COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT

STAFF REPORT

Administrative Review Memo **October 12, 2017**

CASE No.: **USR2017-00002**	CASE NAME: **Extraction – Prairie Center Well Pad**

Owner's Name:	Extraction Oil & Gas, Inc.
Applicant's Name:	Extraction Oil & Gas, Inc.
Applicant's Address:	370 17th Street, Suite 5300, Denver, CO 80202
Location of Request:	16500 East 132nd Avenue Section 29, Township 1S, Range 66W (N/2 of SW/4) Parcel number 0156929100001
Nature of Request:	A Use by Special Review Permit to allow sixteen (16) horizontal wells on one (1) well pad for the production of oil and gas.
Zone District:	Agriculture - 3 (A-3)
Site Size:	Approximately 11.9 acres (509.18-acre parcel)
Proposed Uses:	Multi-well pad for the production of oil and gas
Existing Use:	Vacant
Report Date:	October 12, 2017
Case Manager:	Christopher LaMere
Director Options:	Approval with 4 Findings of Fact, 6 Conditions Precedent, and 18 Conditions; Denial; or Referral to the Board of County Commissioners
Staff Recommendation:	Approval with 4 Findings of Fact, 6 Conditions Precedent, and 18 Conditions.

SUMMARY OF APPLICATION

Background:

Extraction Oil & Gas, the applicant, engages in exploration and development of oil and natural gas, primarily in the Denver-Julesburg Basin. The applicant has proposed an oil and gas well pad location in unincorporated Adams County to develop those minerals. The proposed site, known as the Prairie Center Pad, consists of one well pad with up to 16 wells and one access road.

The proposed pad location is on a 509.18-acre parcel, southwest of the intersection of Buckley Road and East 132nd Avenue. Access to the site is from East 132nd Avenue, the northern boundary of the property.

Summary of Application:
The applicant has proposed a single well pad with 16 wells, a reduction from the original application of 20 wells, and one access road to accommodate all traffic during all phases of the project including construction, production, and long-term maintenance. The drilling period is expected to last 10-15 days per well, with an additional 5-10 days per well for the completion period. Overall, the drilling and completion phase will take approximately 240-400 days total.

The well pad size during the drilling and completion phases will be approximately 11.9 acres; however, this will be reduced after the construction phase is completed. On-site production facilities include 14 oil tanks, 2 processed water tanks, 16 separators, 16 well head manifolds, 2 vapor recovery towers, 8 combustors, 2 generators, 2 scrubbers, 6 vapor recovery units, 1 gas sale line, and 1 Lease Automatic Custody Transfer (LACT) unit.

Mitigation measures for the proposed well pad site include traffic controls, underground infrastructure, sound walls, and the use of a pipeline. The proposed traffic control plan shows vehicles utilizing the access road from the property to 132nd Avenue, then north on Buckley Rd, and east on 136th Avenue to Interstate 76. This route minimizes impacts to County roads and reduces conflicts with local traffic by routing large vehicles as quickly as possible to highways. However, the number of large trucks needed to transport the products from the well pad, in conjunction with its close proximity to residences and municipalities, necessitates that oil and gas products will need to be transported offsite via pipeline for the facility to be compatible with the current and future land uses. An ambient sound study was required to determine potential noise impacts to nearby residents and the results of the study and recommended mitigation are included in exhibit 2.4.

Development Standards and Regulations Requirements:
In order to obtain an Administrative Use by Special Review approval, an Oil and Gas Facility must satisfy certain criteria.

1. Memorandum of Understanding (MOU)

Extraction Oil & Gas signed the standard County MOU, which was executed by Adams County Board of County Commissioners on March 22, 2016. The MOU requires the use of best management practices for potential impacts such as noise, lighting, and dust.

2. Satisfy Submittal Requirements

The applicant has satisfied all required submittal items as outlined in the Development Standards and Regulations. These include:

- Conceptual Review Meeting – The applicant attended a Conceptual Review Meeting with the Adams County Development Review Team to discuss their proposed site on January 23, 2017.
- Neighborhood Meeting – The applicant notified property owners within one half mile of the parcel boundary of the proposed oil and gas facility and invited them to a neighborhood meeting open house. The Neighborhood Meeting was held on February 13, 2017 at the Adams County Government Center and approximately twenty-two (22) people attended. The operator provided an overview of the project, operation timeline, and proposed mitigation measures.
- Application Form and Fees – The operator submitted the required Oil and Gas Facility application form and paid the applicable permit fees. Prior to construction and operation, the operator is required to obtain Right of Way permits, including an Access Permit for the access road and Oversize Load Permits for the drill rigs and other oversize equipment.
- Oil and Gas Operations Plan – The operator submitted an Oil and Gas Operations Plan including an Impact Area Map showing all oil and gas wells and water wells within one half mile, a Drilling Operation Plan Map showing a site plan with drilling equipment, a Production Plan Map including a site plan showing the production phase, and a Sign Plan showing all locations of signs to be posted for the project.
- Emergency Preparedness Plan – The operator submitted a site-specific Emergency Preparedness Plan that has been reviewed and approved by the Adams County Office of Emergency Management.
- Engineering Documents – The operator provided a Grading, Erosion, and Sediment Control Report & Plan, as well as a Traffic Impact Plan, in accordance with the Development Standards and Regulations.
- Surface Owner Documentation – The operator provided a Memorandum of Surface Use Agreement to show the proposed oil and gas facility is authorized by the surface owner.

3. Compatibility / Land Use Impacts

The subject site is approximately 509.18 acres of which 11.9 acres is proposed to be used for the development of a 16-well oil and gas well pad and associated production facility. Currently, the site is zoned Agricultural-3 (A-3). The purpose of the A-3 zone district is to provide land primarily in holdings of at least thirty-five acres for dryland or irrigated farming, pasturage, or other related food production uses. Surrounding properties are zoned A-1 and A-2 to the west, A-3 to the north and east, with Brighton and Commerce City municipalities to the north and south. As the subject site is adjacent to two municipalities, it is expected to be annexed in the future with anticipated commercial development.

The Adams County Comprehensive Plan designates the subject site as Agricultural, with Estate Residential areas located to the west and municipal areas to the north and south. Barr Lake currently occupies the area to the east and has a future land use designation of Parks and Open Space. Agricultural areas are intended for dryland or irrigated farming, pasturage, or other related food production uses. The goals of the Comprehensive Plan include promoting agricultural preservation in this area and maintaining the integrity of sensitive agricultural lands

to preserve the County's agricultural economic base. Generally, if an area is intended to remain agricultural, oil and gas development can be compatible with those uses.

The oil and gas facility is also located within the District Plan boundaries, which was the result of a collaborative effort between Adams County and the City of Brighton. With the intent of preserving valuable farmland while stimulating innovative growth opportunities, the District Plan seeks to provide a balance between the agricultural heritage and new development. The subject parcel, owned by the Prairie Center, has been identified by the Plan and the Denver Regional Council of Governments (DRCOG) as an area that is likely to be urbanized and annexed in the next 10 years. Additionally, the Plan proposes a future land use for the subject parcel as Employment – Commercial, which contemplates offices, business parks, hotels, and public facilities. Utilizing a pipeline for the transportation of oil and natural gas products off-site will reduce on-site storage and minimize the large truck traffic accessing the well pad, allowing the facility to be less impactful to the surrounding area.

The City of Brighton has expressed concerns about the compatibility of the proposed facility being located within Brighton's Growth Management Area and the potential impacts the facility will have on the vision outlined in the District Plan. Specifically, Brighton has expressed concerns regarding truck traffic management, access routes to the proposed location, and the large number of on-site storage tanks being proposed.

All traffic servicing the well pad will utilize one access and a traffic route that will allow the trucks to get to a state highway as expeditiously as possible. All trucks entering and exiting the subject site will be directed onto 132nd Avenue, 132nd Avenue to Buckley Road, Buckley Road to 136th Avenue, then 136th Avenue to Interstate 76. A total of 1.5 miles of Adams County roads will be impacted by the well pad truck traffic. With the Traffic Impact Study commissioned by the applicant assuming no pipeline transport of products, the total number of truck trips for the proposed 16-well pad is estimated to be nearly 100,000 trips. It was assumed that following the development of the well pad site and completion of the oil and gas wells, large truck traffic would be reduced to trucks hauling product, produced water, and daily monitoring by employees. During the first year of production, the applicant estimated approximately 8,116 truck trips for the 16 wells, although the intent is to begin by only drilling eight (8) wells. Following the first year of production, the applicant is anticipating approximately 90,972 truck trips over an estimated 19 years of operation. The impacts of these large trucks on the 1.5 miles of local County roads would be significant and can be minimized with the use of pipelines to transport the oil and gas products off site.

In the application submittal items, the Written Explanation of the project identified this location as the best choice due in part to the proximity of the Boardwalk Pipeline stating,

> "…a pipeline will greatly reduce truck traffic in and out of the location for the life of the well. The utilization of pipelines also ensures a safer operation as it greatly reduces the number of tanks that are required on location."

The Boardwalk Pipeline (RCU2016-00016) was presented to the Adams County Planning Commission on December 8, 2016 and a recommendation of approval was forwarded to the

Board of County Commissioners. Heard before the Board on December 13, 2016, the application was approved, and the Boardwalk Pipeline has since been built and is currently in operation. By connecting to a pipeline, the long-term truck traffic and impacts associated with on-site storage of petroleum products can be sufficiently mitigated to allow the proposed well pad to be compatible with the surrounding area.

Industrial impacts inherent to large-scale oil and gas development require significant mitigation from residential and commercial development. The most significant long-term impacts associated with oil and gas production are the daily truck trips and the number of tanks required for on-site storage of oil. Taking into consideration the compatibility requirements of the Adams County Development Standards and Regulations, the operator should use the existing pipeline for the transportation of oil and gas products from the site to minimize the impacts of truck traffic and reduce the number of onsite storage tanks, which will allow the well pad to be more harmonious with the surrounding area.

In addition to the truck traffic associated with production, the well pad construction, drilling, and completion phases will have impacts to the surrounding area similar to that of an industrial facility. These include but are not limited to impacts such as noise, lights, traffic, and dust. To make this facility compatible with the surrounding residential uses, traffic mitigation, noise mitigation, visual mitigation, and dust suppression will be required. An ambient sound study has been completed for the proposed pad location and the operator has agreed to follow the recommendations of the study. The study recommended implementing 260 linear feet of sound barrier on the eastern side of the pad, 860 linear feet on the western side, and 300 linear feet on the north side. The recommended height of the sound barriers is 32 feet, which will aid in mitigating potential light impacts.

Fencing and landscaping are proposed to screen the site and mitigate the visual impact from surrounding existing residential and agricultural uses in accordance with the Adams County Development Standards and Regulations. The future land use that is anticipated with annexation will also be considered when reviewing and approving the visual mitigation plan. This will include a landscape buffer around the site to improve visual compatibility.

Short-term impacts to surrounding properties are to be mitigated through a combination of site planning decisions, traffic and access management, and sound mitigation measures. Long-term compatibility is addressed through the requirement for landscaping and screening, as well connecting to a pipeline for the transfer of products. These mitigation measures maximize the compatibility of the site for both current and future uses. It is staff's recommendation that this criterion of compatibility has been satisfied by the applicant's proposal and through the recommended conditions of approval.

4. Emergency Service Providers

The applicant provided the required 'will serve' letter from the Brighton Fire District.

Referral Comments:

Emergency Management requested the operator update the contact information in the Emergency Preparedness Plan. Adams County Development Review Engineering reviewed the subject request and informed the applicant that a permit for the proposed access will be required. The operator is to provide the County contact information for nearby property owners who are electing to receive baseline well water test per Section 6(c) of the MOU.

The City of Brighton responded with concerns about locating a large oil and gas well pad on this site, specifically, traffic management, access routes to the proposed location, and the large number of tanks proposed. Brighton is also requesting that the applicant implement additional best management practices once the Prairie Center land is annexed into Brighton. In response to these concerns, Adams County has required the applicant to utilize the approved traffic route and any modification shall require an amendment to the AUSR permit. The applicant will connect to a nearby pipeline for transportation of product from the site in lieu of large amounts of onsite storage and truck traffic. A visual mitigation plan is required to address the future compatibility of the facility with planned commercial development.

Brighton Fire District, Brighton 27-J School District, Tri-County Health Department, and United Power reviewed the request and had no concerns.

Staff Recommendation:
Based upon the application, the criteria for an Administrative Use by Special Review permit, and a recent site visit, staff recommends approval of this request with 4 findings-of-fact, 6 conditions precedent, and 18 conditions.

Findings of Fact:

1. The applicant and the County have executed a Memorandum of Understanding (MOU) that is currently in full force and effect, and the oil and gas facility is in compliance with the provisions of the MOU.

2. The applicant has satisfied the submittal requirements for an Administrative Use by Special Review application, as outlined in the Development Standards and Regulations.

3. Based upon compliance with the recommended conditions of approval, the oil and gas facility is compatible with the surrounding area and does not create any site specific or material impacts to nearby land uses.

4. The applicant has provided a commitment to serve the facility from the authority having jurisdiction for providing emergency services.

Recommended Conditions of Approval:

Conditions Precedent:

1. Pad construction and/or drilling shall not commence until combined State approval of Colorado Oil and Gas Conservation Commission (COGCC) Form 2 and 2A and County

approval of AUSR permit. Drilling shall only occur during the COGCC Form 2 permit validity timeframe.

a. Per section 4-10-02-05-10 of the Adams County Development Standards and Regulations, proposed changes to the plans, including but not limited to, any changes in the source or location of water to be used by the Oil and Gas Facility, shall be submitted as amendments to the Administrative Use by Special Review application, reviewed by staff, and approved by the Director or BOCC (if the BOCC approved the original application).

2. Adams County has determined that visual mitigation of the site is required to provide compatibility with the surrounding area. Prior to initiation of construction, the applicant shall submit a landscaping and screening plan for the site to be reviewed and approved by the Community & Economic Development Department staff. Screening of the site shall be provided through a combination of fencing and landscape materials, as determined by the County through the review and approval of the landscape and screening plan. The screening and landscaping plan shall be designed to provide compatibility with the future development of the area. This plan shall serve as the interim restoration plan, and it shall be implemented by the applicant within 90 days of completion of the construction of the final well, if all twenty approved wells are drilled and completed at the same time. If applicant staggers well completion (i.e., completes a lesser number of wells initially with plans to complete the remaining wells at a future date), then the interim restoration plan shall be implemented within 90 days of completion of the initial set of wells.

3. Prior to initiation of construction, the applicant shall provide the applicable title commitment documents to Adams County for review of the easement rights necessary to construct the oil, water, and gas pipelines for the facility.

4. The applicant shall obtain all required access permits and oversized load permits from Adams County.

5. The applicant shall receive a "Notice to Proceed" from the Department of Community and Economic Development. Written proof that all of the conditions precedents have been satisfied shall be required prior to receiving this notice.

Conditions:

1. The approved traffic route for this permit is the site access road to 132nd Avenue, 132nd Avenue to Buckley Road, Buckley Road to 136th Avenue, and 136th Avenue to Interstate 76. This route is depicted in the site plan submitted with this application. All traffic activities associated with this site shall utilize the approved traffic route and any modification shall require an amendment to the AUSR permit.

2. Prior to initiation of production, the applicant will submit to the county written certification that the facility is connected to a pipeline for the transfer of product off-site.

3. Applicant shall implement the best management practices as identified in the Sound Impact Assessment provided as part of the application and provided in exhibit 2.4.

4. Maintenance of required landscaping and fencing shall be in compliance with the Adams County Development Standards and Regulations at all times.

5. As referenced in 8(c.) of the Extraction Oil & Gas/Adams County MOU, the applicant agrees to conduct a baseline test of any registered water well requested by the owner, on a one-time basis, if such well is within a ½ mile radius of the new oil and gas facility.

6. The access road to this site shall be outfitted with a vehicle tracking pad.

7. The applicant shall be responsible for the cleanliness and safety of all roadways adjacent to this site. If at any time, these roadways are found to be dangerous, not passable due to debris or mud, or found to be a nuisance due to tracking of sediment or other debris, Adams County will shut down the project until the roadway conditions have improved and are deemed acceptable. If the contractor/applicant fails to keep the adjacent roadways clean and free from debris, the County has the option to do the required clean up and bill the charges directly to the applicant, Extraction Oil & Gas.

8. Noise levels during the construction, drilling, completions, and production life-cycles shall not exceed those outlined in COGCC Section 802.

9. Per Section 14 of the executed MOU, fresh water as referenced in the COGCC's rules and Regulations, or another source as approved by the County on a case by case basis, may be applied to roads and land surfaces for purpose of dust mitigation. Absolutely no other liquid or substance generated by the production of the operator's facility, including, but not limited to, exploration and production waste (as defined by the COGCC) or any other application of liquids that would have negative impact to natural resources, shall be permitted to be applied to roads and land surfaces.

10. Financial assurance shall meet or exceed the requirements of COGCC 700 Series Rules Financial Assurance and Oil and Gas Conservation and Environmental Response Fund.

11. A closed loop system will be used, as depicted in the permit application.

12. Per Section 5 of the executed MOU, in an effort to reduce truck traffic, where feasible, the Operator will identify a water source lawfully available for industrial use, including oil and gas development, close to the facility location, to be utilized by Operator and its suppliers. Operator will comply with the Colorado Department of Public Health and Environment requirements and Tri-County Health Department (TCHD) regulations concerning water quality. With respect to wastewater treatment, Operator agrees to comply with TCHD's Regulations NO O-14, On-site Wastewater Treatment Systems, as adopted or modified. The Operator agrees to contact TCHD in a timely manner to arrange for the processing of appropriate application matters as required inspections.

13. Per COGCC Section 604.c (4) B. IV. Zero Flaring or venting of gas upon completion of flowback, excepting upset or emergency, or with prior written approval from the COGCC Director for necessary maintenance operations.
    a. The applicant shall provide a copy of written COGCC Director approval to the CEDD Director within 24 hours of flaring operations and/or approval, whichever occurs first.

14. Upon conclusion of construction, drilling, and completion, the site shall be fenced according to the Adams County Development Standards and Regulations Section 4-10-01-03. The fence shall contain a gate and the gate shall remain closed and locked when the well pad and associated facilities are not in use.
    a. The local fire district shall have access to ALL gate key(s)/combination(s) at all times for use in case of emergency.
    b. Adams County oil & gas inspector shall have access to ALL gate key(s)/combination(s) at all times for use in case of emergency.

15. Applicant is required to receive an approved waiver of responsibility/completion of reclamation from Adams County upon abandonment and reclamation of well pad and associated facilities.

16. Well pad, associated facilities, and access road shall be free of any county and state identified noxious weeds throughout the drilling, completion and production portions of operations.

17. A tabletop exercise pertaining to the Emergency Response Plan will be required. This may be requested by the County's Local Government Designee, Emergency Manager, Local Emergency Planning Commission, Sherriff's Office, site-specific Fire District, or Transportation Department.

18. All representations and commitments of the applicant made during the AUSR process are incorporated herein as conditions of approval.

CITIZEN COMMENTS

Notices were sent to all property owners within a half-mile of the site. One person commented with concerns about traffic impacts. As described in the report and in the application documents, the applicant will be directing traffic east on 132nd Avenue, away from residences, in order to gain access to Interstate 76 as expeditiously as possible. In addition, pipelines will also be utilized so that long-term truck traffic impacts can be mitigated.

Referral Notifications Sent	Referral Comments Received
22	1

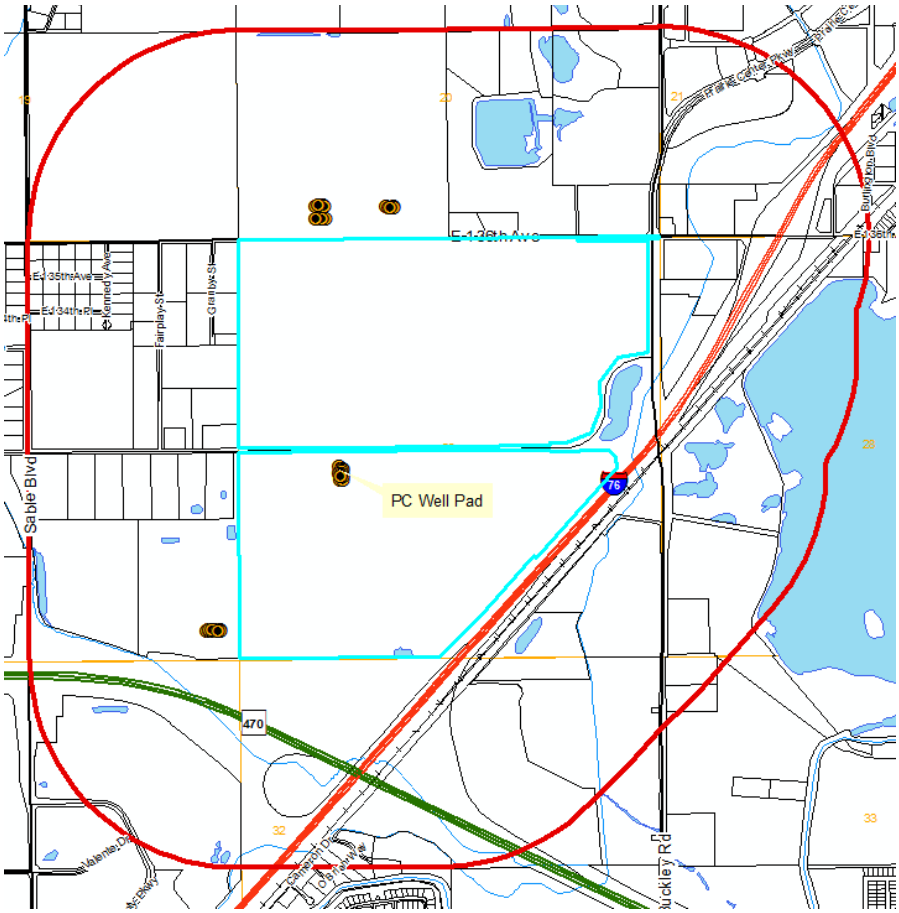

Figure 1. Map showing the ½ mile mailed referral radius from the parcel boundary.

REFERRAL AGENCY COMMENTS

The Community and Economic Development Department determines which outside referral agencies may be affected by the proposed development and provides them with referral packets. Potential referral agencies may include, but not be limited to homeowner's associations, local, regional, state and federal governmental entities, and service providers. Comments received in response to the referral packets are provided to the applicant who is then required to respond to the comments with the intentions of addressing any concerns identified.

Responding with Concerns:
City of Brighton

Responding without Concerns:
Brighton Fire District
Brighton 27-J School District
Tri-County Health
United Power

Notified but not Responding / Considered a Favorable Response:
Colorado Department of Public Health and Environment

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- 2.3 Applicant Site Plan (2)
- 2.4 Sound Impact Assessment

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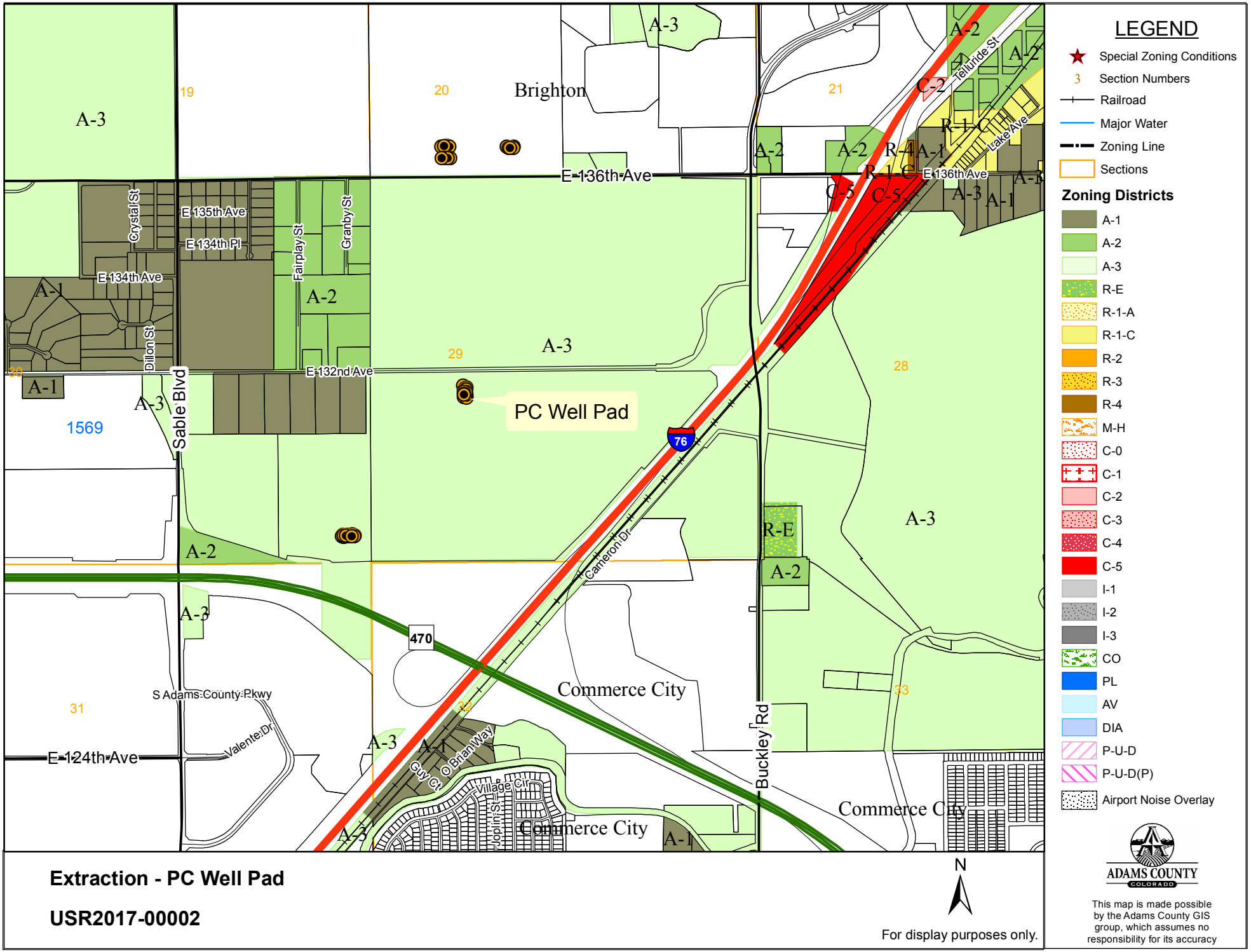
- 3.2 County Agency Comments
- 3.3 Referral Agency Comments
- 3.4 Citizen Comments
- 3.5 Applicant Response to Comments

Exhibit 4- Associated Case Materials
- 4.1 Property Owner Mailing Labels Map
- 4.2 Property Owner Mailing Labels

EXHIBIT 1.1
ZONING MAP



Extraction - PC Well Pad

USR2017-00002

EXHIBIT 1.2
AERIAL MAP

LEGEND

- Special Zoning Conditions
- 3 Section Numbers
- Railroad
- Major Water
- Zoning Line
- Sections

Zoning Districts

- A-1
- A-2
- A-3
- R-E
- R-1-A
- R-1-C
- R-2
- R-3
- R-4
- M-H
- C-0
- C-1
- C-2
- C-3
- C-4
- C-5
- I-1
- I-2
- I-3
- CO
- PL
- AV
- DIA
- P-U-D
- P-U-D(P)
- Airport Noise Overlay

ADAMS COUNTY COLORADO

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Extraction - PC Well Pad

USR2017-00002

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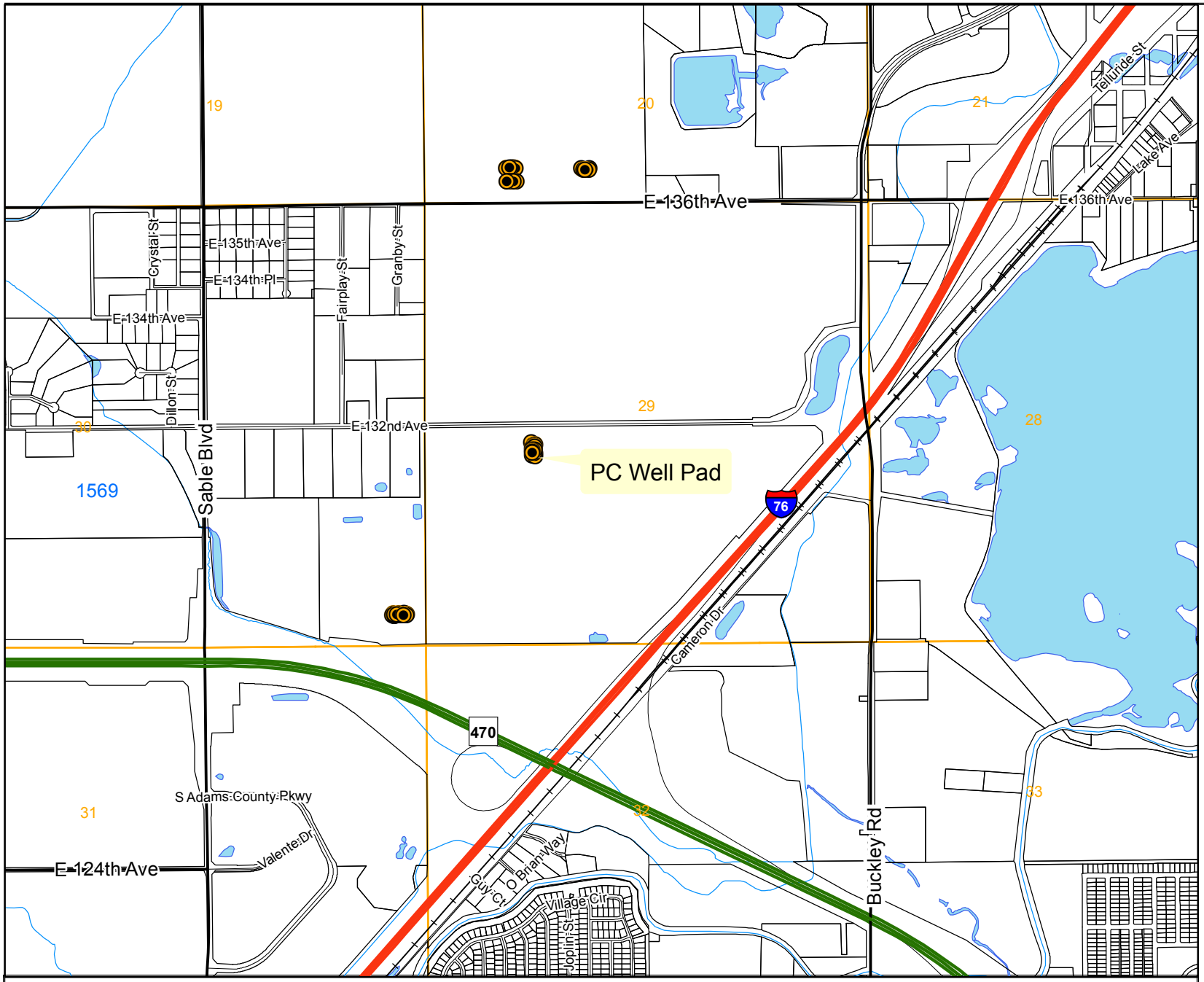
For display purposes only.

EXHIBIT 1.3
SIMPLE MAP



LEGEND

- Special Zoning Conditions
- 3 Section Numbers
- Railroad
- Major Water
- Zoning Line
- Sections

Zoning Districts

- A-1
- A-2
- A-3
- R-E
- R-1-A
- R-1-C
- R-2
- R-3
- R-4
- M-H
- C-0
- C-1
- C-2
- C-3
- C-4
- C-5
- I-1
- I-2
- I-3
- CO
- PL
- AV
- DIA
- P-U-D
- P-U-D(P)
- Airport Noise Overlay

ADAMS COUNTY COLORADO

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Extraction - PC Well Pad

USR2017-00002

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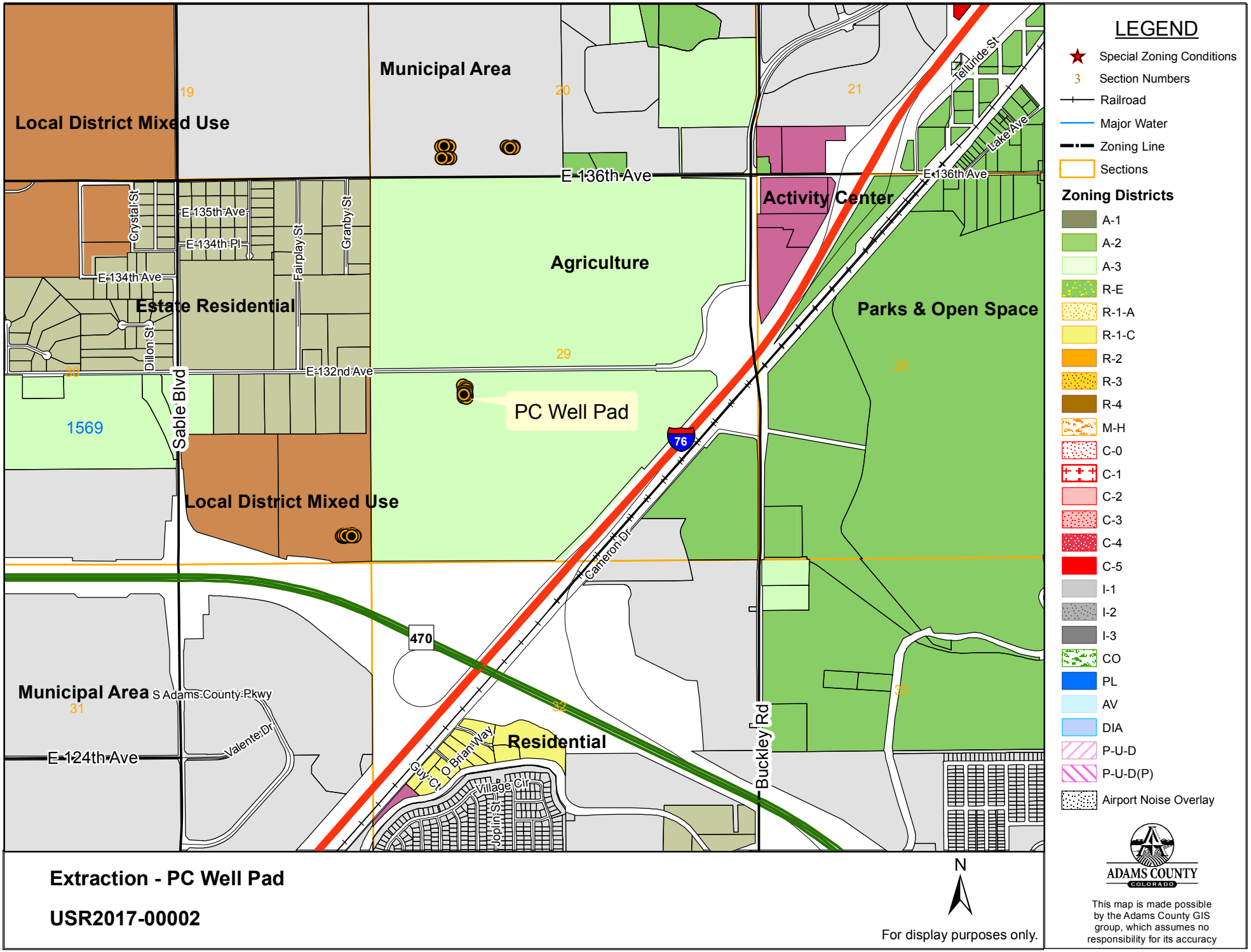
EXHIBIT 1.4
COMPREHENSIVE PLAN MAP



Extraction - PC Well Pad

USR2017-00002

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For display purposes only.

LEGEND

- Special Zoning Conditions
- 3 Section Numbers
- Railroad
- Major Water
- Zoning Line
- Sections

Zoning Districts

- A-1
- A-2
- A-3
- R-E
- R-1-A
- R-1-C
- R-2
- R-3
- R-4
- M-H
- C-0
- C-1
- C-2
- C-3
- C-4
- C-5
- I-1
- I-2
- I-3
- CO
- PL
- AV
- DIA
- P-U-D
- P-U-D(P)
- Airport Noise Overlay

ADAMS COUNTY
COLORADO

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EXHIBIT 2.1
APPLICANT WRITTEN EXPLANATION

Written Explanation

PC Wellpad

Sec. 29 T1S R66W
(N/2 of SW/4)
Adams County, Colorado
Surface: Fee
Mineral Lease: Fee

Written Explanation

The proposed project consists of the construction of one (1) wellpad with up to twenty 20 wells and one access road for an oil and gas location to be operated by HRM Resources II, LLC (HRM). HRM does not intend to drill all (20) wells consecutively. The drilling schedule is subject to change due to economic conditions, business development priorities and equipment availability.

Sequence of Major Activities and Estimated Completion Date

Access Road and WellPad:

Phase I-Pre-Drilling (14 - 21 days)

The access road will be constructed to meet or exceed standards set by Adams County. The access road will be graveled to crown/ditch standards. Ripping and dozing will be done on the contour to prevent erosion while improving the road. There will be minimal traffic during construction. Pad construction will be done simultaneously with road construction. The drilling rig will be moved onto the pad over the bladed road and drilling will begin. Culverts and other good engineering practices will be utilized to insure proper drainage under the access road and around the drill pad. A silt fence and/or ditch with catch ponds, and/or straw bales/waddles will surround the wellpad area during the drilling operations to prevent erosion. Site conditions may dictate alternate erosion control measures which will be chosen appropriately for current on-the-ground conditions.

Phase II-Drilling and Completion (Drilling: 10– 15 days per well, Completion: 5 – 10 days per well)

HRM management will utilize authorized employees and professional contractors to conduct the drilling and completion operations on site. The actual drilling phase is approximately 10-15 days per well, under normal circumstances. Drilling will be continuous, 24 hours a day, for this period. Completion operations will be performed on each well following the drilling phase. Any additional operations including well stimulation will be done at this point.

Phase III-Production

Well completion activities will be completed by this point and the well may be put online. The production facilities will be installed and the wells put on-line. The surface will be re-graded to

its prior condition as nearly as possible. Phase III can last upwards of 30 years depending on well performance. HRM anticipates mobilization and pad construction to begin in (Q3 2017) contingent upon approval from the Adams County and COGCC.

Construction Standards
Access Road:

Running surface width to be 10'-12', with a maximum running road surface of 16', total distributed width to be no more than 40'. Depending on oil and gas production and exploration in the area per design or private surface owner, the road may be widened into a standard road with a 24' running surface.

Borrow ditches are to be back-sloped 3:1 or shallower or as stipulated by the private surface owner. The borrow ditches along the access roads will be reseeded if the well is completed as a producer. Reseeding of the borrow ditches will reduce the area that will be utilized.

If necessary, culverts will be installed prior to commencement of drilling operations. Drainage to consist of borrow ditches on both sides. Low water crossings are not anticipated. However, if necessary, low water crossings will be used during drilling, as conditions dictate and upon completion. Crossings will be upgraded with corrugated metal pipes and/or gravel-bottomed low water crossings. Culverts will be placed on grade and aligned with the natural channel bed. Culvert sizes will be a minimum of 18" diameter.

Construction materials will be obtained from available permitted sources, if needed, and consist of pit gravel.

Wellpad:

The dimension of proposed facilities is anticipated at 490'x 1058', 400,000 sq/ft (±11.9acres). Wellpad construction will commence approximately two (2) to five (5) weeks prior to drilling.

The traveled portion of production site will be gravel-surfaced prior to moving the drilling rig onsite. Site preparation will be done with standard excavation equipment using native materials. Additional surface material will be obtained from commercial sources or an approved borrow area. Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet. In this case, all construction activities which may result in erosion will cease until the soil is deemed dry enough to resume activities.

Production facilities may vary according to the actual reservoir discovered and will be engineered upon completion of well tests. Production facilities will be clustered and placed away from cut/fill slopes to allow maximum recontouring of cut/fill slopes.

Onsite surface production facilities will consist of a maximum of, twenty wellhead manifolds, twenty separators, thirty eight oil tanks, twelve produced water tanks, four vapor recovery towers, eight combustors, two generators, three scrubbers, six vapor recovery units, one gas sales line. Future equipment could include one oil sales line, one LACT unit, and three gas lift compressors. The entire location will be fenced with secure access following the conclusion of completion activities.

Following the construction of the drill site and production facilities, and as-built diagram will be generated, supplied to the county and retained onsite at all times.

Compliance Statement:

The HRM PC Wellpad complies with Section 4-10-02-05-02(3). HRM has worked diligently with the surface owner, in choosing the location that will have the least impacts to the public, environment, and future development. HRM, in conjunction with the landowner, evaluated all potential alternative locations in the area before selecting this site. Please see the Best Management Practices (BMPs) HRM will employ to reduce or eliminate impacts. BMPs may change at any time due to site conditions, enhanced knowledge and technology. The county will be advised if any significant or structural BMP changes. The location was chosen as the ideal site for the following reasons:

- Distance to nearby building units and lack of surrounding building units.
- Alternative locations considered had more building unit conflicts.
- Pad location is outside the Brighton PWS Buffer and Adams County NRCO Overlay.
- Pad access is off a road with minimal traffic.
- There are oil and gas operations planned approximately .5 miles north of the PC pad.
- HRM has plans to utilize locally sourced water found in nearby ditches or hydrants. This will reduce truck traffic which in turn will reduce noise and dust pollution.
- HRM continues to look at midstream options for utilizing pipelines to transfer water, oil and gas. By placing the PC Pad near other proposed oil and gas facilities the prospect for attracting a pipeline increases. If economic, a pipeline will greatly reduce truck traffic in and out of the location for the life of the well. The utilization of pipelines also ensures a safer operation as it greatly reduces the number of tanks that are required on location.

Proposed Mitigation Measures:
Planning

Development from new multi wellpad: HRM is permitting an Oil and Gas Location Assessment - Form 2A as a multi wellpad through the COGCC. This will eliminate the need for multiple wellpads which would ultimately require more surface disturbance. This site was chosen in cooperation with the surface owner to utilize open land as far from building units as possible.

Noise: An ambient sound study will be conducted to determine noise impacts to the nearby residents to the west and north. Based on the results of the noise study, the appropriate sound mitigation design(s) will be implemented. Sound mitigation may include sound walls that once erected will reduce noise pollution.

Odor Mitigation: HRM will comply with COGCC Rule 805 and the Colorado Department of Public Health and Environment (CDPHE), Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII. HRM will also utilize a VOC to reduce odor emissions. The VOC combustor will be placed facing away from the residential buildings.

Visual Mitigation: Pursuant to COGCC Rule 804, the tank battery shall be painted in uniform, non-contrasting, non-reflective color tones with the colors matched to but slightly darker than the surrounding landscape to limit evaporation and waste of liquid hydrocarbons. The site was chosen in cooperation with the developer due to a natural tree barrier to the south that will act as a visual barrier. If sound walls are utilized, they will reduce visual impacts.

Lighting: All permanent lighting will be directed downward and internally. Temporary lighting shall conform to COGCC rules and regulations and not adversely affect adjacent residential

properties. The nearest public road is 100' away. Lighting from the location will not affect visibility on the road. Lights will be directed away from all public ROW. .

Landscaping: HRM will adhere to all Adams County requirements and/or surface owner requests. Where feasible, native vegetation will be minimally impacted. Motorized equipment will be restricted to the wellsite and access road to the wellsite. The location will be fenced to secure the location. Landscaping plan has been agreed to with the surface owner and is included in this application. -See Above Ground Improvements

Weed Control and Management: HRM will manage weed control at the oil and gas facility and along the access road during construction, operations and until final abandonment and final reclamation is completed per Adams County and COGCC regulations.

Dust Mitigation: Fresh water, per COGCC rules, or another approved source will be applied to roads and land surfaces for purposes of dust mitigation as needed. No other liquid or substance generated by the production of the oil and gas facility will be applied to the road and land surface. The wellpad will be graveled, reducing dust pollution.

Erosion Control Measures: HRM will maintain a Stormwater Management Plan with site specific measures for erosion control. HRM will make thorough inspections, in accordance with the requirements set forth by CDPHE Water Quality Division (WQD). The inspection schedule is as follows:

- While site and road is under construction, an inspection is required at least every 14 calendar days;
- Post storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion.

Inspection records will be kept on file for a minimum of five (5) years from expiration or inactivation of permit coverage.

Traffic Control: HRM will construct leasehold road and well site to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition. A Traffic Plan is enclosed. HRM intends to utilize water sources nearby and lay flat surface pipelines which will reduce traffic.

General Housekeeping

Guy Line Anchors: All guy line anchors left buried for future use will be identified by a marker of bright color not less than four feet in height and not greater than one foot further of the guy line anchor.

Removal of Surface Trash: HRM agrees that all trash, refuse pipe, equipment, liquids, chemicals or other materials that are not necessary for the continued operations of the wells will be removed and disposed of no later than 30 days after completion. No such items will be burned or buried on location.

Material Handling and Spill Prevention

Leak Detection Plan: To ensure protection for the surface during fracturing treatment, the location will be specifically constructed to contain any releases or spills. All containment will be constructed of steel with impermeable barriers installed inside and along the internal sidewalks of the containment. Volume capacity will be 110% or greater of the largest tank plus largest annual rainfall.

Leak detection will be monitored by daily operator inspections and remote hi/lo pressure monitoring with electronic shut down functionality. Secondary containment will surround any trucks that carry, mix, or add chemicals to the flow stream as well as connections that could possibly leak fluid. Should any spill or release occur, every reasonable step will be taken to quickly remediate the area disturbed. One (1) to seven (7) inspections per week will be recorded and kept in the district office and available to regulatory agencies. Records will be kept electronically indefinitely. All tanks will have hi level shut down for all producing wells on the pad.

Both gas and oil sales systems will have remote Emergency Shut- Down (ESD) system' functionality and independently tied to the operational status of the purchasing line(s) or vessel, as well as high pressure ESD for all lines and vessels.

Any spills/release reportable to COGCC, will also be reported to Adams County verbally or in writing to the County's Local Government Designee (LGD), Local Planning and Development Department, Sheriff's Office, and the local fire district as soon as possible, but no more than 24 hours after discovery of the spill or release by HRM This includes spills/releases: 1) of any size that impacts or threatens to impacts any waters of the state, a residence or occupied structure, livestock, or public byway; 2) in which one (1) or more barrels of Exploration and Production Waste or produced fluid is spilled or released outside of berms or other secondary containment; and 3) of five (5) or more barrels regardless of whether the spill/release is completely contained within berms or other secondary containment. In addition, HRM will notify the surface owner or the surface owner's tenant of spills/releases in compliance with COGCC rules.

Control of Fire Hazards: HRM and its contractor's will employ best management practices during the drilling and production of its wells and facilities. They will comply with appropriate COGCC and Adams County rules concerning fire and safety. HRM will ensure that any flammable material will remain no less than 25 feet from the wellhead(s), tank(s) and separator(s).

Berm Construction: A steel containment berm or structure will be erected around the oil and water storage tanks. The steel berm will be inspected at least every 14 calendar days while the site is under construction and within 24 hours of a precipitation event. During the production phase one (1) to seven (7) inspections per week will be recorded and kept in the district office and available to regulatory agencies. Records will be kept electronically indefinitely.

Tank specifications: Tanks shall be constructed and maintained in accordance with the National Fire Protection Association Code 30 (2008 version). All tanks will be visually inspected once a day. Recorded inspections will be conducted once a month pursuant to 40 CFR §112.

Material Safety Data Sheets (MSDS) for materials and chemicals used will be kept onsite and updated/modified for each phase of operations. They will be made available to any emergency responders as needed.

Construction

Fencing: The wellsite will be fenced for security and in concurrence with surface owner request.

Drilling/Completion Operations

Closed Loop System: A Closed Loop System will be used for drilling and fluid management. No reserve pit will be used. Water based cuttings will be generated and assessed for land farming applications. Any cuttings other than water based will be hauled to an approved waste disposal site.

Green Completions: Emission Control Systems. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completion techniques pursuant to COGCC Rules.

Air Emissions: Air emission sources shall comply with provisions of the state air quality control program and the rules and regulation promulgated by the State Air Quality Control.HRM will employ control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere.

Wildlife and Wildlife Habitat: The proposed oil and gas wells fall within the Adams County NRCO district. HRM contracted a independent consultant to evaluate the potential impact of the operations within the NRCO boundary. The study determined HRM will not cause significant degradation of wildlife.

BOPE for well servicing operations: Adequate blowout prevention equipment will be used on any servicing operations associated with this well. Backup staving valves shall be required on well servicing operations during reverse circulation. Valves will be pressure tested before each well servicing operation using both low-pressure and high-pressure fluid.

Water Sampling: HRM will adhere to COGCC Rule 318.A. HRM will utilize COGCC's criteria and protocol for analysis and submission to the COGCC data system. If there are no available water sources within a ½ mile radius of the proposed oil and gas facility, HRM will test the nearest downgradient water source within a one (1) mile radius prior to construction.

Interim Restoration (Production): Rehabilitation of unneeded, previously disturbed areas will consist of back sloping, and contouring all cut/fill slopes. These areas will be reseeded. The portions of the cleared well site not needed for operational and safety purposes will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after recontouring to allow for maximum interim reclamation.

Final Reclamation

Well site cleared. Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site.

EXHIBIT 2.2
APPLICANT SITE PLAN

N

SW $\frac{1}{4}$ SEC. 29 T1S, R66W

1,058' x 490' INITIAL AREA OF DISTURBANCE ± 11.90 ACRES

1,058' x 490' INITIAL AREA OF DISTURBANCE ± 11.90 ACRES

100'

25' WIDE ACCESS DRIVE

25' WIDE DOUBLE SWING GATE

PERIMETER SCREENING FENCE

50' WIDE DRIVE AREA

45' WIDTH BETWEEN LANDSCAPE BERMS FOR EQUIPMENT ACCESS

25' WIDE DOUBLE SWING GATE

950' x 360' ON THE LONG SIDES, FINISHED WELLPAD AND EQUIPMENT AREA ± 7.26 ACRES

EDGE OF ROAD, EAST 132ND AVENUE

EDGE OF ROAD ROW

25' WIDE PIPELINE ROW

30'

16 WELLHEADS

15' TYP.

FOR FUTURE APPROVED 4 WELLHEADS

GAS LIFT METER/ SPLITTER BUILDING

SAND FILTERS (AS NEEDED)

24" HIGH CONTAINMENT WALL (TYP.)

GAS LIFT COMPRESSOR

8 COMBUSTERS

6 VRU'S

LP/HP GAS SCRUBBERS

INSTRUMENT AIR SKID

16 VHLP SEPARATORS

OVERHEAD PIPE SUPPORTS

OVERHEAD PIPE SAFETY BARRIERS (2)

VRT, TANK KNOCKOUTS

BLOWCASE

T-201 T-202 T-203 T-204 T-205 T-206 T-207 T-301

T-208 T-209 T-210 T-211 T-212 T-213 T-214 T-302

2–300 SERIES PRODUCED WATER TANKS

2 VRT'S

TRUCK LOADING @ 4 CORNERS (TYP.)

14–200 SERIES OIL STORAGE TANKS

LACT BUILDING

FUTURE BOOSTER COMPRESSOR

GENERATORS (IF NEEDED)

PDC BUILDING

TRANSFORMER

LAUNCHERS

28' DRIVE AREA

100' SETBACK FROM ROAD

INTERIM RECLAMATION AREA, INCLUDES LANDSCAPING AND REVEGETATION ± 4.8 AC.

25' WIDE PIPELINE CORRIDOR FROM FACILITY

35' WIDE LANDSCAPED AREA AROUND PERIMETER (TYP. 4 SIDES)

MEANDERING BERMS 3' HIGH (TYP.) AROUND FACILITY PERIMETER

LANDSCAPING LEGEND

- AUSTRIAN OR PONDEROSA PINE
- ROCKY MOUNTAIN JUNIPER
- NATIVE SHRUBS
- EDGE OF 3' HIGH BERMS
- PERIMETER SCREENING FENCE

NOTES:

1. LIMITS OF DISTURBANCE ±11.90 ACRES
2. LIMITS OF FINISHED PAD ±7.26 ACRES
3. AREA OF INTERIM RECLAMATION ±4.64 ACRES
4. LOCATIONS SHOWN FOR LANDSCAPING ARE FOR EXAMPLE PURPOSES ONLY, AND DO NOT REFLECT EXACT LAYOUT LOCATIONS

HRM RESOURCES II, LLC

REVISIONS

1	WELLS/EQUIPMENT COUNTS UPDATED	05/29/2017	CEK	
0	ISSUED FOR PERMITTING	01/26/2017	CEK	

Mesa Applied Technologies, LLC

FACILITY LAYOUT W/PERIMETER LANDSCAPING
PROP. TANK BATTERY W/WELLPAD
SECTION 29 T1S, R66W
ADAMS COUNTY, COLORADO

DRAWN BY: CEK 1/07/2017	REVIEWED BY:	SCALE: NTS	
CHECKED BY:	APPROVED BY:	DRAWING NUMBER: SEC29–EQUIPLANDSCAPE	

May 31, 2017 - 3:12pm by craig - Path = C:\Projects\HRMR2 Section 29 Kronke\Sec 29 Prairie Center Equipment Landscape Plan 2-17-17.dwg

EXHIBIT 2.3
APPLICANT SITE PLAN (2)

HRM RESOURCES II, LLC

Mesa Applied Technologies, LLC

LOCATION DRAWING

PRAIRIE CENTER TANK BATTERY W/WELLPAD

SECTION 29 T1S, R66W

ADAMS COUNTY, COLORADO

DRAWN BY: CEK 12/07/2016	REVIEWED BY:	SCALE: NTS
CHECKED BY:	APPROVED BY:	DRAWING NUMBER: SEC29-LOC

May 31, 2017 - 3:13pm by craig - Path = C:\Projects\HRM\2 Section 29 Kronke\Section 29 BUFFER ZONES 12-7.dwg

EXHIBIT 2.4
Sound Impact Assessment

Sound Impact Assessment

Prairie Center South Pad

Adams County, Colorado

Prepared for:

Extraction Oil & Gas, Inc.
370 17th Street, Suite 5300
Denver, CO 80202

Prepared by:

Principle Environmental, LLC
201 West Ranch Court
Weatherford, Texas 76087

June 28, 2017

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Wind Chart ..... **Attachment 2**

Table of Typical Sound Levels ..... **Attachment 3**

Executive Summary

Principle Environmental, LLC (TruHorizon) prepared this report to investigate the anticipated sound impact of drilling and hydraulic fracturing operations on the surrounding environment at the Prairie Center (PC) Pad located in Adams County, Colorado. Sound levels from the Patterson Drilling Rig and Liberty regular fracturing operations have been modeled for the PC location. **Table 1** shows the estimated sound levels at the closest structure.

Table 1: Sound Levels at Closest Residential Structure (dBA)

Mitigation	Drilling (dBA)	Drilling (dBC)	Completions (dBA)	Completions (dBC)
No Mitigation	53.8	68.2	60.8	78.9
32 ft. Mitigation (Op. 1)	49.9	60.8	54.7	70.6
32 ft. Mitigation (Op. 2)	50.0	61.1	56.7	73.9

The sound levels generated by oil and gas operations are expected to exceed 65 dBC at nearby structures. Two mitigation options are shown for drilling and completion operations. 32 foot mitigation on the west, north and east side of the pad is recommended for completion operations. 32 foot mitigation on only the west side of the pad is recommended for drilling operations. Please note sound levels will not decrease below ambient sound conditions.

Ordinance Summary

In December 2005 Ordinance No. 1R-99 was enacted for the State of Colorado by the Colorado Oil and Gas Commission which regulates the environmental performance standards. Section 802 sets regulations to establish a process for reasonable noise control.

Section 802 states that “Sound levels shall be measured at a distance of three hundred and fifty (350) feet from the noise source”, or “sound levels shall be measured at a point twenty-five (25) feet from the structure towards the noise source.”

In situations where measurement of noise levels at three hundred and fifty (350) feet is impractical or unrepresentative due to topography, the measurement may be taken at a lesser distance and extrapolated to a 350-foot equivalent using the following formula:

$$dB(A)_{DISTANCE\ 2} = dB(A)_{DISTANCE\ 1} - \left(20 \times \log_{10}\left(\frac{distance\ 2}{distance\ 1}\right)\right)$$

Noise levels not to exceed designated limits in **Table 2** during the stated time frames:

Table 2: COGCC Zones and Designated Limits for Oil and Gas Operations

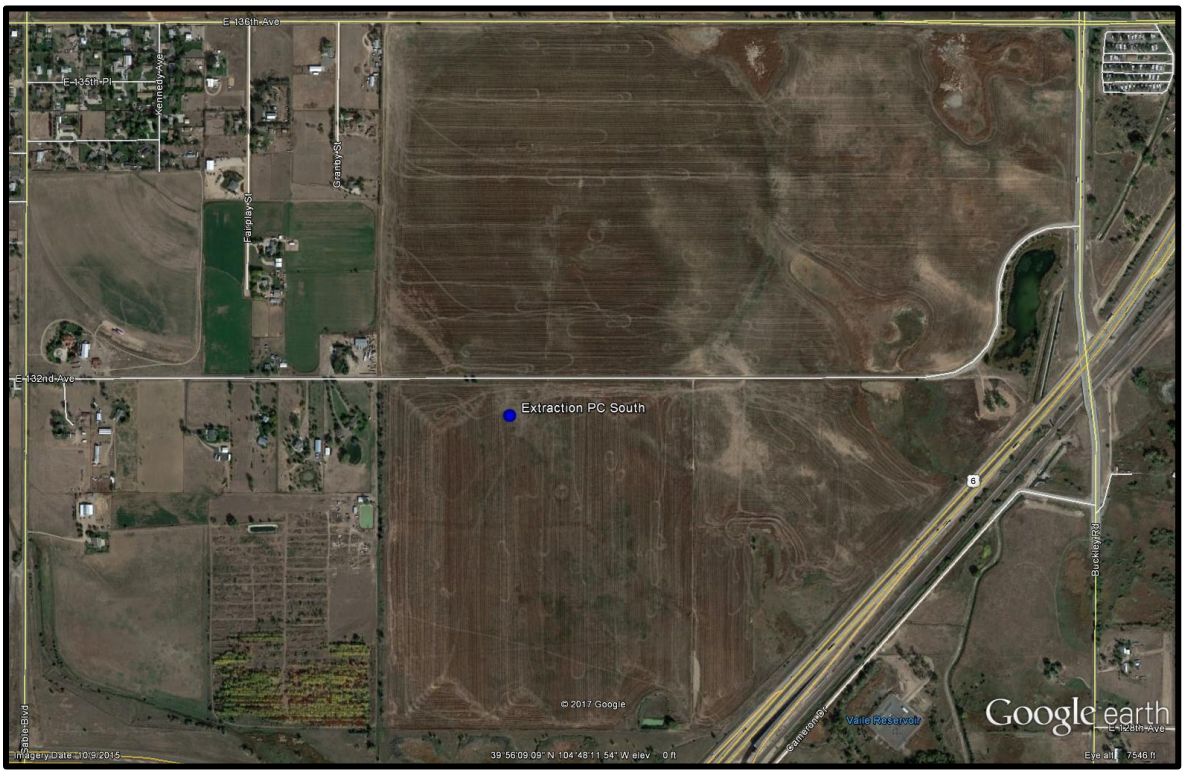
ZONE	7:00 a.m. – 7:00 p.m.	7:00 p.m. – 7:00 a.m.
Residential	55 dB(A)	50 dB(A)
Commercial	60 dB(A)	55 dB(A)
Light industrial	70 dB(A)	65 dB(A)
Industrial	80 dB(A)	75 dB(A)

- Sound level measurements shall be taken four (4) feet above ground level.
- Sound levels shall be determined by averaging minute-by-minute measurements made over a minimum fifteen (15) minute sample duration.
- Sound levels that are C-weighted for low frequency shall not exceed 65 dB(C) when measured twenty-five (25) feet from the exterior wall of the residence or occupied structure nearest to the noise source, in the event of a complaint.

Site Information

The PC pad is to be located south of E 132nd Avenue and east of Sable Boulevard. The coordinates for the proposed site are 39°56'7.07"N, 104°48'19.55"W. **Figure 1** below shows the vicinity of the PC location, designated by the blue dot. There are several structures near the site. The closest structure is approximately 1,000 feet to the west of the location. There are also several homes and other structures further to the west and north.

Figure 1: Aerial View of PC Location



The site is in an open field with tall grass, with no major obstructions in close proximity.

Equipment Noise Signature Data

TruHorizon performed a sound signature on the Patterson Drilling rig 284 as well as the Liberty hydraulic fracturing equipment utilized by Extraction. The full layout and sound levels of the Liberty operation can be found in **Attachment 1**. Please reference the Extraction Johnson Trust Noise Signature 160829 for additional information. The following sound levels in **Table 3** are utilized in the models:

Table 3: PC Site Sound Sources (dBA) at Selected Distances (ft.)

Sound (Point Source)	Quantity	Sound Level (dBA)	Distance (ft.)
Patterson Drill			
Rig Floor	1	74.20	1
Generators	3	98.94	1
Shakers	2	70.52	1
Liberty Hydraulic Fracturing			
Liberty Fracturing Pump	21	87.1	3

Sound Model Limitations and References

By modeling the geographical properties of the location and utilizing equipment sound level data sound levels around the location can be predicted at specific locations. The predicted sound levels can then determine if mitigation is required. TruHorizon utilized DataKustik CadnaA version 2017 MR 1 software for the calculation and assessment of noise propagation to generate the models in the report.

Pre-existing sound sources such as those from road traffic, weather, animals, air traffic and other ambient sounds are not included in the models. Weather conditions such as wind speed, wind direction, temperature and humidity can influence sound intensity and direction. Wind can affect the propagation of sound by several decibels depending on the wind speed, direction and cloud cover. A chart of attenuation of sound due to wind is provided in **Attachment 2**. For conservatism and the uncertainty of the season, TruHorizon omitted foliage in the models. The sound levels generated in the models are strictly from oil and gas operations; measured sound

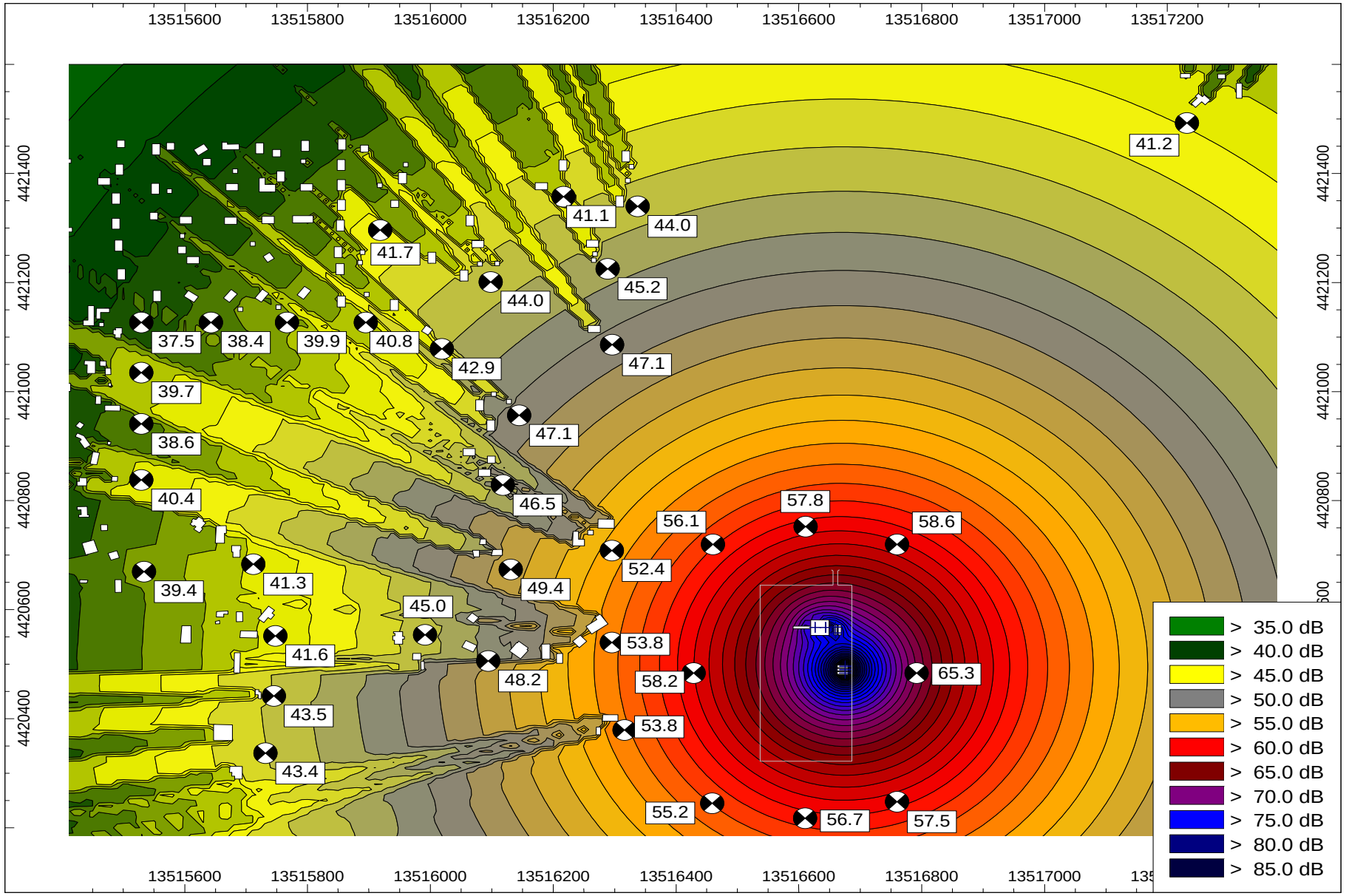
levels may differ from those in the model. **Attachment 3** details typical decibel levels for various types of sounds for reference and comparison. TruHorizon added on-site berms to the model based on site drawing PDFs provided by Extraction. The heights and shapes have been estimated and may differ from on-site conditions.

Predictive modeling of C-weighted sound data is not included in the International Standard ISO 9613 (Acoustics—Attenuation of sound during propagation outdoors.)

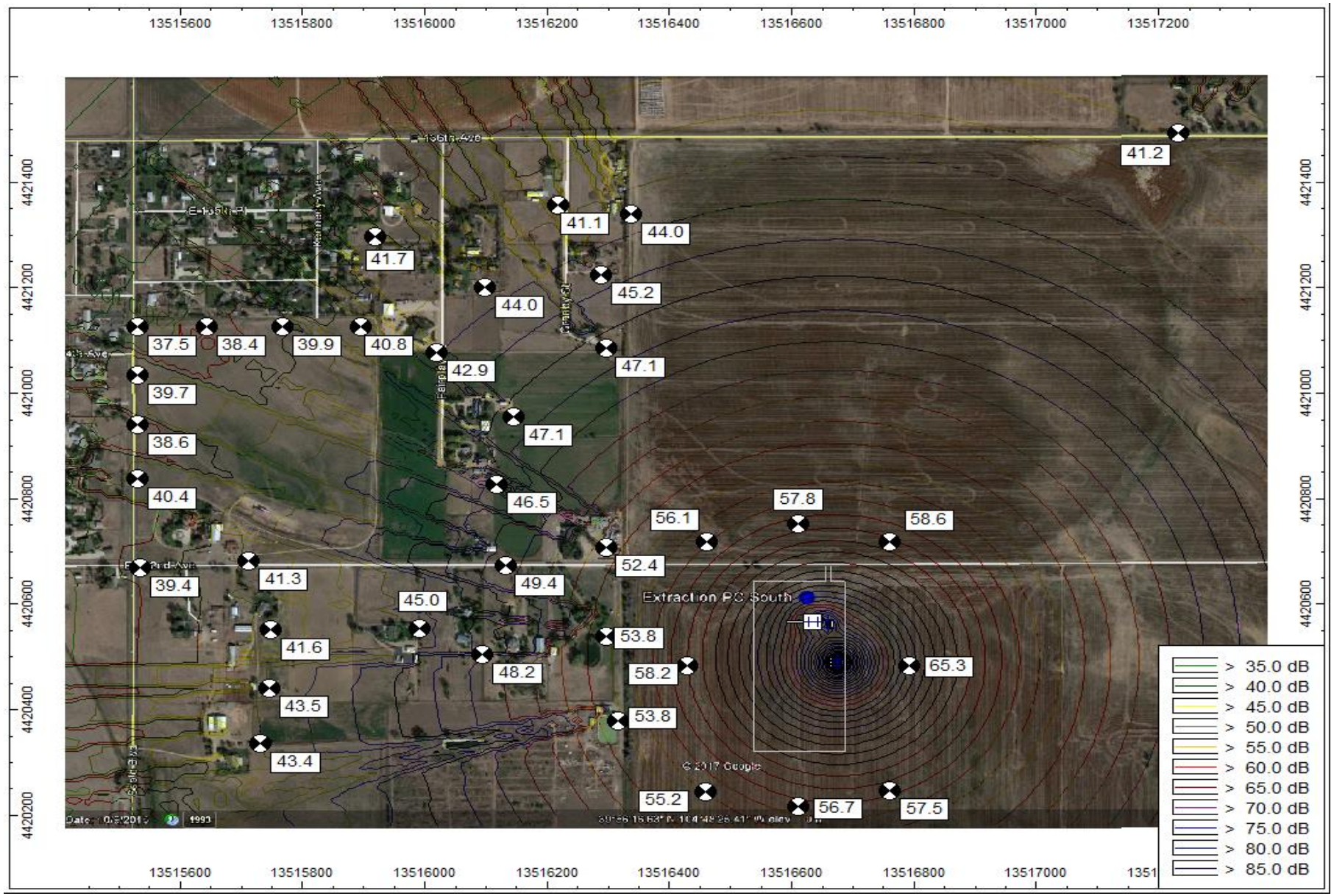
The services provided for the project was performed with the care and skill ordinarily exercised by reputable members of the profession practicing under similar conditions. No warranty, expressed or implied, is made or intended by rendition of these consulting services or by furnishing oral or written reports of the findings made. This report has been prepared by Principle Environmental, LLC for the exclusive use by Extraction Oil & Gas, Inc.

All models are oriented in the northern direction.

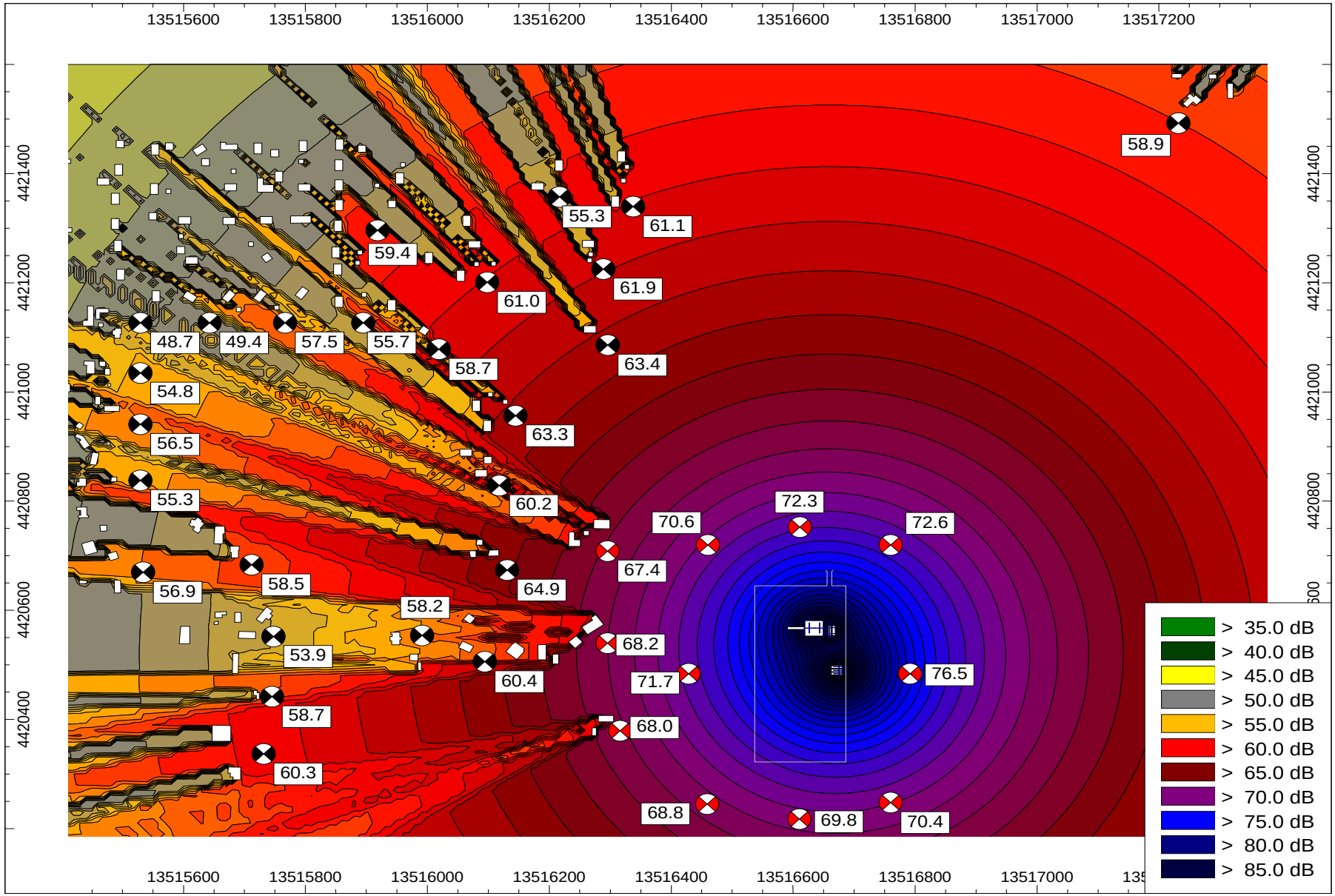
Model 1: Patterson Drilling Operations (A-Weighted Levels)



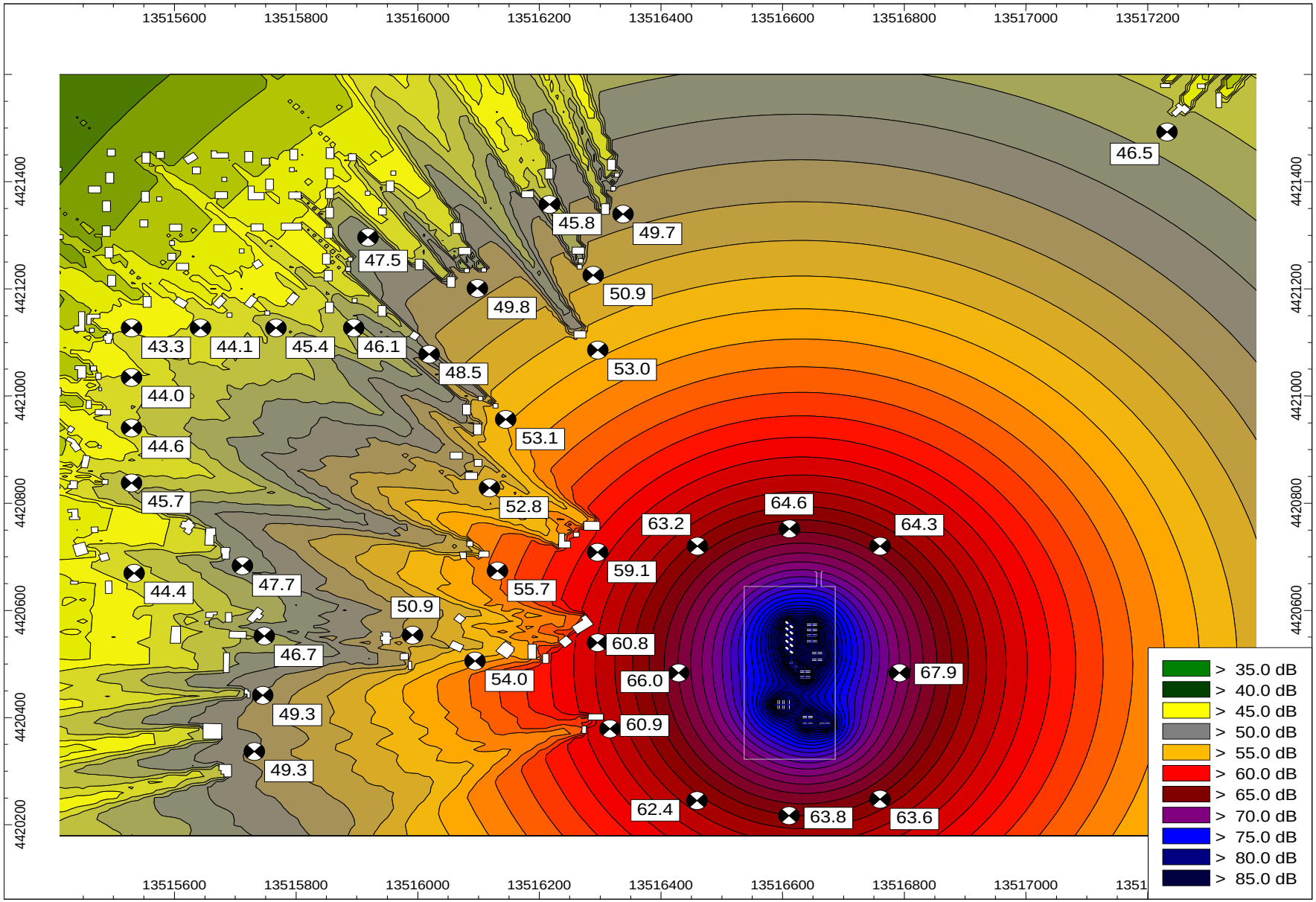
Model 2: Patterson Drilling Operations (A-Weighted Levels)



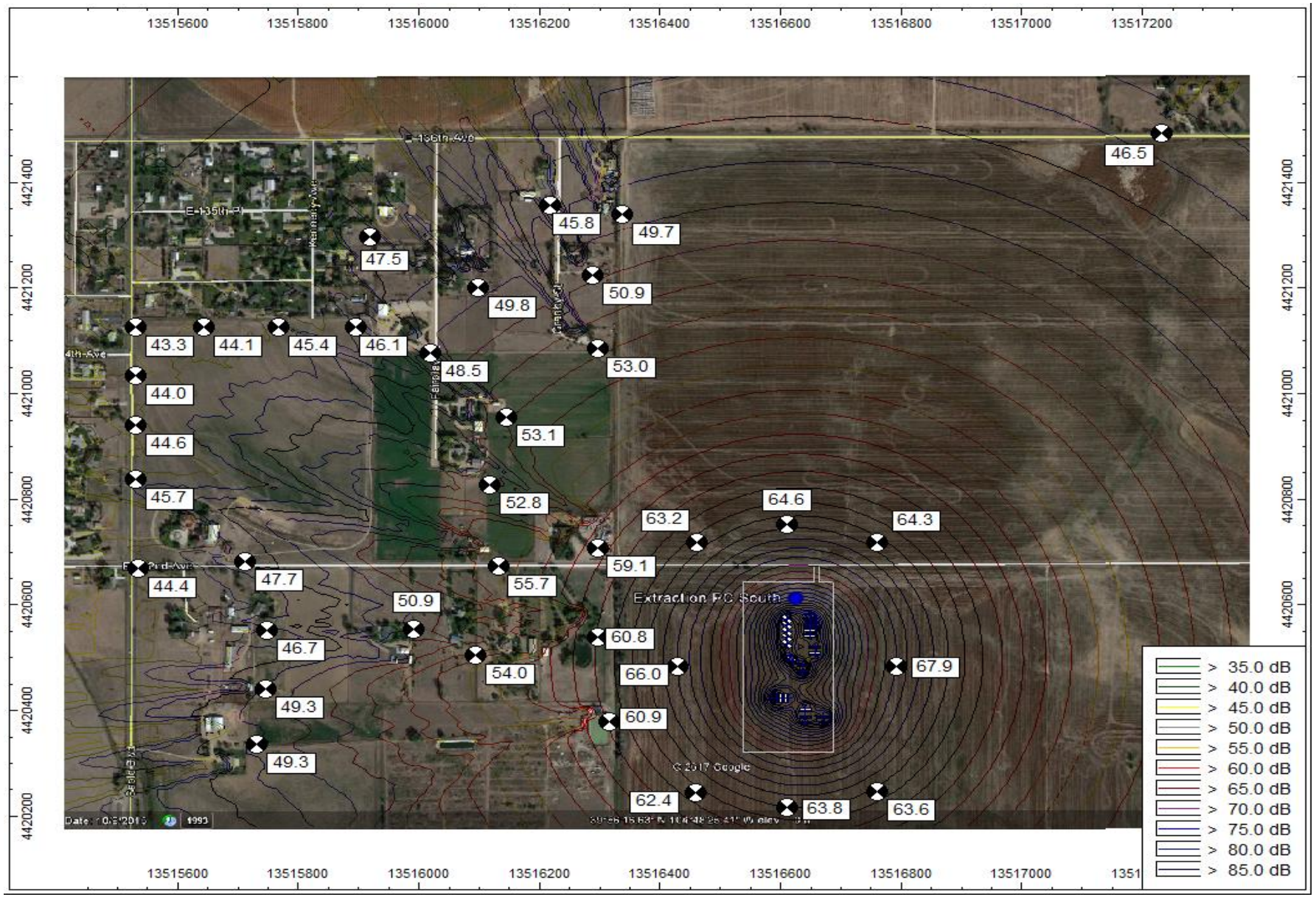
Model 3: Patterson Drilling Operations (**C-Weighted Levels**)



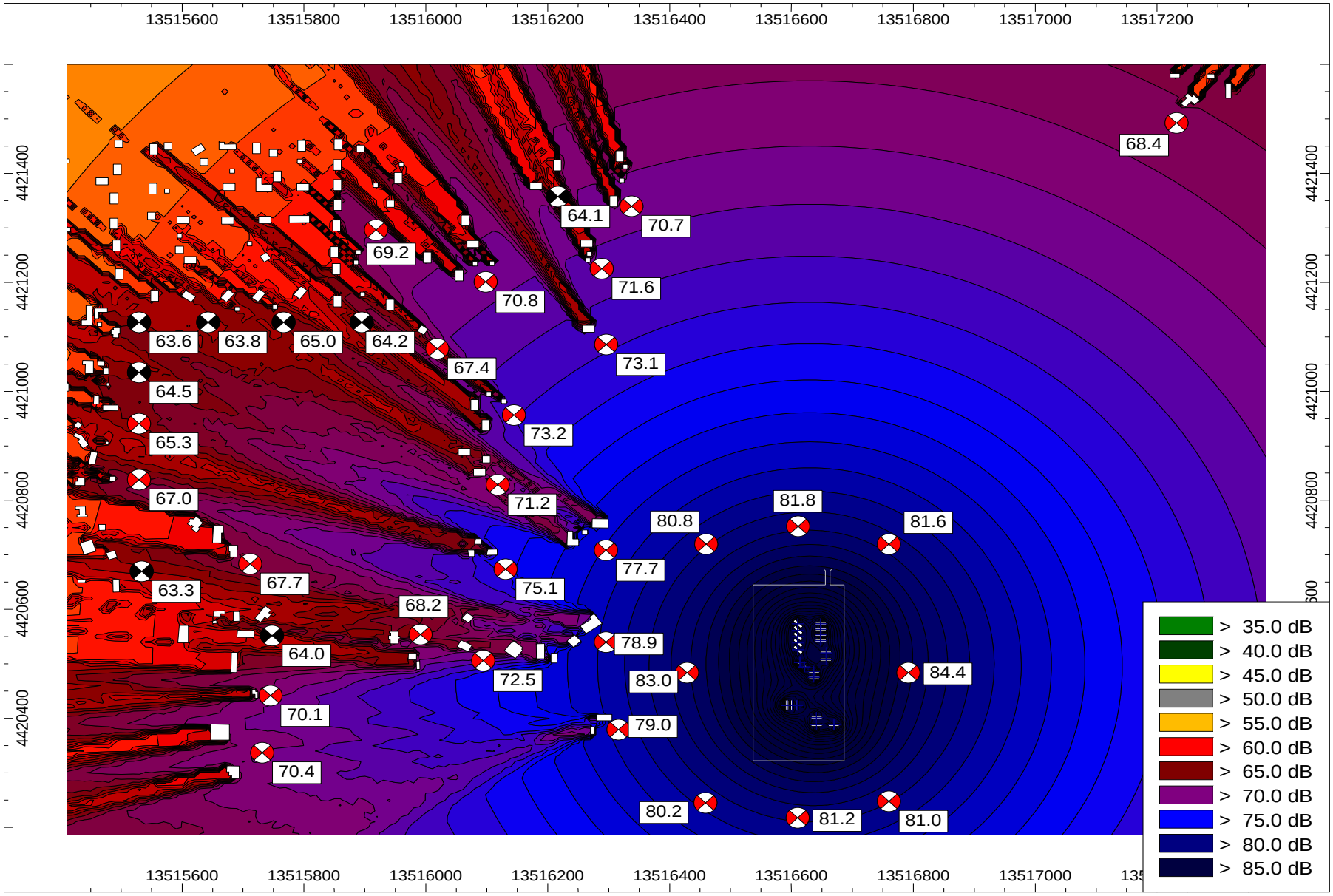
Model 4: Liberty Completion Operations (A-Weighted Levels)



Model 5: Liberty Completion Operations (A-Weighted Levels)



Model 6: Liberty Completion Operations (**C-Weighted Levels**)



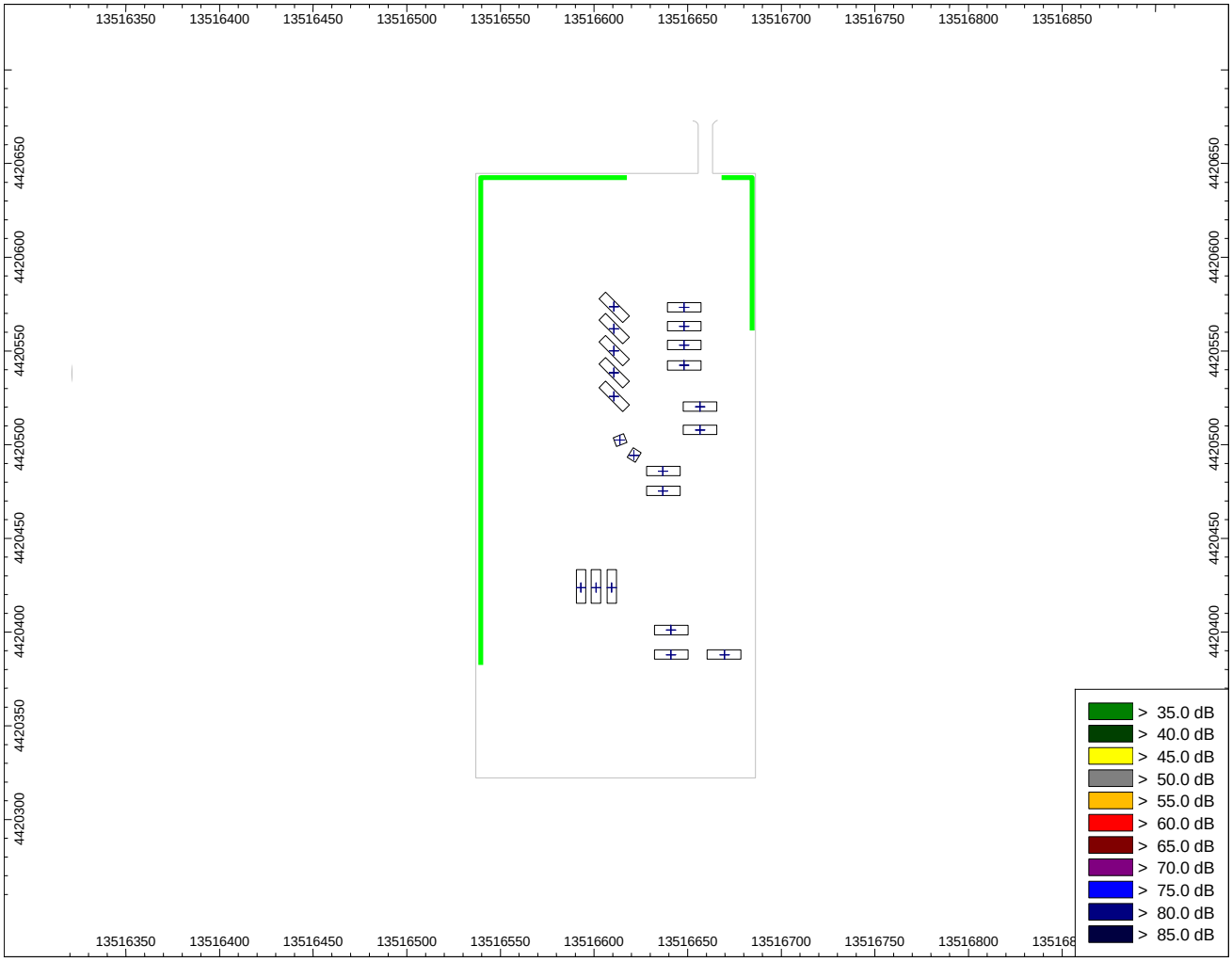
Site Recommendations

The sound levels at nearby residential structures are expected to require abatement based on COGCC requirements. The placement of barriers with this configuration will reduce the noise impact for the surrounding area. The lengths of all barriers are approximate; final lengths will be determined on site. **Figures 2** & **3** show the mitigation layouts; the green line denotes the recommended barrier.

Option 1: Completions Mitigation

- Approximately 260 linear feet of 32 foot high barrier on the eastern side of the pad
- Approximately 860 linear feet of 32 foot high barrier on the western side of the pad
- Approximately 300 linear feet of 32 foot high barrier on the northern side of the pad

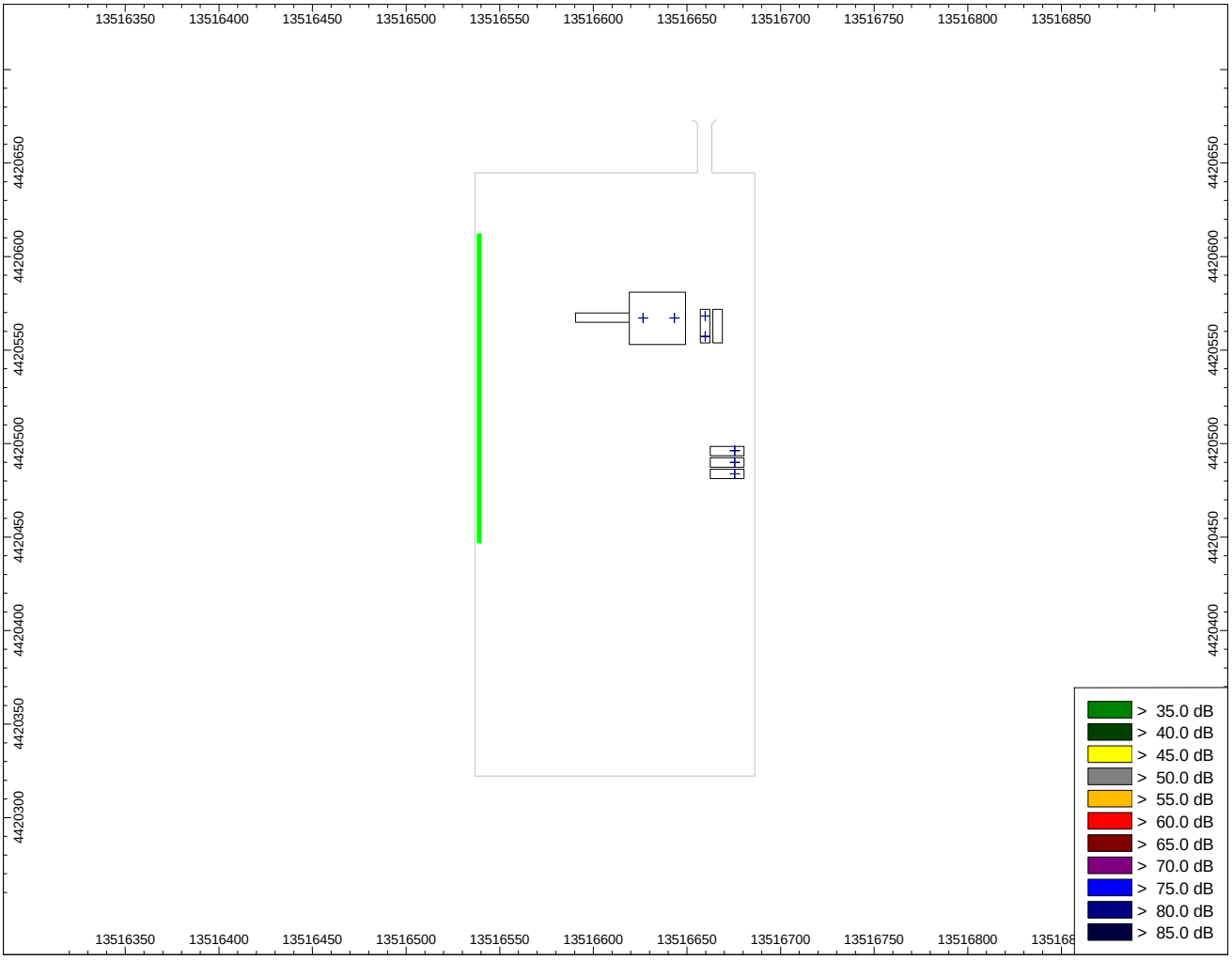
Figure 2: Liberty Completion Operations Mitigation Layout



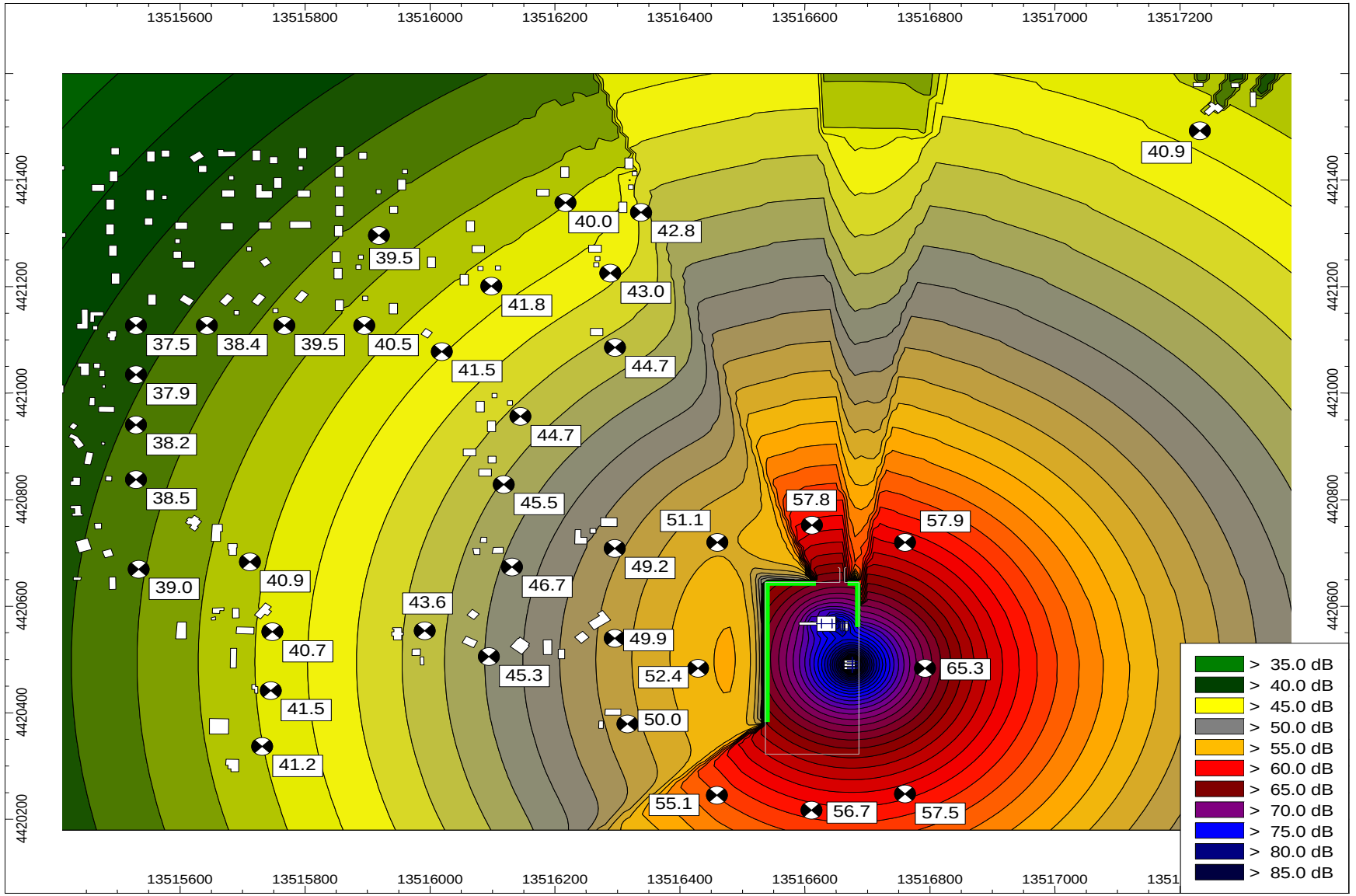
Option 2: Drilling Mitigation

- Approximately 540 linear feet of 32 foot high barrier on the western side of the pad

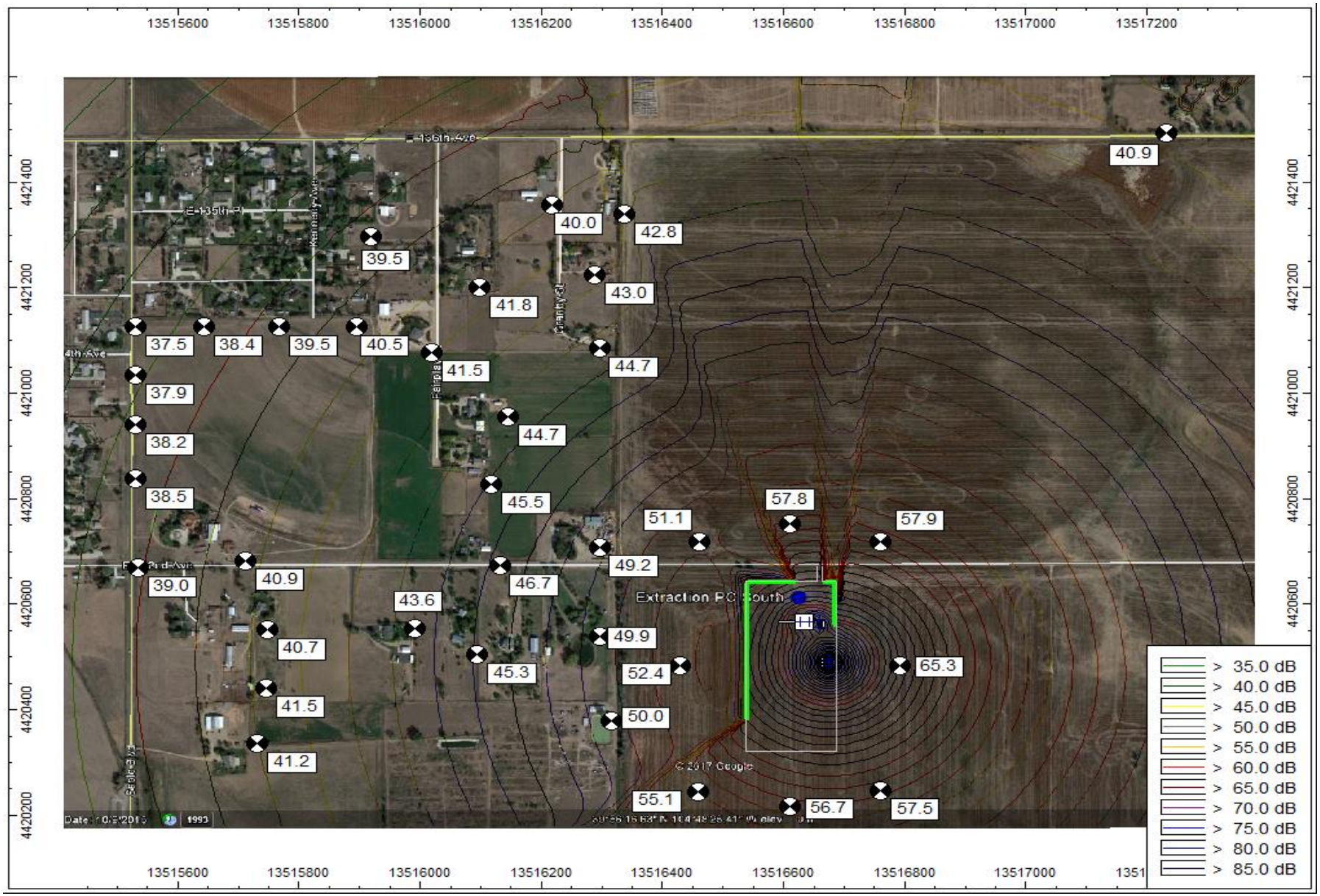
Figure 3: Patterson Drilling Operations Mitigation Layout



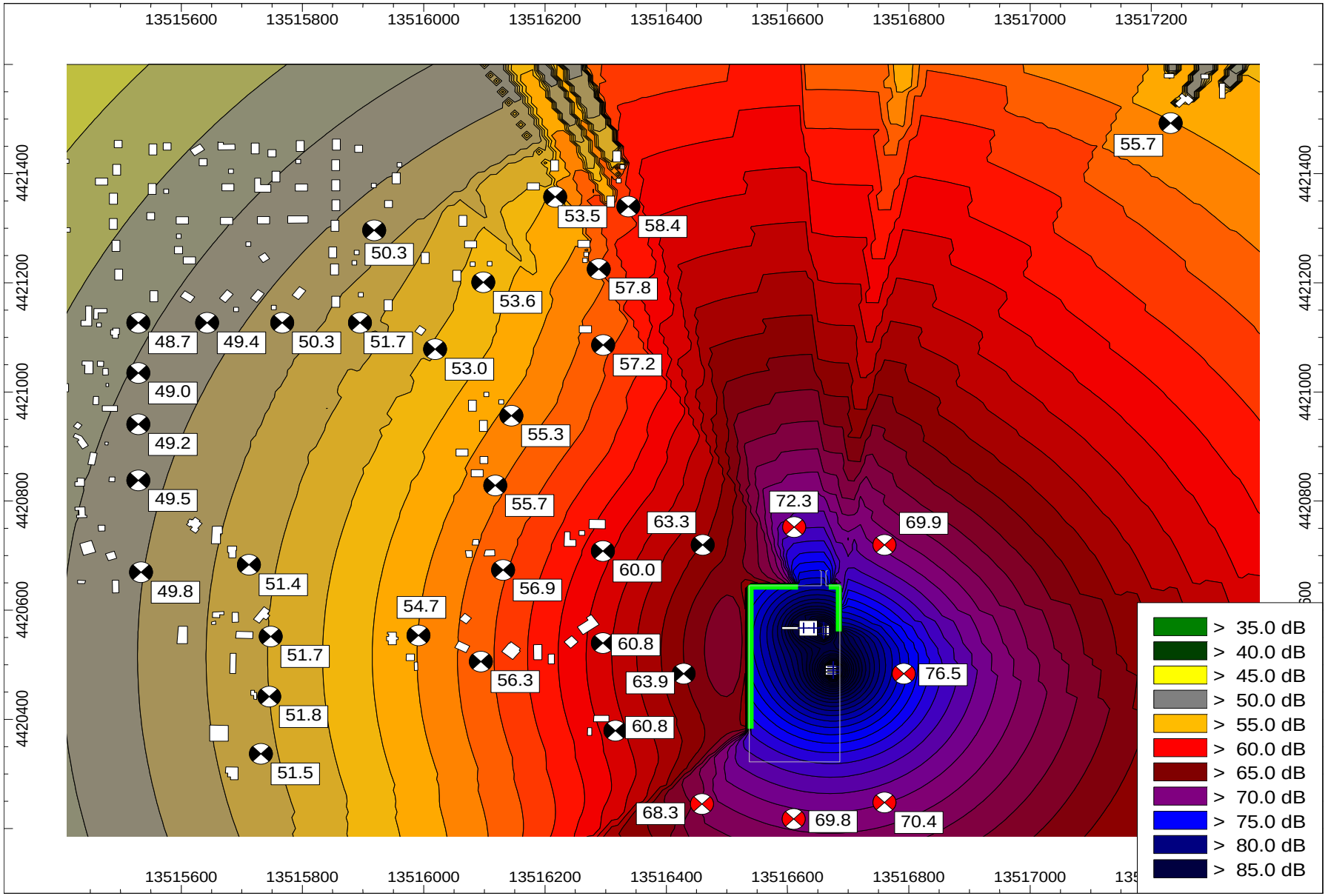
<u>Model 7</u>: Patterson Drilling Operations with Option 1 Mitigation (A-Weighted Levels)



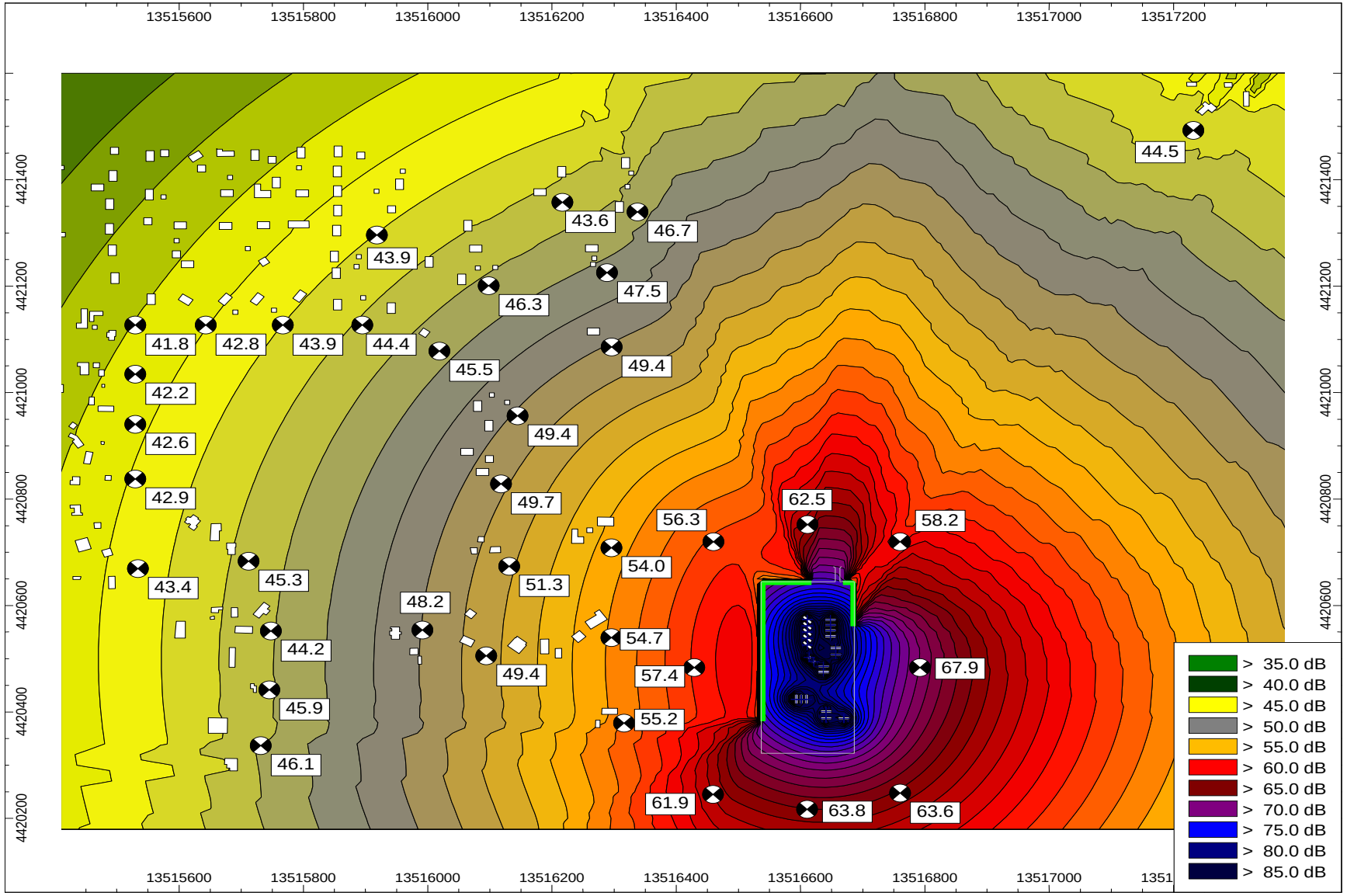
Model 8: Patterson Drilling Operations with Option 1 Mitigation (A-Weighted Levels)



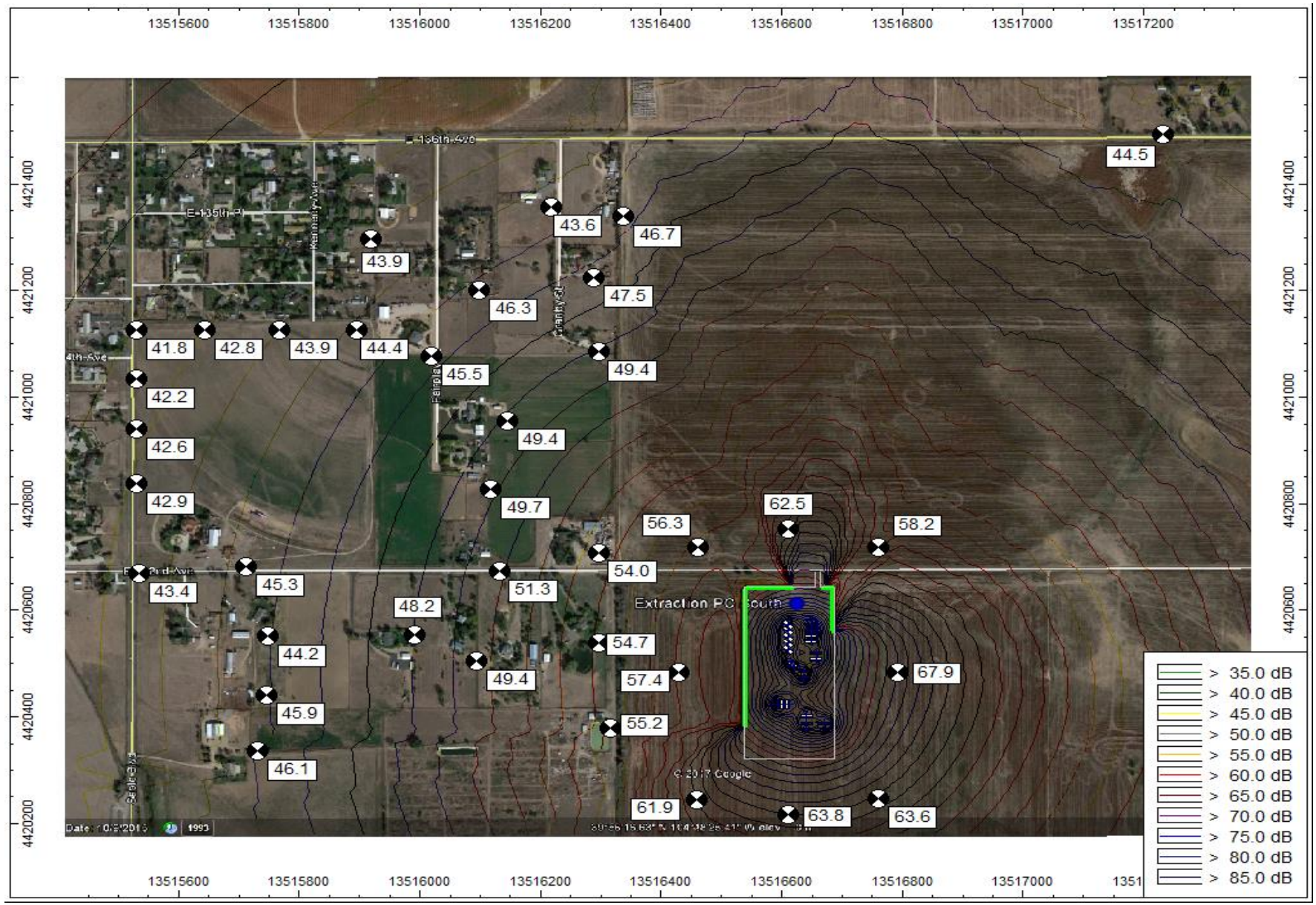
Model 9: Patterson Drilling Operations with Option 1 Mitigation (**C-Weighted Levels**)



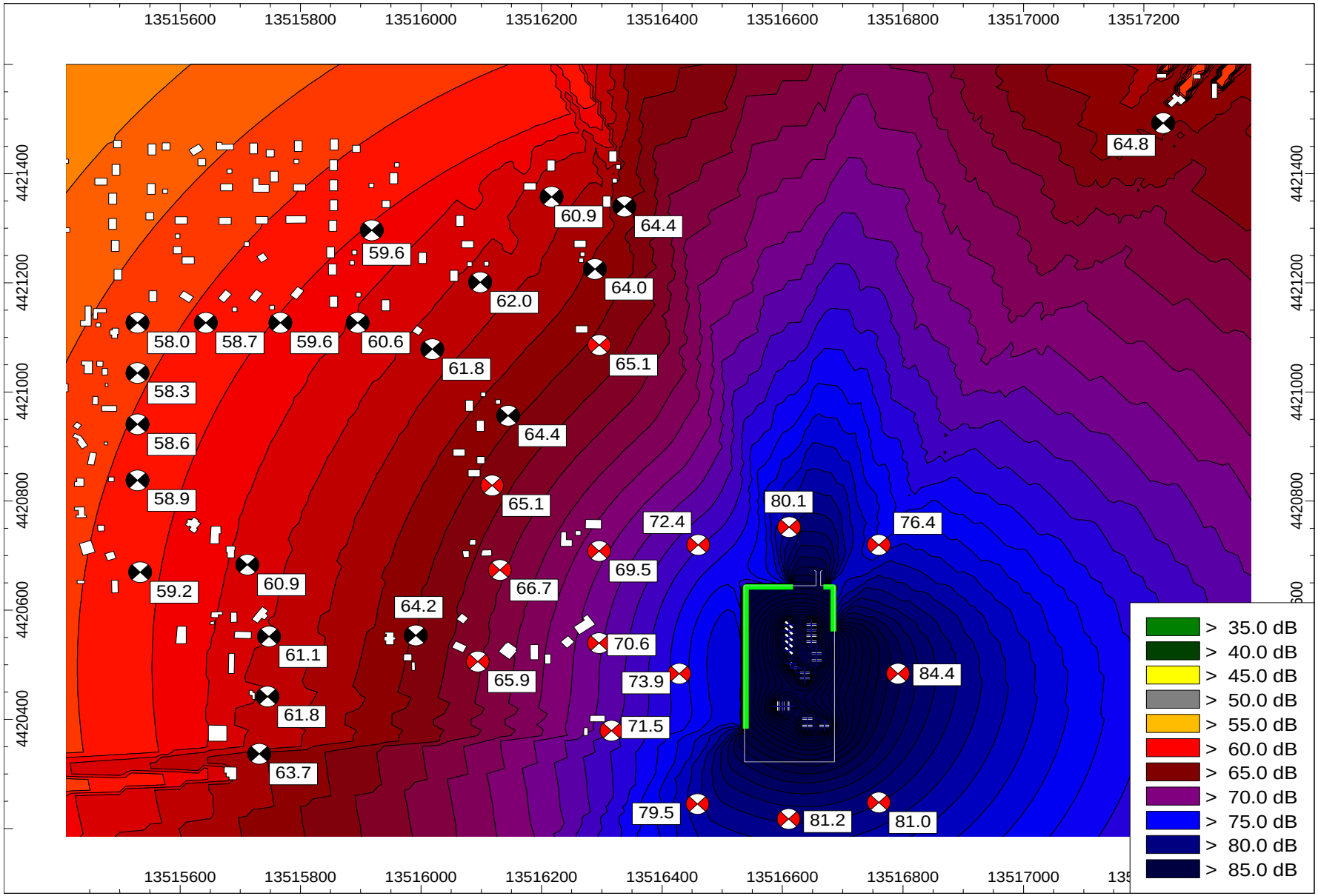
Model 10: Liberty Completion Operations with Option 1 Mitigation (A-Weighted Levels)



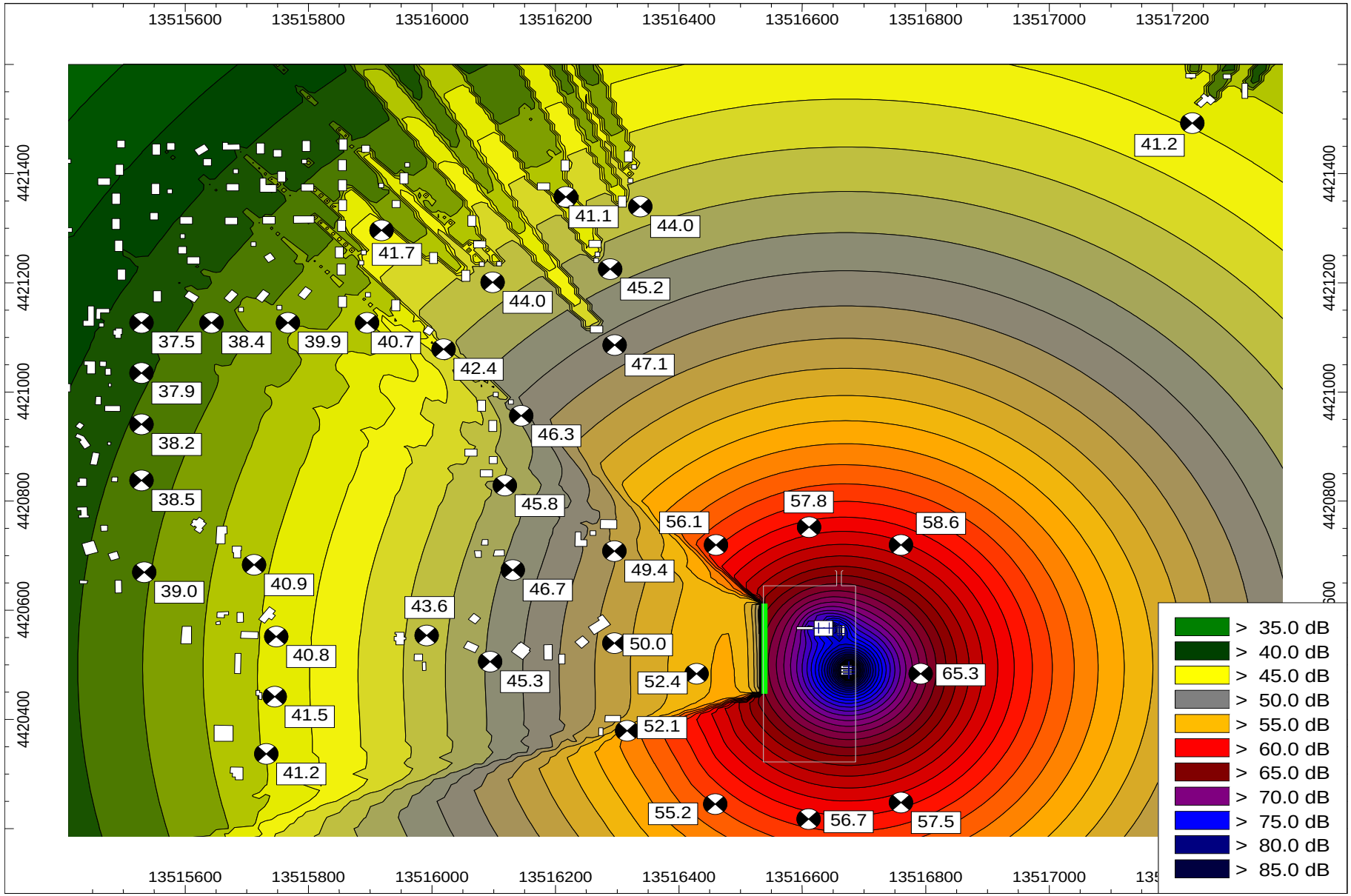
Model 11: Liberty Completion Operations with Option 1 Mitigation (A-Weighted Levels)



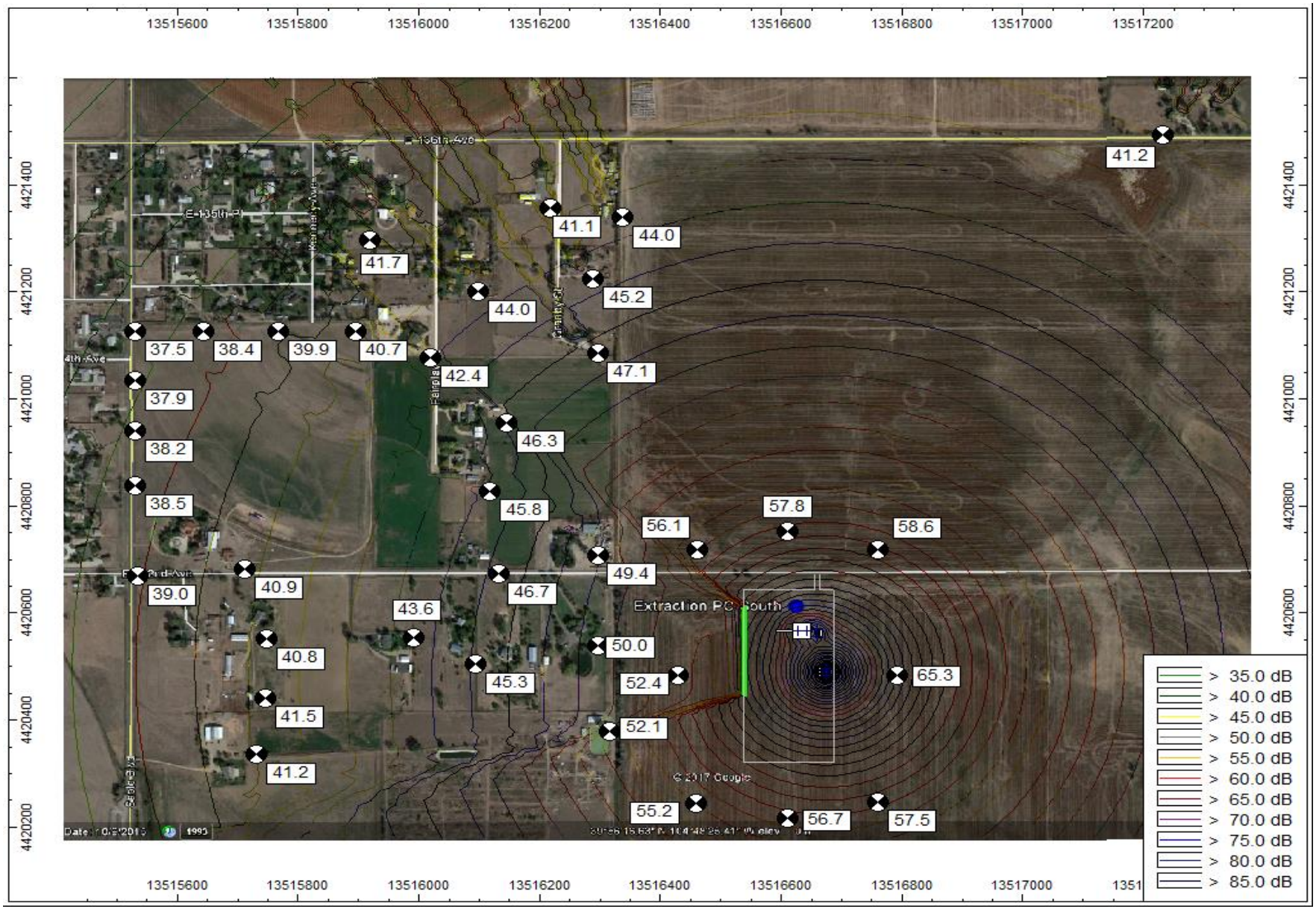
Model 12: Liberty Completion Operations with Option 1 Mitigation (**C-Weighted Levels**)



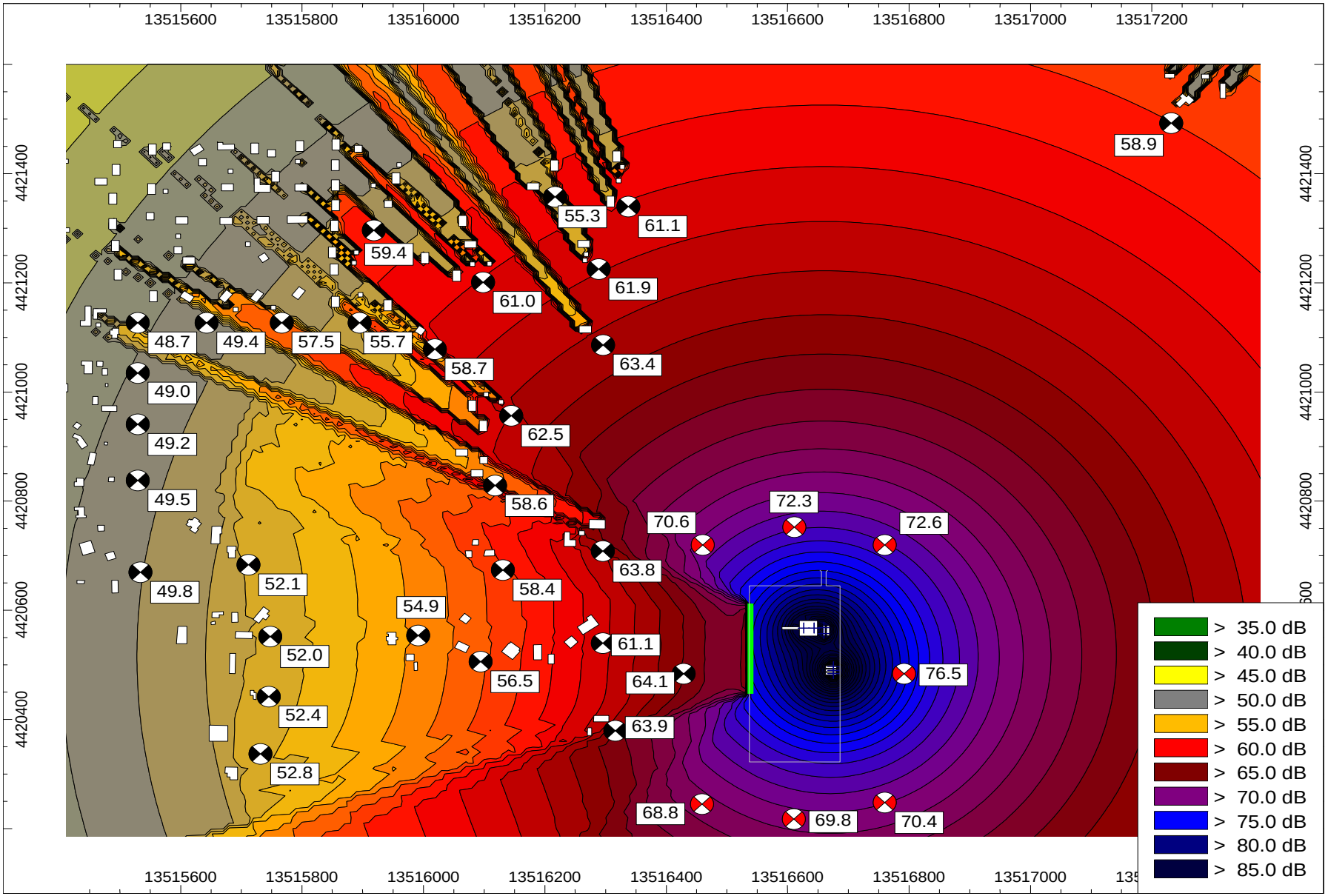
<u>Model 13</u>: Patterson Drilling Operations with Option 2 Mitigation (A-Weighted Levels)



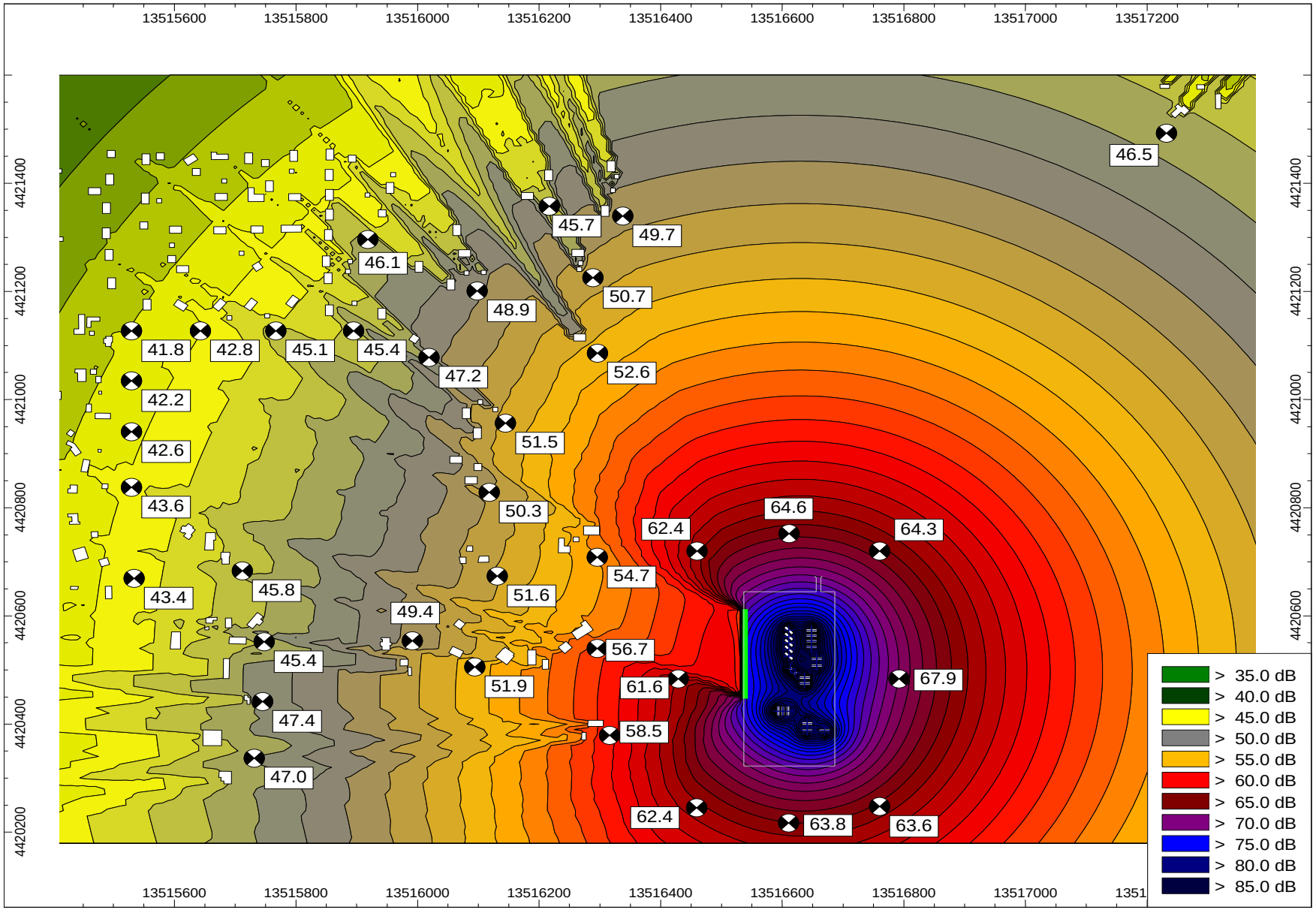
Model 14: Patterson Drilling Operations with Option 2 Mitigation (A-Weighted Levels)



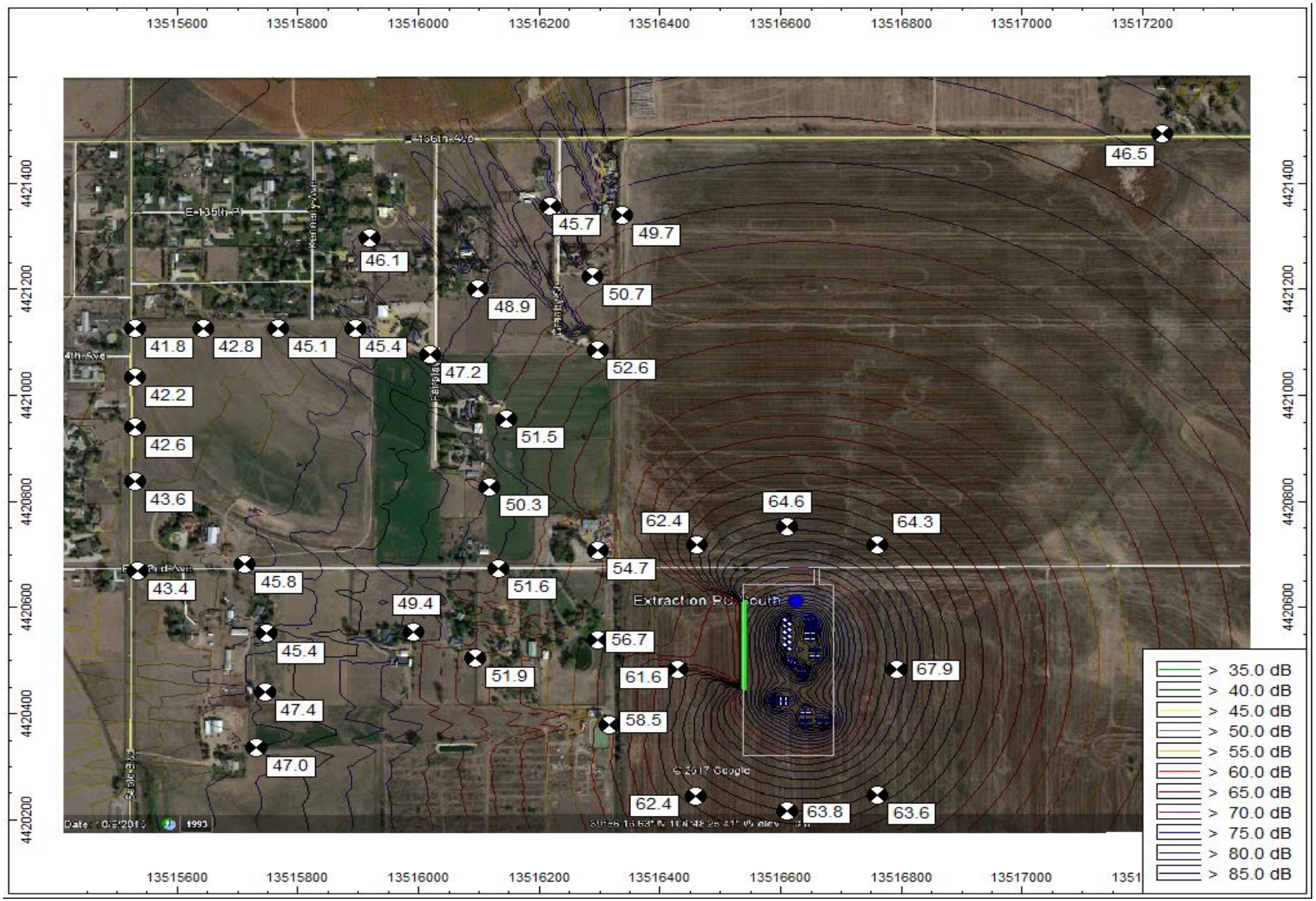
Model 15: Patterson Drilling Operations with Option 2 Mitigation (**C-Weighted Levels**)



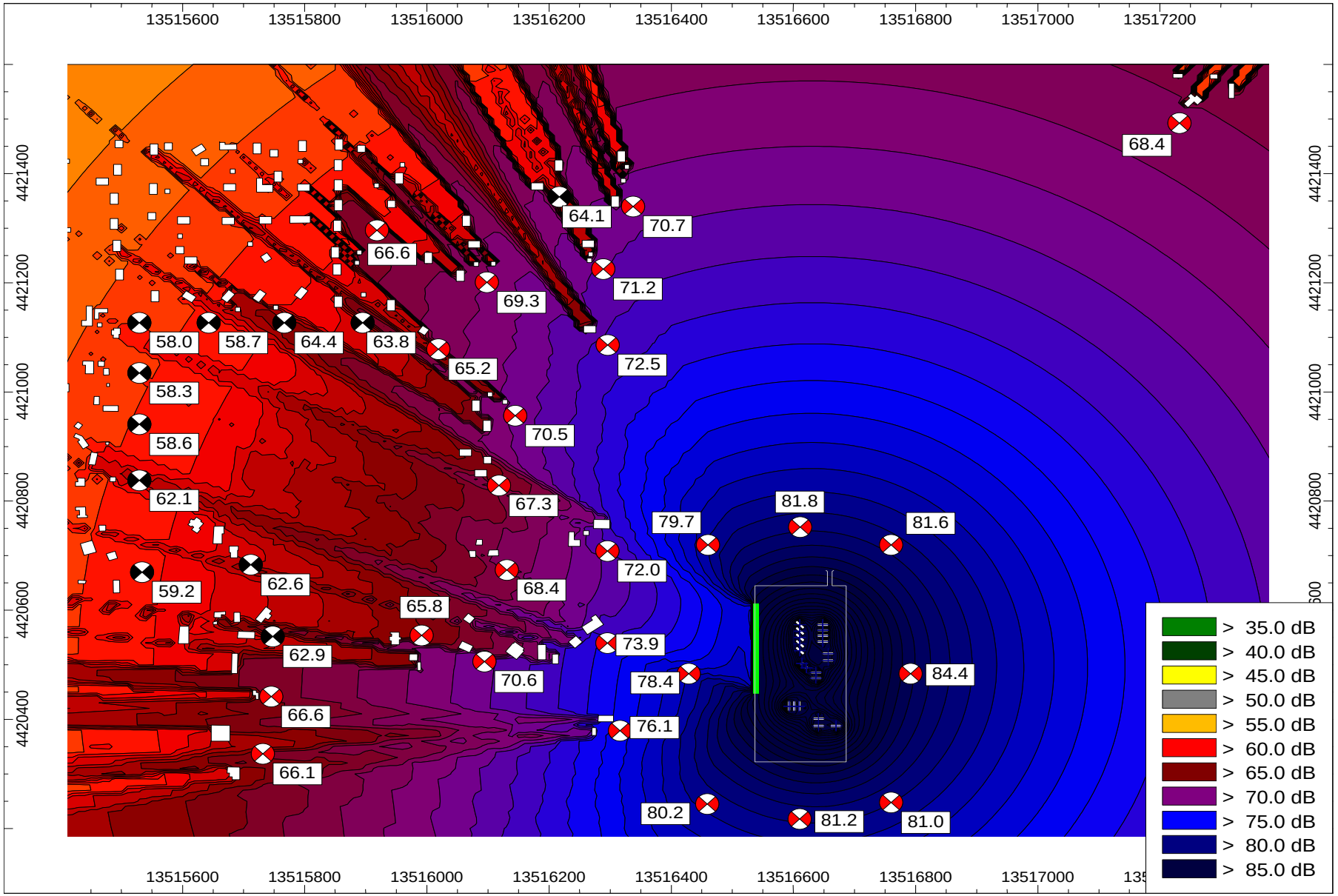
Model 16: Liberty Completion Operations with Option 2 Mitigation (A-Weighted Levels)



Model 17: Liberty Completion Operations with Option 2 Mitigation (A-Weighted Levels)



Model 18: Liberty Completion Operations with Option 2 Mitigation (**C-Weighted Levels**)



ATTACHMENT 1

OPERATION LAYOUTS AND SOUND LEVELS

Layout 1: Liberty Completion Operations

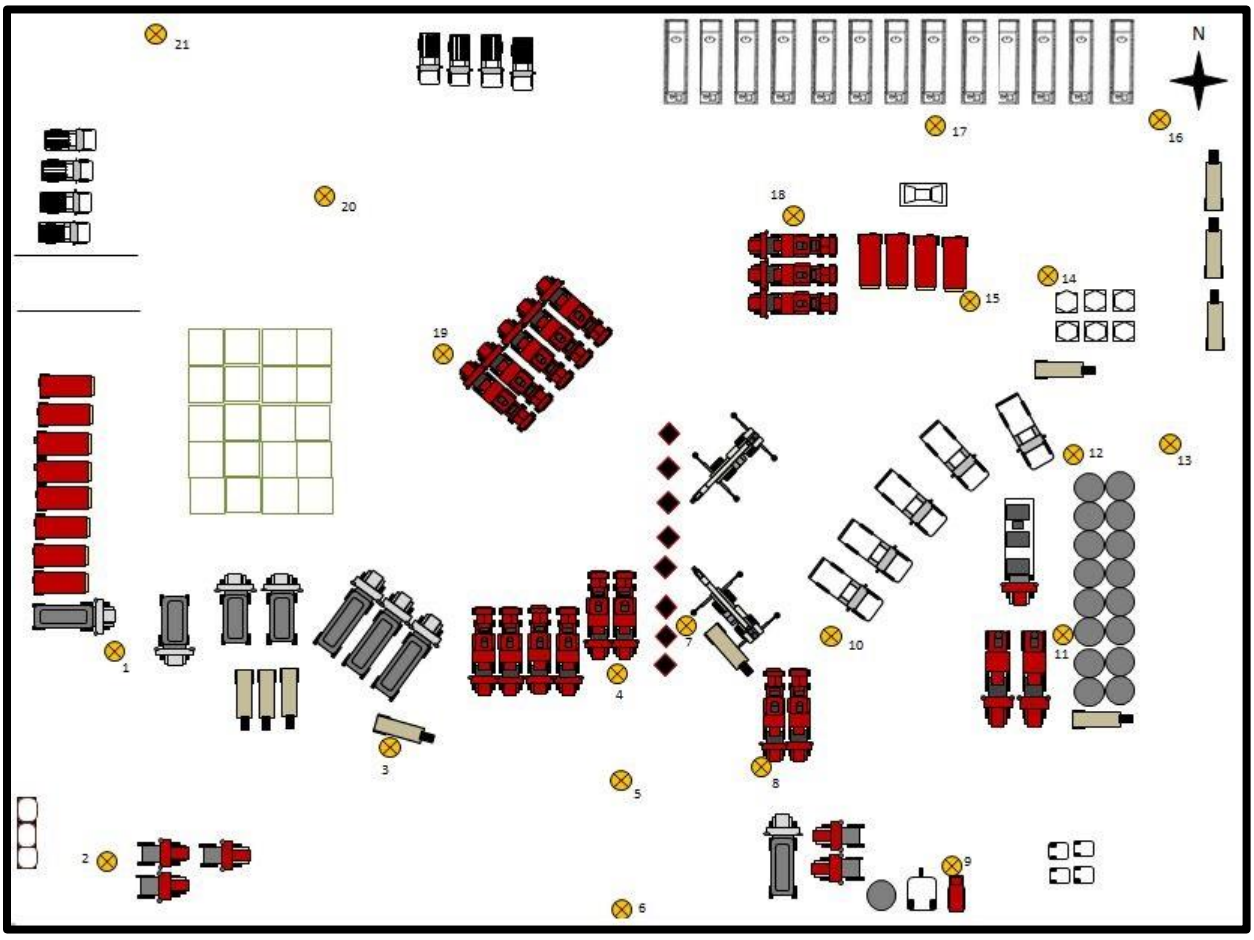
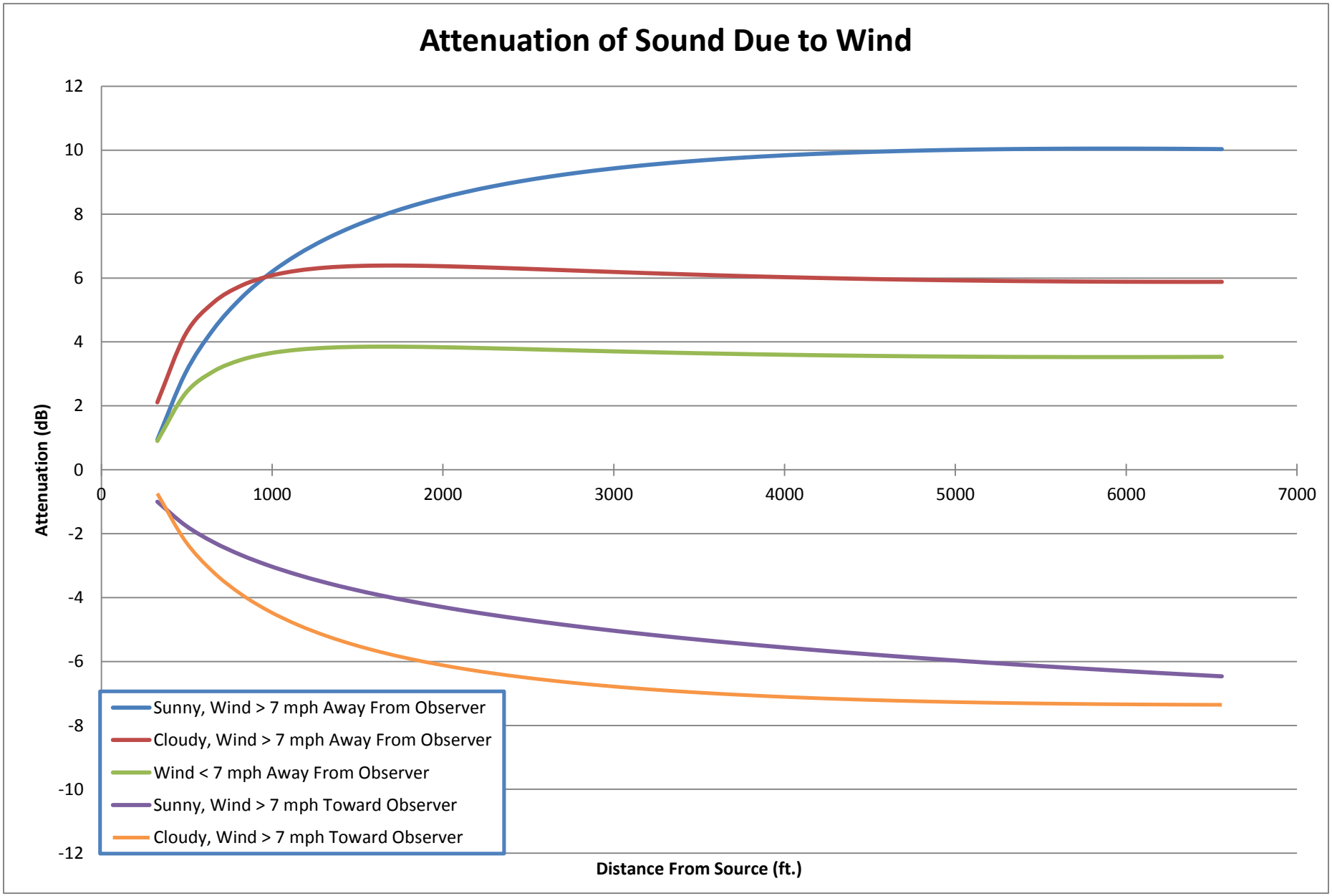


Table A1: Liberty Completion Sound Signature Sound Levels (dBA, dBC)

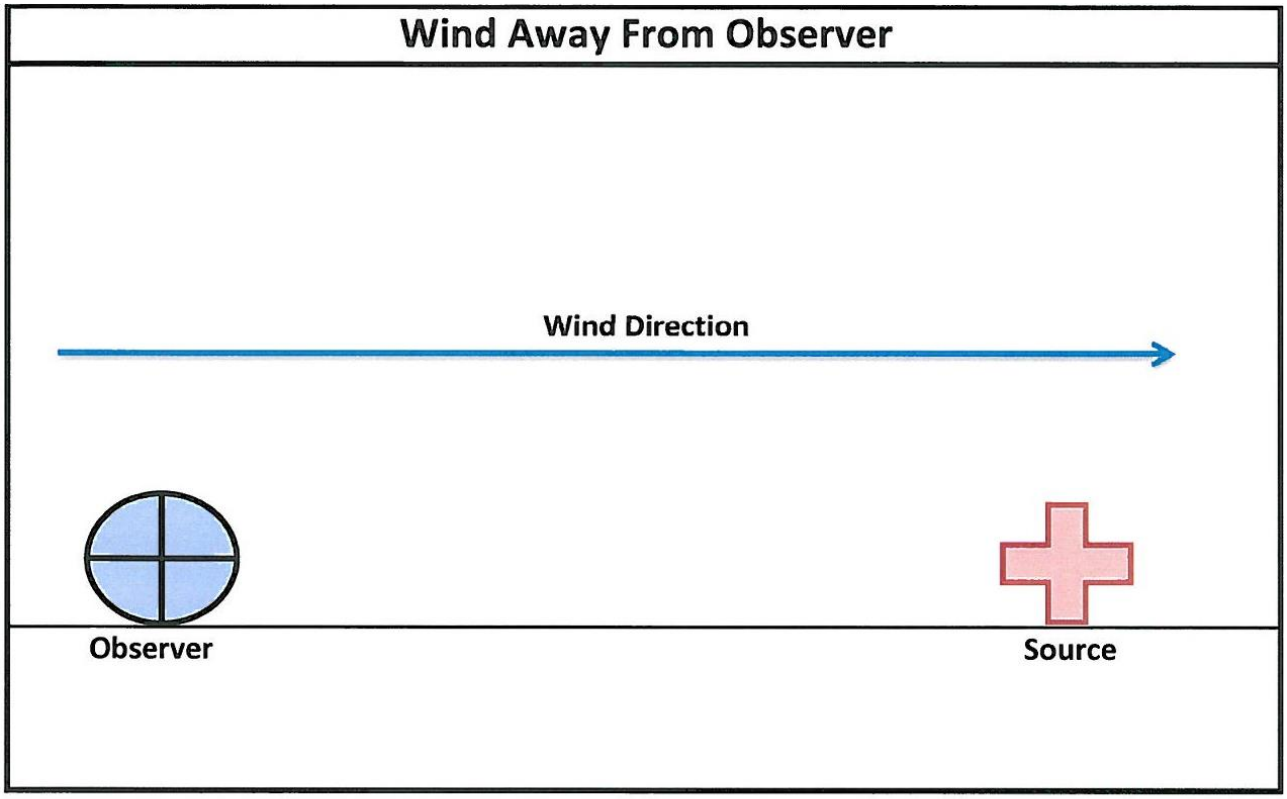
Monitoring Location	Distance (ft.)	Description	LAeq (dB)	LCeq (dB)
Friday 4/29/2016				
1	33	From B&J Hot Oil Service Truck	87.76	96.68
2	174	From Well Head	79.15	89.52
3	21	From Chemical Trailer	81.03	92.52
4	21	From Fracturing Battery	84.35	99.00
5	87	From Fracturing Battery	79.68	91.69
6	186	From Fracturing Battery	78.88	88.41
7	21	From Well Head	85.09	94.93
8	102	From Well Head	77.90	89.77
9	186	From Well Head	71.43	85.27
10	12	From Wireline Truck	85.00	94.62
11	45	From Wireline Truck	80.03	93.94
12	51	From South Crane	89.05	95.97
13	162	From Well Head	77.15	90.62
14	81	From South Crane	80.51	93.42
15	39	From North Crane	81.62	94.76
16	141	From North Crane	74.26	87.43
17	48	From Sand Dispenser	71.33	88.79
18	3	From Fracturing Truck	87.13	96.48
19	96	From Fracturing Battery	80.30	96.57
20	189	From Fracturing Battery	71.15	89.11
21	285	From Fracturing Battery	69.92	85.03

ATTACHMENT 2

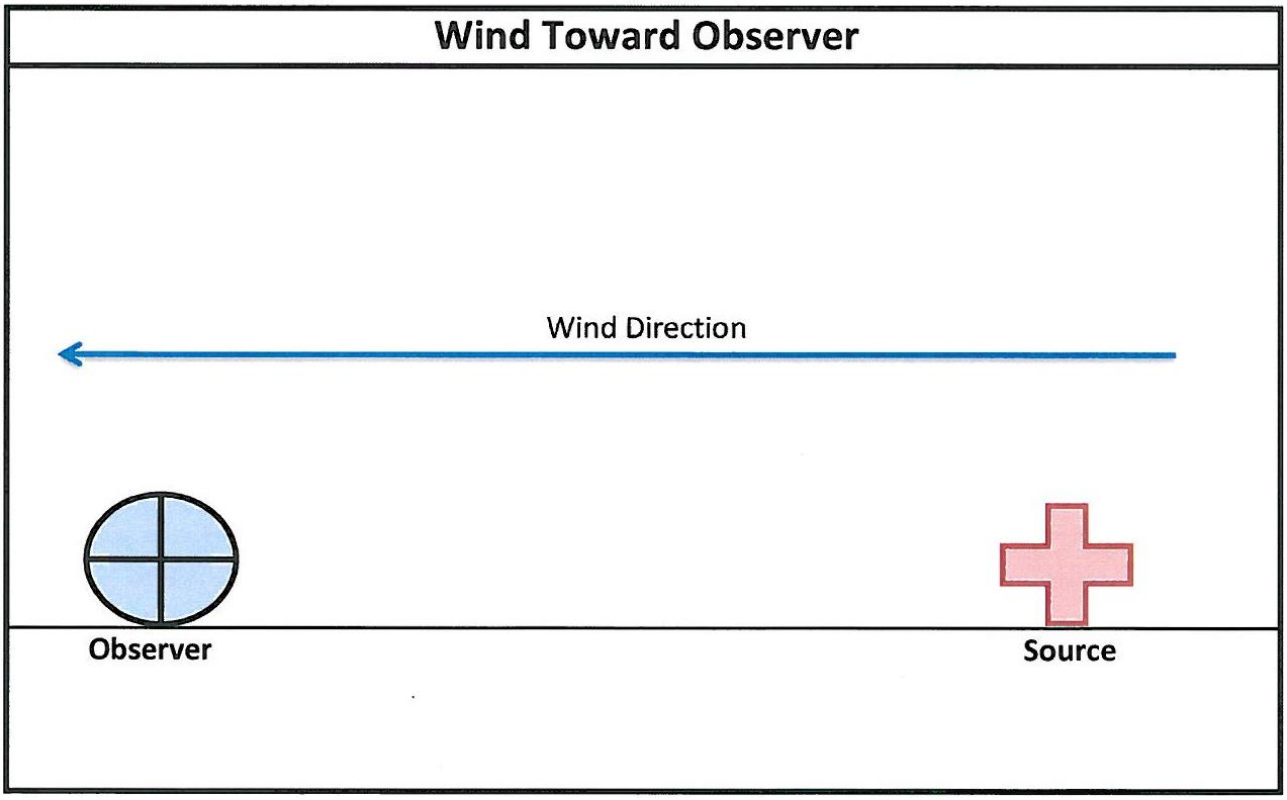
WIND CHART


Attenuation of Sound Due to Wind
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
Attenuation (dB)
0
1000
2000
3000
4000
5000
6000
7000
Distance From Source (ft.)
Sunny, Wind > 7 mph Away From Observer
Cloudy, Wind > 7 mph Away From Observer
Wind < 7 mph Away From Observer
Sunny, Wind > 7 mph Toward Observer
Cloudy, Wind > 7 mph Toward Observer

Wind Away From Observer



Wind Toward Observer



ATTACHMENT 3

TABLE OF TYPICAL SOUND LEVELS

Table B1: Typical Sound Levels Measured in the Environment

Description of Sound	Sound Level (dBA)	Human Perception of Loudness*
Threshold of Hearing	0	
Rustling Leaves	20	Just Audible
Quiet Whisper (3 feet away)	30	Very Quiet
Quiet Home	40	Quiet *(1/8 as loud)*
Quiet Street	50	*(1/4 as loud)*
Normal Conversation	60	*(1/2 as loud)*
Inside Car	70	Moderately Loud *(Reference Loudness)*
Automobile (25 feet away)	80	
Train Whistle (500 feet away)	90	
Level at which sustained exposure may result in hearing loss	90 – 95	
Diesel Truck (30 feet away)	95	
Pile Driver (50 ft.)	100	Very Loud *(8 times as loud)*
Power Mower (3 feet away)	107	
Amplified Rock and Roll (6 feet away)	110	*(16 times as loud)*
Jet Airplane (100 feet away)	120	Threshold of pain *(32 times as loud)*
Civil defense siren (100 ft.)	130	
Firearm shots near ear	140	Painfully Loud
Even short term exposure can cause permanent damage – Loudest recommended exposure WITH hearing protection	140	

*Relative to a Reference Loudness of 70 Decibels – Various Sources: Barnek, 1998, Barnes et al., USEPA, 1971

EXHIBIT 3.1
Request for Comments

Community & Economic
Development Department
www.adcogov.org

ADAMS COUNTY
COLORADO

4430 South Adams County Parkway
1st Floor, Suite W2000
Brighton, CO 80601-8204
PHONE 720.523.6800
FAX 720.523.6998

Request for Comments

Case Name: HRM Resources II PC Well Pad
Project Number: USR2017-00002

March 7, 2017

Adams County Community and Economic Development Department is requesting comments on the following request:

Request for a Use by Special Review Permit to allow twenty (20) horizontal wells on one (1) well pad for the production of oil and gas and one (1) on-site production facility.

This request is located south of East 132nd Avenue between Sable Boulevard and I-76.

The Assessor's Parcel Number is 0156929100001.

The legal description of the parcel:
SECT, TWN, RNG: 29-1-66 DESC: ALL OF SEC 29 LYING NWLY OF I-76 EXC HIWAY AND RDS 509/1760A

Please forward any written comments on this application to the Department of Community and Economic Development at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 by *Wednesday, March 29, 2017* so that your comments may be taken into consideration in the review of this case. Please send your response by way of e-mail to jrutter@adcogov.org.

Application submittal items and additional information about the case can be found at https://www.adcogov.org/planning/currentcases.

Additional information about oil and gas development can be found at https://www.adcogov.org/oil-and-gas-information.

Thank you for your review of this case.

Jennifer Rutter
Case Manager

BOARD OF COUNTY COMMISSIONERS

Eva J. Henry — DISTRICT 1
Charles "Chaz" Tedesco — DISTRICT 2
Erik Hansen — DISTRICT 3
Steve O'Dorisio — DISTRICT 4
Mary Hodge — DISTRICT 5

Written Explanation

PC Wellpad

Sec. 29 T1S R66W
(N/2 of SW/4)
Adams County, Colorado
Surface: Fee
Mineral Lease: Fee

Written Explanation

The proposed project consists of the construction of one (1) wellpad with up to twenty 20 wells and one access road for an oil and gas location to be operated by HRM Resources II, LLC (HRM). HRM does not intend to drill all (20) wells consecutively. The drilling schedule is subject to change due to economic conditions, business development priorities and equipment availability.

Sequence of Major Activities and Estimated Completion Date

Access Road and WellPad:

Phase I-Pre-Drilling (14 - 21 days)

The access road will be constructed to meet or exceed standards set by Adams County. The access road will be graveled to crown/ditch standards. Ripping and dozing will be done on the contour to prevent erosion while improving the road. There will be minimal traffic during construction. Pad construction will be done simultaneously with road construction. The drilling rig will be moved onto the pad over the bladed road and drilling will begin. Culverts and other good engineering practices will be utilized to insure proper drainage under the access road and around the drill pad. A silt fence and/or ditch with catch ponds, and/or straw bales/waddles will surround the wellpad area during the drilling operations to prevent erosion. Site conditions may dictate alternate erosion control measures which will be chosen appropriately for current on-the-ground conditions.

Phase II-Drilling and Completion (Drilling: 10– 15 days per well, Completion: 5 – 10 days per well)

HRM management will utilize authorized employees and professional contractors to conduct the drilling and completion operations on site. The actual drilling phase is approximately 10-15 days per well, under normal circumstances. Drilling will be continuous, 24 hours a day, for this period. Completion operations will be performed on each well following the drilling phase. Any additional operations including well stimulation will be done at this point.

Phase III-Production

Well completion activities will be completed by this point and the well may be put online. The production facilities will be installed and the wells put on-line. The surface will be re-graded to

its prior condition as nearly as possible. Phase III can last upwards of 30 years depending on well performance. HRM anticipates mobilization and pad construction to begin in (Q3 2017) contingent upon approval from the Adams County and COGCC.

Construction Standards
Access Road:

Running surface width to be 10'-12', with a maximum running road surface of 16', total distributed width to be no more than 40'. Depending on oil and gas production and exploration in the area per design or private surface owner, the road may be widened into a standard road with a 24' running surface.

Borrow ditches are to be back-sloped 3:1 or shallower or as stipulated by the private surface owner. The borrow ditches along the access roads will be reseeded if the well is completed as a producer. Reseeding of the borrow ditches will reduce the area that will be utilized.

If necessary, culverts will be installed prior to commencement of drilling operations. Drainage to consist of borrow ditches on both sides. Low water crossings are not anticipated. However, if necessary, low water crossings will be used during drilling, as conditions dictate and upon completion. Crossings will be upgraded with corrugated metal pipes and/or gravel-bottomed low water crossings. Culverts will be placed on grade and aligned with the natural channel bed. Culvert sizes will be a minimum of 18" diameter.

Construction materials will be obtained from available permitted sources, if needed, and consist of pit gravel.

Wellpad:

The dimension of proposed facilities is anticipated at 490'x 1058', 400,000 sq/ft (±11.9acres). Wellpad construction will commence approximately two (2) to five (5) weeks prior to drilling.

The traveled portion of production site will be gravel-surfaced prior to moving the drilling rig onsite. Site preparation will be done with standard excavation equipment using native materials. Additional surface material will be obtained from commercial sources or an approved borrow area. Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet. In this case, all construction activities which may result in erosion will cease until the soil is deemed dry enough to resume activities.

Production facilities may vary according to the actual reservoir discovered and will be engineered upon completion of well tests. Production facilities will be clustered and placed away from cut/fill slopes to allow maximum recontouring of cut/fill slopes.

Onsite surface production facilities will consist of a maximum of, twenty wellhead manifolds, twenty separators, thirty eight oil tanks, twelve produced water tanks, four vapor recovery towers, eight combustors, two generators, three scrubbers, six vapor recovery units, one gas sales line. Future equipment could include one oil sales line, one LACT unit, and three gas lift compressors. The entire location will be fenced with secure access following the conclusion of completion activities.

Following the construction of the drill site and production facilities, and as-built diagram will be generated, supplied to the county and retained onsite at all times.

Compliance Statement:

The HRM PC Wellpad complies with Section 4-10-02-05-02(3). HRM has worked diligently with the surface owner, in choosing the location that will have the least impacts to the public, environment, and future development. HRM, in conjunction with the landowner, evaluated all potential alternative locations in the area before selecting this site. Please see the Best Management Practices (BMPs) HRM will employ to reduce or eliminate impacts. BMPs may change at any time due to site conditions, enhanced knowledge and technology. The county will be advised if any significant or structural BMP changes. The location was chosen as the ideal site for the following reasons:

- Distance to nearby building units and lack of surrounding building units.
- Alternative locations considered had more building unit conflicts.
- Pad location is outside the Brighton PWS Buffer and Adams County NRCO Overlay.
- Pad access is off a road with minimal traffic.
- There are oil and gas operations planned approximately .5 miles north of the PC pad.
- HRM has plans to utilize locally sourced water found in nearby ditches or hydrants. This will reduce truck traffic which in turn will reduce noise and dust pollution.
- HRM continues to look at midstream options for utilizing pipelines to transfer water, oil and gas. By placing the PC Pad near other proposed oil and gas facilities the prospect for attracting a pipeline increases. If economic, a pipeline will greatly reduce truck traffic in and out of the location for the life of the well. The utilization of pipelines also ensures a safer operation as it greatly reduces the number of tanks that are required on location.

Proposed Mitigation Measures:
Planning

Development from new multi wellpad: HRM is permitting an Oil and Gas Location Assessment - Form 2A as a multi wellpad through the COGCC. This will eliminate the need for multiple wellpads which would ultimately require more surface disturbance. This site was chosen in cooperation with the surface owner to utilize open land as far from building units as possible.

Noise: An ambient sound study will be conducted to determine noise impacts to the nearby residents to the west and north. Based on the results of the noise study, the appropriate sound mitigation design(s) will be implemented. Sound mitigation may include sound walls that once erected will reduce noise pollution.

Odor Mitigation: HRM will comply with COGCC Rule 805 and the Colorado Department of Public Health and Environment (CDPHE), Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII. HRM will also utilize a VOC to reduce odor emissions. The VOC combustor will be placed facing away from the residential buildings.

Visual Mitigation: Pursuant to COGCC Rule 804, the tank battery shall be painted in uniform, non-contrasting, non-reflective color tones with the colors matched to but slightly darker than the surrounding landscape to limit evaporation and waste of liquid hydrocarbons. The site was chosen in cooperation with the developer due to a natural tree barrier to the south that will act as a visual barrier. If sound walls are utilized, they will reduce visual impacts.

Lighting: All permanent lighting will be directed downward and internally. Temporary lighting shall conform to COGCC rules and regulations and not adversely affect adjacent residential

properties. The nearest public road is 100' away. Lighting from the location will not affect visibility on the road. Lights will be directed away from all public ROW. .

Landscaping: HRM will adhere to all Adams County requirements and/or surface owner requests. Where feasible, native vegetation will be minimally impacted. Motorized equipment will be restricted to the wellsite and access road to the wellsite. The location will be fenced to secure the location. Landscaping plan has been agreed to with the surface owner and is included in this application. -See Above Ground Improvements

Weed Control and Management: HRM will manage weed control at the oil and gas facility and along the access road during construction, operations and until final abandonment and final reclamation is completed per Adams County and COGCC regulations.

Dust Mitigation: Fresh water, per COGCC rules, or another approved source will be applied to roads and land surfaces for purposes of dust mitigation as needed. No other liquid or substance generated by the production of the oil and gas facility will be applied to the road and land surface. The wellpad will be graveled, reducing dust pollution.

Erosion Control Measures: HRM will maintain a Stormwater Management Plan with site specific measures for erosion control. HRM will make thorough inspections, in accordance with the requirements set forth by CDPHE Water Quality Division (WQD). The inspection schedule is as follows:

- While site and road is under construction, an inspection is required at least every 14 calendar days;
- Post storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion.

Inspection records will be kept on file for a minimum of five (5) years from expiration or inactivation of permit coverage.

Traffic Control: HRM will construct leasehold road and well site to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition. A Traffic Plan is enclosed. HRM intends to utilize water sources nearby and lay flat surface pipelines which will reduce traffic.

General Housekeeping

Guy Line Anchors: All guy line anchors left buried for future use will be identified by a marker of bright color not less than four feet in height and not greater than one foot further of the guy line anchor.

Removal of Surface Trash: HRM agrees that all trash, refuse pipe, equipment, liquids, chemicals or other materials that are not necessary for the continued operations of the wells will be removed and disposed of no later than 30 days after completion. No such items will be burned or buried on location.

Material Handling and Spill Prevention

Leak Detection Plan: To ensure protection for the surface during fracturing treatment, the location will be specifically constructed to contain any releases or spills. All containment will be constructed of steel with impermeable barriers installed inside and along the internal sidewalks of the containment. Volume capacity will be 110% or greater of the largest tank plus largest annual rainfall.

Leak detection will be monitored by daily operator inspections and remote hi/lo pressure monitoring with electronic shut down functionality. Secondary containment will surround any trucks that carry, mix, or add chemicals to the flow stream as well as connections that could possibly leak fluid. Should any spill or release occur, every reasonable step will be taken to quickly remediate the area disturbed. One (1) to seven (7) inspections per week will be recorded and kept in the district office and available to regulatory agencies. Records will be kept electronically indefinitely. All tanks will have hi level shut down for all producing wells on the pad.

Both gas and oil sales systems will have remote Emergency Shut- Down (ESD) system' functionality and independently tied to the operational status of the purchasing line(s) or vessel, as well as high pressure ESD for all lines and vessels.

Any spills/release reportable to COGCC, will also be reported to Adams County verbally or in writing to the County's Local Government Designee (LGD), Local Planning and Development Department, Sheriff's Office, and the local fire district as soon as possible, but no more than 24 hours after discovery of the spill or release by HRM This includes spills/releases: 1) of any size that impacts or threatens to impacts any waters of the state, a residence or occupied structure, livestock, or public byway; 2) in which one (1) or more barrels of Exploration and Production Waste or produced fluid is spilled or released outside of berms or other secondary containment; and 3) of five (5) or more barrels regardless of whether the spill/release is completely contained within berms or other secondary containment. In addition, HRM will notify the surface owner or the surface owner's tenant of spills/releases in compliance with COGCC rules.

Control of Fire Hazards: HRM and its contractor's will employ best management practices during the drilling and production of its wells and facilities. They will comply with appropriate COGCC and Adams County rules concerning fire and safety. HRM will ensure that any flammable material will remain no less than 25 feet from the wellhead(s), tank(s) and separator(s).

Berm Construction: A steel containment berm or structure will be erected around the oil and water storage tanks. The steel berm will be inspected at least every 14 calendar days while the site is under construction and within 24 hours of a precipitation event. During the production phase one (1) to seven (7) inspections per week will be recorded and kept in the district office and available to regulatory agencies. Records will be kept electronically indefinitely.

Tank specifications: Tanks shall be constructed and maintained in accordance with the National Fire Protection Association Code 30 (2008 version). All tanks will be visually inspected once a day. Recorded inspections will be conducted once a month pursuant to 40 CFR §112.

Material Safety Data Sheets (MSDS) for materials and chemicals used will be kept onsite and updated/modified for each phase of operations. They will be made available to any emergency responders as needed.

Construction

Fencing: The wellsite will be fenced for security and in concurrence with surface owner request.

Drilling/Completion Operations

Closed Loop System: A Closed Loop System will be used for drilling and fluid management. No reserve pit will be used. Water based cuttings will be generated and assessed for land farming applications. Any cuttings other than water based will be hauled to an approved waste disposal site.

Green Completions: Emission Control Systems. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completion techniques pursuant to COGCC Rules.

Air Emissions: Air emission sources shall comply with provisions of the state air quality control program and the rules and regulation promulgated by the State Air Quality Control.HRM will employ control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere.

Wildlife and Wildlife Habitat: The proposed oil and gas wells fall within the Adams County NRCO district. HRM contracted a independent consultant to evaluate the potential impact of the operations within the NRCO boundary. The study determined HRM will not cause significant degradation of wildlife.

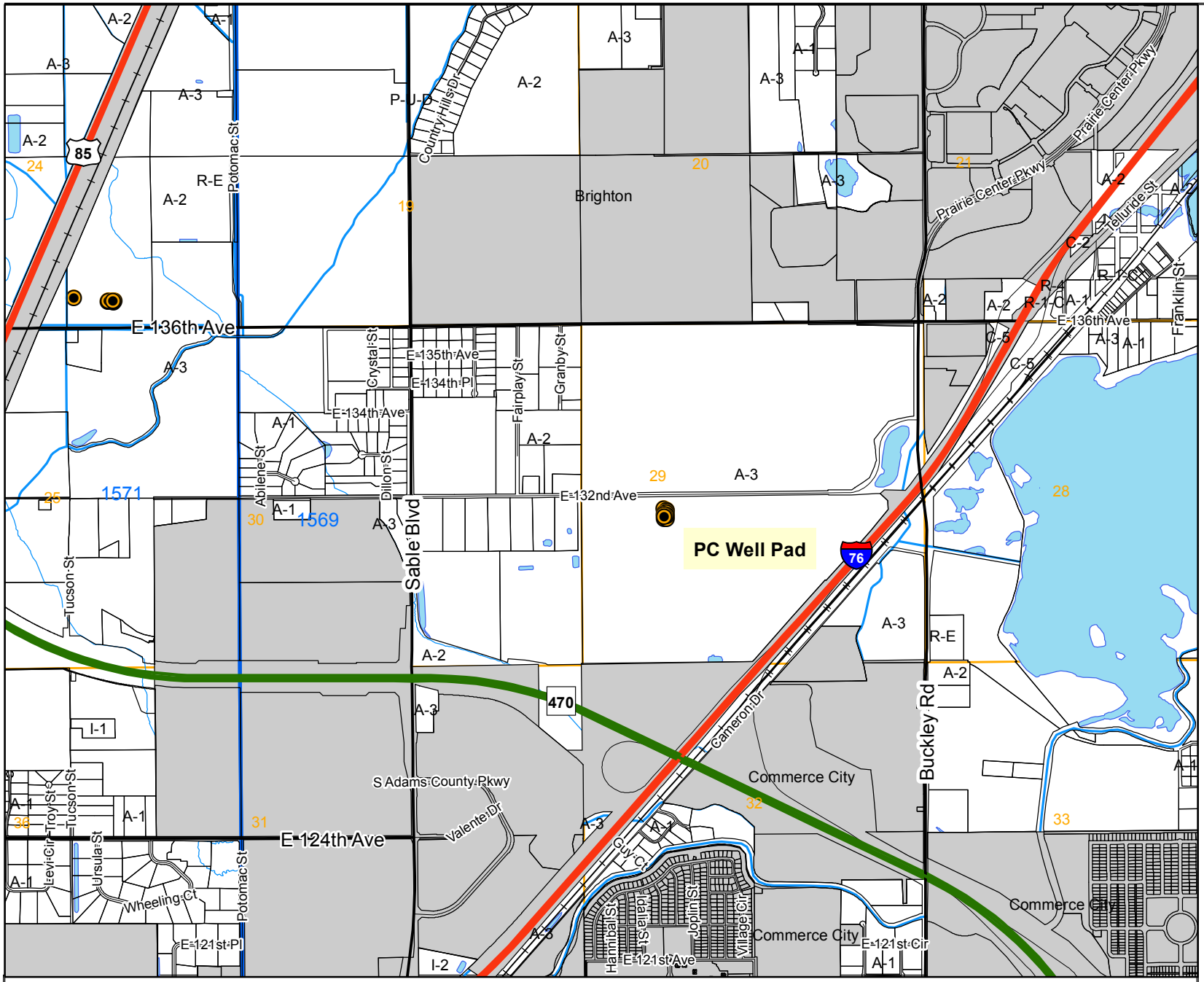
BOPE for well servicing operations: Adequate blowout prevention equipment will be used on any servicing operations associated with this well. Backup staving valves shall be required on well servicing operations during reverse circulation. Valves will be pressure tested before each well servicing operation using both low-pressure and high-pressure fluid.

Water Sampling: HRM will adhere to COGCC Rule 318.A. HRM will utilize COGCC's criteria and protocol for analysis and submission to the COGCC data system. If there are no available water sources within a ½ mile radius of the proposed oil and gas facility, HRM will test the nearest downgradient water source within a one (1) mile radius prior to construction.

Interim Restoration (Production): Rehabilitation of unneeded, previously disturbed areas will consist of back sloping, and contouring all cut/fill slopes. These areas will be reseeded. The portions of the cleared well site not needed for operational and safety purposes will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after recontouring to allow for maximum interim reclamation.

Final Reclamation

Well site cleared. Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site.



PC Well Pad

USR2017-00002

N

For display purposes only.

LEGEND

- Special Zoning Conditions
- 3 Section Numbers
- Railroad
- Major Water
- Zoning Line
- Sections

Zoning Districts

- A-1
- A-2
- A-3
- R-E
- R-1-A
- R-1-C
- R-2
- R-3
- R-4
- M-H
- C-0
- C-1
- C-2
- C-3
- C-4
- C-5
- I-1
- I-2
- I-3
- CO
- PL
- AV
- DIA
- P-U-D
- P-U-D(P)
- Airport Noise Overlay

ADAMS COUNTY COLORADO

This map is made possible by the Adams County GIS group, which assumes no responsibility for its accuracy

EXHIBIT 3.2
County Agency Comments

USR2017-00002 HRM Resources II – PC Pad

ENG1: The Traffic Impact Study analysis provides mitigation measures for the phases of production that creates the most traffic flow.

ENG2: Flood Insurance Rate Map – FIRM Panel # (08001C0341H), Federal Emergency Management Agency, March 5, 2007. According to the above reference, the project site is not located within a special flood hazard delineated area; A floodplain use permit will not be required.

ENG3: The project site is not within the County's MS4 Stormwater Permit area. The installation of erosion and sediment control BMPs are expected. The applicant shall be responsible to ensure compliance with all Federal, State, and Local water quality construction requirements.

ENG4: The applicant's proposed scope of work shows the new addition of impervious surface is less than 3,000 square feet. A drainage study and analysis are not required. A grading and drainage plan will be required for any propose change in grade or improvements to the site.

ENG5: 132nd Avenue is classified as a collector street. No more than two access shall be points shall be allowed to an individual parcel or to contiguous parcels under the same ownership. The proposed access points must meet the criteria described in Chapter 8, page 8-4, Table 8.2. The applicant must obtain a permit for all access points.

ENG6: Applicant must submit legal descriptions, exhibits, and easement documents for any proposed easements on the site. These documents must be reviewed and approved by Development Engineering and recorded at the Clerk and Recorders Office. The record number along with the book and page number must be shown on the approved site plan.

T. Greg Labrie, PE, CFM
Senior Engineer
Adams County
Development Engineering Services
4430 S. Adams County Parkway
Brighton, CO 80601
Ph # 720-523-6824

From:	Lori Wisner
To:	Jen Rutter
Cc:	Rachel Bacon
Subject:	FW: USR2017-00002 HRM Resources II PC Well Pad - Request for Comments
Date:	Friday, March 31, 2017 11:27:47 AM
Attachments:	Request for Comments-PrairieCenter.pdf PC-Site Plans.pdf PC-O&G Operations Plan.pdf PC-TrafficImpactStudyPlan.pdf
Importance:	High

Good morning Jen,

I apologize that this is late, but here are the comments from Long Range Strategic Planning:

The Adams County Long Range Strategic Planning Department appreciates the opportunity to provide comments on project number USR2017-00002 HRM Resources II PC Well Pad. Please consider the following comments:

- The property is located within the District Plan area. The goals of this plan include farmland conservation and local food and agritourism promotion. Some land conservation funding sources such as GOCO may be deterred by the possibility of oil and gas development on conservation projects that they fund. This property is not currently the subject of any conservation projects, but this would be something to be aware of for future possibilities.
- The property was not identified as an agricultural priority in the 2013 Adams County Open Space Master Plan; the property is shown as Employment Commercial with limited open space areas on the west, south, and east on the future land use map (District Plan).
- The property is currently served by the Burlington Ditch. Any water use from the ditch should be in compliance with established water rights.
- The property is located within the Brighton PWS BMP Buffer Zone. According to COGCC Order No. 1-189 to establish a system of requirements and best management practices (BMPs) to protect the Public Water System (PWS) within and adjacent to the City of Brighton located in Adams County Colorado, the following shall be required for all DCPS Operations at New Oil and Gas Locations within the BMP Buffer Zone:
  1. Pitless drilling systems
  2. Flowback and stimulation fluids shall be contained within tanks that are placed on a well pad or in an area with downgradient perimeter berming
  3. Berms or other containment devices shall be constructed around crude oil, condensate, and produced water storage tanks as follows:
     a. Secondary containment shall be sized to contain a minimum of 150% of the volume of the largest primary containment vessel within the secondary containment area
     b. Containment berms shall be constructed of steel rings, designed and installed to prevent leakage and resist degradation from erosion or routine operation
     c. Secondary containment areas for tanks shall be constructed with a synthetic or engineered liner that contains all primary containment vessels and flowlines and is mechanically connected to the steel ring to prevent leakage
     d. Tertiary containment, such as an earthen site berm, is required around the downgradient and side-gradient portions of Production Facilities, including process

vessels

4. Production Facilities will be installed with automated fluid level monitoring, capable of alerting the operator if a sudden change in fluid level or upset condition occurs. Additionally, wells will be equipped with remote shut-in capability.
5. All loadlines shall be bullplugged or capped
6. Notification to the Brighton Public Works Department prior to commencement of new surface disturbing activities at the site; and
7. An emergency spill response program that includes employee training, safety, and maintenance provisions and current contact information for Brighton. The emergency response plan shall specify when notifications to Brighton shall be made and must be prepared in consultation with Brighton.

In the event of a spill or release, the Operator shall immediately implement the emergency response procedures in the above-described emergency response program. If a spill or release results in significant adverse impacts or threatens such impacts to a portion of the Brighton PWS, the Operator shall notify Brighton immediately following discovery of the release in addition to reporting in accordance with Rule 906.b.

Thank you again for the opportunity to comment. Please do not hesitate to contact us with any questions or concerns.

Thank you,

Lori Wisner
Long Range Strategic Planning Technician, *Office of Long Range Strategic Planning*
Deputy County Manager's Office
ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, 3rd Floor, Suite 3000
Brighton, CO 80601
O: 720-523-6863 | lwisner@adcogov.org
www.adcogov.org

From: Jen Rutter
Sent: Monday, March 06, 2017 11:32 AM
To: 'sbarwick@unitedpower.com'; Aaron Clark; 'mike.silverstein@state.co.us'; 'jim.dileo@state.co.us'; Chris LaRue; 'brandon.marette@state.co.us'; 'Laurel Broten'; Matthew Sura; 'kmonti@sd27j.org'; Rachel Bacon
Subject: USR2017-00002 HRM Resources II PC Well Pad - Request for Comments

The Adams County Community & Economic Development Department is requesting comments on the following application:

Request for a Use by Special Review Permit to allow twenty (20) horizontal wells on one (1) well pad for the production of oil and gas and one (1) on-site production facility.

Location: South of East 132nd Avenue between Sable Boulevard and I-76

Please find attached:

- Request for Comments & Project Description
- Site Plans and Visual Mitigation Proposal
- Oil & Gas Operations Plan
- Traffic Impact Study/Report

Please forward any written comments on this application to the Department of Community and Economic Development at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 or (720) 523-6841 by **Wednesday, 3/29/2017** in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to me at jrutter@adcogov.org.

Thank you,

Jen Rutter
Senior Environmental Analyst, *Community & Economic Development Department*
ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, 1st Floor, Suite W2000A
Brighton, CO 80601
O: 720.523.6841 | jrutter@adcogov.org
www.adcogov.org

USR2017-00002 HRM Resources II – PC Pad

PLN1. Property is zoned A-3. Per Section 3-10 the purpose of the A-3 District s to provide land primarily in holding of at 35 acres for dryland or irrigated farming, pasturage, or other related food production uses.
PLN2. Site is located in the Agriculture future land use. The areas that have been identified as agricultural are those that are not expected to develop, except for limited areas of very low density residential at densities of 1 dwelling per 35 acres, for the foreseeable future. These areas are typically characterized by a lack of urban services.
PLN3. Land east of the site is located within the Activity Center future land use. This land use category is characterized by its high intensity, mixed-use character, and high quality. The primary uses will be offices, hotels, retail, high-density residential and clean, indoor manufacturing and warehousing. Activity Centers are designated for areas that will have excellent transportation access and visibility, particularly along the FasTracks corridors. Development in Activity Centers must contain a sufficient intensity and mix of uses to create a pedestrian environment and support transit service. These centers may be especially suitable for providing a variety of housing or should be planned with due consideration of accessibility between residences and places of employment.
PLN4. Lands west of the site are designated as Estate Residential on the future land use map. Estate Residential areas are designated for single family housing at a lower densities, typically no greater than 1 unit per acre, and compatible uses such as schools and parks. Under certain circumstances, net densities for Estate Residential areas may be as low as one unit per acre, provided that development is clustered so as to preserve a significant amount of open space or agricultural land.
PLN5. Land north and east of the site is within the City of Brighton. The City should be contacted to determine any of their concerns.
PLN6. Land south of the site is within the City of Commerce City. The City should be contacted to determine any of their concerns.
PLN7. Properties west of the sites are zoned A-1 and A-2 and are used residentially. There are also two A-3 zoned properties to the north that contain homes. Recommend proper notification and mitigation be in place for these residents.
PLN8. I-76 is located southeast of the site. CDOT should be contacted to determine any concerns.
PLN9. E-470 is located southwest of the site. The E-470 Authority should be contacted to determine any concerns.
PLN10. Barr Lake State Park is in close proximity (east of I-76). It is suggested that coordination occur with the park. Contact the park manager at 303-655-1495.

Christopher C. LaRue
Senior Planner, *Community & Economic Development Department*
ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, W2000A
Brighton, CO 80601
o: 720.523.6858 | *clarue@adcogov.org*
www.adcogov.org

From: Richard Atkins
To: Jen Rutter
Subject: RE: USR2017-00002 HRM Resources PC Well Pad - Request for Comments
Date: Wednesday, March 29, 2017 1:36:38 PM

Jen,

The Emergency Preparedness Plan looks good. They will need to update some of the contacts on pages 11 and on Appendix C.

On the Emergency Preparedness Plan they listed Brighton Fire which is correct. But on their PC-O&G Operations Plan map they show North Metro Fire.

Those are the only items for comment. Thanks.

Richard

Richard H. Atkins
Emergency Management Coordinator, *Office of Emergency Management*
ADAMS COUNTY, COLORADO
4430 S. Adams County Parkway, Brighton, CO 80601
o: 720.523.6602 | c: 303.517.5457 | p: 720.521.2182
ratkins@adcogov.org | adcogov.org

From: Jen Rutter
Sent: Monday, March 06, 2017 11:47 AM
To: Richard Atkins; 'Means, Whitney'
Subject: USR2017-00002 HRM Resources PC Well Pad - Request for Comments

The Adams County Community & Economic Development Department is requesting comments on the following application:

Request for a Use by Special Review Permit to allow twenty (20) horizontal wells on one (1) well pad for the production of oil and gas and one (1) on-site production facility.

Location: South of East 132nd Avenue between Sable Boulevard and I-76

Please find attached:

- Request for Comments & Project Description
- Oil & Gas Operations Plan
- Traffic Impact Study/Report
- Emergency Response Plan

Please forward any written comments on this application to the Department of Community and Economic Development at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 or (720) 523-6841 by **Wednesday, 3/29/2017** in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to me at jrutter@adcogov.org.

Thank you,

Jen Rutter
Environmental Analyst, *Community & Economic Development Department*
ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, 1st Floor, Suite W2000A
Brighton, CO 80601
O: 720.523.6841 | jrutter@adcogov.org
www.adcogov.org

EXHIBIT 3.3
Referral Agency Comments

From: Marisa Dale
To: Jen Rutter
Subject: Case Name: HRM Resources II PC Well Pad Project No: USR2017-00002
Date: Monday, March 20, 2017 12:30:28 PM

Hi Jennifer,

Thank you for allowing United Power, Inc. to review and comment on the HRM Resources II PC Well Pad Project No: USR2017-00002 referral.

United Power, Inc. own and maintains existing electric facilities in the surrounding area. If HRM will require electric service to this well pad site, United Power, Inc. requires a utility easement for our electric line and meter point from the landowner.

HRM will need to contact Catherine Bailey, United Power Project Coordinator, at 303-637-1360 and submit an application for new service.

Thank you,
Marisa

Marisa Dale, RWA| Engineering & Rates ROW
500 Cooperative Way, Brighton, CO 80603 | O 303.637.1387 | C 720.334.5282

Schedule: M-Th 7:00-4:30, F 7:00-3:30
Out of the office: Mar 24-Apr 3, 7 & 21

LAW OFFICE OF MATTHEW SURA

Matthew Sura LLC • 7354 Cardinal Lane, Longmont, CO 80303 • Phone: 720-563-1866 • mattsura.law@gmail.com

TO: Jennifer Rutter, Case Manager,
Adams County Community and Economic Development Department
jrutter@adcogov.org
FR: Matt Sura, Attorney at Law
DT: 3/29/2017
RE: Comment on USR2017-00002, HRM Resources II PC Well Pad

Dear Adams County Community and Economic Development Department,

Thank you for requesting comments from the City of Brighton. The City of Brighton appreciates the opportunity to comment on oil and gas applications within Brighton's Growth Management Area and near its borders. The City of Brighton also appreciates Adams County's requirement that operators consult with local governments within ½ mile of a parcel proposed for oil and gas development. The City of Brighton met with HRM Resources II on February 13th, 2017.

The parcel on which the PC Pad is proposed to be located has been the subject of discussions, negotiations, and agreements between the landowner (Prairie Center), the City of Brighton and Adams County for a number of years. These agreements include:

- The proposed location is within Brighton's Growth Management Area at the southern boundary of Brighton.
- The proposed location is also at the southern border of a major mixed use development (primarily commercial and residential) known as Prairie Center
- The landowner, Prairie Center, and the City of Brighton have entered into an agreement regarding the future annexation of the property.
- In April of 2016, Brighton and Adams County jointly approved a detailed proposed plan for areas of Brighton and unincorporated Adams County (the Local District Plan) which includes the subject parcel.[1] The Local District Plan focuses on joint planning and identified that the Parcel would be annexed into the City.
- In Brighton's recent update to its Comprehensive Plan, HRM's proposed location is designated as a future Brighton business center.[2]

Simultaneous to the HRM proposal, the Colorado Oil and Gas Conservation Commission (COGCC) and the City of Brighton are also considering two additional proposals by Ward Petroleum and PetroShare for multi-well locations less than ½ mile north of the proposed HRM location. The Ward and PetroShare locations are within the Brighton city limits. Adams County and the City of Brighton have also recently approved the Discovery Midstream oil pipeline ("Boardwalk Pipeline Project") that will be built through this area and located within 1,000 feet of the proposed HRM location.

[1] Adams County District Plan, April 2016, page 36. Available at: http://www.brightonco.gov/1018/District-Plan
[2] City of Brighton Comprehensive Plan Update, April 2016, City of Brighton, Colorado, page 3-21. Available at: http://brightonco.gov/553/Comprehensive-Plan

Given the importance of comprehensive planning and the future development of the Prairie Center property to the City of Brighton and Adams County, the City of Brighton requests that HRM, Brighton, Adams County, the land owner, and other operators in the immediate area work in a cooperative effort to agree upon a Comprehensive Drilling Plan (CDP) under COGCC Rule 216. While the Rule 216 is entirely voluntary, Adams County and the City of Brighton could play an important role in encouraging operators to work with our local governments on this plan to ensure the orderly development of the minerals and the surface. Once begun, no permits could be approved by the COGCC or either local government until the CDP is complete.

The City of Brighton appreciates that HRM has proposed a location that appears to be at least 1,000 feet from homes and is outside of Brighton's Public Water Supply Area. The City of Brighton's primary concerns about this location, based on the information provided, are travel management, access routes to the proposed location, and the large number of tanks proposed. Brighton is also requesting that HRM implement additional best management practices once the Prairie Center land is annexed into Brighton.

1) Additional Information Requested

The City of Brighton requests that Adams County require the following additional information from HRM:

- **a)** An operating plan including identified access points and estimated operational timeline; *HRM claims that it will not drill all the wells at once but is not committing itself to any timeline or drilling schedule*
- **b)** A more detailed plan for interim reclamation and re-vegetation of the well pad and final reclamation of the well pad;
- **c)** A traffic and transportation management plan specific to this proposal;
- **d)** Specific transportation routes for produced oil and waste;
- **e)** A Noise Mitigation Plan for the production phase of development; and
- **f)** A Visual Mitigation Plan, including but not limited to, a landscaping plan, proposed fencing and screening.

2) Traffic and Transportation Management Plan

HRM's Traffic Impact Study submitted for this application appears to be the same impact study that it submitted for the HRM Alma well pad in 2016. The analysis is insufficient to determine the impacts of the proposal and appears to be out of compliance with Adams County regulations. HRM's general analysis gives vehicle estimates for eight wells and yet HRM is proposing to drill 20 wells – an increase by a factor of 2.5. HRM also states that the vehicular counts given are for one-mile horizontal wells yet HRM is proposing horizontal laterals that are nearly 2 miles long – an increase by a factor of 2. Are we to assume that the vehicular counts listed are to be increased by a factor of five (2.5 times greater number of wells multiplied by 2 times greater horizontal distance) for drilling, completion, and production? That would mean that HRM is planning 20,000 truck trips during the first year of production. The Traffic Impact Study should be rewritten to indicate the true impacts of this project.

The City of Brighton is responsible for the maintenance of Buckley Rd. and much of 136th Ave. The City needs a traffic and transportation management plan in order to better understand the impacts to

traffic and to Brighton's roads. The HRM traffic study should include a realistic estimate of the total numbers of vehicles (broken out by type) for each phase of development.

3) Traffic Routes

Adams County Development Standards and Regulations (County Regulations) state that "Oil and gas operations must minimize impacts to the physical infrastructure of the county transportation system." County Regulations 4-10-02-05 6.4e. In order to accomplish this, HRM should be required to a) utilize the Discovery Pipeline that is being built within 1,000 feet of the location and through the same parcel of property, and b) require HRM trucks to avoid local roads and utilize federal interstates and state highways as much as possible.

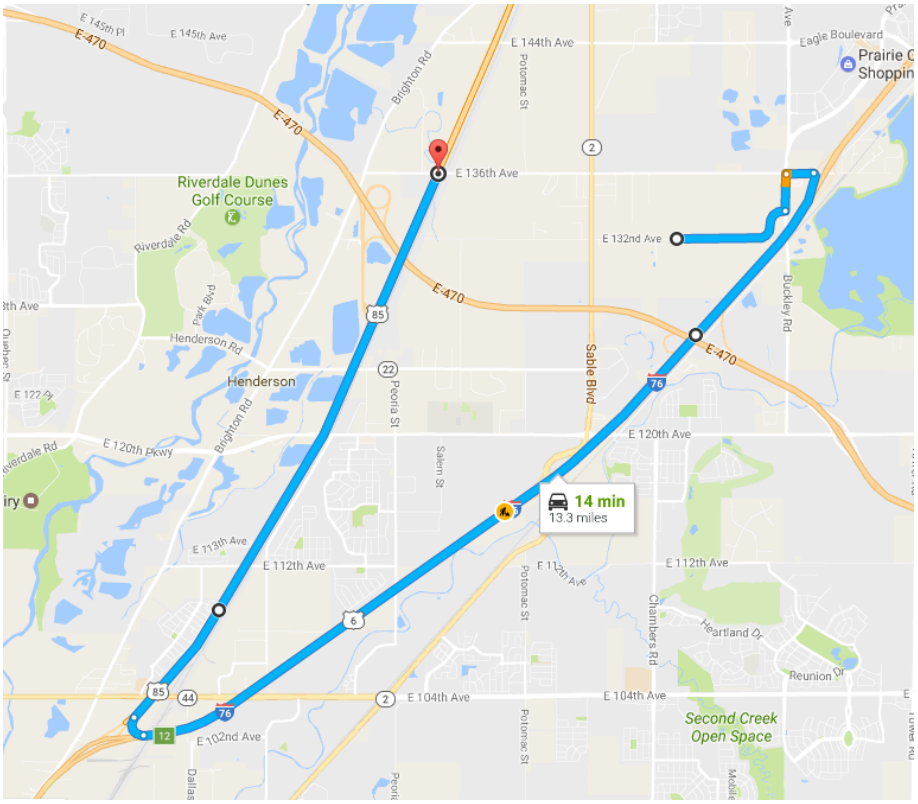


Figure 1 – Google map highlighting alternative route using US I-76 to CO Hwy 85.

HRM is proposing 136th Ave as its primary truck route. HRM's proposed oil and gas development, and the proposed oil and gas development by Ward Petroleum and PetroShare, will present a real problem for traffic flow on 136th. As an alternative, Brighton is proposing that HRM utilize US I-76 to Colorado State Hwy 85. See Figure 1 above.

4) Oil Pipeline

Since Discovery intends to construct a pipeline immediately adjacent to the proposed site, HRM should be required to connect to that pipeline. Encouraging the use of oil pipelines is protective of public

health, safety and welfare.[3] Use of a pipeline would eliminate the need for oil tanks, reduce the size of the facility, reduce the need for landscaping, reduce air pollution, and would eliminate thousands of tanker truck trips currently being proposed.

HRM is proposing 50 tanks on its PC location – 38 oil tanks and 12 water tanks. HRM's proposed tank battery will have a deleterious effect on the City of Brighton given the traffic and road impacts described above, the impacts to air and water quality, the visual impact of a 50-tank battery at the gateway to Brighton, and a long-term impact on future development of the area.

The use of tanks onsite, and the unloading of those tanks, is one of the largest sources of volatile organic compounds (VOCs) -- air pollution that contributes to high ozone levels on the Front Range. The Colorado Department of Public Health has estimated that the oil and gas industry is responsible for 50-60% of the VOCs that contribute to high ozone levels in the 9-county ozone non-attainment area on the Front Range. 79% of those VOCs come from tanks. (See figure 2 below)

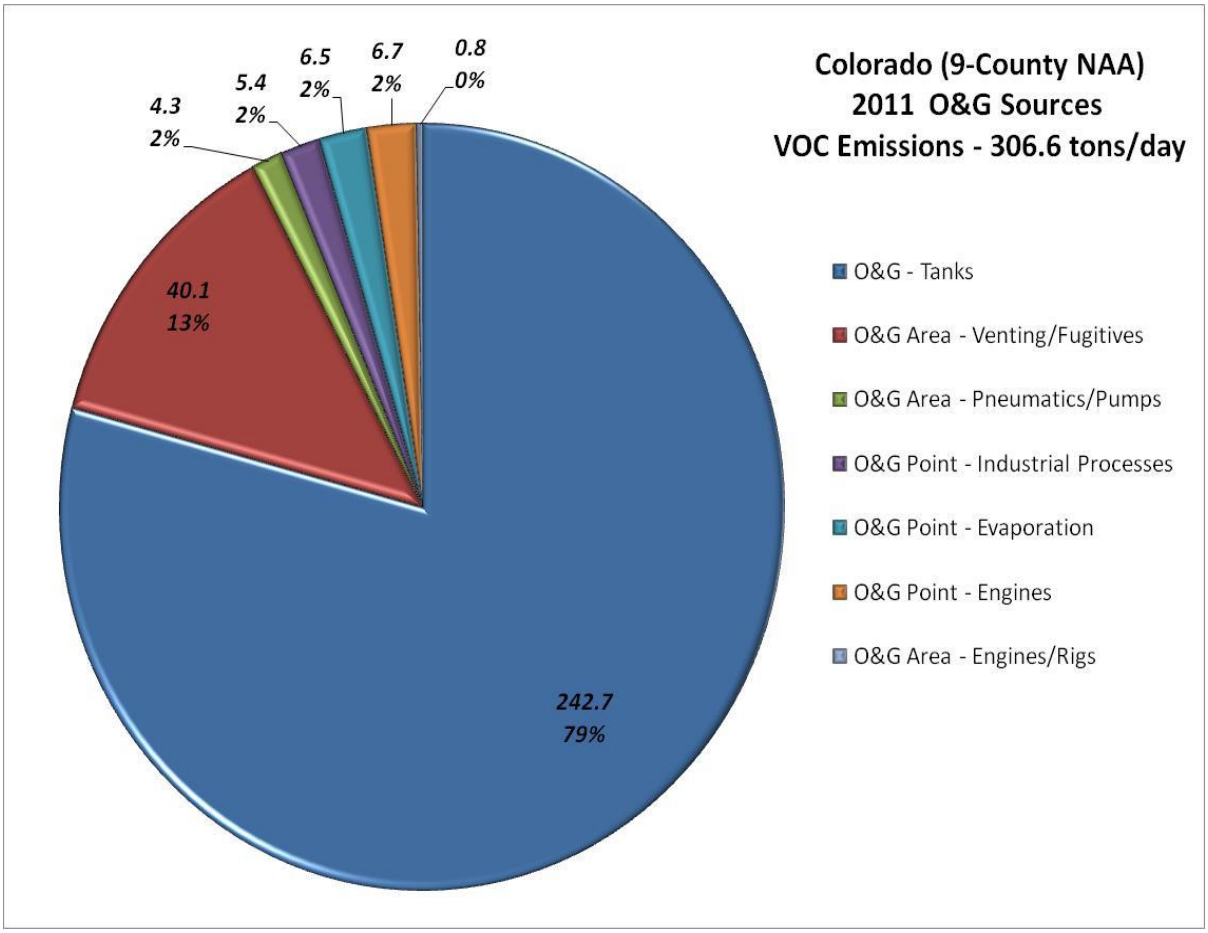


Figure 2 – Source: Colorado Air Pollution Control Division

Many of the oil spills reported in Colorado also occur when trucks are loaded. This is another public health and welfare issue that can be entirely avoided by the use of an oil pipeline.

[3] HRM admits as much on page 3 of its Written Statement: "…a pipeline will greatly reduce truck traffic in and out of the location for the life of the well. The utilization of pipelines also ensures a safer operation as it greatly reduces the number of tanks that are required on location."

In its application to Adams County, and in discussions with the City of Brighton, HRM has refused to commit to using an oil pipeline unless it is "economic." The Adams County requirement that operators minimize impacts to road infrastructure is not contingent an economic analysis. But even if an economic analysis was done, a pipeline would certainly be economic in this case. Discovery Midstream's Boardwalk Pipeline is **immediately adjacent** to the HRM location – on the same parcel of land owned by the Prairie Center. (See Figure 3 below). In conversations with the City of Brighton, representatives from the Prairie Center have stated that they would support the use of a pipeline rather than the proposed battery of 50 tanks.

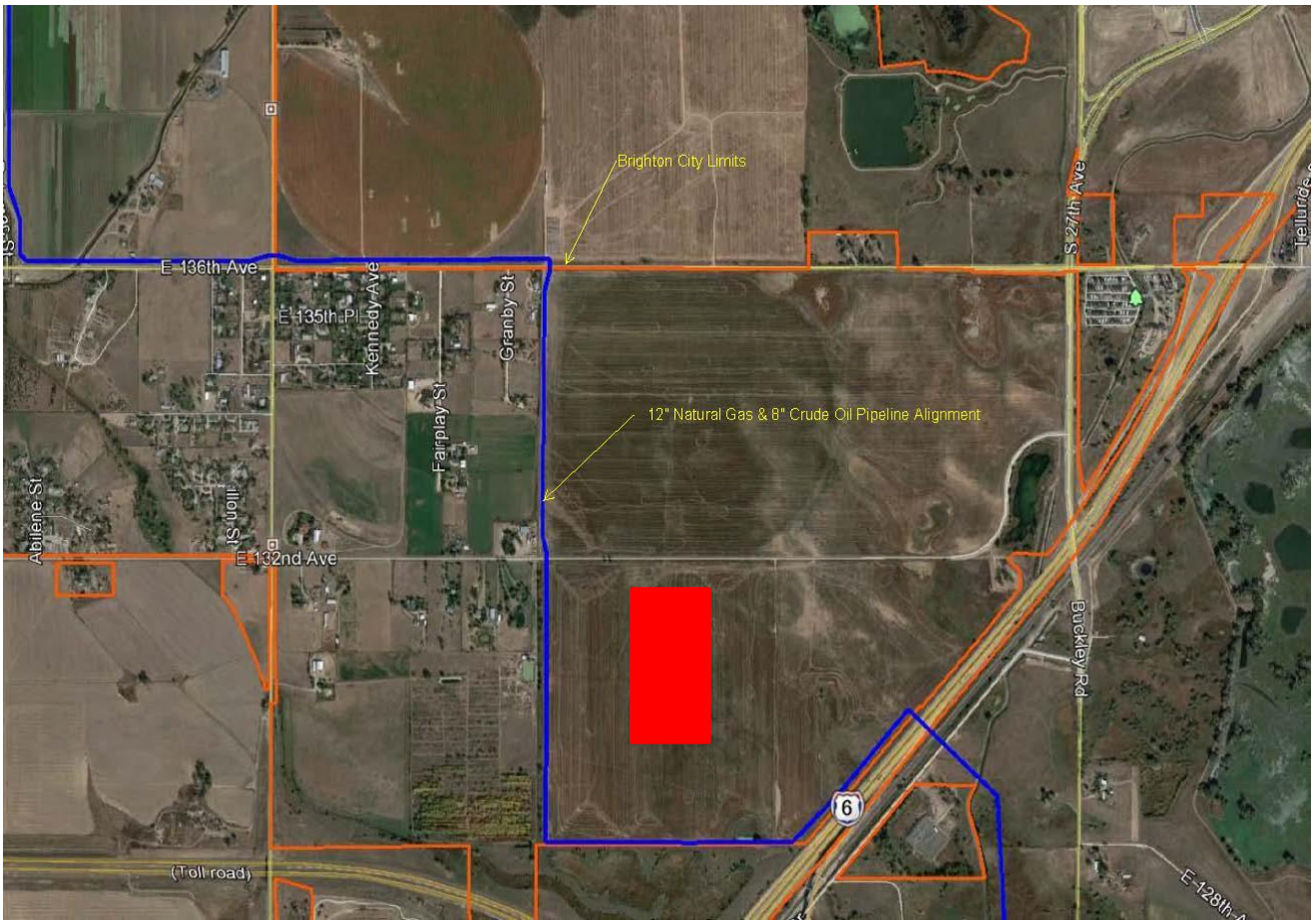


Figure 3 – Approved Discovery pipeline corridor in blue and proposed HRM PC Pad location in red

5) HRM should comply with Rule 609 water quality monitoring

This location is within the Greater Wattenberg Area and therefore is exempted from Rule 609 water quality monitoring regulations. Given the concentration of wells that are proposed for this area, the City of Brighton requests that the COGCC require this location to follow Rule 609, rather than the less-thorough Rule 318A.f.water quality monitoring regulations.

6) Noise.

The City of Brighton requests that the operator commit to a noise mitigation plan to ensure it meets or is under residential noise limits during its production phase of operations. The potential noise from HRM's proposed compressor engines would be incompatible with the future use of the Prairie Center land as a business park.

7) Visual Impacts and Mitigation.

The City of Brighton requests a staged landscaping plan to ensure that, when the land is annexed into the City, it is in compliance with Brighton's landscaping requirements.

a. Operator shall use fencing and the existing berm to mitigate visual impacts.

b. Structures shall be of minimal size to satisfy present and future functional requirements;

c. Landscaping shall be coordinated with the surface estate developer and staged to accommodate surface development. The initial phase will utilize natural topography and fencing surrounding the oil and gas location. Initial landscaping will be installed within 6 months of finishing drilling and completion operations.

The second phase of the landscaping will begin after all 20 wells are drilled or when the land is annexed into the City. At that time HRM should fence and landscape the oil and gas location to fit the design of the business park and the requirements set forth in Sec. 17-48-170 of the City of Brighton Land Use Code.

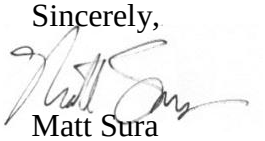
8) Electric Equipment.

HRM should commit to use electric-powered engines for compressors, pumping equipment, and other production equipment in order to mitigate noise and to reduce emissions if and when grid power is available. If electricity from the grid is not available, Operator shall use propane or natural gas to power pumps and motors.

SUMMARY

The timing of the three proposals that are currently before the COGCC gives the state, Adams County, the City of Brighton, landowners, and the industry a unique opportunity to plan for the oil and gas development in that area. The reluctance of HRM to commit to using an oil pipeline, despite having access to a pipeline nearby, has made it clear that greater coordination is needed between the state, local governments, and operators. Brighton is committed to allowing oil and gas to be developed responsibly in and around Brighton but it should not occur to the detriment of future development of the area. The City of Brighton looks forward to working with Adams County and HRM toward this end.

Sincerely,



Matt Sura

From: Means, Whitney
To: Jen Rutter
Subject: RE: USR2017-00002 HRM Resources PC Well Pad - Request for Comments
Date: Tuesday, March 21, 2017 7:24:10 PM

Good evening Jen,

We have the following comments regarding USR2017-00002:

1) Please replace On-duty Battalion Chief (303-591-7707) with Chris Wooley 303-659-4101 in Appendix C.
2) Note (no response needed): Please ensure that the emergency access road provided is at least 16 feet wide, has a minimum of 4 inches of road base, and is capable of supporting 75,000 pounds.

Thank you!

Whitney Means
Deputy Fire Marshal
Brighton Fire Rescue District
500 S. 4th Ave. 3rd Floor
Brighton, CO 80601
303-654-8040
www.brightonfire.org

From: Jen Rutter [mailto:JRutter@adcogov.org]
Sent: Monday, March 6, 2017 11:47 AM
To: Richard Atkins <RAtkins@adcogov.org>; Means, Whitney <wmeans@brightonfire.org>
Subject: USR2017-00002 HRM Resources PC Well Pad - Request for Comments

The Adams County Community & Economic Development Department is requesting comments on the following application:

Request for a Use by Special Review Permit to allow twenty (20) horizontal wells on one (1) well pad for the production of oil and gas and one (1) on-site production facility.

Location: South of East 132nd Avenue between Sable Boulevard and I-76

Please find attached:

- Request for Comments & Project Description
- Oil & Gas Operations Plan
- Traffic Impact Study/Report
- Emergency Response Plan

Please forward any written comments on this application to the Department of Community and Economic Development at 4430 South Adams County Parkway, Suite W2000A Brighton, CO

80601-8216 or (720) 523-6841 by **Wednesday, 3/29/2017** in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to me at jrutter@adcogov.org.

Thank you,

Jen Rutter
Environmental Analyst, *Community & Economic Development Department*
ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, 1st Floor, Suite W2000A
Brighton, CO 80601
O: 720.523.6841 | jrutter@adcogov.org
www.adcogov.org

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From:	Laurel Broten
To:	Jen Rutter
Cc:	Sheila Lynch; Monte Deatrich
Subject:	Referral response for HRM Resources II PC Well Pad
Date:	Wednesday, March 29, 2017 3:11:15 PM
Attachments:	image001.png 4303_HRM Resources II Oil and Gas PC Well Pad_170322_lbroten.pdf

Hi Jen,

Please find the attached referral response letter from TCHD for HRM Resources II PC Well Pad.

Thanks,

Laurel Broten, MPH
Land Use and Built Environment Specialist
Tri-County Health Department
6162 S Willow Dr #100
Greenwood Village, CO 80111
lbroten@tchd.org | 720.200.1585

March 29, 2017

Jennifer Rutter
Adams County
Community & Economic Development Department
4430 S Adams County Pkwy, Suite W2000A
Brighton, CO 80601

RE: HRM Resources II Oil and Gas PC Well Pad
TCHD No. 4273

Dear Ms. Rutter:

Tri-County Health Department (TCHD) has reviewed the application for an Oil and Gas Location Assessment (OGLA) to the COGCC for 20 wells at HRM Resources II PC Well Pad l located south of E 132nd Ave between Sable Blvd and I-76. TCHD staff has the following comments.

Domestic Wastewater Management
Proper wastewater management promotes effective and responsible water use, protects potable water from contaminants, and provides appropriate collection, treatment, and disposal of waste that protects public health and the environment. TCHD, as the local public health agency, plays a role in reviewing whether a new proposed land use has addressed the domestic water and wastewater needs and is the regulating agency for On-Site Wastewater Treatment Systems (OWTS). Because of the nature of oil and gas operations and the typical location of this land use, not in close proximity to existing wastewater facilities, many of the oil and gas sites utilize OWTS.

TCHD permits the use of septic tanks. If the site utilizes an OWTS or vault system for domestic wastewater, the applicant will need to obtain a Use Permit from TCHD. Please contact Mike Weakley at 720-200-1593 or mweakley@tchd.org.

Baseline Water Quality Testing
Water quality is unregulated in domestic and irrigation wells in Colorado and monitored in a limited manner for commercial wells. This means water quality testing is typically not required, and the water quality is often unknown. In general, TCHD supports baseline water quality testing to establish the existing water quality relative to the water well's permitted use and to identify water quality issues that should be known and addressed by the well's owner. Baseline water quality testing can also provide an understanding of pre-existing conditions should the water quality change in the future. Baseline and subsequent water quality testing data can support a determination of whether water treatment may be needed to protect the health of well water users and the health of the environment.

Specific Recommendations for Water Wells within ½ mile:
TCHD believes that any owner of a well within one-half mile of the proposed oil and gas operation should have the opportunity to obtain a baseline water quality test prior to the change in land use. One-half mile is the area of influence established by the Colorado Oil and Gas

Conservation Commission's Final Rule 609 Statewide Groundwater Baseline Sampling and Monitoring.

TCHD recommends the following for well permits and water rights holders located within one-half mile of the proposed oil and gas well as they are likely used or will be used for drinking water for humans or animals.

- That the County or applicant notify owners of the wells or groundwater rights owners of the proposed application;
- That the County refer well owners who want to test their wells to TCHD for guidance on recommended testing parameters, procedures for selection of qualified sampling professionals and laboratories, and sharing of data; and
- That the County refers well owners desiring guidance for wellhead protection to TCHD.

Water Supply for Use by Workers
Providing clean and safe water for use by workers for ware washing, food preparation, hand washing, and showering is important. The majority of foodborne illnesses can be traced to improper food handling procedures in home, retail, or office kitchens. Improper transport, storage, cross-connections, and backflow also pose dangers to potable water quality.

TCHD will need to review information regarding the source of water for workers as well as any proposed potable water system used by workers. If the drinking water is to be hauled, a public water system identification number for the water hauler must be provided to TCHD.

Potential Temporary Water Storage
Non-potable water is used onsite. The storage tank should be marked with a sign indicating the water is non-potable. In addition, these very large water storage tanks have the potential to collapse if not properly constructed with appropriate quality controls. A collapse can result in significant damage to the environment, property, and individuals that may be nearby. TCHD recommends the applicant employ proper quality control techniques when constructing the water storage tank.

Above Ground Storage Tanks
Fuel is often stored onsite at oil and gas sites. All storage tanks must have a secondary containment area, a routine monitoring system to check for leaks, and best management practices implemented in order to prevent the release of contaminants into the soil and water supplies.

Emergency Response Plan
One of the most common environmental releases associated with oil and gas drilling operations is the inadvertent surface spill of chemicals, produced water, or flowback water. No Emergency Response Plan was available for review with the referral materials. The Emergency Response Plan should include response and notification procedures for responding to and effective strategies for minimizing the risk of hydrocarbon spills, hazardous chemical spills, and produced water spills. If a spill or incident were to occur, the emergency response to spills should be indicated in the Spill Prevention, Control, and Countermeasures Plan that is kept onsite.

Specific information related directly to a potential leak or spill from the domestic wastewater system should also be addressed. In the event there is a domestic wastewater spill or leak, TCHD should be contacted immediately.

Air Quality Permitting
Air pollutant emissions including flares are regulated by the Colorado Department of Public Health and Environment. Vapor recovery equipment should be used to control the release of vapors into the environment. The use of green completion technology is strongly encouraged at every site. If the site is to use multiple flares and combustors, the oil and gas industry permits should include a regulatory analysis determining the applicability of state and federal air quality permitting requirements and air pollution control regulations for the proposed emissions source(s). More information as well as all forms can be found online at https://www.colorado.gov/pacific/cdphe/all-permits.

Dust Control and Mitigation
TCHD encourages the applicant to follow best management practices for erosion control on the site, specifically to minimize excessive dust from land disturbance. This will help minimize the environmental impact resulting from any construction and land disturbance on the site. TCHD encourages any reclamation, including site pad minimization, and reseeding activities to occur as early as possible. This prevents erosion, helps control excessive weeds, and can provide some benefit to air quality.

Traffic Safety
Oil and gas production and monitoring wells involve significant truck traffic to and from a site during the construction and drilling process. TCHD encourages the County to designate a primary traffic route for all construction traffic and deliveries. If the trucks servicing the site will be traveling on a local school bus route, we encourage the County to work with the applicant to minimize traffic during hours when school buses are in operation.

Please feel free to contact me at (720) 200-1585 or lbroten@tchd.org if you have any questions about TCHD's comments.

Sincerely,

Laurel Broten, MPH
Land Use and Built Environment Specialist
Tri-County Health Department

CC: Sheila Lynch, Monte Deatrich, TCHD

EXHIBIT 3.4
Citizen Comments

From: Shawna Karl
To: Jen Rutter
Subject: Case name: HRM Resources II PC Well Pad
Date: Sunday, March 19, 2017 4:12:03 PM

Project Number: USR2017-00002

Assessor's Parcel Number: 0156929100001

My concern for the prescribed driving route for trucks is the already congested area between Sable Avenue and FairPlay at 136th Avenue, Brighton, CO.

I live in the subdivision to the south of 136th and East of Sable. We already have a terrible time getting out of out subdivision due to the increase of traffic after the thoroughfare of 132nd Avenue was closed off of Hwy. 85 North.

Why can you not reopen 132nd to give the trucks a straight route to the pad sight?

The traffic and roads of 136th is tremendous. We have trucks and RTD busses cutting through our neighborhood already if the northbound traffic is backed up. The come East on 134th and try to turn North on Kennedy Avenue. The street corner is not larger enough. Our neighbor has already had a semi on their lawn that knocked down a mailbox and damaged sprinkler lines and the lawn. We have also seen an increase in theft due to people driving into our neighborhood, instead of continuing on the highway route of Sable.

Please seriously consider opening 132nd back up.

A concerned resident and tax payer,
Shawna Lea Karl
303.810.5293

EXHIBIT 3.5
Applicant Response to Comments

Christopher LaMere

From: Jen Rutter
Sent: Thursday, August 17, 2017 3:57 PM
To: Christopher LaMere
Subject: FW: HRM RESOURCES II - ADCO - PC PAD AUSR RESPONSE
Attachments: HRM - ADCO PC PAD AUSR Response 06222017.pdf

Jen Rutter
Senior Environmental Analyst, *Community & Economic Development Department*
ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, 1st Floor, Suite W2000A
Brighton, CO 80601
o: 720.523.6841 | *jrutter@adcogov.org*
www.adcogov.org

From: Dan Kelly [mailto:dkelly@hrmres.com]
Sent: Thursday, June 22, 2017 11:04 AM
To: Christopher LaMere; Jen Rutter
Cc: derek.petrie@iptenergyservices.com
Subject: HRM RESOURCES II - ADCO - PC PAD AUSR RESPONSE

Good Morning Mr. LaMere and Ms. Rutter,

HRM Resources II (HRM) and its consultants have completed a careful review of the comments received on the PC PAD AUSR from Adams County, the City of Brighton, Tri-County Health Department, other agencies, and the public. The packet that accompanies this e-mail represents HRM's response to those comments.

Many of HRM's responses to comments are captured in the table provided by the County (which is attached). However, HRM's review of comments also prompted changes in the proposed operation plan and the transportation plan. In those cases, we are submitting additional materials to supplement the AUSR permit application as part of HRM's response to comments on those issues.

Of perhaps most importance, in response to comments from the County and others, and after careful review, HRM has decided to reduce the well count at the PC Pad from 20 to 16, along with a corresponding reduction in the other equipment at the site. By doing so, HRM will also reduce the site footprint and the extent of surface disturbance. We anticipate these changes will significantly mitigate the concerns expressed by various parties in their review of the AUSR.

As now contemplated, the onsite surface production facilities will consist of 16 wellhead manifolds, 16 separators, 14 oil tanks, 2 produced water tanks for a total of 16 tanks), 2 vapor recovery towers, 8 combustors, 2 generators, 2 scrubbers, 6 vapor recovery units, 1 gas sale line and one LACT unit. Future equipment could include an oil sales line and 3 gas lift compressors. The entire location will be fenced with secure access following the conclusion of completion activities.

To reflect these changes in the operational plan for the PC Pad, I also am enclosing with this e-mail a revised location drawing, a site plan showing the surrounding area, and site plan layout locations. I also am enclosing a graphic showing facility layout with perimeter landscaping. These graphic depictions reflect the revised operational plan for the PC Pad and supplement the corresponding materials included with the AUSR application.

Also attached with this e-mail is an Emergency Preparedness Plan that has been revised in response to comments from Adams County Emergency Management.

In response to comments from the County about truck traffic impacts to East 132nd Avenue and Buckley Road, HRM commissioned an evaluation from Arcadis of truck traffic impacts, which is also attached. Arcadis conducted a baseline traffic survey, reviewed trip generation data for 16 wells, and converted traffic volume, truck size, and weight information from the baseline traffic count and the PC Pad development profile into traffic loading expectations over time. Arcadis concluded that the existing roads should be sufficient to support baseline traffic as well as the PC Pad traffic. HRM believes the Arcadis report demonstrates the existing road system's capacity to handle development and completion activities at the PC Pad. However, HRM understands the County's concerns about potential traffic impacts. In response to those concerns, ***HRM will agree to a voluntary road impact mitigation fee of $2,000 per well, or a total of $32,000, payable at the time the first well is spud at the PC Pad.***

In addition, HRM is prepared to enter into a road maintenance agreement with the County. A proposed road maintenance agreement is attached with this e-mail.

HRM has responded thoughtfully to the County's comments as well as those of others who have participated in this process. We appreciate your hard work and patience, and we look forward to completing this process.

Respectfully,
Dan Kelly

	Adams County Community and Economic Development Department Development Review Comments			
	Case Number: USR2017-00002			**Case Name: HRM Resources II- PC Well Pad**
	Applicant: HRM Resources II			**Date Initiated: 3.31.2017**
Referral Comment No.	**Mapped?**	**Reviewer Initials**	**County Comment**	**Applicant Response** (date)
1	No	JR	Staff has reviewed and responded to the comment. The applicant has indicated that they will modify their traffic route to direct trucks east to I-76.	

Agency Referral Comments:

1. Tri-County Health Department provided comments regarding domestic water use and other associated precautions including but not limited to:
    a. Domestic Wastewater Management
    b. Baseline Water Quality Testing
    c. Water Supply for Use by Workers
    d. Potential Temporary Water Storage
    e. Above Ground Storage Tanks
    f. Emergency Response Plan
    g. Air Quality Permitting
    h. Dust Control Mitigation
    i. Traffic Safety

2. The City of Brighton provided extensive comments and requested additional information, including:
    a. Provide an operational timeline.
    b. Provide a landscape and visual mitigation plan.
    c. Provide a traffic management plan.
    d. Perform a sound study and provide a noise plan.
    e. As the location is 1,000 feet from a pipeline that is being constructed (the Boardwalk Pipeline), connect to that pipeline to reduce the truck traffic.

3. United Power responded that they are the electricity provider for this area.

4. Brighton Fire Rescue District provided specific feedback regarding Emergency Response Plan (ERP) please revise and resubmit. Also mentioned is the standard required for the access road. Please take note.

Internal County Comments:

- Emergency Management:
    - Update the contacts in the Emergency Preparedness Plan.
- Development Review Engineering:
    - Applicant must get an Access Permit prior to constructing the access road.
- Planning:
    - See comments for existing land use and recommendations. These will need to be taken into consideration when developing the landscape/screening plan.
- Long-Range and Strategic Planning:
    - See comments for future land use and recommendations. These will need to be taken into consideration when developing the landscape/screening plan.
- General County Comments:
    - Please provide contact information for community members to receive baseline well water sampling per Section 6(c) of the Executed Adams County Memorandum of Understanding.
    - The County supports the revised traffic route that will take traffic east on E132nd Ave and onto I-76 as quickly as possible.
    - An approved visual mitigation/landscape plan will be required prior to the County issuing a Notice to Proceed. This plan will need to account for the planned future development of the area. Consult with the surface owner.
    - A Traffic Management Plan will be required prior to the County issuing a Notice to Proceed.
    - A Noise Study will be required prior to the County issuing a Notice to Proceed and the recommended mitigation measures shall be performed.
    - As the Boardwalk Pipeline will be within 1,000 feet of the well pad location, the County strongly recommends that the operator utilize that form of transportation for the products of this site. As a result, traffic impacts and additional required road maintenance will be reduced in the area.

Agency Referral Comments

1. Tri-County Health Department

    a) Domestic Wastewater Management. Equipment and manpower will be at the site for a relatively brief period of time. When employees and contractors are on site, the operator will ensure that portable restrooms are available and are maintained on a rigorous schedule. The operation will not be extensive enough in scope and duration to require a septic or vault system.
    b) Baseline Water Quality Testing. The operator will offer baseline water quality testing to any property owner within ½ mile of the oil and gas location, at no cost to the property owner. The operator expects a number of property owners to request such sampling and that will result in the creation of a robust baseline water quality measurement. COGCC rules specify testing parameters for such testing and the operator will adhere to those parameters.
    c) Water Supply for Use by Workers. The operator will ensure that all contractors and vendors provide fresh supplies of potable water on a daily basis when employees are on site.
    d) Potential Temporary Water Storage. All water storage tanks onsite will be signed as either potable or non-potable. Any water storage tanks on site will be small; the risk of collapse will be small, and any potential environmental impacts from a collapse would be insignificant.
    e) Above Ground Storage Tanks. Construction and operation of any storage tanks for fuel, condensate or crude will comply fully with all SPCC and other regulatory requirements, including secondary containment.
    f) Emergency Response Plan. The operator will comply fully with all SPCC requirements as well as with all COGCC, CDPHE, and EPA requirements with regard to spills. The operator also will put in place an extensive emergency response plan that addresses all foreseeable potential emergencies and necessary response actions.
    g) Air Quality Permitting. The operator will comply fully with all COGCC requirements regarding venting and flaring, and with all CDPHE air permitting requirements.
    h) Dust Control Mitigation. The operator and all contractors and vendors will employ BMPs to minimize any dust in the area, and will comply with all COGCC interim and final reclamation requirements.
    i) Traffic Safety. The operator has proposed a traffic route that minimizes impacts to communities from all construction traffic. The operator also will require compliance with all traffic laws on the part of contractors and vendors.

2. The City of Brighton

    a) Provide an operational timeline. The AUSR application includes a written explanation of HRM's plans, including an operational timeline, designation of access roads and access points, construction standards for the access road and well pad, and an extensive list of proposed mitigation measures. In response to comments from Adams County and citizens, HRM has revised its operational plans. HRM has reduced the total number of wells from 20 to 16 (and a reduced number of tanks and

other equipment) and will develop the PC Pad in a phased manner. During the initial phase, HRM will construct an access road and a gravel well pad to Adam's County specifications, drill and complete eight wells, and construct necessary on-site facilities. Based on initial well performance, HRM may remobilize a drill rig and well completions crew within an 18-month window to drill and complete the remaining eight wells. HRM is supplementing its AUSR application to reflect this operational plan. The AUSR application also includes a series of revised detailed maps depicting the proposed oil and gas operations plan, and timeline.

b) Provide a landscape and visual mitigation plan. The AUSR application includes a detailed landscaping and visual mitigation plan. That plan shows the contouring that will be provided, the location of trees and native shrubs, and also depicts the fencing that will be provided around the pad. That landscaping plan was developed in collaboration with the surface owner and reflects the surface owner's desired final appearance of the site.

c) Provide a traffic management plan. HRM's AUSR application included a transportation management plan. See, in particular, Section 14 and Appendix A. In subsequent consultations with Adams County, HRM has agreed to modify its transportation plan to reflect comments received from nearby residents during the neighborhood meeting, Adams County staff, and the City of Brighton. That revised traffic management plan will significantly reduce traffic-related concerns for all parties.

d) Perform a sound study and provide a noise plan. HRM already has committed to conducting a baseline ambient sound study. HRM has committed to installing sound mitigation, including sound walls.

e) Require connection to the Boardwalk pipeline. HRM acknowledges the comments from both the County and the City about the potential for using a pipeline to transport oil from the site. HRM reiterates that it is involved in extensive and continuing discussions with pipeline operators in the area to assess the financial feasibility of connecting to a pipeline, particularly during the initial period when a maximum of two wells would be producing. HRM intends to continue those discussions and earnestly hopes they can be successfully completed. However, it is unlikely that those negotiations will be completed during the pendency of this permit application and review process. If the negotiations are successful, HRM will immediately notify the County and will modify its plans accordingly.

3. HRM Resources has met with United Power and addressed this comment.

4 HRM Resources' Emergency Response Plan (ERP) has been updated to address this comment and is attached with this response.

5. Internal County Comments

a) Emergency Management. Emergency Response Plan including contacts has been updated and is attached with this response.

b) Development Review Engineering. HRM acknowledges the need to secure an Access Permit prior to constructing the access road.

c) Planning. The AUSR application includes a detailed landscaping and visual mitigation plan. This is noted on the Exhibit A of the SUA attached in the original AUSR. That Exhibit shows the original and final outlines of the drill site and facility pad. Upon completion of drilling and completion phase a berm will be installed around the exterior of the facility. Specified trees and native shrubs will be planted all outside of a fence equipped with screening material. This landscaping plan was developed in collaboration with the surface owner and reflects the surface owner's desired final appearance of the site, as depicted in the Exhibit to the SUA.

d) Long Range Strategic Planning: Please see comments above regarding landscape and screening plan. HRM worked closely with the surface owner to develop a landscaping and fencing plan that is acceptable to the surface owner and that is consistent with the surface owner's future development plans.

e.) General County Comments

1. Contact information for community members to receive baseline well water sampling is attached.
2. County supports a revised traffic route that will take traffic east on E132nd Avenue and on to I-76 as quickly as possible, HRM agrees to that change in the traffic route. An Updated Traffic Study Memo and Access Route are attached to reflect these changes.
3. An approved visual mitigation plan will be required. As noted above, HRM negotiated a visual mitigation/landscape plan with the owner of the surface and took into account future land uses. The surface owner directed the development of that plan and it became a condition of the surface use agreement executed by both the surface owner and HRM.
4. HRM's AUSR application included a transportation management plan. In subsequent consultations with Adams County, HRM has agreed to modify its transportation plan to reflect comments received from nearby residents during the neighborhood meeting, Adams County staff, and the City of Brighton. That revised traffic management plan will significantly reduce traffic-related concerns for all parties. Additionally HRM contracted Arcadis to conduct a traffic study on the updated access route, and the results of these studies are included.
5. A noise study and mitigation will be required. In its AUSR application, HRM committed to conducting a baseline ambient sound study. HRM also has committed to installing sound mitigation, including sound walls.
6. Pipeline connection. HRM acknowledges the comments from the County about the potential for using a pipeline to transport oil from the site. HRM reiterates that it is involved in extensive and continuing discussions with pipeline operators in the area to assess the financial feasibility of connecting to a pipeline, particularly during the initial period. HRM intends to continue those discussions and earnestly hopes they can be successfully completed. However, it is unlikely that those negotiations will be completed during the pendency of this permit application and review process. If the negotiations

are successful, HRM will immediately notify the County and will modify its plans accordingly.

EXHIBIT 4.1
Property Owner Mailing Labels Map

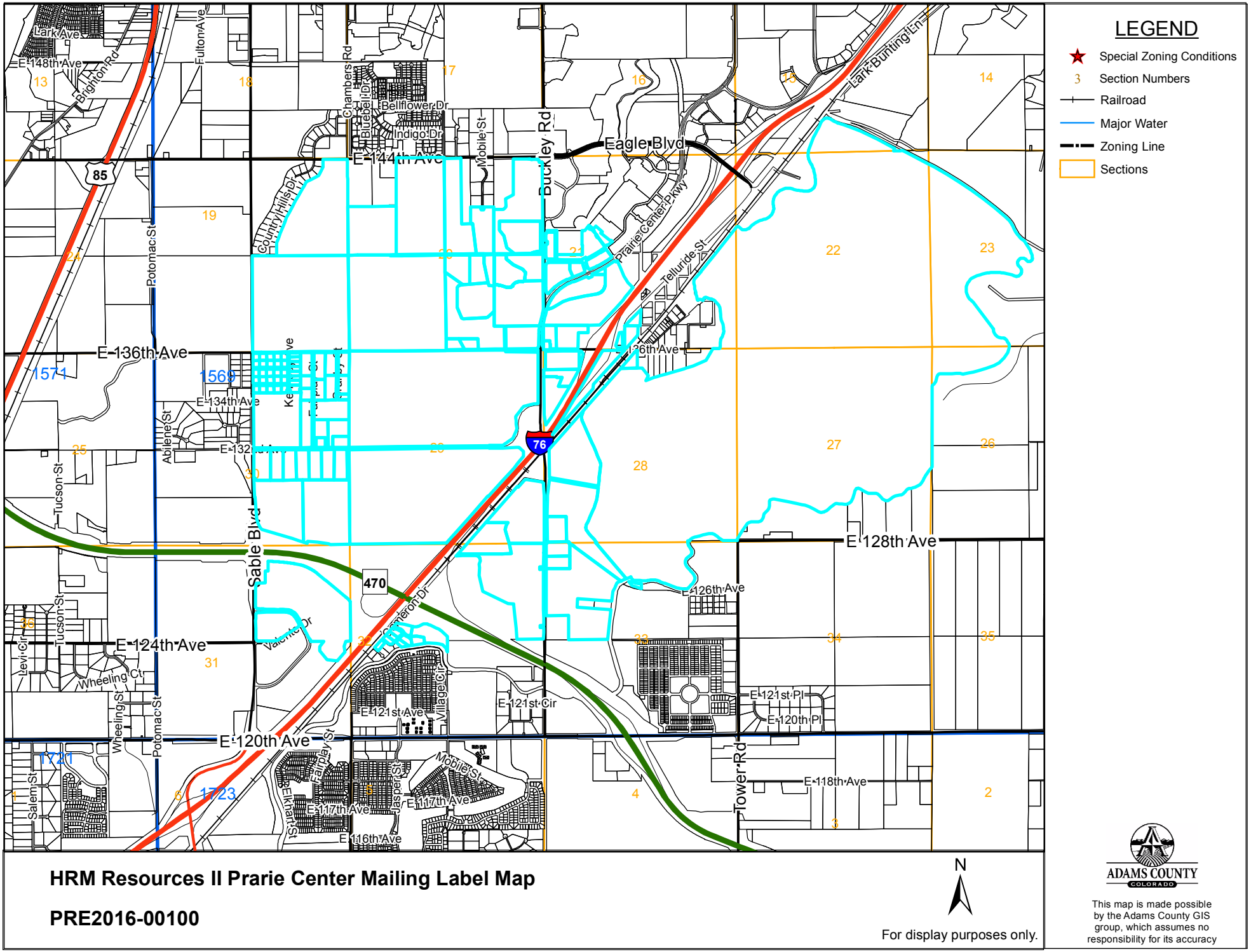
LEGEND
Special Zoning Conditions
Section Numbers
Railroad
Major Water
Zoning Line
Sections
E 148th Ave
Lark Ave
Brighton Rd
Fulton Ave
Chambers Rd
Bellflower Dr
Indigo Dr
Mobile St
Buckley Rd
Eagle Blvd
Lark Bunting Ln
E 144th Ave
85
County Hills Dr
Potomac St
Prairie Center Pkwy
Telluride St
E 136th Ave
1571
1569
E 134th Ave
Abilene St
E 132nd Ave
76
Tucson St
Sable Blvd
470
Cameron Dr
E 128th Ave
E 126th Ave
E 124th Ave
Levi Cir
Wheeling Ct
Wheeling St
Valmont Dr
E 121st Ave
Village Cir
E 121st Cir
E 121st Pl
E 120th Pl
E 120th Ave
1721
1723
Salem St
Elkhart St
Fairfax St
Jasper St
E 117th Ave
E 116th Ave
Tower Rd
E 118th Ave
HRM Resources II Prarie Center Mailing Label Map
PRE2016-00100
N
For display purposes only.
ADAMS COUNTY
COLORADO
This map is made possible by the Adams County GIS group, which assumes no responsibility for its accuracy

EXHIBIT 4.2
Property Owner Mailing Labels

2555 PRAIRIE LLC
2555 PRAIRIE CENTER PKWY
BRIGHTON CO 80601-7052

A M TAYLOR LIMITED PARTNERSHIP
PO BOX 597
BRIGHTON CO 80601

ADAMS COUNTY
4430 S ADAMS COUNTY PKWY
BRIGHTON CO 80601

ADAMS CROSSING LLC
C/O WOODBURY CORPORATION
2733 E PARLEYS WAY SUITE 300
SALT LAKE CITY UT 84109

ADAMS GERALD A AND
ADAMS SANDRA H
5026 HOWES LANE
SAN JOSE CA 95118

ALIRES BENJAMIN T JR AND
ALIRES ANNALEE L
13560 GRANBY ST
BRIGHTON CO 80601-6959

ANDERSON THOMAS D LIVING TRUST 1/2 INT
ANDERSON PATRICIA A LIVING TRUST 1/2
15250 E 132ND AVE
BRIGHTON CO 80601-6936

APPELHANZ JOHN JOSEPH/CHRISTINE ANN 1/3/
1/3/APPELHANZ JOHN JOSEPH/CHRISTINE ANN
5980 MONACO ST
COMMERCE CITY CO 80022-4023

ARCHULETA LEROY AND
ARCHULETA SONDRA M
13365 FAIRPLAY ST
BRIGHTON CO 80601

BACA MICHAEL R AND
BACA PATRICIA C
14588 E 135TH AVE
BRIGHTON CO 80601-6915

BANKS TED K AND
BANKS CONNIE S
15150 E 132ND AVE
BRIGHTON CO 80601

BARNES KEVIN A AND CHRISTINE M
14810 E 136TH AVE
BRIGHTON CO 80601

BESSER MIANNE L AND
BESSER BROOKE
14640 E 136TH AVE
BRIGHTON CO 80601-6948

BORDEN KENNETH W AND
BORDEN TAMARA L
13532 KENNEDY AVE
BRIGHTON CO 80601

BRIGHTON LAKES LLC
200 W HAMPDEN AVE STE 201
ENGLEWOOD CO 80110-2407

BUNKER JAMES A AND
VIGIL-BUNKER THERESA C
13198 SABLE BLVD
BRIGHTON CO 80601-7118

CHALMERS KEITH S AND
CHALMERS PAULA M
15711 REASONER DR
BRIGHTON CO 80603

CHALMERS KEITH S AND
CHALMERS PAULA M
15711 REASONER DR
BRIGHTON CO 80603-6926

CHALMERS KEITH S AND PAULA M
15711 REASONER DR
BRIGHTON CO 80603

CHALMERS WALLACE R AND
CHALMERS PATRICIA A
12409 OBRIAN WAY
BRIGHTON CO 80603-6923

CITY OF BRIGHTON
500 S 4TH AVE
BRIGHTON CO 80601-3165

CITY OF BRIGHTON THE
500 S 4TH AVE
BRIGHTON CO 80601-3165

COLORADO STATE HIGHWAY
NEED ADDRESS

COMEAU DORSEY A AND
COMEAU MARYCATHERINE
13572 KENNEDY AVE
BRIGHTON CO 80601-6946

CUTLER DAN V ET AL
12635 BUCKLEY RD
BRIGHTON CO 80603-7065

DRESSLER WILLIAM R AND
DRESSLER DONNA L
14789 E 135TH AVE
BRIGHTON CO 80601-6920

DROZD KENNETH J
13540 SABLE BLVD
BRIGHTON CO 80601-7225

EDMUNDSON LAND LLC
PO BOX 932
BRIGHTON CO 80601-0932

EWING JOHN L AND
EWING LINDA L
14950 E 132ND AVE
BRIGHTON CO 80601-6937

FARMERS RESERVOIR AND IRRIGATION CO
80 S 27TH AVE
BRIGHTON CO 80601-2699

FLETCHER BRETT
13550 GRANBY ST
BRIGHTON CO 80601-6959

FORTERRA INVESTMENTS LTD
200 W HAMPDEN AVE STE 201
ENGLEWOOD CO 80110-2407

GALENTIN MICHAEL CHANCE
1264 ASTER WAY
BRIGHTON CO 80601-6790

GAZAWAY JOSHUA D AND
GAZAWAY TRACY M
13440 SABLE BLVD
BRIGHTON CO 80601-7220

GONZALES JOSE AND
GONZALES JENNIE J
PO BOX 1217
BRIGHTON CO 80601

GOODWIN REX A AND
RODRIGUEZ CAROLYN A
13741 BURLINGTON BLVD
BRIGHTON CO 80603

HIATT TREVER J AND
HIATT KAREN M
17650 E 136TH AVE
BRIGHTON CO 80603

HIBBARD JAMES A AND
HIBBARD CHALONDA M
12429 O BRIEN WAY
BRIGHTON CO 80603

HOLLAND RODNEY L AND
HOLLAND LINDA M
14709 E 135TH AVE
BRIGHTON CO 80601-6920

JACKSON LARRY DEAN AND ROSEMARY
13510 FAIRPLAY ST
BRIGHTON CO 80601-6954

JD BERNARD LIVING TRUST
14706 E 134TH PL
BRIGHTON CO 80601-6940

JONES HOWARD MARION SR AND
JONES HOWARD M JR
14767 E 134TH PL
BRIGHTON CO 80601-6940

KARL MICHAEL G AND
KARL SHAWNA LEA
13490 KENNEDY AVENUE
BRIGHTON CO 80601

KIZAKI TOSHIHIRO
535 S WILLIAMS ST
DENVER CO 80209-4534

KNAGO CLAUDIA J
13571 KENNEDY AVE
BRIGHTON CO 80601-6947

LAVELY MATTHEW AND
LAVELY BRENDA
14648 E 135TH AVE
BRIGHTON CO 80601

LEADY PHILLIP/BEVERLY FAMILY TRUST THE
12770 BUCKLEY RD
BRIGHTON CO 80603-7066

LIVINGSTON COY W AND
LIVINGSTON SHARON K
14646 E 134TH PL
BRIGHTON CO 80601-6913

LORSHBOUGH ELDON E AND MARY J
15280 E 136TH AVE
BRIGHTON CO 80601

LOYD HODGE & SONS INC
447 POPLAR CIR
BRIGHTON CO 80601-2985

LYONS SADIE AND
LYONS JEFFREY D
14740 E 136TH AVE
BRIGHTON CO 80601-6958

MADER CLINT AND
MADER KARNA
15473 E 109TH AVE
COMMERCE CITY CO 80022-9868

MARSELLA ANNINO L AND
MARSELLA FRANCESCA
14189 MEADOWLARK LN
BRIGHTON CO 80601

MARTINDELCAMPO HECTOR A AND
MARTINDELCAMPO SHELLEY
14566 E 134TH PLACE
BRIGHTON CO 80601

MCKINNEY LARRY L AND
TAYLOR KIRSTY L
14707 E 134TH PL
BRIGHTON CO 80601-6940

MOWERY TIMOTHY
13100 CAMERON DR
BRIGHTON CO 80603-6941

MOWERY TIMOTHY AND
DRANGE JORDAN K
12895 BUCKLEY RD
BRIGHTON CO 80603-7069

MRFR III LLLP
200 W HAMPDEN AVE STE 201
ENGLEWOOD CO 80110-2407

MURPHY PATRICK J
15001 E 132ND AVE
BRIGHTON CO 80601-6936

OLIVAS GREGORY K
13475 FAIRPLAY ST
BRIGHTON CO 80601-6952

OTTEN DONALD M REVOCABLE TRUST THE
7785 TAMRA DRIVE
RENO NV 89506

PALIZZI FARMS LLC
C/O DEBORA M PALIZZI AND GLORIA A BENNET
14820 SABLE BLVD
BRIGHTON CO 80601

PFANNENSTIEL IRENE L LIVING TRUST 1/2 an
PFANNENSTIEL GERALD LIVING TRUST 1/2
13410 GRANBY ST
BRIGHTON CO 80601-6959

POPISH PHILIP H AND
POPISH SHARON L
14649 E 135TH AVE
BRIGHTON CO 80601-6918

PRAIRIE CENTER METROPOLITAN DIST NO 3
2127 INNERBELT BUSINESS CENTER DR NO. 20
ST LOUIS MO 63114

PRAIRIE CENTER RETAIL ONE LLC
C/O THF REALTY
211 N STADIUM BLVD STE 201
COLUMBIA MO 65203-1161

QUINTANAR RUBEN AND LUCY
12408 O BRIEN WAY
BRIGHTON CO 80603

RAMIREZ JESUS GUSTAVO JR
13552 KENNEDY AVE
BRIGHTON CO 80601-6946

ROCKING S AND M LLC
15805 REASONER DR
BRIGHTON CO 80603-6963

SAATHOFF JEFFREY S AND
SAATHOFF TAMI L
14768 E 135TH AVE
BRIGHTON CO 80601

SAUER JOHN H
14589 E 135TH AVE
BRIGHTON CO 80601-6916

SEEGER DONALD R AND
SEEGER PAULINE M
13590 SABLE BLVD
BRIGHTON CO 80601

SHAUFLER TERRY
5511 WEST MEXICO
LAKEWOOD CO 80232

SIMON TIM AND SIMON BRENDA JOINT
REVOCABLE TRUST
13444 KENNEDY AVE
BRIGHTON CO 80601-6944

SLEIGHER CHRISTOPHER JOHN AND
SLEIGHER DONELDA ANNE
15750 REASONER DR
BRIGHTON CO 80603-6926

SMITH CASSIE L
12420 CAMERON DR
BRIGHTON CO 80603-6927

SMITH DEANNA M
15200 E 132ND AVE
BRIGHTON CO 80601

SMITH SHANNON D AND
SMITH GERALDINE K
14766 E 134TH PL
BRIGHTON CO 80601-6940

SOUTH ADAMS COUNTY WATER AND
SANITATION DISTRICT
PO BOX 597
COMMERCE CITY CO 80037-0597

STARBUCK KEVIN
4460 CODY ST
WHEAT RIDGE CO 80033-3248

STATE OF COLO DIV OF NATURAL
RESOURCES/PARK AND OUTDOOR REC
1525 SHERMAN ST
DENVER CO 80203-1714

STOGSDILL HUBERT I AND
STOGSDILL CAROL A
13350 FAIRPLAY ST
BRIGHTON CO 80601-6953

STRATTON JERRY LEE AND
STRATTON JEWELL ANN
13460 FAIRPLAY ST
BRIGHTON CO 80601-6953

THF PRAIRIE CENTER DEVELOPMENT LLC
C/O THF REALTY INC
211 N STADIUM BLVD STE 201
COLUMBIA MO 65203-1161

TWO BAR C DAIRY INC
15300 E 144TH AVE
BRIGHTON CO 80601-6873

UHING KENNETH D
13526 KENNEDY AVE
BRIGHTON CO 80601-6946

UNITED POWER INC
PO BOX 929
BRIGHTON CO 80601

VILLENEUVE PAULINE
1250 S MONACO PKWY APT 76
DENVER CO 80224-1876

WAGNER SAM AND IRENE WILMA TRUST NO 1
15201 E 132ND AVE
BRIGHTON CO 80601

WEBB GEORGE F
14600 E 136TH AVE
BRIGHTON CO 80601-6948

WERBACH CYNTHIA B AND
WERBACH DOUG E
16601 E 136TH AVE
BRIGHTON CO 80601-6956

WHITTINGTON DARIN J AND
WHITTINGTON SHELLY G
15951 NASHVILLE ST
HUDSON CO 80642-7941

WOLF JOSEPH A AND
WOLF ROSE M
12890 BUCKLEY RD
BRIGHTON CO 80603

YOUMANS ARDEN A AND
YOUMANS BARBARA S
13422 KENNEDY AVE
BRIGHTON CO 80601

YOUMANS ARDEN A AND
YOUMANS BARBARA S
14708 E 135TH AVENUE
BRIGHTON CO 80601

ZAISS BRIAN RONALD AND
ZAISS AMY LYNN
13300 FAIRPLAY ST
BRIGHTON CO 80601-6953

ZIMMERMAN CARRIE L AND
ZIMMERMAN GREGORY W
13516 KENNEDY AVE
BRIGHTON CO 80601-6946