

SURFACE USE PLAN OF OPERATIONS

**WRD Federal 30-34
Rio Blanco County, Colorado
Federal Lease # COC- 037933**

**Koch Exploration Company, LLC
950 17th Street, Suite 1900
Denver, CO 80202**

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SURFACE USE PLAN OF OPERATIONS

Koch Exploration Company, LLC
WRD Federal 30-34
2007' FSL, 752' FWL
NWSW, Section 29, T2N, R96W
Rio Blanco County, Colorado
Federal Lease # COD – 037933

1.0 INTRODUCTION

The well site was surveyed on March 8, 2013 by Uintah Engineering and Land Surveying for Koch Exploration Company, LLC on a site that was geologically, topographically, and legally acceptable.

Koch Exploration Company, LLC requests this Application for Permit to Drill (APD) serve as the amendment application for right-of-way for the access roads, water route, and well pad on federal lands.

2.0 12 POINT SUMMARY

2.1 Existing Access Roads

Topos A and B show the area map, location of well, and access roads.

Directions to location from Rangely, Colorado are as follows:

- Proceed in a easterly, then southeasterly, then easterly, then southeasterly direction from Rangely, Colorado along Highway 64 approximately 39.3 miles to the junction of this road and County Road 142 to the north; turn left and proceed in a northerly direction approximately 0.5 miles to the junction of this road and county road 143 to the north; proceed in a northerly direction approximately 1.8 miles to the junction of this road and an existing road to the west; turn left and proceed in a westerly, then northerly, then northwesterly direction approximately 0.5 miles to the beginning of the existing access to the south; turn left and proceed in a southerly direction approximately 0.5 miles to the existing location. Distance from Rangely, Colorado to the existing location is approximately 42.6 miles.

All existing roads will be maintained and/or brought up to the Bureau of Land Management (BLM) minimum standards as found in BLM Manual 9113.

2.2 Planned Reconstructed Access Roads (see Topo B, Sheets C1.00-C1.40)

No new access roads will be constructed; existing road will be upgraded. All upgraded roads will be constructed and maintained per BLM Manual Section 9113. The access roads will be constructed as follows:

- Approximately 3,100 feet of access road will be upgraded (see Topo B and Sheets C1.00-C1.40).
- The upgraded roads will be crowned and ditched, with a subgrade running surface of 14 feet. The maximum disturbed width will be 50 feet. Crowns and inslope/outslope will be

between 0.02 to 0.05 feet/feet. Topsoil will be will be windrowed and re-spread in the borrow area.

- See Sheets C1.00-1.40 for engineered road design which includes crowned and ditched, inslope/outslope and ditch construction based on terrain and reconstruction needs for the road.
- Borrow ditches to be back sloped no greater than 2:1 with drainage on both sides.
- Curves will be widened to BLM standards are based upon the “design” vehicle.
- Maximum grade is 11 percent.
- Ten 18-inch culverts will be installed (see Sheets C1.00-C1.40).
- No additional surfacing material will be required.
- No major road cuts will be required.
- The upper edges of all cut banks on the access road and well pad will be rounded.
- Six turnouts will be constructed (See Sheets C1.00-C1.40).
- Fence cuts, gates and cattle guards will not be required.
- All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of 3 inches, unless otherwise approved by the Authorized Officer.
- There shall be no mud blading on the access road. Vehicles may be towed through the mud provided they stay on the roadway.
- The White River Resource Area Manager shall be notified at least 48 hours prior to commencing reclamation work.
- Erosion control is specified under “Other Information” below.
- Road construction on public lands shall meet the minimum standards listed in BLM Manual Section 9113.
- New roads shall be maintained to BLM minimum standards as found in BLM Manual Section 9113.

2.3 Location of Existing Wells

See Topo C for existing wells within a 1 mile radius.

2.4 Location of Existing and/or Proposed Production Facilities

The subject well will be located on the existing WRD Federal 29-31 well pad. Existing production equipment and gas lines have been identified (see Figure 4). The following specifications are provided for construction of the production facilities:

- New facilities will be constructed on the existing pad (see Figure 4). Actual layout to be submitted by Sundry Notice prior to construction of facilities.

- Site preparation for production will be done with standard excavation equipment using native materials. Additional surface material will be obtained from commercial sources or an approved borrow area.
- All above-ground permanent structures, including production equipment, will be painted to blend with the surrounding landscape. The color will be determined by the BLM.
- Production facilities may vary according to the actual reservoir discovered and will be engineered upon completion of well tests. If the well is a producer, all production facilities will be authorized by Sundry Notice.
- No facilities will be constructed off location.
- Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the emergency and cuttings pit area, back sloping, and contouring all cut and fill slopes. These areas will be re-seeded. Refer to plans for restoration of surface for additional details.
- A dike or metal berm will be constructed around the tank battery of sufficient capacity to contain at least 110 percent of the storage capacity of the largest tank within the dike.
- Pipeline:
 - Install a gas sales pipeline from the WRD Federal 30-34 to tie into the existing WRD Federal 29-31 pipeline located in NWSW, Section 29, T2N, R96W, Rio Blanco County, Colorado.
 - The pipe will be 4-inch steel with a wall thickness of 0.188 inch. The line will be pressure tested prior to service. Safety pressure relief equipment will be installed at the well location.
 - It is proposed to install the pipeline along the route on the attached map (see Sheets C0.00
 - The pipeline right-of-way length will be approximately 116 feet (0.13 acres) on federal surface. The maximum width of the disturbed area will not exceed 50 feet.
 - The line will be coated pipe with welded connections. The welds will be coated, wrapped, and buried to a depth not less than 4 feet.
 - A meter run will be installed on the well pad. The well meter will be used for royalty payment purposes, thereby not requiring an application for off-base measurement.
 - ♦ All measurement facilities will be designed, constructed, operated, and maintained to meet ANSI/API 2530 and AGA Committee Report Number 3, second edition 1985.

Off Well Pad

None are anticipated.

2.5 Location and Types of Water Supply

The following information is provided for the location and types of water supply:

- Location: Water supply;
 - Irrigation Ditch – Pat Reigan Ditch, NWSE of Section 2, T1S, R97W
 - Irrigation Ditch – NWSE of Section 2, T1S, R97W
 - Irrigation Ditch – George S. Witter Ditch, NWNW of Section 21, T2S, R97W
- Method of transportation: Via truck (Refer to Topo A).
- Approximate water usage 15,000 bbls (13,000 bbls for fracking and 2,000 bbls for drilling)
- Water well to be drilled: None.
- Water Pipeline: None

2.6 Construction Materials

Construction materials will consist of native materials from borrow ditches and location areas.

At this time, the need for surfacing materials is not anticipated. If surface materials are required, a Sundry Notice will be submitted to the BLM.

2.7 Methods for Handling Waste Disposal

Waste disposal will be handled in the following manner:

- A cuttings pit will be constructed on the well pad; the 100'x60'x5' pit will provide storage for cuttings from the closed loop system (see Figure 1).
 - The pit will be constructed on the cut side of the pad and be designed to prevent the collection of surface runoff.
 - Drill cuttings will be disposed of on location and buried by a minimum of three feet of clean fill if they meet COGCC standards for onsite disposal. If cuttings are disposed off site they will be hauled to an approved disposal facility and the BLM will be notified via Sundry.
- Drilling fluid will be a closed-loop system. All drilling fluids will be contained in temporary aboveground storage tanks and disposed of at an approved disposal facility for which a Sundry Notice will be submitted to the BLM.
- Produced fluid will be contained in test tanks during completion and testing.
- Sewage will be handled in self-contained, chemical-treated portable toilets and contents hauled off location to an authorized Colorado Department of Public Health and Environment (CDPHE) approved sanitary disposal facility in accordance with state and local regulations.

- Garbage and other burnable waste will be contained in a portable trash cage that will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at the CDPHE-approved Rio Blanco County Landfill.
- Trash will be picked up if scattered and contained in the trash cage as soon as practical after rig is moved off.
- Upon release of the drilling rig, rat and mouse, will be filled. Debris and excess equipment will be removed.
- Produced water will be hauled to an approved disposal facility.
- Hazardous Materials: Koch Exploration Company, LLC maintains a file, per 29 CFR 1910.1200(g) containing current *Material Safety Data Sheets* for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) that may be transported across these lands may include drilling mud and cementing products, which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/stimulation activities such as flammable or combustible substances, and acids/gels (corrosives).

2.8 Ancillary Facilities

There will be no ancillary facilities associated with this project.

2.9 Well Site Layout

Well site layout is as follows:

- See the attached survey plat.
- The drill site will be located on the existing WRD Federal 29-31 well pad. The pad will be expanded during the drilling and completion of the well then reclaimed back to its original size (see Figure 4).
- See Figure 2 for the cut and fill cross sections.
- See Figure 1 and 5 for the location layout.
- See Figures 1 and 3 for the emergency pit location.
 - An emergency pit will be constructed on the well pad; the pit will provide emergency containment of drilling fluids in case of a mechanical problem with the closed loop system.
 - The pit will be constructed on the cut side of the pad and be designed to prevent the collection of surface runoff. The pit will be lined with 12mm or thicker polyethylene to prevent leakage of fluids. The liner will be rolled in place and recurved at the ends, i.e., buried on the top of the pit berms.
 - The pit will be fenced “stock tight” on three sides, the fourth side will be fenced at time of rig release, at which time the pit will be flagged.

- See Figures 1 and 3 for the cuttings pit location.
 - A cuttings pit will be constructed on the well pad. The pit will be constructed on the cut side of the pad and be designed to prevent the collection of surface runoff.
- All equipment and vehicles will be confined to the access road, pad, and area specified in the APD.
- The construction program and design are on the attached location layout and cross sectional diagrams (see Figures 1 and 2).
- Prior to construction, all topsoil will be removed from the entire site and stockpiled separate from subsoil. No topsoil will be stripped when soils are saturated or frozen below stripping depth. Topsoil for this site is the first 6 inches of soil material (see Figures 1 and 5)
- Vegetation Clearing: Before construction or any surface disturbance, well pad, access road, and pipeline route will be cleared of brush and trees. All trees directly outside the staked limit of disturbance are to remain undamaged.

2.10 Plans for Surface Reclamation

Interim Reclamation (See Figure 4)

The following surface reclamation will be done within 6 months after the final well is completed.

- The emergency pit will be constructed only if it is needed. If the emergency pit is constructed and not used, the pit will be backfilled.
- If the emergency pit is used, it will be dried, backfilled, and re-contoured to blend with the existing environment. If natural evaporation of the emergency pit is not feasible, alternative methods of drying, removal of fluids, or other treatment will be developed. If fluids are disposed of by any method other than hauling to a CDPHE approved disposal pit, prior approval by the BLM will be required. If disposal involves proposed discharge or transport, CDPHE approval will be necessary.
 - The BLM will be notified no later than 5 days prior to closure.
 - Pre-closure testing for COGCC standards will occur in accordance with directives provided by the BLM.
- During interim and final reclamation of the site, the operator will push fill material into the cuts and up over the back slope to approximate the original topography. No large depressions will be left that forms unnatural ponds. However, sufficient roughening will occur to trap seed and moisture to aid in the reclamation process.
- All disturbed areas are to be seeded with a seed mixture approved by a BLM representative. The seeding is to be done by drilling with a drill equipped with a depth regulator to insure even depths of planting not to exceed ½ inch. Seeding is to be done during the months of September or October following construction completion. The seeding will be repeated until a satisfactory stand, as determined by the Area Manager

of the BLM, is achieved. The BLM is to be notified 15 days prior to seeding in order that arrangements can be made for supervision of the seeding project.

- Vegetation or soil disturbance by the operator will be held to the minimum consistent with practical construction operations and the operator will smooth all disturbed areas to conform as nearly as practical to adjacent terrain.
- The operator is responsible for weed control on disturbed areas within the exterior limits of the permit. The operator is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods.
- Our field-wide goal for reclamation is that we perform the reclamation work and return the surface to as native a state as possible as soon as is reasonable and achievable. Taking into account future development in an area, weather conditions, best season for reseeding, and equipment availability, Koch will work diligently to achieve this goal.
- Rat and mouse holes shall be filled immediately upon release of the drilling rig from the location.
- The rehabilitation will begin after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or the area will be flagged or fenced. Other cleanup will be done as needed.
- Compacted soils will be ripped a minimum depth of 18 to 24 inches at furrow spacing of no more than 2 feet.
- Disturbed areas not needed for long-term production will be recontoured, stabilized, and revegetated with a seed mixture as specified by the BLM.
- BLM will be contacted at least 72 hours before reclamation is commenced.
- If damage to reclaimed areas occurs as a result of operations, affected areas will be reclaimed again.
- Roads that are no longer in use on public lands will be reclaimed and revegetated.

Final Reclamation

- All disturbed areas, including the well pad, production facility, roads, pipelines and utility corridors, will be recontoured to approximate the original landforms.
- Compacted soils will be ripped to a depth of 18 to 24 inches on 18 to 24 inch centers.
- Topsoil will be evenly spread over the location. All recontoured disturbance will be revegetated with a seed mixture as specified by the BLM.
- Final abandonment of pipelines will include purging, proper disposal of any fluids, then plugged.
- Vegetation Monitoring and Reporting
 - Pre- and post-disturbance vegetation monitoring data will be collected in the growing

season beginning the second year after reclamation efforts are initiated and continue every third year until Final Abandonment is approved.

- The BLM will be informed when reclamation is planned, has been completed, and is reported to be successful or when the site is ready for final inspection.
- Reclamation monitoring reports will be submitted with reclamation status reports with the below minimum components. Data will be gathered using quantitative methods approved by the BLM. Sample size in reclaimed areas and monitoring method measure and quantify the following:
 - ♦ Bare ground, including rocks, wood debris, biotic soils, and litter (dead plant material)
 - ♦ Plant cover
 - ♦ Vegetation composition
 - ♦ Plant species of management concerns
 - ♦ Species richness over entire reclaimed area
 - ♦ Non-native invasive plant species
 - ♦ Vegetation height
 - ♦ Proportion of soil surface in large intercanopy gaps.
- Final reclamation will be completed within 6 months of well plugging.
- Seed mixture and application rates are listed in the table below. . All disturbed areas will be seeded using a drill equipped with a depth regulator and must be drilled on the contour. Seed will be planted between 0.25 and 0.5 inches deep and in all disturbed areas using a drill equipped with a depth regulator. Where drilling is not possible (too steep or rocky), the seed will be broadcasted, raked, or chain in the area to cover the seed. If the seed mixture is broadcast, the rate will be doubled. The seeding shall be repeated until a satisfactory stand, as determined by the Authorized Officer, is obtained. The first evaluation of growth will be made following completion of the first growing season after seeding. A certified or registered seed mixture will be used.
- **Table 1 – Koch Seed Mixes**

| Koch Seed Mixes | | | |
|------------------------|--------------------------|--------------------------------|-----------------------|
| Variety | Common Name | Scientific Name | Rate (PLS)/ac. |
| Rosana | Western Wheatgrass | <i>Pascopyrum smithii</i> | 3 |
| Critana | Thickspike Wheatgrass | <i>Elymus lanceolatus</i> | 2 |
| Rimrock | Indian Ricegrass | <i>Achnatherum hymenoides</i> | 2 |
| Toe Jam Creek | Bottlebrush Squirreltail | <i>Elymus Elymoides</i> | 1 |
| Whitmar | Bluebunch Wheatgrass | <i>Pseudoroegneria spicata</i> | 1 |
| | Needle and Thread | <i>Hesperostipa comate</i> | 0.5 |
| | Sulphur Flower | <i>Eriogonum umbellatum</i> | 1 |
| | Annual Sunflower | <i>Heliantus annus</i> | 1.5 |

- Seeding will take place after September 1 and prior to ground frost.
- Pre-disturbance photographs (see Photo P1, P2, P3, and Photo REF 1 and 2).

2.11 Surface Ownership

- **Mineral Lessor:** BLM.
- **Surface Owner:** BLM.

2.12 Other Information

Other relevant information is provided below:

- **Soil characteristics:** clay loam.
- **Flora:** vegetation is sparse and consists of the following:
 - Bluebunch Wheatgrass, Western Wheatgrass, Prairie Junegrass, Blue Gamma Grass, Indian Rice Grass, Threadleaf Sedge, Prickly Pear Cactus, Gardeners Saltbrush, Shadecale, Yucca, Sagebrush, Antelope Bitterbrush, and Grasswood.
- **Fauna:** antelope, deer, coyotes, raptors, small mammals, and livestock.
- **Concurrent surface use:** Recreation, livestock grazing, and hunting.
- **Historic, cultural, and paleontological resources:** A Class III cultural resource inventory was completed by Pronghorn Archaeological and submitted to the BLM White River Resource Area in compliance with EO 11593 and *Section 106 of the National Historic Preservation Act of 1966*.
- **Storm water management:** General Construction Permit from the Colorado Department of Health and Environment will be approved and the Storm Water/Erosion Management Plan will be in place prior to location instruction.
- **Noxious weeds:** Annual or noxious weeds shall be controlled on all disturbed areas as directed by the White river Resourced Area Manager. Method of control shall be by an approved mechanical method or an Environmental Protection Agency (EPA) registered herbicide. All herbicide application proposals must be approved by the BLM. Application of herbicides must be under direct field supervision of an EPA certified pesticide applicator.

Pre-disturbance surveys will be conducted to identify and quantify weeds and undesirable plant species within 200 feet of the project area, including the well pad, access roads, and pipelines.

All heavy equipment brought onto public lands will be cleaned prior to use to reduce the potential for introduction of noxious weeds.

Dust abatement: Fugitive dust will be prevented and abated as needed.

3.0 LESSEE OR OPERATOR'S FIELD REPRESENTATIVE

Operator

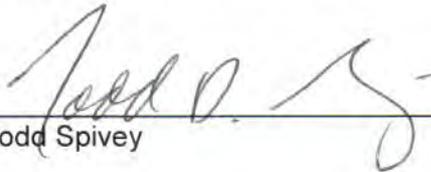
Doug Howard
Vice President of Operations
Koch Exploration Company
950 17th Street, Suite 1900
Denver, CO 80202

Permit Agent

Todd Spivey
Senior Wildlife Biologist/Project Manager/
Environmental, Health, and Safety Manager
Environmental Planning Group, LLC
7900 East Union Avenue, Suite 1100
Denver, CO 80237

4.0 CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this APD plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Koch Exploration Company, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



Todd Spivey

8/7/14

Date

KOCH EXPLORATION COMPANY
WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
 LOCATED IN RIO BLANCO COUNTY, COLORADO
 SECTION 29, T2N, R96W, 6th P.M.

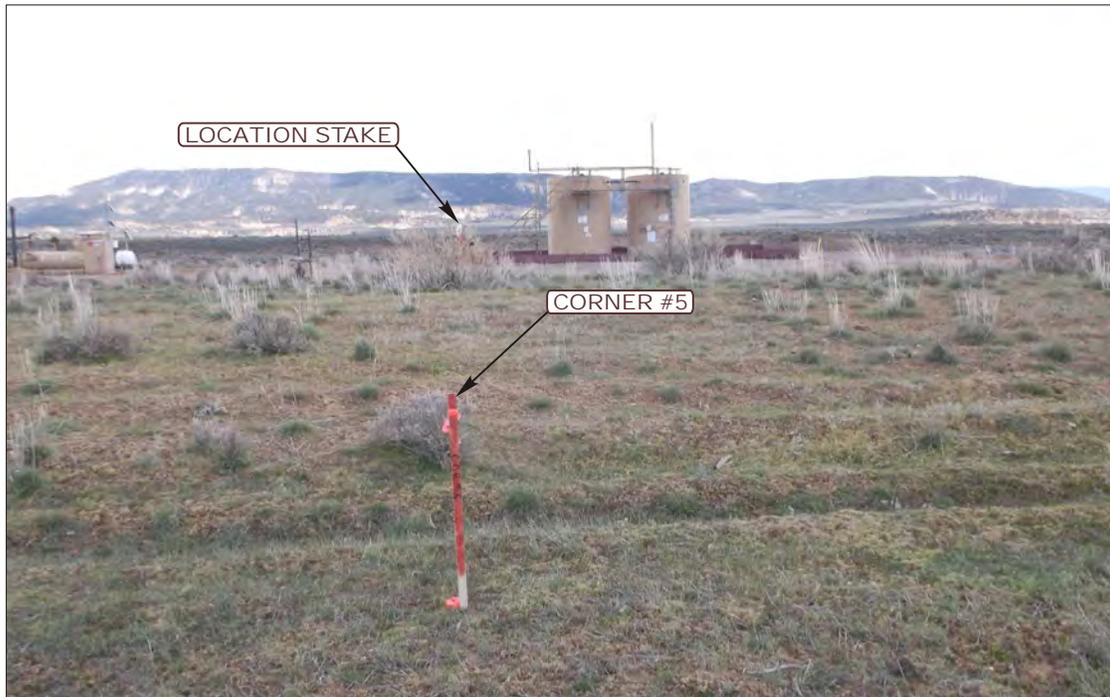


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO: VIEW FROM BEGINNING OF EXISTING ACCESS

CAMERA ANGLE: SOUTHWESTERLY



- Since 1964 -

U&LS Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

| | | | | |
|------------------------|----------------|----------------------|-----------|---------------------|
| LOCATION PHOTOS | 03 | 18 | 13 | PHOTO P1 |
| | MONTH | DAY | YEAR | |
| TAKEN BY: M.P. | DRAWN BY: C.I. | REV: 04-21-14 J.M.F. | | |

KOCH EXPLORATION COMPANY
WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
 LOCATED IN RIO BLANCO COUNTY, COLORADO
 SECTION 29, T2N, R96W, 6th P.M.



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: EASTERLY



- Since 1964 -

U
ELS Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

| | | | | | | |
|------------------------|--|----------------|-----------|----------------------|-----------|---------------------|
| LOCATION PHOTOS | | | 03 | 18 | 13 | PHOTO P2 |
| | | | MONTH | DAY | YEAR | |
| TAKEN BY: M.P. | | DRAWN BY: C.I. | | REV: 04-21-14 J.M.F. | | |

KOCH EXPLORATION COMPANY
WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
 LOCATED IN RIO BLANCO COUNTY, COLORADO
 SECTION 29, T2N, R96W, 6th P.M.



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: SOUTHERLY



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: WESTERLY



- Since 1964 -

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E
L
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| | | | | |
|------------------------|----------------|----------------------|-----------|---------------------|
| LOCATION PHOTOS | 03 | 18 | 13 | PHOTO P3 |
| | MONTH | DAY | YEAR | |
| TAKEN BY: M.P. | DRAWN BY: C.I. | REV: 04-21-14 J.M.F. | | |

T2N, R96W, 6th. P.M.

KOCH EXPLORATION COMPANY

Well location, WRD FEDERAL #30-34, located as shown in the NW 1/4 SW 1/4 of Section 29, T2N, R96W, 6th. P.M., Rio Blanco County, Colorado.

BASIS OF ELEVATION

SPOT ELEVATION AT A BRIDGE LOCATED IN THE SE 1/4 OF SECTION 34, T2N, R97W, 6th P.M. TAKEN FROM THE BARCUS CREEK SE, QUADRANGLE, COLORADO, RIO BLANCO COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5700 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

R
97
W

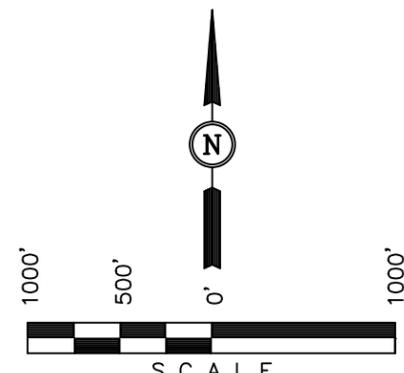
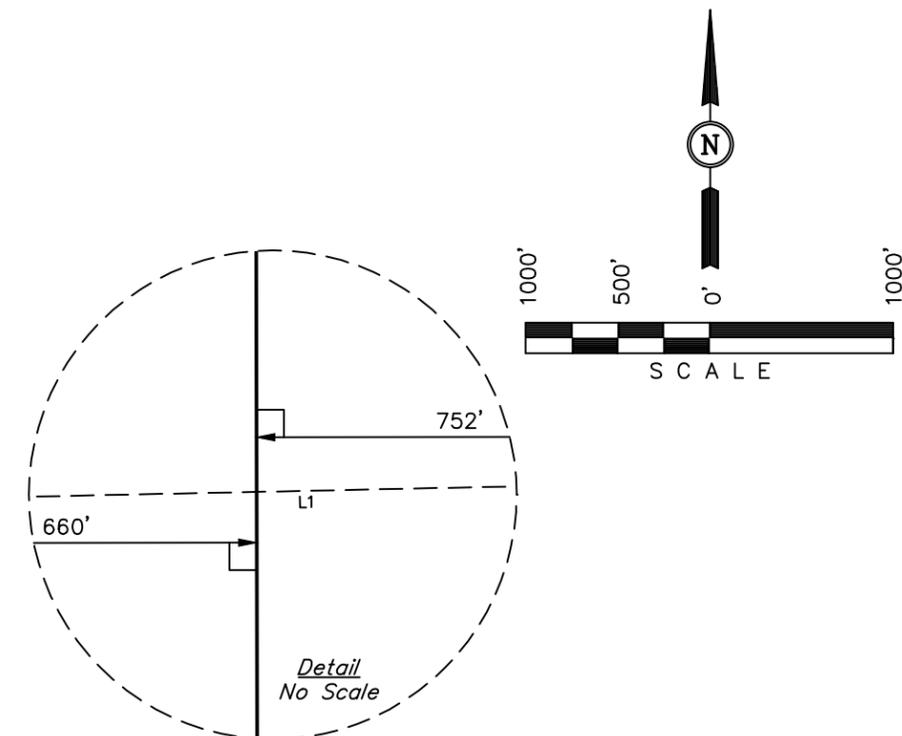
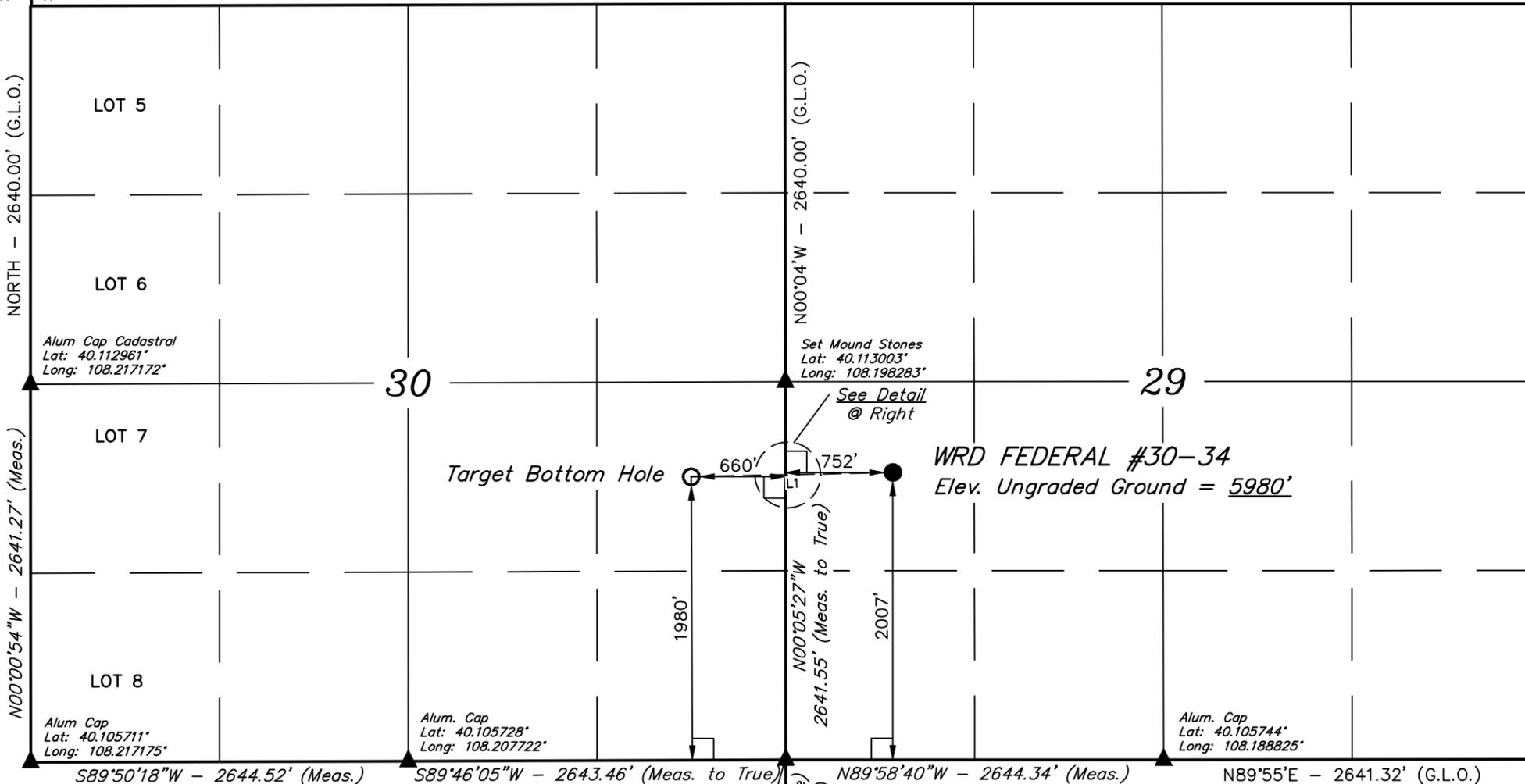
NORTH - 2640.00' (G.L.O.)

N00°00'54"W - 2641.27' (Meas.)

N89°50'E - 5275.38' (G.L.O.)

WEST - 5281.32' (G.L.O.)

N00°03'W - 5280.00' (G.L.O.)



WRD FEDERAL #30-34
Elev. Ungraded Ground = 5980'

Target Bottom Hole

Existing Water
Line

| LINE TABLE | | |
|------------|-------------|----------|
| LINE | DIRECTION | LENGTH |
| L1 | S88°47'29"W | 1412.04' |

CERTIFICATE
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.
Robert L. Meador
REGISTERED LAND SURVEYOR
REGISTRATION NO. 17492
STATE OF COLORADO
04-23-14

REVISED: 04-21-14 T.B.
REVISED: 06-12-13 J.S.

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

PDOP = 1.4

| NAD 83 (TARGET BOTTOM HOLE) | | NAD 83 (SURFACE LOCATION) | |
|-------------------------------------|--|-------------------------------------|--|
| LATITUDE = 40°06'40.25" (40.111181) | LONGITUDE = 108°12'02.31" (108.200642) | LATITUDE = 40°06'40.54" (40.111261) | LONGITUDE = 108°11'44.14" (108.195594) |
| NAD 27 (TARGET BOTTOM HOLE) | | NAD 27 (SURFACE LOCATION) | |
| LATITUDE = 40°06'40.36" (40.111211) | LONGITUDE = 108°12'00.00" (108.200000) | LATITUDE = 40°06'40.64" (40.111289) | LONGITUDE = 108°11'41.84" (108.194956) |

| | | |
|---------------------------|----------------------------------|-------------------------|
| SCALE 1" = 1000' | DATE SURVEYED: 03-08-13 | DATE DRAWN: 03-11-13 |
| PARTY B.H. A.H. J.G.G. | REFERENCES G.L.O. PLAT | |
| WEATHER COLD | FILE KOCH EXPLORATION COMPANY | |

LEGEND:
└─┘ = 90° SYMBOL
● = PROPOSED WELL HEAD.
▲ = SECTION CORNERS LOCATED.

S.E. Corner of Sec. 31
Alum. Cap
Lat: 40.098500°
Long: 108.198269°

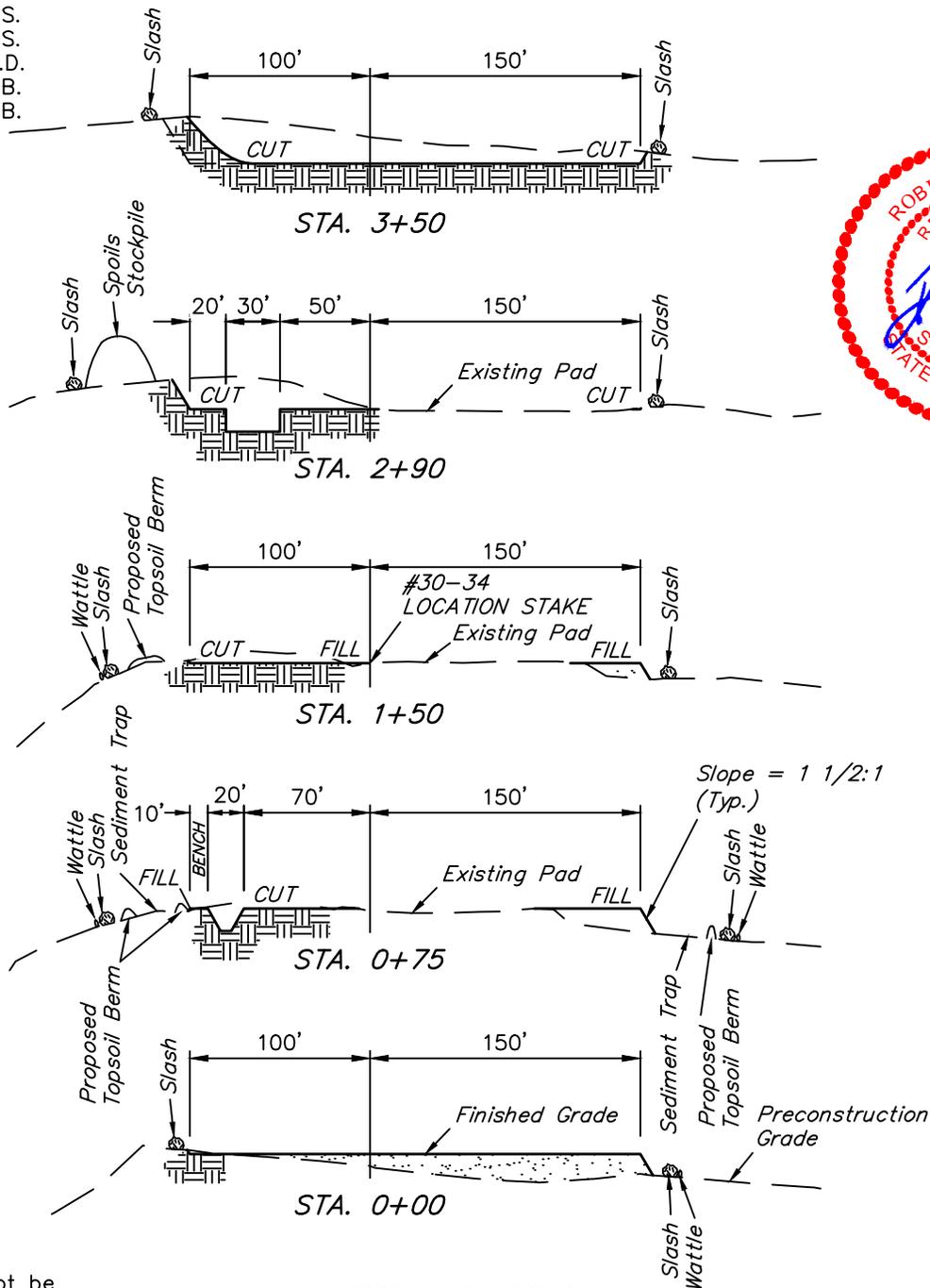
KOCH EXPLORATION COMPANY

FIGURE #2

CONSTRUCTION LAYOUT CROSS SECTIONS FOR WRD FEDERAL #30-34 ON EXISTING #29-31 PAD SECTION 29, T2N, R96W, 6th P.M. 2007' FSL 752' FWL

1" = 40'
X-Section
Scale
1" = 100'

DATE: 03-11-13
DRAWN BY: J.G.G.
REVISED: 06-13-13 J.S.
REVISED: 06-19-13 J.S.
REVISED: 08-30-13 M.D.
REVISED: 01-27-14 T.B.
REVISED: 04-21-14 T.B.



NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE ACREAGE

EXISTING PAD DISTURBANCE = ± 0.802 ACRES
PROPOSED ADDITION DISTURBANCE = ± 2.093 ACRES
TOTAL WELL SITE DISTURBANCE = ± 2.895 ACRES

*** NOTE:**

FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 650 Cu. Yds.
(New Construction Only)
Remaining Location = 4,020 Cu. Yds.
TOTAL CUT = 4,670 CU. YDS.
FILL = 2,940 CU. YDS.

EXCESS MATERIAL = 1,730 Cu. Yds.
Topsoil = 650 Cu. Yds.
EXCESS UNBALANCE = 1,080 Cu. Yds.
(After Interim Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

KOCH EXPLORATION COMPANY

TYPICAL RIG LAYOUT FOR

WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
2007' FSL 752' FWL

FIGURE #3

SCALE: 1" = 60'

DATE: 03-11-13

DRAWN BY: J.G.G.

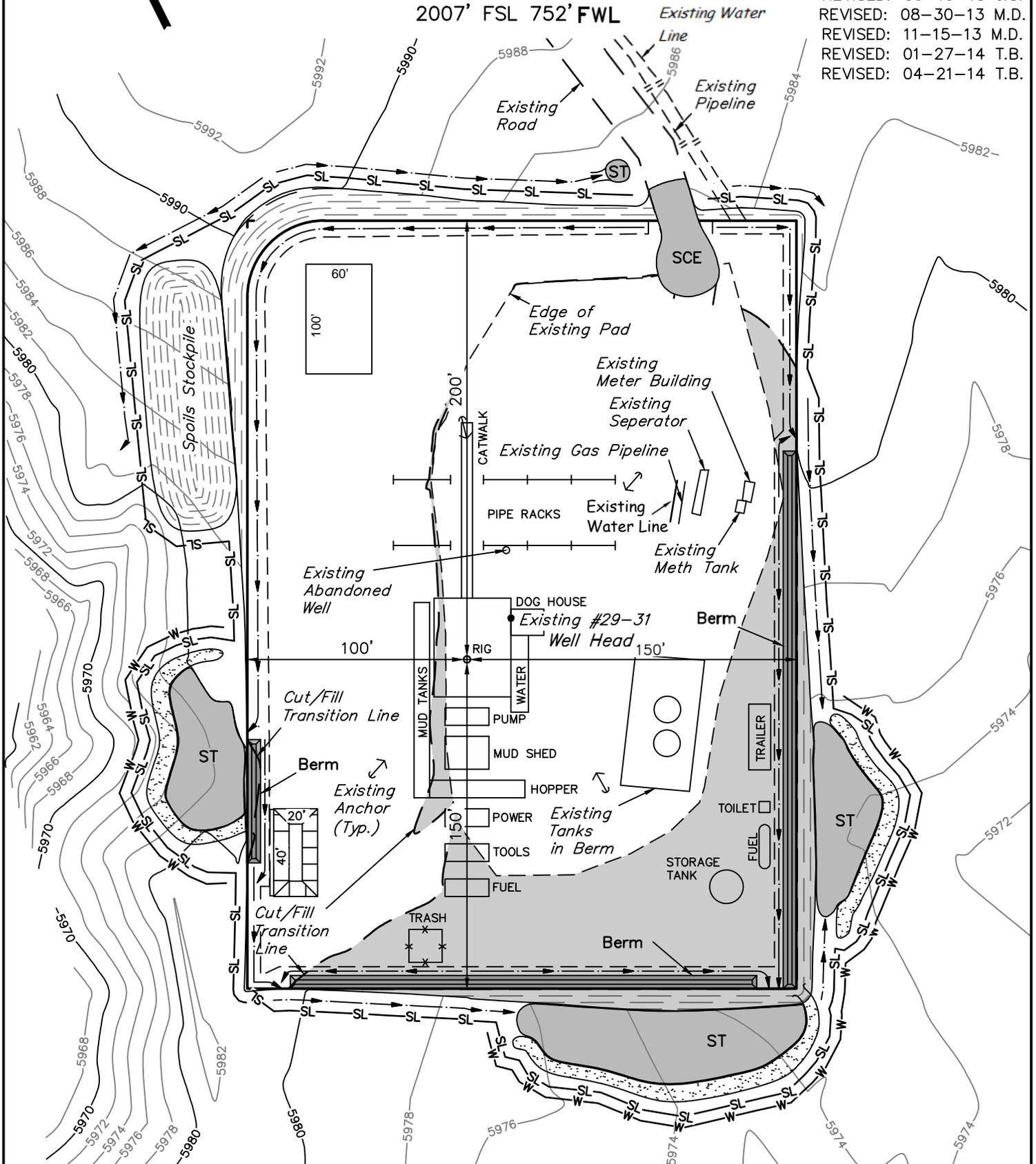
REVISED: 06-19-13 J.S.

REVISED: 08-30-13 M.D.

REVISED: 11-15-13 M.D.

REVISED: 01-27-14 T.B.

REVISED: 04-21-14 T.B.



KOCH EXPLORATION COMPANY

RECLAMATION DIAGRAM FOR

WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
2007' FSL 752' FWL

FIGURE #4

SCALE: 1" = 60'

DATE: 03-11-13

DRAWN BY: J.G.G.

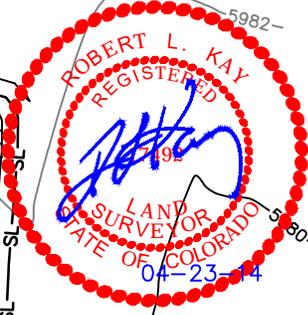
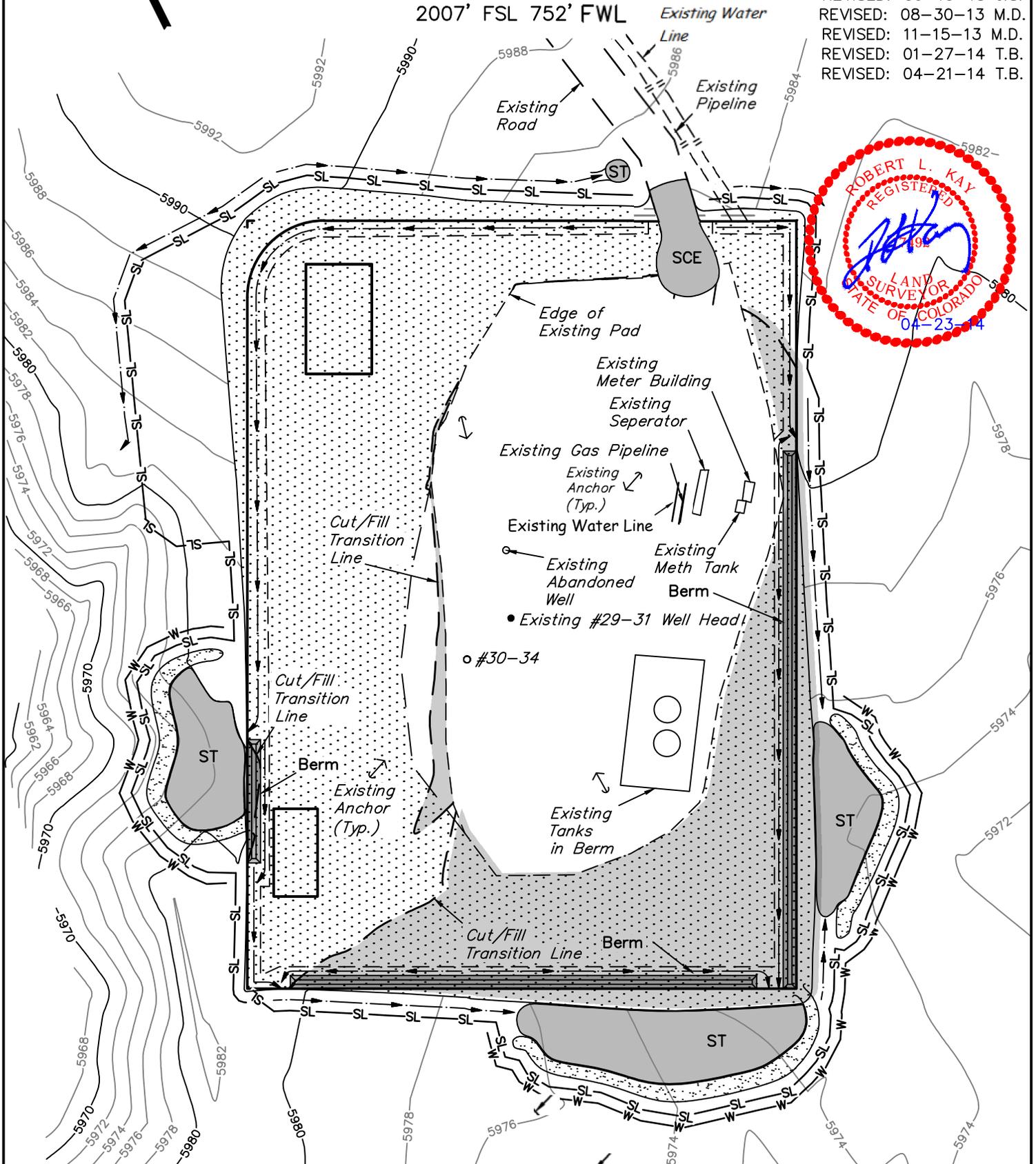
REVISED: 06-19-13 J.S.

REVISED: 08-30-13 M.D.

REVISED: 11-15-13 M.D.

REVISED: 01-27-14 T.B.

REVISED: 04-21-14 T.B.



RECLAIMED AREA

APPROXIMATE ACREAGE
UN-RECLAIMED = ± 0.854 ACRES

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KOCH EXPLORATION COMPANY

LOCATION DRAWING FOR

WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
2007' FSL 752' FWL

FIGURE #5

SCALE: 1" = 200'

DATE SURVEYED: 04-10-14

SURVEYED BY: MARTIN PIERCE

DATE DRAWN: 03-11-13

DRAWN BY: J.G.G.

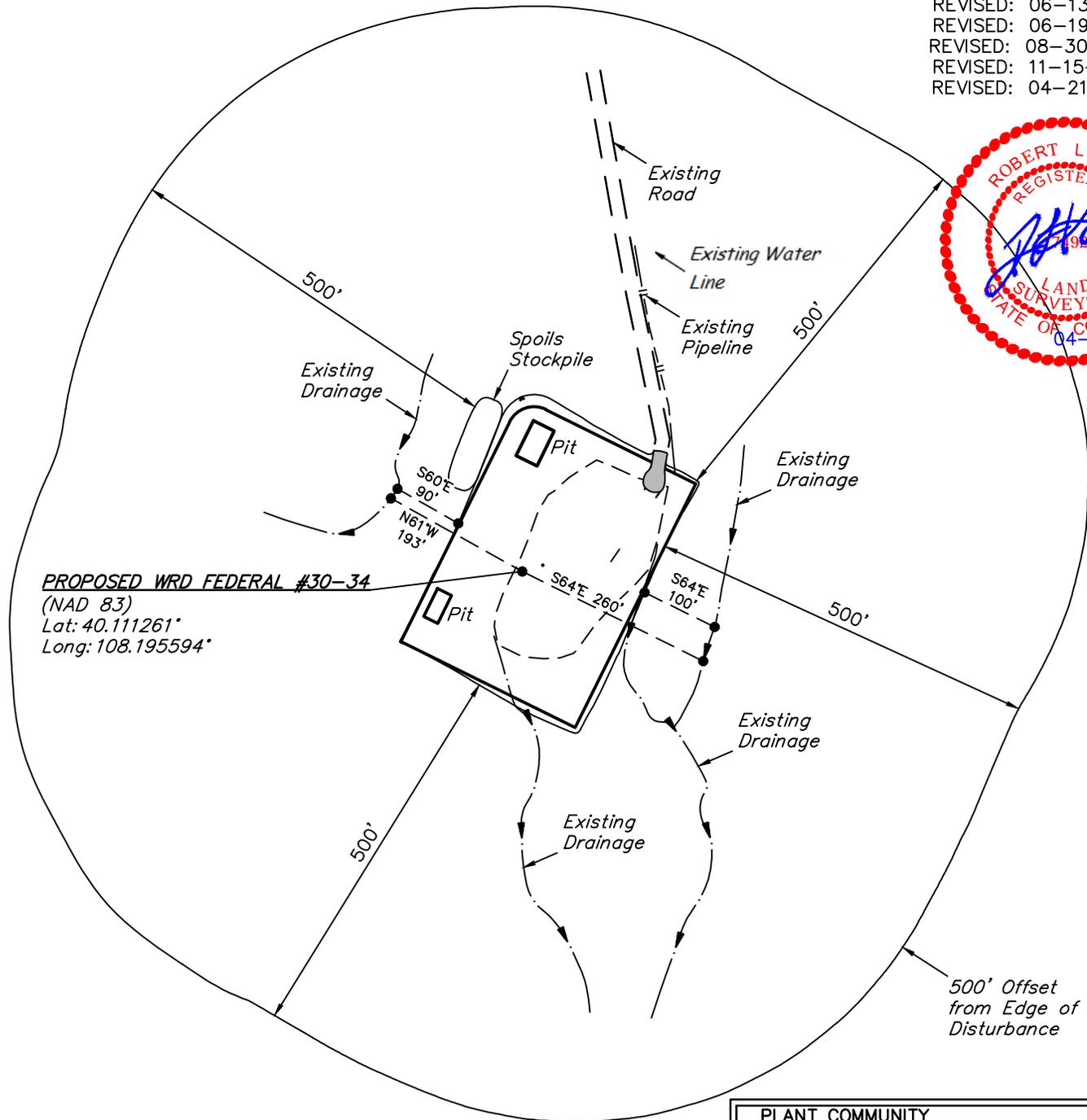
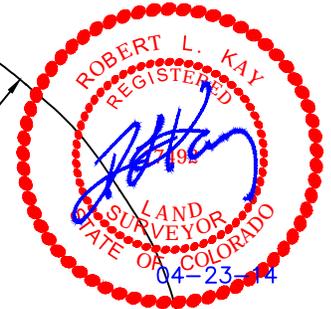
REVISED: 06-13-13 J.S.

REVISED: 06-19-13 J.S.

REVISED: 08-30-13 M.D.

REVISED: 11-15-13 M.D.

REVISED: 04-21-14 T.B.



PROPOSED WRD FEDERAL #30-34
(NAD 83)
Lat: 40.111261°
Long: 108.195594°

| CURRENT LAND USE | | | | |
|------------------|-------------------------------------|-------------------------------------|---|--|
| CROP LAND: | <input type="checkbox"/> IRRIGATED | <input type="checkbox"/> DRY LAND | <input type="checkbox"/> IMPROVED PASTURE | <input type="checkbox"/> HAY MEADOW <input type="checkbox"/> CRP |
| NON-CROP LAND: | <input type="checkbox"/> RANGELAND | <input type="checkbox"/> TIMBER | <input type="checkbox"/> RECREATIONAL | <input type="checkbox"/> OTHER (Describe) |
| SUBDIVIDED: | <input type="checkbox"/> INDUSTRIAL | <input type="checkbox"/> COMMERCIAL | <input type="checkbox"/> RESIDENTIAL | |

| FUTURE LAND USE | | | | |
|-----------------|-------------------------------------|-------------------------------------|---|--|
| CROP LAND: | <input type="checkbox"/> IRRIGATED | <input type="checkbox"/> DRY LAND | <input type="checkbox"/> IMPROVED PASTURE | <input type="checkbox"/> HAY MEADOW <input type="checkbox"/> CRP |
| NON-CROP LAND: | <input type="checkbox"/> RANGELAND | <input type="checkbox"/> TIMBER | <input type="checkbox"/> RECREATIONAL | <input type="checkbox"/> OTHER (Describe) |
| SUBDIVIDED: | <input type="checkbox"/> INDUSTRIAL | <input type="checkbox"/> COMMERCIAL | <input type="checkbox"/> RESIDENTIAL | |

| PLANT COMMUNITY |
|--|
| <input type="checkbox"/> DISTURBED GRASSLAND |
| <input type="checkbox"/> NATIVE GRASSLAND |
| <input type="checkbox"/> SHRUB LAND |
| <input type="checkbox"/> PLAINS RIPARIAN |
| <input type="checkbox"/> MOUNTAIN RIPARIAN |
| <input type="checkbox"/> FOREST LAND |
| <input type="checkbox"/> WETLANDS AQUATIC |
| <input type="checkbox"/> ALPINE |
| <input type="checkbox"/> OTHER (Describe): _____ |

KOCH EXPLORATION COMPANY

WRD FEDERAL #30-34 ON EXISTING #29-31 PAD

SECTION 29, T2N, R96W, 6th P.M.

DATE: 04-21-14

| DISTANCES FROM WELL HEAD | | | | | | | | | | | | | | | | |
|---------------------------------|-----------|--------|---------------|--------|---------------------|--------|-------------|--------|-------------|--------|----------------------|--------|-------------|--------|---------------|--------|
| WELL NAME | BUILDING | | BUILDING UNIT | | HIGH OCCU. BUILDING | | D.O.A.A. | | PUBLIC ROAD | | ABOVE GROUND UTILITY | | RAILROAD | | PROPERTY LINE | |
| | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH |
| WRD FEDERAL #30-34 | S16°E | 2266' | OVER 1 MILE | | OVER 1 MILE | | OVER 1 MILE | | S57°E | 1249' | S57°E | 1249' | OVER 1 MILE | | N59°E | 3759' |
| EXISTING #29-31 | S15°E | 2267' | OVER 1 MILE | | OVER 1 MILE | | OVER 1 MILE | | S55°E | 1232' | S55°E | 1865' | OVER 1 MILE | | N59°E | 3732' |

| DISTANCES FROM PRODUCTION AREA | | | | | | | | | | | | | | | | |
|---------------------------------------|-----------|--------|---------------|--------|---------------------|--------|-------------|--------|-------------|--------|----------------------|--------|-------------|--------|---------------|--------|
| PRODUCTION FEATURE | BUILDING | | BUILDING UNIT | | HIGH OCCU. BUILDING | | D.O.A.A. | | PUBLIC ROAD | | ABOVE GROUND UTILITY | | RAILROAD | | PROPERTY LINE | |
| | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH | DIRECTION | LENGTH |
| PRODUCTION EQUIPMENT | S15°E | 2154' | OVER 1 MILE | | OVER 1 MILE | | OVER 1 MILE | | S56°E | 1142' | S57°E | 1774' | OVER 1 MILE | | N58°E | 3621' |



KOCH EXPLORATION COMPANY
WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.

FROM WITTER DITCH TO HIGHWAY 64

PROCEED IN AN EASTERLY DIRECTION FROM THE WITTER DITCH ALONG COUNTY ROAD 26 APPROXIMATELY 0.54 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 5; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 18.0 MILES TO THE JUNCTION OF THIS ROAD AND HIGHWAY 64.

TOTAL DISTANCE TO HIGHWAY 64 IS APPROXIMATELY 18.54 MILES.

FROM REIGAN DITCH TO HIGHWAY 64

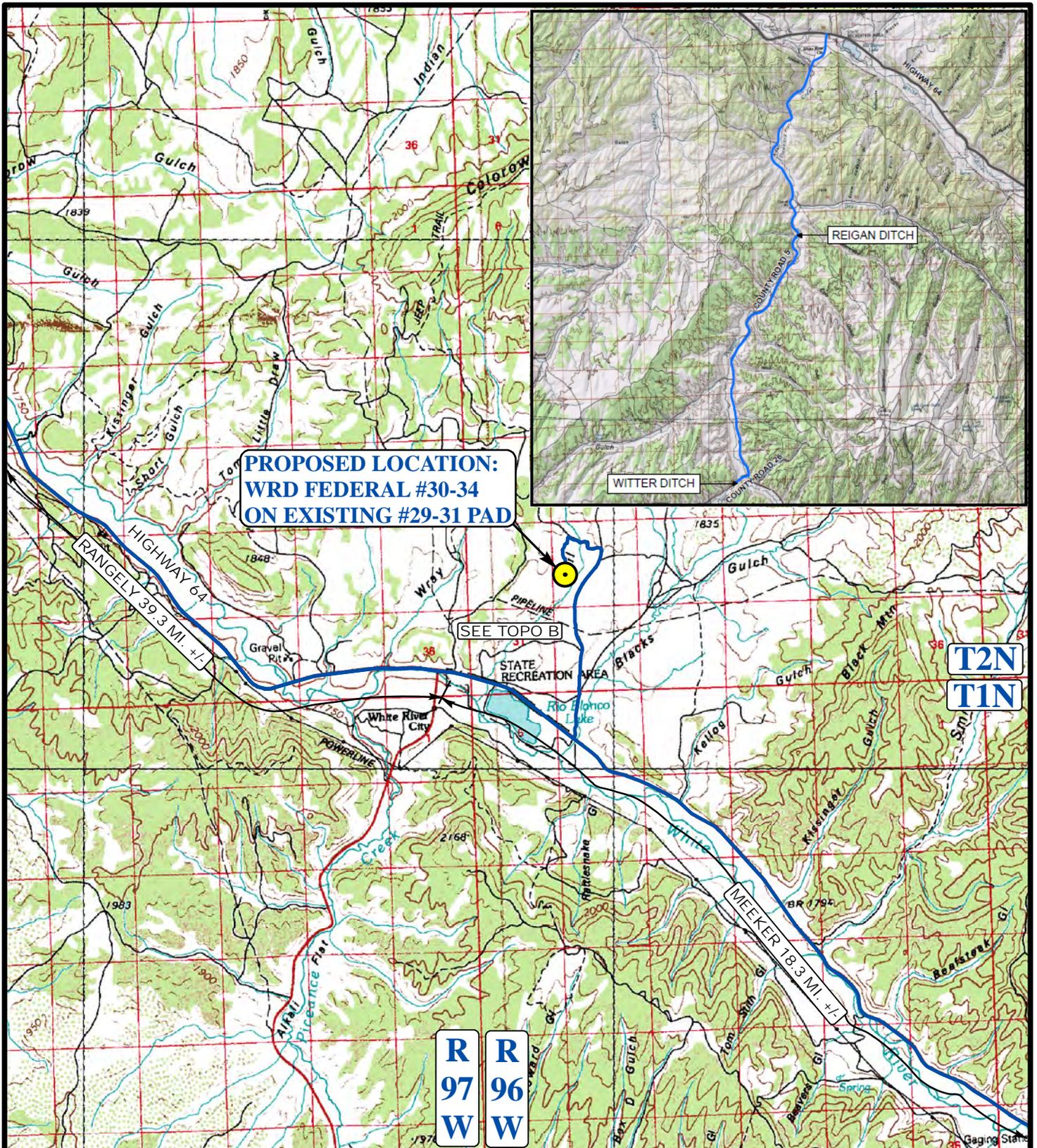
PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 8.4 MILES TO THE JUNCTION OF THIS ROAD AND HIGHWAY 64.

TOTAL DISTANCE TO HIGHWAY 64 IS APPROXIMATELY 8.4 MILES.

FROM RANGELY, COLORADO TO WRD FEDERAL #30-34

PROCEED IN A EASTERLY, THEN SOUTHEASTERLY, THEN EASTERLY, THEN SOUTHEASTERLY DIRECTION FROM RANGELY, COLORADO ALONG HIGHWAY 64 APPROXIMATELY 39.3 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 142 TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 143 TO THE NORTH; PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 1.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN LEFT AND PROCEED IN A WESTERLY, THEN NORTHERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE BEGINNING OF THE EXISTING ACCESS TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE EXISTING LOCATION.

TOTAL DISTANCE FROM RANGELY, COLORADO TO THE EXISTING LOCATION IS APPROXIMATELY 42.6 MILES.



**PROPOSED LOCATION:
WRD FEDERAL #30-34
ON EXISTING #29-31 PAD**

SEE TOPO B

**T2N
T1N**

**R
97
W** **R
96
W**

LEGEND:

PROPOSED LOCATION



KOCH EXPLORATION COMPANY

**WRD FEDERAL #30-34
ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
NW 1/4 SW 1/4**

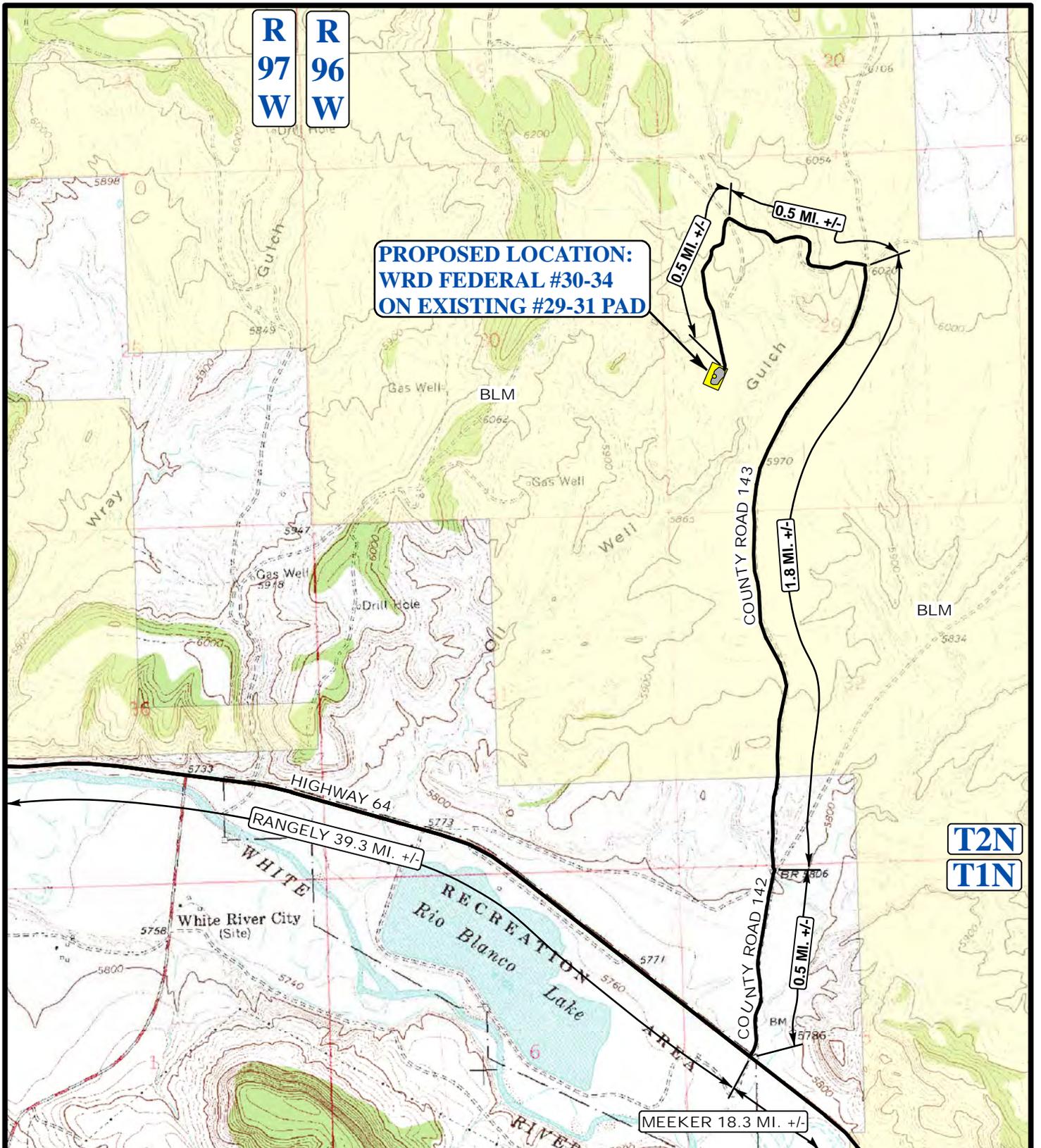


Uintah Engineering & Land Surveying
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(435) 789-1017 * FAX (435) 789-1813

**ACCESS ROAD
MAP**
SCALE: 1:100,000 DRAWN BY: C.I.

03 18 13
MONTH DAY YEAR
REV: 04-21-14 J.M.F.





R 97 W
R 96 W

**PROPOSED LOCATION:
WRD FEDERAL #30-34
ON EXISTING #29-31 PAD**

T2N
T1N

LEGEND:

————— EXISTING ROADS



KOCH EXPLORATION COMPANY

**WRD FEDERAL #30-34
ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
NW 1/4 SW 1/4**



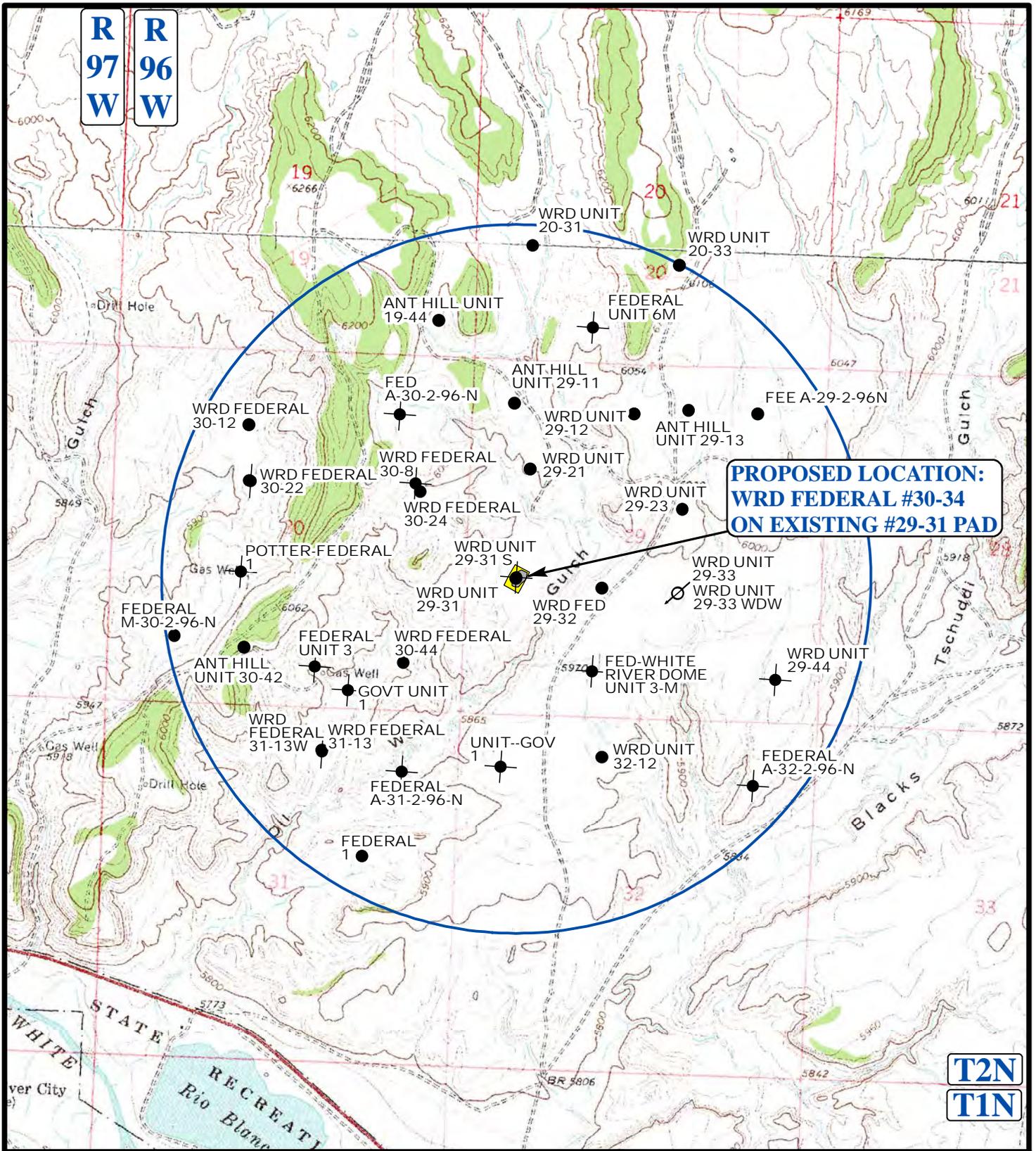
Utah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

**ACCESS ROAD
MAP**

03 18 13
MONTH DAY YEAR



SCALE: 1"=2000' DRAWN BY: C.I. REV: 04-21-14 J.M.F.



R 97 W
R 96 W

**PROPOSED LOCATION:
WRD FEDERAL #30-34
ON EXISTING #29-31 PAD**

T2N
T1N

LEGEND:

- ⊘ DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

KOCH EXPLORATION COMPANY

**WRD FEDERAL #30-34
ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
NW 1/4 SW 1/4**

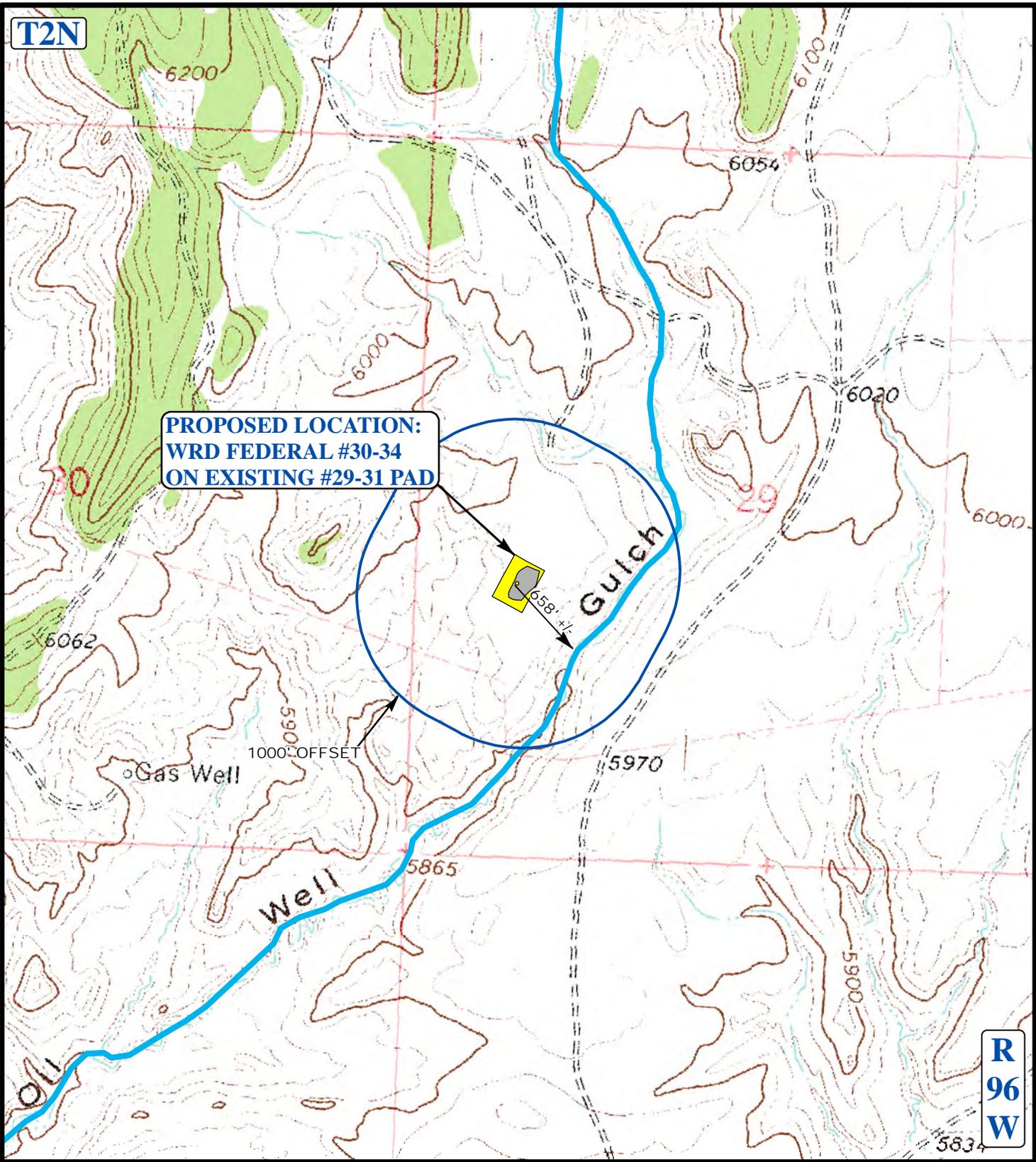
UES Utah Engineering & Land Surveying
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TOPOGRAPHIC MAP
SCALE: 1"=2000' DRAWN BY: C.I. REV: 04-21-14 J.M.F.

| | | |
|-------|-----|------|
| 03 | 18 | 13 |
| MONTH | DAY | YEAR |

C
TOPO



**PROPOSED LOCATION:
WRD FEDERAL #30-34
ON EXISTING #29-31 PAD**

LEGEND:

- EXISTING WATER
- 1000' OFFSET BOUNDRY

KOCH EXPLORATION COMPANY

**WRD FEDERAL #30-34
ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
NW 1/4 SW 1/4**



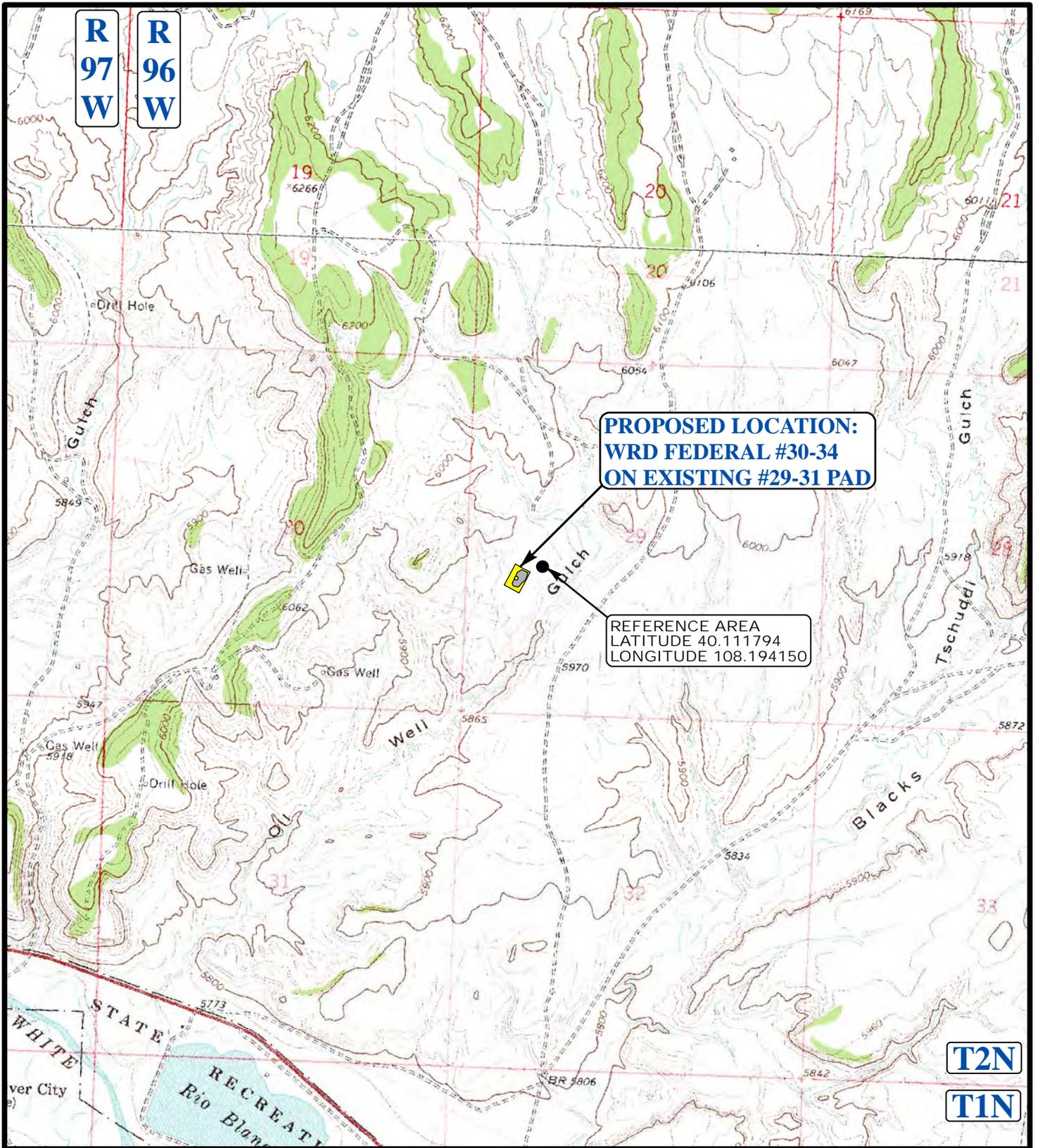
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813



**HYDROLOGY
MAP**
SCALE: 1" = 1000' DRAWN BY: C.I.

03 18 13
MONTH DAY YEAR
REV: 04-21-14 J.M.F.





**PROPOSED LOCATION:
WRD FEDERAL #30-34
ON EXISTING #29-31 PAD**

REFERENCE AREA
LATITUDE 40.111794
LONGITUDE 108.194150

LEGEND:

KOCH EXPLORATION COMPANY

**WRD FEDERAL #30-34
ON EXISTING #29-31 PAD
SECTION 29, T2N, R96W, 6th P.M.
NW 1/4 SW 1/4**



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**REFERENCE AREA
MAP**

| | | |
|--------------------|------------------|-------------------|
| 03 MONTH | 18 DAY | 13 YEAR |
|--------------------|------------------|-------------------|

**REF
TOPO**

SCALE: 1" = 2000' DRAWN BY: C.I. REV: 04-21-14 J.M.F.

KOCH EXPLORATION COMPANY
WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
 LOCATED IN RIO BLANCO COUNTY, COLORADO
 SECTION 29, T2N, R96W, 6th P.M.



PHOTO: VIEW OF REFERENCE AREA

CAMERA ANGLE: NORTHERLY



PHOTO: VIEW OF REFERENCE AREA

CAMERA ANGLE: EASTERLY



- Since 1964 -

UELS Uintah Engineering & Land Surveying
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| | | | | | | |
|----------------------------------|----------------|----------------------|--------------------|------------------|-------------------|-----------------------|
| REFERENCE AREA PHOTOS | | | 03 MONTH | 18 DAY | 13 YEAR | PHOTO REF1 |
| TAKEN BY: M.P. | DRAWN BY: C.L. | REV: 04-21-14 J.M.F. | | | | |

KOCH EXPLORATION COMPANY
WRD FEDERAL #30-34 ON EXISTING #29-31 PAD
 LOCATED IN RIO BLANCO COUNTY, COLORADO
 SECTION 29, T2N, R96W, 6th P.M.



PHOTO: VIEW OF REFERENCE AREA

CAMERA ANGLE: SOUTHERLY



PHOTO: VIEW OF REFERENCE AREA

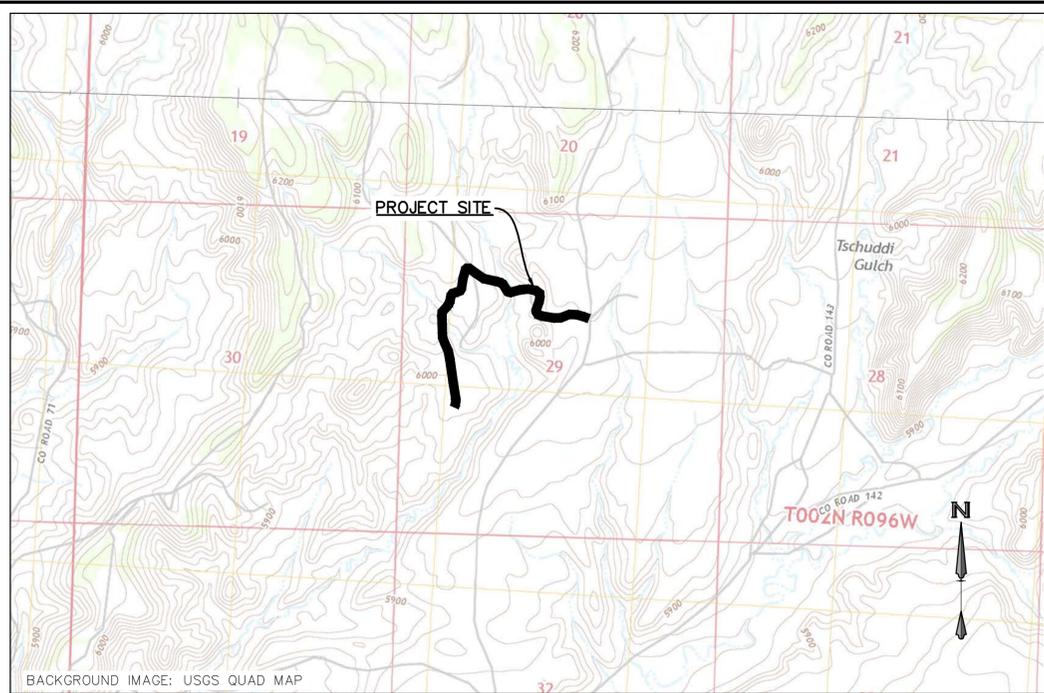
CAMERA ANGLE: WESTERLY



- Since 1964 -

U
E
L
S Uintah Engineering & Land Surveying
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| | | | | | | |
|----------------------------------|----------------|----------------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|
| REFERENCE AREA PHOTOS | | | 03 <small>MONTH</small> | 18 <small>DAY</small> | 13 <small>YEAR</small> | PHOTO REF2 |
| TAKEN BY: M.P. | DRAWN BY: C.I. | REV: 04-21-14 J.M.F. | | | | |



VICINITY MAP

GRADING NOTES

1. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL MEET OR EXCEED THE LATEST PUBLISHED EDITIONS OF STANDARDS AND SPECIFICATIONS OF THE BUREAU OF LAND MANAGEMENT (BLM) AND THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT).
2. ALL EXISTING IMPROVEMENTS AND ELEVATIONS ARE BASED ON THE DESIGN SURVEY PREPARED BY ACKLAM, INC. (CAD DATA RECEIVED ON 6/30/14). CRESTONE CONSULTANTS, LLC MAKES NO WARRANTY TO THE ACCURACY OF THIS INFORMATION. CONTRACTORS SURVEYOR SHALL VERIFY ALL PERTINENT PROPERTY BOUNDARY INFORMATION, BELOW GRADE, AND ABOVE GRADE IMPROVEMENTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY SHOULD THERE BE ANY CONFLICTS BETWEEN THESE PLANS AND CONDITIONS FOUND IN THE FIELD.
3. CONTRACTOR TO OBTAIN AT THEIR OWN COST ALL REQUIRED PERMITS THROUGH THE LOCAL MUNICIPALITY, STATE AND FEDERAL JURISDICTIONS.
4. CONTRACTOR RESPONSIBLE FOR MAINTAINING THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
5. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEERING REPORT. THIS INCLUDES, BUT IS NOT LIMITED TO ALL PROJECT OVEREXCAVATION, BACKFILL MATERIAL, COMPACTION, SUBGRADE PREPARATION, TRENCHING & BEDDING, EMBANKMENTS, RETAINING WALLS, UNDERDRAINS, TESTING, ROAD SECTIONS AND SURFACING REQUIREMENTS. CONTRACTOR AND OWNER SHALL REVIEW THE REQUIREMENTS, RECOMMENDATIONS, AND RISKS IDENTIFIED OR VARIANCES TO THE REQUIREMENTS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS ARE TO FINISH GROUND.
7. **THE CONTRACTOR IS SPECIFICALLY CAUTIONED** THAT THE LOCATIONS OF EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION BASED ON INFORMATION PROVIDED BY OTHERS. NOT ALL UTILITIES MAY BE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES WHETHER SHOWN OR NOT BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES AND COSTS WHICH MIGHT OCCUR BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO PROCEEDING WITH GRADING AND CONSTRUCTION. ALL WORK PERFORMED IN THE AREA OF UTILITIES SHALL BE PERFORMED AND INSPECTED ACCORDING TO THE REQUIREMENTS OF THE UTILITY OWNER. LIKEWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAPPING ANY EXISTING UTILITY (INCLUDING DEPTH) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION, AND FOR RELOCATING ENCOUNTERED UTILITIES AS DIRECTED BY THE UTILITY OWNER. CONTRACTOR SHALL CONTACT AND RECEIVE APPROVAL FROM THE UTILITY OWNER BEFORE RELOCATING ANY ENCOUNTERED UTILITIES. CONTRACTOR IS RESPONSIBLE FOR SERVICE CONNECTIONS, AND RELOCATING AND RECONNECTING AFFECTED UTILITIES AS COORDINATED WITH UTILITY OWNER, INCLUDING NON-MUNICIPAL UTILITIES (TELEPHONE, PROPANE, CABLE, ETC., WHICH SHALL BE COORDINATED WITH THE UTILITY OWNER). THE CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER UPON DISCOVERY OF A UTILITY DISCREPANCY OR CONFLICT. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY NOTIFICATION CENTER OF COLORADO (811, WWW.UNCC.ORG).
8. AT LOCATIONS WITH CROSS DRAIN CULVERTS, EXISTING ROAD TO BE REPAIRED/RECONSTRUCTED TO MEET OR EXCEED EXISTING ROAD SECTION, COMPACTION, ETC.

LEGEND

- - - 5970 - - - EXISTING GROUND CONTOUR (5' INTERVAL)
- XG - - - XG - - - EXISTING GAS LINE
- WM - - - WM - - - EXISTING WATER LINE

BENCHMARK & COORDINATE BASE

INFORMATION PROVIDED BY ACKLAM, INC. ON 07/03/14.

BENCHMARK
 60D NAIL
 N: 1296606.73
 E: 2246304.01
 ELEV: 6012.82 (NAVD 88)

BASIS OF BEARINGS
 BEARINGS SHOWN HEREON ARE GRID AND ARE BASED ON THE COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83, BASED ON GPS OBSERVATIONS.

SHEET INDEX

| SHEET # | SHEET NAME |
|---------|------------------------|
| C0.00 | COVER SHEET |
| C1.00 | ROADWAY PLAN & PROFILE |
| C1.10 | ROADWAY PLAN & PROFILE |
| C1.20 | ROADWAY PLAN & PROFILE |
| C1.30 | ROADWAY PLAN & PROFILE |
| C1.40 | DETAILS |
| C2.00 | DRAINAGE BASIN MAP |

EARTHWORK DATA

TOTAL CUT = 490 CY
 TOTAL FILL = 2,647 CY

NET = 2,157 CY OF IMPORT REQUIRED

NOTE: EARTHWORK VOLUMES ARE BASED UPON THE DIFFERENCE BETWEEN THE EXISTING GROUND AND FINISHED GROUND SURFACES. STREET CORE, RIPRAP PAD THICKNESS & SHRINKAGE/SWELL FACTORS HAVE NOT BEEN APPLIED TO THE VOLUME CALCULATIONS.

ROADWAY IMPROVEMENT DATA

PER THIS PLAN, APPROXIMATELY 3,100 LINEAL FEET OF EXISTING ROADWAY WILL BE IMPROVED/UPGRADED.

| LINE | BEARING | LENGTH |
|------|-------------|--------|
| L1 | N71°34'31"W | 250.66 |
| L2 | S69°47'47"W | 96.53 |
| L3 | N80°47'08"W | 238.32 |
| L4 | N17°38'46"E | 153.35 |
| L5 | S88°15'17"W | 98.68 |
| L6 | S74°06'46"W | 150.99 |
| L7 | N32°01'15"W | 46.62 |
| L8 | N76°42'30"W | 181.22 |
| L9 | N55°16'11"W | 214.39 |
| L10 | N37°58'31"W | 77.01 |
| L11 | S50°48'28"W | 42.56 |
| L12 | S10°07'42"W | 220.75 |
| L13 | S78°43'38"W | 61.23 |
| L14 | S9°45'37"W | 64.64 |
| L15 | S43°24'30"W | 65.30 |
| L16 | S6°18'48"E | 67.62 |
| L17 | S1°08'32"E | 206.53 |
| L18 | S24°28'47"E | 118.66 |
| L19 | S9°00'09"E | 730.12 |
| L20 | S5°49'37"W | 92.78 |

| CURVE | RADIUS | LENGTH | DELTA |
|-------|--------|--------|------------|
| C1 | 300.00 | 202.26 | 38°37'42" |
| C2 | 220.00 | 112.96 | 29°25'05" |
| C3 | 80.00 | 137.44 | 98°25'54" |
| C4 | 150.00 | 286.39 | 109°23'29" |
| C5 | 220.00 | 54.30 | 14°08'32" |
| C6 | 80.00 | 103.14 | 73°51'59" |
| C7 | 220.00 | 171.59 | 44°41'15" |
| C8 | 220.00 | 82.32 | 21°26'19" |
| C9 | 220.00 | 124.35 | 32°23'05" |
| C10 | 220.00 | 57.94 | 15°05'25" |
| C11 | 220.00 | 156.20 | 40°40'47" |
| C12 | 80.00 | 95.78 | 68°35'56" |
| C13 | 60.00 | 72.22 | 68°58'01" |
| C14 | 220.00 | 129.20 | 33°38'53" |
| C15 | 150.00 | 130.17 | 49°43'18" |
| C16 | 220.00 | 19.86 | 5°10'16" |
| C17 | 250.00 | 101.83 | 23°20'15" |
| C18 | 400.00 | 108.05 | 15°28'37" |
| C19 | 220.00 | 56.94 | 14°49'46" |



CRESTONE CONSULTANTS, LLC
 civil engineering solutions
 14145 West Warren Circle
 Lakewood, CO 80228
 303-997-6113 • www.crestone.com
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KOCH EXPLORATION
WRD FEDERAL #30-34
 SEC. 29, T2N., R96W
 RIO BLANCO COUNTY, CO

PRELIMINARY PLAN
FOR REVIEW ONLY

811
 FOR BURIED UTILITY INFORMATION
 UTILITY NOTIFICATION CENTER
 OF COLORADO
 CALL 811
 (or 800-922-1987)
 AT LEAST TWO (2) BUSINESS
 DAYS BEFORE YOU DIG
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J.N.: 14024
 DATE: 08.05.14
 SCALE: AS SHOWN
 COVER SHEET
 SHEET: **C0.00**

BACKGROUND IMAGE COURTESY OF RIO BLANCO COUNTY GIS

GRADING LEGEND

- EXISTING GROUND CONTOUR (5' INTERVAL)
- EXISTING SWALE
- EXISTING GAS LINE
- EXISTING WATER LINE
- PROPOSED CULVERT W/ F.E.S. (CULVERT LENGTHS SHOWN INCLUDE THE LENGTH OF THE F.E.S.)
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- PROPOSED SWALE
- PROPOSED ROAD/TURNOUT
- RIPRAP EROSION PROTECTION (RE: SHEET C1.40) & PREFORMED SCOUR HOLE (RE: SHEET 1.40)

GRADING NOTES

SEE SHEET 0.00 FOR GRADING NOTES

BENCHMARK & COORDINATE BASE

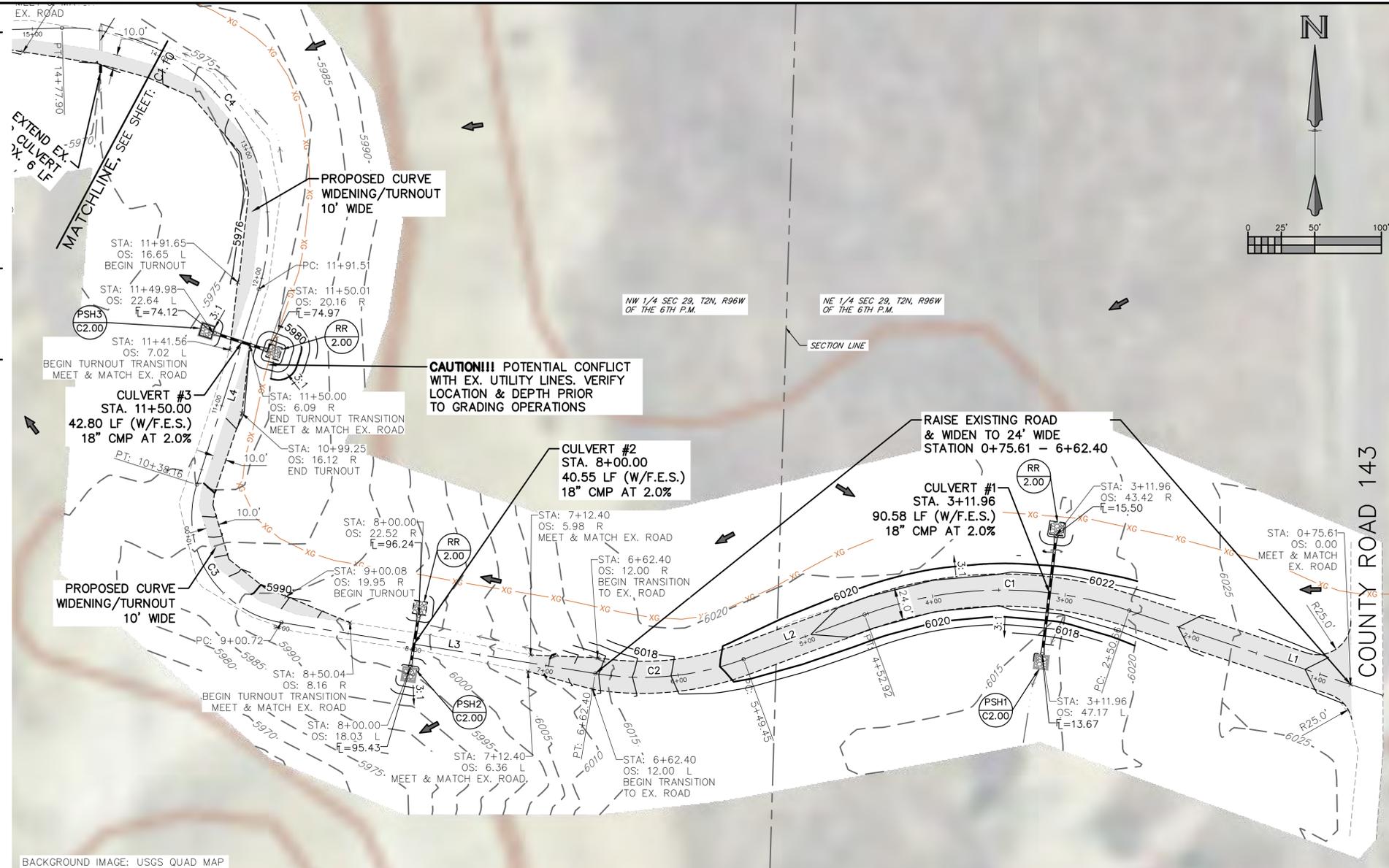
INFORMATION PROVIDED BY ACKLAM, INC. ON 07/03/14.

BENCHMARK
60D NAIL
N: 1296606.73
E: 2246304.01
ELEV: 6012.82 (NAVD 88)

BASIS OF BEARINGS
BEARINGS SHOWN HEREON ARE GRID AND ARE BASED ON THE COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83, BASED ON GPS OBSERVATIONS.

| LINE | BEARING | LENGTH |
|------|-------------|--------|
| L1 | N71°34'31"W | 250.66 |
| L2 | S69°47'47"W | 96.53 |
| L3 | N80°47'08"W | 238.32 |
| L4 | N17°38'46"E | 153.35 |

| CURVE | RADIUS | LENGTH | DELTA |
|-------|--------|--------|------------|
| C1 | 300.00 | 202.26 | 38°37'42" |
| C2 | 220.00 | 112.96 | 29°25'05" |
| C3 | 80.00 | 137.44 | 98°25'54" |
| C4 | 150.00 | 286.39 | 109°23'29" |

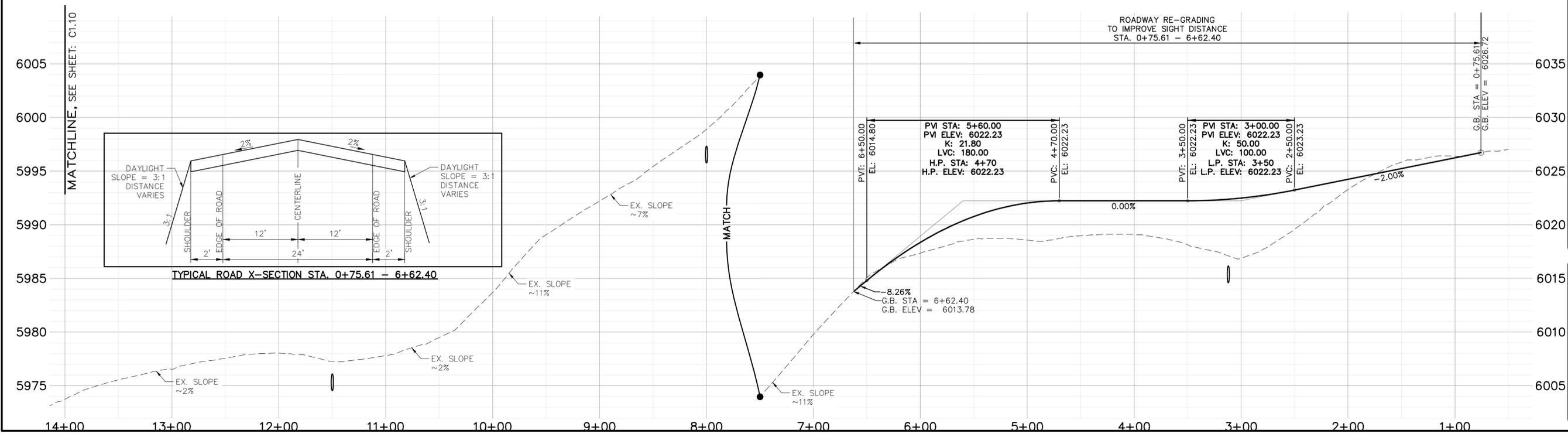


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KOCH EXPLORATION
WRD FEDERAL #30-34

SEC. 29, T2N., R96W
RIO BLANCO COUNTY, CO



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J.N.: 14024
DATE: 08.05.14
SCALE: 1" = 50'

ROADWAY PLAN & PROFILE

SHEET: **C1.00**

GRADING LEGEND

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- EXISTING SWALE
- EXISTING GAS LINE
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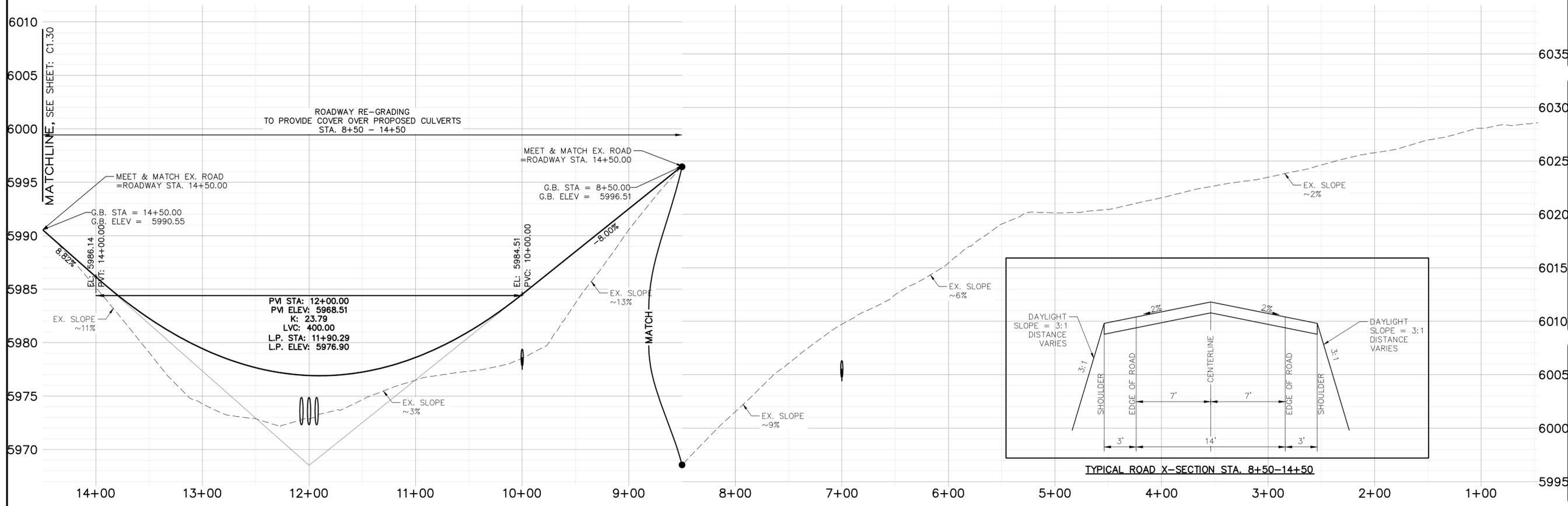
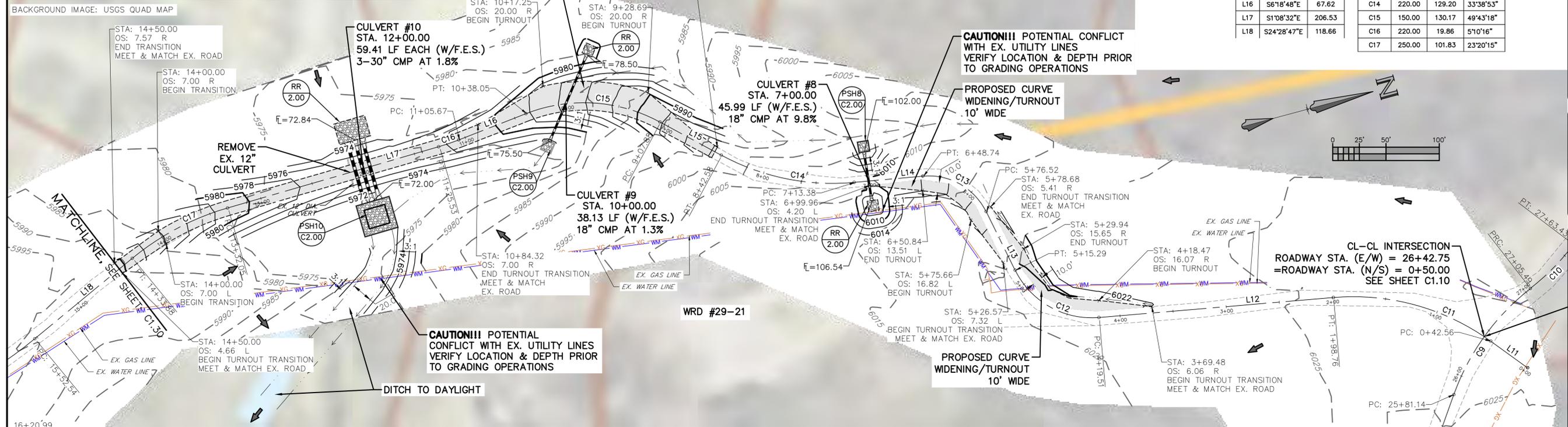
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GRADING NOTES

SEE SHEET 0.00 FOR GRADING NOTES

| LINE TABLE | | | CURVE TABLE | | | |
|------------|-------------|--------|-------------|--------|--------|-----------|
| LINE | BEARING | LENGTH | CURVE | RADIUS | LENGTH | DELTA |
| L11 | S50°48'28"W | 42.56 | C9 | 220.00 | 124.35 | 32°23'05" |
| L12 | S10°07'42"W | 220.75 | C10 | 220.00 | 57.94 | 15°05'25" |
| L13 | S78°43'38"W | 61.23 | C11 | 220.00 | 156.20 | 40°40'47" |
| L14 | S9°45'37"W | 64.64 | C12 | 80.00 | 95.78 | 68°35'56" |
| L15 | S43°24'30"W | 65.30 | C13 | 60.00 | 72.22 | 68°58'01" |
| L16 | S6°18'48"E | 67.62 | C14 | 220.00 | 129.20 | 33°38'53" |
| L17 | S1°08'32"E | 206.53 | C15 | 150.00 | 130.17 | 49°43'18" |
| L18 | S24°28'47"E | 118.66 | C16 | 220.00 | 19.86 | 5°10'16" |
| | | | C17 | 250.00 | 101.83 | 23°20'15" |



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 SCALE: 1" = 50'
ROADWAY PLAN & PROFILE
 SHEET: **C1.20**

GRADING NOTES

SEE SHEET 0.00 FOR GRADING NOTES

| LINE | BEARING | LENGTH |
|------|-------------|--------|
| L18 | S24°28'47"E | 118.66 |
| L19 | S9°00'09"E | 730.12 |
| L20 | S5°49'37"W | 92.78 |

| CURVE | RADIUS | LENGTH | DELTA |
|-------|--------|--------|-----------|
| C17 | 250.00 | 101.83 | 23°20'15" |
| C18 | 400.00 | 108.05 | 15°28'37" |
| C19 | 220.00 | 56.94 | 14°49'46" |

GRADING LEGEND

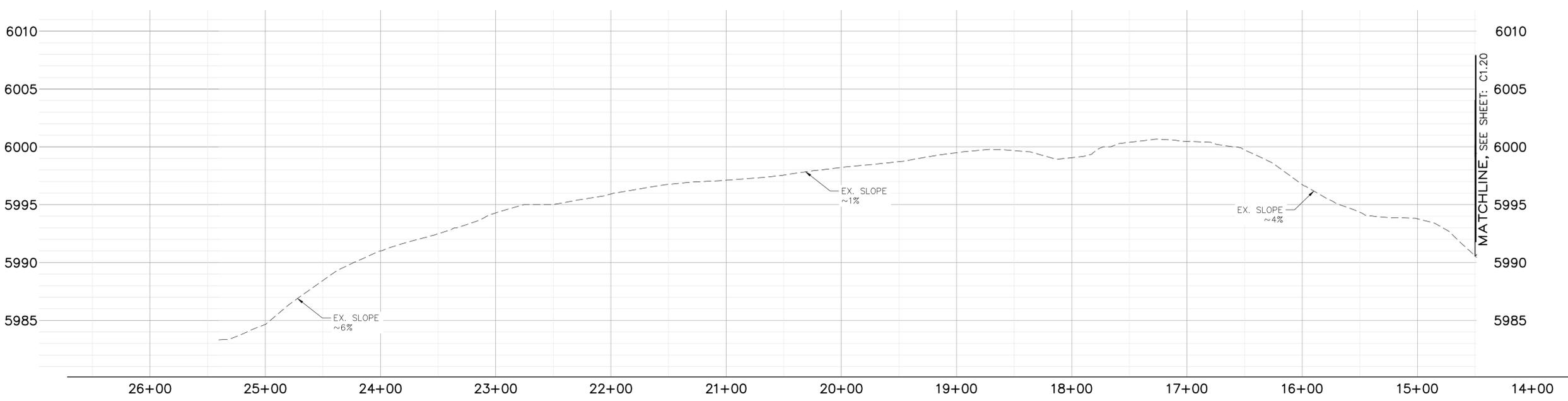
- - - 5970 - - - EXISTING GROUND CONTOUR (5' INTERVAL)
- → → EXISTING SWALE
- XG XG EXISTING GAS LINE
- WM WM EXISTING WATER LINE
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BENCHMARK & COORDINATE BASE

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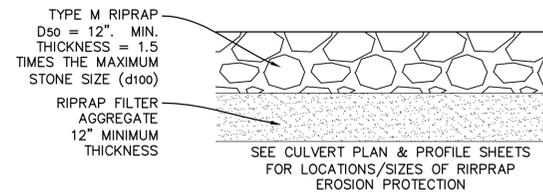
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J.N.: 14024
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SCALE: 1" = 50'
ROADWAY
PLAN &
PROFILE
SHEET:
C1.30

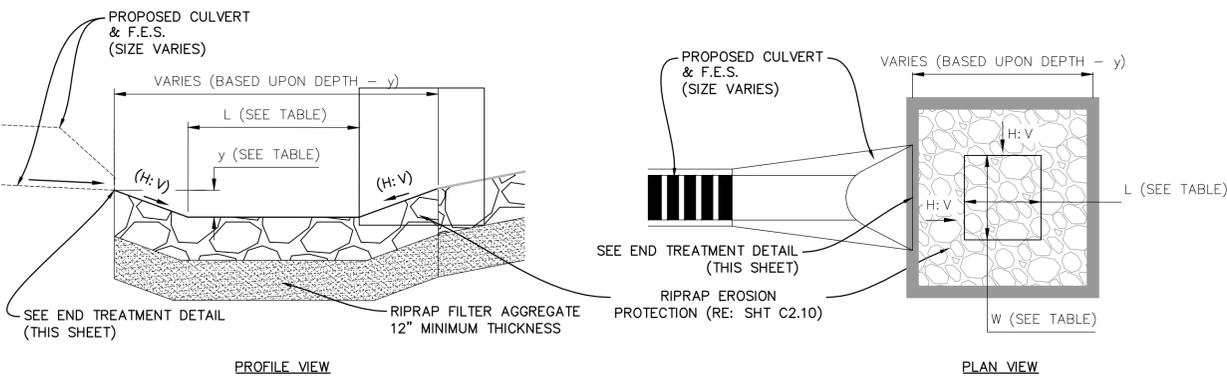
RR
C1.40

RIPRAP EROSION PROTECTION DETAIL



RIPRAP PAD DIMS

| SCOUR HOLE # | TOTAL PAD DIMS |
|--------------|----------------|
| CULVERT #1 | 10'x10' |
| CULVERT #2 | 10'x10' |
| CULVERT #3 | 10'x10' |
| CULVERT #4 | 20'x46.5' |
| CULVERT #5 | 10'x10' |
| CULVERT #6 | 10'x10' |
| CULVERT #7 | 10'x10' |
| CULVERT #8 | 10'x10' |
| CULVERT #9 | 10'x10' |
| CULVERT #10 | 20'x30' |



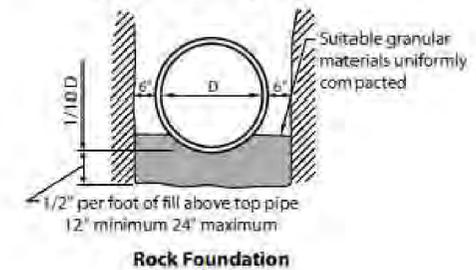
PERFORMED SCOUR HOLE TABLE

| SCOUR HOLE # | L (LENGTH - ft) | W (WIDTH - ft) | y (DEPTH - ft) | H:V | TOTAL PAD DIMS |
|--------------|-----------------|----------------|----------------|-----|----------------|
| PSH1 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH2 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH3 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH4 | 18 | 34.5 | 2 | 3:1 | 30'x46.5' |
| PSH5 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH6 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH7 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH8 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH9 | 4 | 4 | 1 | 3:1 | 10'x10' |
| PSH10 | 18 | 20 | 2 | 3:1 | 30'x32' |

PERFORMED SCOUR HOLE DETAIL

PSH
C1.40

Typical Bedding Details



CULVERT BEDDING DETAIL
BLM "THE GOLD BOOK" (2007)

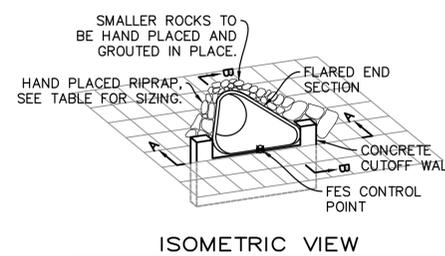
Table MD-11—Gradation for Granular Bedding

| U.S. Standard Sieve Size | Percent Weight by Passing Square-Mesh Sieves | |
|--------------------------|--|-----------------------------------|
| | Type I CDOT Sect. 703.01 | Type II CDOT Sect. 703.09 Class A |
| 3 inches | ---- | 90-100 |
| 1½ inches | ---- | ---- |
| ¾ inches | ---- | 20-90 |
| ⅜ inches | 100 | ---- |
| #4 | 95-100 | 0-20 |
| #16 | 45-80 | ---- |
| #50 | 10-30 | ---- |
| #100 | 2-10 | ---- |
| #200 | 0-2 | 0-3 |

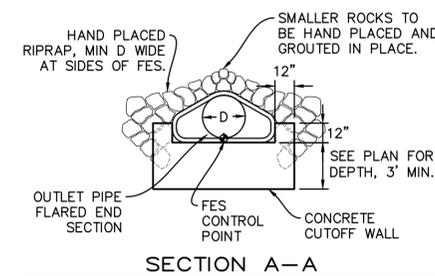
RIPRAP FILTER AGGREGATE GRADATION TABLE
URBAN DRAINAGE & FLOOD CONTROL DISTRICT, 2008

GENERAL NOTES

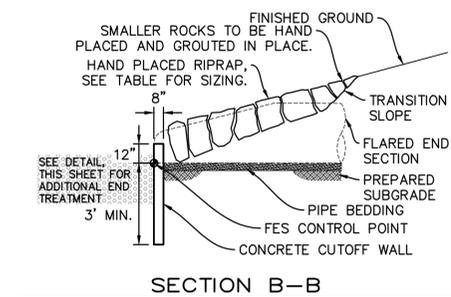
- CORRUGATED METAL PIPE SHALL MEET CDOT STANDARDS (RE: CDOT STANDARD PLAN NO. M-601-1, 4 SHEETS)
- CORRUGATED METAL FLARED END SECTIONS (F.E.S.) SHALL MEET CDOT STANDARDS (RE: CDOT STANDAR PLAN NO. M-603-10, 2 SHEETS)



ISOMETRIC VIEW



END TREATMENT DETAIL



SECTION B-B

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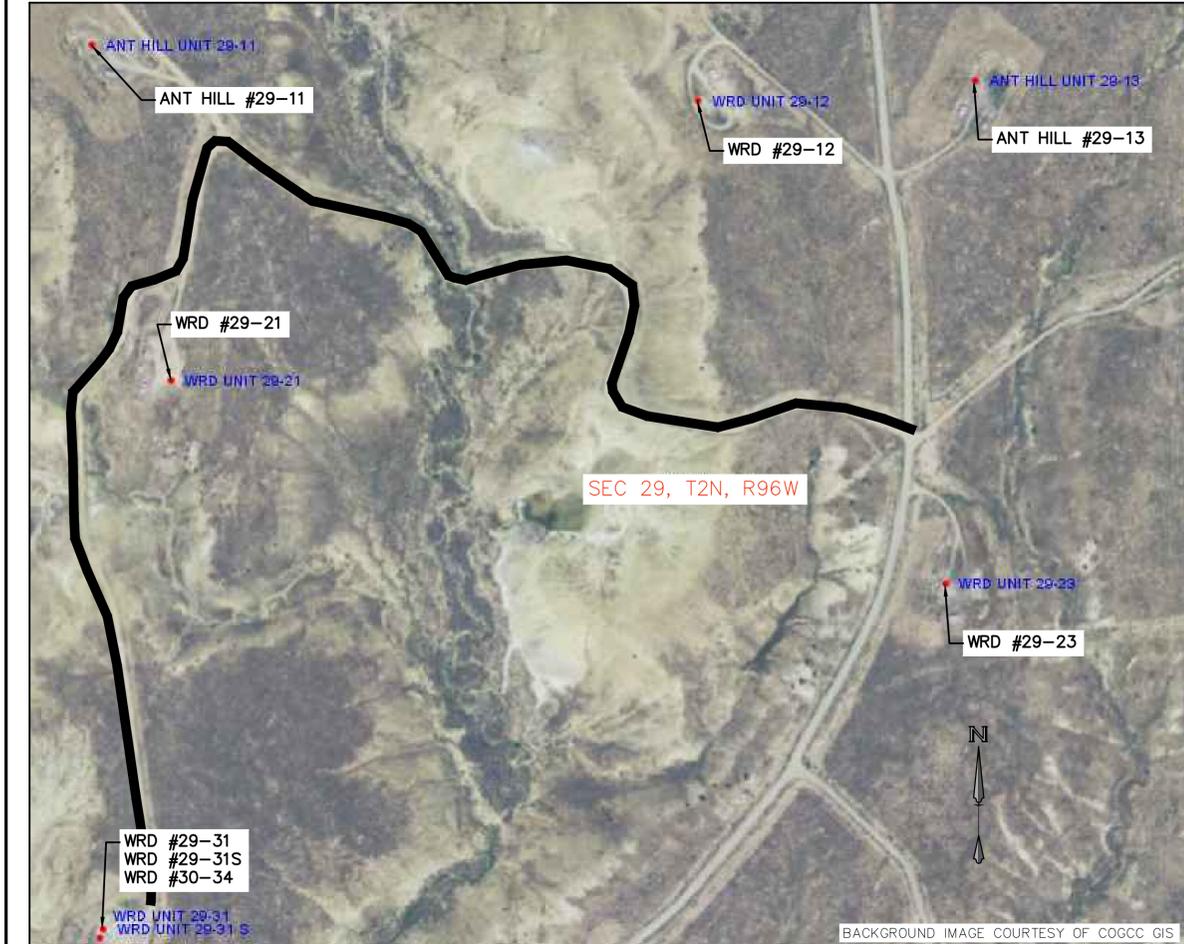
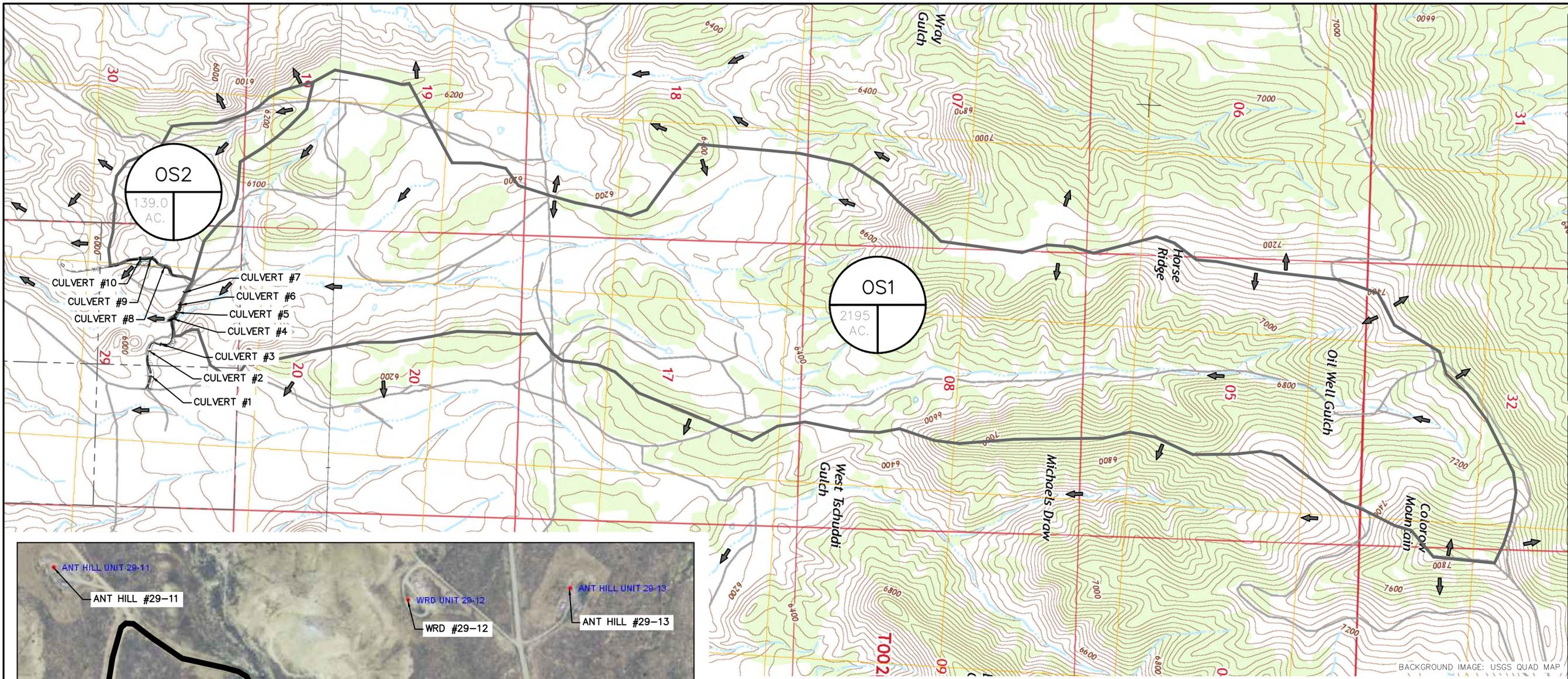
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RIO BLANCO COUNTY, CO

PRELIMINARY PLAN FOR REVIEW ONLY

NO. DATE DESCRIPTION REVISIONS

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J.N.: 14024
DATE: 08.05.14
SCALE: N/A
DETAILS
SHEET: **C1.40**



COGCC INFORMATION

N.T.S.

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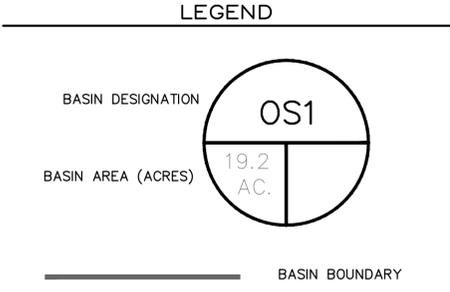
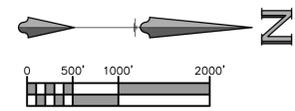
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J.N.: 14024
 DATE: 08.05.14
 SCALE: 1" = 1,000'
DRAINAGE
BASIN
MAP
 SHEET:
C2.00



HISTORIC DRAINAGE BASIN FLOW INFORMATION

| BASIN | AREA (AC) | TRAVEL L (FT) | Tc (HOUR) | CURVE NO. | 10 YR FLOW (CFS) | 25 YR FLOW (CFS) | 100 YR FLOW (CFS) | PROP. CULVERT | CULVERT # |
|-------|-----------|---------------|-----------|-----------|------------------|------------------|-------------------|---------------|-------------|
| OS1 | 2195 | 28997 | 1.8 | 85 | 402 | 605 | 965 | 3-4.5' DIA. | CULVERT #4 |
| OS2 | 139 | 4721 | 0.4 | 85 | 70 | 105 | 165 | 3-2.5' DIA. | CULVERT #10 |

HYDROLOGIC MODELING: TR-55, 24 HOUR STORM
 RAINFALL DATA: "LITTLE HILLS" STATION I.D. 05-5048
 HYDRAULIC MODELING (CULVERTS): HYDRAFLOW EXPRESS EXTENSION FOR AUTOCAD CIVIL 3D 2011
 CULVERT #4 & CULVERT #10 SIZED TO PASS THE 10 YR/24 HOUR STORM WITH A MAXIMUM Hw/D = 1.0

3160 (Office Code)
COD- 037933

Koch Exploration Company, LLC
Attn: Janni Keidel
950 17th Street Suite 1900
Denver, CO 80202

Re: Receipt and Acceptability of Application for Permit to Drill (APD)
Federal/Indian Lease No(s). COD- 037933, Well No. WRD Federal 30-34
Legal Description T2N R96W SESE Section 30
Rio Blanco County, Colorado
Date APD Received: 12/12/2013

Dear Operator:

This is the 10-day letter pursuant to Onshore Oil and Gas Order, Number 1, Section III.E.2.a.

The BLM received your Application for Permit to Drill (APD), for the referenced well, on **[Insert date the BLM received APD]**. The BLM reviewed the APD package pursuant to part III.B.2 of Onshore Oil and Gas Order No.1 and it is:

1. Complete (*BLM will process the APD and you have no deficiencies to submit.*)

2. Incomplete/Deficient (*The BLM cannot process the APD until you submit the identified items within 45 calendar days of the date of this notice or the BLM will return your APD.*)
 - Form 3160-3, Application for Permit to Drill or Re-Enter
 - APD Processing Fee payment
 - Well Plat
 - Drilling Plan
 - Surface Use Plan of Operations
 - Certification of Private Surface Owner Access Agreement
 - Bonding
 - Operator Certification
 - Onsite (The BLM has scheduled the onsite to be on _____)

This requirement is exempt of the 45-day timeframe to submit deficiencies. This requirement will be satisfied on the date of the onsite.

Incomplete/Deficient

- Existing Roads [See SUPO section 2.1](#)
 - The maintenance needs to be to Goldbook or BLM 9113 Manual standards.
- New or Re-Constructed Road Access [See SUPO Section 2.2](#)
 - Information needed on the proposed access road. Onshore Order 1 requires the following information for proposed access roads.
 - Road width; [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - Maximum grade; [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - Crown design; [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - Turnouts; [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - Drainage and ditch design; [See Sheets C1.00 – 1.40 & C2.00](#)
 - On-site and off-site erosion control; [See SUPO Section 2.12](#)
 - Revegetation of disturbed areas; [See SUPO Section 2.10](#)
 - Location and size of culverts and/or bridges; [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - Fence cuts and/or cattleguards; [See SUPO Section 2.2](#)
 - Major cuts and fills; [See Sheets C1.00 – 1.30](#)
 - Source and storage of topsoil; and [See Figures 1 and 3](#)
 - Type of surfacing materials, if any, that will be used. [See SUPO Section 2.6](#)
 - Missing information
 - Road design (crown ditch?) a cross section helps portray this detailed information needed for the road. [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - What is the maximum grade? [See Sheets C1.00 – 1.30, See SUPO Section 2.2](#)
 - Topsoil (handling, storing, reclamation)., [See SUPO Sections 2.9 & 2.10](#)
- Location of Existing/Proposed Production Facilities [See SUPO Section 2.4](#)
 - In order to complete an analysis, if the pipeline is planning to be constructed with the pad (without additional NEPA or approval) then size of the lines will be needed. [See SUPO Section 2.4](#)
- Location and Type of Water Supply
 - For NEPA analysis, the estimated amount of water needed for drilling and travel route of the trucked water will be needed. [See SUPO Section 2.5](#)
- Source of Construction Material [See SUPO Section 2.6](#)
 - The source location for construction materials is required by Onshore Order 1. This needs to be put into the SUPO or language needs to be in the SUPO that is along the lines of “Although at this time we are not aware of a need for gravel, if we do, we will submit the source location via Sundry Notice to the BLM”.
- Methods of Handling Waste [See SUPO Section 2.7](#)
 - The Onshore Order #1 States “The Surface Use Plan of Operations must contain a written description of the methods and locations proposed for safe containment and disposal of each type of waste material (e.g., cuttings, garbage, salts, chemicals, sewage, etc.) that results from drilling the proposed well.”
 - If the drilling fluids/mud is to be recycled/reused a Sundry Notice will need to be submitted notifying the BLM of the location it is being used.

- If the drilling fluid/mud is to be disposed of onsite, then a Sundry Notice will need to be submitted with a detailed description of the disposal. This will need to be submitted prior to disposal for approval. If being disposed of offsite a Sundry Notice will need to be submitted with the location. Information regarding how the drilling fluids used or disposed of needs to be in the SUPO.
 - Detailed information is needed for the reserve pit such as location, size, liner, reclamation etc.; also, is the reserve pit the same as the “emergency pit” on the layout?
 - If drill cuttings are to be disposed on location then they will need to be tested for COGCC standards then if they pass, they must be buried by a minimum of three feet of clean fill. If disposed off location then location needs to be in the SUPO or submitted by Sundry Notice. All this detailed information should be in the SUPO.
 - Final Destination is needed for all fluids and wastes.
 - How will produced water be handled?
 - Sewage, further information is needed on disposal. Where will disposal of the sewage occur?
 - Need the final destination of garbage or language stating the possibilities and the final destination will be submitted via Sundry Notice.
- Well Site Layout
 - Layout is supposed to be to a scale no less than 1 inch equals 50 feet. . [Uintah layout is 1” = 60’](#)
 -
 - Reserve pit is not located on layout, only see emergency pit. [No reserve pit will be used. See SUPO section 2.9](#)
 -
 - Plans for Surface Reclamation [See SUPO section 2.10](#)
 - Onshore Order 1 States “Plans for Surface Reclamation: The operator must submit a plan for the surface reclamation or stabilization of all disturbed areas. This plan must address interim (during production) reclamation for the area of the well pad not needed for production, as well as final abandonment of the well location. Such plans must include, as appropriate:
 - Configuration of the reshaped topography;
 - Drainage Systems;
 - Segregation of spoil materials (stockpiles);
 - Surface disturbances;
 - Backfill requirements;
 - Proposals for pit/sump closures;
 - Redistribution of topsoil;
 - Soil Treatments;
 - Seeding or other steps to reestablish vegetation;
 - Weed Control; and
 - Practices necessary to reclaim all disturbed areas, including any access roads and pipelines.”
 - Much of the above information is either missing or not in an adequate amount of detail. The SUPO needs to have a reclamation plan that address the above

required information for Interim and Final Reclamation. [See SUPO section 2.10 and see Figures 1, 3, 4 and 5](#)

○
Concerns/Recommendation

• Topsoil

- The Topsoil numbers on the plan does not show enough topsoil being collected to adequately redistribute (to an approximate 6 inches of depth) topsoil on the 2.435 acres of disturbance for the well site. This potentially leaves disturbances that may not receive an adequate amount of topsoil. Please provide detail on how this concern is to be remedied. If detail is not provided on how it will be remedied, then a Condition of Approval may be applied.
- For example, if topsoil is not removed from the location of the spoils pile, then it is not being adequately separated from the spoils pile. Also it would compromise the viability of the topsoil. Similarly for sediment traps, depending on design, if the topsoil is not removed it may be compromised. [See SUPO section 2.10 and see Figures 1, 3, 4 and 5](#)

3. Missing Necessary Information (*The BLM can start, but cannot complete, the analysis until you submit the identified items within 2-years from the date we declare your APD complete or the BLM will deny your APD.*)

- Designation of Operator (*if Indian*)
- Other Surface Use Permits
- Water Management Plan
- Alternative Bonding
- Air Quality Modeling
- Other

[Define/explain the specific necessary information here.]

4. Additional steps/items needed to process the APD (*The BLM, other agencies, or you are responsible for the identified items. Due to staffing shortages and reduced funding, we are requesting that you submit these items to expedite the approval process.*)

- National Environmental Policy Act (NEPA) Analysis
 - BLM responsible Other Agency responsible
- Cultural Resources Inventory **Submitted**
 - *Operator responsible BLM responsible Other Agency responsible
- Wildlife Survey
 - *Operator responsible BLM responsible Other Agency responsible
- Emissions Inventory

- Operator responsible BLM responsible Other Agency responsible
 Other (Plant Survey)
 Operator responsible BLM responsible Other Agency responsible

*Survey reports may have already been submitted

5. APD is returned for the following reasons:

[Define/explain here.]

NOTE: The BLM will return your APD package to you, unless you correct all deficiencies identified above (item 2) within 45 calendar days.

The BLM will not refund an APD processing fee or apply it to another APD for any returned APD.

Extension Requests:

If you know you will not be able to meet the 45-day timeframe for reasons beyond your control, you must submit a written request through [*Insert your office's preferred format for this request*] for extension prior to the 45th calendar day from this notice [*Insert due date here*].

The BLM will consider the extension request if you can demonstrate your diligence (providing reasons and examples of why the delay is occurring beyond your control) in attempting to correct the deficiencies and can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an extension, the BLM will return the APD as incomplete after the 45 calendar days have elapsed.

- The BLM will determine whether to grant an extension beyond the required 45 calendar days and will document this request in the well file. If you fail to submit deficiencies by the date defined in the extension request, the BLM will return the APD.

APDs Remaining Incomplete:

If the APD is still not complete, the BLM will notify you and allow 10 additional business days to submit a written request to the BLM for an extension. The request must describe how you will address all outstanding deficiencies and the timeframe you request to complete the deficiencies.

- The BLM will consider the extension request if you can prove your diligence (providing reasons and examples of why the delay is occurring) in attempting to correct the deficiencies and you can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an additional extension, the BLM will return the APD as incomplete.

If you have any questions, please contact _____ (Name) at _____ (Phone number).

Sincerely,

Name
Title

cc: *If Indian*, BIA, Agency Name
If Tribal, Tribe Name
If Forest Service, USFS Office Name