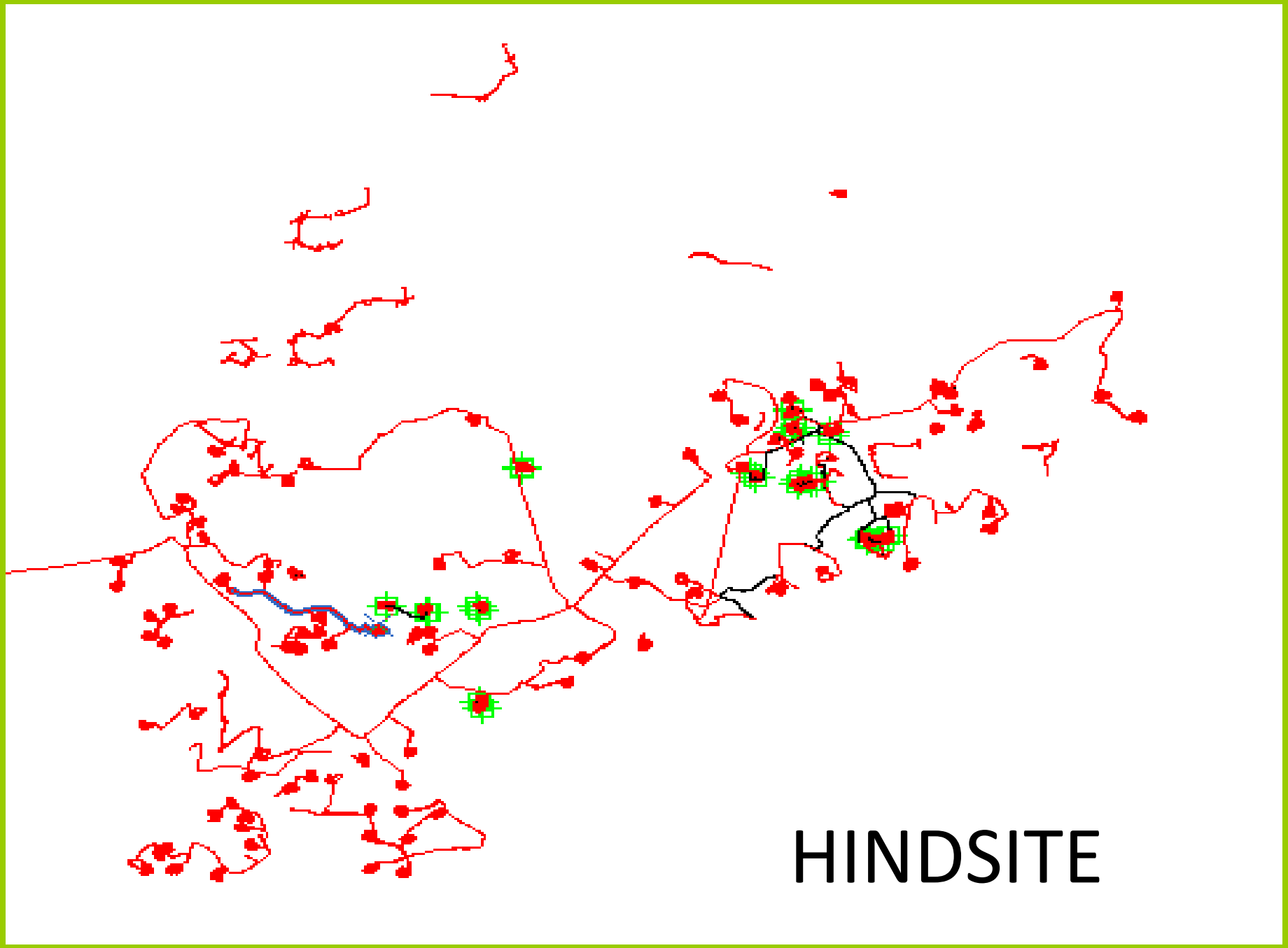
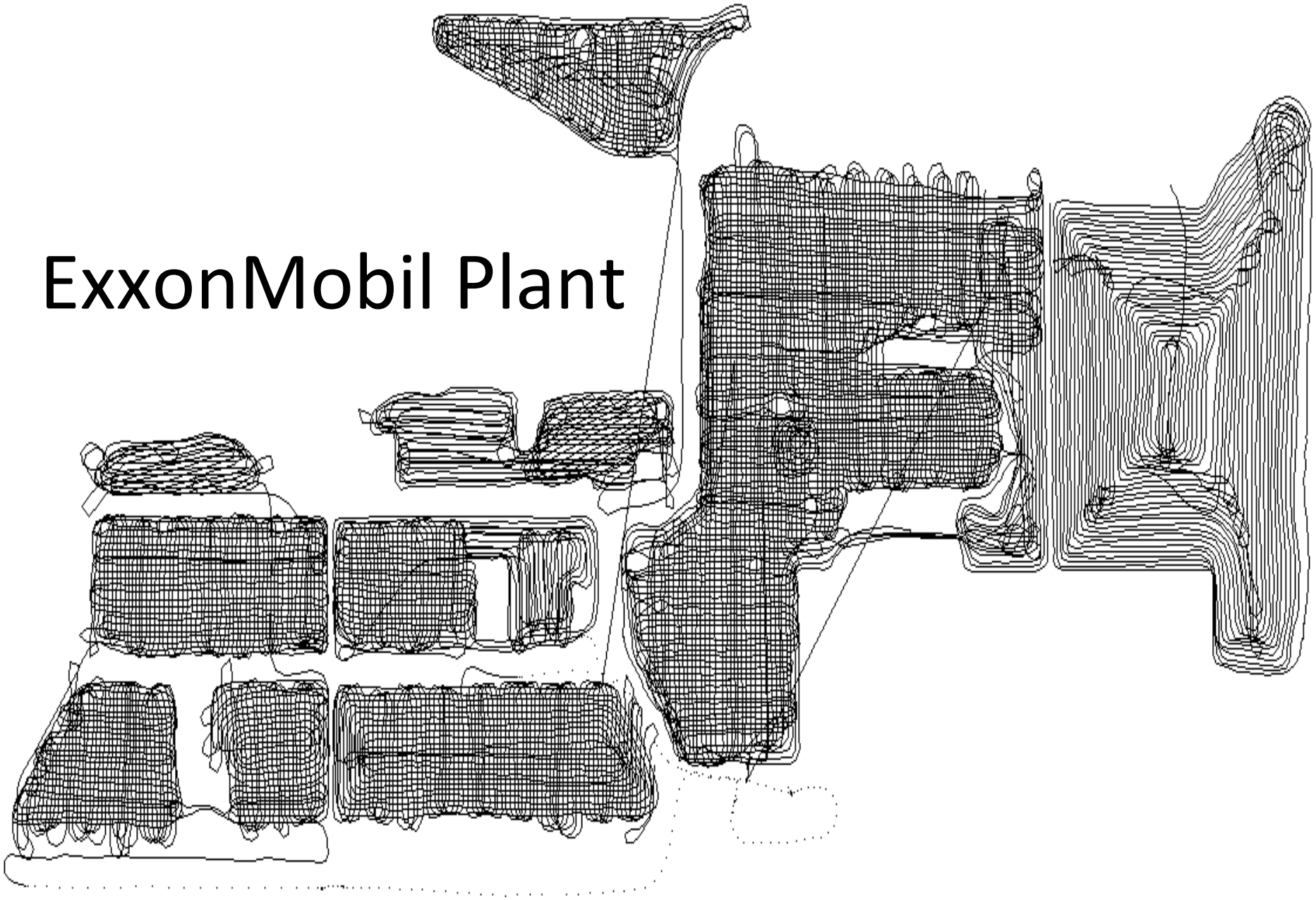
Seeding

- Keeping track of areas seeded
- Quality control
- Photos with GPS
- Hidden information


HINDSITE

ExxonMobil Plant



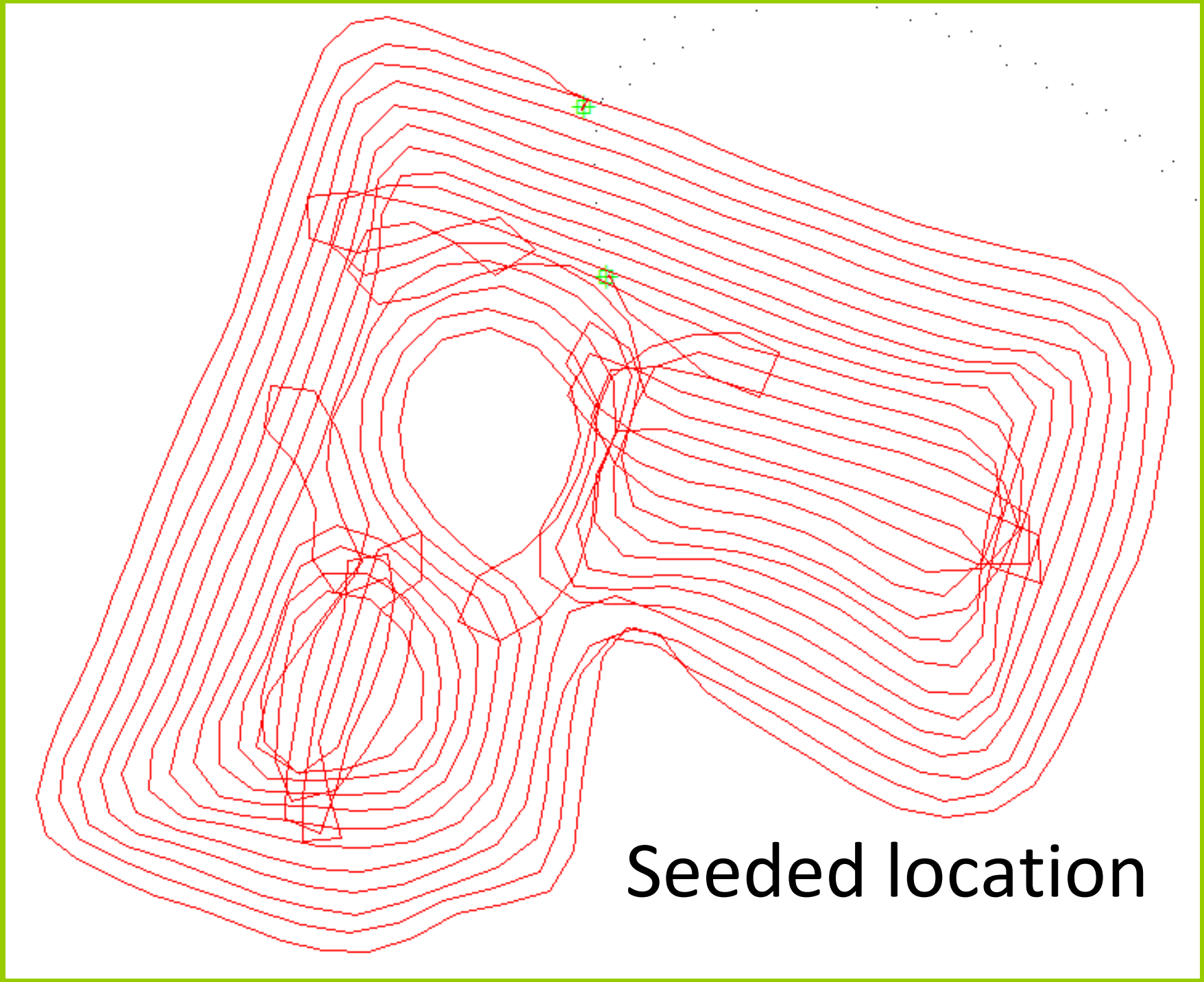
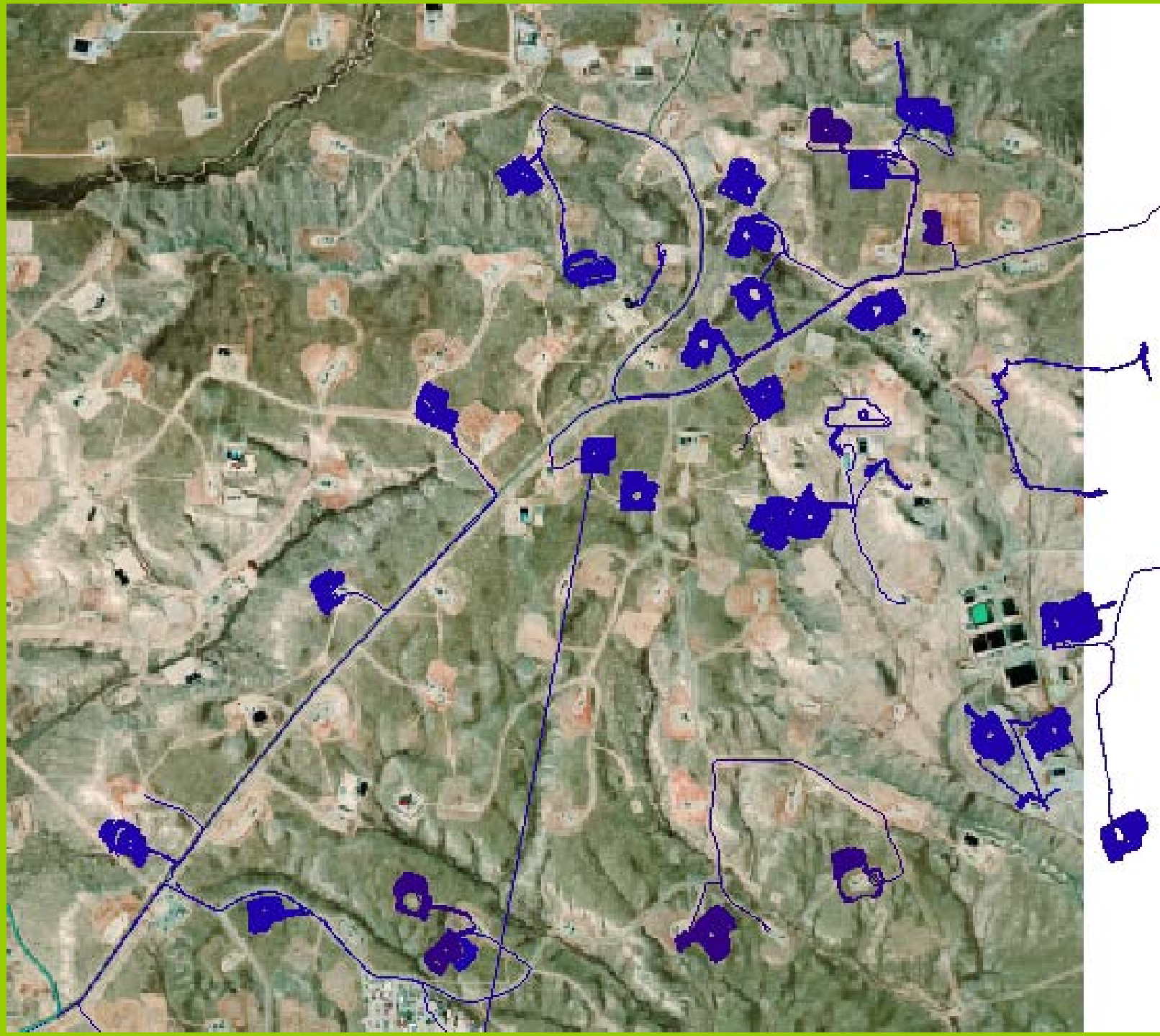

Seeded location

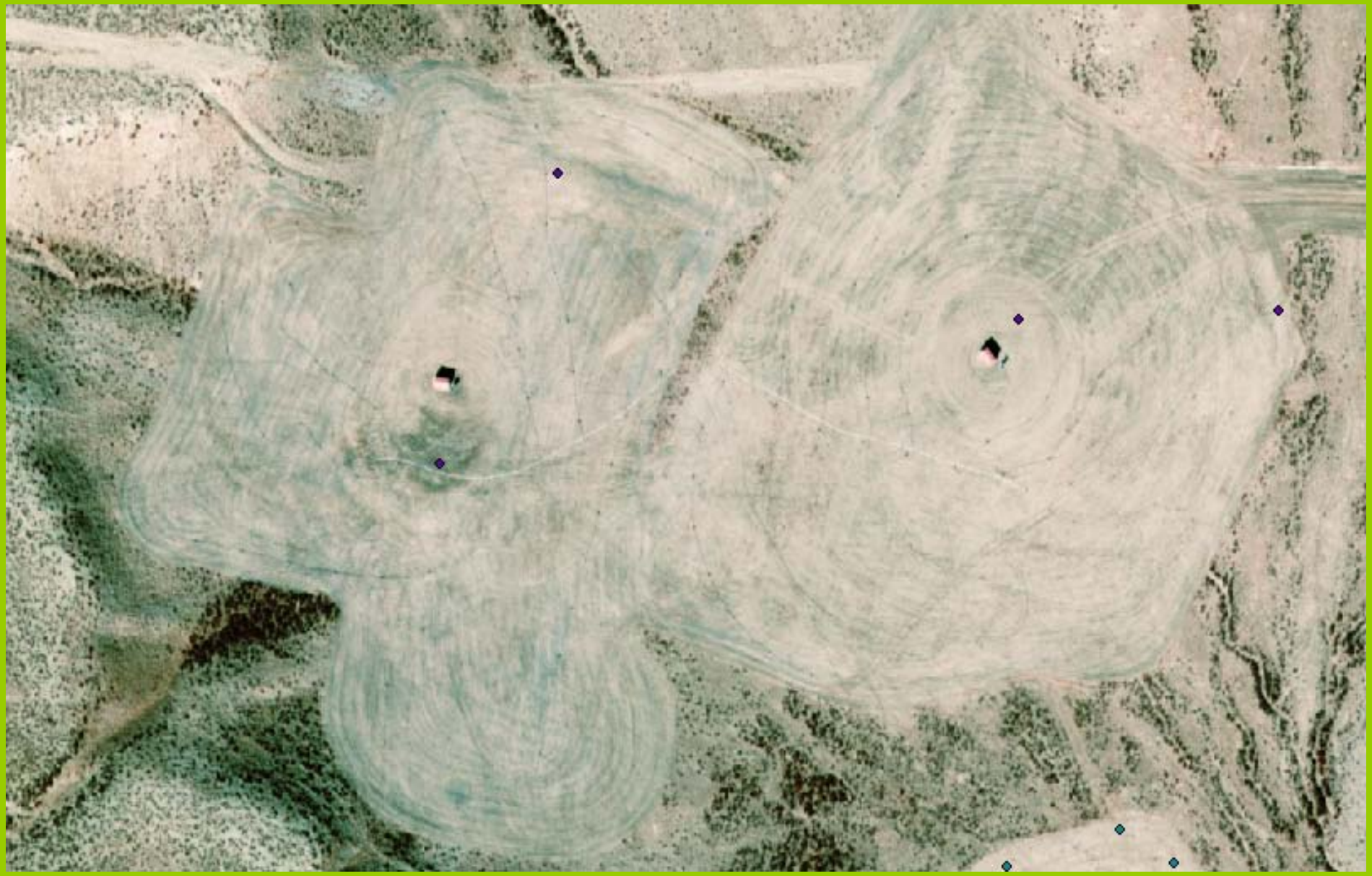
Photo of work area

GPS

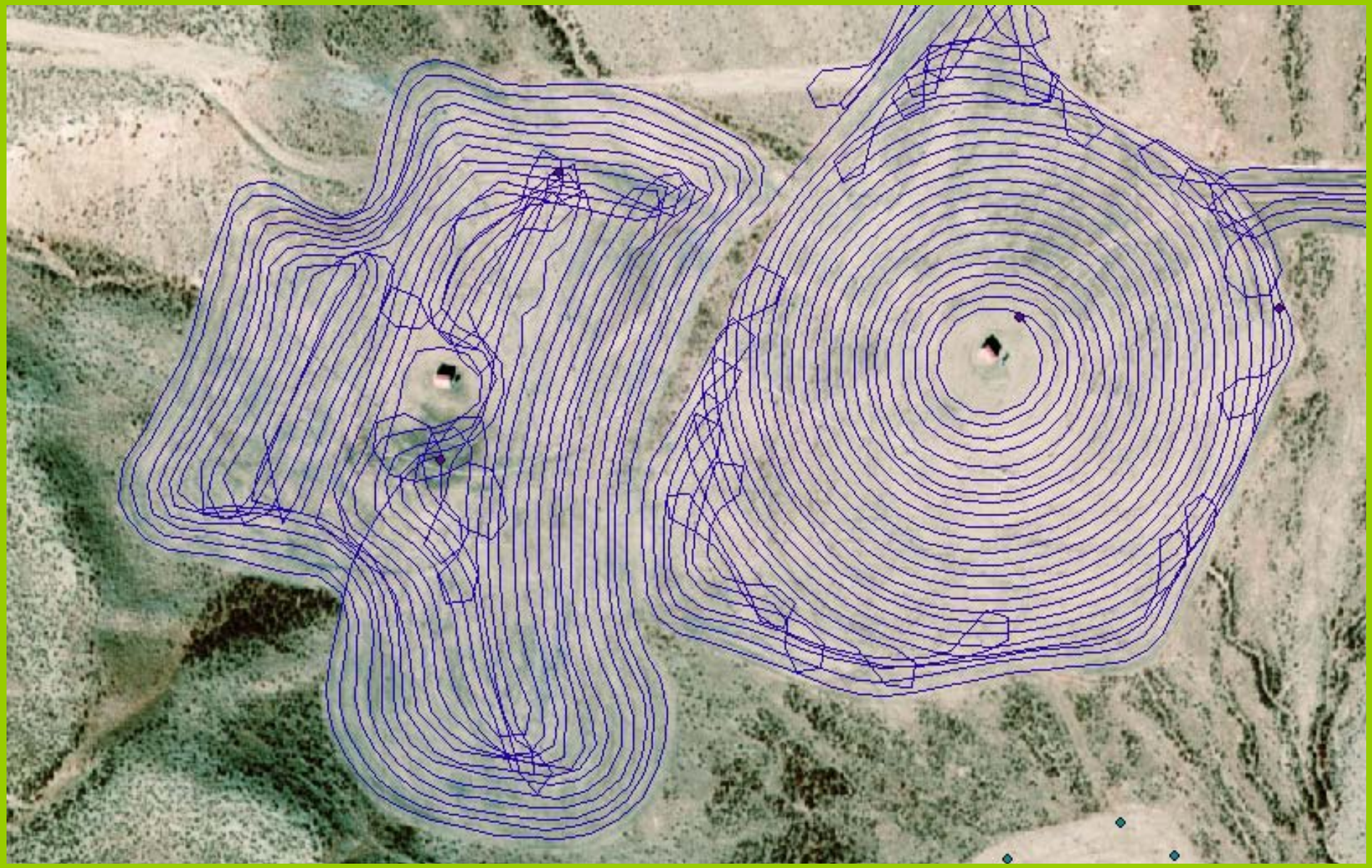
overlay2
008



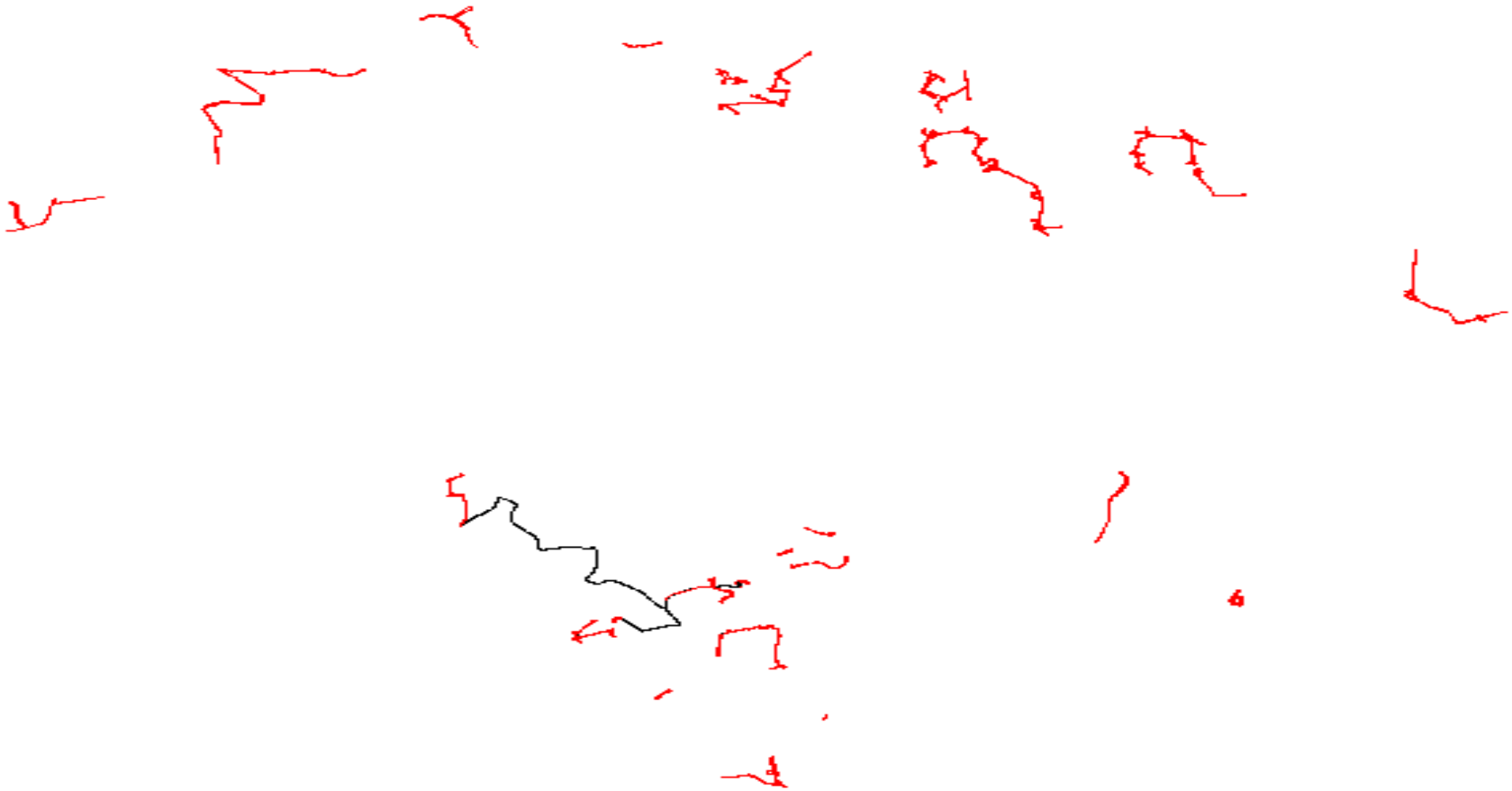
Two Gas Locations



Seeded



Pipelines

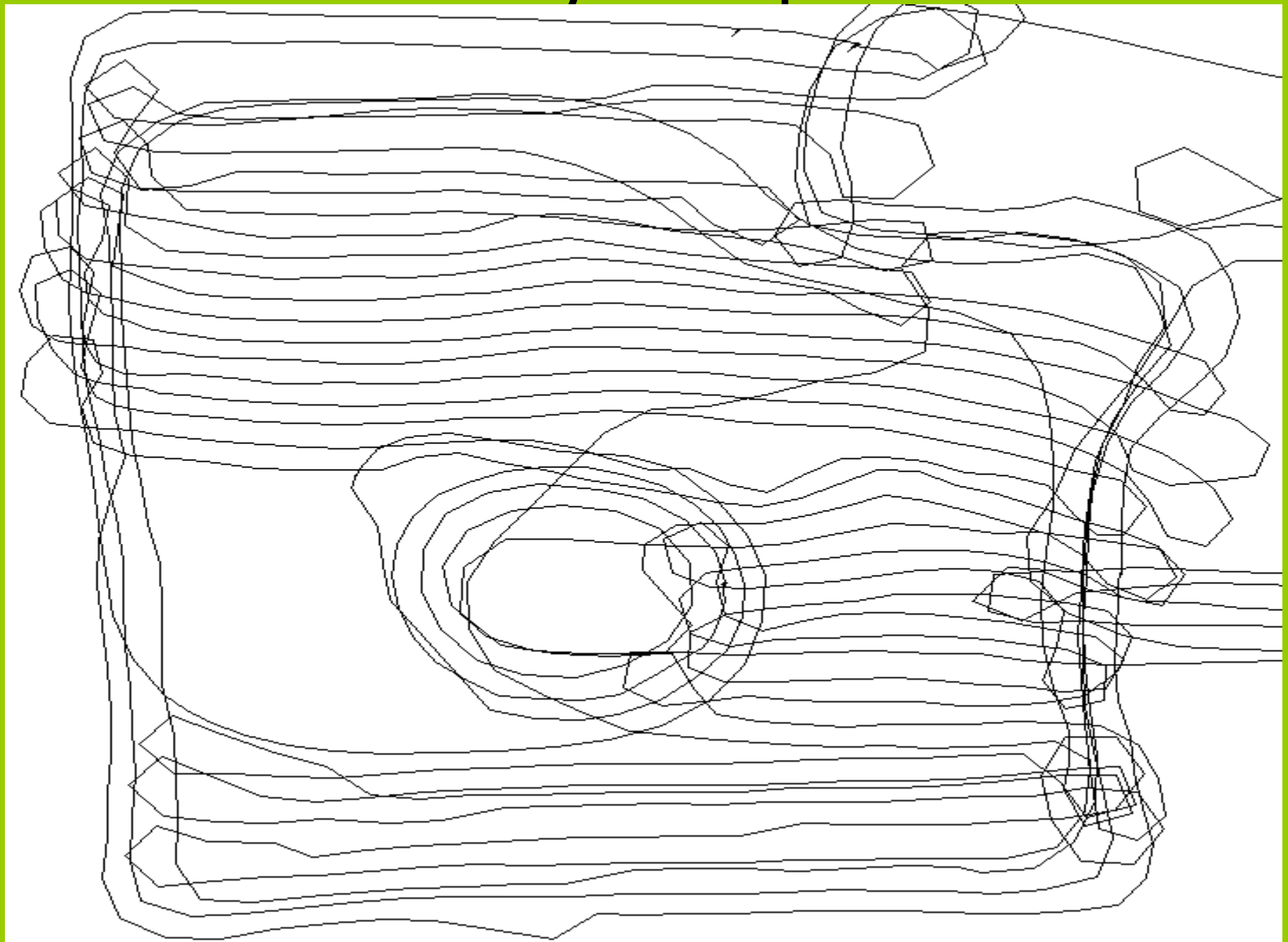


Quality Control

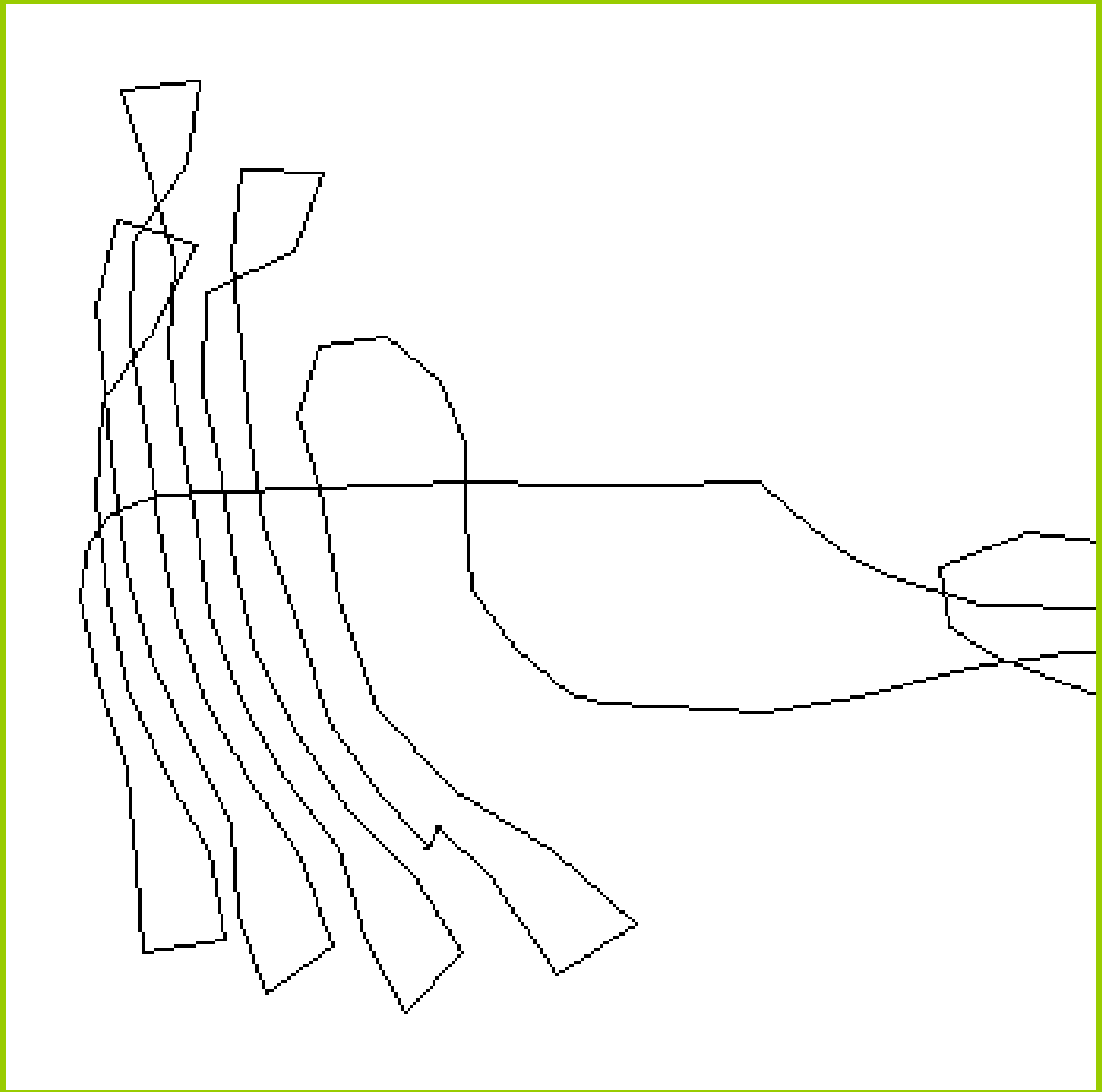
- What was actually seeded
- Was it seeded correctly
- Is there any follow up that is required

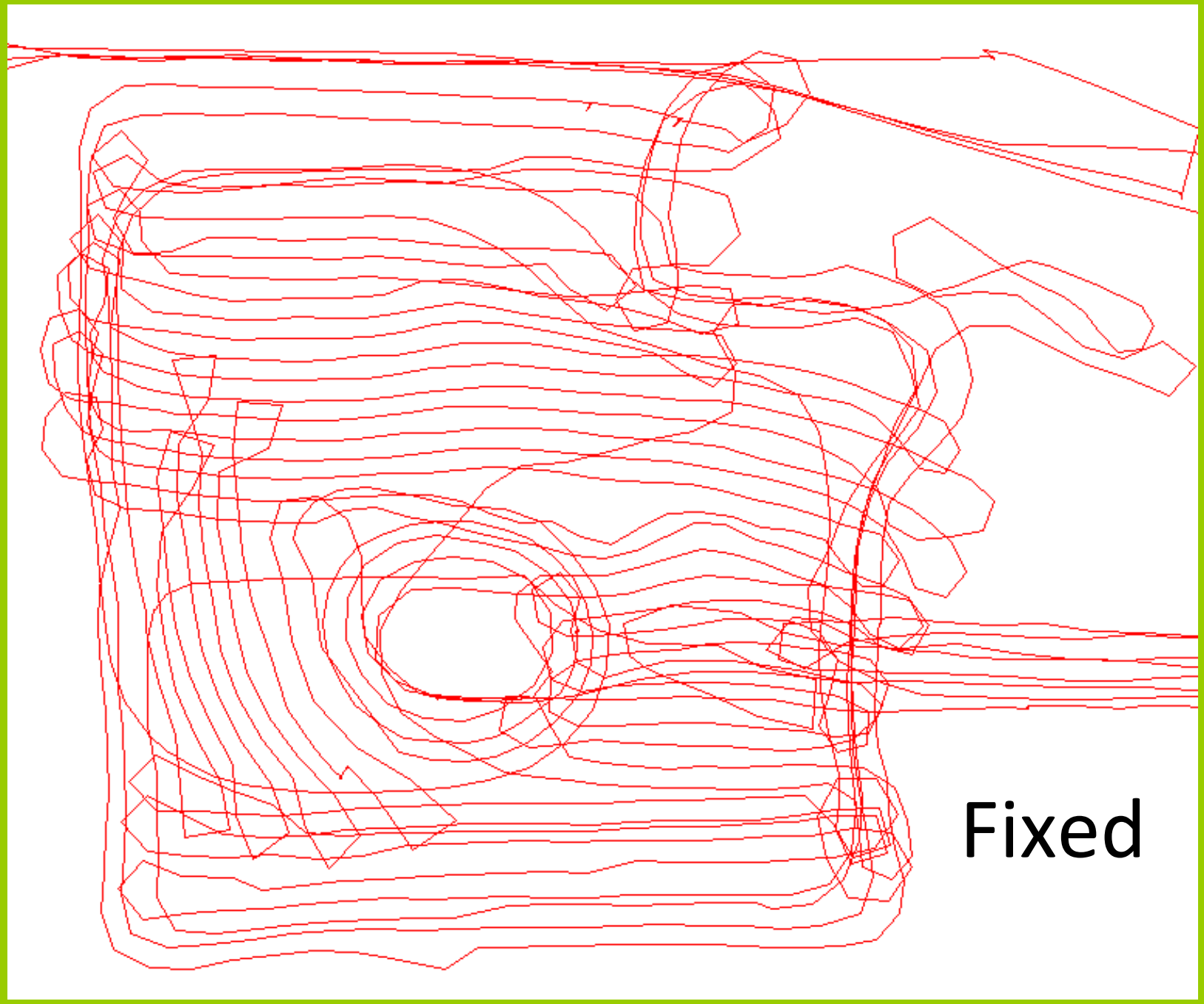
Quality control

There may be a problem



The fix




Fixed

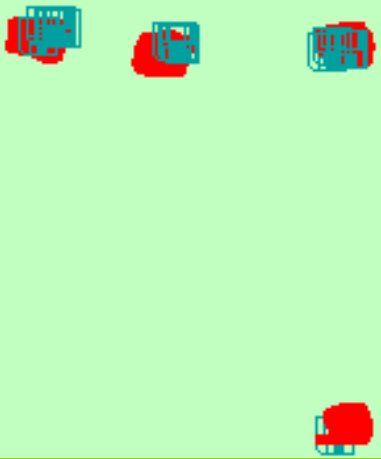
Photos

- How do we keep track of them?
- What do we keep track of?
- How do we make them available?

- What I have tried to do
  - Location name
  - Seed tag
  - Pictures of location

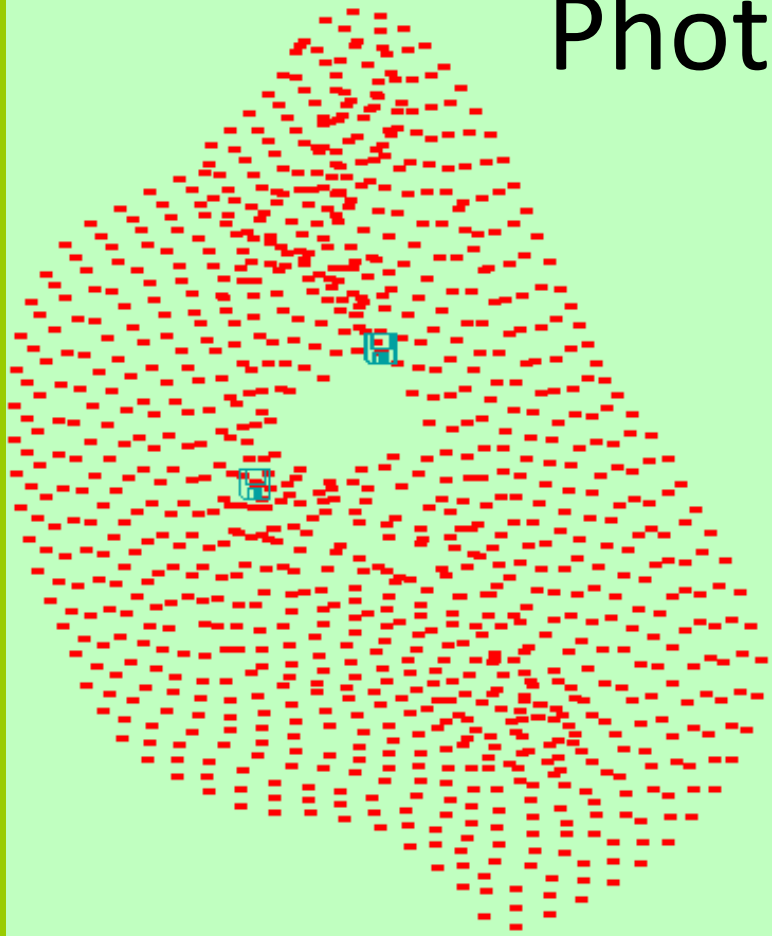
EnCana Seeding

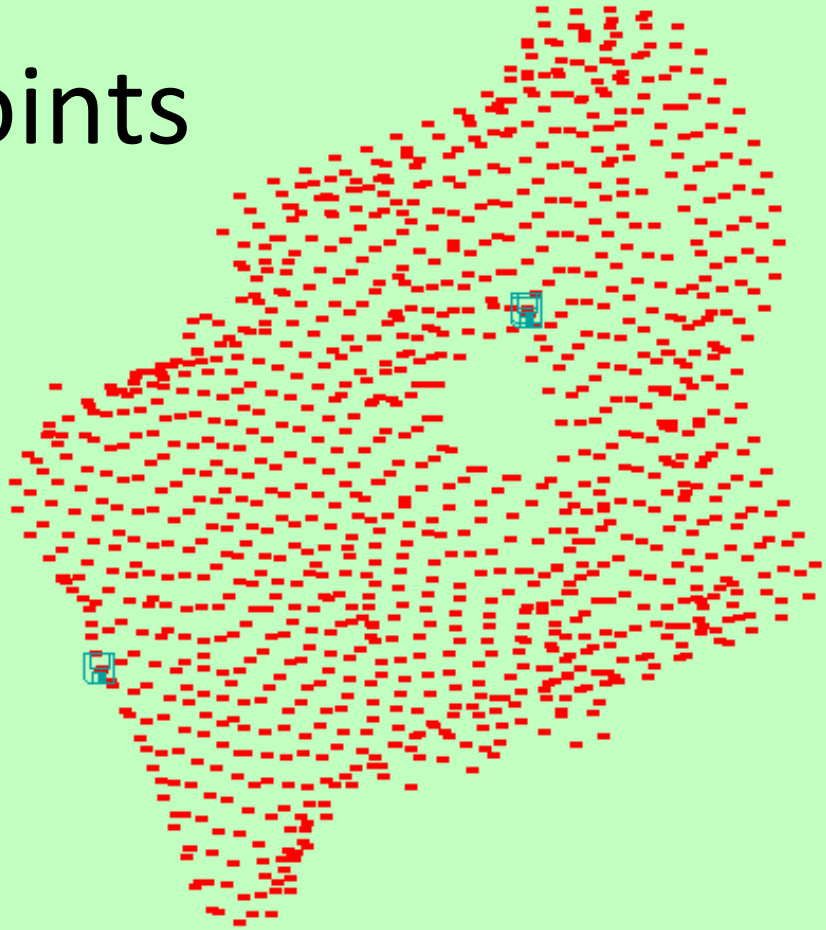
Photo sites



EnCana Seeding

Photo Points





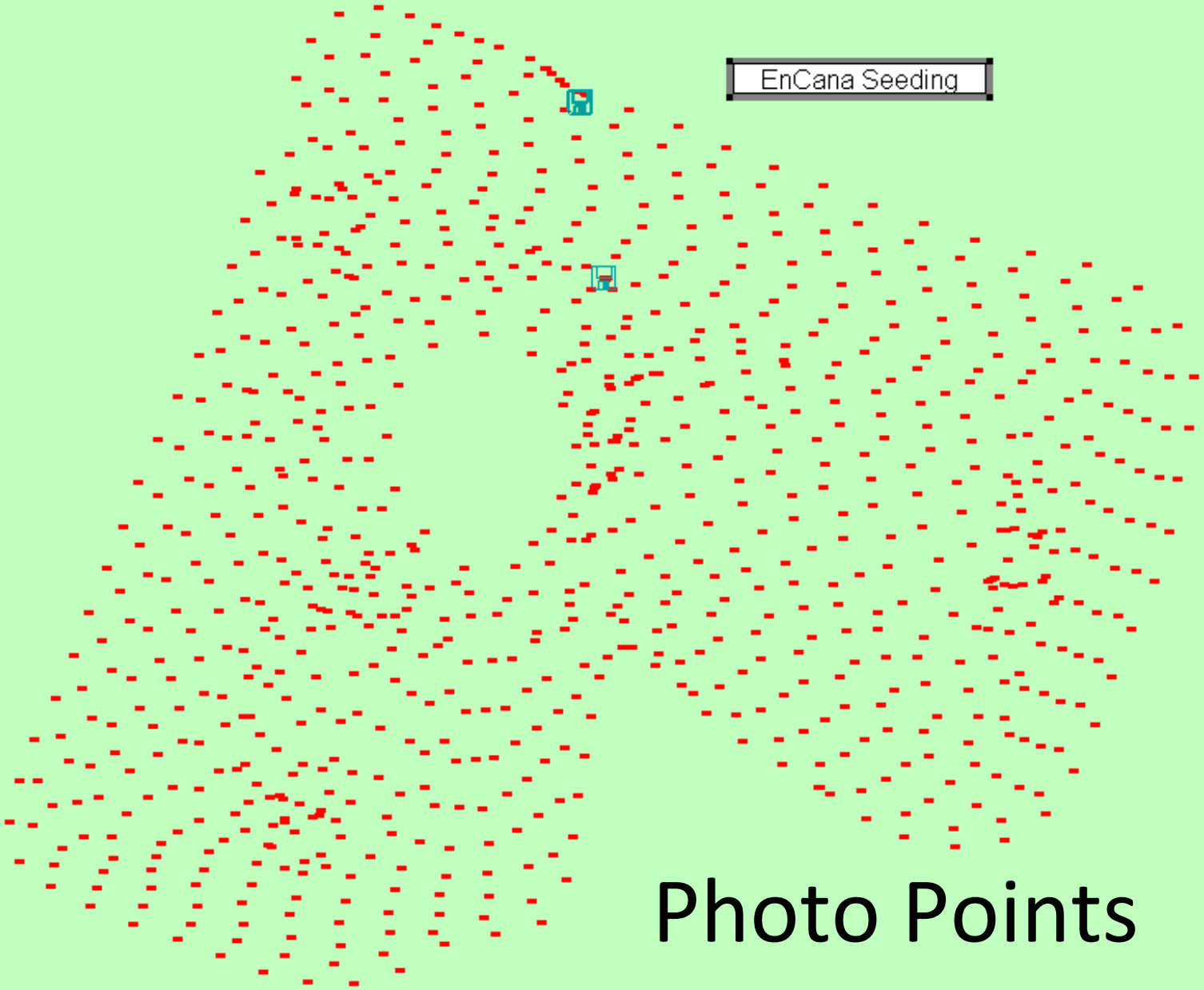


Photo Points

Location Photo

Seed Mix

3075 Lane 51 1/2
Manderson, WY 82432
(307) 568-3361

RANGE
CO:
ELE:

Order Number: [illegible]
Project Number:
Project Name: 2008 EnCana Jonah
Blend Name: Mix A Shrub Forb
Date Tested: 03/12/08

Sold To: EnCana Oil & Gas

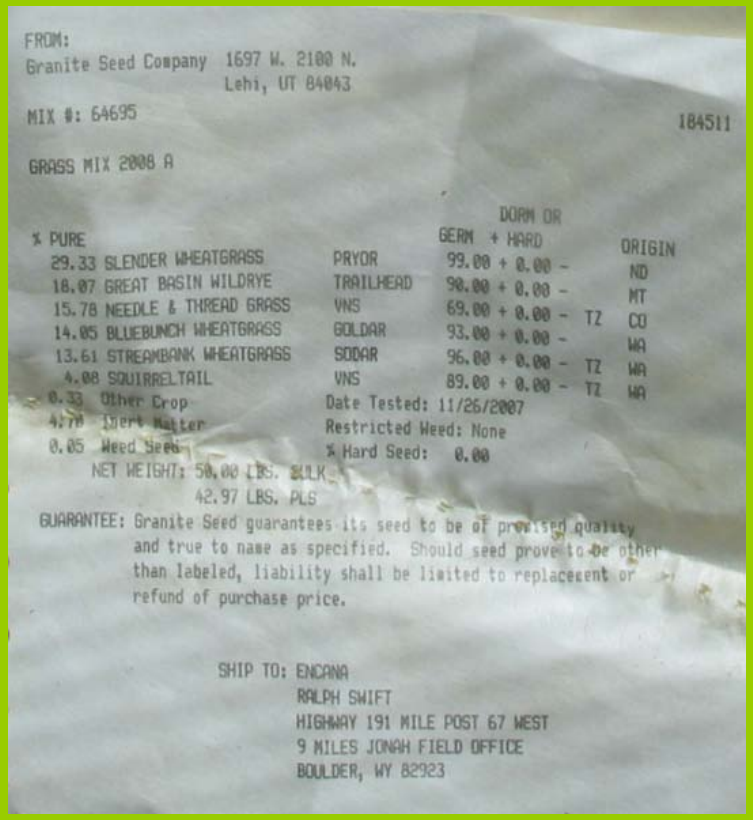
Species & Variety	Pure Seed %	Total Viable Germ	TZ	Origin
Shadscale	20.10		[illegible]	UT
Winterfat	1.54		46	NM
Gardner Saltbush	2.84		52	WY
Globemallow Scarlet	1.42		52	UT
Buckwheat, Wyeth, E heracleoides, bracts	1.78		33	UT
Big Sagebrush, Wyoming	0.56		83	UT
Penstemon palmeri, Palmer	0.65		91	UT
Aster, Blueleaf, Eurybia glauca	0.40		93	WY
Evening Primrose, White	0.65	91		CA
Gardner Saltbush, trident	5.11		72	MT
Yarrow, White native	0.75		98	NZ
Beeplant Rocky Mountain	9.22		24	UT
Aster Prairie	0.92	80		

Noxious Weeds: None Found
Restricted: None Found

Weed Seed: 0.01
Other Crop: 0.06
Inert Matter: 47.92
Total: 100

Hard Seed: 0.00
Dormant: 0.00
Lot #: 20632-1

Bulk Lbs: 50.00
PLS lbs: 12.04



FROM:
Granite Seed Company 1697 W. 2100 N.
Lehi, UT 84043

MIX #: 64695 184511

GRASS MIX 2008 A

% PURE			GERM	DORM OR + HARD		ORIGIN
29.33	SLENDER WHEATGRASS	PRYOR	99.00	+ 0.00 -		ND
18.07	GREAT BASIN WILDRYE	TRAILHEAD	90.00	+ 0.00 -		MT
15.78	NEEDLE & THREAD GRASS	VNS	69.00	+ 0.00 -	TZ	CO
14.05	BLUEBUNCH WHEATGRASS	GOLDAR	93.00	+ 0.00 -		WA
13.61	STREAMBANK WHEATGRASS	SODAR	96.00	+ 0.00 -	TZ	WA
4.08	SQUIRRELTAIL	VNS	89.00	+ 0.00 -	TZ	WA

0.33 Other Crop
4.70 Inert Matter
0.05 Weed Seed

Date Tested: 11/26/2007
Restricted Weed: None
% Hard Seed: 0.00

NET WEIGHT: 50.00 LBS. BULK
42.97 LBS. PLS

GUARANTEE: Granite Seed guarantees its seed to be of promised quality and true to name as specified. Should seed prove to be other than labeled, liability shall be limited to replacement or refund of purchase price.

SHIP TO: ENCANA
RALPH SWIFT
HIGHWAY 191 MILE POST 67 WEST
9 MILES JONAH FIELD OFFICE
BOULDER, WY 82923

Seeded

Seeded

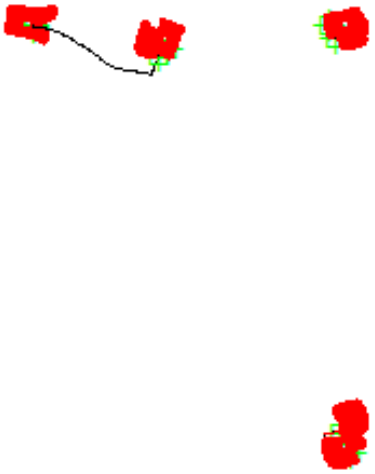
Close Up

ROUGH RIDER

Other information gleaned from our GPS records

- Position
- Information entered in the field
- Date
- Time

Fall Irrigation Sites

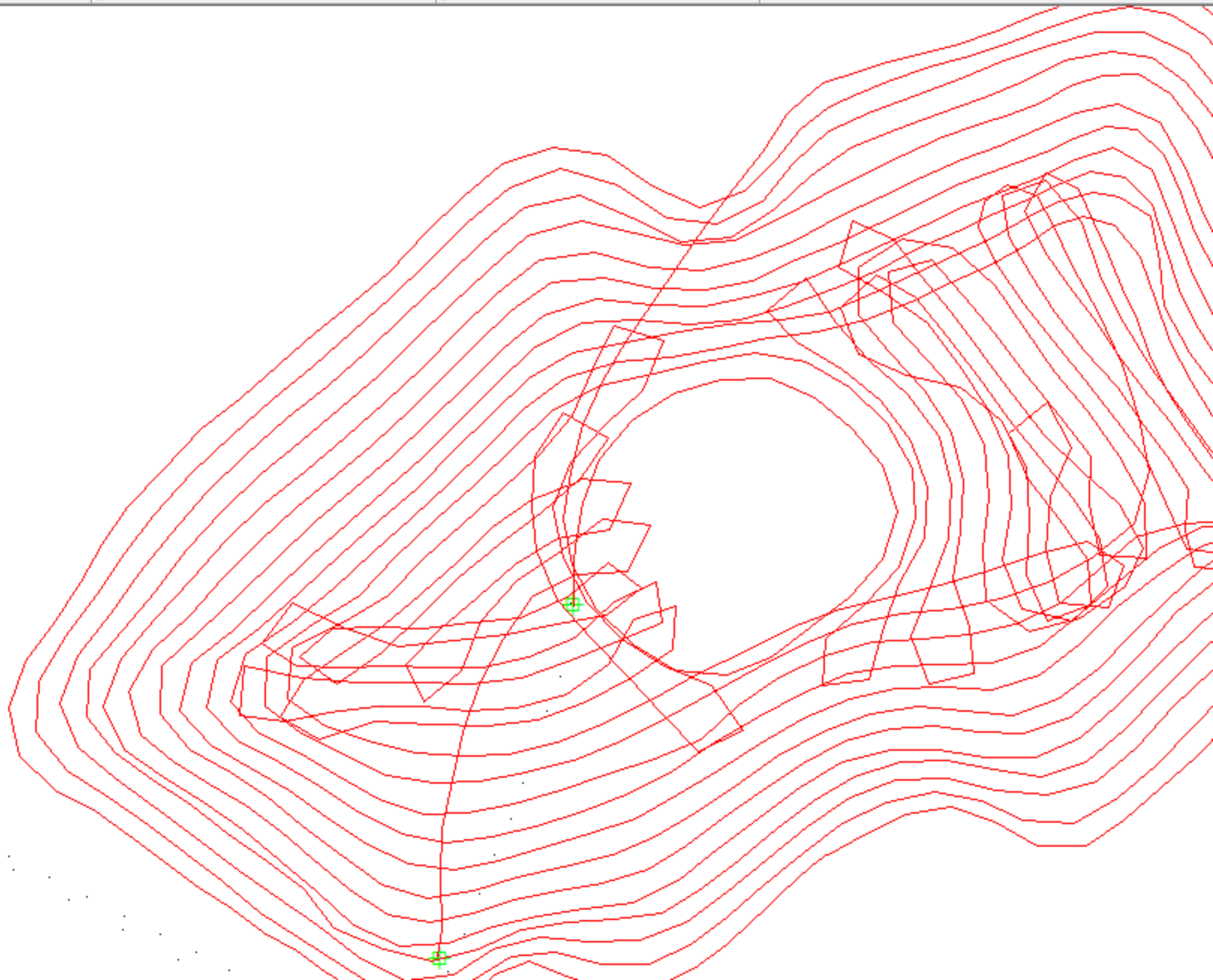


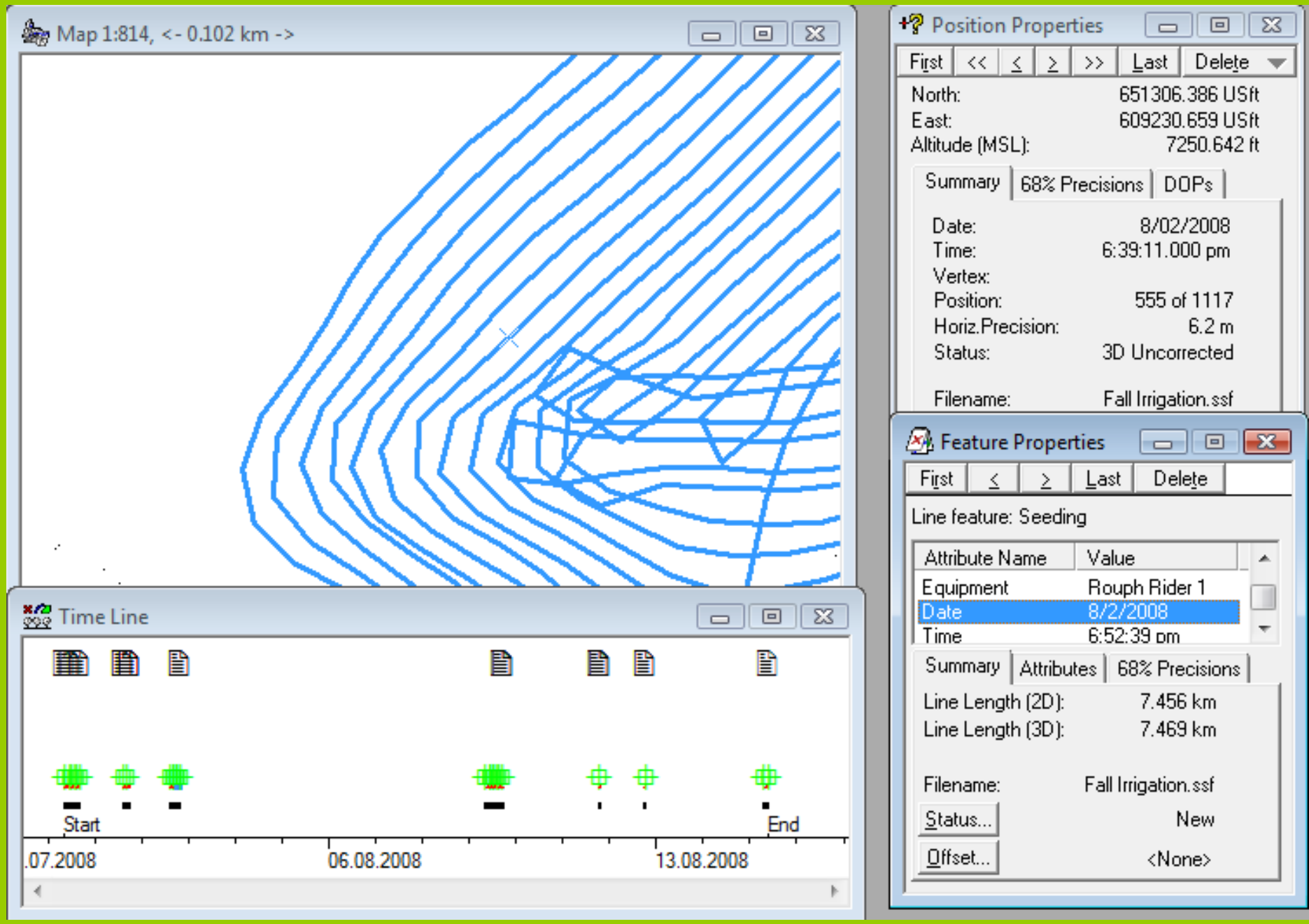
GPS Pathfinder Office - Fall Irrigation.ssf - [Map 1:814, <- 0.269 km ->]

File Edit View Data Utilities Options Window Help

Default

276 GB




Map 1:814, <- 0.102 km ->
Time Line
Start
End
.07.2008
06.08.2008
13.08.2008
Position Properties
First
<<
<
>
>>
Last
Delete
North: 651306.386 USft
East: 609230.659 USft
Altitude (MSL): 7250.642 ft
Summary
68% Precisions
DOPs
Date: 8/02/2008
Time: 6:39:11.000 pm
Vertex:
Position: 555 of 1117
Horiz.Precision: 6.2 m
Status: 3D Uncorrected
Filename: Fall Irrigation.ssf
Feature Properties
First
<
>
Last
Delete
Line feature: Seeding
Attribute Name
Value
Equipment
Rouph Rider 1
Date
8/2/2008
Time
6:52:39 pm
Summary
Attributes
68% Precisions
Line Length (2D): 7.456 km
Line Length (3D): 7.469 km
Filename: Fall Irrigation.ssf
Status...
New
Offset...
<None>

Hidden Information

- Location Name SHB 47-26
- Comments Rocky
- Seed Mix Seed mix A
- Soil type Rocky
- Soil Condition Dry
- Equipment Rough Rider
- Date 8-2-2008
- Time 6:52:32
- All of the GPS Information

Something extra

- What are we sowing
- Wheat?
- Or
- Tares?

- Lets take a look

Wheat Grasses

- Western
- Thickspike
- Slender
- Streambank
- Bluebunch
- Downy

0.05 Weed Seed

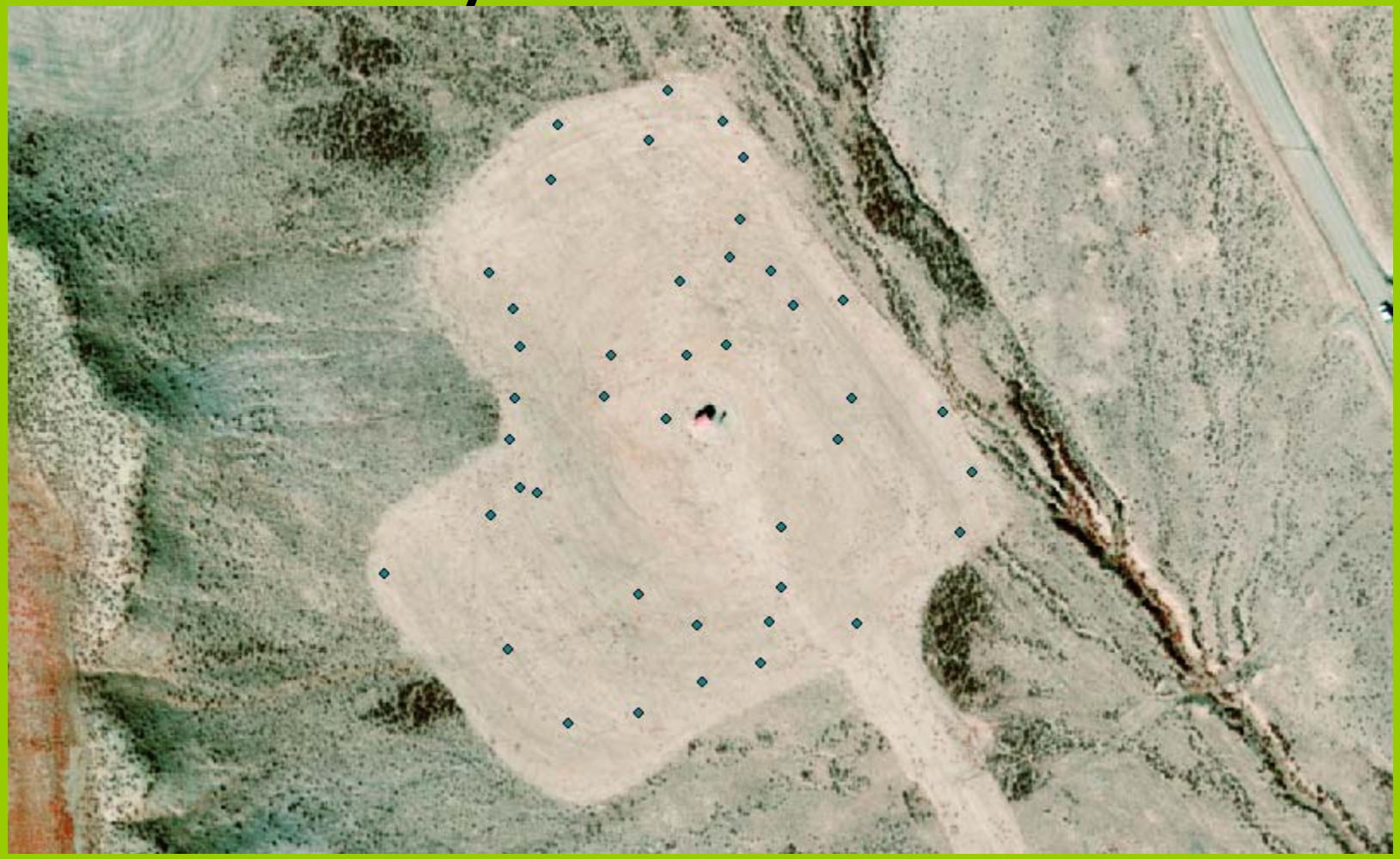
Weed Seed In Mix

Noxious Weeds: None Found
Restricted: None Found

Weed Seed:	0.01	Hard Seed:	0.00
Other Crop:	0.06	Dormant:	0.00
Inert Matter:	47.92	Lot #:	20632-1
Total:	100		
		Bulk Lbs:	50.00
		PLS lbs:	12.94

Planted In 2007

Downy Brome Year One



Disadvantages of GPS

- Cost
- Training
- The mindset that it is essential

- My GPS system has never planted a seed
- My GPS system has never repaired a planter
- Neat technology
- Just one tool

This is what its all about

THE HELP

The Help

The equipment

Rough Rider with imprinters

Rough Rider

Laird Drill

Dick, Glade, Jim, Don

ROUGH RIDER

ROUGH RIDER

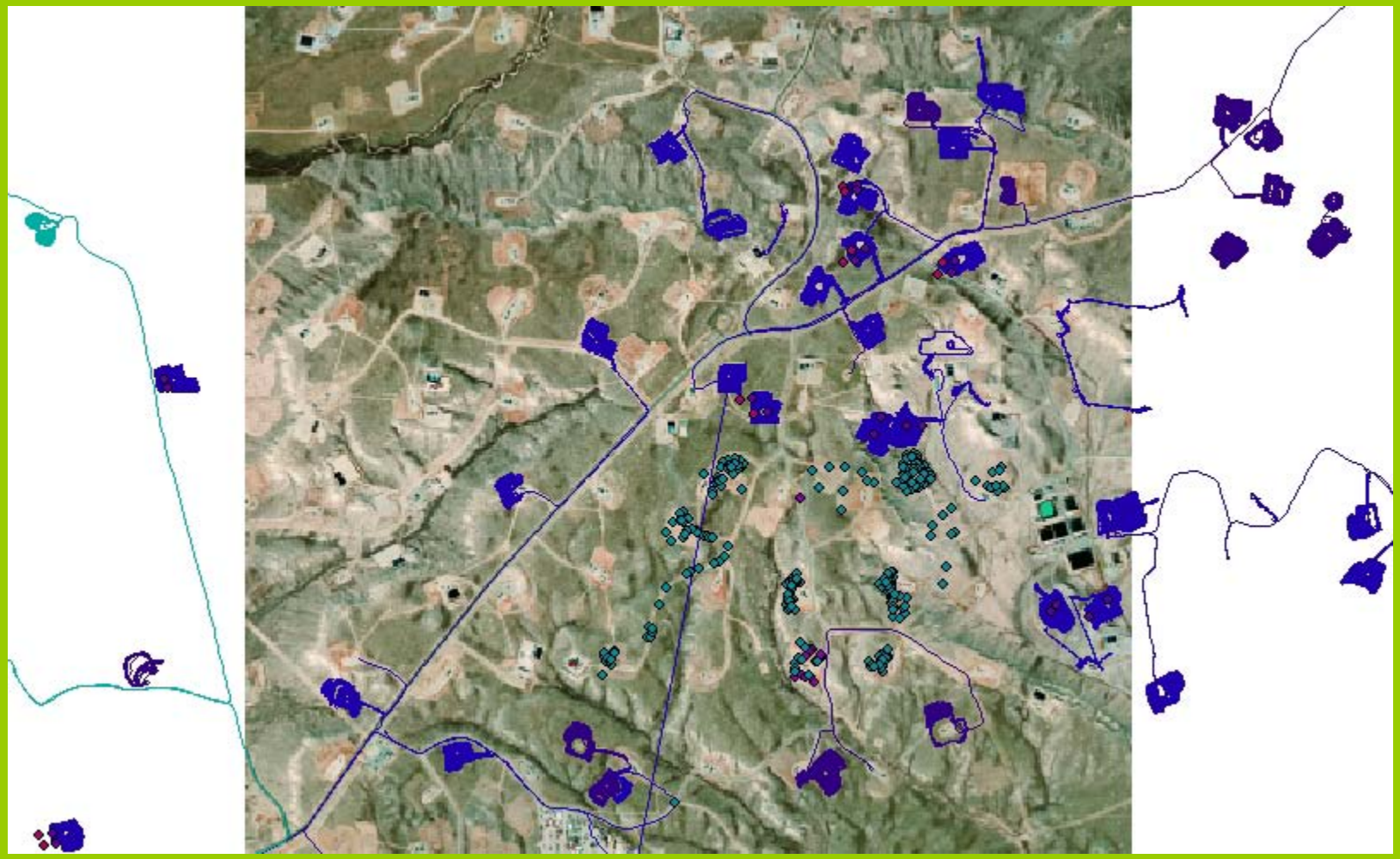
Russo Drill

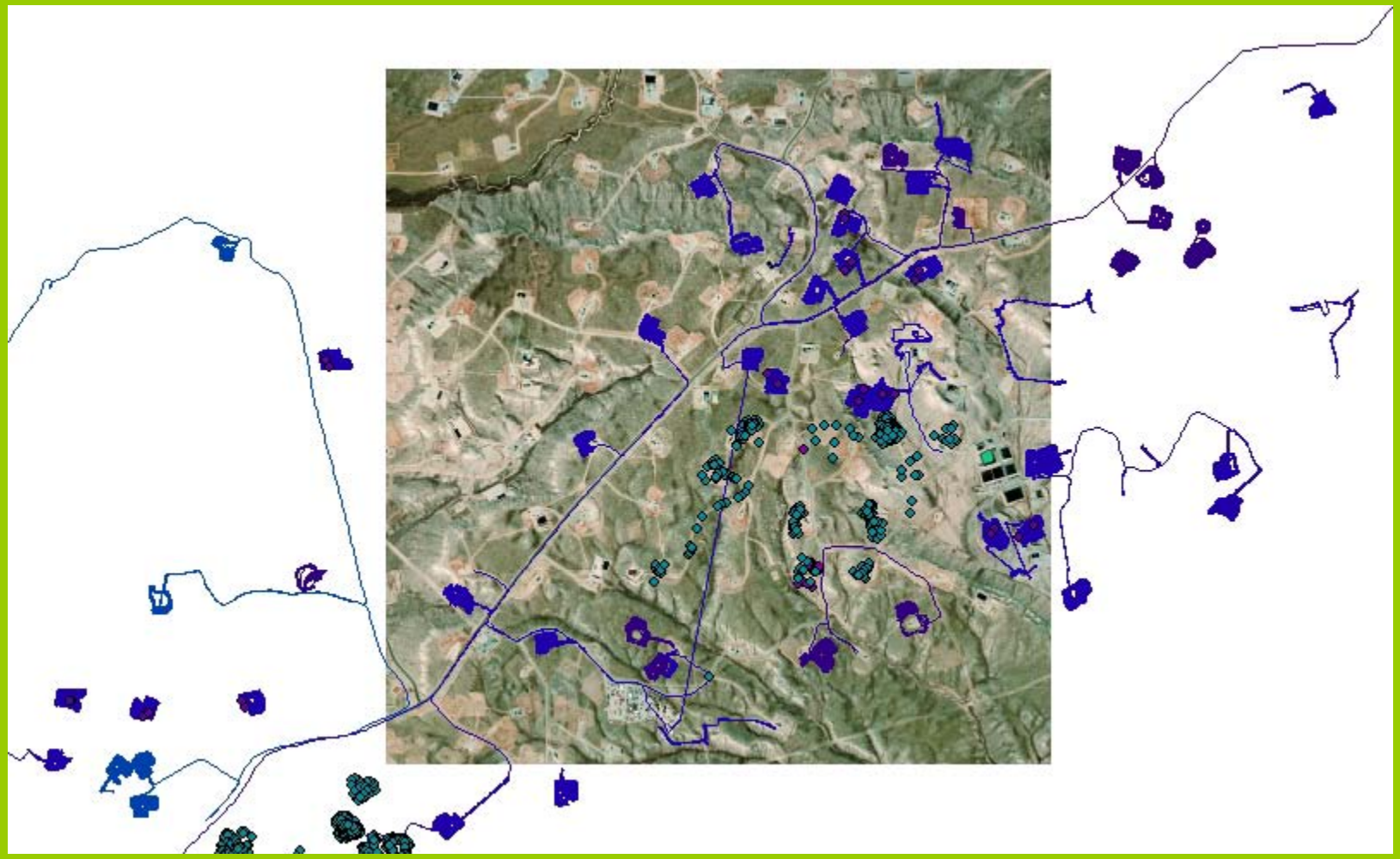
ROUGH RIDER

The Help

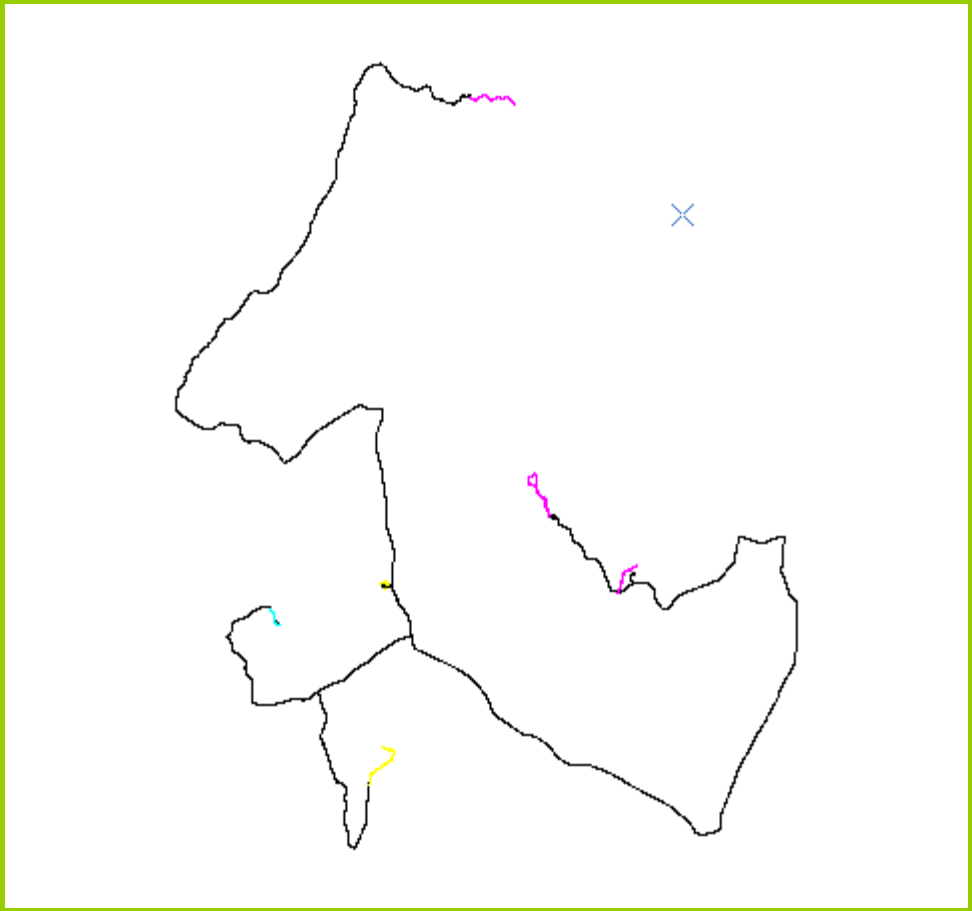
ROUGH RIDER

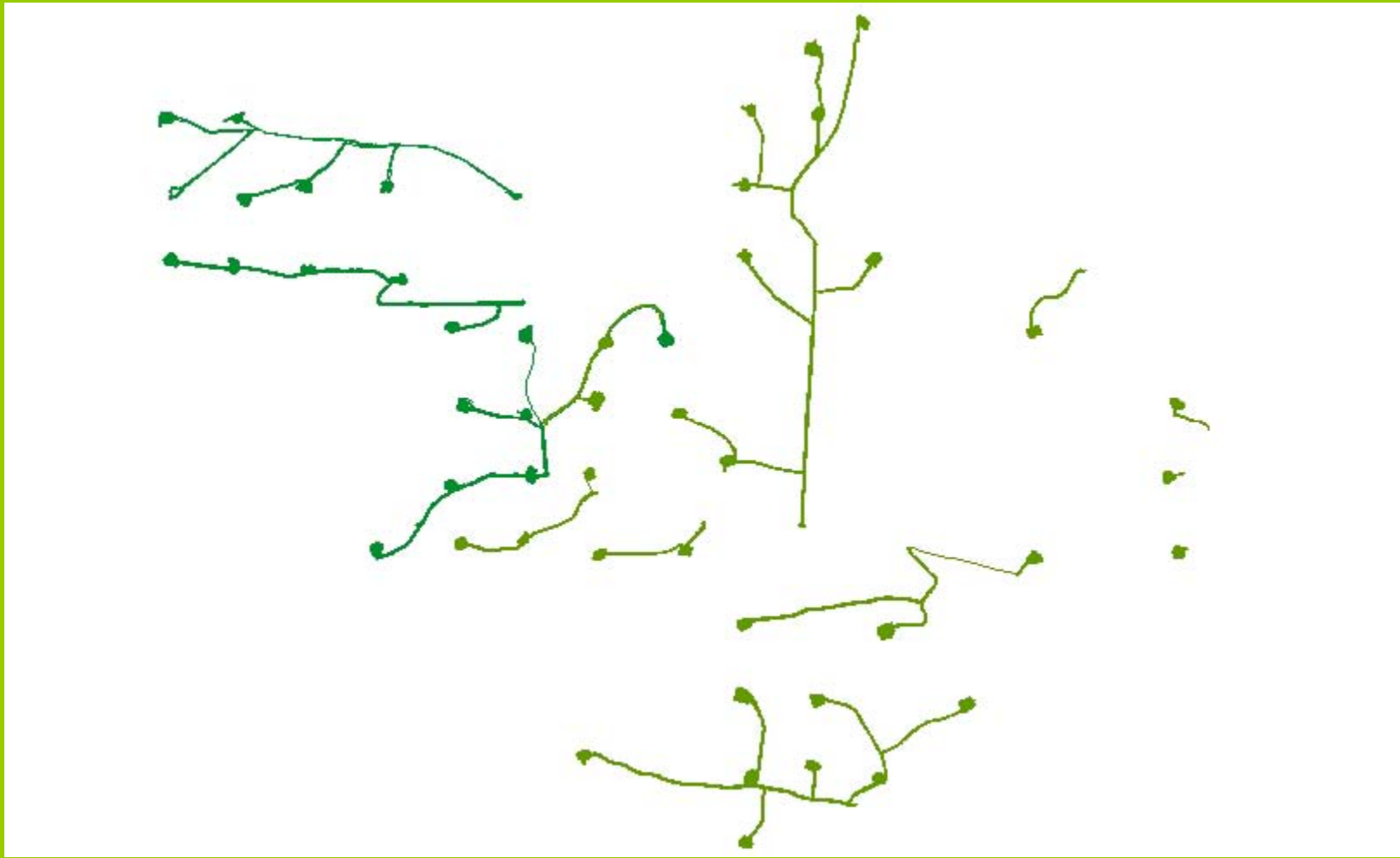
6 years



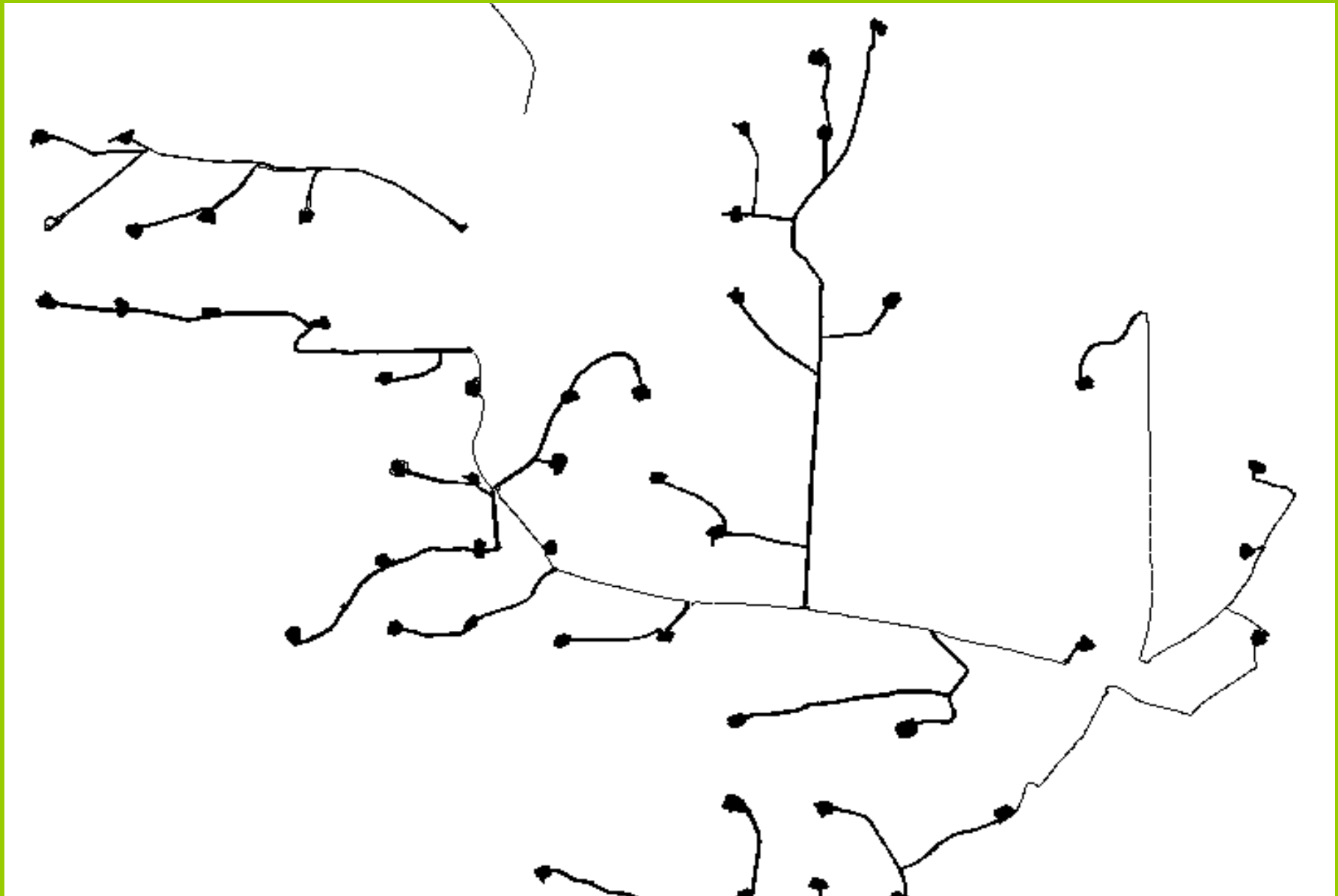


ExxonMobil Colorado

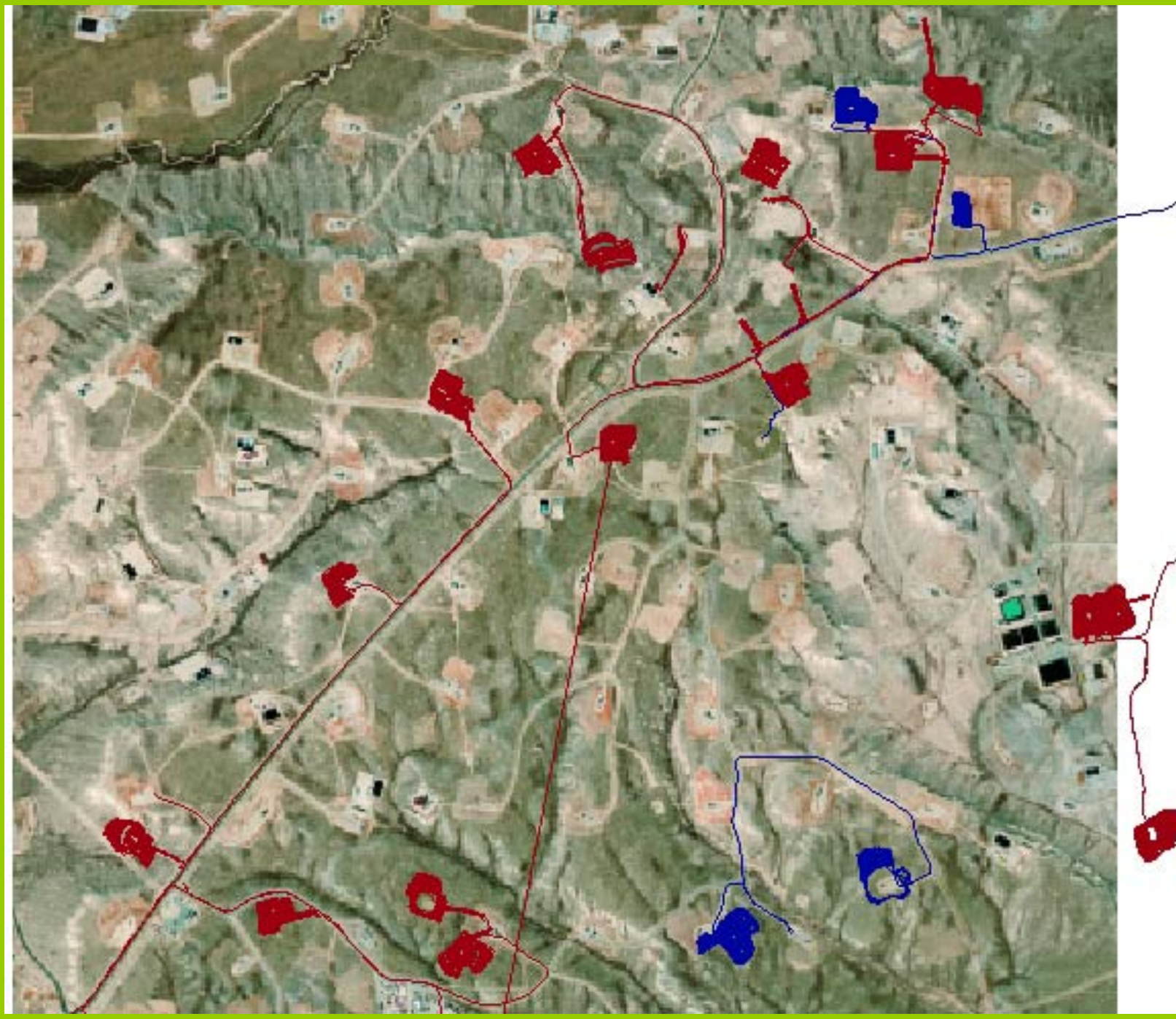




WOGC

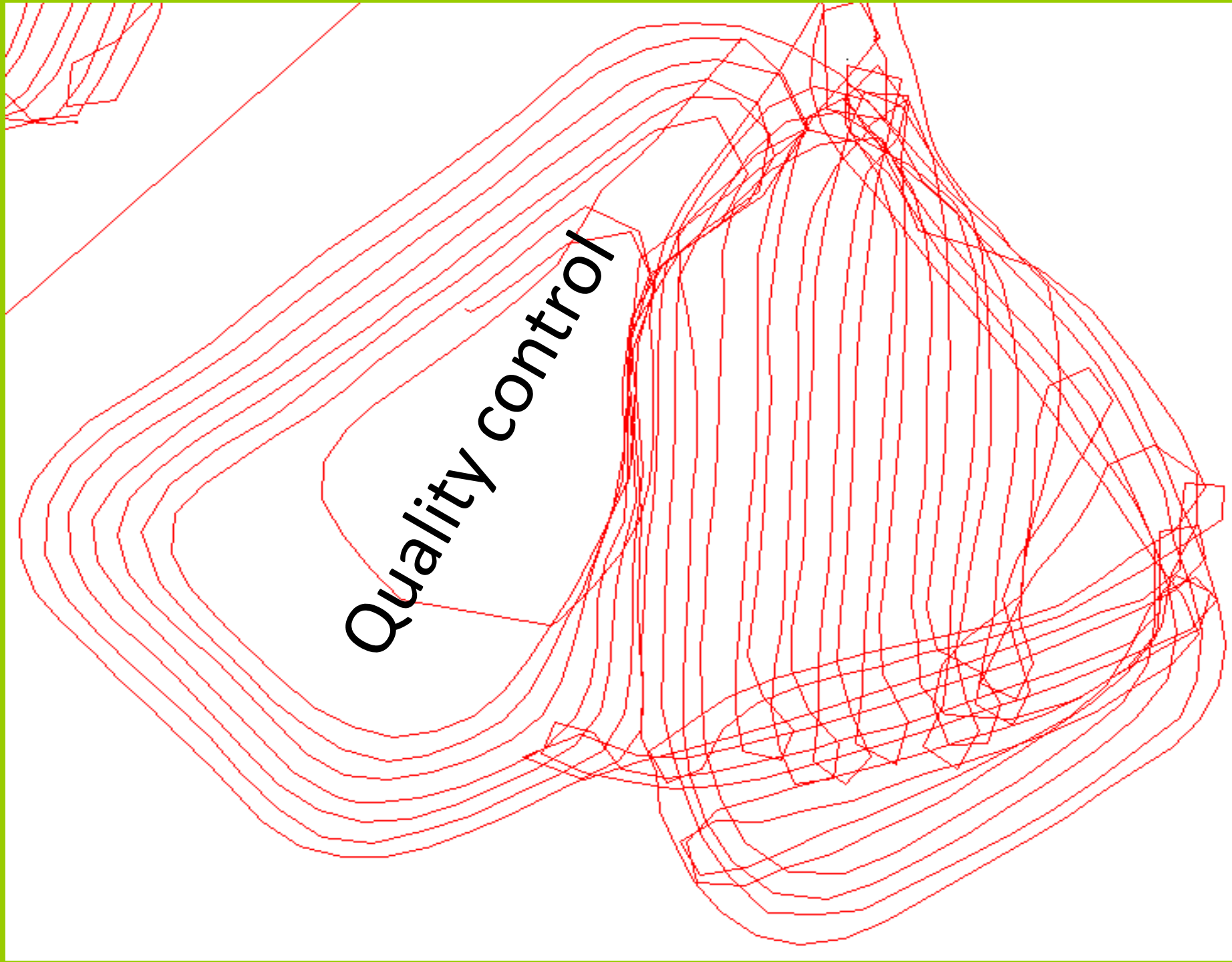


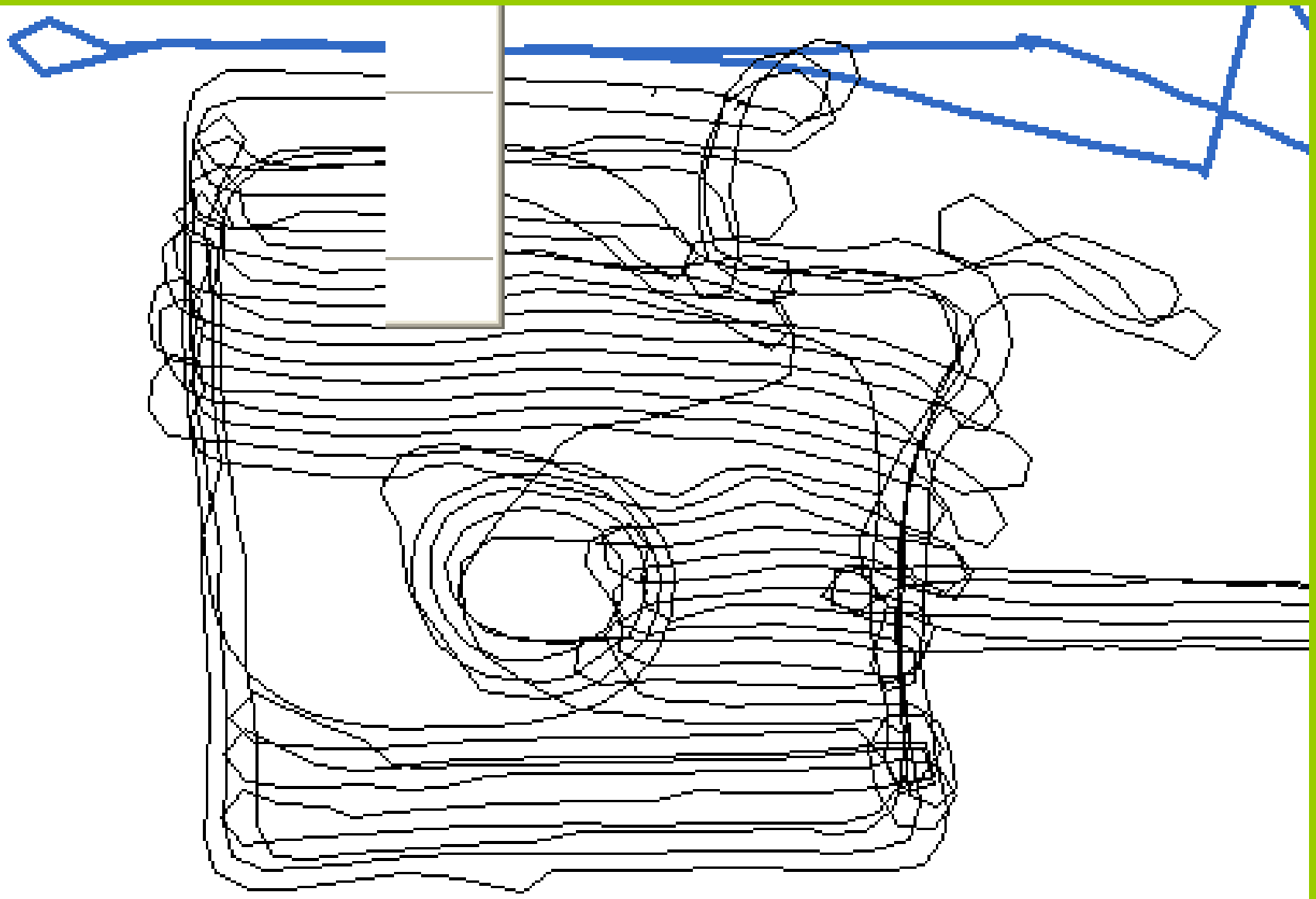
GPS
Overlay



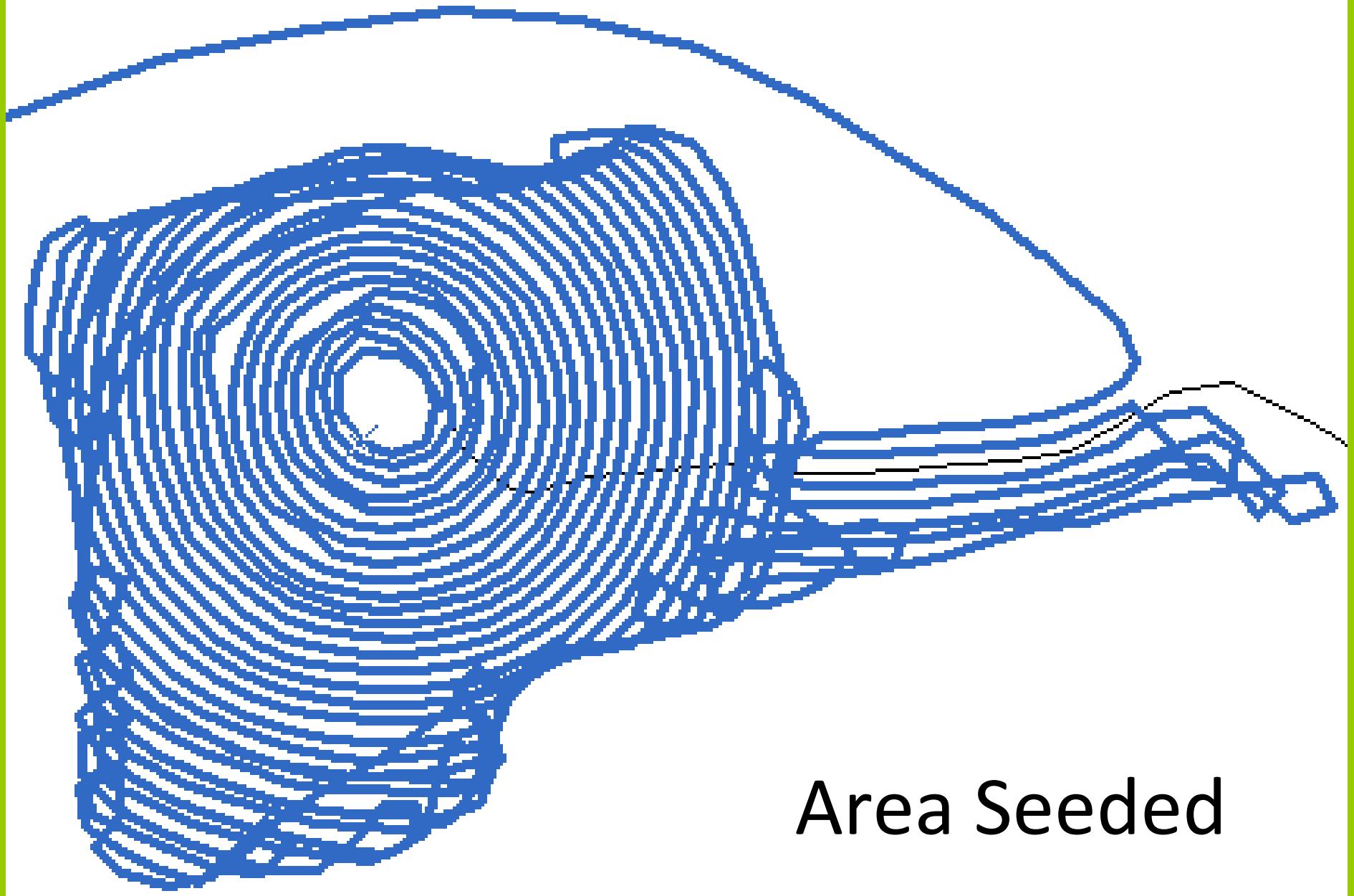
Close up

Quality control

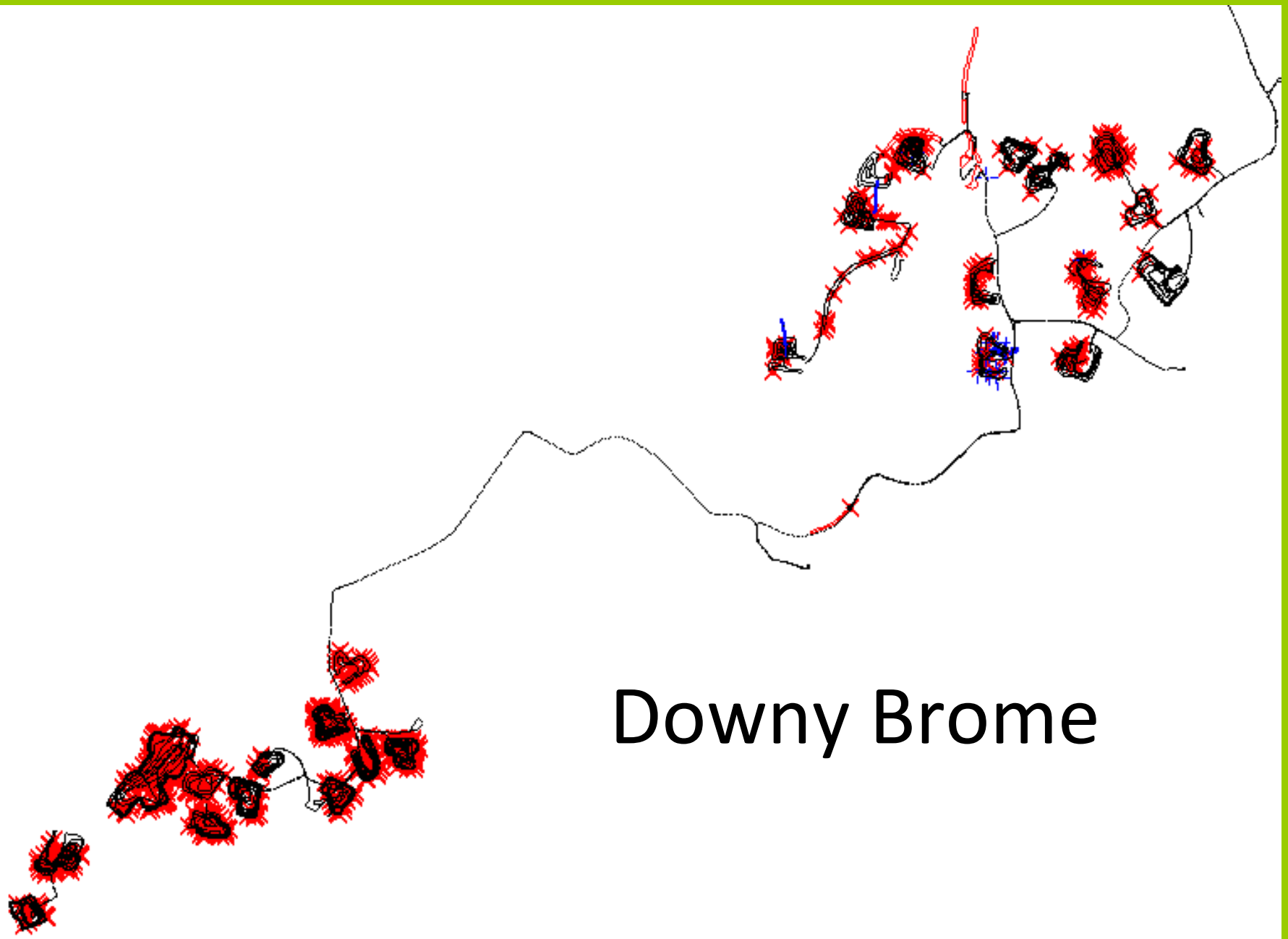


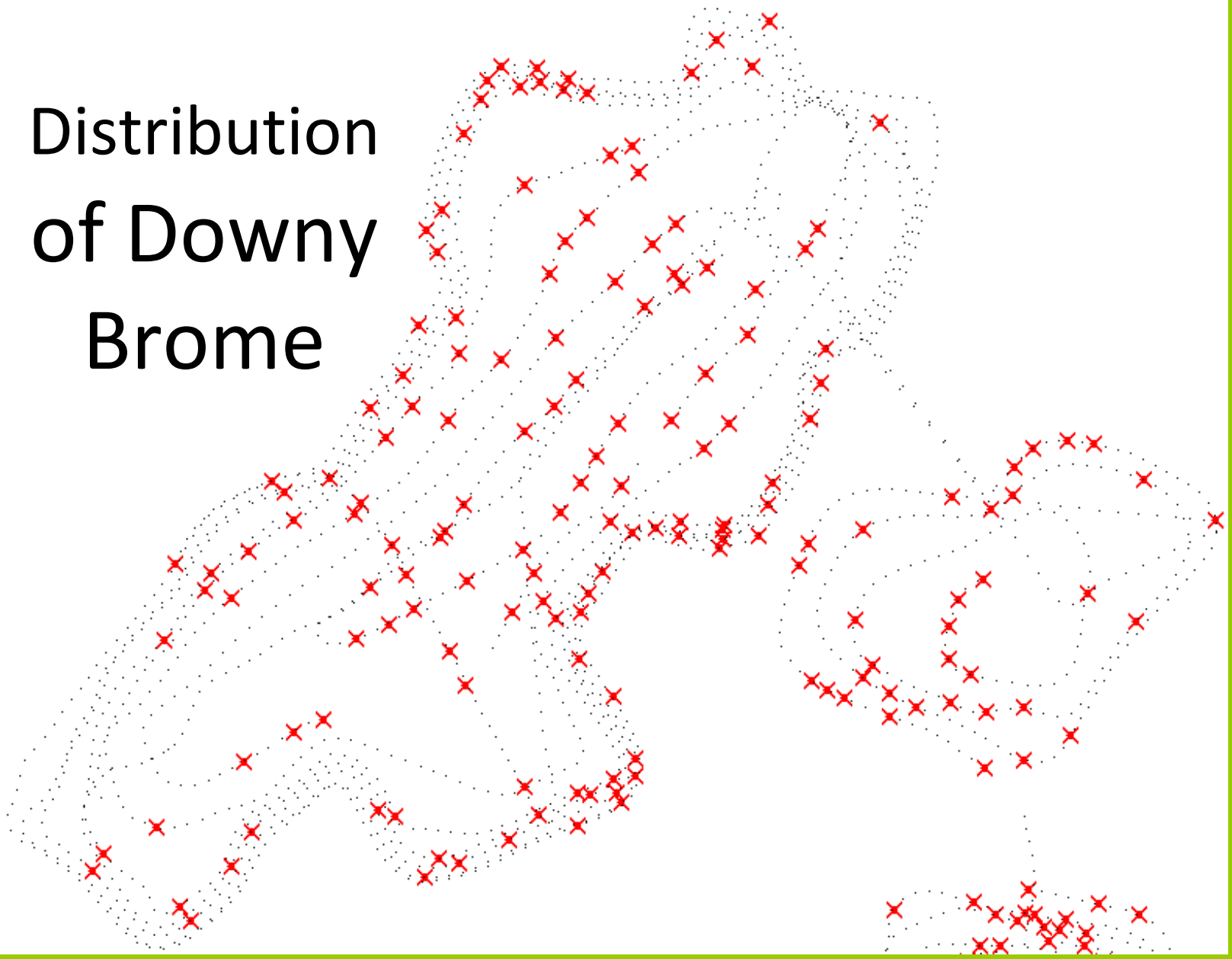


There may be a problem



Area Seeded



Downy Brome

Distribution of Downy Brome