

ELECTRICAL CONDUCTIVITY MAPPING

Correlates the electrical conductivity values and soil properties that impact yield.

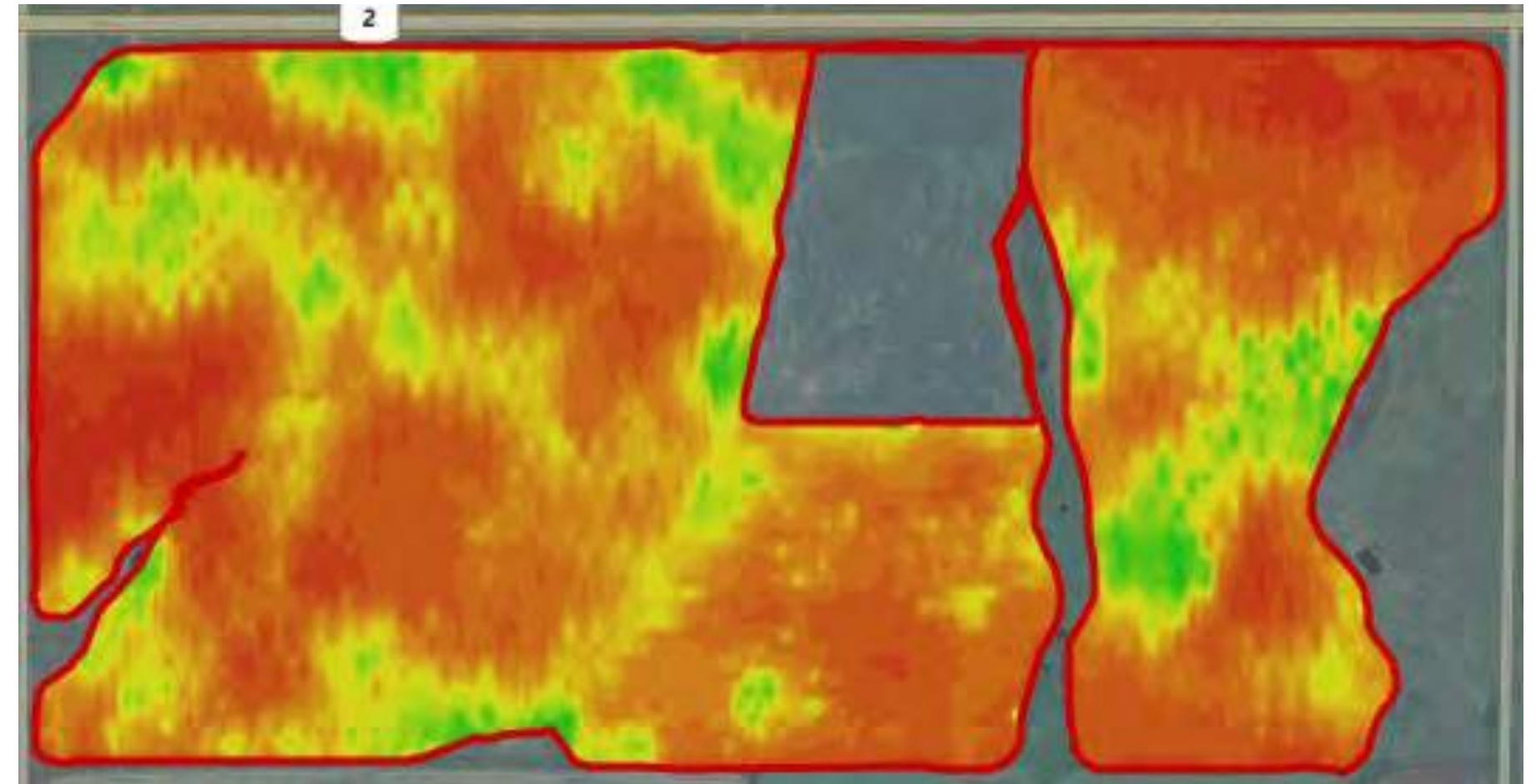
Electrical conductivity (EC) is the ability of a substance to conduct an electrical current. Combined with precision soil sampling, it provides a comprehensive field variability analysis.

Soil properties correlating to EC value:

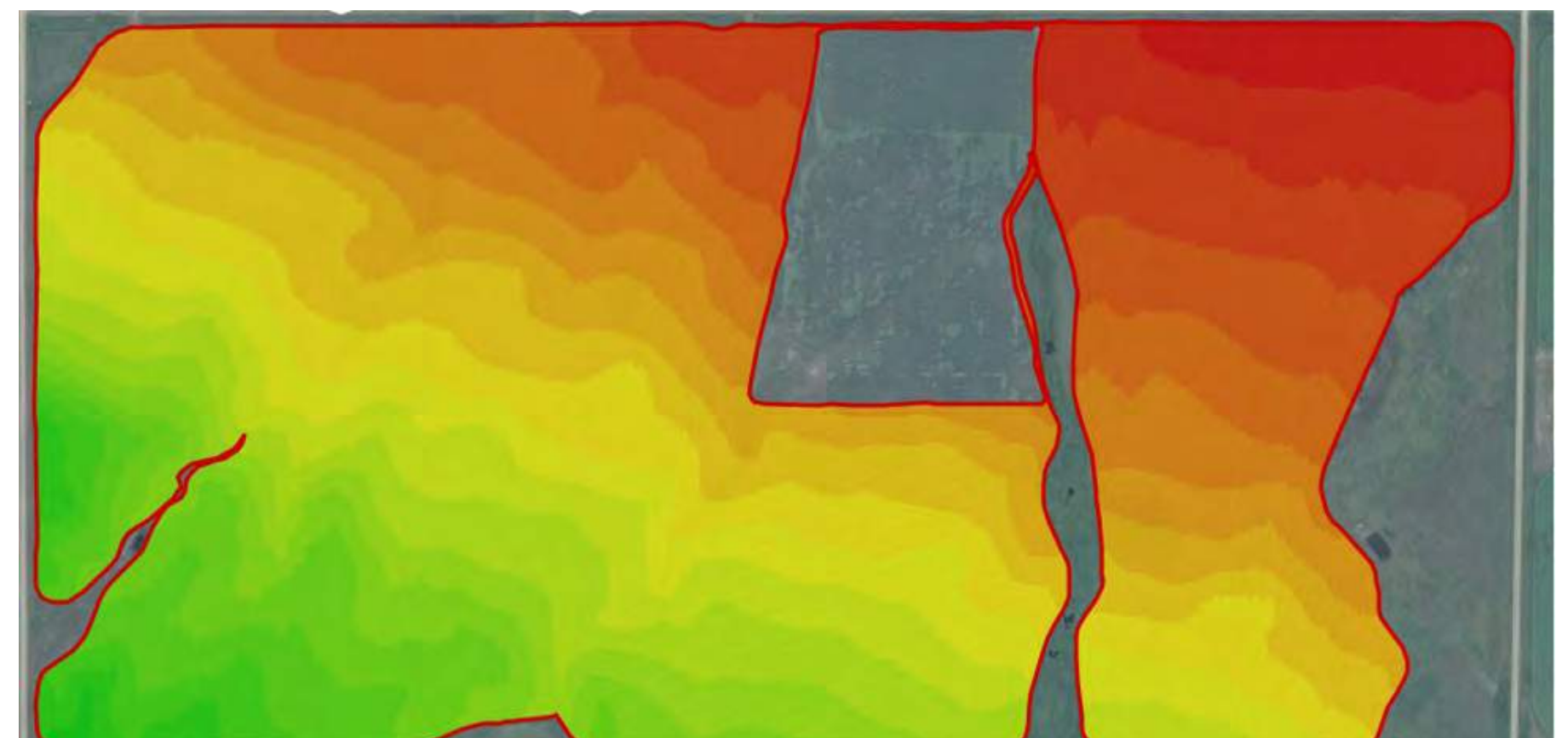
- Soil texture
- Salinity
- Cation exchange capacity (CEC)
- Soil organic matter (SOM)
- Water holding capacity
- Drainage conditions
- Topsoil depth

EC map to create management zones:

- Directed soil sampling
- Variable rate seeding, fertilizer
- Yield map interpretation
- Better placement of field trials
- Soil salinity management



EC Map



Elevation Map



Geonics EM 38



Electrical Conductivity / Elevation Mapping



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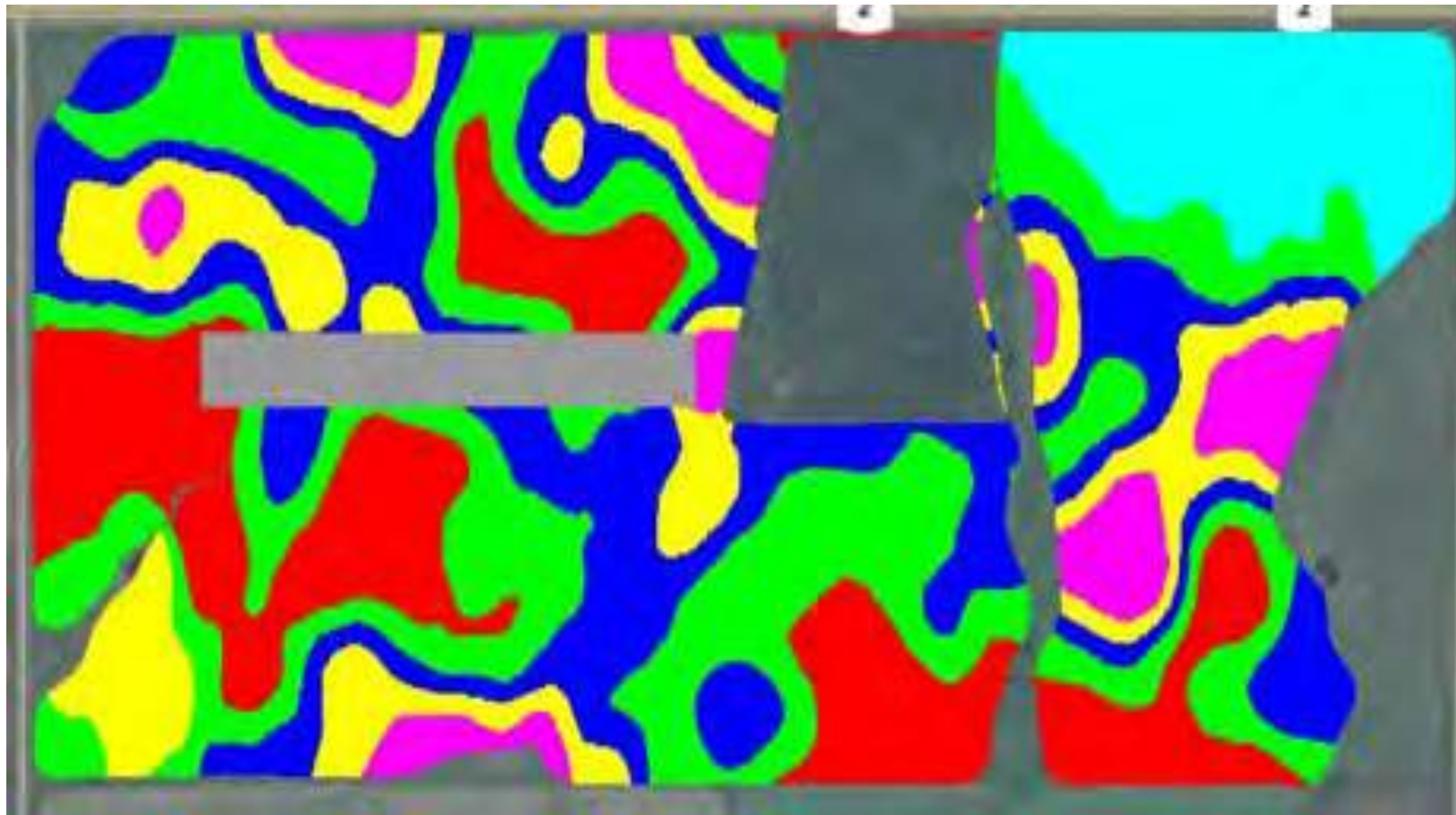


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SMART ZONES

Understanding the carrying characteristics of your soil enables you to maximize your land's potential.



Zones developed utilizing electrical conductivity mapping and precision soil testing.

Zone	Min	Max	Area	Urea	Starter Blend				
1		0.5	46.64 ac	112.0 lbs/ac	5223.7 lbs	\$0.00	92.0 lbs/ac	4290.9 lbs	\$0.00
2	0.5	0.6	68.64 ac	161.0 lbs/ac	11051.0 lbs	\$0.00	123.0 lbs/ac	8442.7 lbs	\$0.00
3	0.6	0.8	55.05ac	54.0 lbs/ac	2972.7 lbs	\$0.00	77.0 lbs/ac	4238.8 lbs	\$0.00
4	0.8	0.9	33.30 ac	21.0 lbs/ac	699.3 lbs	\$0.00	77.0 lbs/ac	2564.1 lbs	\$0.00
5	0.9	0.0	17.65 ac	58.0 lbs/ac	1023.7 lbs	\$0.00	77.0 lbs/ac	1359.0 lbs	\$0.00
6			23.7 ac	182.0 lbs/ac	4253.3 lbs	\$0.00	92.0 lbs/ac	2150.0 lbs	\$0.00
7			10.82 ac	99.0 lb/ac	1071.2 lbs	\$0.00	131.0 lbs/ac	1417.4 lbs	\$0.00
			255.47 ac		26294.9 lbs	\$0.00		24463.1 lbs	\$0.00
				Avg. 102.93 lbs/ac		\$0.00		Avg. 95.76 lbs/ac	\$0.00



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2016 Soil Test Results

Nitrogen				Potassium	
Zone	0 - 6 "	6 - 24"	Total	Zone	0-24"
1	39 lbs	39 lbs	78 lbs	1	225 ppm
2	29 lbs	30 lbs	59 lbs	2	184 ppm
3	42 lbs	57 lbs	99 lbs	3	220 ppm
4	41 lbs	60 lbs	101 lbs	4	194 ppm
5	31 lbs	27 lbs	58 lbs	5	236 ppm
6	31 lbs	21 lbs	52 lbs	6	191 ppm
7	38 lbs	36 lbs	74 lbs	7	179 ppm

Phosphorus		CEC	
Zone	0-24"	Zone	0-24"
1	9	1	25.7
2	9	2	18.9
3	13	3	27.6
4	16	4	31.4
5	23	5	26
6	19	6	19.4
7	7	7	24.9

Soluble Salts			Soil pH		SOM
Zone	0-6"	6-24"	0-6"	6-24"	
1	0.55	0.39	6.9	8.1	5.5%
2	0.34	0.5	6.3	8.0	5.7%
3	0.94	2.59	7.1	7.9	5.3%
4	0.99	2.39	7.4	8.1	4.4%
5	2.23	3.71	6.9	8.2	4.3%
6	0.39	0.37	6.2	7.3	5.9%
7	0.62	2.35	7.2	8.0	5.1%

Soil Test Lab: AgVise Laboratories.



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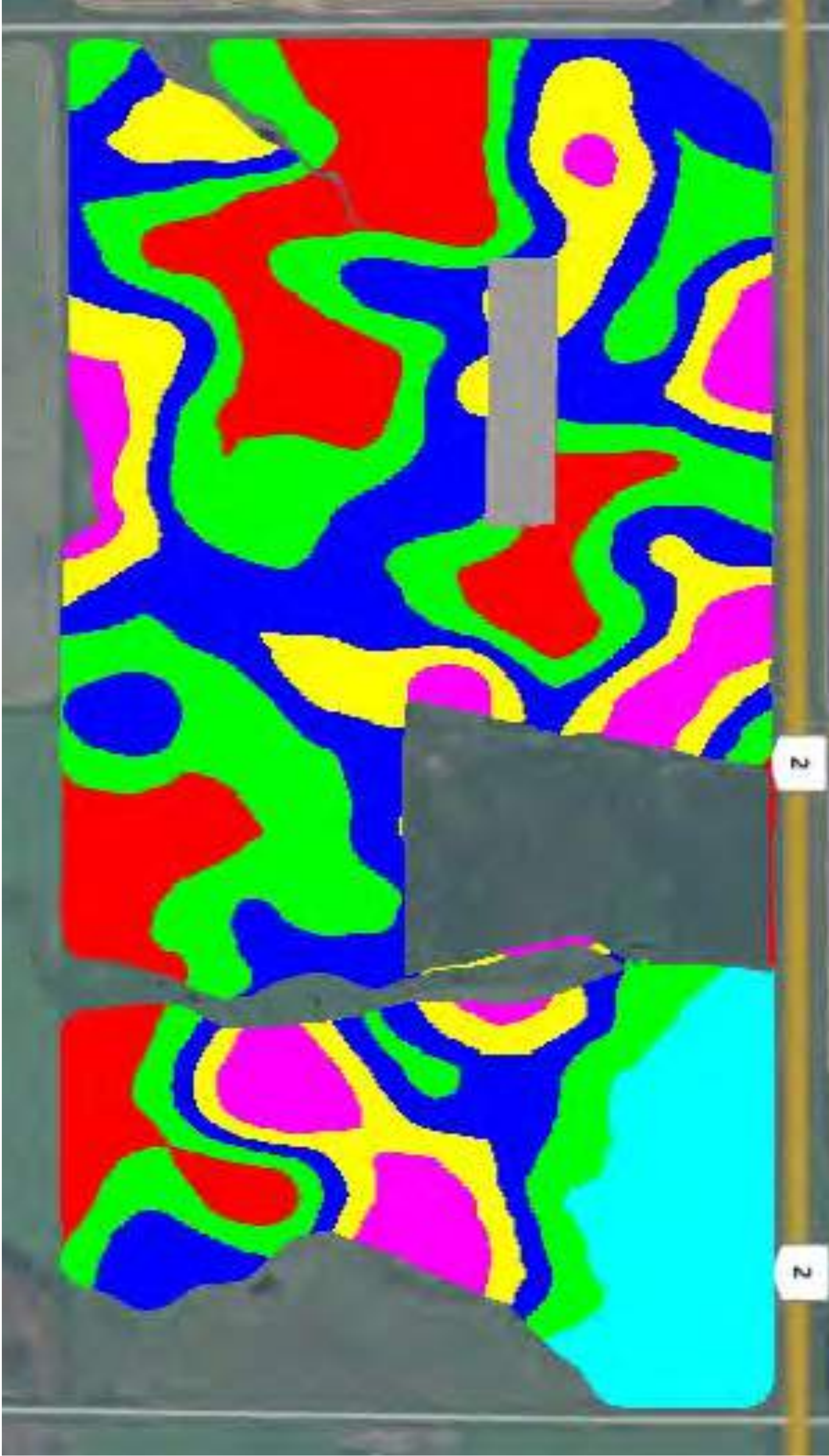


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Zone	
1	<ul style="list-style-type: none"> - Reduced yield potential - Coarser textured soil - High nutrient leaching - Higher risk of drought pressure
2	<ul style="list-style-type: none"> - Higher yield potential - Good SOM - Well drained with moderate water holding capacity
3	<ul style="list-style-type: none"> - Medium yield potential - Higher water holding capacity - increased salinity - Potential for excess moisture issues
4	<ul style="list-style-type: none"> - Low yield potential - High salinity - High potential for excess moisture issues
5	<ul style="list-style-type: none"> - Low yield potential - Very high salinity - High potential for excess moisture
6	<ul style="list-style-type: none"> - Very high salinity - Lowest part of the field, poor drainage
Test Strip	<ul style="list-style-type: none"> - Standard field rate

Zone	Yield Goal
1	137
2	143
3	130
4	117
5	91
6	143
Test Strip	130



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SMART DATA

The most advanced program of collecting, storing and accessing farm collected data.

Equipment, Technology & Agronomy:

Seed Placement:

Oats:

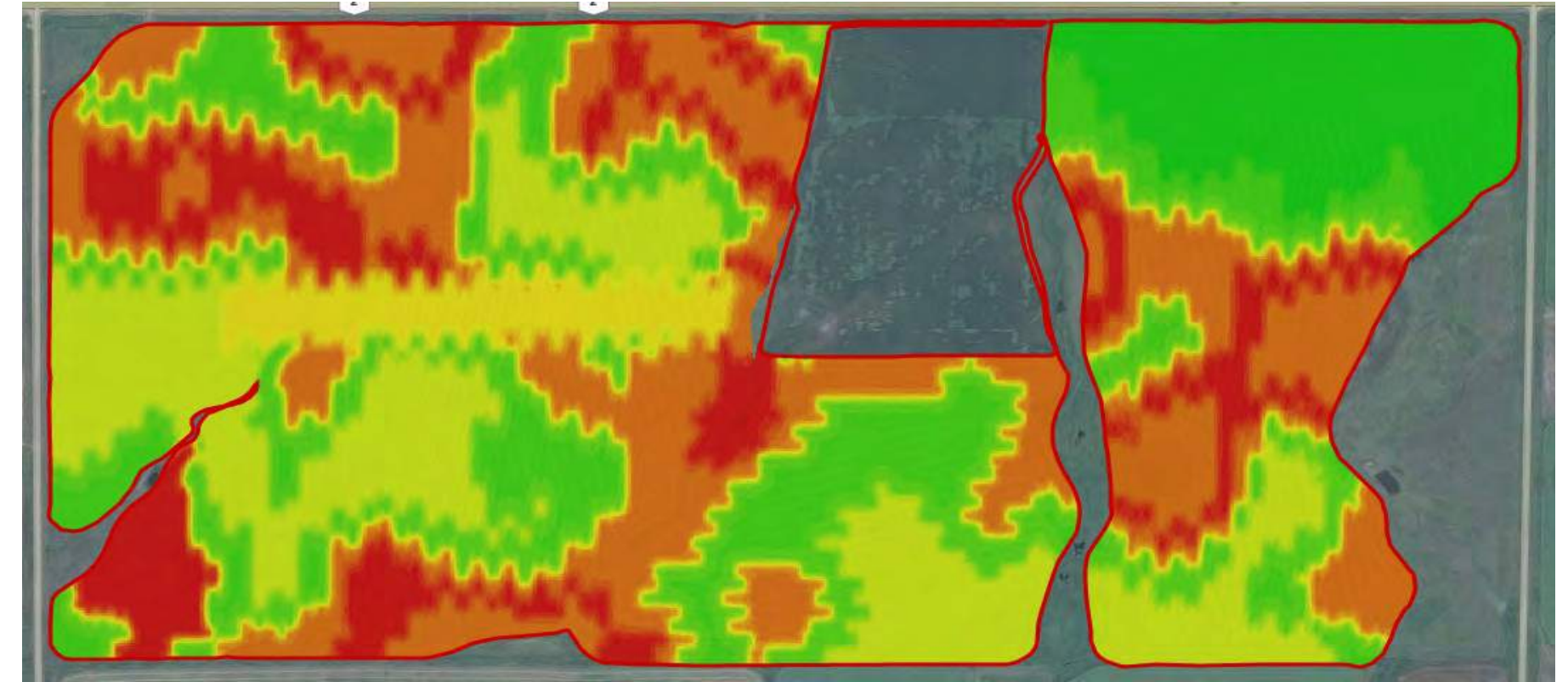
- Variety: Souris
- Average rate: 97 lbs/acre

Fertilizer Placement:

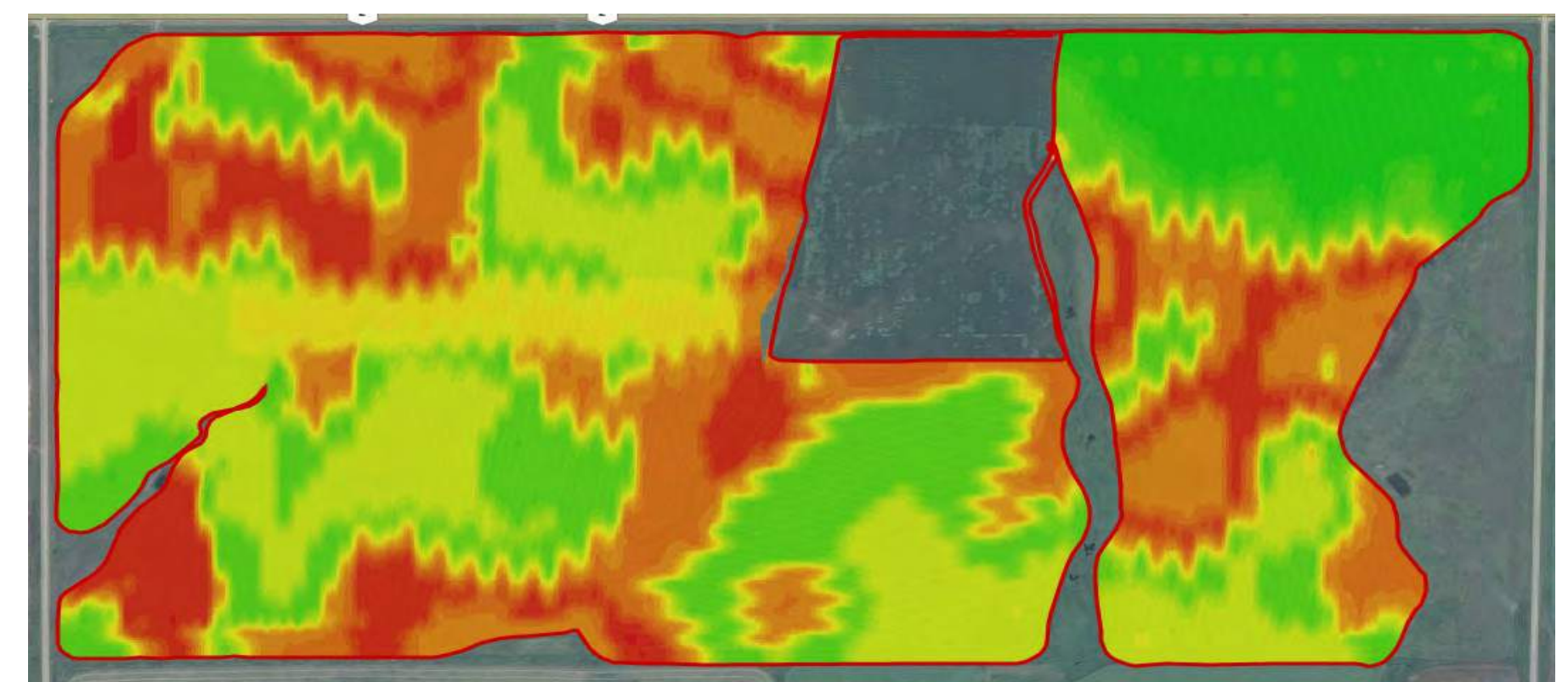
- Variable rate Urea 46-0-0 @ 93-240 lbs/ac

Equipment/Technology:

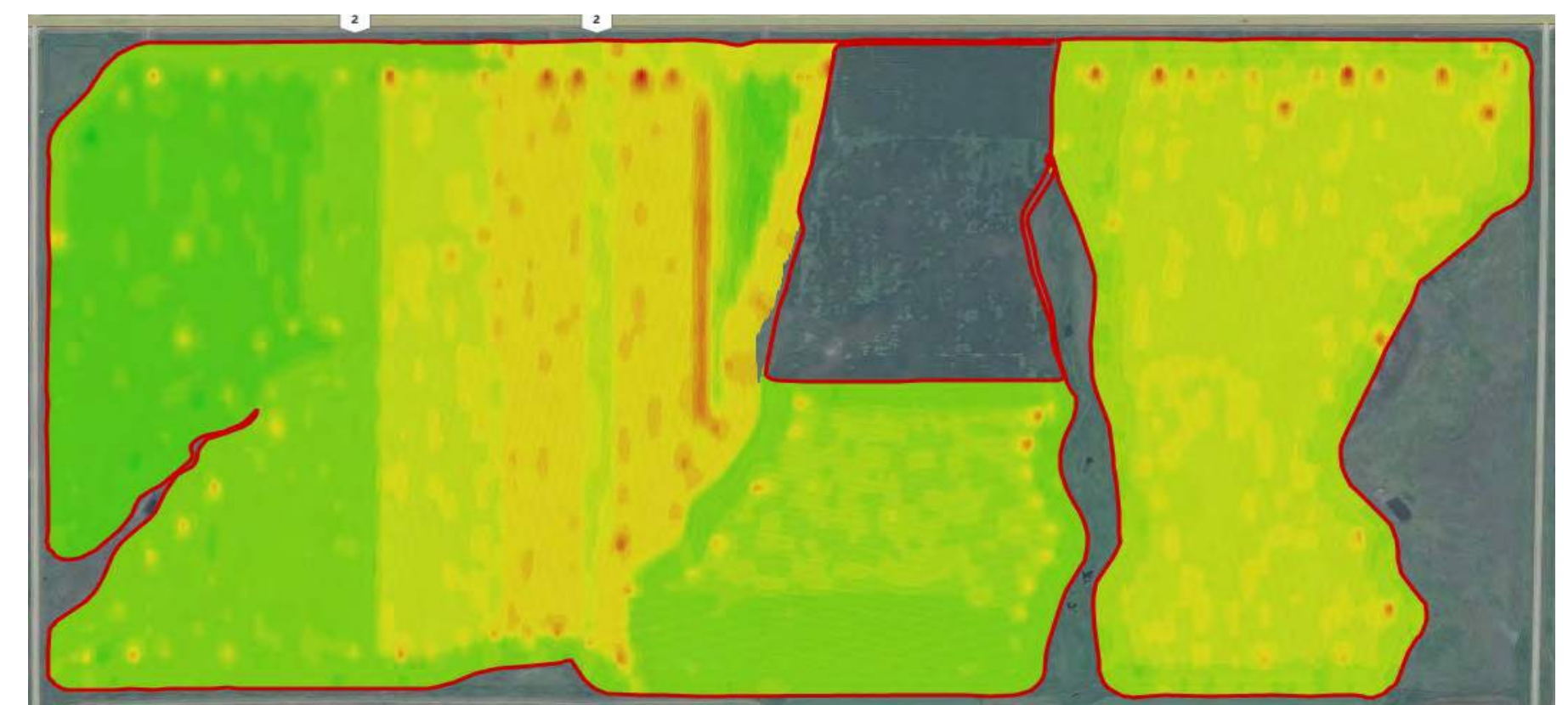
- John Deere 1870 air seeder Conserva Pak
- John Deere 9410R tractor
- John Deere RTK-inter row seeding
- Field Smart variable rate fertility
- Field Smart electrical conductivity mapping



As Applied Target Rate Map



As Applied Actual Rate Map



As Planted Map



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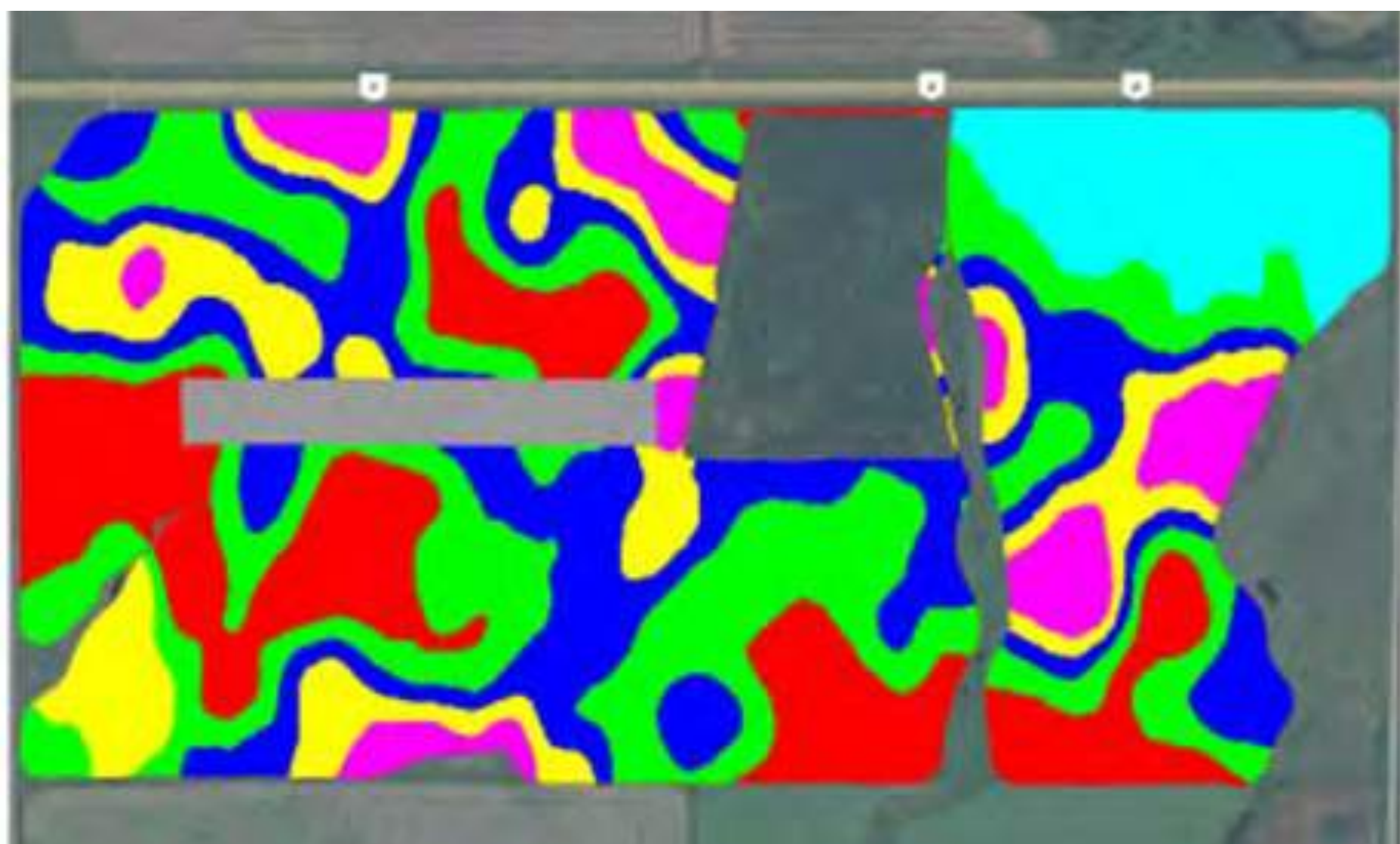


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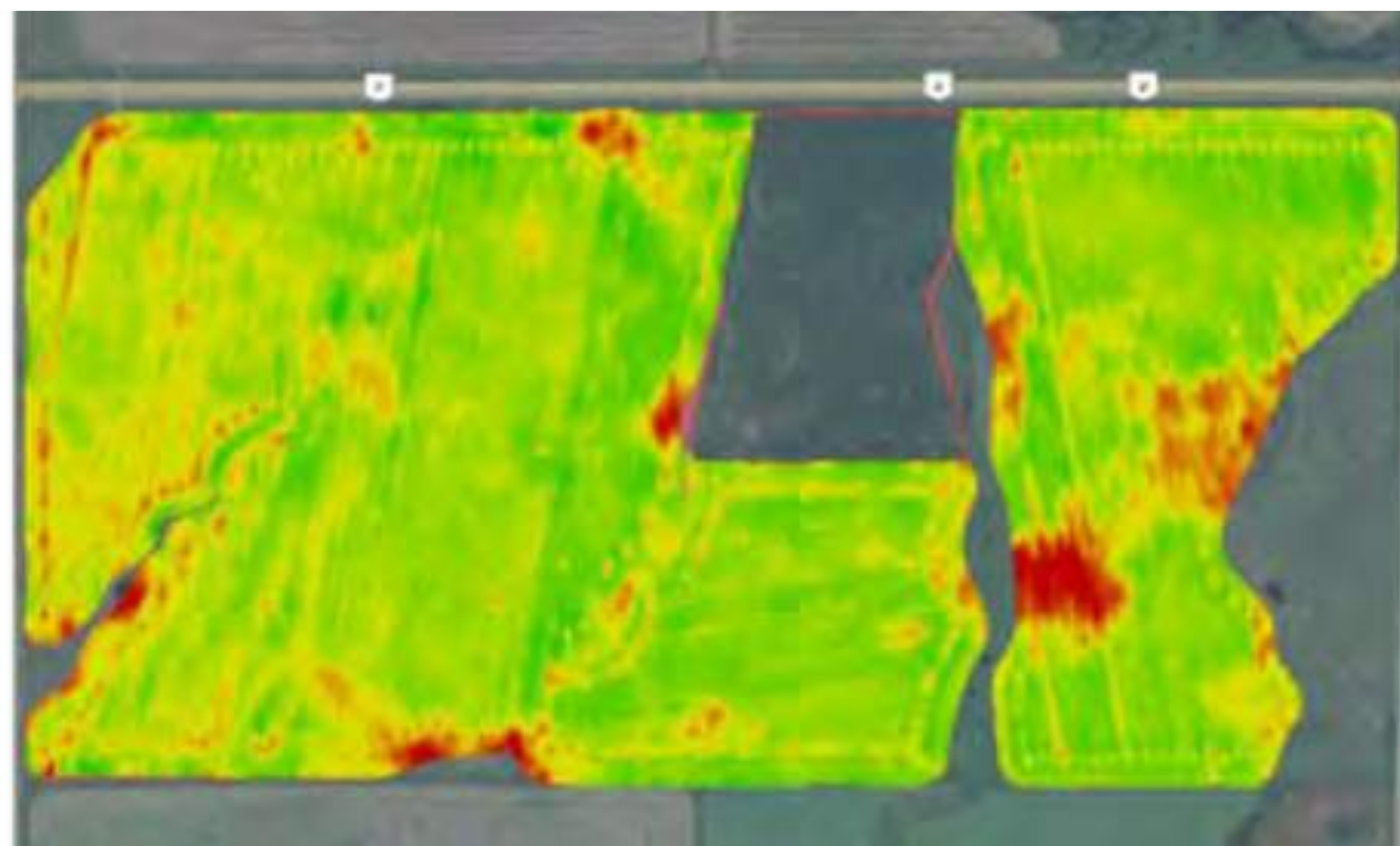


SMART DATA

The most advanced program of collecting, storing and accessing farm collected data.



Zone Map



Yield Map

Zone	Range	Data	Avg Yield	Harvest Acres	Area
1	Min- 0.5	112,92	57.73 bu/ac	45.68 ac	46.64 ac
2	0.5-0.6	161,123	59.55 bu/ac	67.84 ac	68.64 ac
3	0.6-0.8	54,77	56.73 bu/ac	54.82 bu	55.05 ac
4	0.8-0.9	21,77	50.20 bu/ac	32.45 ac	33.30 ac
5	0.9-max	58,77	35.22 bu/ac	16.51 ac	17.65 ac
6	Min-max	189,92	60.87 bu/ac	22.68 ac	23.37 ac
7	Min-max	92,131	56.61 bu/ac	10.92 ac	10.82 ac



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OPTIMIZEPRO

Capitalize on your investment in equipment, technology and precision agriculture.



John Deere 9410R with 1910 commodity cart and 1870 air drill with Conserva Pak opener



John Deere RTK: accuracy for inter-row seeding



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