

September 2, 2022

Rusty Kelly
Catamount Energy Partners, LLC
1801 Broadway, Suite 1000
Denver, CO 80202

**RE: Soil Gas Survey Results
Ignacio 34-8 (OWP) #3-18 (API#: 05-067-05545)
La Plata County, Colorado**

Dear Mr. Kelly,

Cottonwood Consulting LLC (Cottonwood) is pleased to provide you with the results of a soil gas survey conducted in the vicinity of the Ignacio 34-8 (OWP) #3-18 (API#: 05-067-05545) plugged & abandoned (P&A) well in La Plata County, Colorado (Figure 1). The methodology and associated results are summarized below.

Background

The Ignacio 34-8 (OWP) #3-18 was drilled in 1956 by Northwest Production Corporation to a total depth of 5,224 feet below ground surface (bgs). The well was initially plugged in 1962 by Northwest Production Corporation. The well is currently considered an “orphaned” well and managed by the Colorado Oil and Gas Conservation Commission (COGCC) Orphaned Well Program (OWP). See Attachment 1 for the COGCC scout card.

Catamount Energy Partners, LLC (Catamount) came to an agreement with the COGCC and was responsible for final plugging and abandonment of the Ignacio 34-8 (OWP) #3-18 wellbore. Catamount plugged and abandoned the well in summer 2022 and contracted Cottonwood to conduct a post-plugging soil gas survey around the Ignacio 34-8 (OWP) #3-18 wellhead and surrounding area. The post-plugging soil gas survey was conducted September 1, 2022.

Methodology

Cottonwood was on-site to conduct the soil gas survey on September 1, 2022. Prior to the soil gas survey, Cottonwood conducted a utility locate to ensure that all underground utilities within the survey area were properly marked prior to ground disturbance.

Soil gas measurements were collected at 50-foot intervals in a grid surrounding the location of the Ignacio 34-8 (OWP) #3-18.

At each measurement location, Cottonwood used a slide-hammer to advance a borehole to a total depth of approximately one to two feet bgs. Tubing connected to a GEM5000 Plus[®] Landfill Gas Meter was lowered into each borehole to collect measurements of methane, carbon dioxide, hydrogen sulfide, and oxygen. The concentration of each gas and the associated measurement location was recorded using a Trimble GeoXH[®] GPS unit capable of sub-meter accuracy.

Additional observations regarding vegetation and general site conditions were recorded in a field notebook.

Results

Methane was not detected in any of the measurement locations. Carbon dioxide, oxygen, and hydrogen sulfide concentrations were generally consistent with background levels. Vegetation in the survey area appeared to be consistent with seasonal and surrounding conditions.

Results of the soil gas survey are presented on Figure 1, soil gas measurements are presented in Table 1, and photographic documentation of site conditions during the survey is included as Attachment 2.

Conclusions

Based on results of the soil gas survey, it does not appear that methane is seeping from the ground surface in the vicinity of the Ignacio 34-8 (OWP) #3-18 following plugging and abandonment of the well.

Should you have any questions, please do not hesitate to contact me at 970-764-7356 or ksiesser@cottonwoodconsulting.com. We appreciate the opportunity to provide services to Catamount.

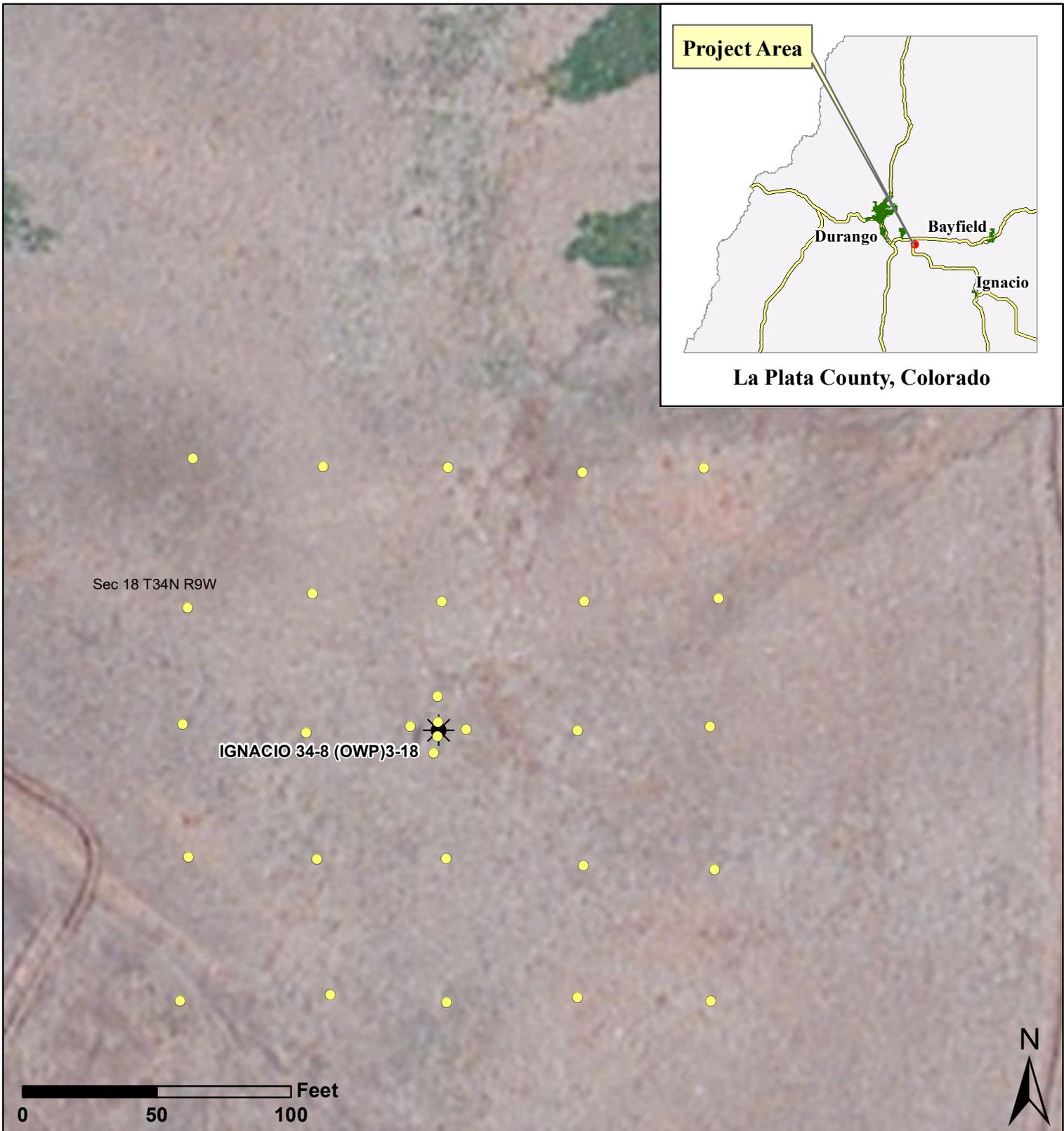
Sincerely,



Kyle G. Siesser, P.G.
Cottonwood Consulting, LLC

Attachments: Figure 1 – Soil Gas Survey Area
Table 1 – Soil Gas Survey Results
Attachment 1 – Ignacio 34-8 (OWP) #3-18 Scout Card
Attachment 2 – Photographic Log

FIGURE 1



Notes: Soil gas survey conducted following plugging and abandoning the Ignacio 34-8 (OWP) #3-18. All measurements collected 9/1/2022.

Legend

 Plugged & Abandoned Well

Subsurface Methane Gas Measurement

 0.0%



Mapping by: E. Millar, 9/2/2022
 Coordinate System:
 NAD 1983 UTM Zone 13 N

Location: SWNW Sec 18 T34N R8W NMPM

Figure 1
Ignacio 34-8 (OWP) #3-18
Soil Gas Survey Map
Catamount Energy Partners, LLC

TABLE 1

Table 1
Soil Gas Survey Results
Ignacio 34-8 (OWP) #3-18
Catamount Energy Partners, LLC

Point ID	CH4 (%)	CO2 (%)	O2 (%)	H2S (ppm)	Latitude	Longitude
1	0.0	0.1	20.5	0	37.21829671	-107.7920444
2	0.0	0.1	20.3	0	37.21832954	-107.7920825
3	0.0	0.1	20.4	0	37.21829808	-107.7921163
4	0.0	0.8	20.2	0	37.21827182	-107.7920856
5	0.0	0.0	20.5	0	37.2181636	-107.7920655
6	0.0	0.1	20.4	0	37.21816068	-107.7918897
7	0.0	0.4	20.2	0	37.21829876	-107.7919024
8	0.0	0.8	19.9	0	37.2184313	-107.7918987
9	0.0	0.3	20.3	0	37.21842647	-107.7920807
10	0.0	0.2	20.4	0	37.21843111	-107.7922468
11	0.0	0.2	20.3	0	37.21828861	-107.7922492
12	0.0	0.0	20.5	0	37.21815921	-107.7922305
13	0.0	0.0	20.5	0	37.2180102	-107.7924003
14	0.0	0.0	20.5	0	37.21802052	-107.7922085
15	0.0	0.0	20.6	0	37.21801708	-107.7920595
16	0.0	0.0	20.6	0	37.21802603	-107.791892
17	0.0	0.0	20.6	0	37.21802577	-107.7917215
18	0.0	0.0	20.6	0	37.21816102	-107.7917217
19	0.0	0.0	20.6	0	37.21830658	-107.791733
20	0.0	0.0	20.7	0	37.21843831	-107.7917267
21	0.0	0.0	20.6	0	37.21857121	-107.7917507
22	0.0	0.6	20.1	0	37.21856299	-107.7919059
23	0.0	0.0	20.6	0	37.21856407	-107.7920778
24	0.0	0.0	20.5	0	37.21856122	-107.7922373
25	0.0	0.0	20.5	0	37.21856532	-107.7924042
26	0.0	0.0	20.6	0	37.21841278	-107.7924057
27	0.0	0.0	20.4	0	37.21815782	-107.7923951
28	0.0	0.8	19.9	0	37.21829325	-107.7924075
29	0.0	1.9	19.4	0	37.21828842	-107.7920812
30	0.0	2.7	18.4	0	37.21830317	-107.7920807

Notes:

All measurements collected on 9/1/2022.

CH4 - Methane

CO2- Carbon Dioxide

O2- Oxygen

H2S - Hydrogen Sulfide

% - percent

ppm - parts per million

ATTACHMENT 1

COGIS - WELL Information

Scout Card

 [Related](#)
 [Insp.](#)
 [MIT](#)
 [GIS](#)
 [Doc](#)
 [COA](#)
 [Wellbore](#)
 [Orders](#)

Surface Location Data for API # 05-067-05545

Status: PA 8/17/1962

Well Name/No: [IGNACIO 34-8 \(OWP\) #3-18](#) (click well name for production)
Operator: NORTHWEST PROD CORP - 64675
Status Date: 8/17/1962 **Federal or State Lease #:**
FacilityID: **214219** **LocationID:** **385407**
County: LA PLATA #067 **Location:** SWNW 18 34N8W N PM
Field: IGNACIO BLANCO - #38300 **Elevation:** 6,910 ft.
Planned Location 1515 FNL 1005 FWL **Lat/Long:** 37.218177/-107.792297 **Lat/Long Calculated From Footages**
As Drilled Location Footages Not Available **Lat/Long:** 37.218304/-107.792089 **Lat/Long Source: Calculated From Footages**

Wellbore Data for Sidetrack #00

Status: AB 5/17/2013

Wellbore Permit

Permit #: 560000 **Expiration Date:** 3/9/1957
Prop Depth/Form: **Surface Mineral Owner Same:**
Mineral Owner: FEE **Surface Owner:**
Unit: **Unit Number:**
Formation and Spacing: Code: FMNG , Formation: FARMINGTON , Order: 0 , Unit Acreage: 0, Drill Unit:

Wellbore Completed

Completion Date: 12/24/1956
Measured TD: 5224 **Measured PB depth:** 1780
True Vertical TD: 5224 **True Vertical PB depth:**
Casing: String Type: SURF , Hole Size: , Size: 10.75, Top: 0, Depth: 240, Weight: 32.75
Cement: Sacks: 250, Top: 0, Bottom: 240, Determination Method: CALC
Casing: String Type: SURF , Hole Size: , Size: 10.75, Top: 0, Depth: 240, Weight:
Cement: Sacks: 0, Top: 0, Bottom: , Determination Method:
Casing: String Type: 1ST , Hole Size: 8.75, Size: , Top: 1320, Depth: 5211, Weight: 11.5
Cement: Sacks: 200, Top: 1320, Bottom: 5211, Determination Method:
Casing: String Type: 1ST , Hole Size: , Size: 5, Top: 0, Depth: 5224, Weight:
Cement: Sacks: 0, Top: 0, Bottom: , Determination Method:
Casing: String Type: S.C. 1.1 , Hole Size: , Size: , Top: 1720, Depth: 6100, Weight: 11.5
Cement: Sacks: 350, Top: 1720, Bottom: 6100, Determination Method:

Formation	Log Top	Log Bottom	Cored	DSTs
KIRTLAND	984			
FRUITLAND	1910			
PICTURED CLIFFS	2326			
LEWIS	2815			
MESAVERDE	4475			
CLIFF HOUSE	4815			
MENEFEE	4887			
POINT LOOKOUT	5025			

Completed information for formation FMNG

Status: AB 8/17/1962

1st Production Date: N/A **Choke Size:** 0.000
Status Date: 8/17/1962 **Open Hole Completion:**
Commingled: **Production Method:**
Formation Name: FARMINGTON **Status:** AB
Tubing Size: **Tubing Setting Depth:**
Tubing Packer Depth: **Tubing Multiple Packer:**
Open Hole Top: **Open Hole Bottom:**

No Initial Test Data was found for formation FMNG .

No Perforation Data was found for formation FMNG .

ATTACHMENT 2

Photographic Log
Ignacio 34-8 (OWP) #3-18
Soil Gas Survey
Catamount Energy Partners, LLC



Photo 1: Ignacio 34-8 (OWP) #3-18 well sign, 9/1/2022.

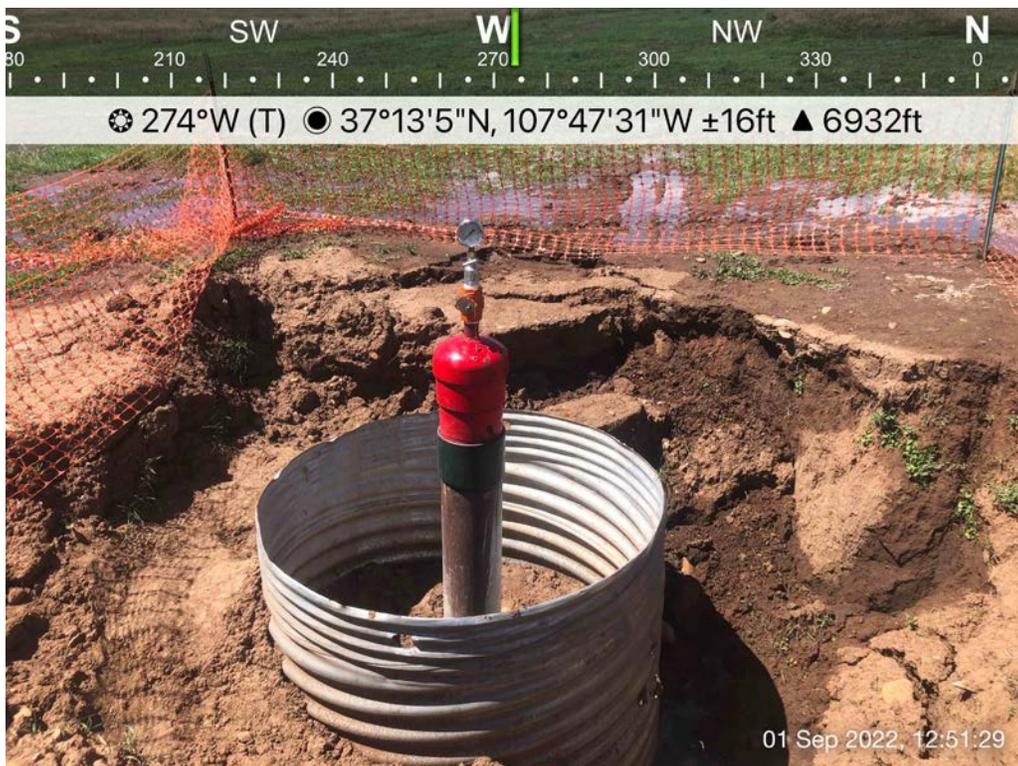


Photo 2: Ignacio 34-8 (OWP) #3-18 P&A marker, 9/1/2022.

Photographic Log
Ignacio 34-8 (OWP) #3-18
Soil Gas Survey
Catamount Energy Partners, LLC



Photo 3: Looking north from the P&A, 9/1/2022.



Photo 4: Looking east from the P&A, 9/1/2022.

Photographic Log
Ignacio 34-8 (OWP) #3-18
Soil Gas Survey
Catamount Energy Partners, LLC



Photo 5: Looking south from the P&A, 9/1/2022.



Photo 6: Looking west from the P&A, 9/1/2022.