



LETTER OF INTRODUCTION

EASTERN HILLS SOUTH

3AH, 3BH, 3CH, 3DH, 4AH, 4BH, 4CH, 4DH

City File No. DA-2155-00

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EASTERN HILLS SOUTH
1AH, 1BH, 1CH, 1DH, 2AH, 2BH, 2CH, 2DH, 3AH
OIL & GAS PERMIT
SE/4 NE/4 SEC. 15-T4S-R65W, 6TH P.M.
ARAPAHOE COUNTY, COLORADO
(CITY OF AURORA)

SUBMITTAL: DECEMBER 18, 2019



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Project Summary

Project Location

ConocoPhillips Company, a Delaware corporation, and its subsidiary Burlington Resources Oil & Gas Company LP, a Delaware limited partnership, (Applicant) submits this application for approval of a Site Plan from the City of Aurora, Colorado, a municipal corporation (City) for Eastern Hills South 4-65 17-18 3AH, 3BH, 3CH, 3DH, 4AH, 4BH, 4CH, 4DH (Well Site). The proposed Well Site is located on rangeland approximately 1.3 miles north of the intersection of East Jewell Avenue and South Powhaton Road. The Well Site will be in the E2SE of Section 17, Township 4 South, Range 65 West, within Parcel 1977-00-0-00-237, zone district R-2. The address is 641 S. Powhaton Road, Aurora, Co 80018. Please refer to Site Plan and Vicinity Map.

Purpose, Pad, and Access Road

Applicant intends to drill and complete eight (8) oil and gas wells from one pad. The proposed wells will be known as the Eastern Hills 4-65 17-18 3AH, Eastern Hills 4-65 17-18 3BH, Eastern Hills 4-65 17-18 3CH, Eastern Hills 4-65 17-18 3DH, Eastern Hills 4-65 17-18 4AH, Eastern Hills 4-65 17-18 4BH, Eastern Hills 4-65 17-18 4CH, and Eastern Hills 4-65 17-18 4DH. The desired outcome of this application is to permit the construction of this Well Site. The purpose of the wells is to produce hydrocarbons from underlying formations known to have commercial potential from the production of such substances.

The disturbance will be approximately 12.0 acres; the drilling pad will be 7.82 acres during drilling and completion, reduced to 7.8 acres after interim reclamation. The existing topography generally drains from southeast to northwest at an existing grade of the disturbed area, approximately 0.3-1%, with the undisturbed upstream basin having slopes of approximately 1% to 11% slope. Stormwater collected along the west side of the access road will sheet flow from east to west along its historical flow patterns. No adverse drainage impacts to the surrounding site or properties resulting from the construction of the site are anticipated. Please refer to **Exhibit Vicinity Map**.

The Well Site will be accessed by a constructed private gravel roadway approximately 1,690-linear foot and 23 feet wide, accessed from S Powhaton Road ending at the pad with a cattle guard. The pad will be fenced by a four foot wildlife fence. The City of Aurora and applicant have agreed to a plan in which there will be two haul routes: one pre-oil pipeline installation, and one post-pipeline installation. The pre-oil pipeline haul route will be to proceed South on Powhaton Road to Jewell. Then East on Jewell for 4 miles; then North on Watkins Road for 4 miles, then merge onto I-70 heading West. The post-pipeline haul route will be to proceed North on Powhaton Road for 3.9 miles; then East on I-70 Frontage Road for 1 mile before merging onto the Interstate heading West.

Equipment will consist of a temporary drill rig and associated support equipment, followed by a completion phase utilizing hydraulic fracturing, and ultimately 8 wellheads with minimal on-site pumping and oil and gas equipment.

The timing of all phases of operations are subject to change due to equipment availability, safety considerations, and weather cooperation. Construction of the pad and access road will require approximately 45 days of work. BMPs will be installed to mitigate the earthmoving activities and to stabilize the disturbed surfaces to achieve revegetation. A wildlife fence will be erected around the pad site and a locked gate will be installed at the access road/well site entrance. This fencing and gate will provide security for the life of the Well Site.

The BMP Site Specific narratives that follow summarize the BMPs listed in Exhibit C of the Operator Agreement between the City of Aurora and ConocoPhillips Company and its subsidiaries, dated June 5, 2019 with a brief explanation of how the Applicant intends to accomplish the obligation of each specific BMP for the Eastern Hills South project.

Please note that the numbering does not correlate to the individual BMP Operating Agreement numbers.

1. **Definitions:** The Operator Agreement references the following defined terms that have been used throughout this application: **Residential Building Unit, High Occupancy Building, Construction Phase, Drilling Phase, Completion Phase, Production Phase, and Reclamation Phase.** (See Operator Agreement, Exhibit C, BMP No. 1).
2. **Access Roads:** The access road for the Eastern Hills South project uses the same access road as Phase 1 of the Eastern Hills 4-65 17-18 1AH, 1BH, 1CH, 1DH, 2AH, 2GBH, 2CH (aka the Eastern Hills North) well that was drilled in September 2018. The access road was built in July 2018. The final access road alignment was laid out during the civil survey. The route was also based on the surface rights that were granted in the Surface Use Agreement along with the local topography. There will be approximately 1,350 feet of new road constructed to the South to the entrance of the Eastern Hills South Well Site. The access point at the nearest public roadway was determined by sight distances and setbacks from existing intersections. The first one hundred feet (100') was constructed of asphalt. The access road was constructed in conformance with the City's 2016 Roadway Specification Manual. (See Operator Agreement, Exhibit C, BMP No. 28; Site Plan: General Construction Notes 4&6; Access Road and Pad Construction Notes; and Operations Plan.)
3. **Air Quality:** Applicant's Environmental Group has worked with City Planning staff (Juliana Berry) to provide an Air Quality Field Wide Plan as well as a Site-Specific Plan pursuant to discussions on September 18, 2019 and submitted with this Application. This comprehensive plan addresses policies and procedures used to evaluate, eliminate, capture, or minimize all potentially harmful emissions and compliance with all applicable state and federal regulations, including regulations promulgated by Colorado Department of Public Health and Environment, Colorado Oil and Gas Conservation Commission and United States Environmental Protection Agency. Applicant will be working with APIS, Inc., a third-party vendor who manufactures and services the air quality monitoring stations within 500 feet of the Well Site. At least five days prior to oil and gas operations commencing, the background monitoring station(s) will be placed away from and upwind of the emission concern areas. The air quality monitoring stations will provide continuous monitoring throughout the life of the well(s). Vendor will also manually deploy at least one whole-air canister to collect samples for a one-week time span prior to oil and gas operations commencing. (See Operator Agreement, Exhibit C, BMP No. 15; Air Quality Plan, and Site Plan.)
4. **Anchoring:** During Drilling and Completion phases of the Eastern Hills South, all equipment requiring anchoring is anchored using surface anchors or removable anchoring systems, no anchors are left behind for future use. During Production Phase, tanks and separation equipment are secured to the ground using anchors engineered to resist flotation, collapse, lateral movement, or subsidence. The Eastern Hills South location is not in a floodplain. (See Operator Agreement, Exhibit C, BMP No. 41.)
5. **Automatic Safety Protective Systems and Surface Safety Valves:** The Eastern Hills South Well Site will be equipped to operate remotely via the automated safety protective system. This system

monitors flowing pressures and other operating parameters which have predetermined threshold values programmed and will remotely shut the well in should certain upset conditions be detected. All vessels and tanks are equipped with high level remote shutdowns to prevent an overflow scenario. Additionally, the automated safety system provides the ability to remotely shut-in wells on demand through operator remote intervention. *(See Operator Agreement, Exhibit C, BMP No. 45 and Operations Plan.)*

6. **Burning:** The Applicant will not allow open burning of debris to occur on the Eastern Hills South Well Site or any oil and gas operation, as per City code. This does not include emergency flares. *(See Operator Agreement, Exhibit C, BMP No. 6 and Operations Plan.)*
7. **Chemical Disclosure and Storage:** All hydraulic fracturing chemicals will be disclosed to the Aurora Fire Rescue department. Prior to the bringing of such chemicals onto the Eastern Hills South property, the Applicant will make available to the City the storage, containment and disposal method for such chemicals. *(See Operator Agreement, Exhibit C, BMP No. 7 and Operations Plan.)*
8. **Class II Underground Injection Control Wells:** The Applicant will not develop, use, operate, or contract with any third party for the use of any Class II underground injection control wells within the city limits or within a four-mile buffer of the City's existing or planned critical infrastructure. Notwithstanding the four-mile buffer, Applicant may use the Class II underground injection well operated by Expedition Water Solutions located in the SW/ 4 of Section 5, T5SR64W in Arapahoe County. *(See Operator Agreement, Exhibit C, BMP No. 34; and Operations Plan.)*
9. **Closed-Loop Pitless System for the Containment and/or Recycling of Drilling Fluids:** Eastern Hills South wells will be drilled, completed and operated using closed-loop pitless systems for containment and/or reuse of all drilling, completion, flowback and produced fluids. Applicant will reuse fluids to the maximum extent practicable, with the City's understanding that Applicant is limited in its ability to reuse all fluids. All above ground storage, including tanks and separators, for use during drilling, completion, flowback and other produced fluids will have secondary containment. The secondary containment system used around the tank battery is an engineered steel panel containment wall with a full impermeable synthetic liner under all tanks and up the sides of the containment wall. This system is consistent across our operations, no difference between site specific and field wide design. *(See Operator Agreement, Exhibit C, BMP No. 5; Operations Plan and Site Plan.)*
10. **Color/Paint Color:** All permanent above ground associated production equipment, structures and stationary equipment for the Eastern Hills South will be painted in a tan or brown matte finish unless a different color is necessary for safety per regulations. *(See Operator Agreement, Exhibit C, BMP No. 8; Operations Plan; and Site Plan Note No. 3.)*
11. **Combustion Devices:** Combustors will be available at the Eastern Hills South Well Site during the entire production phase to eliminate fugitive emissions for maintenance or emergency use only. The device will be fired using natural gas and operate with a 98% or higher hydrocarbon destruction efficiency. The device will be designed and operated in a manner that will ensure no visible emissions during normal operation. Visible emissions do not include radiant energy or water vapor. *(See Operator Agreement, Exhibit C, BMP No. 19; Operations Plan; Air Quality Plan and Site Plan (Production page) Best Management Practices Note No. 7.)*
12. **Containment Berms:** A containment system capable of containing one and one-half times (150%) the capacity of the largest vessel, plus sufficient freeboard to prevent overflow will be constructed

around all permanent tanks at the Eastern Hills South Well Site. The containment system will be constructed of a steel-rim berm and lined with a synthetic or engineered liner, mechanically connected to the steel-rim which will surround all primary containment vessels. When used, temporary vessels will have secondary containment constructed from lined earthen berms or pre-engineered, duck-pond style containment systems. All berms and containment devices will be inspected quarterly. *(See Operator Agreement, Exhibit C, BMP No. 40; Site Plan; Notes #2, Best Management Practices Note No. 2.)*

- 13. Cultural and Historical Resource Protection:** Applicant has not discovered any landmark buildings or sites within the disturbance area for the Eastern Hills South. Construction, alteration, removal or demolition of a building or feature or any changes that would impair the cultural or historical association of the landmark building, landmark site or historical district pursuant to those qualities depicted in the City of Aurora Municipal Code will not be made without first obtaining approval. If there is a discovery of historical artifacts at the Eastern Hills South Well Site, the City will be notified. *(See Operator Agreement, Exhibit C, BMP No. 47 and Operations Plan.)*
- 14. Discharge Valves:** Open-ended discharge valves on all storage tanks and other containers within the Eastern Hills South Well Site will be secured, capped, or blind-flanged, and so they will not be accessible to the general public. The Applicant will ensure that all open-ended discharge valves within the Well Site are placed within the interior of the secondary containment area. *(See Operator Agreement, Exhibit C, BMP No. 11 and Operations Plan.)*
- 15. Electric Equipment:** Pursuant to the OA, Electric Equipment is required at sites along and west of Monaghan Rd. as shown on Exhibit A-3. The Eastern Hills South well site is located east of Monaghan Rd and is not identified on Exhibit A-3 and therefor is exempt from this BMP. *(See Operator Agreement, Exhibit C, BMP No. 13 and Operations Plan.)*
- 16. Events or Incidents:** In the event of a medical, fire or explosion incident on the Eastern Hills South Well Site, 911 will be called and local emergency services will be dispatched. Any COGCC reportable safety events or OSHA reportable injuries at the Eastern Hills South Well Site will be reported to the City within 24 hours. *(See Operator Agreement, Exhibit C, BMP No. 37 and Emergency Response Plan.)*
- 17. Emergency Response Plan:** A site specific Emergency Response Plan (ERP) has been submitted for this site. The Applicant's emergency response will be uniform and will be executed in the format outlined in the ERP for all emergencies. A revised Emergency Response Plan has been provided to the City. The ERP provides 24 hour contact information for persons responsible for emergency field operations, information on evacuation routes and locations of healthcare facilities anticipated to be used as well as a detailed plan for response to emergencies that may include any or all of the following: explosions, fires, gas, oil or water pipeline leaks or ruptures. The ERP also provides guidance on training and coordination and communication with City emergency personnel and departments. *(See Operator Agreement, Exhibit C, BMP No. 14, and Emergency Response Plan.)*
- 18. Fencing:** Secure, opaque fencing will be installed at the Eastern Hills South Well Site after interim reclamation has been completed. This fencing will be eight feet tall. *(See Operator Agreement, Exhibit C, BMP No. 17 and Site Plan.)*
- 19. Flammable Material:** The Eastern Hills South Well Site will be maintained in a manner so to ensure that all ground within twenty-five (25) feet of any tank or other structure containing flammable

or combustible materials will be kept free of dry weeds, grass, rubbish or landscaping. (See *Operations Plan and Operator Agreement, Exhibit C, BMP No. 18.*)

20. **Flowlines:** All flowlines (the pipeline connecting the wellhead to the production facility) are contained entirely within the boundary of the well pad. No off-location flowlines as defined and set forth in COGCC Rule 1101, will be utilized. (See *Operations Plan, Operator Agreement, Exhibit C, BMP No. 42 and Site Plan; Notes #11.*)
21. **Fugitive Dust Suppression:** Dust associated with Site activities and traffic on roads will be minimized throughout all phases such that there are no visible dust emissions from sites or roads to the maximum extent practicable given wind conditions. Numerous mitigation measures are in place to minimize dust emissions including (but not limited to): application of fresh water to roads and ground during earth moving activities, curtailment of work during windy conditions and re-establishment of vegetation on disturbed areas that are not graveled. (See *Operations Plan and Operator Agreement, Exhibit C, BMP No. 12, Dust Suppression Plan.*)
22. **General Maintenance:** All equipment will be operated and maintained pursuant to manufacture specifications consistent with technological limitations and reasonable and customary maintenance practices. In addition to automated shutdowns, preventative maintenance and best practices are in place to prevent leaks from vessels. These include (but are not limited to) yearly shut-downs and visual inspections of each 2-phase and 3-phase vessel on site, yearly non-destructive testing of each 2-phase and 3-phase vessel shell and head on site, internal coating to prevent corrosion, weekly environmental checks by operations personnel, non-destructive testing of all water piping, and non-destructive testing of various flowlines to monitor for thin walled piping caused by erosion or corrosion. (See *Operator Agreement, Exhibit C, BMP No. 35 and Operations Plan.*)
23. **Landscaping:** Landscaping will be performed on the Eastern Hills South once reasonable access to a City water main is within four hundred feet (400') of the Well Site. (See *Operations Plan and Operator Agreement, Exhibit C, BMP No. 20, and Site Plan: Landscape Plan Sheet(s).*)
24. **Lighting:** Lighting is only used during the Drilling and Completion Phases of operations. No permanent lighting will be installed. All lighting used will be situated so that is downcast and does not shine beyond the boundary of the oil and gas operations area. (See *Operations Plan and Operator Agreement, Exhibit C, BMP No. 21 and Lighting Plan, Site Plan; Photometric Sheet(s).*)
25. **Low Profile Tanks:** All tanks installed on the well site will be no taller than sixteen feet (16'). (See *Operations Plan and Operator Agreement, Exhibit C, BMP No. 9, and Site Plan: Production Equipment Representative Table.*)
26. **Maintenance of Machinery:** Routine field maintenance of vehicles and mobile machinery will not be performed within 500 feet of navigable waters of the United States. All fueling will occur over impervious material. The Maintenance Supervisor and all supporting personnel will be responsible for compliance with BMP No. 22. (See *Operator Agreement, Exhibit C, BMP No. 22 and Operations Plan.*)
27. **Mud Tracking:** The Applicant will take all practicable measures to ensure that vehicles do not track mud or debris onto City streets. If mud or debris is deposited on City streets the Applicant will clean the streets in a reasonable amount of time, or within 24 hours of notice by the City. If the clean-up cannot be done or is postponed the Applicant will notify the City. Further information

may be found in the Operations Plan. This will be accomplished by the Construction Supervisor, Drilling Superintendent, Completions Supervisor and Maintenance Supervisor who understand this requirement and has the responsibility to ensure their teams will meet this requirement. (See *Operator Agreement, Exhibit C, BMP No. 23 and Operations Plan.*)

28. Noise Management Plan/Noise Mitigation: The Applicant will comply with the sound limitation regulations set forth in the COGCC 800 Series Aesthetic and Noise Control regulations. The Applicant had Behrens Engineering, a third-party engineering firm, perform an environmental noise impact assessment and will follow its mitigation recommendations to stay in compliance with the COGCC 800 series requirements. Applicant provided Behrens' Noise Modeling Report to the City.

- Per Section 2.2 of the OA, Applicant is required to conduct a baseline noise study if a New Well is planned within 2,640' of 5 Residential Building Units (RBU) or 1 High Occupancy Building (HOB). There are no (0) RBU's within 2,640' of the Eastern Hills South Well Site, and there are no HOB's within 2,640' of the Eastern Hills South Well Site, so a baseline noise study is not required. However, since a baseline noise study was required for the Eastern Hills North, we have performed a baseline noise study for the Eastern Hills South as well. The results of this baseline study have been incorporated into the overall Noise Modeling Report provided with this application.
- Per Section 2.3 of the OA, Applicant is required to use noise mitigation if a New Well is within the area identified on Exhibit A-2 to the OA or if the New Well is within 1,320' of a RBU or 1,500' of a HOB. There are no (0) RBU's within 1,320' of the Eastern Hills South Well Site, and there are no (0) HOB's within 1,500' of the Eastern Hills South Well Site. However, the Eastern Hills South Well Site is located within the area identified on Exhibit A-2 to the OA, so Applicant will use noise mitigation during the Drilling and Completion Phases for the Eastern Hills South Well Site. Applicant will use Noise mitigation berms during the Drilling Phase and Completion Phase.
- Per Section 2.4 of the OA, Applicant may be required to conduct additional noise mitigation for New Wells within 1,320' of a RBU. As stated above, there are no RBU's within 1,320' of the Eastern Hills South Well Site.
- Per Section 2.6 of the OA, Applicant is required to address C scale noise/vibration if a New Well is within 1,320' of a RBU or 1,500' of a HOB. As stated above, there are no (0) RBU's within 1,320' of the Eastern Hills South Well Site, and there are no (0) HOB's within 1,500' of the Eastern Hills South Well Site.

Unmitigated noise models of the proposed drilling and fracing operations were constructed for the Eastern Hills 3AH-4DH pad in Arapahoe County, Colorado. The unmitigated noise models indicate that the drilling or fracing operations will not exceed the C-weighted COGCC noise limits at the modeled receptor locations. However, as mentioned above the applicant will use Noise mitigation berms during the Drilling Phase and Completion Phase.

29. Notifications to the City: (*Regarding Commencement of Operations and Phases of Operations/ Notifications to the City Regarding Commencement of Construction at CGF and Pipeline Operations/Notifications to the City*) The Applicant will notify the City, through the designated City representative, no less than 30 days prior to the commencement of the Construction for the

Eastern Hills South (unless the Construction Phase commences within 45 days of the approval of the applicable Form 2, Form 2A, or local permit), Drilling, or Completion Phases, and 30 days prior to recompleting, re-drilling, or plugging and abandonment of the well. Operator will provide all required notifications under the OA to the City by notifying Daniel Brotzman by e-mail at dbrotzman@auroragov.org as well as Stephen Rodriguez by e-mail at srodrigu@auroragov.org. (See Operator Agreement, Exhibit C, BMP No. 4.)

- 30. Noxious Weed Control:** All disturbed ground not needed for subsequent operations for Eastern Hills South, including stockpiles and cut and fill slopes, are seeded and mulched in accordance with the permits. Approved weed-free seed mix is used, and these areas are monitored and maintained for weed establishment for the life of the well. (See Operator Agreement, Exhibit C, BMP No. 33, Weed Control Plan and Operations Plan.)
- 31. Odor:** Applicant will mitigate odors by routing to closed loop systems to the maximum extent practicable. If the Applicant receives complaints from a Residential Building within 1,320 feet from the site, Applicant will take measures to mitigate the odor within 24 hours, based on the specific circumstances. Further detail may be found in the Air Quality Plan and Operations Plan provided with this application. (See Operator Agreement, Exhibit C, BMP No. 36, Air Quality Plan and Operations Plan.)
- 32. PHA-Hazard and Operability Study:** The Applicant has provided a letter that the engineer of record has incorporated all applicable PHA-HAZOP recommendations in the design. On January 29, 2018 a PHA-HAZOP was facilitated by Cyndee R. Clouse, a certified facilitator, and conducted by a multi-disciplined team for the Multi-Well Pad Facility with Individual Separation. While the facility design being evaluated does not fall under Process Safety Management (PSM) pursuant to OSHA 29 CFR 1910.119, the HAZOP process was similar. This study consisted of a risk assessment utilizing methodology commonly used while conducting a Process Hazard Analysis (PHA) with a Layers of Protection Analysis (LOPA). (See Operator Agreement, Exhibit C, BMP No. 44 and PHA-HAZOP Letter.)
- 33. Plugged and Decommissioned Well Testing:** Pursuant to COGCC regulation, an offset well evaluation for the Eastern Hills South will be submitted to the COGCC for review. This evaluation reveals that one (1) Previously Abandoned well (the State-Smith 1-16) is located within one thousand five hundred feet (1,500') of the proposed well tract for any New Well proposed to be drilled from the Eastern Hills South Location. Pursuant to the OA, notice was sent to the Surface Owner requesting access to the property for the purpose of testing the Previously Abandoned Well. Subsequently, the Surface owner responded to this notice by denying the request. Permission from the Operator of Record could not be obtained, this company is no longer in existence. Therefore, no plugged and decommissioned well testing is required for the Eastern Hills South. (See Operator Agreement, Exhibit C, BMP No. 43 and Operations Plan.)
- 34. Reclamation:** Because the Eastern Hills South is surrounded by cropland pursuant to COGCC rule 1003 (b.), Interim Reclamation will occur within three months of first production. The Applicant will comply with COGCC Rules 1000 series governing the reclamation of sites. An **Interim Reclamation Plan** has been provided within the Site Plan for this application further detailing site-specific reclamation that will take place following the well(s) being put into production. Additional information regarding Interim reclamation may also be found in the Storm Water Management Plan (SWMP), submitted to the Public Works Department and approved by that department. A **Final Reclamation Plan** will be submitted to the City concurrently with the Applicant's plugging and abandonment permit submission to the COGCC. Areas reaching substantial completion of

grading and topsoil placement operations will be drill seeded and crimp mulched within 14 days of substantial completion of grading and topsoil operations. If an incomplete area is to remain inactive for longer than 30 days, it will be drill seeded and crimp mulched or otherwise landscaped within 14 days from the suspension or completion of land disturbance activities. (See Operator Agreement, Exhibit C, BMP No. 39 and Operations Plan.)

- 35. Reduced Emission Completions (Commonly known as Green Completions):** The Applicant will comply with the EPA Reduced Emission Completions rules (under 40 CFR 60 Subpart OOOO and OOOOa) for oil and gas wells. Applicant will apply best management practices to safely maximize resource recovery and minimize releases to the environment. Applicant was an early adopter of reduced emissions completions (green completions), a charter member of the Natural Gas Star program, and is committed to reducing emissions from flaring and venting. For all projects in the City including the Eastern Hills South project, we plan to have a gas pipeline installed and ready to accept natural gas production immediately after initial flowback of wells on this site. Further detail may be found in the Operations Plan and the Air Quality Plan provided with this application. (See Operator Agreement, Exhibit C, BMP No. 16, Operations Plan and Air Quality Plan.)
- 36. Removal of Debris:** The Applicant will ensure that all construction-related debris is removed from the Well Site for proper disposal in a timely manner. The Applicant will ensure that Well Site is reasonably free of debris and excess materials at all times during all phases of operations. Applicant shall not stockpile debris at the Well Sites. (See Operator Agreement, Exhibit C, BMP No. 24 and Operations Plan.)
- 37. Removal of Equipment:** At the end of the flowback stage of development (the beginning of the Production Phase), all temporary equipment will be removed from the Eastern Hills South site (within 30 days), leaving only the wellhead(s) and the permanent production facilities, including, separators, storage tanks and emissions control equipment. No permanent storage of removable equipment will occur on any well site. (See Operator Agreement, Exhibit C, BMP No. 25 and Operations Plan.)
- 38. Road Repairs:** No roads within the jurisdictional boundaries of The City of Aurora will be used to access this site. The Applicant will coordinate with Arapahoe County for payment of traffic impact fees, if applicable. Road repairs will be addressed pursuant to the requirements of Arapahoe County. (See Operator Agreement, Exhibit C, BMP No. 29, Operations Plan.)
- 39. Spills:** The Applicant will notify the City of any spill of materials on permeable ground at Eastern Hills South Well Site that has a reportable quantity under any applicable laws. Applicant will provide a copy of the self-reporting submissions that the Applicant provides to the COGCC due to any spill on the Well Site. Further detail may be found in the Spill Prevention, Control and Countermeasure Plan (SPCC) provided with this application. (See Operator Agreement, Exhibit C, BMP No. 38 and Operations Plan.)
- 40. Stormwater Management:** The Applicant will not begin construction of the Eastern Hills South Well Site until a Stormwater Water Management Plan (SWMP) is approved by the City and a stormwater quality discharge permit has been acquired for the Well Site. Applicant will perform monthly inspections of stormwater BMPs, or after a storm event. Further detail may be found in the SWMP provided with this application. (See Operator Agreement, Exhibit C, BMP No. 30, Operations Plan and Stormwater Management Plan.)
- 41. Trailers:** The Applicant will not place any permanent trailers on the Eastern Hills South Well Site.

The Applicant will have temporary construction trailers on site during the Construction, Drilling and Completion phases of development and up to 6 months following the Completions phase of development. (See *Operator Agreement, Exhibit C, BMP No. 26, Operations Plan, and Site Plan (Drilling sheet)*).

- 42. Transportation and Circulation:** The Applicant has provided the Traffic Management Plan and Traffic Letter with this application. The Eastern Hills South haul route is depicted on the Haul Route Sheet of the site plan. No roads within the jurisdictional boundaries of The City of Aurora will be utilized to access this site. (See *Operator Agreement, Exhibit C, BMP No. 27 and Road Maintenance Agreement*.)
- 43. Transportation and Storage of Fluids:** The Applicant will utilize pipelines for the transportation of hydrocarbons for the Eastern Hills South. Non-potable water used for hydraulic fracturing will be transported by above-ground water supply line, typically 12” in diameter and typically made of synthetic rubber or similar “hose” material. They are used for the transfer of water from an identified water source to support company’s hydraulic fracturing operations. Permanent tanks will be used for storage and transportation of produced water, and for storage of oil under downtime due to third parties. All third-party trucking operations will be subject to the Applicant’s HSE policies and procedures. (See *Operator Agreement, Exhibit C, BMP No. 3, Site Plan (Operations Plan page), and the Water Delivery Method*.)
- 44. Tree Mitigation:** There are no trees required to be removed at the Eastern Hills South Well Site. (See *Operator Agreement, Exhibit C, BMP No. 10, and Operations Plan*.)
- 45. Visual Mitigation:** Operator Agreement, Exhibit C, BMP No. 49 applies to four specific Well Sites, the Eastern Hills South is not one of these Well Sites. (See *Operator Agreement, Exhibit C, BMP No. 49*.)
- 46. Wastewater and Waste Management:** All fluids and waste will be contained and disposed of at licensed disposal or recycling facilities outside of the City. Applicant will provide a Spill Prevention, Control and Countermeasure Plan (SPCC) with the application. (See *Operator Agreement, Exhibit C, BMP No. 31, Waste Management Plan and the SPCC Plan attached as an appendix thereto, and Operations Plan*.)
- 47. Water Protection Requirements:** Identification of sensitive water resources begins in the pre-development planning stage of the project. The proximity of wells to existing City infrastructure is depicted on the Adjacent Visible Improvements sheet of the Site Plan. BMP No. 48 describes that all new wells will be located a minimum of 500’ from City Infrastructure unless vibratory studies confirm that no negative impacts occur to the City Infrastructure, in this case the wells may be setback 350’ from City Infrastructure. The results of a vibratory study were provided to the City of Aurora Water Department and it was confirmed that a 350’ setback was acceptable. (See *Operator Agreement, Exhibit C, BMP No. 48 and Operations Plan*.)
- 48. Water Quality Monitoring Plan/Groundwater Pollution Mitigation:** The Applicant will sample existing water wells prior to drilling activities and will continue to sample existing or installed wells through the Production Phase, until final Reclamation Phase is completed for the well site to ensure that groundwater has not been contaminated by the Applicant’s activity. As the well is constructed, concentric layers of steel casing and cement form the barrier to protect groundwater resources from the contents that will later flow inside the well mitigating any potential pollution for groundwater pollution. The depth of the casing will extend to the deepest known depth of the

freshwater aquifers. Surface casing is set at +/- 2600 ft TVD and cemented to surface. The production casing is a long string and is cemented to 200 ft inside the surface casing by design. If needed during the Drilling Phase, Applicant shall run temperature or cement log if surface casing cement is not circulated to the surface in order to ensure integrity. Completion well preparation tests production casing to 9800 psi before opening toe sleeve or perforating toe. If pressure test is unsuccessful (i.e. the toe valve leaks) a plug is deployed to test to 9800 psi as deep as the plug will go on wireline. During the production phase the Applicant will monitor casing pressures using pressure transmitters in the surface. Bradenhead testing will be performed during the completions phase with COGCC staff onsite. (See *Operator Agreement, Exhibit C, BMP No. 46, Fieldwide Water Quality Monitoring Plan, Site Specific Water Quality Monitor location on the Site Plan and Operations Plan.*)

- 49. Water Supply:** Pursuant to the terms of the Agreement for Delivery of Reusable Raw Water effective September 26, 2017 between the City of Aurora and ConocoPhillips Company the Applicant will take delivery from the City of water to be used during the Drilling, Completions, and Production Phases of development. Further details may be found within the Agreement for Delivery of Reusable Raw Water and in the Water Delivery Method. Operator has a site-specific Water Delivery Plan and Method that has been provided to the City with this application. These temporary, above-ground water supply lines (“Lay Flat Lines”) are typically 12” in diameter and made of synthetic rubber or similar “hose” material. They are used for the transfer of water from an identified water source to support hydraulic fracturing operations. (See *Operator Agreement, Exhibit C, BMP No. 32, Agreement for Delivery of Reusable Raw Water effective September 26, 2017 between the City of Aurora and ConocoPhillips Company, and Operations Plan.*)

NEIGHBORHOOD MEETING RESULTS

Farkas, Scott (Veracity Land Services, LLC)

Subject: FW: ConocoPhillips Open House
Attachments: file-7.jpeg; file1-2.jpeg; file2.jpeg; file3.jpeg

From: Mead, Jayme L <Jayme.Mead@conocophillips.com>
Sent: Monday, August 12, 2019 8:55 AM
To: blegare@auroragov.org
Subject: ConocoPhillips Open

House Good morning Mayor,

I know you are aware that ConocoPhillips hosted our neighborhood meeting on August 6th for ten projects reflected in our Operator's Agreement with the City. We had a diverse team pulled together to engage and educate citizens in Aurora on our operations. We had subject matter experts present from ConocoPhillips representing the following fields: health and safety, noise mitigations, permitting, drilling and completions. We sent out 966 invitations to residents within 1 mile of our locations and had 15 residents in attendance. Although the turnout was low, citizens in attendance were very engaged and provided positive feedback on their experience with our staff and the overall flow of the open house.

Here are the only comments received from the open house:

- *"This open house was very organized! I really appreciate the individual time each ConocoPhillips Person showed to the participants. Super Job!"*
- *"All the different informational tables were staff with top notch professionalism. Will attend a follow-up session hopefully if it's planned. Thanks for the invitation."*

I've attached a few pictures from the event to give you an idea of our setup. Please let me know if you have any questions.

Best regards,

Jayme Mead | Stakeholder Relations Advisor Niobrara
ConocoPhillips | 34501 E Quincy Ave. Watkins CO, 80137
T: 303.268.3757 | M: 505.215.6615 | Jayme.Mead@conocophillips.com









TYPICAL PHOTOS



AURORA COLORADO OIL & GAS OPERATIONS
DRILLING RIG

CONOCOPHILLIPS COMPANY

ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546



AURORA COLORADO OIL & GAS OPERATIONS
DRILLING RIG WITH AUTOMATIC PIPE HANDLING

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546



AURORA COLORADO OIL & GAS OPERATIONS
DIESEL FUEL AND GENERATORS WITH SECONDARY CONTAINMENT

CONOCOPHILLIPS COMPANY

ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720)482-9526
Fax: (720)482-9546



AURORA COLORADO OIL & GAS OPERATIONS
MATERIALS STORAGE WITH SECONDARY CONTAINMENT

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546



AURORA COLORADO OIL & GAS OPERATIONS
PIPE STORAGE RACK

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.,
Suite 240
Englewood, CO80112
Tel: (720)482-9526
Fax: (720)482-9546



AURORA COLORADO OIL & GAS OPERATIONS
OFFICES & TEMPORARY LIVING QUARTERS

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720)482-9526
Fax: (720)482-9546



SAND CASTLES AND TRUCKS

TRUCKS AND PUMPS



AURORA COLORADO OIL & GAS OPERATIONS
COMPLETION SITE

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546



AURORA COLORADO OIL & GAS OPERATIONS
TEMPORARY SOUND MITIGATION WALLS

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



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Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

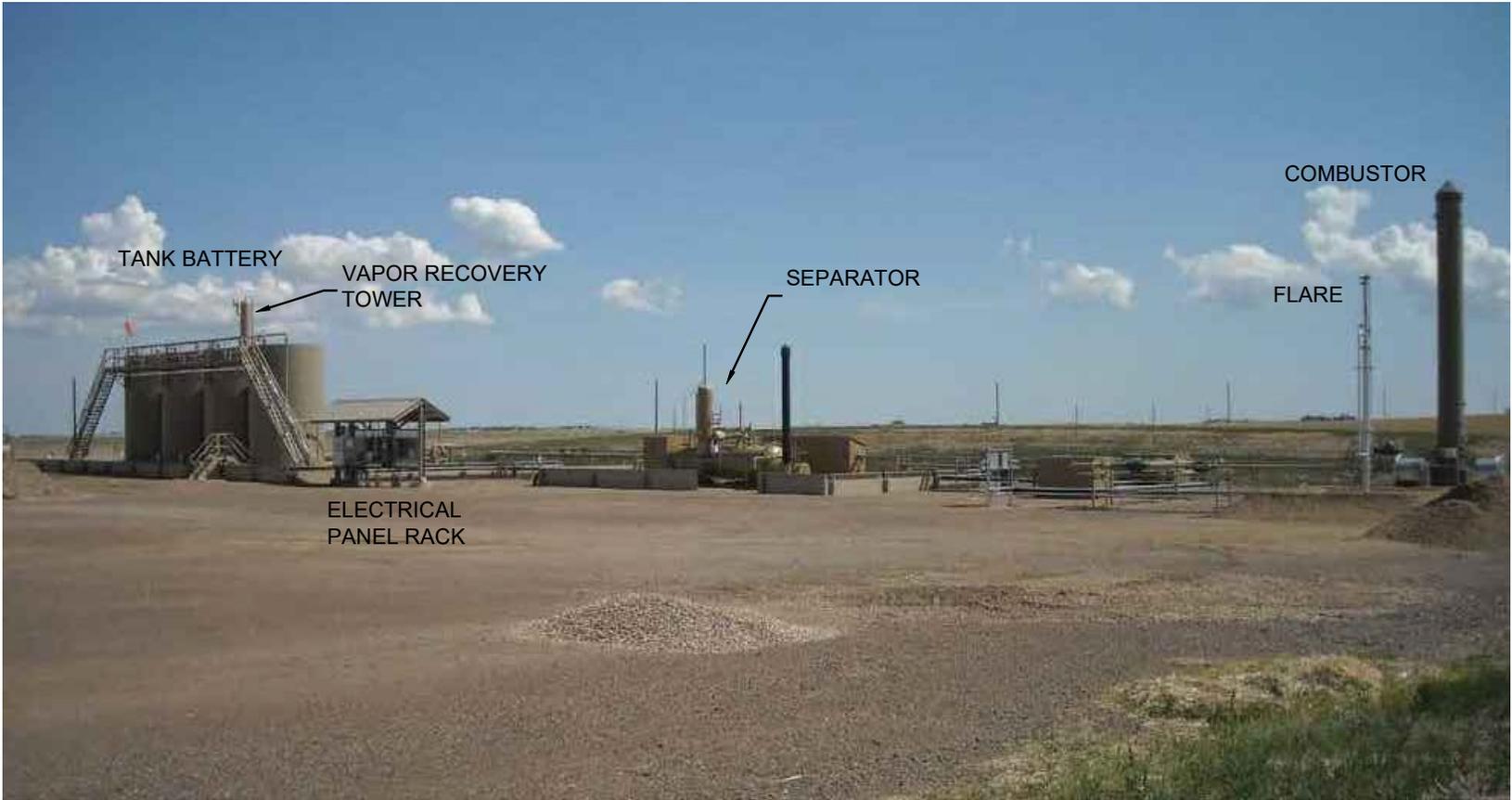


AURORA COLORADO OIL & GAS OPERATIONS
MOBILE TORNADO SHELTER

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



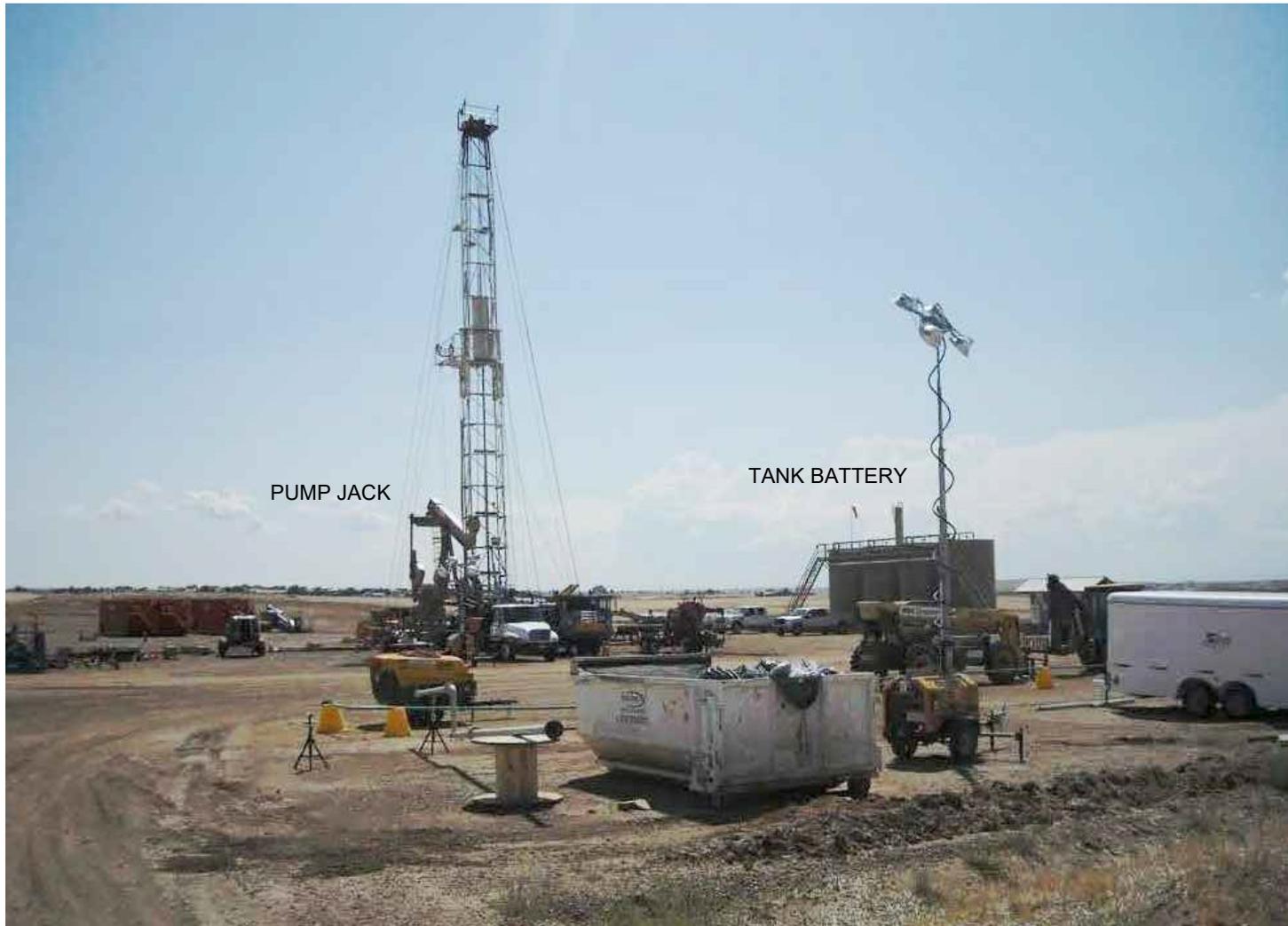
10333 E. Dry Creek Rd.
Suite 240
Englewood, CO80112
Tel: (720)482-9526
Fax: (720)482-9546



AURORA COLORADO OIL & GAS OPERATIONS
PRODUCTION FACILITY

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1





AURORA COLORADO OIL & GAS OPERATIONS
WORKOVER RIG-PRODUCTION SETTING

CONOCOPHILLIPS COMPANY





AURORA COLORADO OIL & GAS OPERATIONS
CLOSED LOOP DRILLING SYSTEM (MUD TANKS)

CONOCOPHILLIPS COMPANY

ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773



10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546



AURORA COLORADO OIL & GAS OPERATIONS
SIGNAGE

CONOCOPHILLIPS COMPANY
ATTN: KATHY DENZER
34501 E. QUINCY AVE., BUILDING 1
WATKINS, CO 80137
PHONE: (303) 268-3773

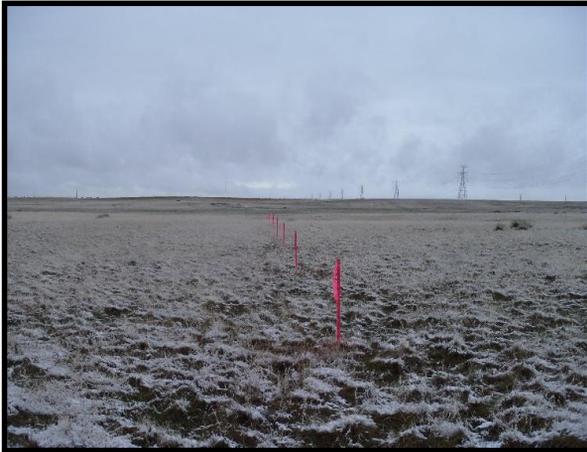


10333 E. Dry Creek Rd.
Suite 240
Englewood, CO 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

PLAT PACKAGE

(excerpts)

LOCATION PHOTOS



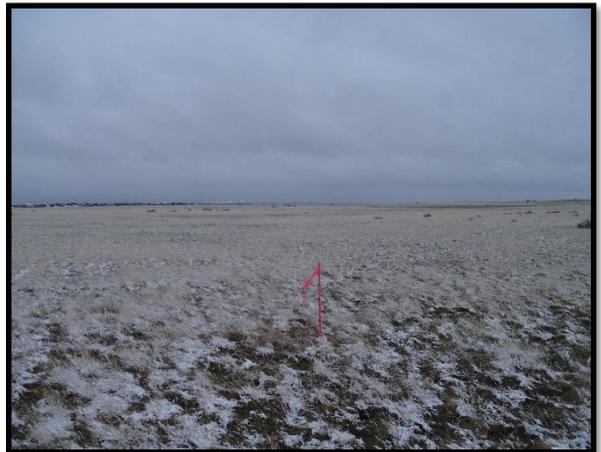
Looking North



Looking East



Looking South



Looking West

**Well Pad Name: EASTERN HILLS 4-65 17-18
3AH-3DH, 4AH-4DH PAD**

Operator: CONOCO PHILLIPS

Location: T4S R65W SEC. 17 E1/2 SE1/4

Date Taken: 04/24/18

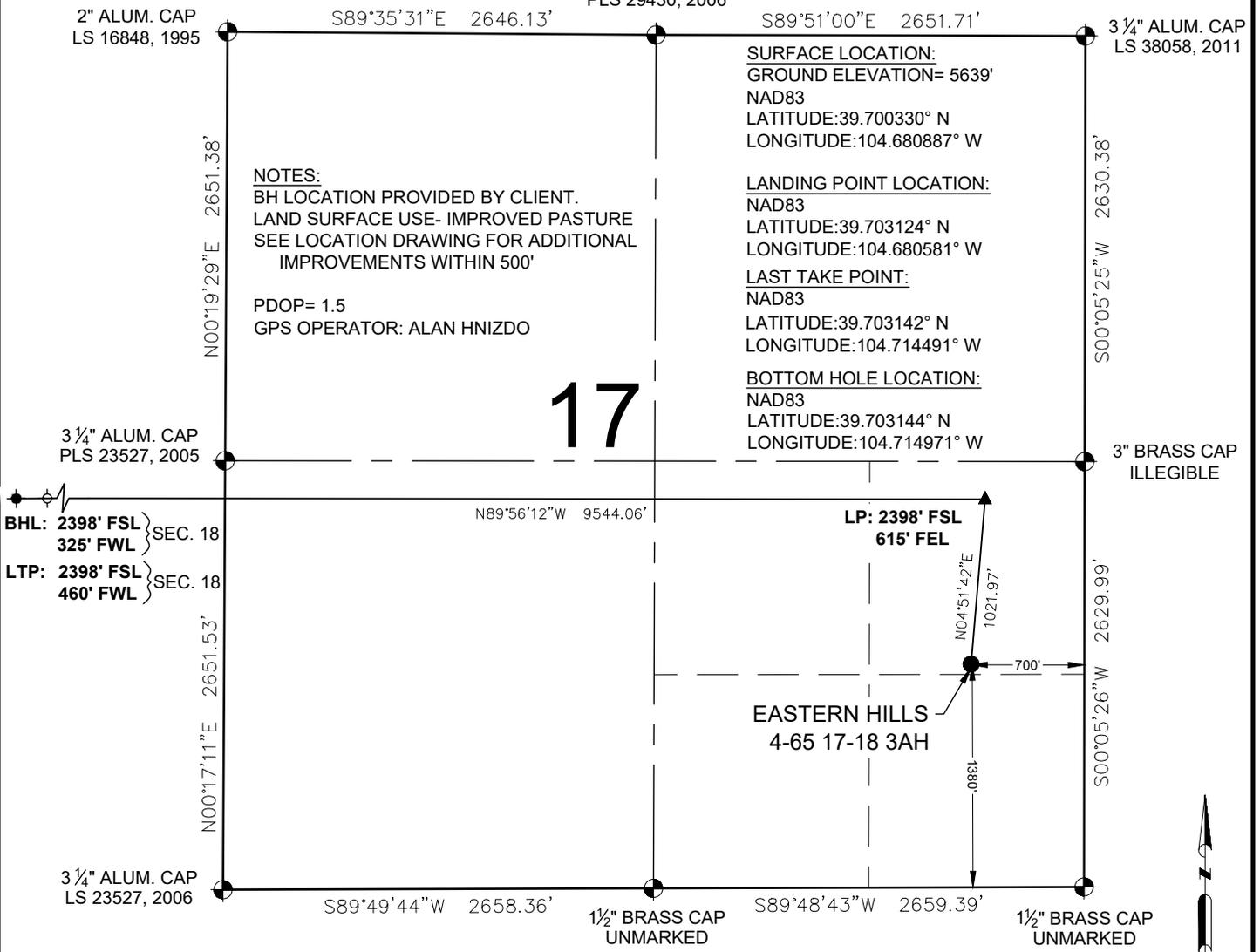
ConocoPhillips

7535 Hilltop Circle
Denver, CO 80221
(303) 928-7128
www.ascentgeomatics.com



EASTERN HILLS 4-65 17-18 3AH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.5
GPS OPERATOR: ALAN HNZDO

SURFACE LOCATION:
GROUND ELEVATION= 5639'
NAD83
LATITUDE:39.700330° N
LONGITUDE:104.680887° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.703124° N
LONGITUDE:104.680581° W

LAST TAKE POINT:
NAD83
LATITUDE:39.703142° N
LONGITUDE:104.714491° W

BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.703144° N
LONGITUDE:104.714971° W

17

BHL: 2398' FSL } SEC. 18
325' FWL }
LTP: 2398' FSL } SEC. 18
460' FWL }

LP: 2398' FSL
615' FEL

EASTERN HILLS
4-65 17-18 3AH

LEGEND

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- ▲ = BOTTOM HOLE
- ▲ = LANDING POINT
- ⊙ = LAST TAKE POINT
- ⊙ = LAST TAKE POINT
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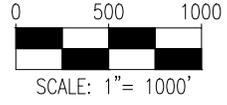
- NOTES:**
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 2. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GROUND VALUES AS GPS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO LINES SHOWN HEREON. THIS LOW DISTORTION PROJECTION (LDP) IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 39.696714°N, A CENTRAL MERIDIAN LONGITUDE OF 104.659538°W, AND A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000269 (EXACT). THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
 3. FIELD VERIFICATION OF MONUMENTS COMPLETED WITHIN 1 YEAR OF SIGNATURE DATE, UNLESS OTHERWISE NOTED.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THIS SAID DATE OF THIS CERTIFICATION SHOWN HEREON.

**WELL EASTERN HILLS 4-65 17-18 3AH TO BE
LOCATED 1380' FSL & 700' FEL**

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO **CONOCO PHILLIPS** THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

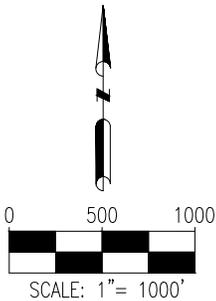
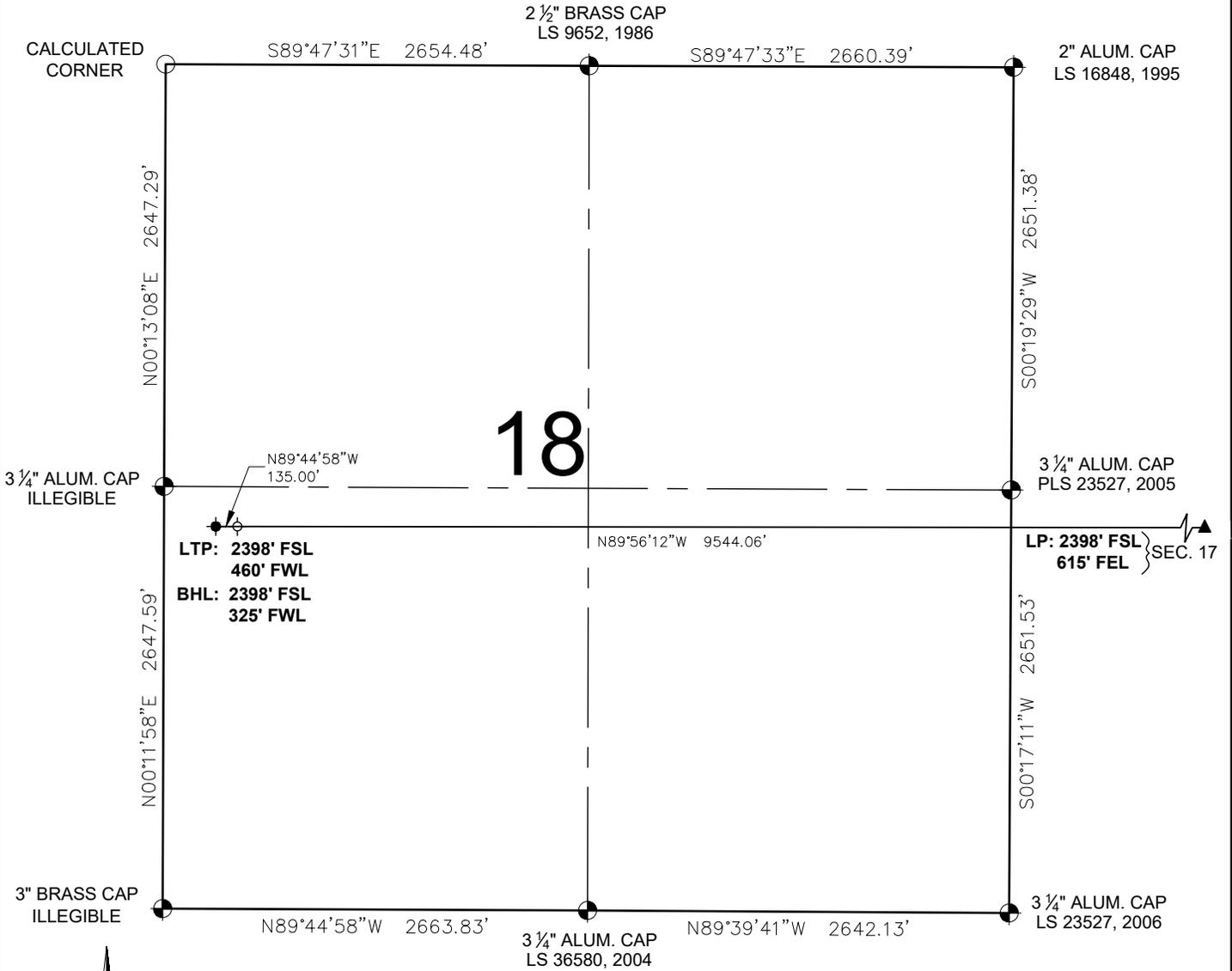
JERRY R. JOHNSON, PLS 29417
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC
d.b.a. ASCENT GEOMATICS SOLUTIONS



SHEET 1 OF 2

<p style="font-size: 8pt;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3AH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: NE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3AH WELL LOCATION EXHIBIT



LEGEND

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- = PROPOSED WELL
- ◆ = EXISTING WELL
- ◆ = BOTTOM HOLE
- ▲ = LANDING POINT
- ⊕ = LAST TAKE POINT
- LP = LANDING POINT
- BHL = BOTTOM HOLE LOCATION
- LTP = LAST TAKE POINT

JERRY R. JOHNSON, PLS 29417
 COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
 FOR AND ON BEHALF OF P.F.S., LLC
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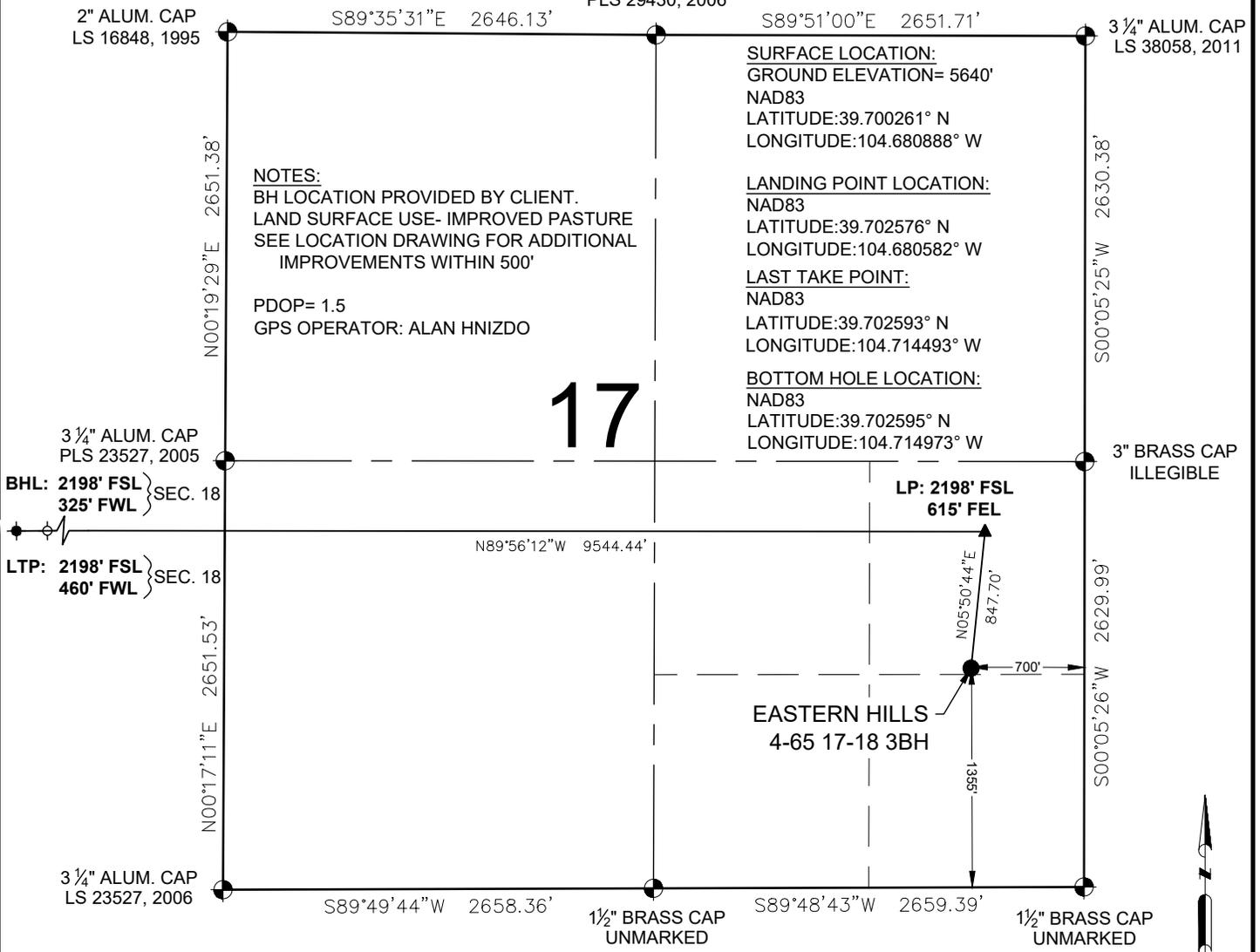


SHEET 2 OF 2

<p style="font-size: 8px;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3AH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: NE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3BH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.5
GPS OPERATOR: ALAN HNZDO

SURFACE LOCATION:
GROUND ELEVATION= 5640'
NAD83
LATITUDE:39.700261° N
LONGITUDE:104.680888° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.702576° N
LONGITUDE:104.680582° W

LAST TAKE POINT:
NAD83
LATITUDE:39.702593° N
LONGITUDE:104.714493° W

BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.702595° N
LONGITUDE:104.714973° W

3 1/4" ALUM. CAP
PLS 23527, 2005
BHL: 2198' FSL } SEC. 18
325' FWL }
LTP: 2198' FSL } SEC. 18
460' FWL }

LP: 2198' FSL
615' FEL

EASTERN HILLS
4-65 17-18 3BH

LEGEND

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- ◆ = EXISTING WELL
- ▲ = BOTTOM HOLE
- ▲ = LANDING POINT
- ⊙ = LAST TAKE POINT
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- LTP = LAST TAKE POINT

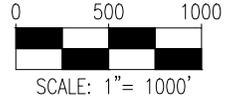
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 - ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GROUND VALUES AS GPS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO LINES SHOWN HEREON. THIS LOW DISTORTION PROJECTION (LDP) IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 39.696714°N, A CENTRAL MERIDIAN LONGITUDE OF 104.659538°W, AND A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000269 (EXACT). THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
 - FIELD VERIFICATION OF MONUMENTS COMPLETED WITHIN 1 YEAR OF SIGNATURE DATE, UNLESS OTHERWISE NOTED.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THIS SAID DATE OF THIS CERTIFICATION SHOWN HEREON.

**WELL EASTERN HILLS 4-65 17-18 3BH TO BE
LOCATED 1355' FSL & 700' FEL**

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO **CONOCO PHILLIPS** THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

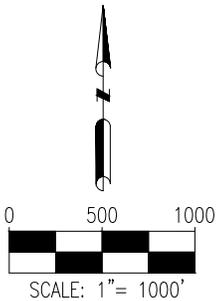
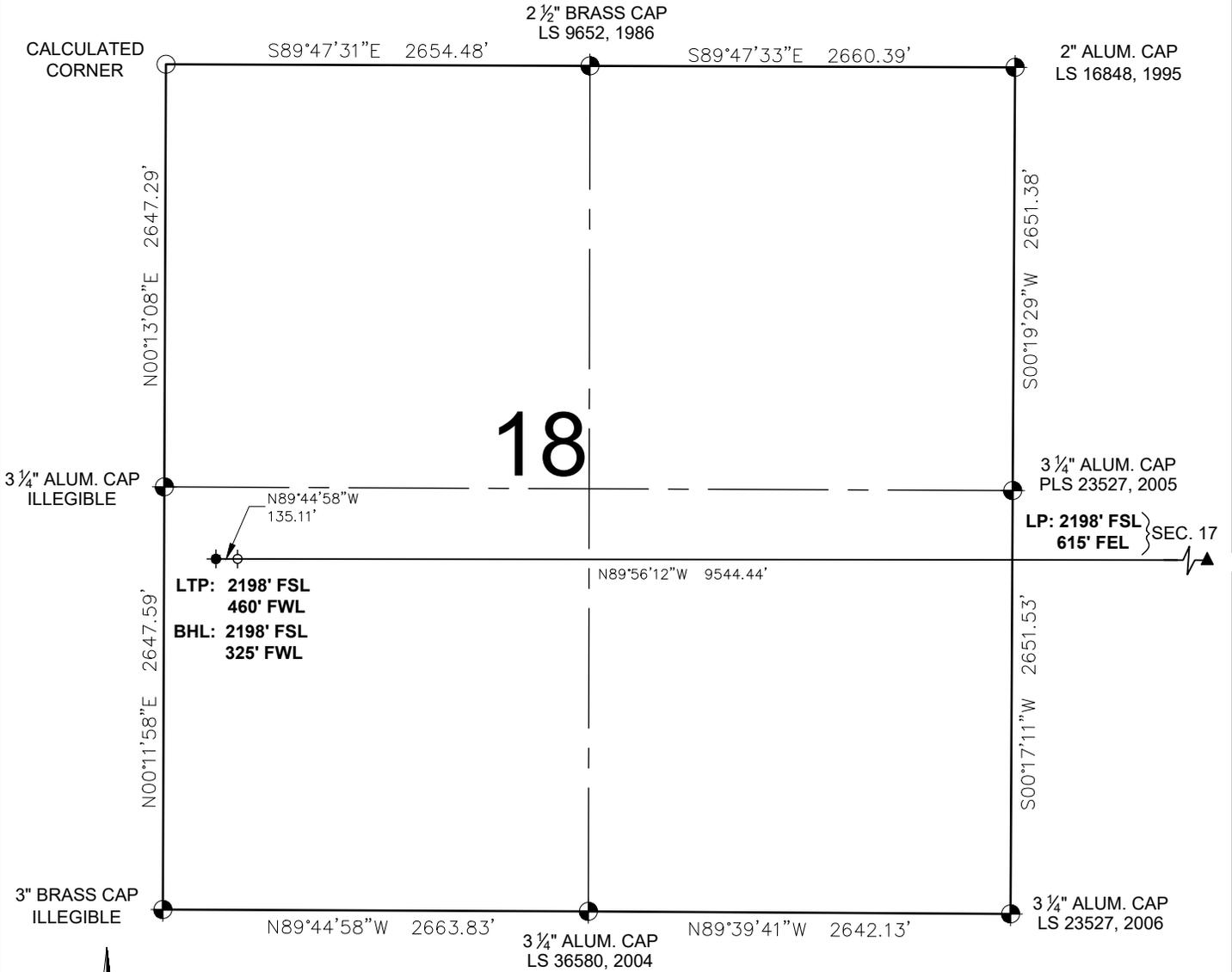
JERRY R. JOHNSON, PLS 29417
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC
d.b.a. ASCENT GEOMATICS SOLUTIONS



SHEET 1 OF 2

<p>8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3BH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: NE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3BH WELL LOCATION EXHIBIT



LEGEND

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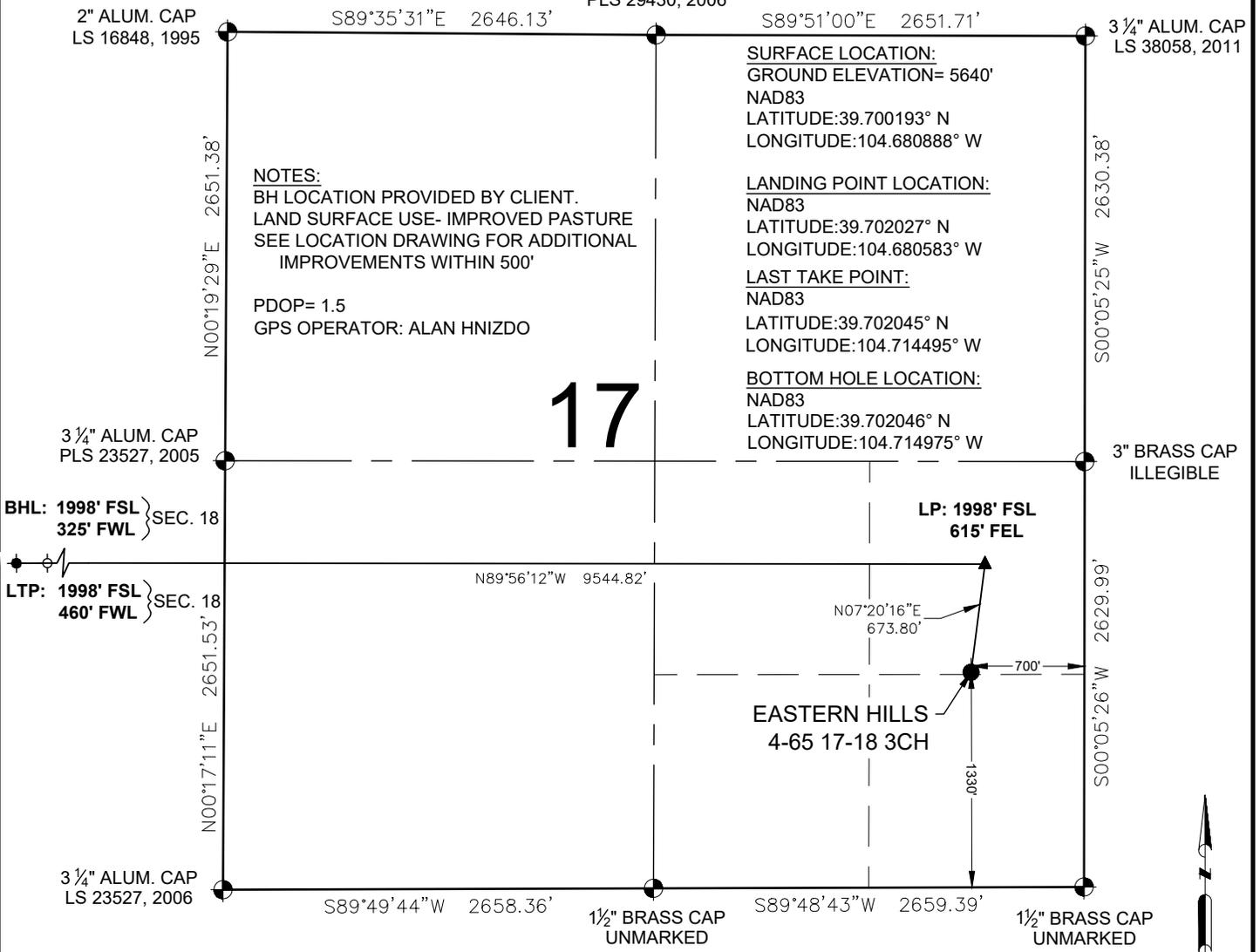


SHEET 2 OF 2

 8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3BH	PREPARED FOR:
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BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3CH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.5
GPS OPERATOR: ALAN HNIZDO

SURFACE LOCATION:
GROUND ELEVATION= 5640'
NAD83
LATITUDE:39.700193° N
LONGITUDE:104.680888° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.702027° N
LONGITUDE:104.680583° W

LAST TAKE POINT:
NAD83
LATITUDE:39.702045° N
LONGITUDE:104.714495° W

BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.702046° N
LONGITUDE:104.714975° W

17

**BHL: 1998' FSL
325' FWL** } SEC. 18

**LTP: 1998' FSL
460' FWL** } SEC. 18

**LP: 1998' FSL
615' FEL**

LEGEND

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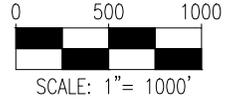
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 3. FIELD VERIFICATION OF MONUMENTS COMPLETED WITHIN 1 YEAR OF SIGNATURE DATE, UNLESS OTHERWISE NOTED.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THIS SAID DATE OF THIS CERTIFICATION SHOWN HEREON.

**WELL EASTERN HILLS 4-65 17-18 3CH TO BE
LOCATED 1330' FSL & 700' FEL**

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO **CONOCO PHILLIPS** THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

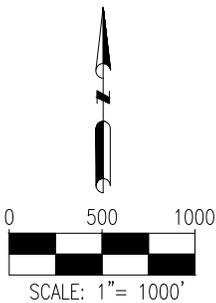
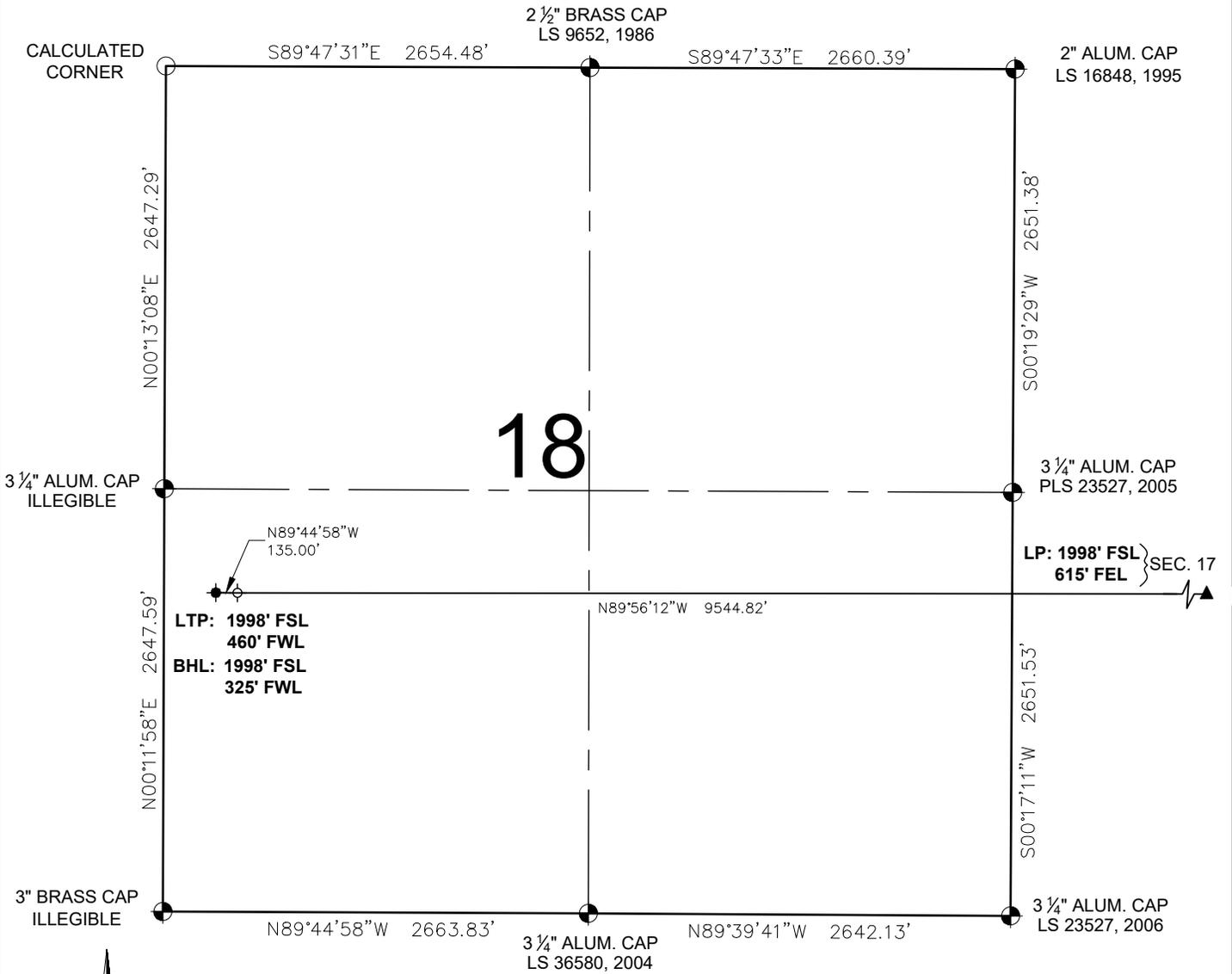
JERRY R. JOHNSON, PLS 29417
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC
d.b.a. ASCENT GEOMATICS SOLUTIONS



SHEET 1 OF 2

<p style="font-size: 8pt;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3CH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: NE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3CH WELL LOCATION EXHIBIT



LEGEND

- ⊙ = EXISTING MONUMENT
- = CALCULATED POSITION
- = PROPOSED WELL
- ◆ = EXISTING WELL
- ◆ = BOTTOM HOLE
- ▲ = LANDING POINT
- ⊕ = LAST TAKE POINT
- LP = LANDING POINT
- BHL = BOTTOM HOLE LOCATION
- LTP = LAST TAKE POINT

JERRY R. JOHNSON, PLS 29417
 COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
 FOR AND ON BEHALF OF P.F.S., LLC
 d.b.a. ASCENT GEOMATICS SOLUTIONS

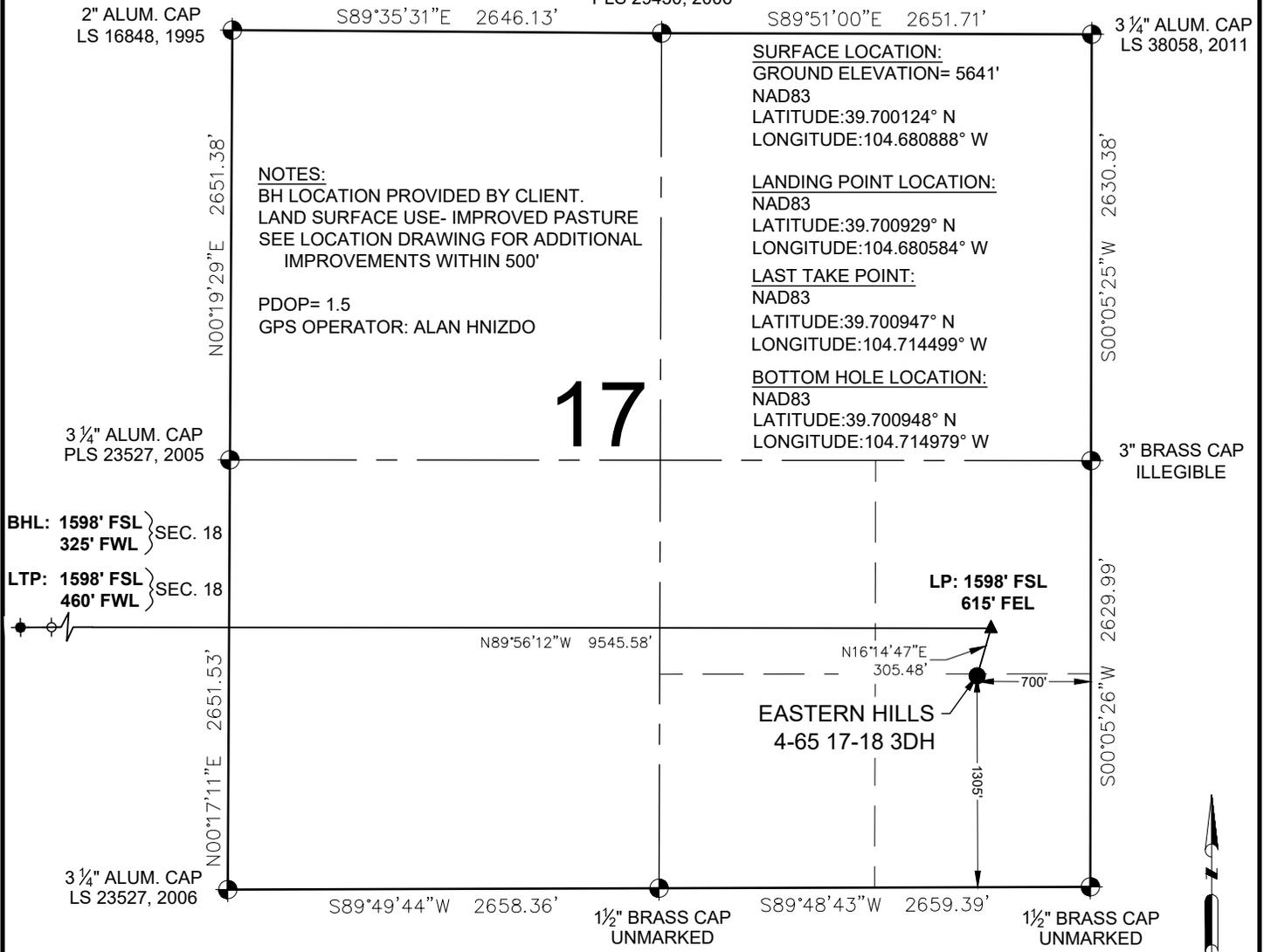


SHEET 2 OF 2

 8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3CH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: NE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3DH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.5
GPS OPERATOR: ALAN HNZDO

SURFACE LOCATION:
GROUND ELEVATION= 5641'
NAD83
LATITUDE:39.700124° N
LONGITUDE:104.680888° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.700929° N
LONGITUDE:104.680584° W

LAST TAKE POINT:
NAD83
LATITUDE:39.700947° N
LONGITUDE:104.714499° W

BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.700948° N
LONGITUDE:104.714979° W

17

BHL: 1598' FSL } SEC. 18
325' FWL }
LTP: 1598' FSL } SEC. 18
460' FWL }

LP: 1598' FSL
615' FEL

EASTERN HILLS
4-65 17-18 3DH

LEGEND

- = EXISTING MONUMENT
- = CALCULATED POSITION
- = PROPOSED WELL
- ◆ = EXISTING WELL
- ▲ = BOTTOM HOLE
- ▲ = LANDING POINT
- ⊙ = LAST TAKE POINT
- ⊙ = LANDING POINT
- BHL = BOTTOM HOLE LOCATION
- LTP = LAST TAKE POINT

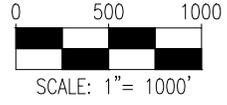
- NOTES:**
1. THIS FIELD SURVEY CONFORMS TO THE MINIMUM STANDARDS SET BY THE C.O.G.C.C., RULE NO. 215
 2. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GROUND VALUES AS GPS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO LINES SHOWN HEREON. THIS LOW DISTORTION PROJECTION (LDP) IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 39.696714°N, A CENTRAL MERIDIAN LONGITUDE OF 104.659538°W, AND A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000269 (EXACT). THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
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**WELL EASTERN HILLS 4-65 17-18 3DH TO BE
LOCATED 1305' FSL & 700' FEL**

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO **CONOCO PHILLIPS** THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

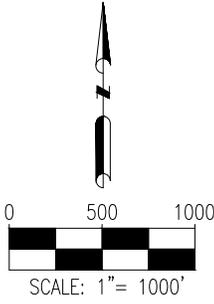
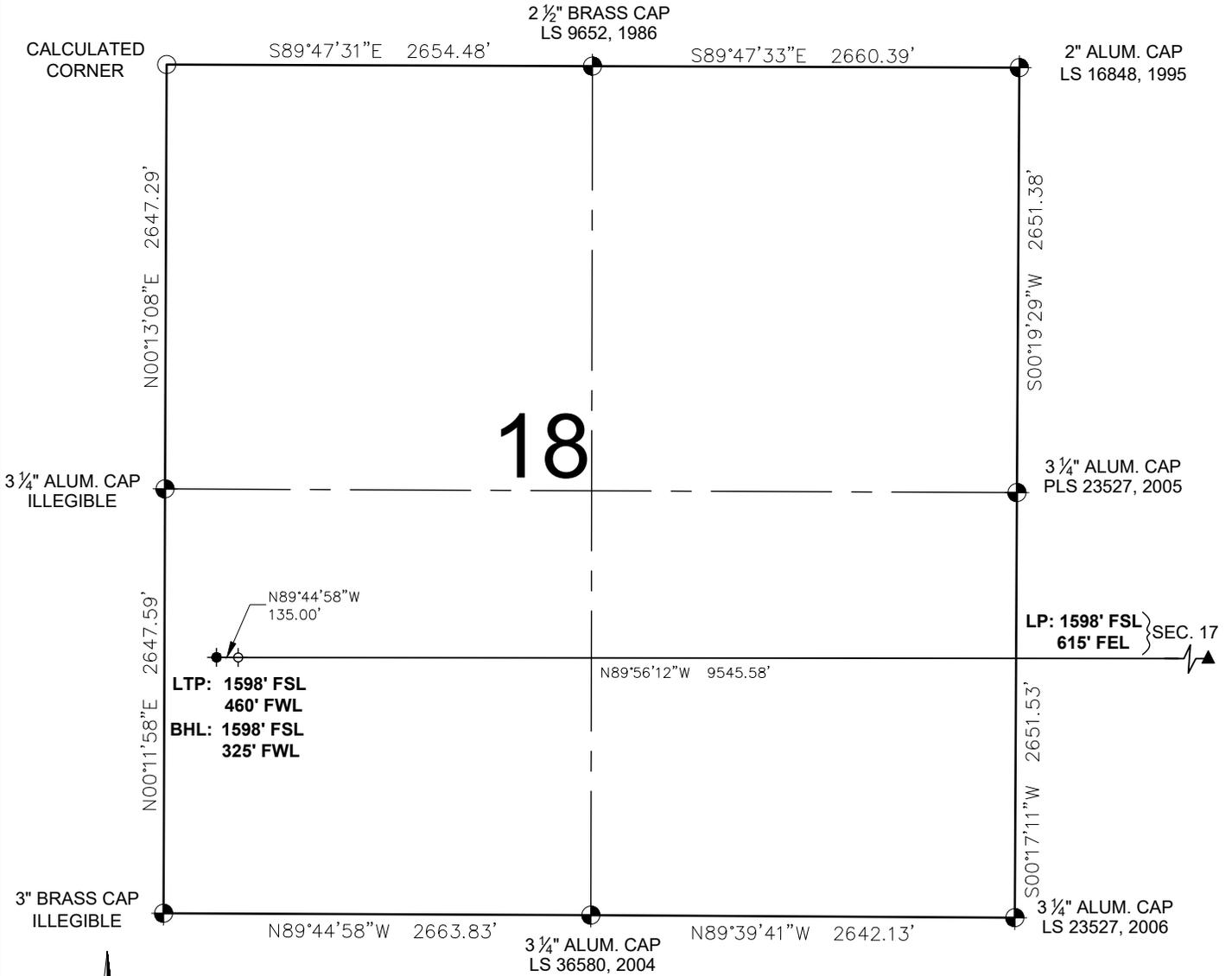
JERRY R. JOHNSON, PLS 29417
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC
d.b.a. ASCENT GEOMATICS SOLUTIONS



SHEET 1 OF 2

<p style="font-size: 8pt;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3DH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3DH WELL LOCATION EXHIBIT



LEGEND

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- = CALCULATED POSITION
- = PROPOSED WELL
- ◆ = EXISTING WELL
- ◆ = BOTTOM HOLE
- ⊕ = LAST TAKE POINT
- ▲ = LANDING POINT
- ⊕ = LAST TAKE POINT
- LP = LANDING POINT
- BHL = BOTTOM HOLE LOCATION
- LTP = LAST TAKE POINT

JERRY R. JOHNSON, PLS 29417
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SHEET 2 OF 2

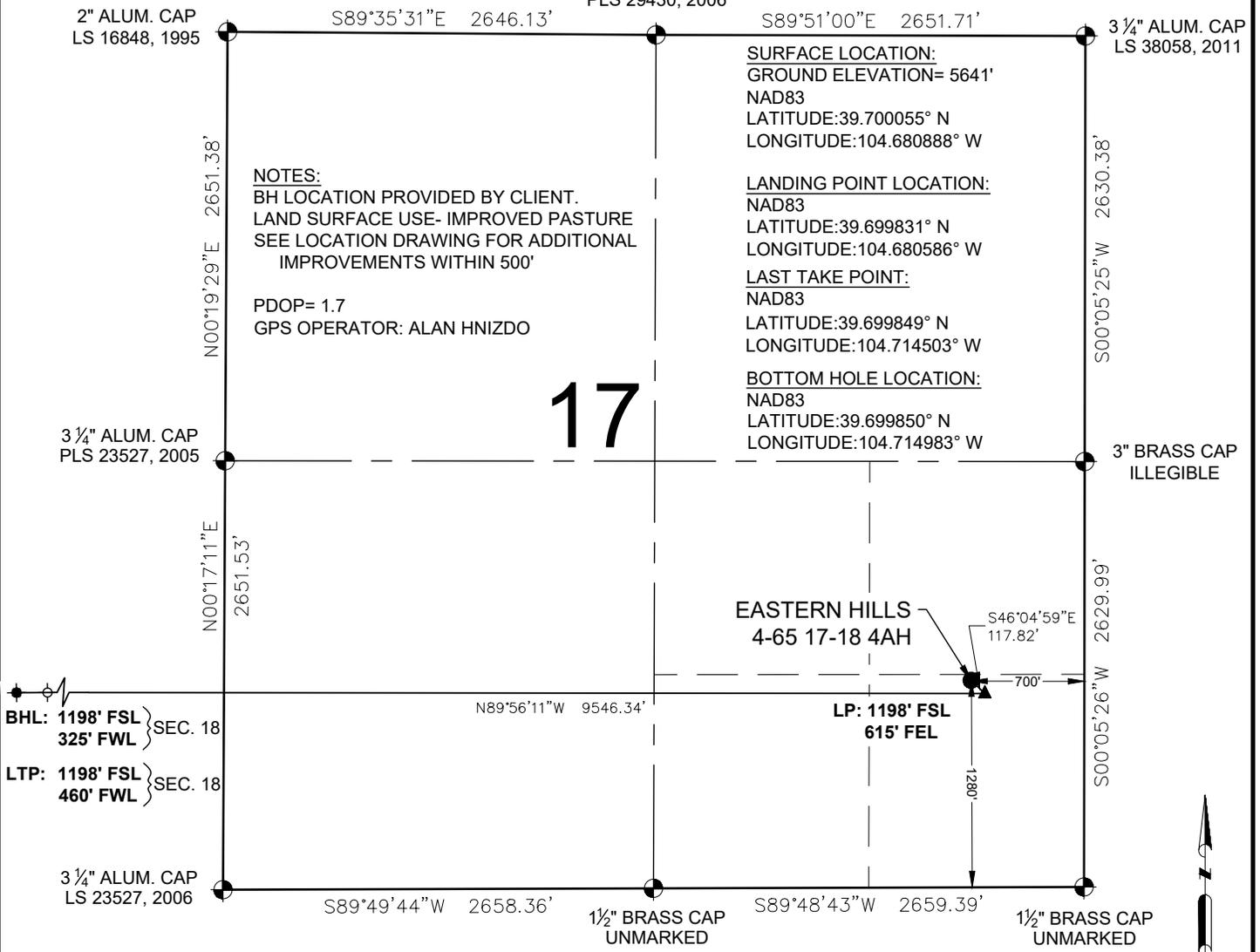
8620 Wolff Court
Westminster, CO 80031
(303) 928-7128
www.ascentgeomatics.com

FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 3DH
DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO
BY: CSG	CHECKED: JAG

PREPARED FOR:

EASTERN HILLS 4-65 17-18 4AH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.7
GPS OPERATOR: ALAN HNIZDO

SURFACE LOCATION:
GROUND ELEVATION= 5641'
NAD83
LATITUDE:39.700055° N
LONGITUDE:104.680888° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.699831° N
LONGITUDE:104.680586° W

LAST TAKE POINT:
NAD83
LATITUDE:39.699849° N
LONGITUDE:104.714503° W

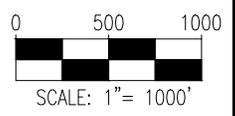
BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.699850° N
LONGITUDE:104.714983° W

17

BHL: 1198' FSL } SEC. 18
325' FWL }
LTP: 1198' FSL } SEC. 18
460' FWL }

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 - = PROPOSED WELL
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 - ⊙ = LAST TAKE POINT
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 - LTP = LAST TAKE POINT

WELL EASTERN HILLS 4-65 17-18 4AH TO BE LOCATED 1280' FSL & 700' FEL



- NOTES:**
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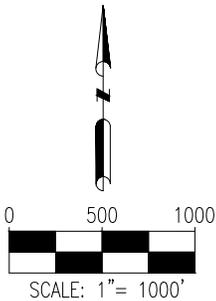
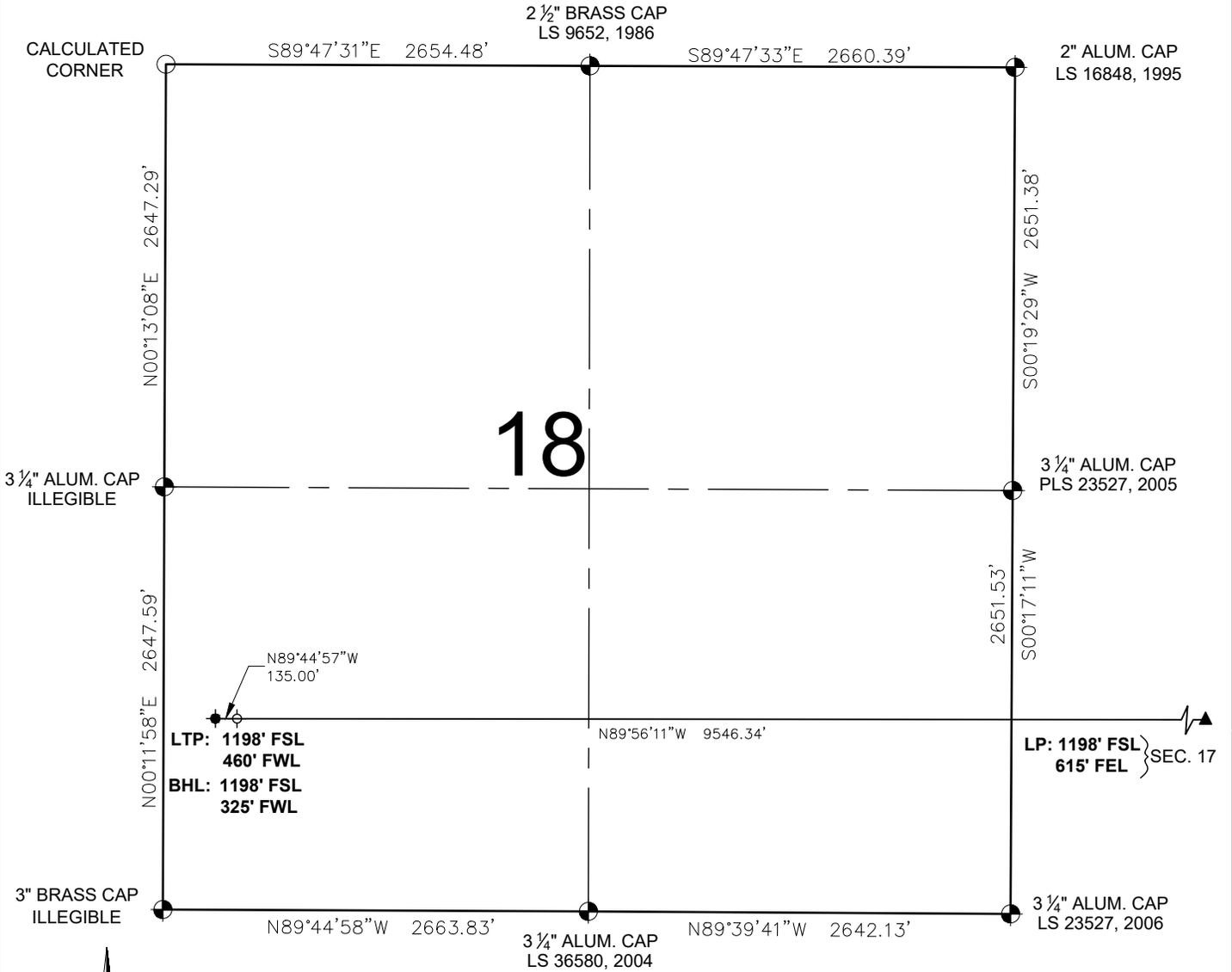
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JERRY R. JOHNSON, PLS 29417
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC
d.b.a. ASCENT GEOMATICS SOLUTIONS

SHEET 1 OF 2

<p style="font-size: 8pt;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4AH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 4AH WELL LOCATION EXHIBIT



LEGEND

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- ⊕ = LAST TAKE POINT
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JERRY R. JOHNSON, PLS 29417
 COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
 FOR AND ON BEHALF OF P.F.S., LLC
 d.b.a. ASCENT GEOMATICS SOLUTIONS

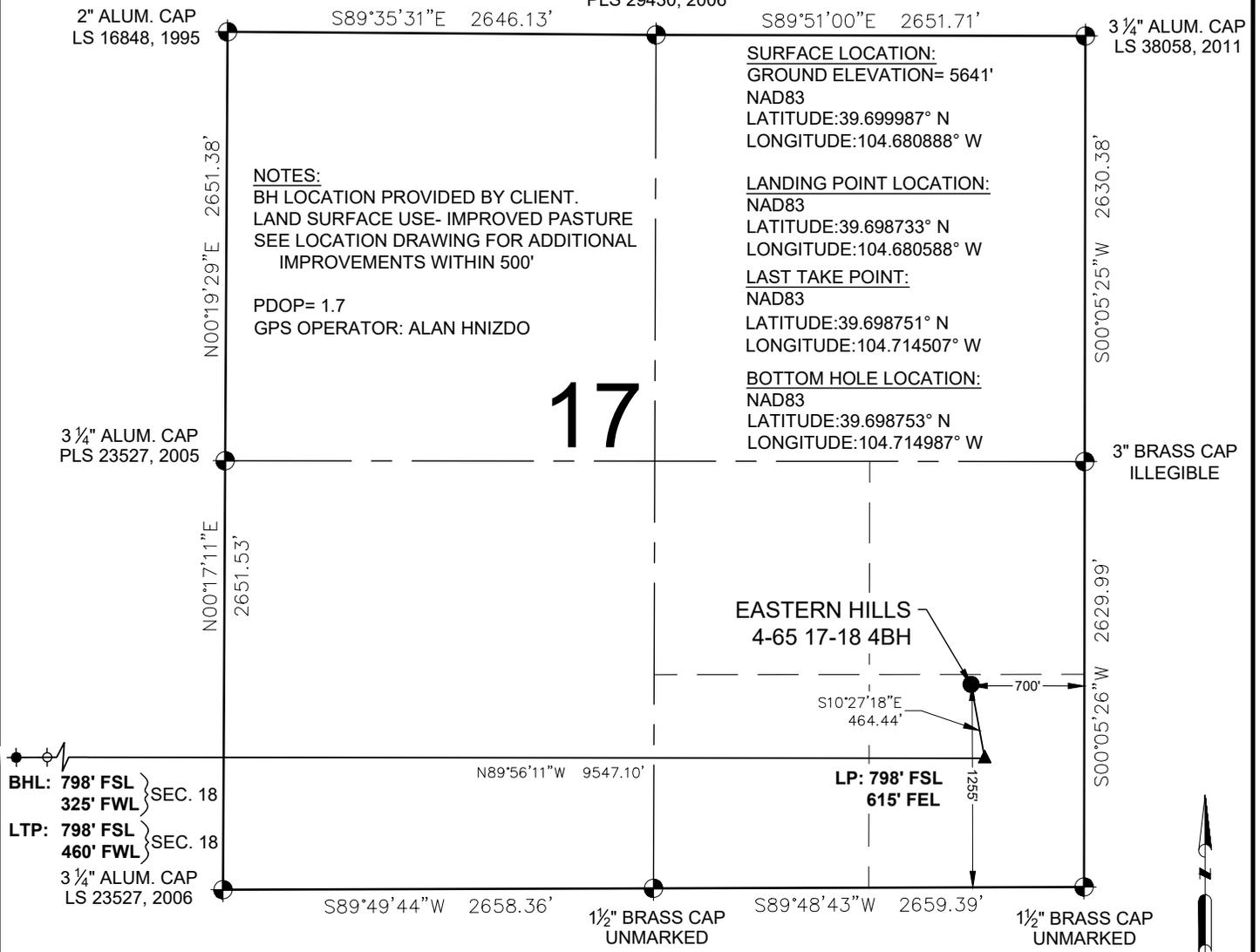


SHEET 2 OF 2

<p style="font-size: 8px;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4AH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 4BH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.7
GPS OPERATOR: ALAN HNZDO

SURFACE LOCATION:
GROUND ELEVATION= 5641'
NAD83
LATITUDE:39.699987° N
LONGITUDE:104.680888° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.698733° N
LONGITUDE:104.680588° W

LAST TAKE POINT:
NAD83
LATITUDE:39.698751° N
LONGITUDE:104.714507° W

BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.698753° N
LONGITUDE:104.714987° W

17

BHL: 798' FSL } SEC. 18
325' FWL }
LTP: 798' FSL } SEC. 18
460' FWL }
3 1/4" ALUM. CAP
LS 23527, 2006

LEGEND

- = EXISTING MONUMENT
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- = PROPOSED WELL
- ◆ = EXISTING WELL
- ▲ = BOTTOM HOLE
- △ = LANDING POINT
- ◇ = LAST TAKE POINT
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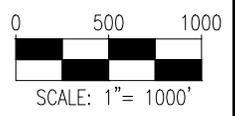
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**WELL EASTERN HILLS 4-65 17-18 4BH TO BE
LOCATED 1255' FSL & 700' FEL**

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO **CONOCO PHILLIPS** THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

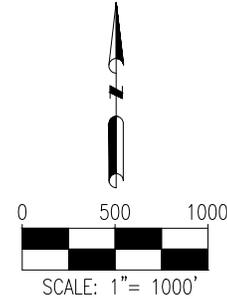
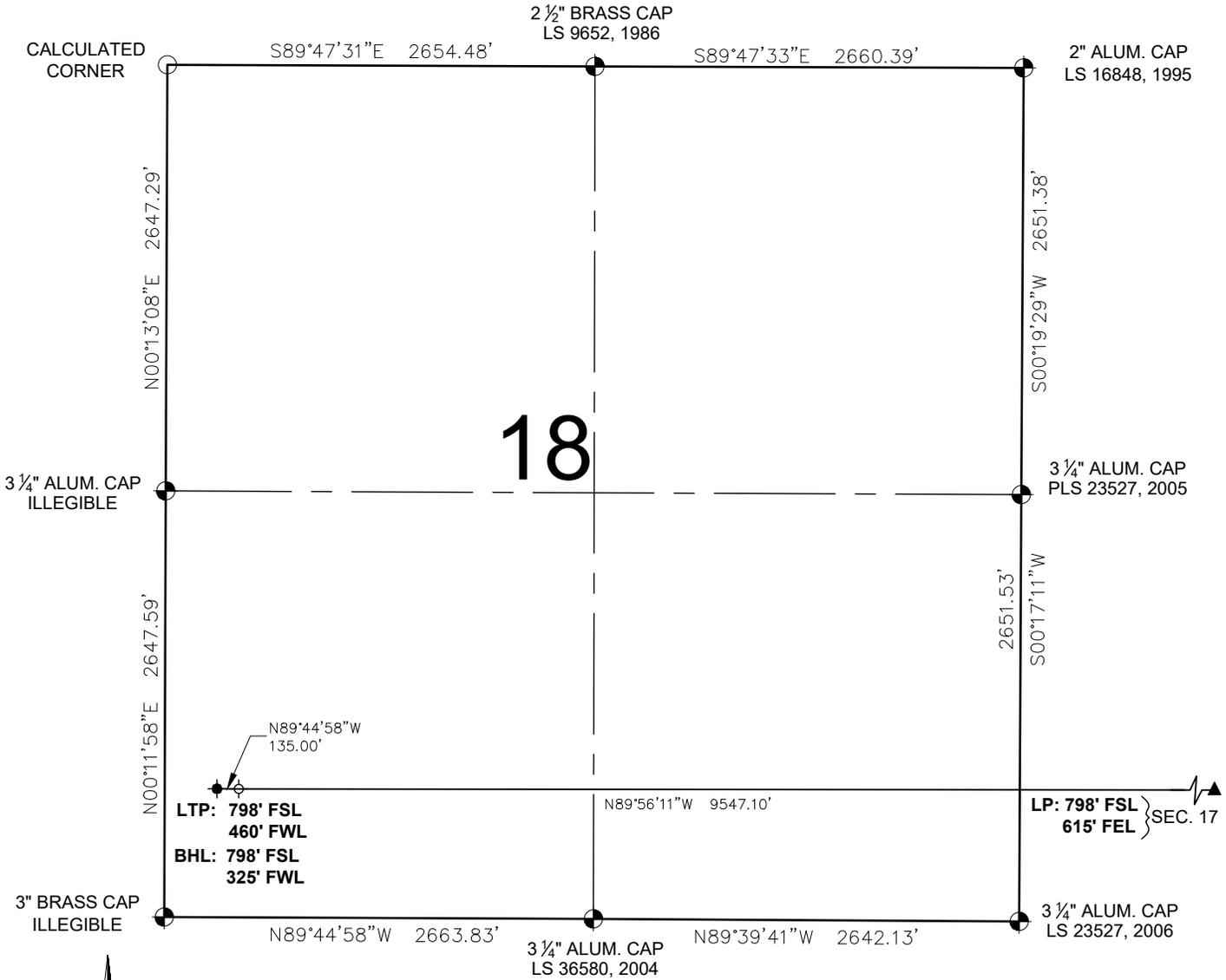
JERRY R. JOHNSON, PLS 29417
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SHEET 1 OF 2

<p style="font-size: 8pt;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4BH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 4BH WELL LOCATION EXHIBIT



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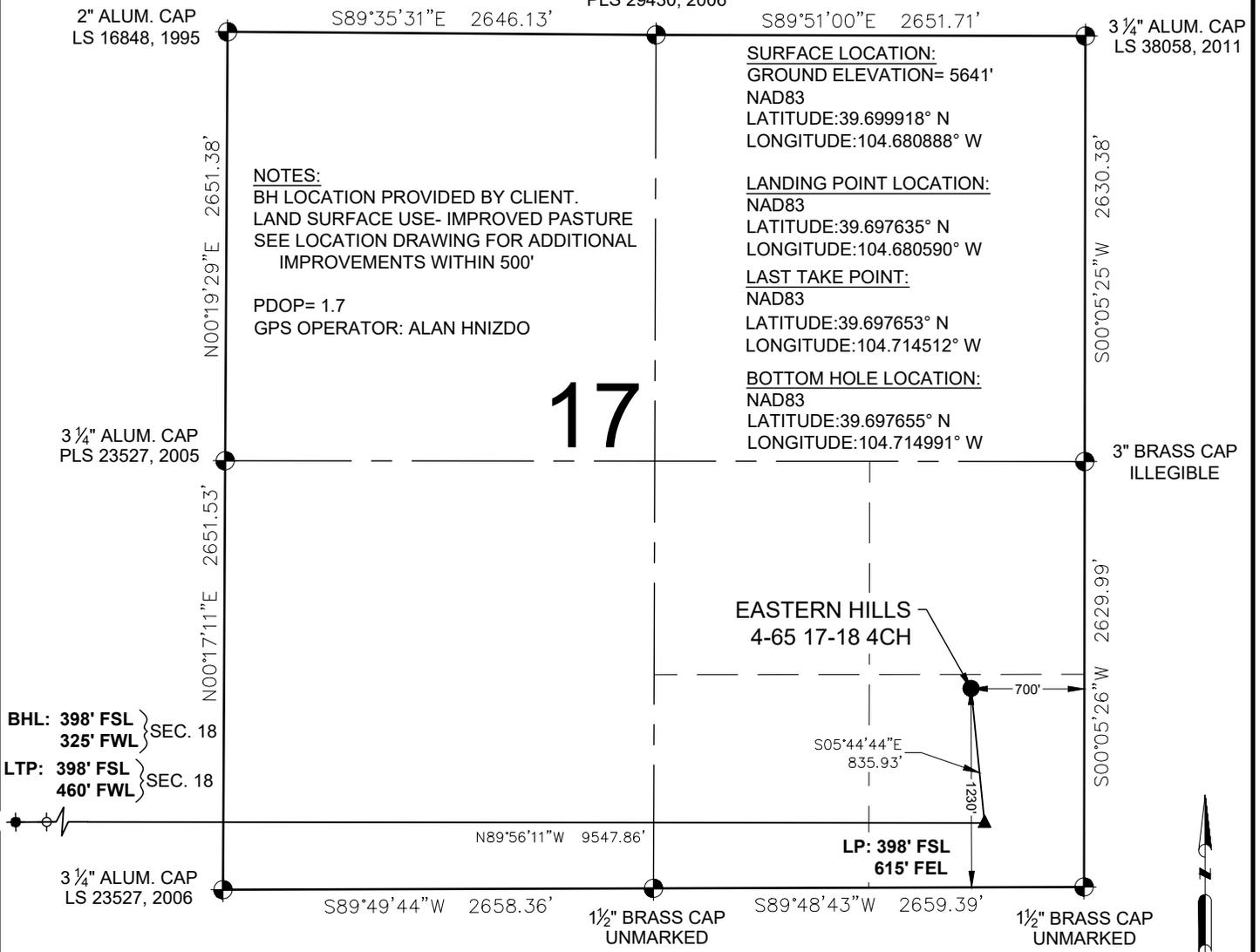
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SHEET 2 OF 2

<p>8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4BH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
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EASTERN HILLS 4-65 17-18 4CH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE- IMPROVED PASTURE
SEE LOCATION DRAWING FOR ADDITIONAL
IMPROVEMENTS WITHIN 500'

PDOP= 1.7
GPS OPERATOR: ALAN HNIZDO

SURFACE LOCATION:
GROUND ELEVATION= 5641'
NAD83
LATITUDE:39.699918° N
LONGITUDE:104.680888° W

LANDING POINT LOCATION:
NAD83
LATITUDE:39.697635° N
LONGITUDE:104.680590° W

LAST TAKE POINT:
NAD83
LATITUDE:39.697653° N
LONGITUDE:104.714512° W

BOTTOM HOLE LOCATION:
NAD83
LATITUDE:39.697655° N
LONGITUDE:104.714991° W

17

BHL: 398' FSL } SEC. 18
325' FWL }
LTP: 398' FSL } SEC. 18
460' FWL }

LEGEND

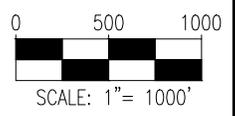
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- NOTES:**
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**WELL EASTERN HILLS 4-65 17-18 4CH TO BE
LOCATED 1230' FSL & 700' FEL**

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO **CONOCO PHILLIPS** THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

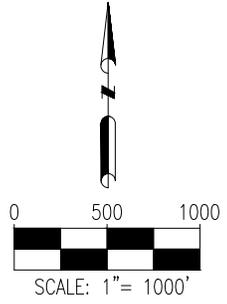
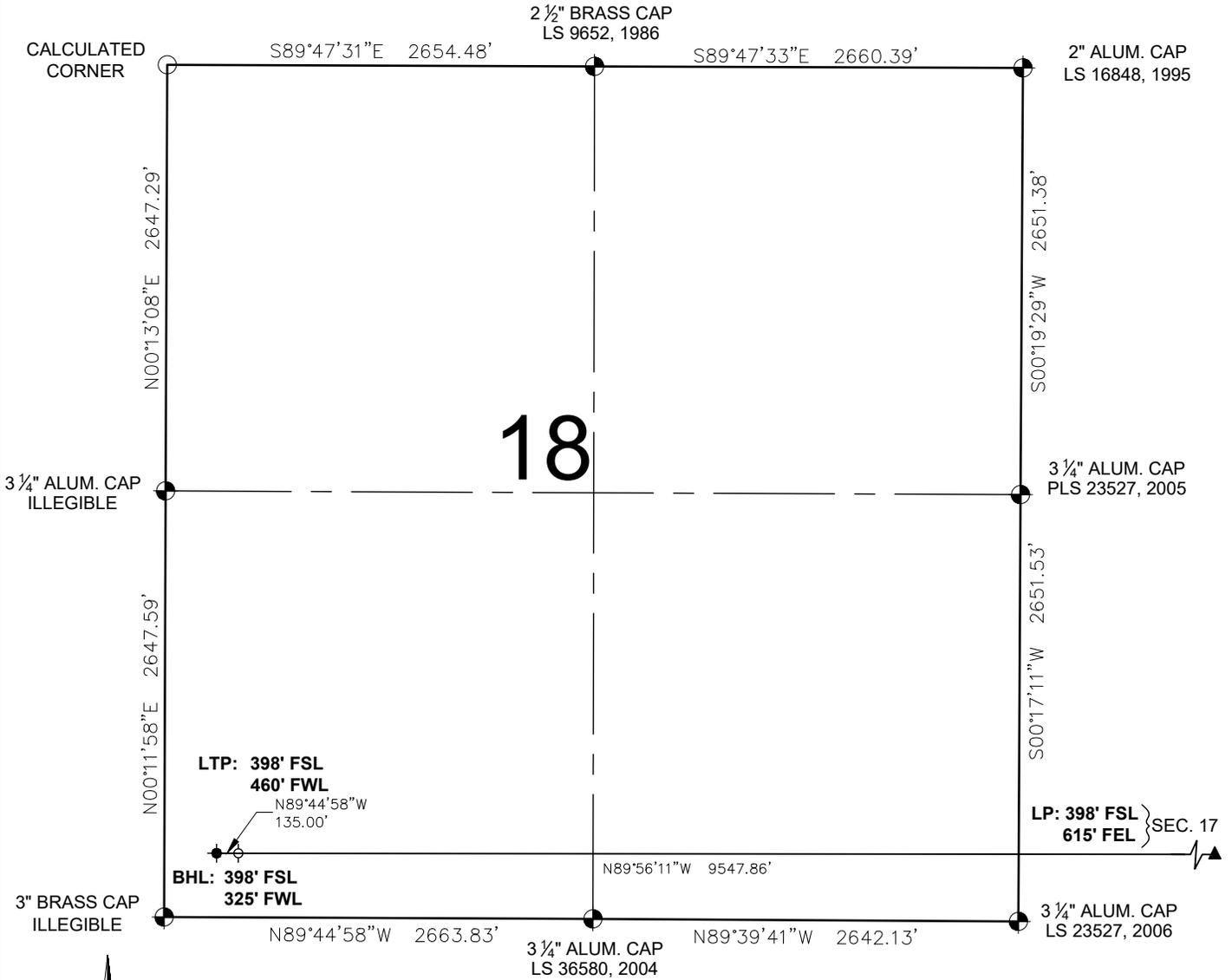
JERRY R. JOHNSON, PLS 29417
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC
d.b.a. ASCENT GEOMATICS SOLUTIONS



SHEET 1 OF 2

 8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4CH	PREPARED FOR: <div style="text-align: center;"> </div>
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 4CH WELL LOCATION EXHIBIT



- LEGEND**
- = EXISTING MONUMENT
 - = CALCULATED POSITION
 - = PROPOSED WELL
 - ◆ = EXISTING WELL
 - ◆ = BOTTOM HOLE
 - ▲ = LANDING POINT
 - ⊙ = LAST TAKE POINT
 - LP = LANDING POINT
 - BHL = BOTTOM HOLE LOCATION
 - LTP = LAST TAKE POINT

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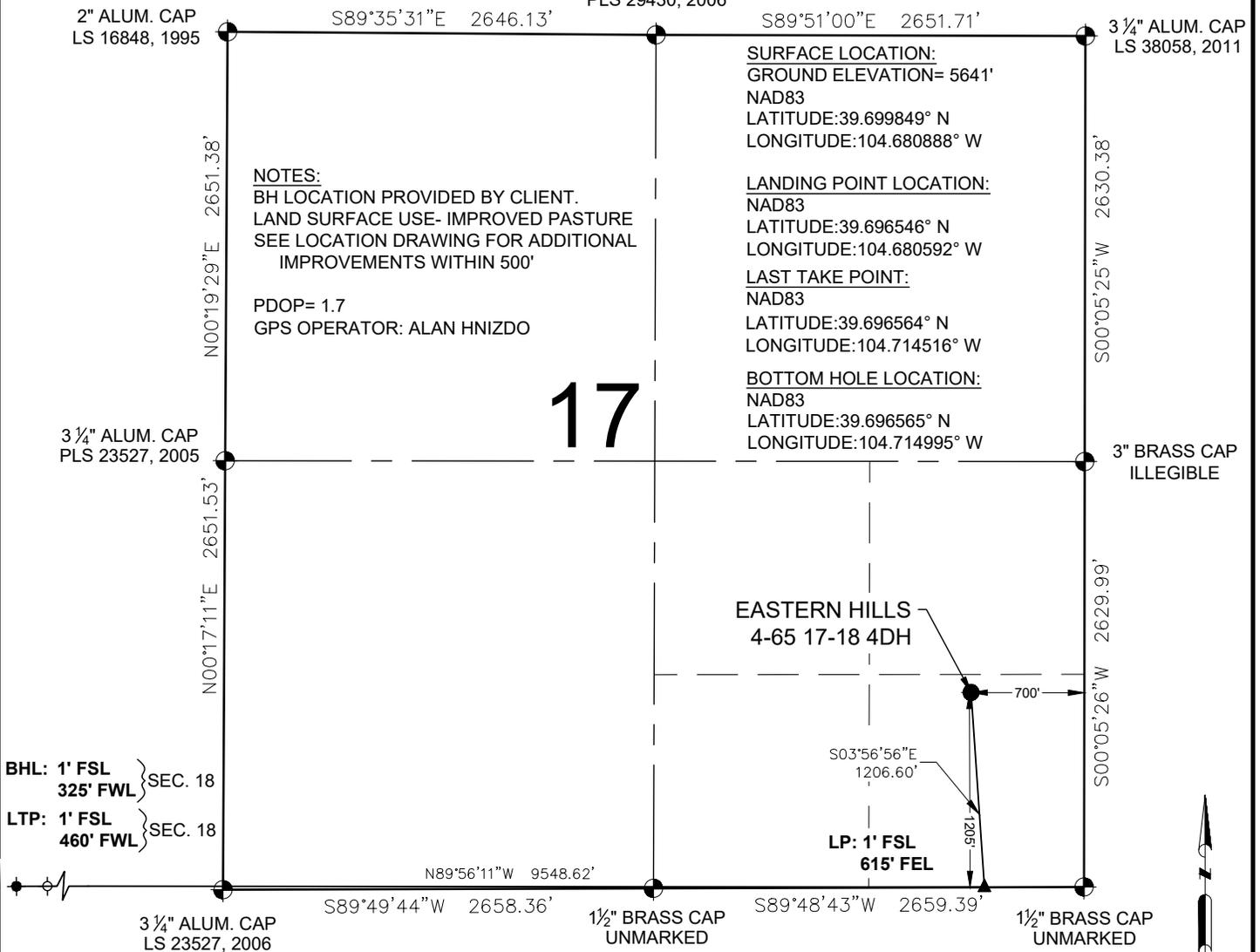


SHEET 2 OF 2

<p style="font-size: 8px;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4CH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 4DH WELL LOCATION EXHIBIT

3 1/4" ALUM. CAP
PLS 29430, 2006



LEGEND

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- ◆ = EXISTING WELL
- ▲ = BOTTOM HOLE
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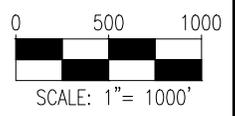
- NOTES:**
- THIS FIELD SURVEY CONFORMS TO THE MINIMUM STANDARDS SET BY THE C.O.G.C.C., RULE NO. 215
 - ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GROUND VALUES AS GPS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO LINES SHOWN HEREON. THIS LOW DISTORTION PROJECTION (LDP) IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 39.696714°N, A CENTRAL MERIDIAN LONGITUDE OF 104.659538°W, AND A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000269 (EXACT). THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
 - FIELD VERIFICATION OF MONUMENTS COMPLETED WITHIN 1 YEAR OF SIGNATURE DATE, UNLESS OTHERWISE NOTED.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THIS SAID DATE OF THIS CERTIFICATION SHOWN HEREON.

WELL EASTERN HILLS 4-65 17-18 4DH TO BE LOCATED 1205' FSL & 700' FEL

I, JERRY R. JOHNSON, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY STATE TO CONOCO PHILLIPS THAT THE WELL LOCATION EXHIBIT SHOWN HEREON WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS EXHIBIT MEETS THE REQUIREMENTS OF A GIS LAND POSITION AS DEFINED BY SECTION 38-51-102 (7.5) C.R.S. AND AS SUCH PER SECTION 38-51-109.3 C.R.S. CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

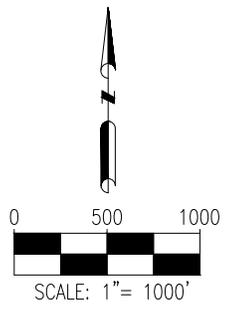
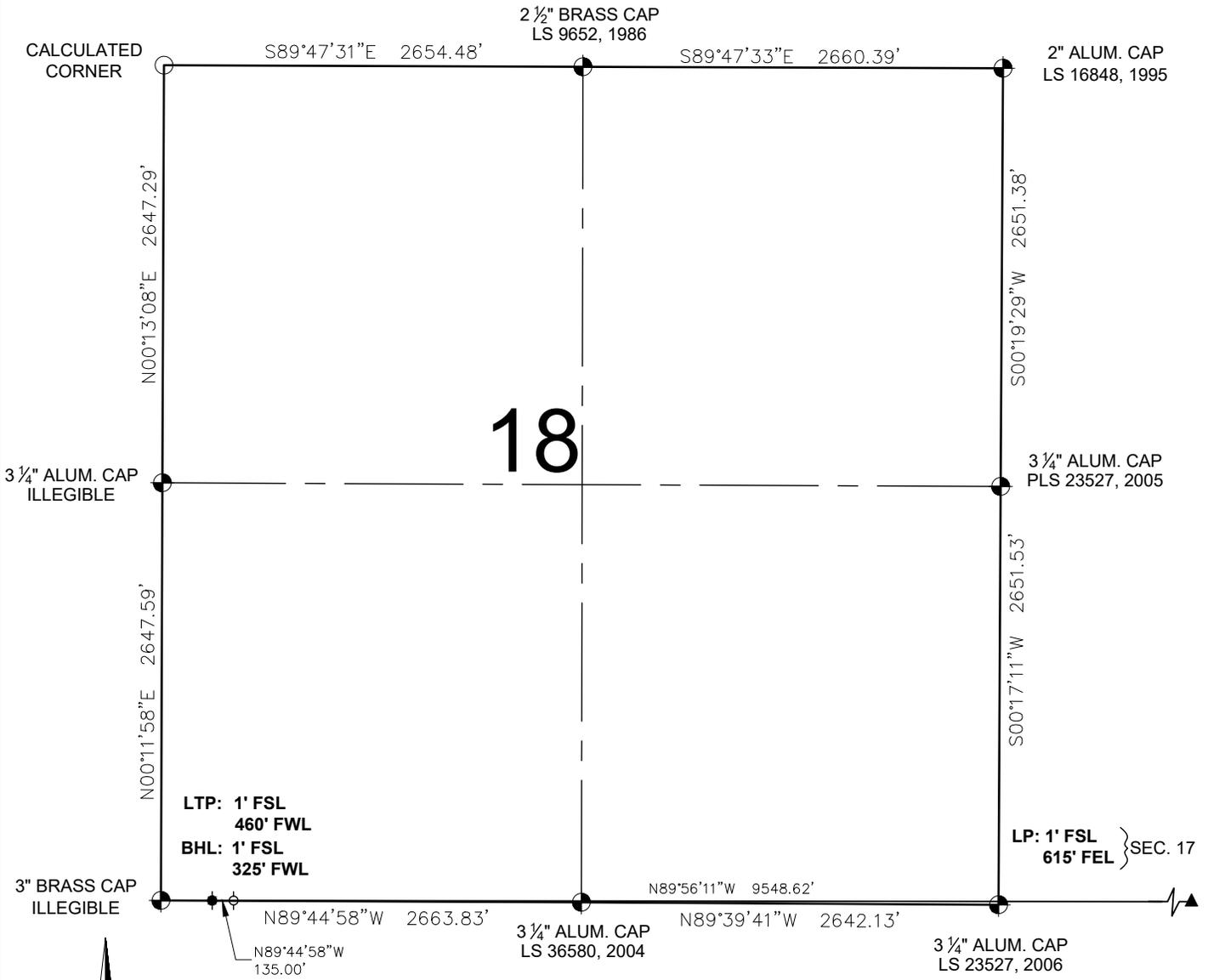
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SHEET 1 OF 2

<p>8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4DH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M.	
BY: CSG	CHECKED: JAG	ARAPAHOE COUNTY, COLORADO	

EASTERN HILLS 4-65 17-18 4DH WELL LOCATION EXHIBIT



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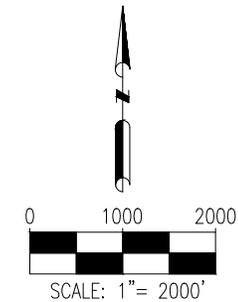
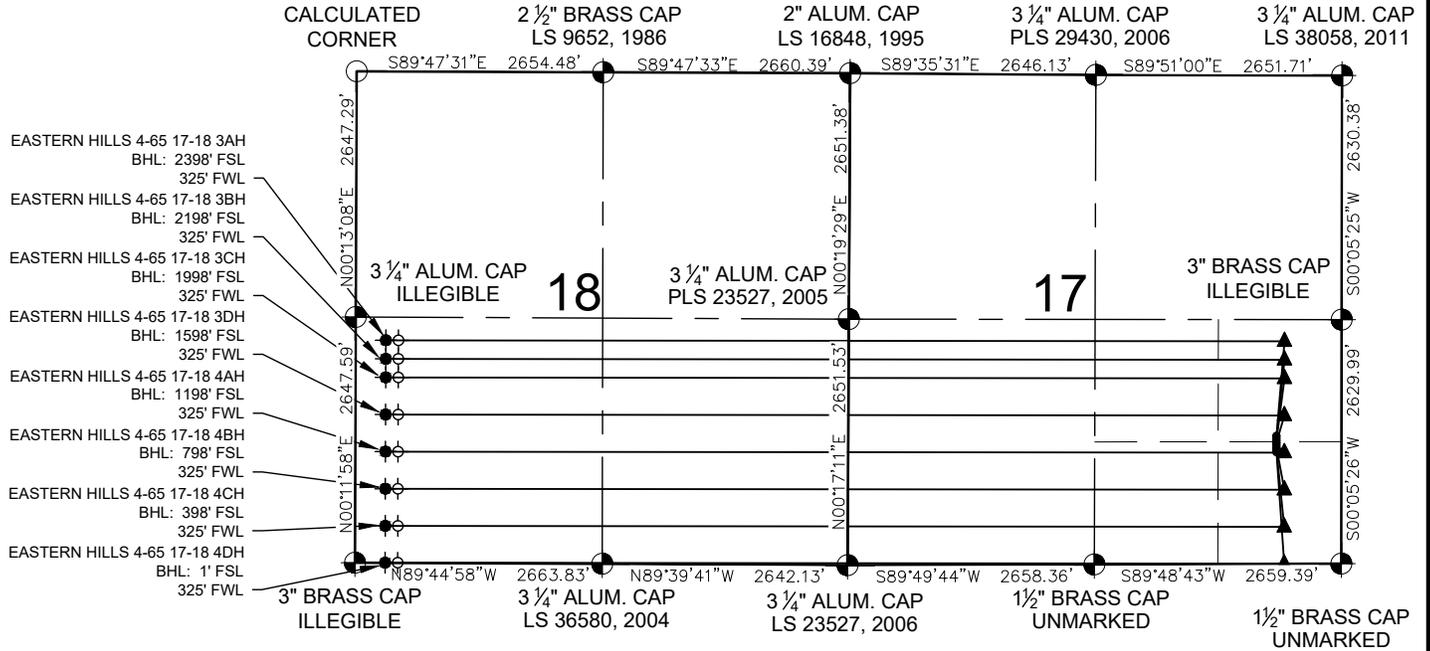
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SHEET 2 OF 2

<p style="font-size: 8px; margin-top: 5px;">8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	WELL NAME: EASTERN HILLS 4-65 17-18 4DH	PREPARED FOR:
	DRAWING DATE: 03-15-19	SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG		

EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD MULTI-WELL PLAN



LEGEND

- = EXISTING MONUMENT
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- ▲ = BOTTOM HOLE
- ▲ = LANDING POINT
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- BHL = BOTTOM HOLE LOCATION

NOTES:

1. THIS FIELD SURVEY CONFORMS TO THE MINIMUM STANDARDS SET BY THE C.O.G.C.C., RULE NO. 215
2. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GROUND VALUES AS GPS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO LINES SHOWN HEREON. THIS LOW DISTORTION PROJECTION (LDP) IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 39.696714°N, A CENTRAL MERIDIAN LONGITUDE OF 104.659538°W, AND A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000269 (EXACT). THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
3. FIELD VERIFICATION OF MONUMENTS COMPLETED WITHIN 1 YEAR OF FIELD DATE, UNLESS OTHERWISE NOTED.

NOTES:

- EASTERN HILLS 4-65 17-18 3AH TO BE AT 1380' FSL & 700' FEL. BOTTOM HOLE AT 2398' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 3BH TO BE AT 1355' FSL & 700' FEL. BOTTOM HOLE AT 2198' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 3CH TO BE AT 1330' FSL & 700' FEL. BOTTOM HOLE AT 1998' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 3DH TO BE AT 1305' FSL & 700' FEL. BOTTOM HOLE AT 1598' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 4AH TO BE AT 1280' FSL & 700' FEL. BOTTOM HOLE AT 1198' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 4BH TO BE AT 1255' FSL & 700' FEL. BOTTOM HOLE AT 798' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 4CH TO BE AT 1230' FSL & 700' FEL. BOTTOM HOLE AT 398' FSL & 325' FWL, SEC. 18.
- EASTERN HILLS 4-65 17-18 4DH TO BE AT 1205' FSL & 700' FEL. BOTTOM HOLE AT 1' FSL & 325' FWL, SEC. 18.



FIELD DATE: 04-24-18	SITE NAME: EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD	PREPARED FOR:
DRAWING DATE: 03-14-19	SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG	

EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD MULTI-WELL PLAN

EASTERN HILLS 4-65 17-18 3AH

			PDOP = 1.5
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'1.19" (39.700330)	LATITUDE = 39°42'11.25" (39.703124)	LATITUDE = 39°42'11.31" (39.703142)	LATITUDE = 39°42'11.32" (39.703144)
LONGITUDE = 104°40'51.19" (104.680887)	LONGITUDE = 104°40'50.09" (104.680581)	LONGITUDE = 104°42'52.17" (104.714491)	LONGITUDE = 104°42'53.90" (104.714971)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'1.23" (39.700343)	LATITUDE = 39°42'11.29" (39.703137)	LATITUDE = 39°42'11.36" (39.703154)	LATITUDE = 39°42'11.36" (39.703156)
LONGITUDE = 104°40'49.30" (104.680362)	LONGITUDE = 104°40'48.20" (104.680056)	LONGITUDE = 104°42'50.27" (104.713965)	LONGITUDE = 104°42'52.00" (104.714445)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1681013.285 E: 3230479.741	N: 1682031.87 E: 3230556.798	N: 1681954.147 E: 3221015.857	N: 1681953.709 E: 3220880.798
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 681005.566 E: 2230633.508	N: 682024.138 E: 2230710.549	N: 681946.266 E: 2221169.689	N: 681945.826 E: 2221034.632

EASTERN HILLS 4-65 17-18 3BH

			PDOP = 1.5
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.94" (39.700261)	LATITUDE = 39°42'09.27" (39.702576)	LATITUDE = 39°42'09.33" (39.702593)	LATITUDE = 39°42'09.34" (39.702595)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.10" (104.680582)	LONGITUDE = 104°42'52.17" (104.714493)	LONGITUDE = 104°42'53.90" (104.714973)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.99" (39.700274)	LATITUDE = 39°42'09.32" (39.702589)	LATITUDE = 39°42'09.38" (39.702605)	LATITUDE = 39°42'09.39" (39.702607)
LONGITUDE = 104°40'49.30" (104.680362)	LONGITUDE = 104°40'48.20" (104.680057)	LONGITUDE = 104°42'50.28" (104.713967)	LONGITUDE = 104°42'52.01" (104.714447)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680988.292 E: 3230479.933	N: 1681832.259 E: 3230558.317	N: 1681754.169 E: 3221017.023	N: 1681753.73 E: 3220881.963
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680980.573 E: 2230633.701	N: 681824.53 E: 2230712.071	N: 681746.291 E: 2221170.859	N: 681745.85 E: 2221035.8

EASTERN HILLS 4-65 17-18 3CH

			PDOP = 1.5
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.69" (39.700193)	LATITUDE = 39°42'07.30" (39.702027)	LATITUDE = 39°42'07.36" (39.702045)	LATITUDE = 39°42'07.37" (39.702046)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.10" (104.680583)	LONGITUDE = 104°42'52.18" (104.714495)	LONGITUDE = 104°42'53.91" (104.714975)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.74" (39.700205)	LATITUDE = 39°42'07.34" (39.702040)	LATITUDE = 39°42'07.41" (39.702057)	LATITUDE = 39°42'07.41" (39.702058)
LONGITUDE = 104°40'49.30" (104.680362)	LONGITUDE = 104°40'48.21" (104.680058)	LONGITUDE = 104°42'50.29" (104.713969)	LONGITUDE = 104°42'52.02" (104.714449)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680963.299 E: 3230480.125	N: 1681632.283 E: 3230559.839	N: 1681554.555 E: 3221018.186	N: 1681553.752 E: 3220883.128
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680955.58 E: 2230633.893	N: 681624.557 E: 2230713.596	N: 681546.679 E: 2221172.025	N: 681545.874 E: 2221036.968

EASTERN HILLS 4-65 17-18 3DH

			PDOP = 1.5
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.45" (39.700124)	LATITUDE = 39°42'03.34" (39.700929)	LATITUDE = 39°42'03.41" (39.700947)	LATITUDE = 39°42'03.41" (39.700948)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.10" (104.680584)	LONGITUDE = 104°42'52.20" (104.714499)	LONGITUDE = 104°42'53.92" (104.714979)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.49" (39.700137)	LATITUDE = 39°42'03.39" (39.700942)	LATITUDE = 39°42'03.45" (39.700959)	LATITUDE = 39°42'03.46" (39.700960)
LONGITUDE = 104°40'49.31" (104.680363)	LONGITUDE = 104°40'48.21" (104.680059)	LONGITUDE = 104°42'50.30" (104.713973)	LONGITUDE = 104°42'52.03" (104.714453)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680938.307 E: 3230480.317	N: 1681232.335 E: 3230563.165	N: 1681154.598 E: 3221020.519	N: 1681153.795 E: 3220885.459
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680930.589 E: 2230634.086	N: 681224.614 E: 2230716.928	N: 681146.727 E: 2221174.364	N: 681145.922 E: 2221039.305



8620 Wolff Court
Westminster, CO 80031
(303) 928-7128
www.ascentgeomatics.com

FIELD DATE:
04-24-18

DRAWING DATE:
03-14-19

BY:
CSG

CHECKED:
JAG

SITE NAME:
EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD

SURFACE LOCATION:
**E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M.
ARAPAHOE COUNTY, COLORADO**

PREPARED FOR:



EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD MULTI-WELL PLAN

EASTERN HILLS 4-65 17-18 4AH

			PDOP = 1.7
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.20" (39.700055)	LATITUDE = 39°41'59.39" (39.699831)	LATITUDE = 39°41'59.46" (39.699849)	LATITUDE = 39°41'59.46" (39.699850)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.11" (104.680586)	LONGITUDE = 104°42'52.21" (104.714503)	LONGITUDE = 104°42'53.94" (104.714983)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°42'0.24" (39.700068)	LATITUDE = 39°41'59.44" (39.699844)	LATITUDE = 39°41'59.50" (39.699861)	LATITUDE = 39°41'59.50" (39.699862)
LONGITUDE = 104°40'49.31" (104.680363)	LONGITUDE = 104°40'48.22" (104.680061)	LONGITUDE = 104°42'50.32" (104.713977)	LONGITUDE = 104°42'52.04" (104.714456)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680913.314 E: 3230480.508	N: 1680832.385 E: 3230566.21	N: 1680754.642 E: 3221022.852	N: 1680753.839 E: 3220887.79
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680905.596 E: 2230634.277	N: 680824.669 E: 2230719.979	N: 680746.776 E: 2221176.703	N: 680745.971 E: 2221041.642

EASTERN HILLS 4-65 17-18 4BH

			PDOP = 1.7
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°41'59.95" (39.699987)	LATITUDE = 39°41'55.44" (39.698733)	LATITUDE = 39°41'55.50" (39.698751)	LATITUDE = 39°41'55.51" (39.698753)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.12" (104.680588)	LONGITUDE = 104°42'52.23" (104.714507)	LONGITUDE = 104°42'53.95" (104.714987)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°41'60.00" (39.699999)	LATITUDE = 39°41'55.48" (39.698746)	LATITUDE = 39°41'55.55" (39.698763)	LATITUDE = 39°41'55.56" (39.698765)
LONGITUDE = 104°40'49.31" (104.680363)	LONGITUDE = 104°40'48.23" (104.680063)	LONGITUDE = 104°42'50.33" (104.713981)	LONGITUDE = 104°42'52.06" (104.714461)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680888.322 E: 3230480.7	N: 1680432.434 E: 3230569.255	N: 1680354.686 E: 3221025.184	N: 1680354.247 E: 3220890.117
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680880.604 E: 2230634.469	N: 680424.724 E: 2230723.031	N: 680346.825 E: 2221179.041	N: 680346.384 E: 2221043.975

EASTERN HILLS 4-65 17-18 4CH

			PDOP = 1.7
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°41'59.71" (39.699918)	LATITUDE = 39°41'51.49" (39.697635)	LATITUDE = 39°41'51.55" (39.697653)	LATITUDE = 39°41'51.56" (39.697655)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.12" (104.680590)	LONGITUDE = 104°42'52.24" (104.714512)	LONGITUDE = 104°42'53.97" (104.714991)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°41'59.75" (39.699931)	LATITUDE = 39°41'51.53" (39.697648)	LATITUDE = 39°41'51.60" (39.697665)	LATITUDE = 39°41'52.07" (39.697667)
LONGITUDE = 104°40'49.31" (104.680363)	LONGITUDE = 104°40'48.23" (104.680065)	LONGITUDE = 104°42'50.35" (104.713986)	LONGITUDE = 104°42'50.35" (104.714465)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680863.329 E: 3230480.892	N: 1680032.484 E: 3230572.3	N: 1679954.727 E: 3221027.236	N: 1679954.291 E: 3220892.448
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680855.612 E: 2230634.662	N: 680024.779 E: 2230726.082	N: 679946.871 E: 2221181.099	N: 679946.433 E: 2221046.312

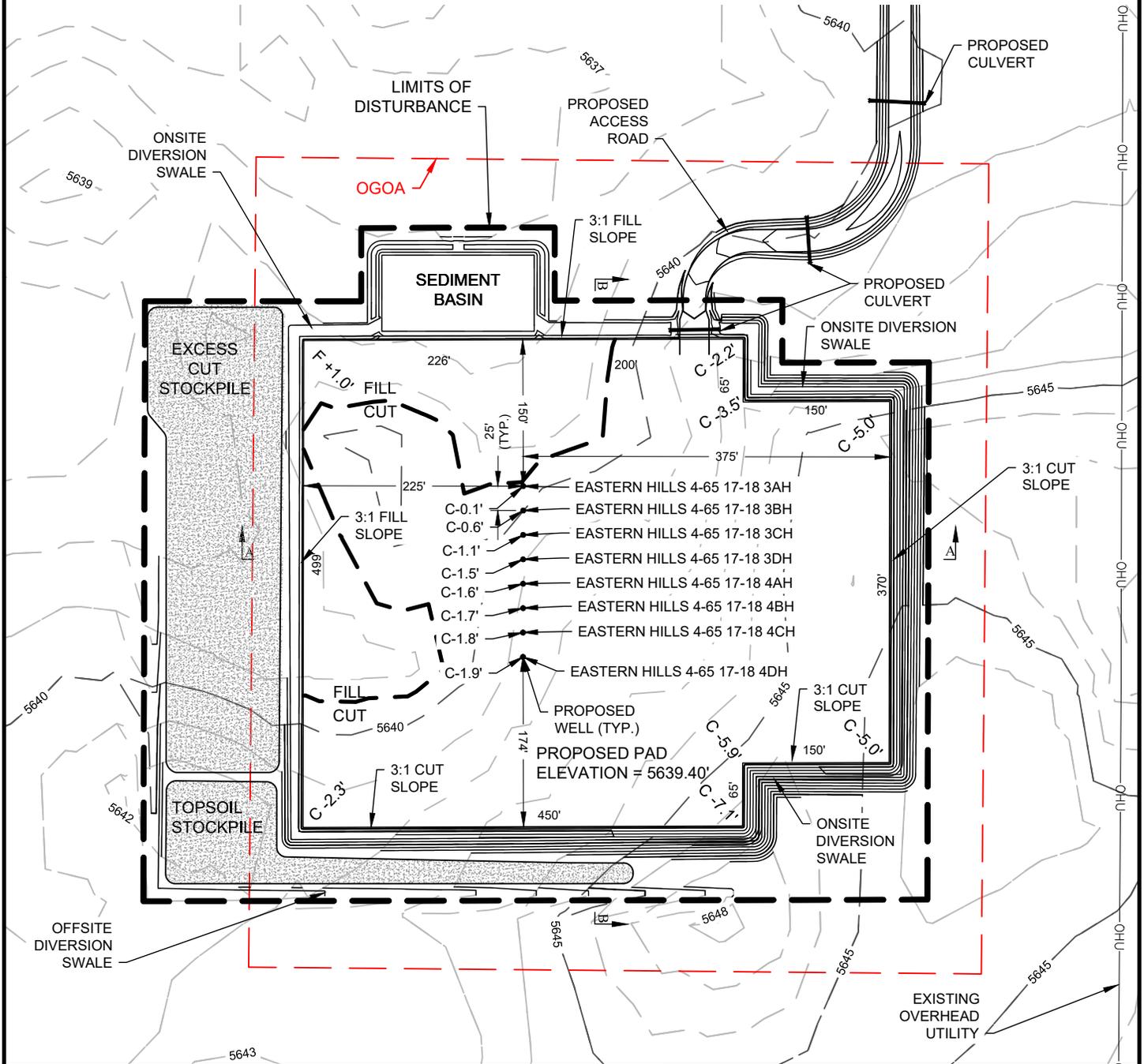
EASTERN HILLS 4-65 17-18 4DH

			PDOP = 1.7
NAD 83 (SURFACE LOCATION)	NAD 83 (BEG. PROD. INTERVAL)	NAD 83 (ENDING PROD. INTERVAL)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 39°41'59.46" (39.699849)	LATITUDE = 39°41'47.57" (39.696546)	LATITUDE = 39°41'47.63" (39.696564)	LATITUDE = 39°41'47.63" (39.696565)
LONGITUDE = 104°40'51.20" (104.680888)	LONGITUDE = 104°40'50.13" (104.680592)	LONGITUDE = 104°42'52.26" (104.714516)	LONGITUDE = 104°42'53.98" (104.714995)
NAD 27 (SURFACE LOCATION)	NAD 27 (BEG. PROD. INTERVAL)	NAD 27 (ENDING PROD. INTERVAL)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 39°41'59.50" (39.699862)	LATITUDE = 39°41'47.61" (39.696559)	LATITUDE = 39°41'47.67" (39.696576)	LATITUDE = 39°41'47.68" (39.696577)
LONGITUDE = 104°40'49.31" (104.680363)	LONGITUDE = 104°40'48.24" (104.680067)	LONGITUDE = 104°42'50.36" (104.713990)	LONGITUDE = 104°42'52.09" (104.714469)
STATE PLANE NAD 83 (CO. CENTRAL)			
N: 1680838.337 E: 3230481.084	N: 1679635.812 E: 3230575.315	N: 1679558.049 E: 3221029.54	N: 1679557.249 E: 3220894.753
STATE PLANE NAD 27 (CO. CENTRAL)			
N: 680830.62 E: 2230634.854	N: 679628.113 E: 2230729.103	N: 679550.198 E: 2221183.409	N: 679549.396 E: 2221048.623



FIELD DATE: 04-24-18	SITE NAME: EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD	PREPARED FOR:
DRAWING DATE: 03-14-19	SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: CSG	CHECKED: JAG	

EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD PAD LAYOUT

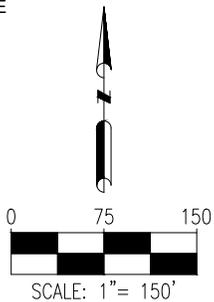


NOTES:

1. A COMPLETE UTILITIES LOCATION IS RECOMMENDED BEFORE CONSTRUCTION.
2. GEOGRAPHIC POSITIONS/COORDINATES SHOWN HEREON ARE IN NAD83 DATUM.
3. EARTHWORK QUANTITIES ARE APPROXIMATE & FOR INFORMATION ONLY. 6" OF TOPSOIL HAS BEEN SUBTRACTED FROM EXISTING SURFACE PRIOR TO PERFORMING EARTHWORK CALCULATIONS.

CURRENT SURFACE USE: IMPROVED PASTURE
FUTURE SURFACE USE: IMPROVED PASTURE

DISCLAIMER:
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.

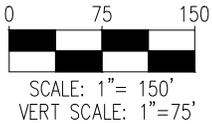
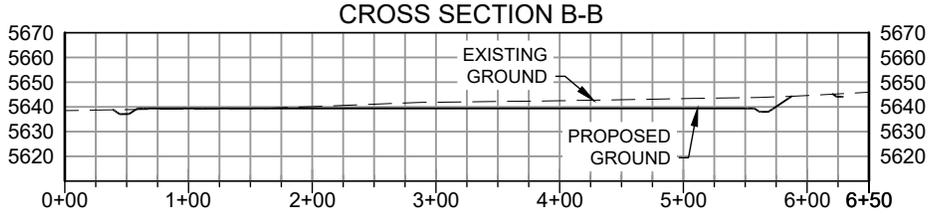
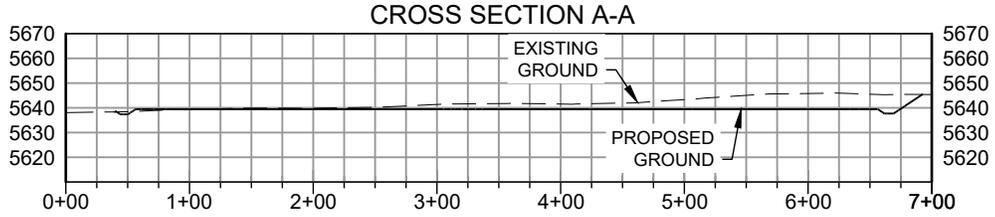


SITE QUANTITIES

FINISHED GRADE ELEVATION	5639.40'
TOTAL CUT FOR WELL PAD	27,942 CY
TOTAL CUT FOR SEDIMENT BASIN	25 CY
FILL FOR WELL PAD	7,370 CY
FILL FOR SEDIMENT BASIN	485 CY
10% FILL FACTOR	785 CY
TOTAL FILL	8,640 CY
NET EXCESS MATERIAL	19,327 CY
TOPSOIL FROM GRADED AREA	5,591 CY
TOTAL DISTURBANCE AREA	11.4 ACRES

	FIELD DATE: 02-15-18 DRAWING DATE: 11-17-19 BY: RMC CHECKED: MLP	SITE NAME: EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	PREPARED FOR:
	8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com		

EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD CROSS SECTIONS



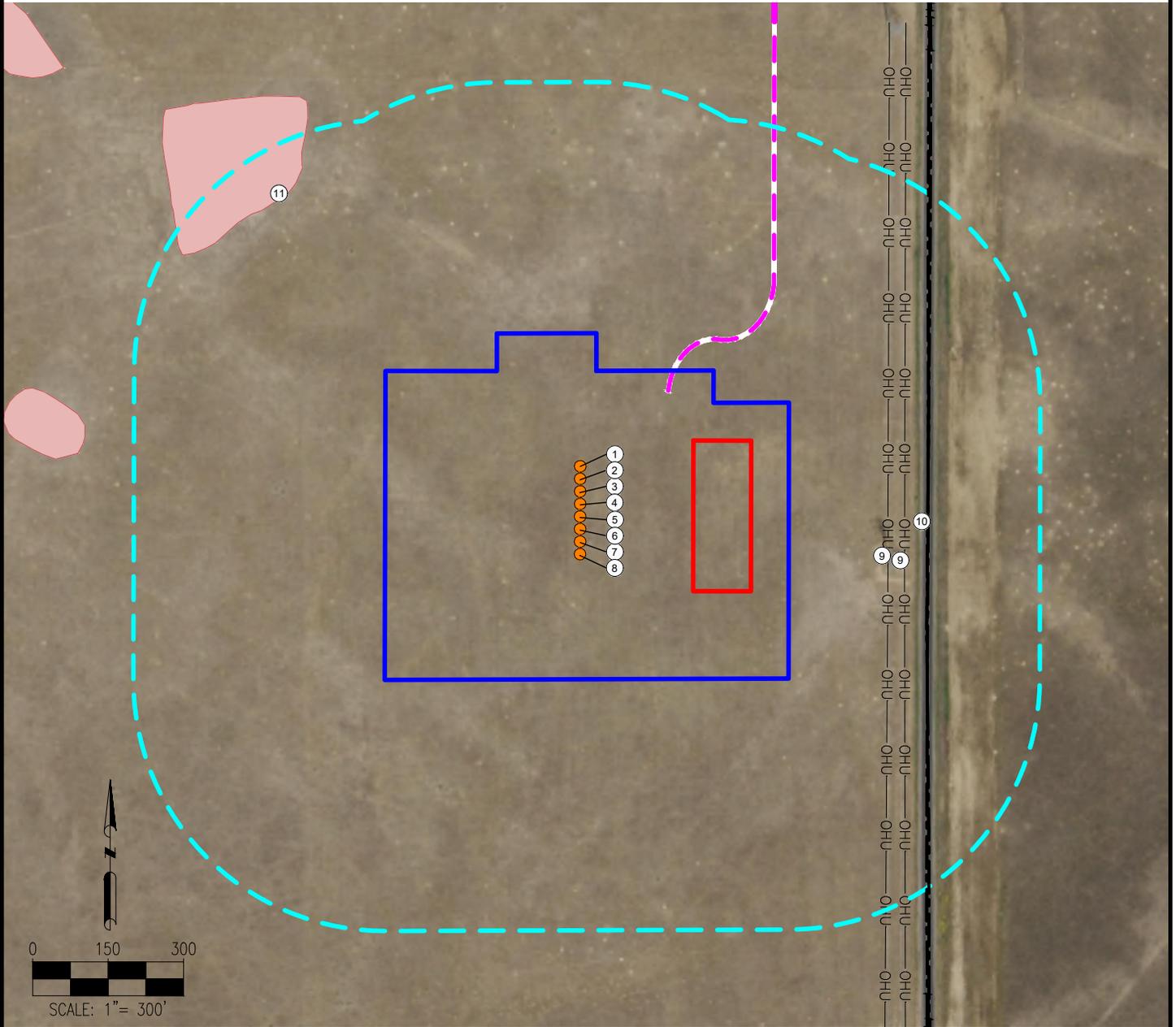
CURRENT SURFACE USE: IMPROVED PASTURE
FUTURE SURFACE USE: IMPROVED PASTURE

DISCLAIMER:
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.

NOTE:
1. A COMPLETE UTILITIES LOCATION IS RECOMMENDED BEFORE CONSTRUCTION.

 <p>8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 02-15-18	SITE NAME: EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD	PREPARED FOR:
	DRAWING DATE: 11-17-19	SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: RMC	CHECKED: MLP		

EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD LOCATION DRAWING



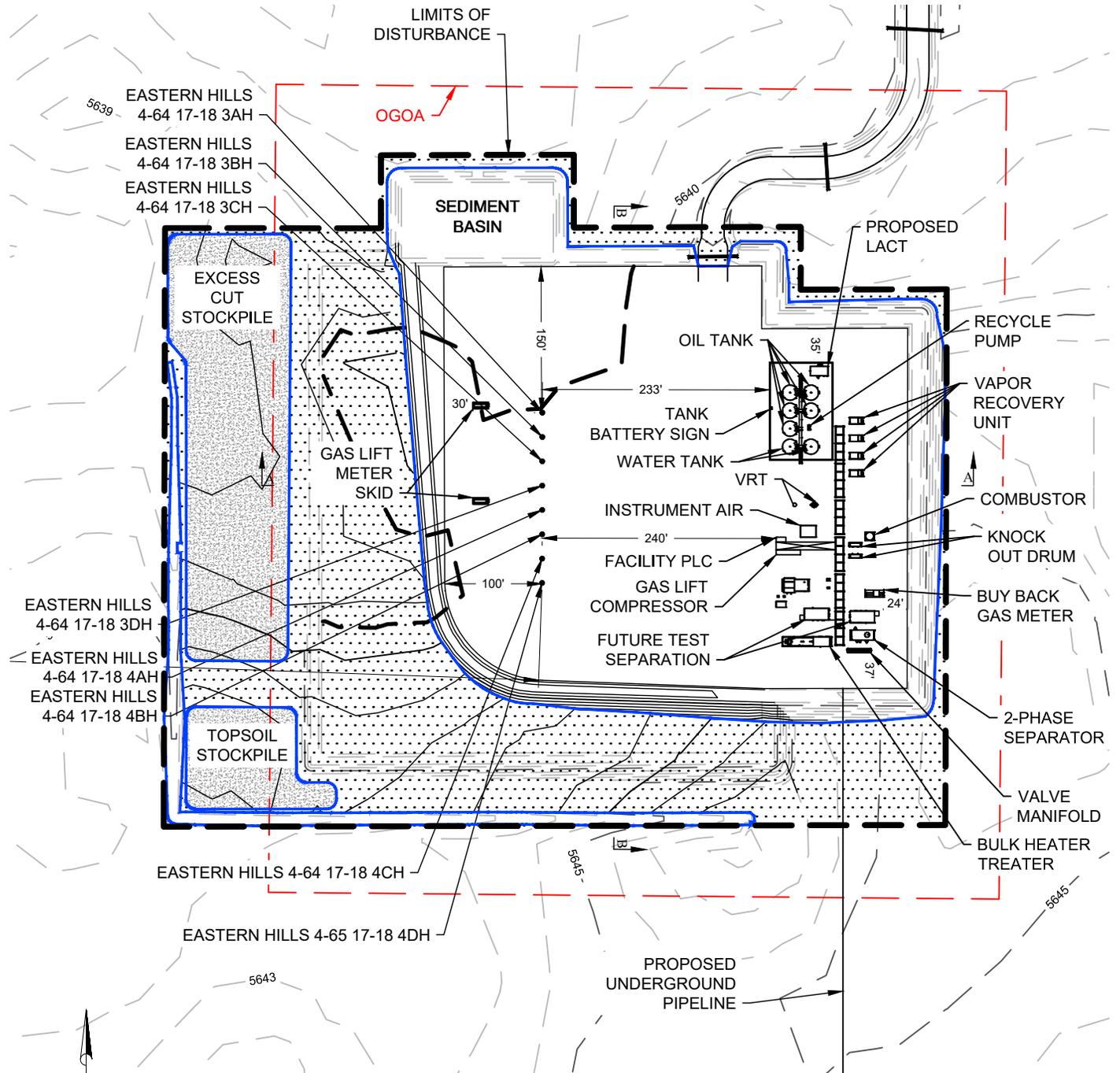
- | | |
|--|--|
| <ol style="list-style-type: none"> 1. EASTERN HILLS 4-65 17-18 3AH 2. EASTERN HILLS 4-65 17-18 3BH 3. EASTERN HILLS 4-65 17-18 3CH 4. EASTERN HILLS 4-65 17-18 3DH 5. EASTERN HILLS 4-65 17-18 4AH 6. EASTERN HILLS 4-65 17-18 4BH 7. EASTERN HILLS 4-65 17-18 4CH 8. EASTERN HILLS 4-65 17-18 4DH | <ol style="list-style-type: none"> 9. OVERHEAD UTILITIES ARE ±613' E, ±646' E 10. S POWHATON RD IS ±680' E 11. LOW LYING AREA IS ±796' NW |
|--|--|

LEGEND: ● = PROPOSED WELL --- = PROPOSED ACCESS ROAD --- = EXISTING ROAD --- OHU --- = OVERHEAD UTILITY	 = DISTURBANCE AREA = 500' RADIUS = PROPOSED FACILITY BERM = LOW LYING AREA	MEASURED FROM NEAREST WELL OR FACILITY: BUILDING ±1772' SW BUILDING UNIT ±3836' SW PUBLIC ROAD (S POWHATON RD) ±340' E PROPERTY LINE (PSCo) ±152' E UTILITY (OVERHEAD UTILITY) ±272' E RAILROAD +5280' N MEASURED FROM NEAREST EDGE OF DISTURBANCE: SURFACE WATER (LOW LYING AREA) ±402' NW	REFERENCE LOCATION **EASTERN HILLS 4-65 17-18 3AH** LAT: 39.700330° N LONG: 104.680887° W ELEVATION: 5639' 1380' FSL & 700' FEL PDOP: 1.5 GPS OPERATOR: ALAN HNIZDO
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DISCLAIMER: THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.	DATA SOURCE: AERIAL IMAGERY: NAIP 2017 WATER WELLS: COLORADO DWR NHD: USGS PUBLICLY AVAILABLE DATA SOURCES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY ASCENT.	MEASURED FROM NEAREST EDGE OF DISTURBANCE: WATER WELL ±1030' SE SWL = 137' PERMIT: 35635- - RECEIPT: 9006798	DISTURBANCE ACREAGE: 11.4 ACRES DRILLING OPERATIONS 4.6 ACRES INTERIM RECLAIM CURRENT SURFACE USE: IMPROVED PASTURE FUTURE SURFACE USE: IMPROVED PASTURE
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	7535 Hilltop Circle Denver, CO 80221 (303) 928-7128 www.ascentgeomatics.com	FIELD DATE: 04-24-18 DRAWING DATE: 10-02-18 BY: DNS CHECKED: MMP	SITE NAME: EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	PREPARED FOR:
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EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD PRODUCTION LAYOUT

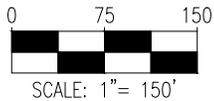


SITE QUANTITIES

TOPSOIL AREA LEFT AFTER RECLAMATION 4,848 CY
 EXCESS CUT STOCKPILE AREA 15,962 CY

 = RECLAIMED AREA

APPROXIMATE UN-RECLAIMED ACREAGE = ±7.7 ACRES
 APPROXIMATE RECLAIMED ACREAGE = ±3.7 ACRES
 APPROXIMATE TOTAL DISTURBED ACREAGE = ±11.4 ACRES



CURRENT SURFACE USE: IMPROVED PASTURE
 FUTURE SURFACE USE: IMPROVED PASTURE

DISCLAIMER:
 THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.

NOTE:

1. A COMPLETE UTILITIES LOCATION IS RECOMMENDED BEFORE CONSTRUCTION.



FIELD DATE:
02-15-18
 DRAWING DATE:
11-17-19
 BY:
RMC
 CHECKED:
MLP

SITE NAME:
EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD
 SURFACE LOCATION:
E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M.
 ARAPAHOE COUNTY, COLORADO

PREPARED FOR:

ConocoPhillips Company
 EASTERN HILLS SOUTH 4-65 17-18 3AH, 3BH, 3CH, 3DH, 4AH, 4BH, 4CH, 4DH
 E 1/2 SE 1/4, SECTION 17, T4S, R65W, 6th P.M.
 ARAPAHOE COUNTY, COLORADO
 DATE: 11-11-19 ; RMC

DISTANCES FROM WELLHEAD

WELL NAME	BUILDING		BUILDING UNIT		HIGH OCCU. BUILDING		D.O.A.A.		PUBLIC ROAD		ABOVE GROUND UTILITY		RAILROAD		PROPERTY LINE		CHILD CARE FACILITY		SCHOOL FACILITY		SCHOOL PROPERTY LINE	
	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH
EASTERN HILLS 4-65 17-18 3AH	SW	1906'	SW	4045'	OVER 1 MILE	OVER 1 MILE	E	680'	E	613'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 3BH	SW	1887'	SW	4016'	OVER 1 MILE	OVER 1 MILE	E	680'	E	613'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 3CH	SW	1867'	SW	3991'	OVER 1 MILE	OVER 1 MILE	E	680'	E	612'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 3DH	SW	1848'	SW	3967'	OVER 1 MILE	OVER 1 MILE	E	680'	E	612'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 4AH	SW	1829'	SW	3942'	OVER 1 MILE	OVER 1 MILE	E	680'	E	612'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 4BH	SW	1810'	SW	3917'	OVER 1 MILE	OVER 1 MILE	E	680'	E	612'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 4CH	SW	1791'	SW	3893'	OVER 1 MILE	OVER 1 MILE	E	680'	E	612'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE
EASTERN HILLS 4-65 17-18 4DH	SW	1772'	SW	3868'	OVER 1 MILE	OVER 1 MILE	E	680'	E	612'	OVER 1 MILE	E	492'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE

DISTANCES FROM PRODUCTION AREA

PRODUCTION FEATURE	BUILDING		BUILDING UNIT		HIGH OCCU. BUILDING		D.O.A.A.		PUBLIC ROAD		ABOVE GROUND UTILITY		RAILROAD		PROPERTY LINE		CHILD CARE FACILITY		SCHOOL FACILITY		SCHOOL PROPERTY LINE	
	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH	DIRECTION	LENGTH
PRODUCTION EQUIPMENT	SW	1902'	SW	3852'	OVER 1 MILE	OVER 1 MILE	E	320'	E	261'	OVER 1 MILE	E	141'	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE	OVER 1 MILE

**EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD
DRIVING DIRECTIONS**

PRE-OIL PIPELINE HAUL ROUTE:

PROCEED IN AN EASTERLY DIRECTION FROM THE INTERSECTION OF INTERSTATE 25 & INTERSTATE 70 IN DENVER, COLORADO ALONG INTERSTATE 70 APPROXIMATELY 20.9 MILES TO THE JUNCTION OF INTERSTATE 70 AND EXIT 295 TO THE SOUTHEAST; EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE JUNCTION OF EXIT 295 AND WATKINS ROAD ; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 4.0 MILES TO THE JUNCTION OF WATKINS ROAD AND EAST JEWELL AVENUE; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 3.9 MILES TO THE JUNCTION OF EAST JEWELL AVENUE AND SOUTH POWHATON ROAD; TURN RIGHT AND PROCEED IN A NORTHERLY DIRECTION FOR 1.6 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE WEST; TURN LEFT AND FOLLOW ROAD FLAGS IN A WESTERLY DIRECTION, THEN A SOUTHERLY DIRECTION APPROXIMATELY 0.3 MILES TO THE PROPOSED LOCATION

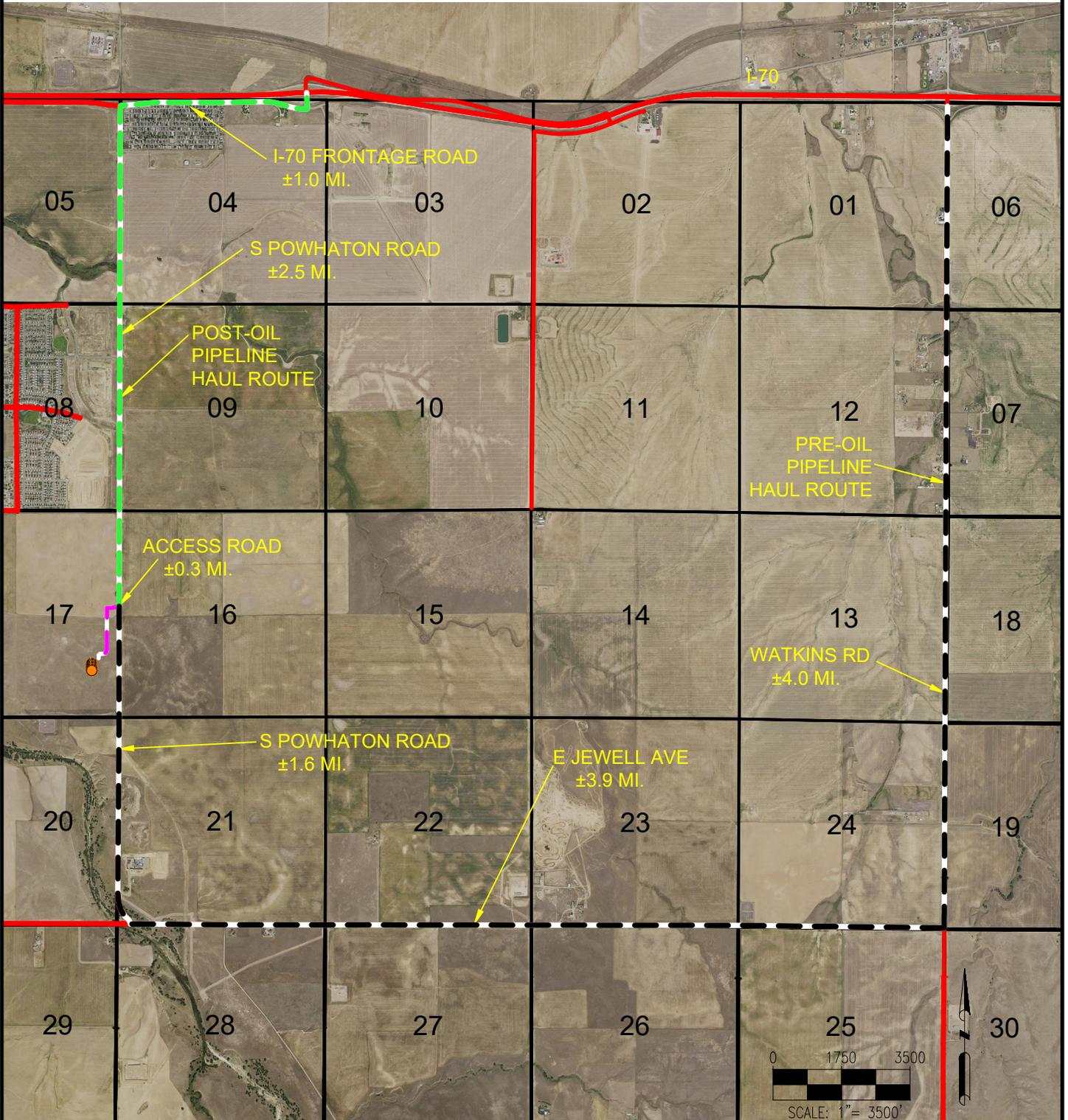
POST-OIL PIPELINE HAUL ROUTE:

PROCEED IN AN EASTERLY DIRECTION FROM THE INTERSECTION OF INTERSTATE 25 & INTERSTATE 70 IN DENVER, COLORADO ALONG INTERSTATE 70 APPROXIMATELY 15.1 MILES TO THE JUNCTION OF INTERSTATE 70 AND EXIT 289 TO THE SOUTHEAST; EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE JUNCTION OF EXIT 289 AND E-470 TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE JUNCTION OF E-470 AND INTERSTATE 70 FRONTAGE ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE JUNCTION OF INTERSTATE 70 FRONTAGE ROAD AND INTERSTATE 70 FRONTAGE ROAD/COLFAX AVENUE TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 2.0 MILES TO THE JUNCTION OF INTERSTATE 70 FRONTAGE ROAD/COLFAX AVENUE AND POWHATON ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 2.5 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE WEST; TURN RIGHT AND FOLLOW ROAD FLAGS IN A WESTERLY DIRECTION, THEN A SOUTHERLY DIRECTION APPROXIMATELY 0.3 MILES TO THE PROPOSED LOCATION

TOTAL DISTANCE FROM THE INTERSECTION OF INTERSTATE 25 & INTERSTATE 70 TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 20.1 MILES.

 <p>8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</p>	FIELD DATE: 04-24-18	SITE NAME: EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD	PREPARED FOR: 
	DRAWING DATE: 09-10-18	SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17 T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	
BY: RMC	CHECKED: JDB		

EASTERN HILLS SOUTH 4-65 17-18 3AH-3DH, 4AH-4DH PAD ACCESS ROAD MAP

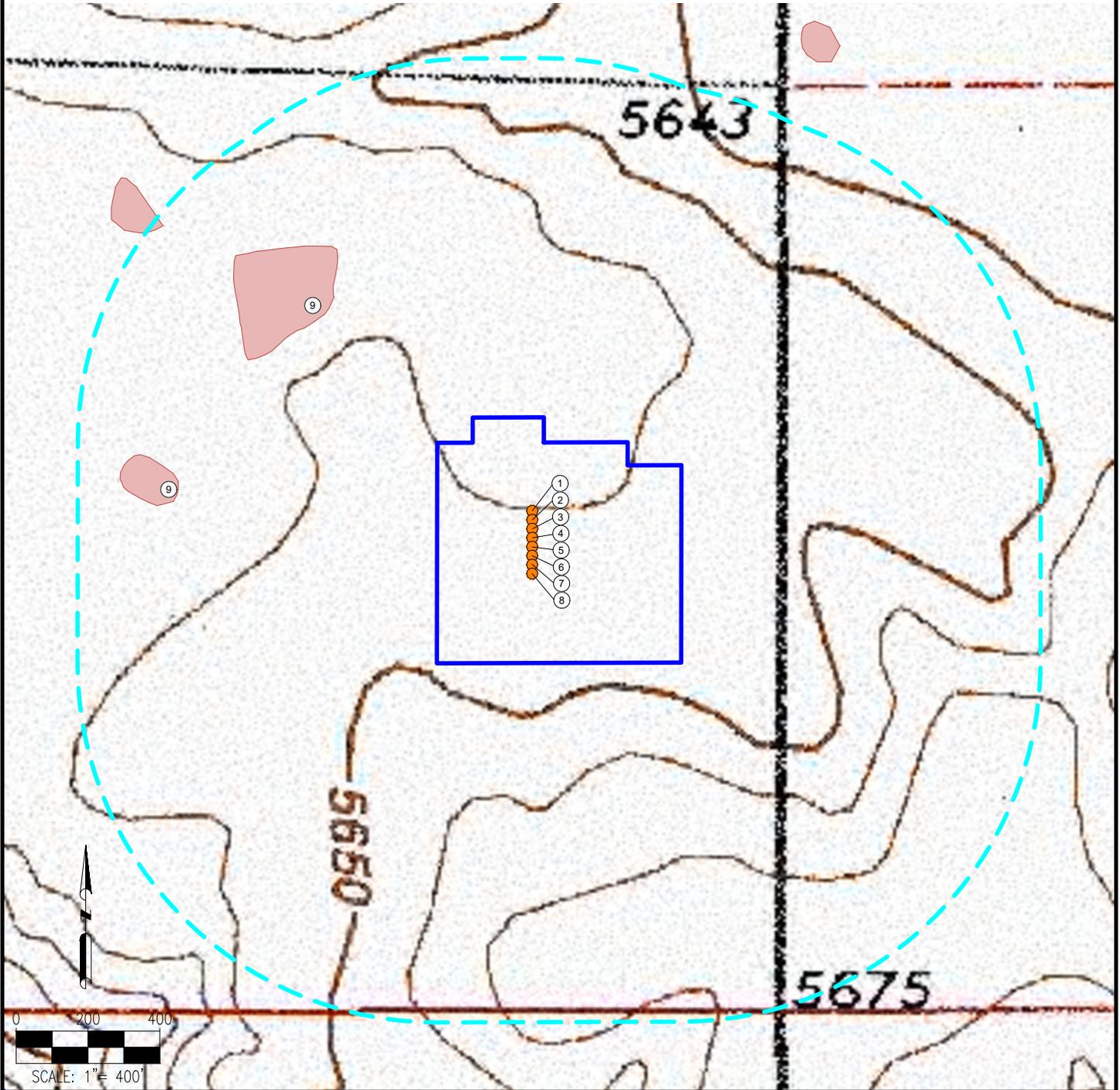


NOTE:
1. FIRE ACCESS ROAD AND PAD CONSTRUCTION SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS (85,000 LBS) UTILIZING THE CDOT ROAD-BASE #6 SPECIFICATION TO PROVIDE FOR ALL WEATHER DRIVING CAPABILITIES.

LEGEND: = PROPOSED WELL = POST-OIL PIPELINE HAUL ROUTE	= SECTION LINE = PROPOSED ACCESS ROAD = MAJOR PUBLIC ROAD = PRE-OIL PIPELINE HAUL ROUTE	DISCLAIMER: THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.	DATA SOURCE: AERIAL IMAGERY: NAIP 2017 PLS: BLM PUBLICLY AVAILABLE DATA SOURCES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY ASCENT.
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 <small>8620 Wolff Court Westminster, CO 80031 (303) 928-7128 www.ascentgeomatics.com</small>	FIELD DATE: 04-24-18 DRAWING DATE: 09-10-19 BY: RMC CHECKED: JDB	SITE NAME: EASTERN HILLS SOUTH 4-65 17-18 3AH-3DH, 4AH-4DH PAD SURFACE LOCATION: E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M. ARAPAHOE COUNTY, COLORADO	PREPARED FOR:
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EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD HYDROLOGY MAP



MEASUREMENTS ARE MADE FROM THE NEAREST EDGE OF THE DISTURBANCE AREA.

- | | |
|---------------------------------|--|
| 1. EASTERN HILLS 4-65 17-18 3AH | 7. EASTERN HILLS 4-65 17-18 4CH |
| 2. EASTERN HILLS 4-65 17-18 3BH | 8. EASTERN HILLS 4-65 17-18 4DH |
| 3. EASTERN HILLS 4-65 17-18 3CH | 9. LOW LYING AREAS ARE ±476' NW, ±720' W |
| 4. EASTERN HILLS 4-65 17-18 3DH | |
| 5. EASTERN HILLS 4-65 17-18 4AH | |
| 6. EASTERN HILLS 4-65 17-18 4BH | |

LEGEND:

- = PROPOSED WELL
- = DISTURBANCE AREA
- = 1000' RADIUS
- = LOW LYING AREA

DISCLAIMER:
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DATA SOURCE:
TOPO MAP: USGS
NHD: USGS
PUBLICLY AVAILABLE DATA SOURCES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY ASCENT.

7535 Hilltop Circle
Denver, CO 80221
(303) 928-7128
www.ascentgeomatics.com

FIELD DATE:
04-24-18

DRAWING DATE:
05-03-18

BY:
MJW

CHECKED:
MJE

SITE NAME:
EASTERN HILLS 4-65 17-18 3AH-3DH, 4AH-4DH PAD

SURFACE LOCATION:
**E 1/2 SE 1/4 SEC. 17, T4S, R65W, 6TH P.M.
ARAPAHOE COUNTY, COLORADO**

PREPARED FOR: