

**Wavetech Helium Inc.**  
**1 Wavetech Harker Family 14-26**  
**Alternative Location Analysis Narrative**  
**Section 26 T12S R43W**

**Proposed Oil and Gas Location Name:** 1 Wavetech Harker Family 14-26

**Total Disturbed Area within Project:** 3.5 Acres

**Size of Location After Interim Reclamation:** 1.2 Acres

**Surface Owner:** Harker Family Registered LLLP

**Relevant Local Government:** Cheyenne County

**Relevant Local Government Zoning:** Agriculture

**Description of Potential Impacts to Health, Safety, Welfare, Wildlife and Environment related to the Development of this Oil and Gas Location:**

The closest Residential Building Units (RBUs) is 5,280' from the working pad surface of the proposed location.

Potential impacts to health, safety, welfare, and the environment are minimal due to the remote nature of the location. Wildlife may be minimal and temporarily impacted due to operations.

**Description of Advantages and Disadvantages associated with Oil and Gas Location:**

**Advantages:**

1. All RBUs are more than 1 mile from the location.
2. The location is 2 miles from the nearest Colorado Parks and Wildlife (CPW) mapped Lesser Prairie Chicken Lek 2 mile Lek buffer.
3. There are three (3) wind turbines within 1,800 meters of the proposed location. The United States Fish and Wildlife Services has suggested the impact disturbance from a wind turbine to be 1,800m. The nearest wind turbine is 547 meters. Due to the proximity of multiple wind turbines the area has been deemed not considerably highly suitable habitat.
4. The proposed location is not within the Lesser Prairie Chicken Focal Area within 2 miles of a Lek.

**Disadvantages:**

1. The proposed Wavetech location lie within the Lesser Prairie Chicken Estimated Occupied Range (EOR) and Connectivity Area.

**Permitting Considerations for the Oil and Gas Location:**

The majority of Cheyenne County is covered by the EOR. It is impossible to move the proposed locations outside of the EOR while still developing the helium leases owned by Wavetech. Wavetech does not have any proposed locations within a mapped Lek.

Geologically, the locations chosen cannot be moved. Oil and gas production, and associated helium, in the Morrow Formation of eastern Colorado occurs from conventional traps. These conventional traps result

from Morrow channel sandstone bodies draping across structurally high areas to allow buoyancy trapping to occur. The traps have sharp, boundaries defined by the presence of the reservoir sandstone and specific elevations above a structural datum below which water is present in the reservoir.

The reservoir sandstones were deposited from river channels and like modern rivers which occupy narrow regions of the landscape (Morrow reservoir sandstone bodies average approximately one-half mile in width in eastern Colorado). As such, drilling targets require detailed mapping to define potential sandstone boundaries and proposed well locations are specific and precise.

Minimal location moves, even less than 100', from the axis of the reservoir channel systems exponentially increases the possibility of dry holes. Helium fields in eastern Colorado producing from the Morrow formation are usually one or at most two locations wide and run longitudinally as far as the sandstone remains above a datum elevation that defines the water contact (less than one to several miles along its axis). Reservoir sandstones, when present, have high porosity and high permeability and neither horizontal drilling nor fracking is required to produce. The footprint of Morrow formation within the landscape of Cheyenne County is minimal.

Tier III-A.

304.b.(2).B- x Criteria Met									
i	ii	iii	iv	v	vi	vii	viii	ix	x
							X		

**Conditions or Factors that make the Oil and Gas Location Unavailable:**

Wavetech does not believe there are any conditions or factors that make the subject Oil and Gas Location unavailable for development.

**Any Other Considerations for Subject Oil and Gas Location:**

Wavetech is committed to Best Management Practices that will minimize and mitigate impacts to the Lesser Prairie Chicken. Traffic and traffic emissions will be reduced due to existing gas pipeline infrastructure.

**Alternative Location No. 1:****Legal Description:** T12S R43W Section 26 SWSW**Surface Owner:** Harker Family Registered LLLP**Relevant Local Government:** Cheyenne County**Relevant Local Government Zoning:** Agriculture**Description of Potential Impacts to Health, Safety, Welfare, Wildlife and Environment related to the Development of this Oil and Gas Location:**

The alternative location triggers the same criteria as the proposed location. There is no alternative location that can reach the proposed mineral development that is not located within the Lesser Prairie Chicken EOR.

**Description of Advantages and Disadvantages associated with Oil and Gas Location:****Advantages:**

1. There are no RBUs within 1 mile of the location.
2. The location is 2 miles from the nearest CPW mapped Lesser Prairie Chicken Lek 2 mile Lek buffer.
3. There are three (3) wind turbines within 1,800 meters of the proposed location. The United States Fish and Wildlife Services has suggested the impact disturbance from a wind turbine to be 1,800m. Due to the proximity of multiple wind turbines the area has been deemed not considerably highly suitable habitat.
4. The proposed location is not within the Lesser Prairie Chicken Focal Area or Connectivity Area or within 2 miles of a lek.

**Disadvantages:**

1. The proposed Wavetech location lie within the Lesser Prairie Chicken Estimated Occupied Range (EOR) and Connectivity Area.

**Permitting Considerations for the Oil and Gas Location:**

Tier III-A.

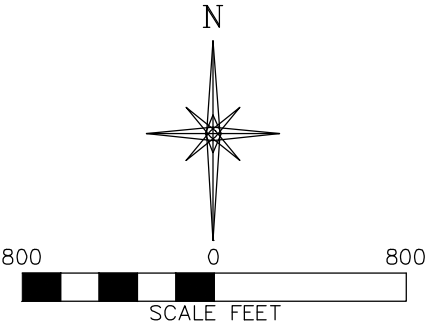
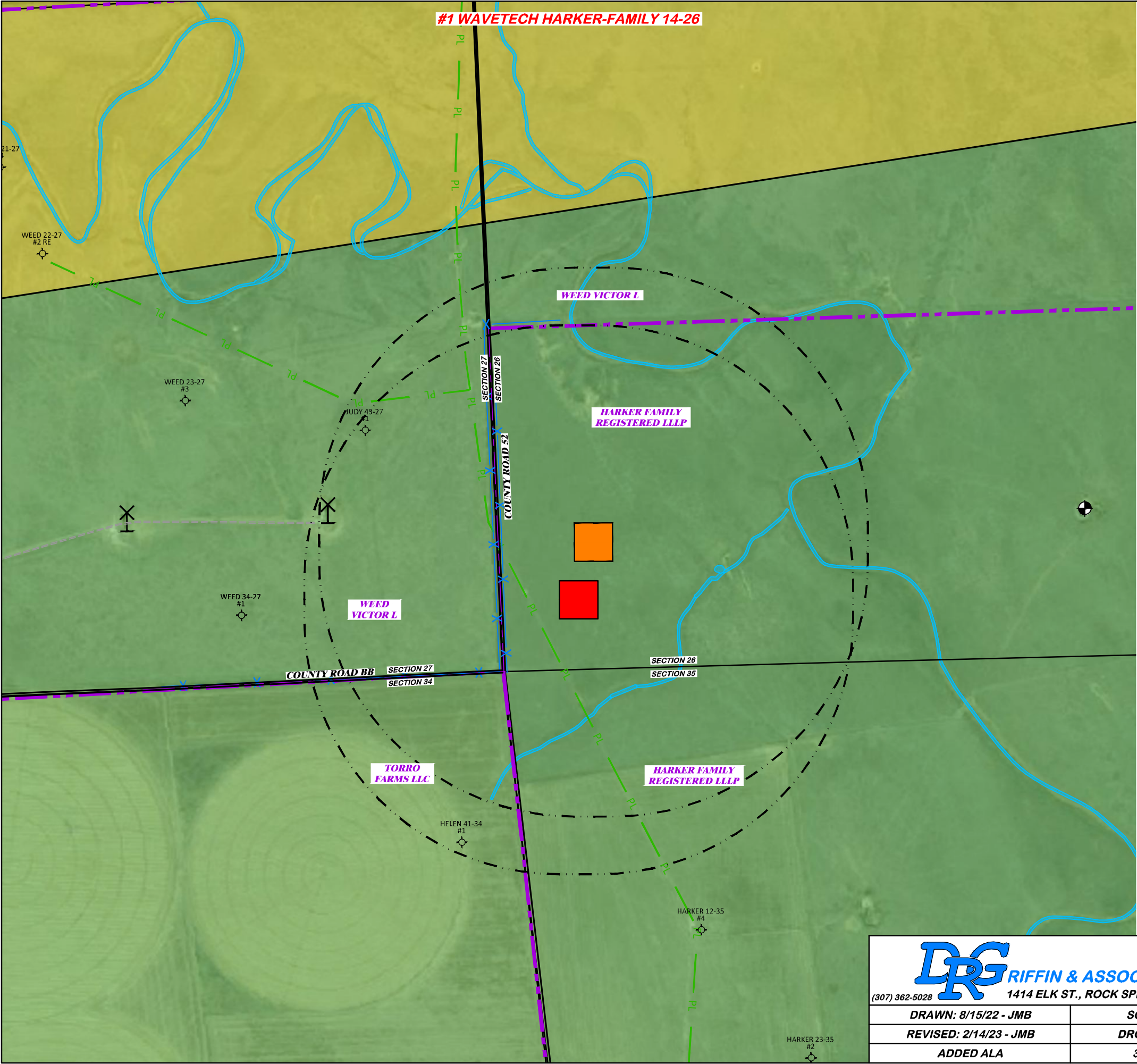
304.b.(2).B- x Criteria Met									
i	ii	iii	iv	v	vi	vii	viii	ix	x
							X		

**Conditions or Factors that make the Oil and Gas Location Unavailable:**

1. There are no conditions or factor that make the location unavailable.


**Any Other Considerations for Subject Oil and Gas Location:**

None



	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
PROPOSED LOCATION	N 38.974055	W 102.202482
ALTERNATE LOCATION	N 38.975284	W 102.202016

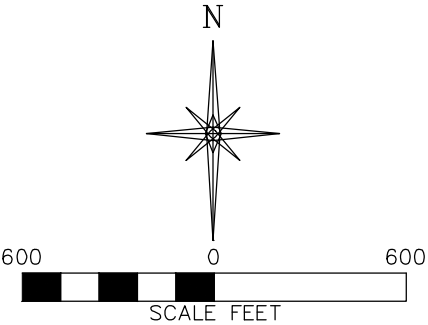
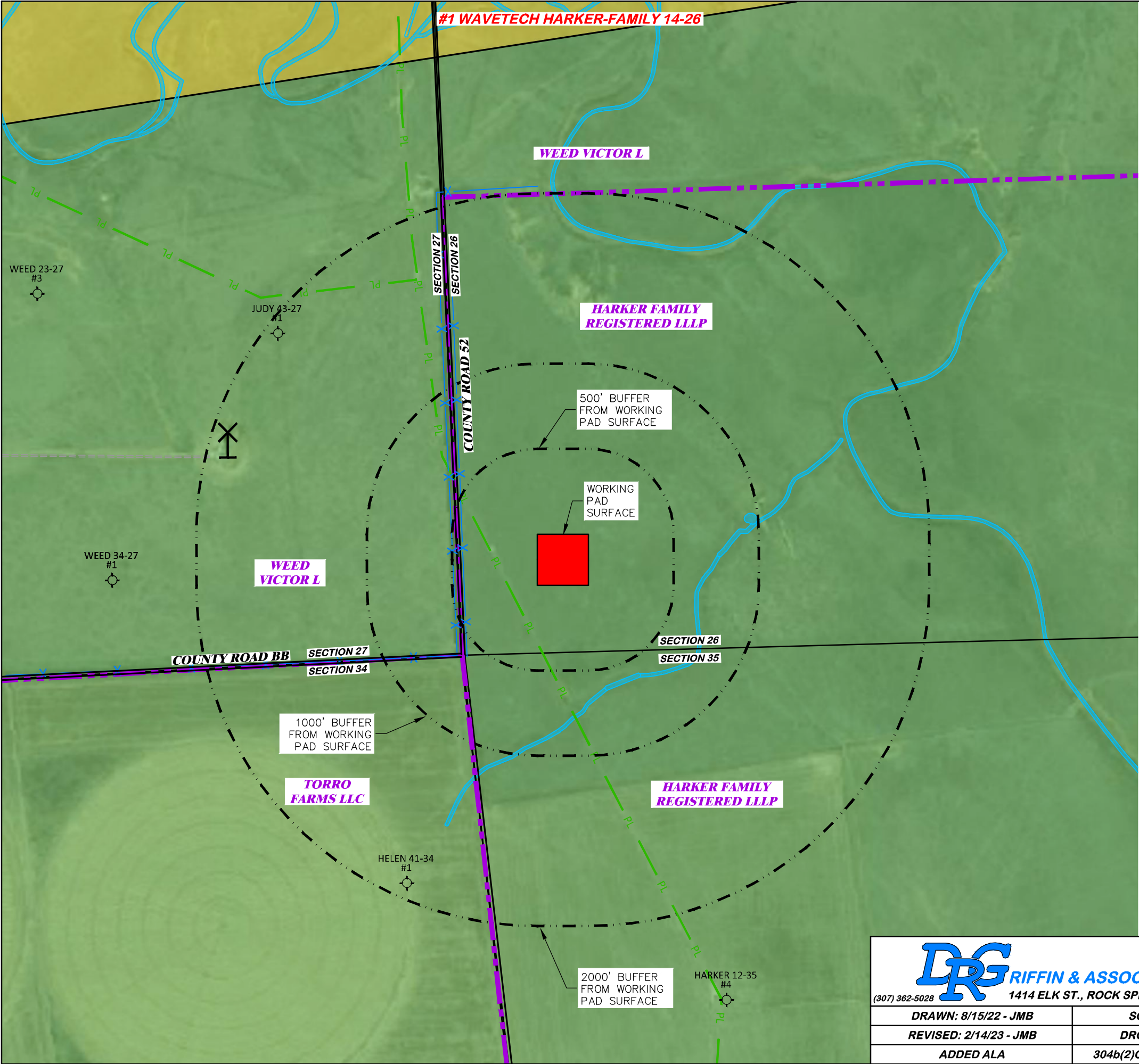
	PROPOSED WORKING PAD SURFACE
	ALTERNATE WORKING PAD SURFACE
	PROPERTY LINE
	2000' WORKING PAD SURFACE BUFFER
	COUNTY ROAD / EXISTING 2-TRACK ROAD
	EXISTING 2-TRACK ROAD
	EXISTING UNDERGROUND PIPELINE
	PLUGGED OIL & GAS (P&A) WELL
	WETLANDS AREA PROVIDED BY USFWS
	RULE 309.e.1 OTHER CONSULTATION HABITAT – LESSER PRAIRIE CHICKEN ESTIMATED OCCUPIED RANGE
	RULE 309.e.1 OTHER CONSULTATION HABITAT – LESSER PRAIRIE CHICKEN CONNECTIVITY AREA

**DRG** RIFFIN & ASSOCIATES, INC.  
(307) 362-5028 1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 8/15/22 - JMB	SCALE: 1" = 800'
REVISED: 2/14/23 - JMB	DRG JOB No. 22271
ADDED ALA	304b(2)Ci ALA

ALTERNATIVE LOCATION ANALYSIS
<b>WAVETECH HELIUM, INC.</b> <b>#1 WAVETECH HARKER-FAMILY 14-26</b> <b>SWSW, SECTION 26, T. 12 S., R. 43 W., 6th P.M.,</b> <b>CHEYENNE COUNTY, COLORADO</b>

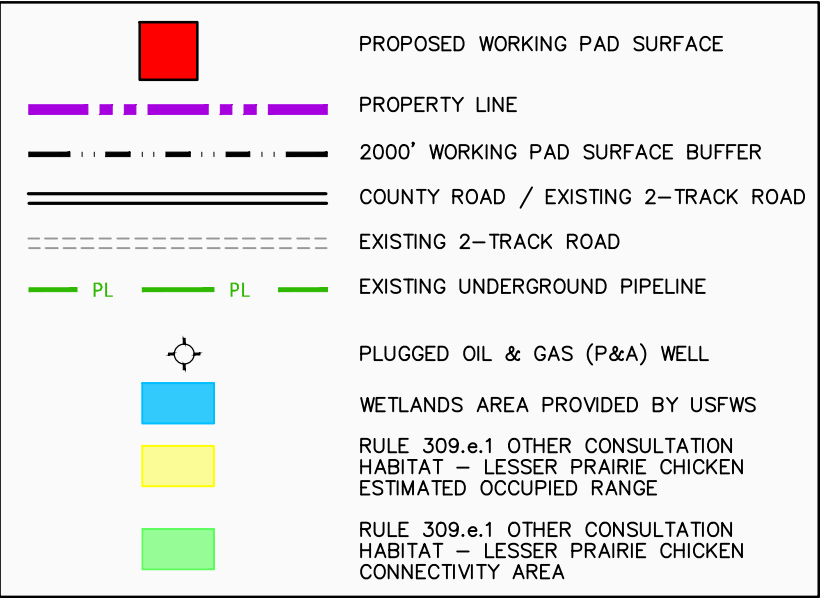





	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
PROPOSED LOCATION	N 38.974055	W 102.202482

CULTURAL ITEMS: MEASURED FROM NEAREST EDGE OF THE PROPOSED WORKING PAD SURFACE	
BUILDING	5280' +
RESIDENTIAL BUILDING	5280' +
HIGH OCCUPANCY BUILDING	5280' +
DOAA	5280' +
PUBLIC ROAD	446' W
ABOVE GROUND UTILITY	1871 NW
RAILROAD	5280' +
PROPERTY LINE	471' W
SCHOOL FACILITY	5280' +
SCHOOL PROPERTY LINE	5280' +
CHILDCARE FACILITY	5280' +
SCHOOL PROPERTY LINE	5280' +
DI COMMUNITY	5280' +
USFWS WETLANDS	587' SE

CULTURAL FEATURE INFORMATION			
PRODUCTION FEATURE	0-500 FEET	501 - 1,000 FEET	1,001 - 2,000 FEET
	NUMBER	NUMBER	NUMBER
BUILDING	0	0	0
RESIDENTIAL BUILDING	0	0	0
HIGH OCCUPANCY BUILDING	0	0	0
SCHOOL PROPERTIES	0	0	0
SCHOOL FACILITIES	0	0	0
DOAA	0	0	0



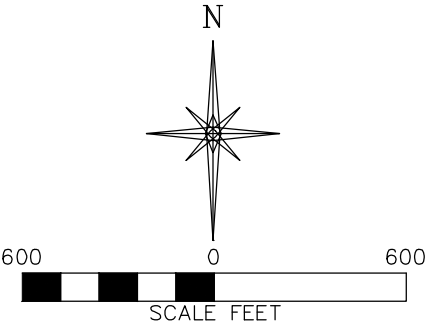
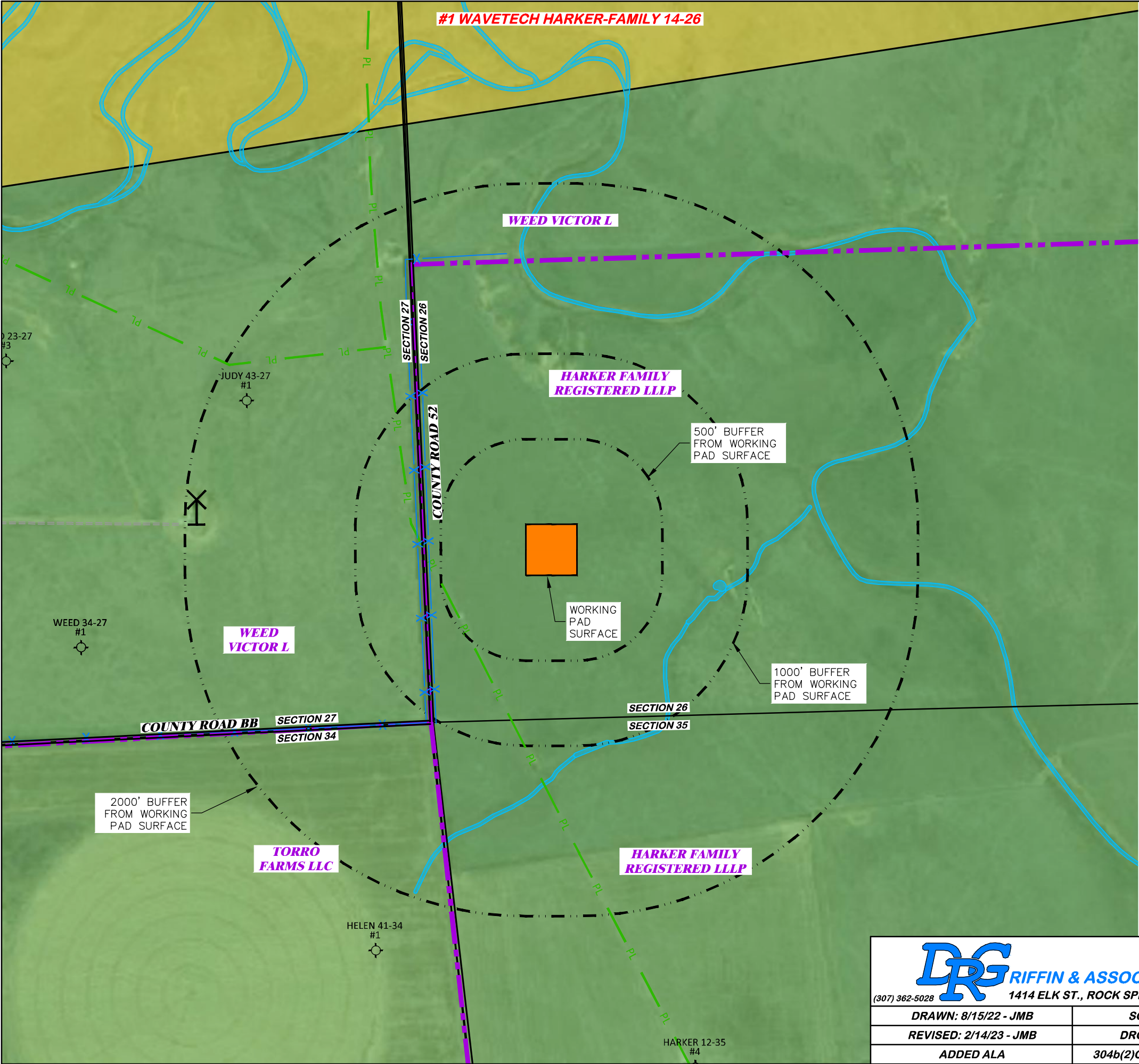
**DRG RIFFIN & ASSOCIATES, INC.**  
(307) 362-5028 1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 8/15/22 - JMB	SCALE: 1" = 600'
REVISED: 2/14/23 - JMB	DRG JOB No. 22271
ADDED ALA	304b(2)Ciii ALA SHEET 1 OF 2

ALTERNATIVE LOCATION ANALYSIS

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**SWSW, SECTION 26, T. 12 S., R. 43 W., 6th P.M.,**  
**CHEYENNE COUNTY, COLORADO**








	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
ALTERNATE LOCATION	N 38.975284	W 102.202016


CULTURAL ITEMS: MEASURED FROM NEAREST EDGE OF THE PROPOSED WORKING PAD SURFACE	
BUILDING	5280' +
RESIDENTIAL BUILDING	5280' +
HIGH OCCUPANCY BUILDING	5280' +
DOAA	5280' +
PUBLIC ROAD	593' W
ABOVE GROUND UTILITY	1931' W
RAILROAD	5280' +
PROPERTY LINE	607' W
SCHOOL FACILITY	5280' +
SCHOOL PROPERTY LINE	5280' +
CHILDCARE FACILITY	5280' +
SCHOOL PROPERTY LINE	5280' +
DI COMMUNITY	5280' +
USFWS WETLANDS	685' SE


CULTURAL FEATURE INFORMATION			
PRODUCTION FEATURE	0-500 FEET	501 - 1,000 FEET	1,001 - 2,000 FEET
	NUMBER	NUMBER	NUMBER
BUILDING	0	0	0
RESIDENTIAL BUILDING	0	0	0
HIGH OCCUPANCY BUILDING	0	0	0
SCHOOL PROPERTIES	0	0	0
SCHOOL FACILITIES	0	0	0
DOAA	0	0	0


ALTERNATE WORKING PAD SURFACE


PROPERTY LINE


2000' WORKING PAD SURFACE BUFFER


COUNTY ROAD / EXISTING 2-TRACK ROAD


EXISTING 2-TRACK ROAD


EXISTING UNDERGROUND PIPELINE

PLUGGED OIL & GAS (P&A) WELL

WETLANDS AREA PROVIDED BY USFWS

RULE 309.e.1 OTHER CONSULTATION HABITAT – LESSER PRAIRIE CHICKEN ESTIMATED OCCUPIED RANGE

RULE 309.e.1 OTHER CONSULTATION HABITAT – LESSER PRAIRIE CHICKEN CONNECTIVITY AREA

**DRG RIFFIN & ASSOCIATES, INC.**  
(307) 362-5028 1414 ELK ST., ROCK SPRINGS, WY 82901

<b>DRAWN:</b> 8/15/22 - JMB	<b>SCALE:</b> 1" = 600'
<b>REVISED:</b> 2/14/23 - JMB	<b>DRG JOB No.</b> 22271
<b>ADDED ALA</b>	<b>304b(2)Ciii ALA SHEET 2 OF 2</b>

**ALTERNATIVE LOCATION ANALYSIS**

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**#1 WAVETECH HARKER-FAMILY 14-26**  
**SWSW, SECTION 26, T. 12 S., R. 43 W., 6th P.M.,**  
**CHEYENNE COUNTY, COLORADO**