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

September 8, 2014

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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 access roads will be constructed and maintained per BLM Manual Section 9113. The access roads will be constructed as follows:

Approximately 3,300 linear feet (lf) of access road (2.4 acres) will be upgraded (see Topo B and Sheets C1.00-C1.40):

Existing access road going west from County Road 143 (Sheets C1.00-1.10):

- Station 0 +75 – 6+62 (587 lf), 0.6 acres of disturbance

- Station 8+50 – 11+50 (300 lf), 0.06 acres of disturbance
- Station 11+41 – 15+56 (415 lf), 0.11 acres of disturbance
- Station 15+56 – 22+00 (644 lf), 0.75 acres of disturbance

29-31 access road (see sheets 1.20-1.30):

- Station 3+69 – 6+99 (330 lf), 0.07 acres of disturbance
- Station 5+26 – 7+00 (174 lf), 0.09 acres of disturbance
- Station 8+50 – 14+50 (600 lf), 0.70 acres of disturbance
- Station 16+01 – 18+20 (219 lf), 0.03 acres of disturbance

- An additional 0.29 acres will be disturbed by installation of new culverts.
- 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 stored along the road, 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.

- 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

- Facilities will be constructed on location; and the actual layout will be submitted by Sundry Notice prior to construction of facilities. The following specifications are provided for construction of the 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 per BLM recommended color - Covert Green from the Standard Environmental Colors Chart CC-001: June 2008.

- 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 pit will provide storage for the drill cuttings from 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.

- Drill cuttings will be stored in the cuttings pit. Cuttings will be tested per Colorado Oil and Gas Conservation Commission (COGCC) standards, if cuttings meet COGCC standards, the cuttings will be buried to a minimum depth of 3 feet and covered with clean fill.

- If drill cuttings do not meet COGCC standards, the cuttings will be disposed of at a Colorado Department of Public Health and Environment (CDPHE) approved disposal facility. A Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.

- Drilling fluid will be a closed-loop system. All drilling fluids will be contained in temporary aboveground storage tanks and disposed of at a Colorado CDPHE approved disposal facility. A Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.

- Produced fluid will be contained in test tanks during completion and testing.

- Produced water will be disposed of at the 29-33 WDW (UIC Facility No. 159065) located in the SWSW of Section 29, T2N, R96W of Rio Blanco County, Colorado and operated by Koch Exploration Company.

- Sewage will be handled in self-contained, chemical-treated portable toilets and contents will be hauled off location to an authorized CDPHE approved sanitary disposal facility in accordance with state and local regulations. A Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.

- 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 dumped at the following CDPHE approved landfill located 22 miles west of Meeker on Highway 64:

  Wray Gulch Landfill
  1496 County Road 72
  Meeker, Colorado 81641

- Trash will be picked up if scattered and contained in the trash cage as soon as practical after the rig is moved off.

- Upon release of the drilling rig, rat and mouse holes will be filled. Debris and excess equipment will be removed.

- Liners from the drill cuttings pit and emergency pit (if used) will be disposed of at a CDPHE approved disposal facility. A Sundry Notice will be submitted to the BLM with the name and location of the 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). If secondary containment for hazardous materials is required, it will be addressed in the Conditions of Approval (COA).

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 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 is case of a mechanical problem with the closed loop system.
- If the Emergency pit is constructed and not used, the pit will be backfilled. 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 emergency pit liner (if used) will be weighted down and anchored. Pit liner edges will be recurved and buried up to the pit berm to adequately secure the pit liner during windy conditions. The material used to secure the pit liner will be puncture resistant and will be carefully placed in the pit to ensure the liner is not damaged.
    - If fluids are in the pit, the pit will be netted per BLM approval.
    - If used, the emergency pit liner will be removed and disposed of at a CDPHE approved disposal facility. A Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.
    - The pit will be backfilled and closed within six months of completion of the well, weather permitting, in accordance with timeframes and testing requirements outlined in the COGCC 900 Series Rules.

See Figures 1 and 3 for the cuttings pit location.

- A cuttings pit will be constructed on the well pad; the pit will provide storage for the drill cuttings from 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 cuttings pit liner will be weighted down and anchored. Pit liner edges will be recurved and buried up to the pit berm to adequately secure the pit liner during windy conditions. The material used to secure the pit liner will be puncture resistant and will be carefully placed in the pit to ensure the liner is not damaged.
- If fluids are in the pit, the pit will be netted per BLM approval.
- The liner will be removed and disposed of at a CDPHE approved disposal facility. A Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.
- The pit will be backfilled and closed within six months of completion of the well, weather permitting, in accordance with timeframes and testing requirements outlined in the COGCC 900 Series Rules

- 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 begin within 6 months after the final well is completed.

- 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 and a Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.
    - The BLM will be notified no later than 5 days prior to closure of the pit.
    - Pre-closure sampling will occur in the cuttings pit and emergency pit (if used) in accordance with Colorado Oil and Gas Conservation Commission (COGCC)

standards, if samples meet COGCC standards, the cuttings pit and emergency pit (if used) will be buried a minimum depth of 3 feet and covered with clean fill.

- 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.

- Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. A Pesticide Use Proposal for weed management will be submitted at the request of the COGCC or BLM.

- Drilling fluids; a will be a closed-loop system will be utilized. All drilling fluids will be contained in temporary above ground storage tanks and disposed of at a CDPHE approved disposal facility. A Sundry Notice will be submitted to the BLM with the name and location of the disposal facility.

- The field-wide goal for reclamation is to 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 the area, weather conditions, best season for reseeding, and equipment availability, Koch will work diligently to achieve this goal

- Upon release of the drilling rig, rat and mouse holes will be filled. Debris and excess equipment will be removed.

- 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.
- Topsoil from the pipeline will be stored onsite. It will be re-spread after backfilling the ditch. The ditch will be backfilled after construction.

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.
    - A Final Abandonment Notice will be submitted to the BLM after the success criteria listed in Section 3.2.2 of the White River Field Office Surface Reclamation Protocol (most current version) have been met.
    - 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	*Pascopyrum smithii*	3
Critana	Thickspike Wheatgrass	*Elymus lanceolatus*	2
Rimrock	Indian Ricegrass	*Achnatherum hymenoides*	2
Toe Jam Creek	Bottlebrush Squirreltail	*Elymus Elymoides*	1
Whitmar	Bluebunch Wheatgrass	*Pseudoroegneria spicata*	1
	Needle and Thread	*Hesperostipa comate*	0.5
	Sulphur Flower	*Eriogonum umbellatum*	1
	Annual Sunflower	*Heliantus annus*	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, Shadescale, 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/Erosion Management Plan: 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

September 8, 2014
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.

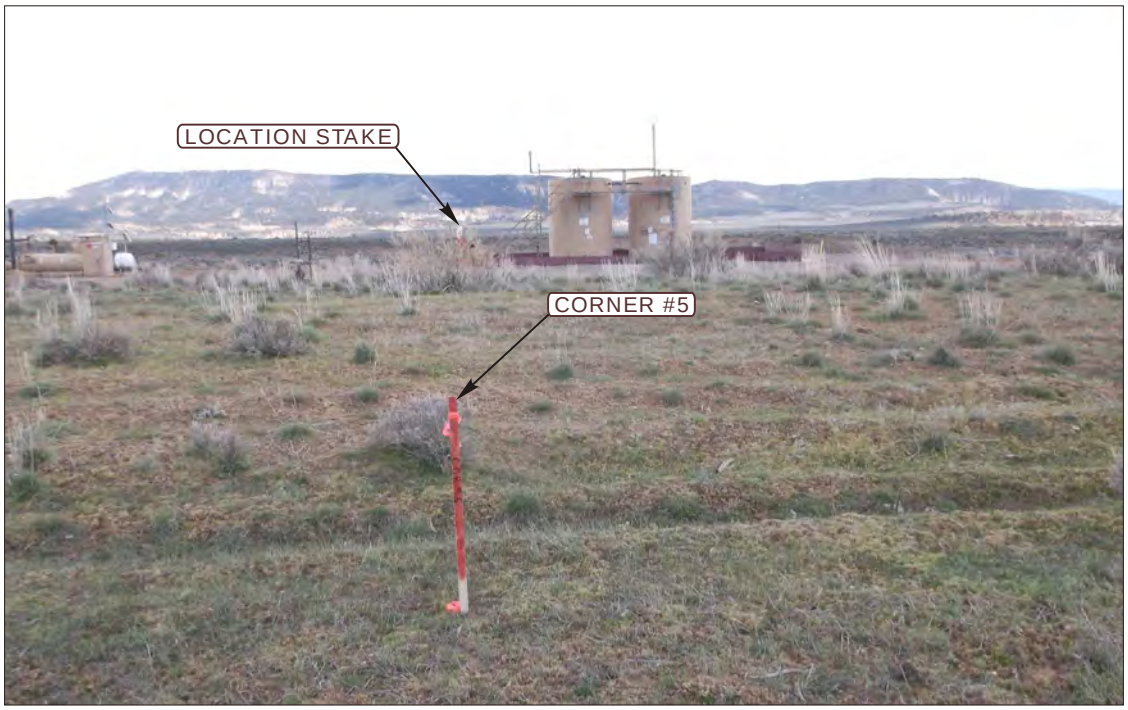

PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE **CAMERA ANGLE: SOUTHEASTERLY**

PHOTO: VIEW FROM BEGINNING OF EXISTING ACCESS **CAMERA ANGLE: SOUTHWESTERLY**

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

LOCATION PHOTOS	03 MONTH	18 DAY	13 YEAR	PHOTO P1
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 -
Uintah Engineering & Land Surveying
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(435) 789-1017 * FAX (435) 789-1813

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

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

LOCATED IN RIO BLANCO COUNTY, COLORADO
SECTION 29, T2N, R96W, 6th P.M.

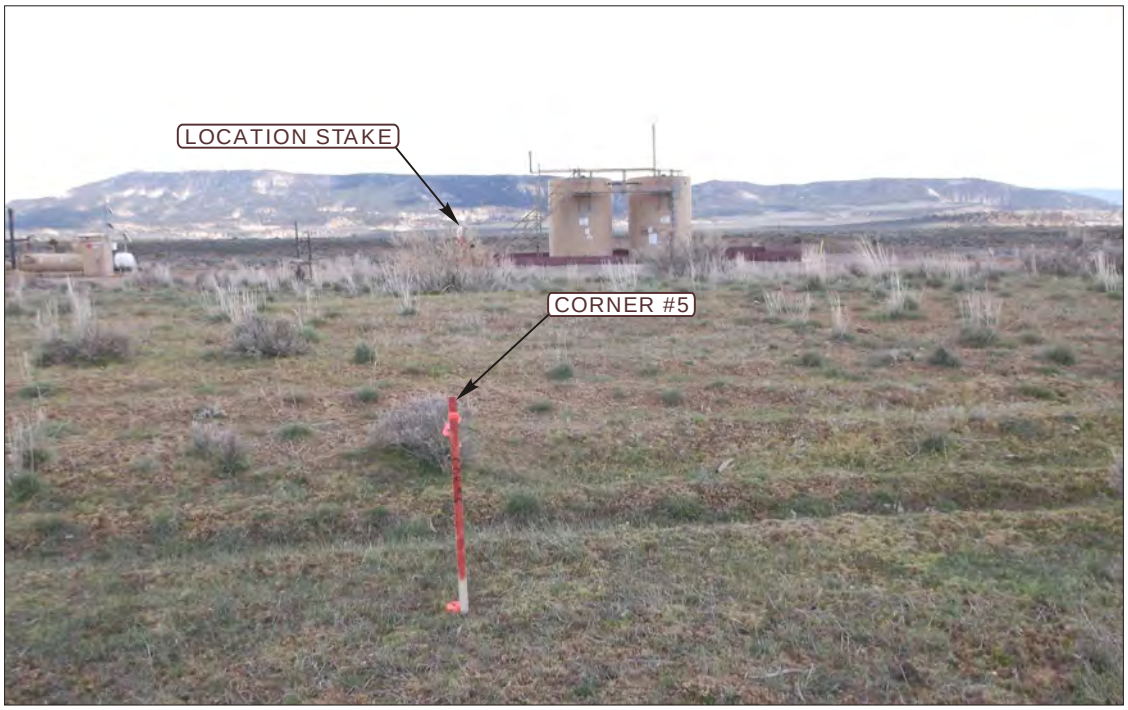

PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE **CAMERA ANGLE: SOUTHEASTERLY**

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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 -
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LOCATION PHOTOS	03 MONTH	18 DAY	13 YEAR	PHOTO P2
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 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

LOCATION PHOTOS	03 MONTH	18 DAY	13 YEAR	PHOTO P3
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**

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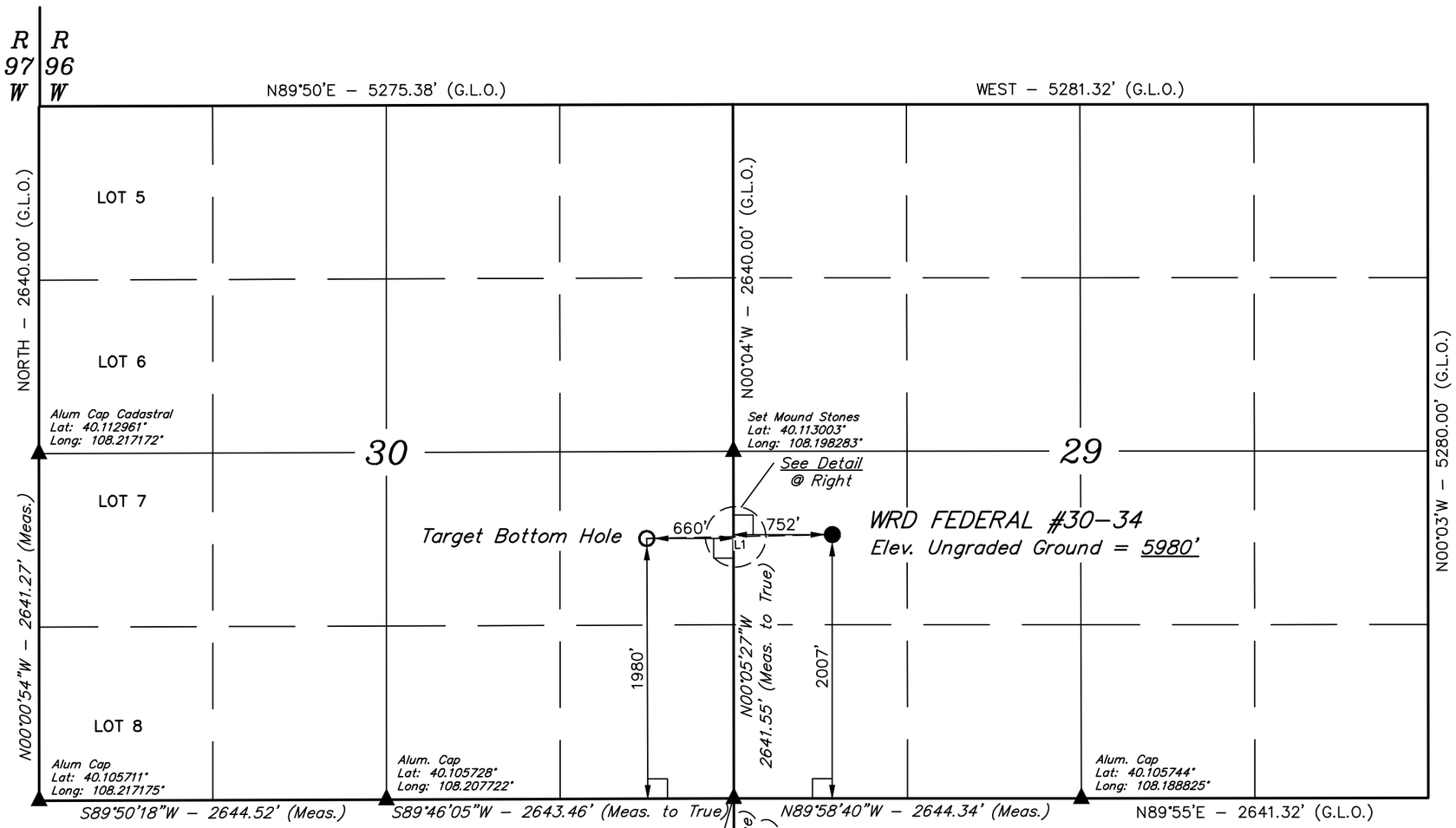
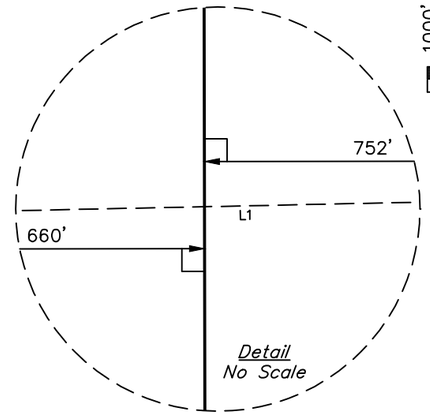
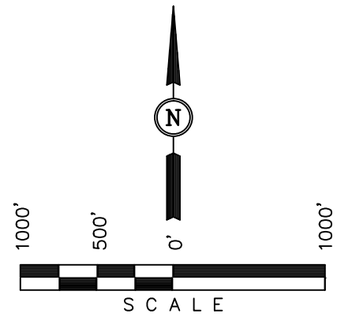
LOCATION PHOTOS	03 MONTH	18 DAY	13 YEAR	PHOTO P3
TAKEN BY: M.P.	DRAWN BY: C.I.	REV: 04-21-14 J.M.F.		

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.

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.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 17492
STATE OF COLORADO

ROBERT L. KAY — REGISTERED LAND SURVEYOR — STATE OF COLORADO — 04-23-14

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

LEGEND:

└ = 90° SYMBOL
● = PROPOSED WELL HEAD.
▲ = SECTION CORNERS LOCATED.

PDOP = 1.4

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

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85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789–1017

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

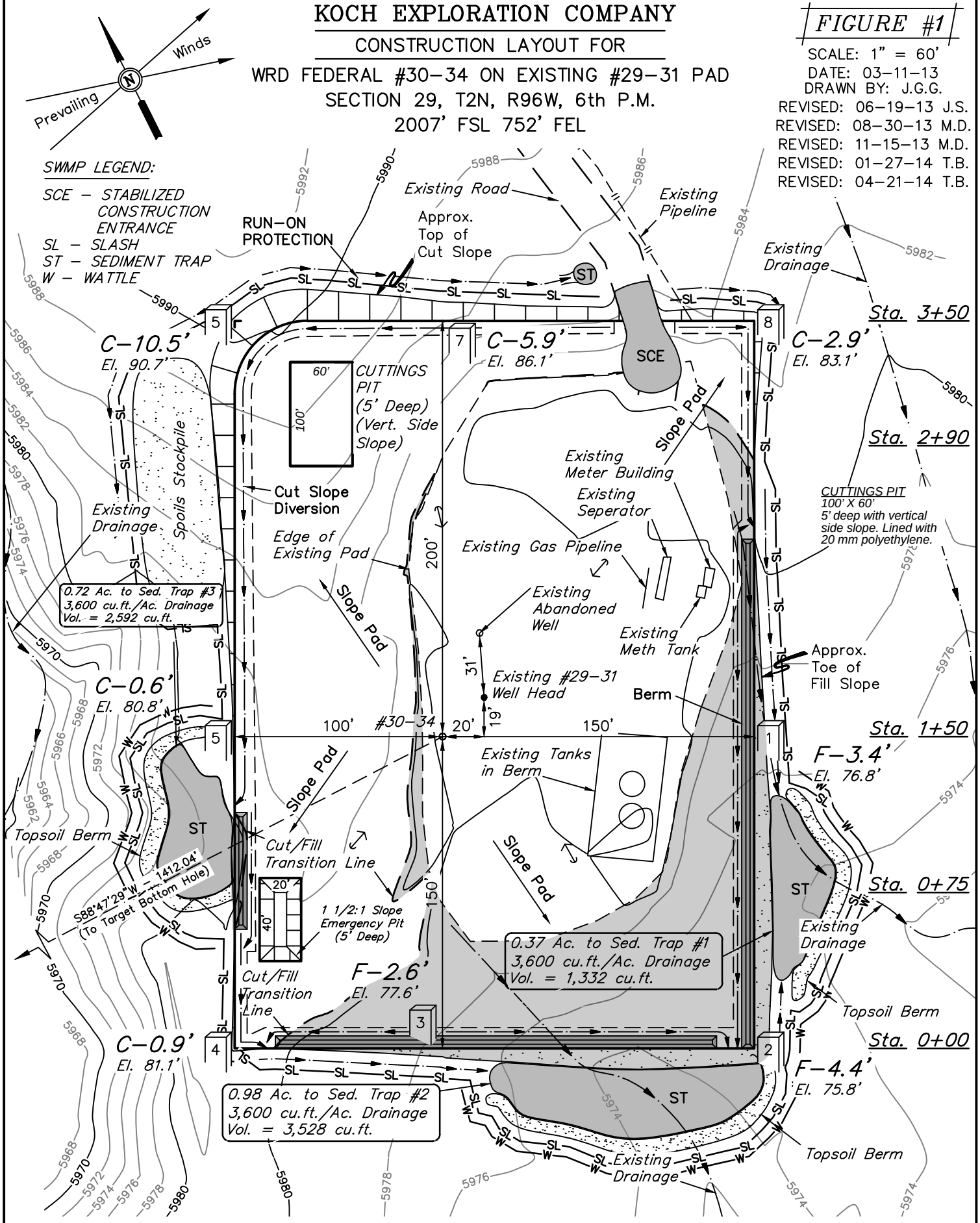
KOCH EXPLORATION COMPANY

CONSTRUCTION LAYOUT FOR

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

FIGURE #1

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.



FINISHED GRADE ELEV. AT #30-34 LOC. STAKE = 5980.2'

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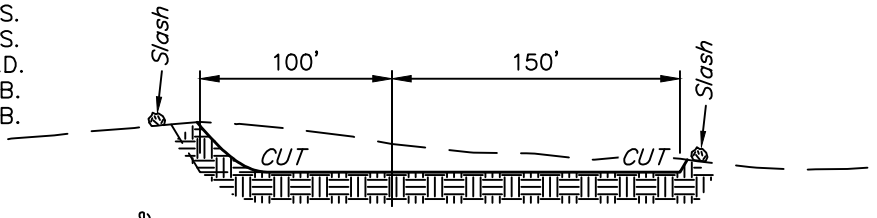
CONSTRUCTION LAYOUT CROSS SECTIONS FOR

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

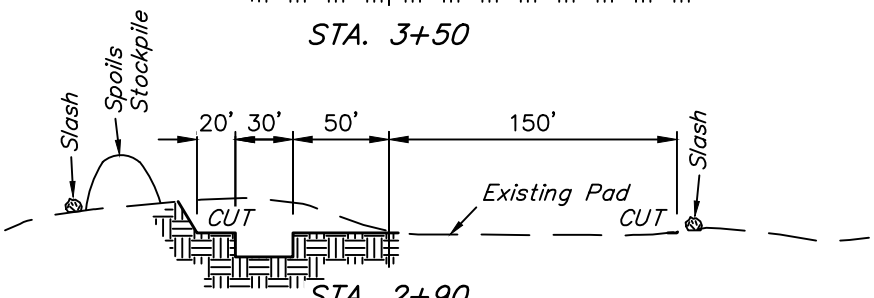
FIGURE #2

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

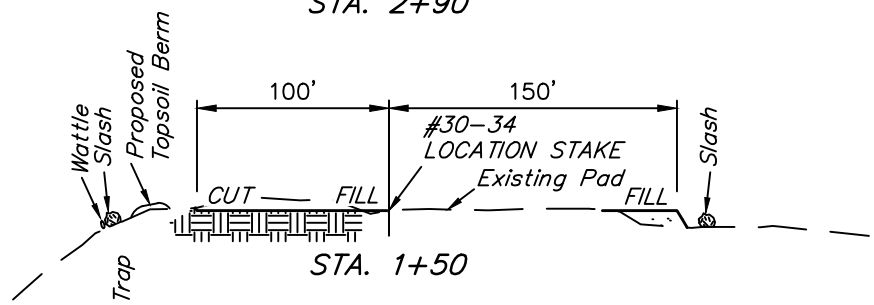
DATE: 03-11-13
DRAWN BY: J.G.G.
REVISED: 06-13-13 J.S.
REVISED: 06-19-13 J.S.
REVISED: 08-30-13 M.D.
REVISED: 01-27-14 T.B.
REVISED: 04-21-14 T.B.



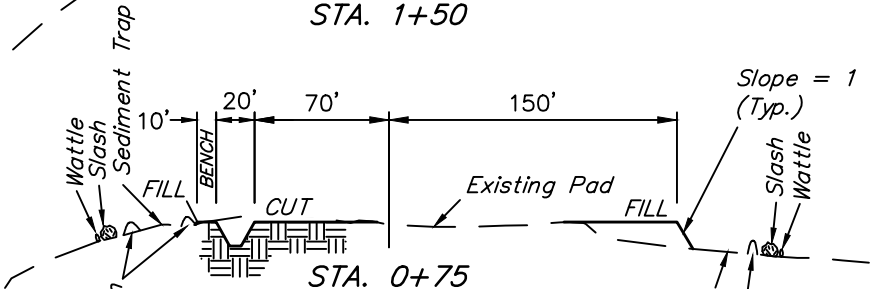
STA. 3+50



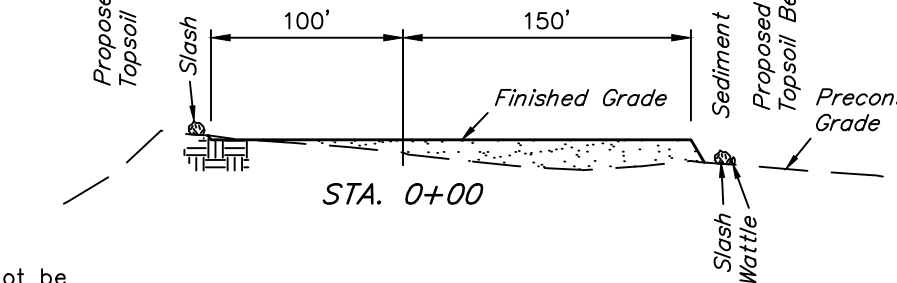
STA. 2+90



STA. 1+50



STA. 0+75



STA. 0+00

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 (New Construction Only)	=	650 Cu. Yds.
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 (After Interim Rehabilitation)	=	1,080 Cu. Yds.

ROBERT L. KAY REGISTERED 4892 LAND SURVEYOR STATE OF COLORADO 04-23-14

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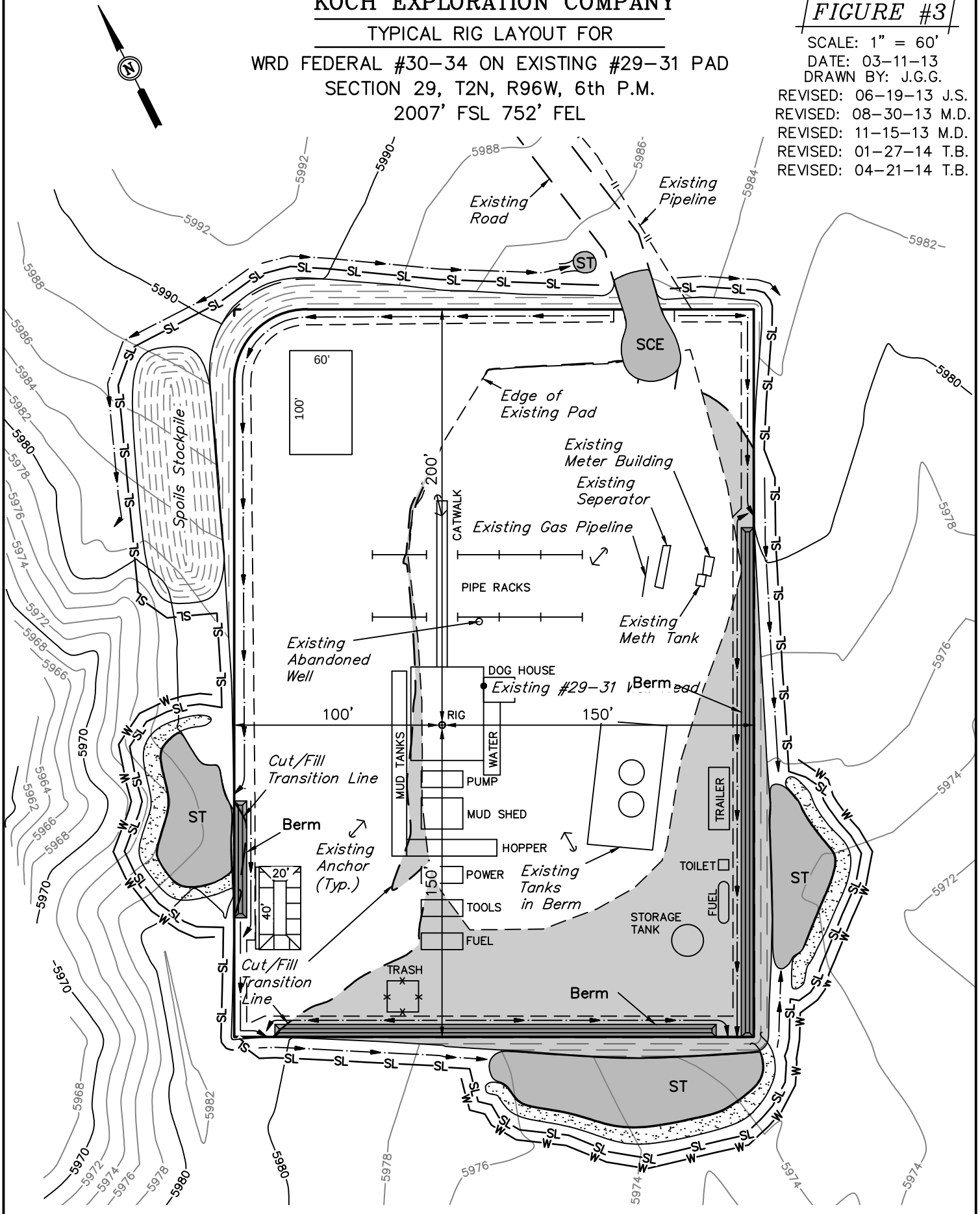
TYPICAL RIG LAYOUT FOR

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

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.



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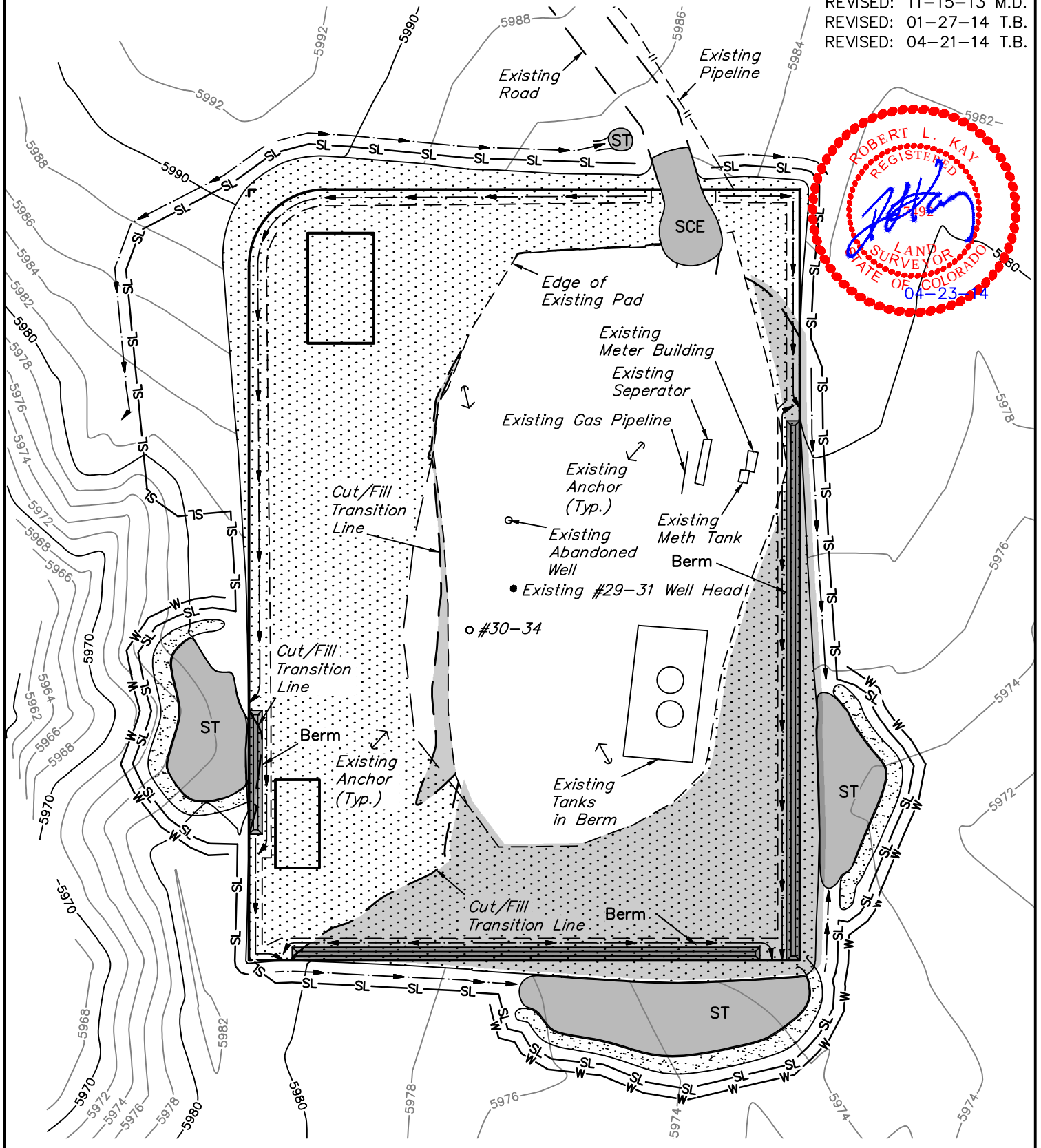
RECLAMATION DIAGRAM FOR

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

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.



ROBERT L. KAY
REGISTERED
492
LAND SURVEYOR
STATE OF COLORADO
04-23-14

RECLAIMED AREA

APPROXIMATE ACREAGE
UN-RECLAIMED = ± 0.854 ACRES

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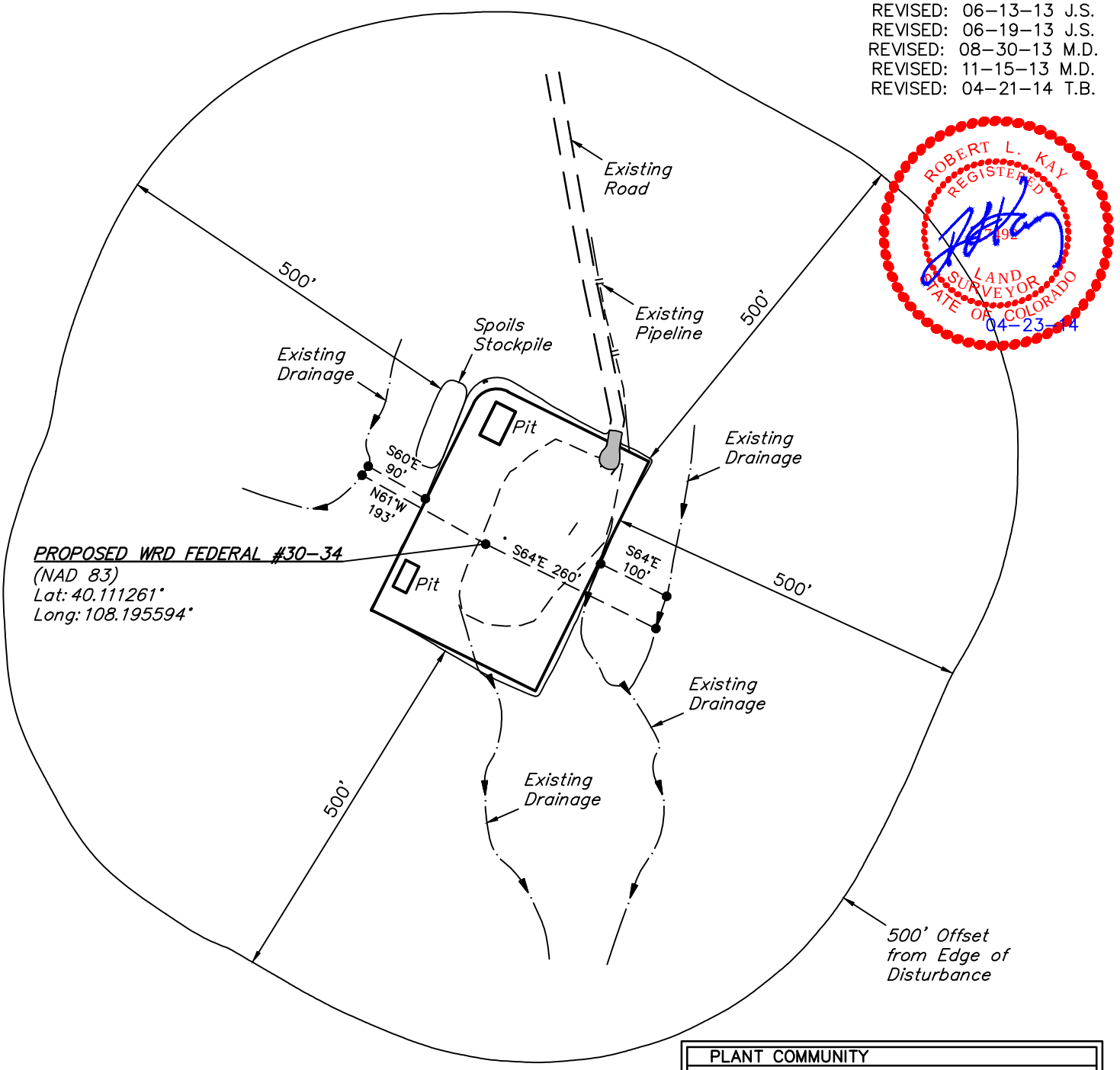
LOCATION DRAWING FOR

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

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.

ROBERT L. KAY REGISTERED 4992 LAND SURVEYOR STATE OF COLORADO 04-23-14



CURRENT LAND USE					
CROP LAND:	☐ IRRIGATED	☐ DRY LAND	☐ IMPROVED PASTURE	☐ HAY MEADOW	☐ CRP
NON-CROP LAND:	☐ RANGELAND	☐ TIMBER	☐ RECREATIONAL	☐ OTHER (Describe)	
SUBDIVIDED:	☐ INDUSTRIAL	☐ COMMERCIAL	☐ RESIDENTIAL		

FUTURE LAND USE					
CROP LAND:	☐ IRRIGATED	☐ DRY LAND	☐ IMPROVED PASTURE	☐ HAY MEADOW	☐ CRP
NON-CROP LAND:	☐ RANGELAND	☐ TIMBER	☐ RECREATIONAL	☐ OTHER (Describe)	
SUBDIVIDED:	☐ INDUSTRIAL	☐ COMMERCIAL	☐ RESIDENTIAL		

PLANT COMMUNITY
☐ DISTURBED GRASSLAND
☐ NATIVE GRASSLAND
☐ SHRUB LAND
☐ PLAINS RIPARIAN
☐ MOUNTAIN RIPARIAN
☐ FOREST LAND
☐ WETLANDS AQUATIC
☐ ALPINE
☐ OTHER (Describe):

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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'
EXISITNG #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'

UINTAH ENGINEERING & LAND SURVEYING

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

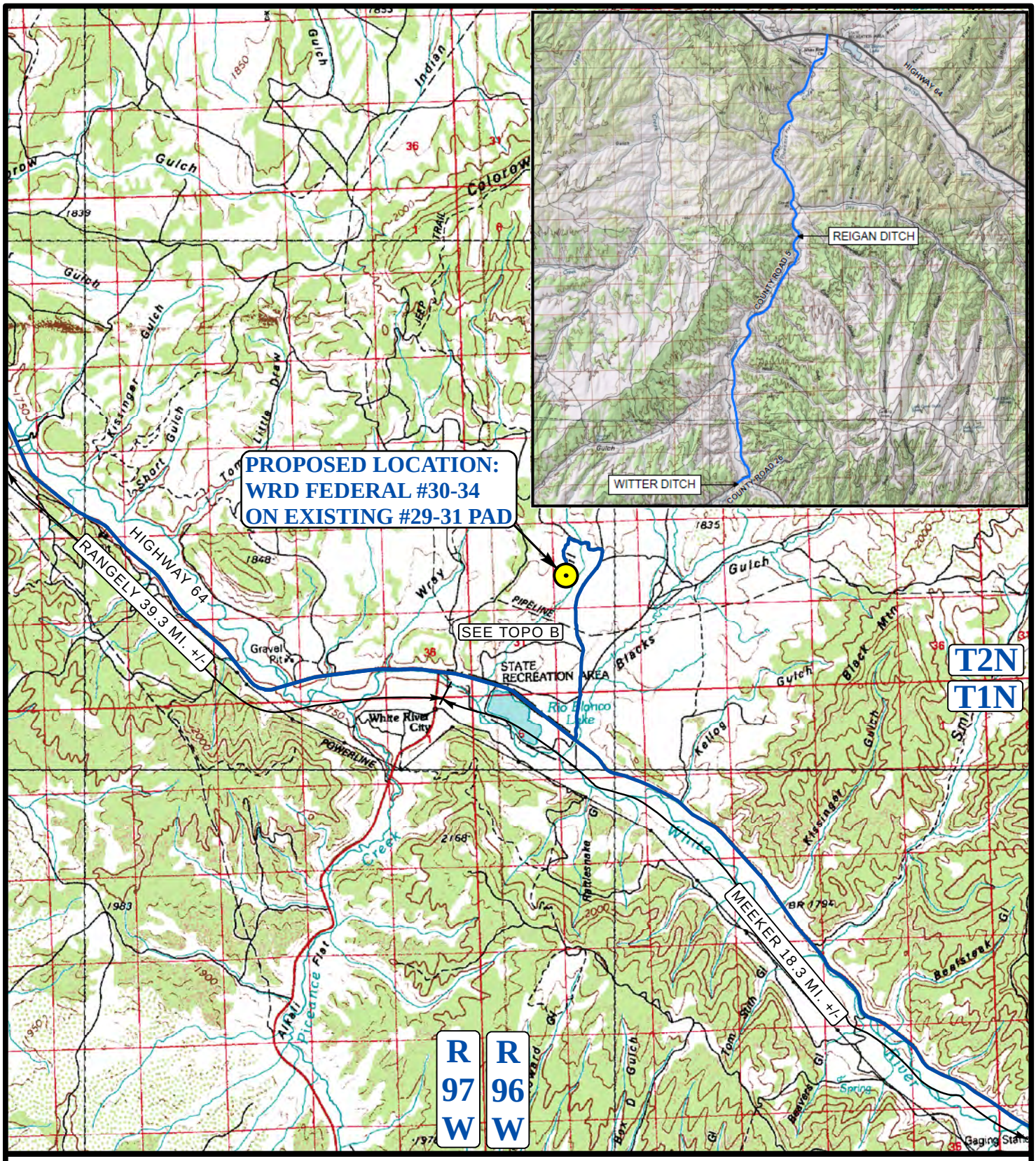
PROCEED IN AN EASTERLY DIRECTION FROM THE WITTER DITCH ALONG COUNTY ROAD 26 APPROXIMATELY 0.54 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 5; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 18.0 MILES TO THE JUNCTION OF THIS ROAD AND HIGHWAY 64.
TOTAL DISTANCE TO HIGHWAY 64 IS APPROXIMATELY 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 THEEXISTING LOCATION.
TOTAL DISTANCE FROM RANGELY, COLORADO TO THE EXISTING LOCATION IS APPROXIMATELY 42.6 MILES.



LEGEND:

PROPOSED LOCATION

N

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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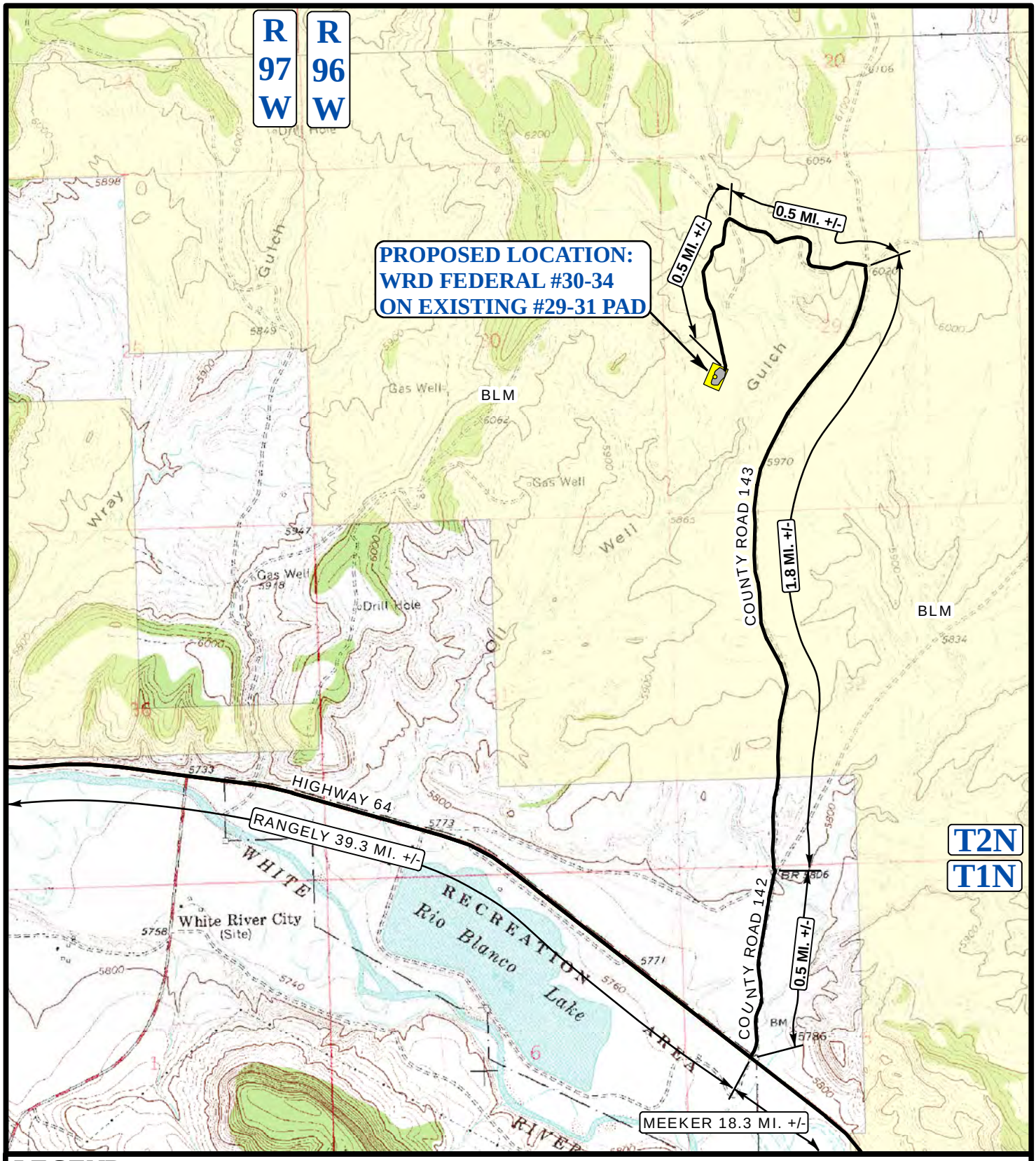
ACCESS ROAD MAP	03 MONTH	18 DAY	13 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.I.	REV: 04-21-14 J.M.F.		



LEGEND:

EXISTING ROADS

N

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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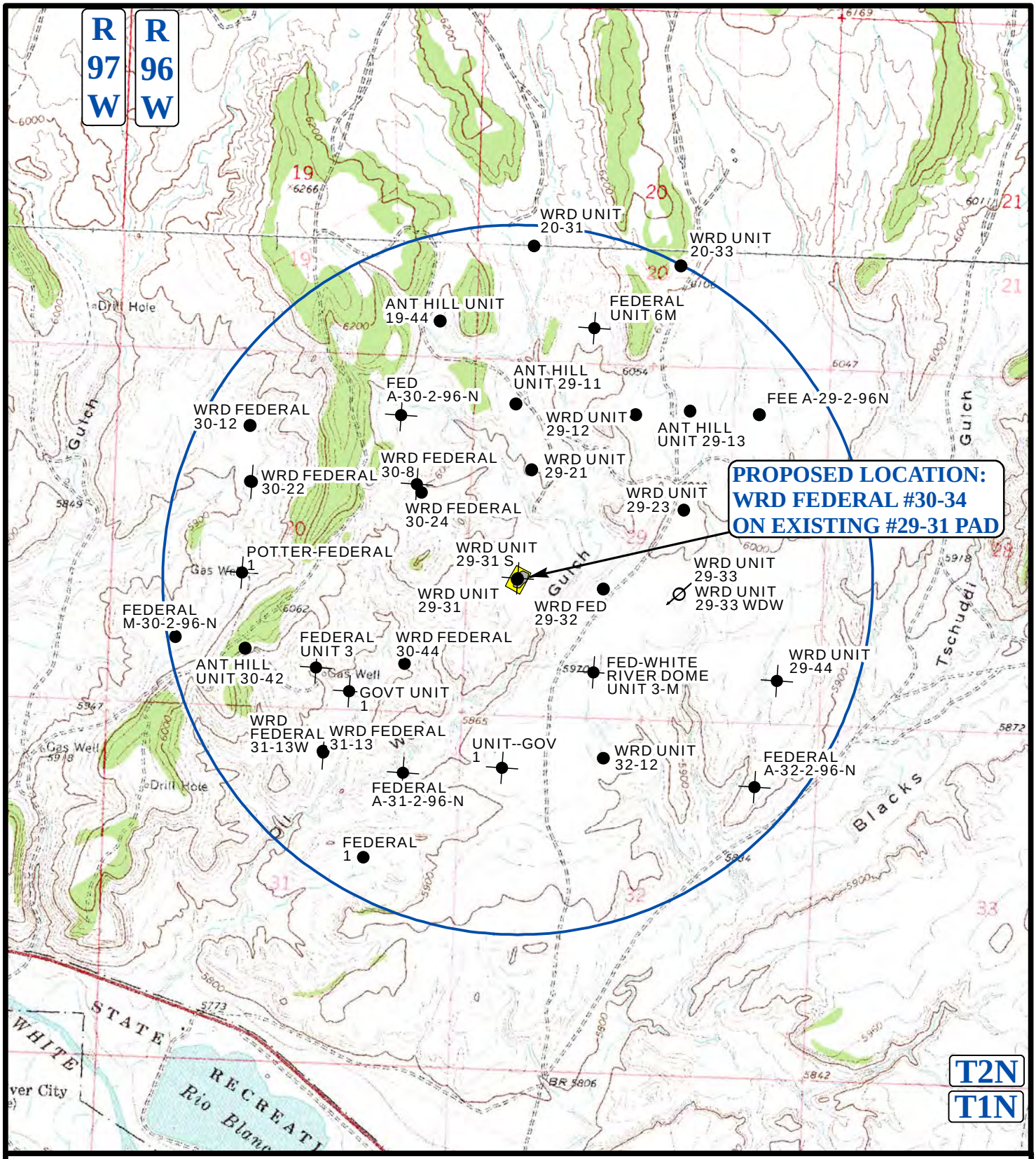
ACCESS ROAD MAP	03 MONTH	18 DAY	13 YEAR	B TOPO
SCALE: 1"=2000'	DRAWN BY: C.I.	REV: 04-21-14 J.M.F.		



LEGEND:

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

N

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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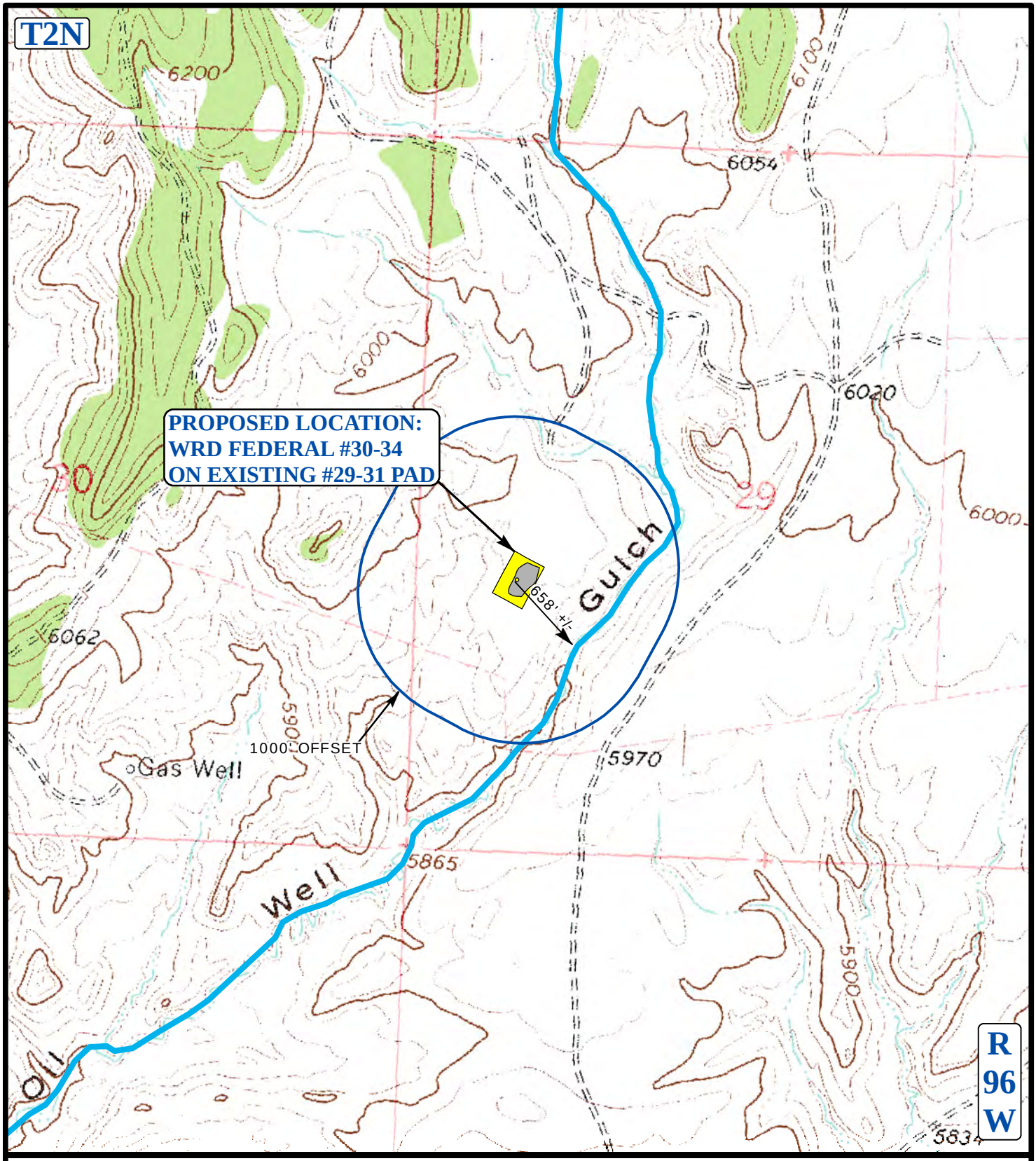
TOPOGRAPHIC MAP	03 MONTH	18 DAY	13 YEAR	C TOPO
SCALE: 1"=2000'	DRAWN BY: C.I.	REV: 04-21-14 J.M.F.		



LEGEND:

EXISTING WATER

1000' OFFSET BOUNDRY

N

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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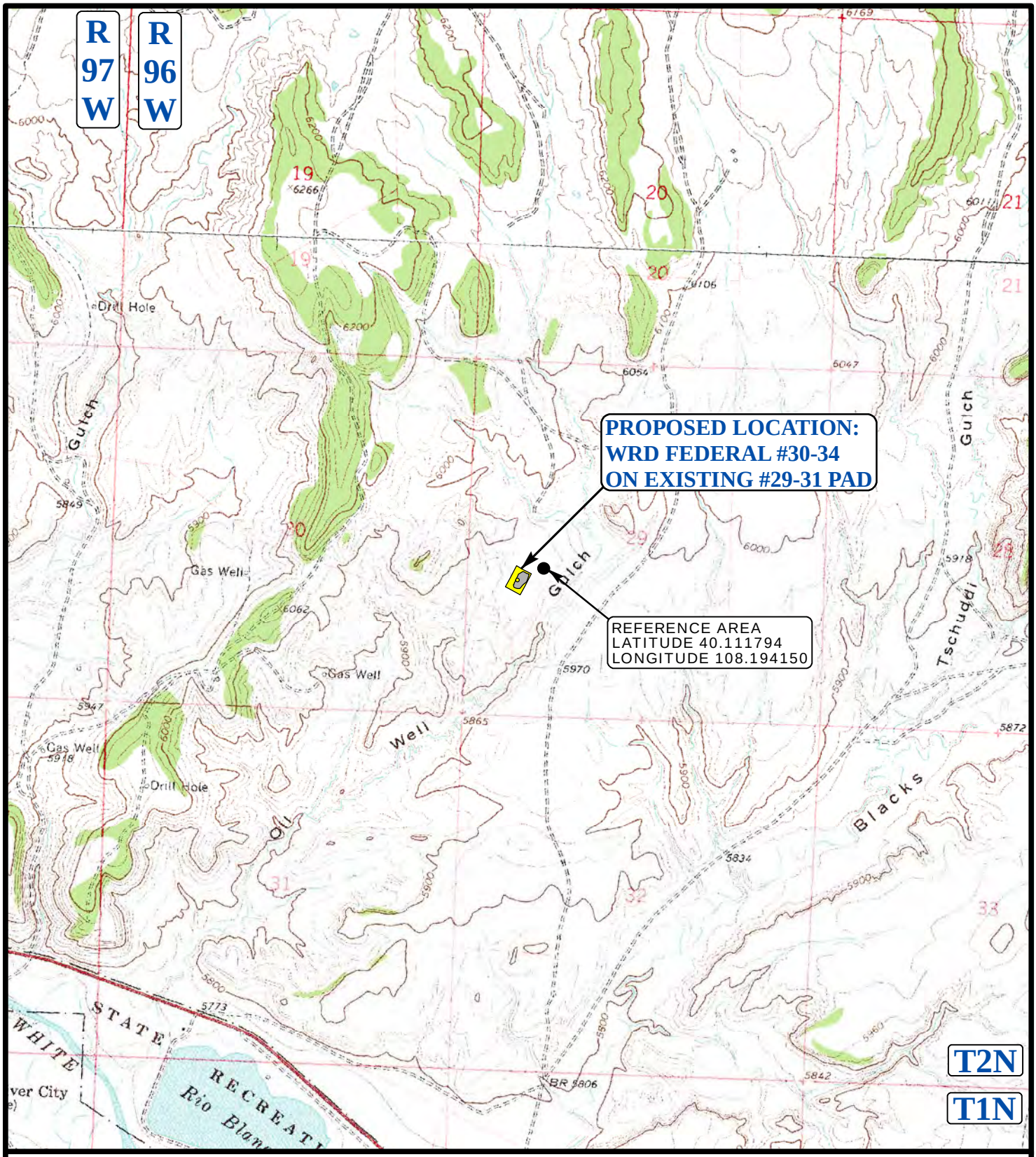
HYDROLOGY MAP

03 MONTH | 18 DAY | 13 YEAR

SCALE: 1"= 1000' | DRAWN BY: C.I. | REV: 04-21-14 J.M.F.

W TOPO



LEGEND:

N

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 -

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REFERENCE AREA PHOTOS	03 MONTH	18 DAY	13 YEAR	PHOTO REF1
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 REFERENCE AREA **CAMERA ANGLE: SOUTHERLY**

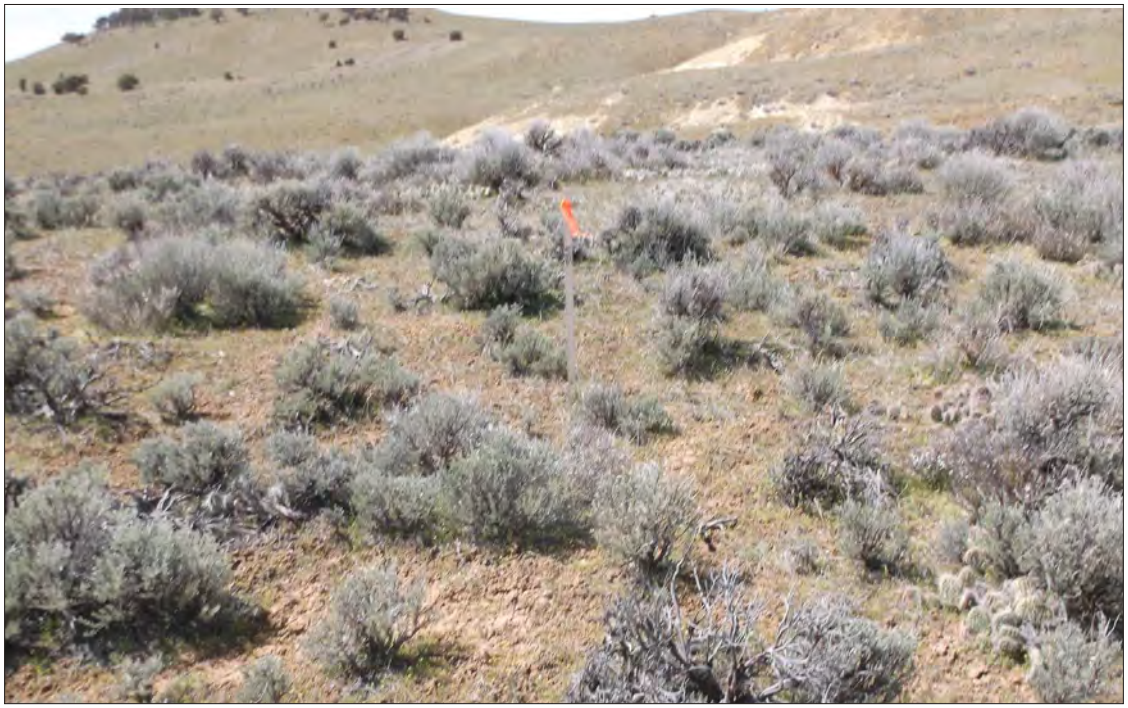

PHOTO: VIEW OF REFERENCE AREA **CAMERA ANGLE: WESTERLY**

- Since 1964 -

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REFERENCE AREA PHOTOS	03 MONTH	18 DAY	13 YEAR	PHOTO REF2
TAKEN BY: M.P.	DRAWN BY: C.I.	REV: 04-21-14 J.M.F.		