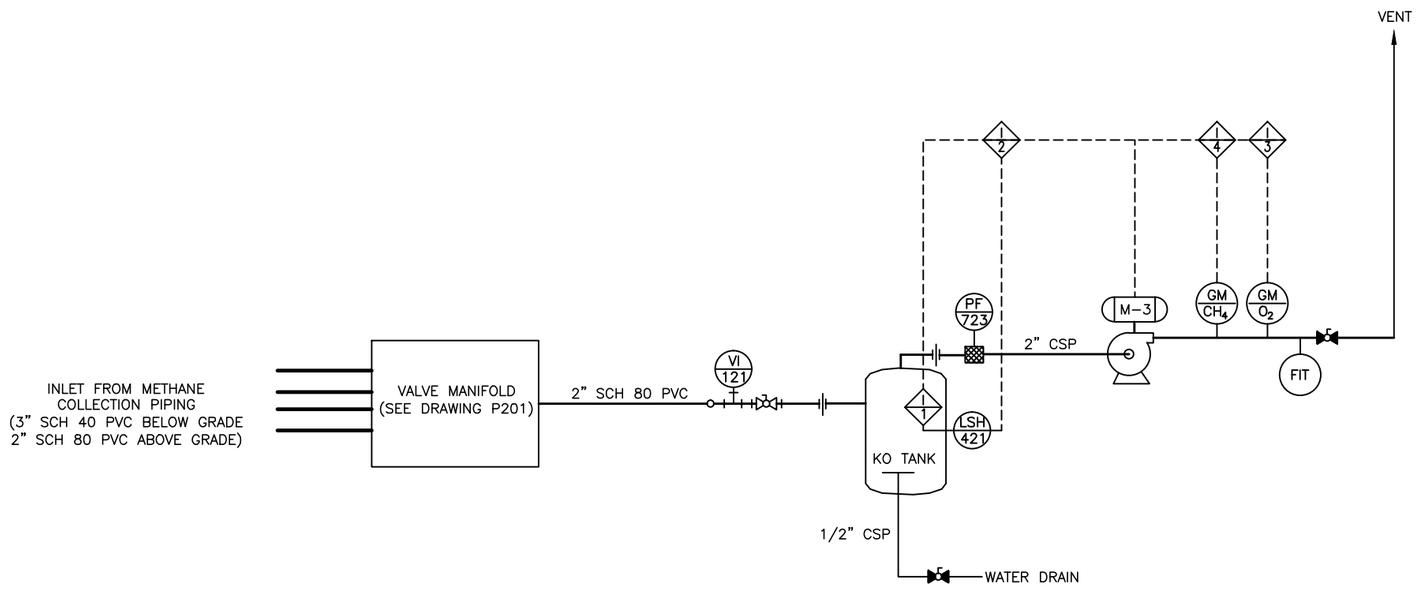
EQUIPMENT BUILDING DETAILS
SITE 2 – PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. C203

LEGEND

- BALL VALVE (NO)
- BALL VALVE (NC)
- 1/2" PLUGGED SAMPLING PORT
- UNION
- KNOCKOUT TANK
- CSP — CARBON STEEL PIPE
- PVC — POLYVINYL CHLORIDE PIPE
- M-1 — MOTOR
- FILTER
- VI — VACUUM INDICATOR
- LSH — HIGH LEVEL SWITCH
- FIT — FLOW INDICATOR/TOTALIZER
- GM — GAS MONITOR
- ELECTRICAL CONNECTION
- BLOWER
- 1 — INTERLOCK ELECTRICAL CONTROL



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	REVISIONS			
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REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\P200		
SCALE: AS SHOWN		

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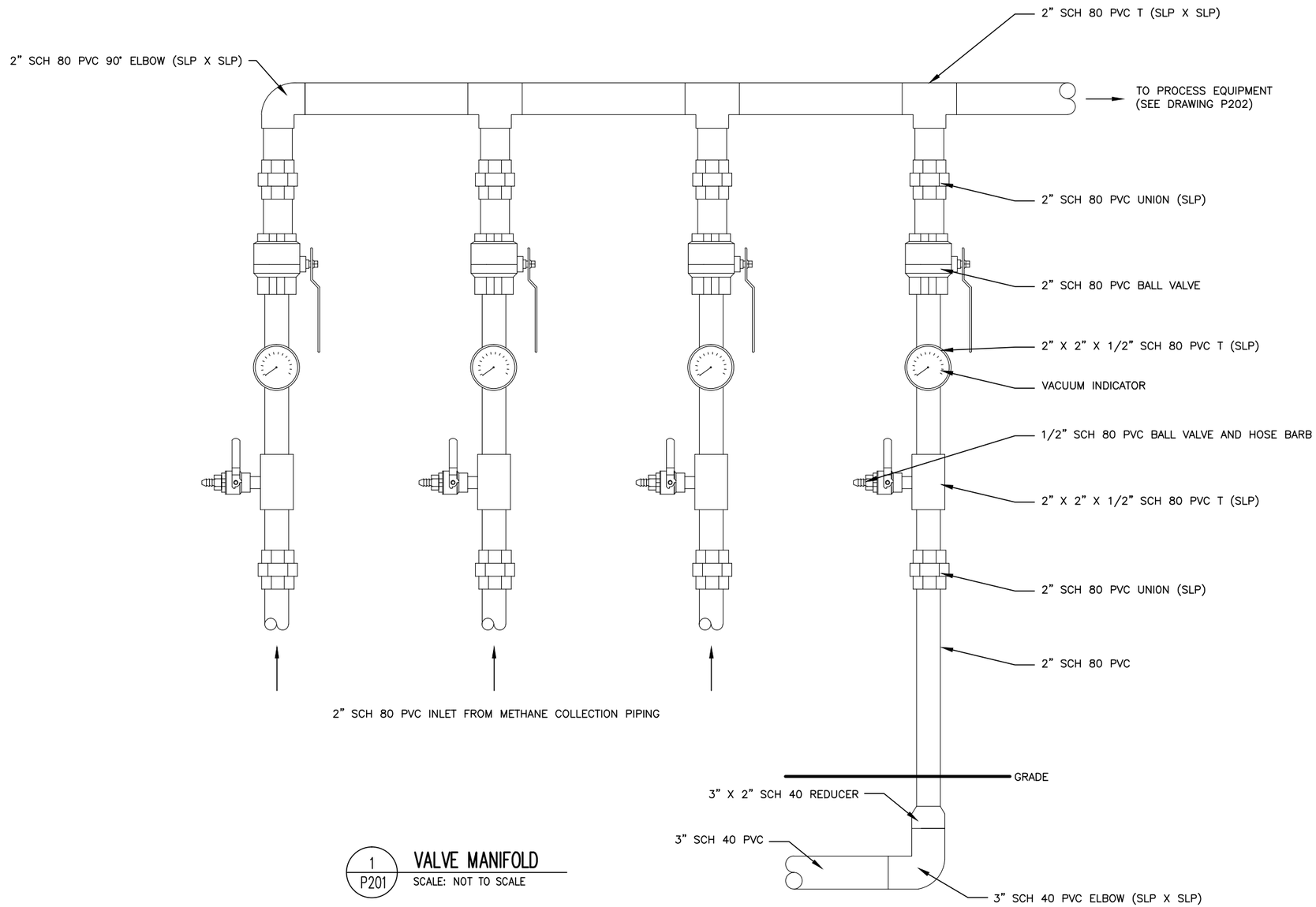
PROCESS FLOW AND INSTRUMENTATION DIAGRAM
SITE 2 - PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. P200



1 / P201 **VALVE MANIFOLD**
SCALE: NOT TO SCALE

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS-BUILT	MRV	CES	9/4/09
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DESIGNED	MRV	9/4/09
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CHECKED	MRV	9/4/09
REVIEWED	CES	9/4/09
APPROVED	CES	9/4/09
FILE: OGCC081\AS-BUILT\P201		
SCALE: AS SHOWN		

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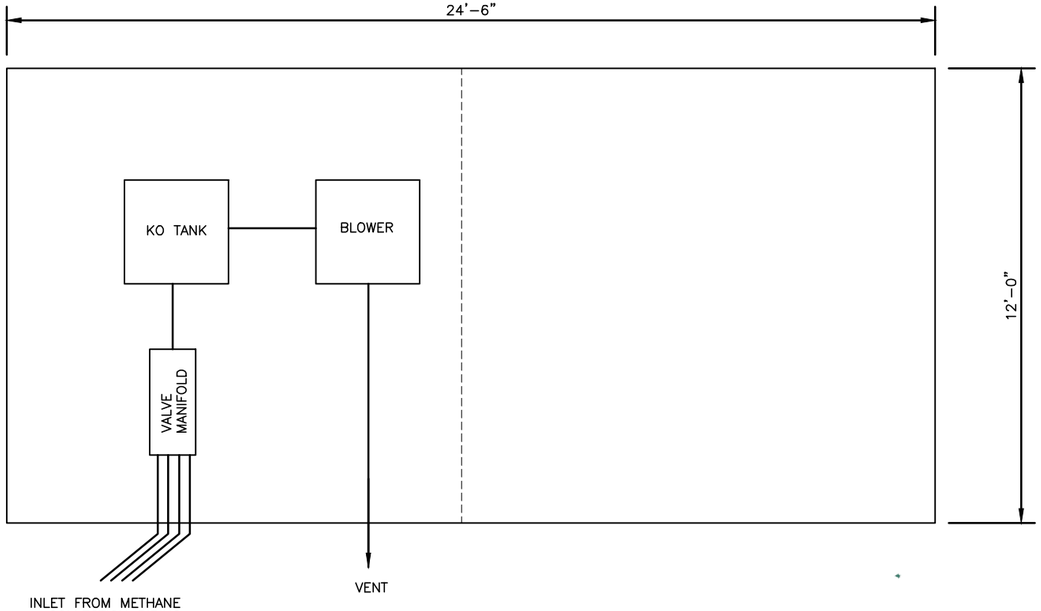
VALVE MANIFOLD
SITE 2 - PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. P201



NOTE:
CLASS I, DIVISION 2 ELECTRICAL CLASSIFICATION

1 / P202 **PROCESS EQUIPMENT LAYOUT**
SCALE: NOT TO SCALE

NO.	DESCRIPTION	BY	APPROVED	DATE
	REVISIONS			
C	AS–BUILT	MRV	CES	9/4/09
B	FINIAL DESIGN	MRV	CES	10/1/08
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APPROVED	CES	9/4/09
FILE: OGCC081\AS–BUILT\P202		
SCALE: AS SHOWN		

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PROCESS EQUIPMENT LAYOUT
SITE 2 – PINE RIVER
4M OUTCROP MITIGATION
DURANGO, COLORADO

PROJECT LOCATION: DURANGO, COLORADO	PROJECT NO. OGCC0801	
CLIENT: COLORADO OIL AND GAS CONSERVATION COMMISSION	REV NO. C	DWG NO. P202