Exploration & Production Waste Management Plan
Land Application & Incorporation of Water-Based Bentonitic Drilling Fluids
& Associated Drill Cuttings
Bayswater Exploration & Production, LLC

Subject Property: Cockroft Farms
Facility ID: 441086
SE ¼, NE ¼, Sec 19, T5N, R63W
Weld County Road 388
Weld County, Kersey, Colorado

This Exploration & Production (E&P) Waste Management Plan outlines the operational requirements for applying water-based bentonitic drilling fluids and associated drill cuttings to privately owned agricultural land to maintain compliance with COGCC Rule 907.d. (3). Only water-based bentonitic drilling fluids and associated drill cuttings generated by Bayswater Exploration & Production, LLC are covered by this plan. The drilling fluids and drill cuttings will be applied to the agricultural cropland and adjacent non-crop land as a beneficial soil amendment and as a conservation method to prevent soil erosion. A topographic map showing the site location is provided as Figure 1. An aerial photograph showing the location of the proposed land application site is provided as Figure 2. The E&P Waste Management Plan is outlined as follows:

1. Bayswater Exploration & Production, LLC will certify this plan by signing said plan and certifying compliance with the contents of this plan (Attachment A).

2. Bayswater Exploration & Production, LLC shall obtain written authorization from the surface owner prior to land application of the water-based bentonitic drilling fluids and associated drill cuttings (Attachment B). The property located at Latitude: 40.386875, Longitude: -104.470968 is used for dry land agriculture with some irrigated cropland.

3. The agreement certifies that only water-based bentonitic drilling fluids and associated drill cuttings will be applied at this site. There will be three main steps involved in the actual spreading of the drilling fluids and drill cuttings listed here:

    - The cuttings and drill fluids hauled from the drilling rig to the cutting/staging area will first be tilled into/mixed with sandy soil at the staging area to help stabilize the soil. This mixture will then be mixed with manure for compost generated by Cockroft Farms livestock in order to be spread by Cockroft Farms personnel (section B, Figure 2). No other E&P waste shall be deposited at this site.

- All water based bentonitic drilling fluids generated from drilling operations will be hauled from the rig to the liquid spread area where it is spread in an east to west orientation to promote drying (section A, Figure 2).

- After the compost and liquids are deemed dry enough by the farmer, the materials will periodically be spread across sections A, B, & C (Figure 2).

4. Water based bentonitic fluids and associated drill cuttings will be applied and spread at a minimum distance of approximately 50 feet from each property boundary to provide an adequate buffer between the application site and surrounding properties. The spread areas lie at an elevation of approximately 4630 feet which is approximately 30 feet above the existing cropland immediately to the south.

5. A 3-inch maximum lift of water-based bentonitic drilling fluids and associated drill cuttings will be applied prior to incorporation. The waste shall be applied to prevent ponding or erosion.

6. Bayswater Exploration & Production, LLC performed a database records search for water wells near the spread field. Figure No. 3 indicates there are 12 water wells within one quarter mile of the spread area and approximate depth to water is six to eight feet. Due to the static water level and the physical locations of the water wells in the area there is minimal chance for impacts to the groundwater from spreading activities.

7. Based on research conducted using the COGCC GIS Online map it was determined the site is not in a mapped Sensitive Wildlife Habitat Area or a Restricted Surface Occupancy Area (Figure 4).

8. High visibility pink colored retro-reflective tape and numerous large wooden stakes marked with the operator's identification placed along the transport route and at the spread areas will serve to notify the public and prevent unauthorized dumping or access.

9. Bayswater Exploration & Production, LLC personnel, in conjunction with Kinetic Energy Resources, LLC will ensure that the material is incorporated into the soil within 10 days, unless adverse weather conditions are encountered or after the crops have been harvested (site and weather conditions permitting). The cuttings will be staged on a small parcel of land located on the northeast corner of the Cockroft property pending appropriate agricultural and weather conditions. Furthermore, if the cuttings freeze there will need to be a minimum of 20 consecutive days of above freezing temperatures before the cuttings can be spread. Every reasonable effort will be made to comply with the 10 day policy.

10. Bayswater Exploration & Production, LLC will maintain records of the following information:
    - Name of the well where material was generated.
    - Date the material was transferred from the well to the land application site.
    - Volume of the material taken to the land application site (anticipating approximately 37,500 yards/47,000 tons of soil cuttings & approximately 9,000 BBLs of drilling mud per year)
    - Name of the transporter.

11. Soil sampling:
    - Baseline soil samples will be collected by Kinetic Energy Services, LLC personnel and analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), inorganic analyses including electrical conductivity (EC), sodium adsorption ratio (SAR), and pH, and analyses of COGCC Table 910-1 priority metals.
    - The composite baseline soil sample collected on March 11, 2015 by Kinetic Energy Services, LLC revealed that the spread area is not considered a sensitive area as the analyses shows all parameters within acceptable limits according to COGCC Table 910-1 (Attachment C).
    - Following incorporation of the drilling mud, representative soil sample(s) will be collected by Kinetic Energy Services, LLCLLC personnel from an interval of 0-12 inches below ground surface (bgs). The number of samples collected will depend on the surface acreage used for incorporation.
    - At a minimum, post incorporation soil samples will be analyzed for TEPH-TVPH, BTEX, EC, SAR, pH, and Table 910-1 priority metals to ensure compliance with COGCC Table 910-1.

- In addition to the baseline soil sampling, Kinetic Energy Services, LLC will provide annual soil sampling and any supplementary soil maintenance on an as-needed basis and ensure that the land application site is compliant per COGCC regulations.

12. Water-based bentonitic drilling fluids and associated drill cuttings will be applied at this site for a maximum period of three years.

13. Upon closure of the site, Bayswater Exploration & Production, LLC or Kinetic Energy Services, LLC will submit Form 4 Sundry Notice providing final confirmation soil sample(s) data and request closure for this site.

Exploration & Production Waste Management Plan
Land Application & Incorporation of Water-Based Bentonitic Drilling Fluids
& Associated Drill Cuttings
Bayswater Exploration & Production, LLC

ATTACHMENT A

PLAN CERTIFICATION

Management Approval Statement:

This Exploration & Production (E&P) Waste Management Plan is fully supported by the management of Bayswater Exploration & Production, LLC . Bayswater Exploration & Production, LLC is committed to the protection of surficial and subsurface environments, waters of the State, and public health, and maintains the highest standards for tracking drilling fluid applications, site subsurface monitoring, sampling and compliance with Colorado Oil and Gas Conservation Commission (COGCC) regulations. Bayswater Exploration & Production, LLC ensures that E&P waste is properly stored, handled, transported, treated, recycled or disposed of to prevent threatened or actual adverse environmental impacts to air, water, soil or biological resources or to the extent necessary to comply with the concentration levels outlined in COGCC Table 910-1.

Bayswater Exploration & Production, LLC will implement this Plan at the referenced facility and will provide the means necessary to control impact to the environment as a result of the application of water based bentonitic drilling fluids and associated drilling cuttings as surficial soil amendments.

_____ Date: 3/19/15

Bayswater Exploration & Production, LLC owner or authorized agent Signature

MARK E. BROWN

Printed Name

ATTACHMENT B

SURFACE OWNER APPROVAL

PLSS Location:SE ¼, NE ¼, Sec. 19, T5N, R63W

Address:___30907 CR 388, Kersey, CO_____

The owner or authorized agent of the referenced property located in the _____ SE ¼, NE ¼, Sec. 19, T5N, R63W _____, Colorado, onto which ___Bayswater Exploration & Production_____ proposes to apply water based bentonitic drilling fluids and associated drill cuttings, authorizes the application of the drilling fluids onto the referenced property. The surface owner is fully aware and understands COGCC land application requirements as outlined in this plan, and formally stated in COGCC Regulation 907 d. (3) B. The property owner hereby authorizes _____Kinetic Hydrovac_____ to commence land treatment applications on said property until subsequent written agreement has been completed terminating this authorization.

Scott R. Cockroft Date: 3-12-2015

Property owner or authorized agent Signature

Scott R. Cockroft

Property owner Printed Name

Scanned by CamScanner

ATTACHMENT C: BASLINE SOIL SAMPLING ANALYTICAL RESULTS

Test Report

eANALYTICS

LABORATORY

March 13, 2015

Client:	CGRS
Project:	Bayswater / Cockroft
Lab ID:	3061
Date Samples Received:	3/11/2015
Number of Samples:	1
Sample Condition:	Samples arrived intact and in appropriate sample containers
Sample Temperature:	Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

Christopher Dieken
Quality Assurance Manager

Todd Rhea
Laboratory Manager

Chain of Custody

eANALYTICS LABORATORY

Chain of Custody Form

eANALYTICS LABORATORY

1767 Rocky Mountain Avenue Loveland CO 80538 | Phone: (970) 667-6975 | Fax: (970) 669-0941 | www.eAnalyticsLab.com

CLIENT INFORMATION
(*New Clients please fill out completely)

Company: Kinetic Hydrovac
Project: Bayswater/Cockroft
Project Manager: Ken CGRS
Sampler: Shad Martin
Phone/Email: 7205521221
Address:

ANALYSIS INFORMATION
(Select analysis by checking box on corresponding sample line)

Lab ID	Sample Name	Sampling Date/Time	Number of Containers	Matrix(S) Soil (W) Water (V) Vapor (O) Other	BTEX / ~~TPHG~~ / TVPH (EPA 8260)	TEPH (EPA 8015)	Vapor BTEX / TVPH (EPA TO-14)	Full VOC (EPA 8260)	Semi-Volatiles (Full List / PAH's)	TRPH / Oil & Grease	RCRA 8 Metals (Total / TCLP / Dissolved)	React. / Ignit. / Corrosivity / Paint Filter	pH / ~~TDS~~ ~~TPS~~	Metals (Specify)	PCBs / Pesticides / Herbicides	Anions (Specify)	Other Analysis
1	Cockroft Composite	3-11-15 1130 AM/PM	1		✓	✓	✓						✓				EDB 8260 1,2-DCA 8260 Naphthalene

Comments:

Turnaround Time (Business Days)
TAT begins when sample is received by eANALYTICS
- ○ Normal (5-10 Days)
- ○ 3 Day (25%)
- ○ 2 Day (50%)
- ○ 1 Day (100%)
- ○ Same Day (300%)

Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.

Colorado OPS Project : Yes / No

For eANALYTICS Use

Samples Received Intact: (Yes) / No
Received Within Temperature Range (2-6°C): (Yes) / No
Sample Preservative: Ice / None / Acid / Other

Record of Custody

Relinquished by: Date
Company: Time
Received by: Date
Company: Time
Relinquished by: Date
Company: Time
Received by: Date 3/11/15
Company: eANALYTICS Time 1:24

WO # 30601

eANALYTICS: Environmental testing made Easy

Page ___ of ___

eANALYTICS
LABORATORY

Client:	CGRS	Lab ID:	3061
Project:	Bayswater / Cockroft		
Analysis:	Volatile Organics TPH	Method:	EPA8260 EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TVPH	TEPH	Date Sampled	Date Analyzed	Lab ID	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
Cockroft Composite	<0.01	<0.01	<0.01	<0.01	<0.50	<10.0	03/11/15	03/12/15	3061	1

Soil
Sample Analysis

eANALYTICS
LABORATORY

Client:	CGRS	Lab ID:	3061
Project:	Bayswater / Cockroft		
Analysis:	pH EC SAR	Method:	EPA9045D USDA 60 (3) USDA 60 (20B)

Sample Name	pH	EC	SAR	Date Sampled	Date Analyzed	Lab ID	
	su	mmhos/cm	ratio				
Cockroft Composite	**6.6**	**1.02**	**1.26**	03/11/15	03/13/15	3061	1

eANALYTICS
LABORATORY

Client:	CGRS	Lab ID:	3061
Project:	Bayswater / Cockroft		
Analysis:	Table 910 metals	Method:	EPA6010/7196/7471

Sample Name	As mg/kg	Ba mg/kg	B (Hot Water Soluble) mg/L	Cd mg/kg	Cr (III) mg/kg	Cr (VI) mg/kg	Cu mg/kg	Pb mg/kg	Date Sampled	Date Analyzed	Lab ID	
Cockroft Composite	**1.47**	**34.0**	< 1.20	< 0.50	**1.06**	< 15	**2.29**	**2.51**	03/11/15	03/13/15	3061	1

Soil
Sample Analysis

eANALYTICS LABORATORY

Client:	CGRS	Lab ID:	3061
Project:	Bayswater / Cockroft		
Analysis:	Table 910 metals	Method:	EPA6010/7196/7471

Sample Name	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Zn mg/kg	Date Sampled	Date Analyzed	Lab ID	
Cockroft Composite	< 5.0	**1.38**	< 5.0	< 0.50	**8.13**	03/11/15	03/13/15	3061	1

Soil
Quality Control - Surrogate Recoveries

eANALYTICS
LABORATORY

Client: CGRS Lab ID: 3061

Project: Bayswater / Cockroft Method: EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID	
Cockroft Composite	99	104	101	109	03/11/15	03/12/15	3061	1

Soil
Quality Control - Analyses

eANALYTICS LABORATORY

Client:	CGRS	Lab ID:	3061
Project:	Bayswater / Cockroft		
Analysis:	Volatile Organics TPH	Method:	EPA8260 EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TVPH	TEPH	Date Analyzed	Lab ID
	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec		
Laboratory Control Sample	92	97	95	94	92	97	03/12/15	LCS 3061 1
(70-130%)								
Method Blank	< 0.01	< 0.01	< 0.01	< 0.01	< 0.50	< 10.0	03/12/15	MB 3061 1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		

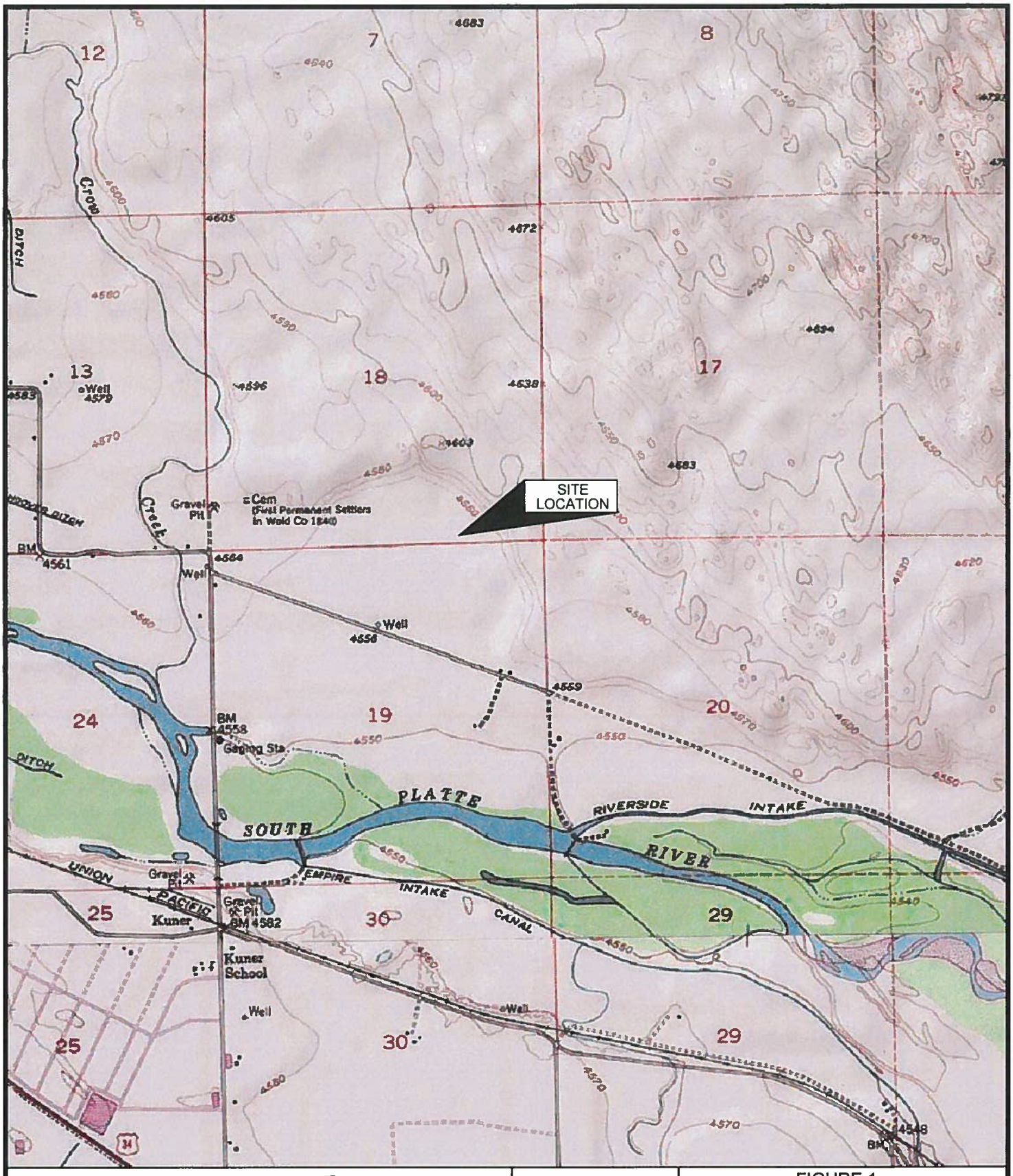
ATTACHMENT D: COGCC TABLE 910-1

Table 910-1 CONCENTRATION LEVELS

Contaminant of Concern	Concentrations
Organic Compounds in Soil	
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg
Benzene	0.17 mg/kg2
Toluene	85 mg/kg2
Ethylbenzene	100 mg/kg2
Xylenes (total)	175 mg/kg2
Acenaphthene	1,000 mg/kg2
Anthracene	1,000 mg/kg2
Benz(a)anthracene	0.22 mg/kg2
Benzo(b)fluoranthene	0.22 mg/kg2
Benzo(k)fluoranthene	2.2 mg/kg2
Benzo(a)pyrene	0.022 mg/kg2
Chrysene	22 mg/kg2
Dibenzo(a,h)anthracene	0.022 mg/kg2
Fluoranthene	1,000 mg/kg2
Fluorene	1,000 mg/kg2
Indeno(1,2,3,c,d)pyrene	0.22 mg/kg2
Naphthalene	23 mg/kg2
Pyrene	1,000 mg/kg2

Exploration & Production Waste Management Plan
Land Application & Incorporation of Water-Based Bentonitic Drilling Fluids
& Associated Drill Cuttings
Bayswater Exploration & Production, LLC

FIGURES AND TABLES



COLORADO

■ QUADRANGLE LOCATION

NORTH

0 1000 2000

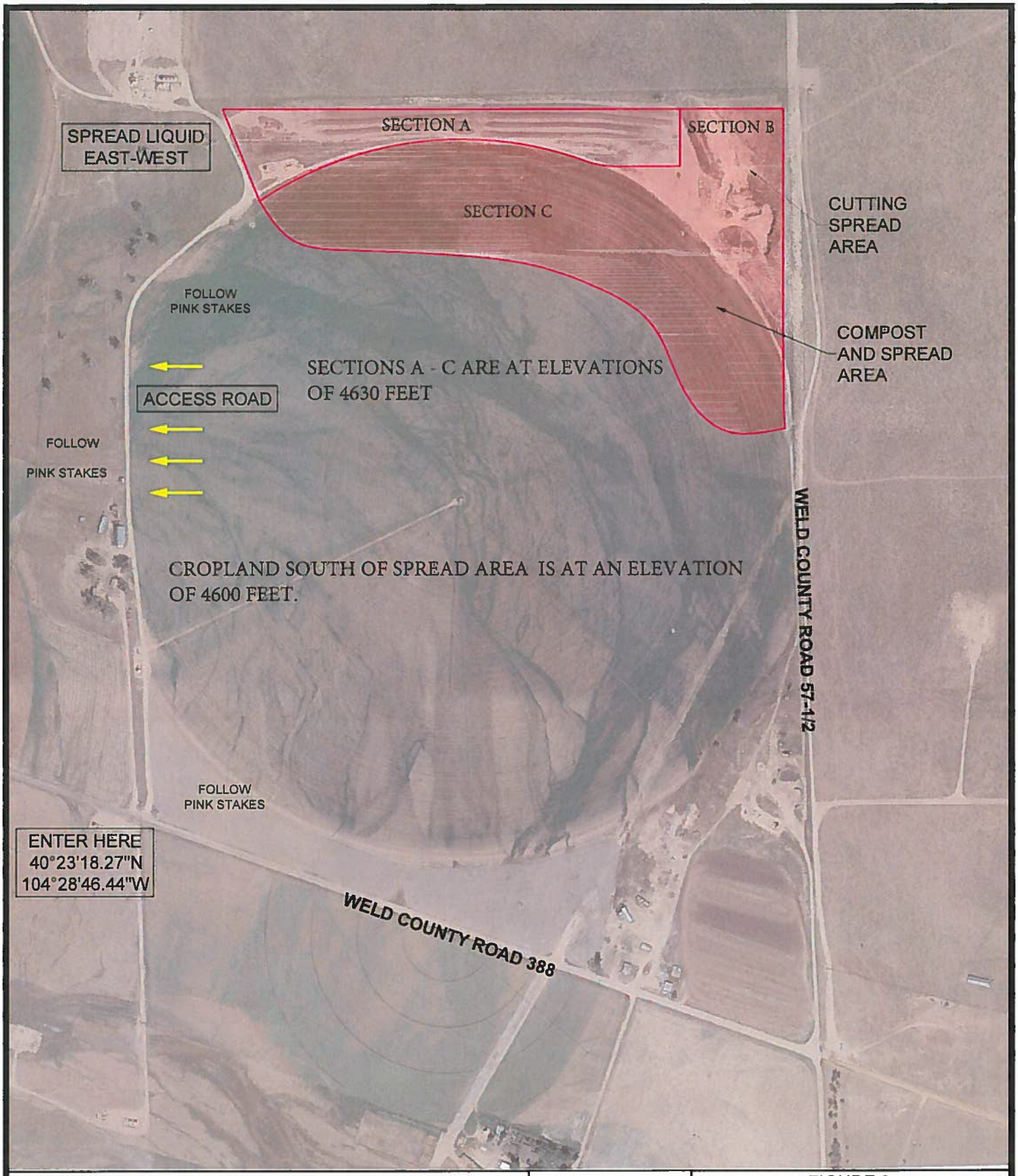
SCALE IN FEET

FIGURE 1
SITE LOCATION MAP

BAYSWATER EXPLORATION & PRODUCTION
COCKROFT LAND APPLICATION SITE
SE 1/4, NE 1/4, Sec. 19, 5N, 63W KERSEY, COLORADO

PROJECT:	DRAFT:
1-12556-15117aa	MSP
DATE:	REVIEW:
3/11/2015	

CGRS ENVIRONMENTAL CONSTRUCTION COMPLIANCE



NORTH

0 100 200 300 400 500

SCALE IN FEET

FIGURE 2
SITE CONDITIONS MAP

KINETIC HYDROVAC
COCKROFT LAND APPLICATION SITE
SE 1/4, NE 1/4, Sec. 19, 5N, 63W
KERSEY, COLORADO

PROJECT:	DRAFT:
1-12556-15117aa	DRS
DATE:	REVIEW:
3/16/2015	

CGRS ENVIRONMENTAL CONSTRUCTION COMPLIANCE

Cockroft Farms Spread Field DWR wells

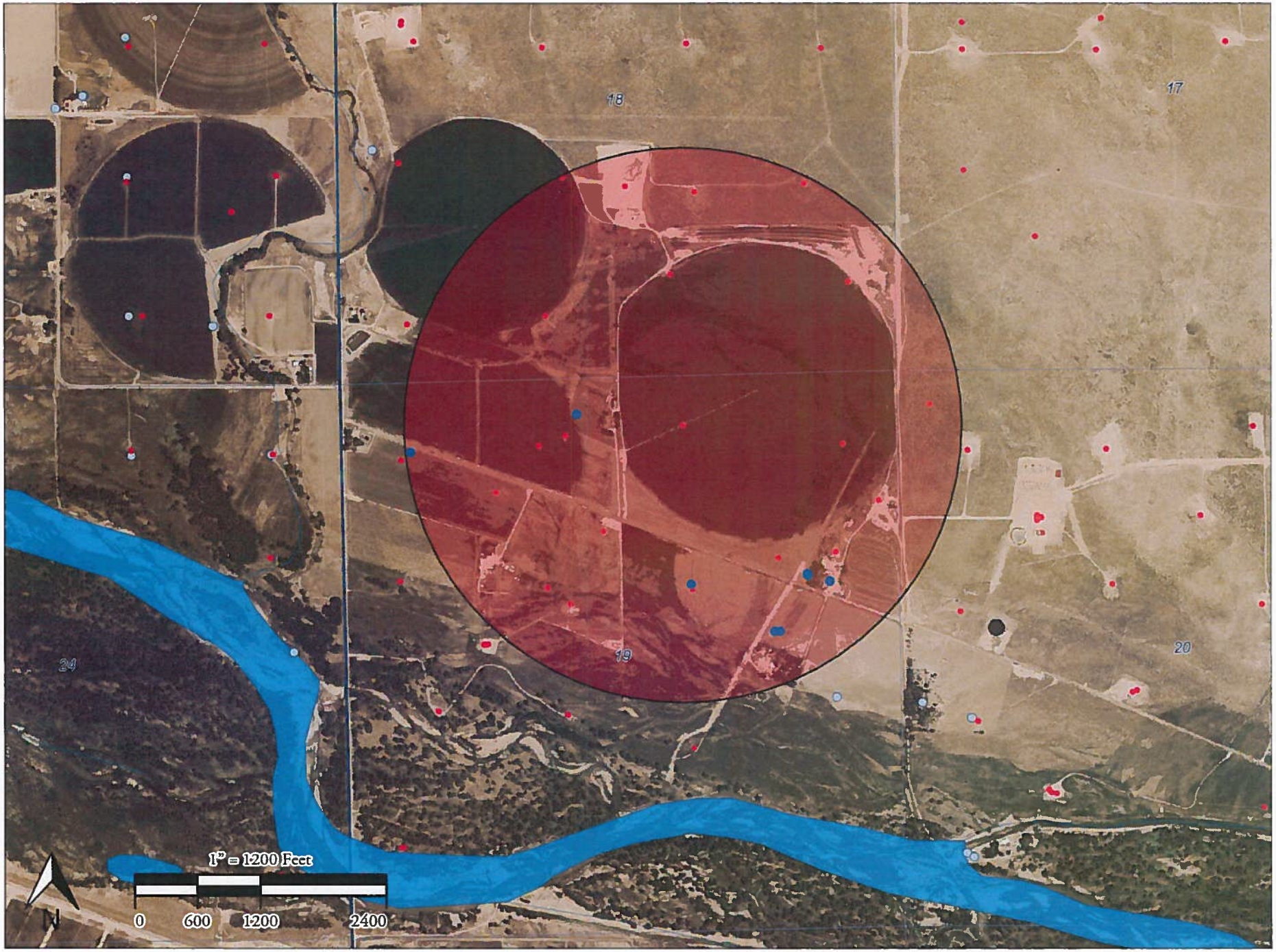


TABLE 1: DIVISION OF WATER RESOURCES - WATER WELLS WITHIN 1/4 MILE OF COCKROFT FARM

WELL DESCRIPTION	LOCATION	WELL INFORMATION			
		Depth	Top Perf	Bottom Perf	Aquifer
Receipt=0024667, Permit=0094454-VE- COCKROFT DAIRY FARMS	SENE 19 5 N-63W	0	0	0	GW
Receipt=0201421, Permit=0012495-R-R CHRISTENSEN F	SENE 19 5 N-63W	48	28	44	GW
Receipt=0376550A, Permit=0183901-- COCKROFT DAIRY FARMS	SENE 19 5 N-63W	60	0	0	GW
Receipt=0376550B, Permit=0183901--A COCKROFT DAIRY FARMS	SENE 19 5 N-63W	56	36	56	GW
Receipt=9061180, Permit=0012494-R- CHRISTENSON FRANCES	SWNE 19 5 N-63W	28	0	0	GW
Receipt=9061181, Permit=0012495-R- CHRISTENSON FRANCES	SWNE 19 5 N-63W	24	0	0	GW
Receipt=9061984, Permit=0014525-R- KLIPPERT JOHN R III & DEBORAH L	SWNE 19 5 N-63W	33	0	0	GW
Receipt=3621287, Permit=0275447-- COCKROFT LOREN	NENW 19 5 N-63W	12	6	12	GW
Receipt=9060352, Permit=0010481-R- BELDEN BRETT & ISABEL VALLE	NWNW 19 5 N-63W	42	0	0	GW
Receipt=9061626, Permit=0013451-- KISSLER ROLAND H. & MARY E. & EVER	NWNW 19 5 N-63W	32	23	32	GW
Receipt=0535375A, Permit=0262443-- KLIPPERT JOHN R III	NESE 19 5 N-63W	0	0	0	GW
Receipt=0535375B, Permit=0262443--A KLIPPERT JOHN R III	NESE 19 5 N-63W	49	36	45	GW

Cockroft Land Application Site - Sensitive Wildlife Habitat