

Wavetech Helium Inc.
1 Wavetech Howard 22-29
Alternative Location Analysis Narrative
Sec. 29 T13S R42W (SE/4 NW/4)

Proposed Oil and Gas Location Name: 1 Wavetech Howard 22-29

Total Disturbed Area within Project: 9.0 Acres

Size of Location After Interim Reclamation: 1.0 Acres

Surface Owner: Paul D. Howard

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 over 4 miles from the nearest Colorado Parks and Wildlife (CPW) mapped Lesser Prairie Chicken 2 mile lek buffer.
3. There is a mapped surface water less than 500' from the working pad surface. However, the location and equipment has been oriented so that all storage of fluids is greater than 500'.

Disadvantages:

1. The proposed Wavetech location lies within the Lesser Prairie Chicken Estimated Occupied Range (EOR).

Permitting Considerations for the Oil and Gas Location:

The majority of Cheyenne County is covered by the Lesser Prairie Chicken EOR. It is impossible to move the proposed locations outside of the Lesser Prairie Chicken 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 increase 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 the 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 an existing gas pipeline infrastructure.

Alternative Location No. 1:

Legal Description: T13S R42W Section 29

Surface Owner: Paul D. Howard

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 Estimated Occupied Range (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 over 4 miles from the nearest Lesser Prairie Chicken Lek.

Disadvantages:

1. The proposed Wavetech location lies within the Lesser Prairie Chicken EOR.
2. The alternative location is closer to a mapped surface water.

Permitting Considerations for the Oil and Gas Location:

Tier III-A.

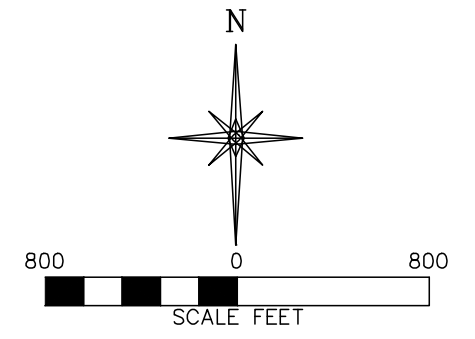
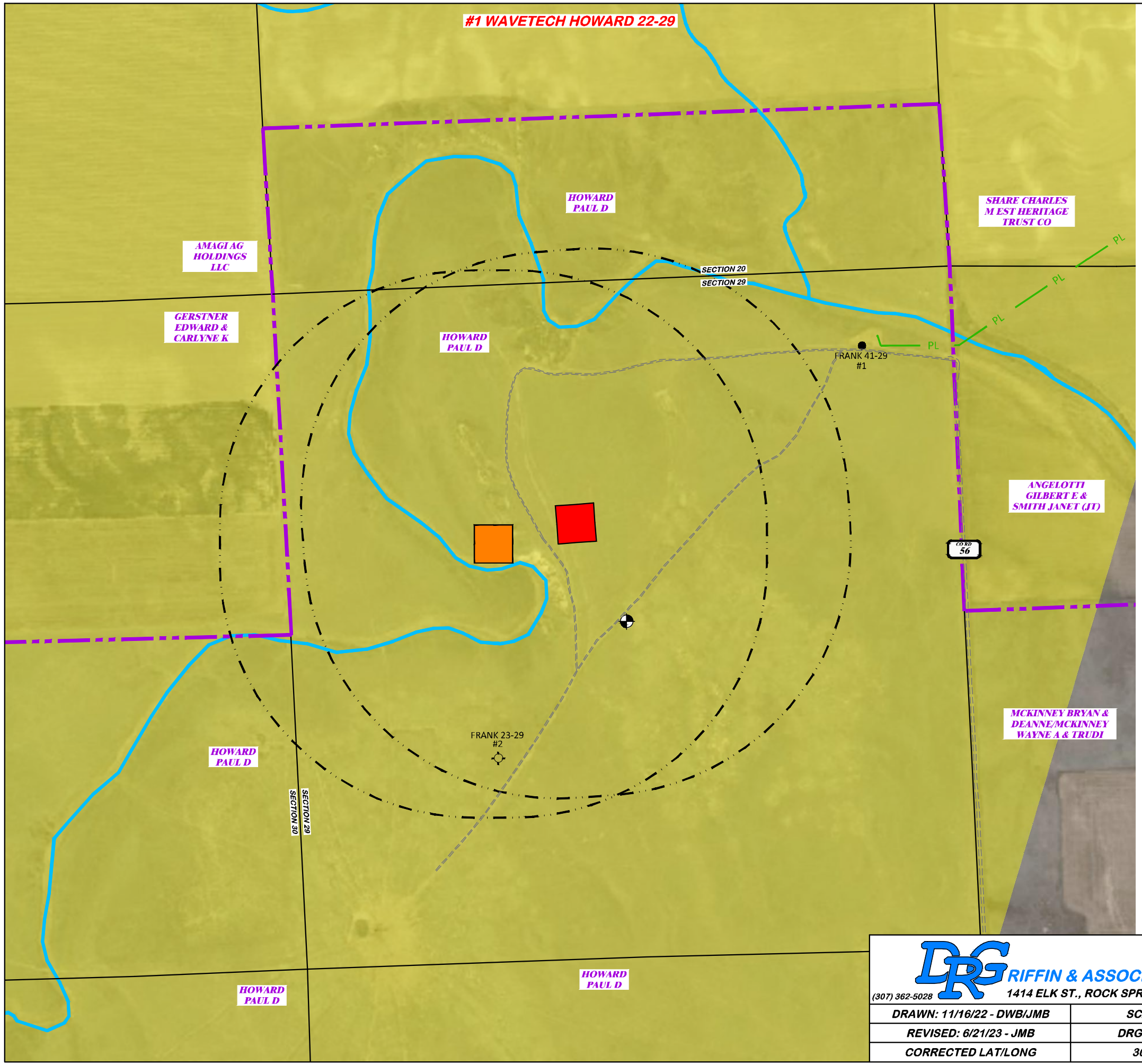
304.b.(2).B- x Criteria Met									
i	ii	iii	iv	v	vi	vii	viii	ix	x
							X		

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

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

Any Other Considerations for Subject Oil and Gas Location:

None



	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
PROPOSED LOCATION	N 38.895378	W 102.138554
ALTERNATE LOCATION	N 38.895002	W 102.140853

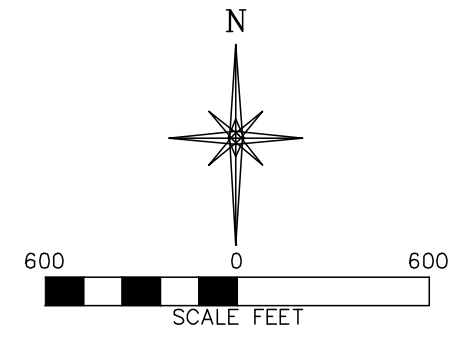
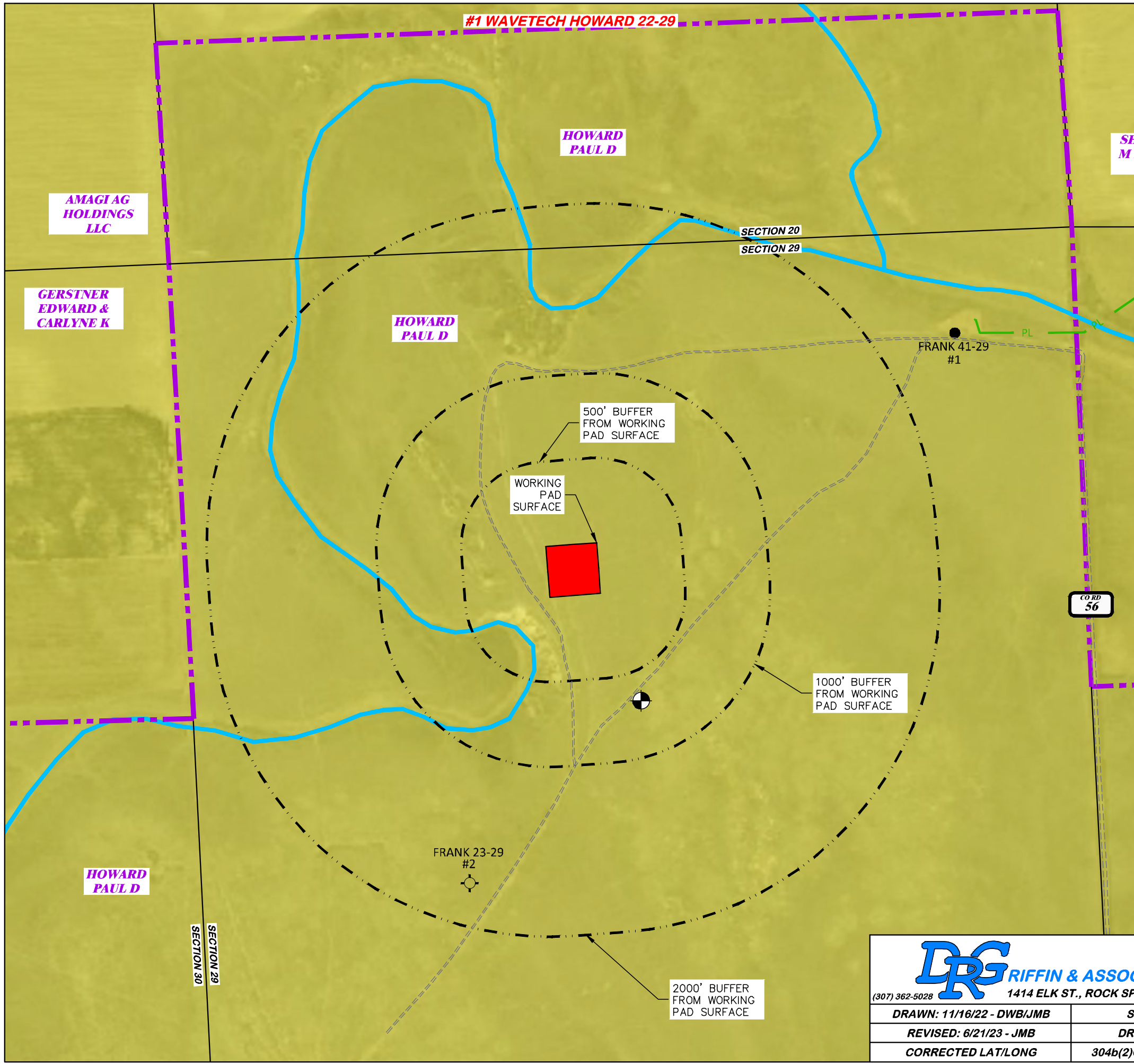
	PROPOSED WORKING PAD SURFACE
	ALTERNATE WORKING PAD SURFACE
	PROPERTY LINE
	2000' WORKING PAD SURFACE BUFFER
	COUNTY ROAD / EXISTING 2-TRACK ROAD
	EXISTING UNDERGROUND PIPELINE
	WATER WELL
	PRODUCING OIL & GAS WELL
	PLUGGED OIL & GAS (P&A) WELL
	WETLANDS AREA PROVIDED BY USFWS
	RULE 309.e.1 OTHER CONSULTATION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

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

DRAWN: 11/16/22 - DWB/JMB	SCALE: 1" = 800'
REVISED: 6/21/23 - JMB	DRG JOB No. 22300
CORRECTED LAT/LONG	304b(2)Ci ALA

ALTERNATIVE LOCATION ANALYSIS

WAVETECH HELIUM, INC.
#1 WAVETECH HOWARD 22-29
SENW, SECTION 29, T. 13 S., R. 42 W., 6th P.M.,
CHEYENNE COUNTY, COLORADO



	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
PROPOSED LOCATION	N 38.895378	W 102.138554

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	2888' E
ABOVE GROUND UTILITY	5280+
RAILROAD	5280+
PROPERTY LINE	2131' W
SCHOOL FACILITY	5280+
SCHOOL PROPERTY LINE	5280+
CHILDCARE FACILITY	5280+
CHILDCARE FACILITY PROPERTY LINE	5280+
DI COMMUNITY	5280+
USFWS WETLANDS	290' SW

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

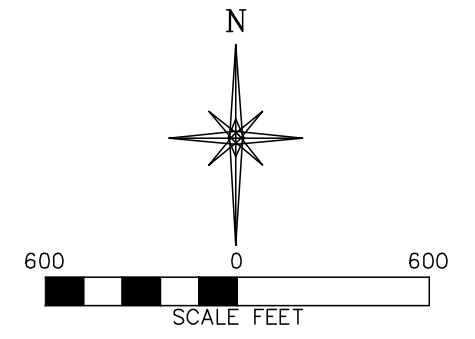
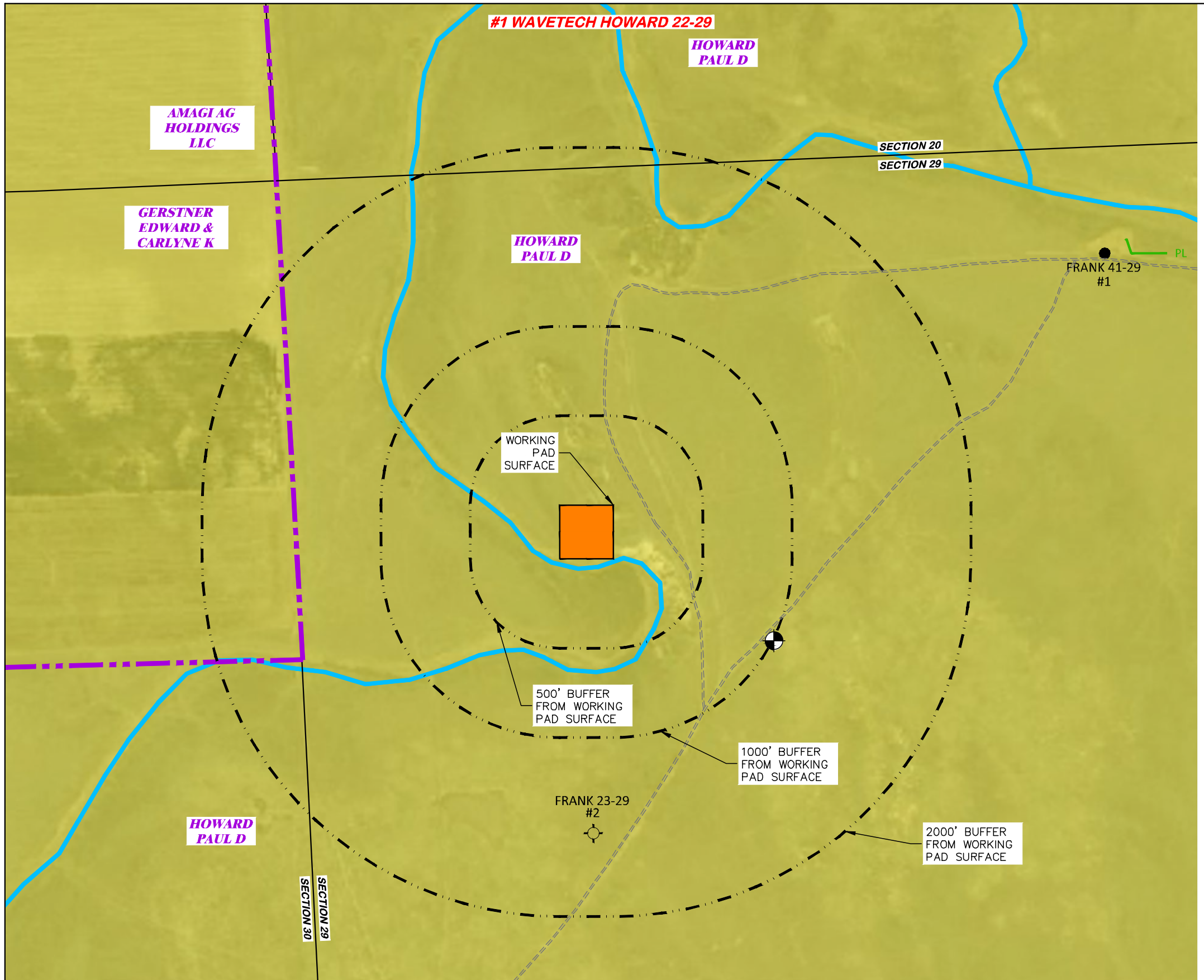
	PROPOSED WORKING PAD SURFACE
	PROPERTY LINE
	2000' WORKING PAD SURFACE BUFFER
	COUNTY ROAD / EXISTING 2-TRACK ROAD
	EXISTING UNDERGROUND PIPELINE
	WATER WELL
	PRODUCING OIL & GAS WELL
	PLUGGED OIL & GAS (P&A) WELL
	WETLANDS AREA PROVIDED BY USFWS
	RULE 309.e.1 OTHER CONSULTATION HABITAT - LESSER PRAIRIE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

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 (307) 362-5028 1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 11/16/22 - DWB/JMB	SCALE: 1" = 600'
REVISED: 6/21/23 - JMB	DRG JOB No. 22300
CORRECTED LAT/LONG	304b(2)Ciii ALA SHEET 1 OF 2

ALTERNATIVE LOCATION ANALYSIS

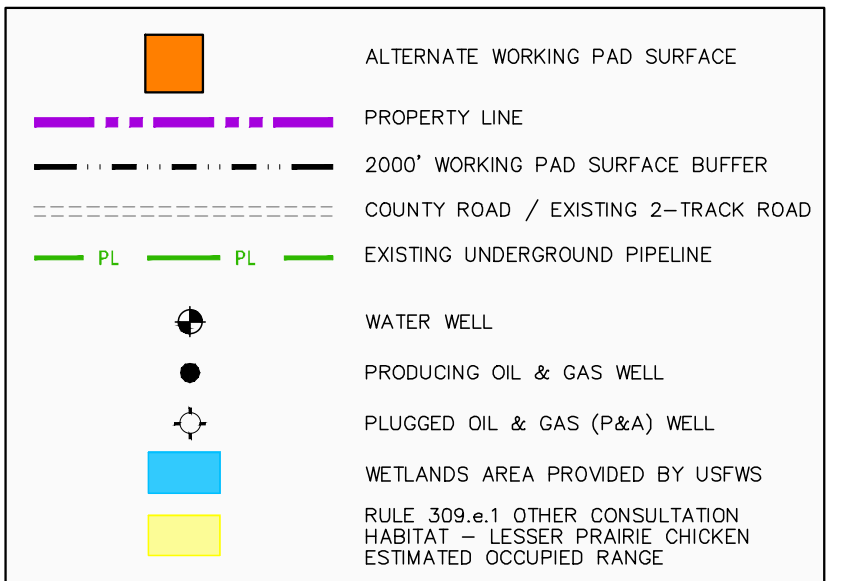
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	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
ALTERNATE LOCATION	N 38.895002	W 102.140853

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		3558' E
ABOVE GROUND UTILITY		5280+
RAILROAD		5280+
PROPERTY LINE		1478' W
SCHOOL FACILITY		5280+
SCHOOL PROPERTY LINE		5280+
CHILDCARE FACILITY		5280+
CHILDCARE FACILITY PROPERTY LINE		5280+
DI COMMUNITY		5280+
USFWS WETLANDS		5' S

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



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CORRECTED LAT/LONG	304b(2)Ciii ALA SHEET 2 OF 2

ALTERNATIVE LOCATION ANALYSIS

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