

RKI Exploration & Production
Hydrogen Sulfide Contingency Plan
For Drilling/Workover/Facility

This well and its anticipated facility are not expected to have Hydrogen Sulfide releases. However, there may be Hydrogen Sulfide production in the nearby area. There are no private Residences in the area but a contingency plan has been orchestrated. RKI Exploration and Production will have a Company Representative available to rig personnel through out drilling or production operations. If hydrogen sulfide is detected or suspected, monitoring equipment will be acquired for monitoring and/or testing.

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General H2S Emergency Actions:

1. All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".
2. If for any reason a person must enter the hazardous area, they must wear a SCBA (Self Contained Breathing Apparatus).
3. Always use the "buddy system"
4. Isolate the well/problem if possible
5. Account for all personnel
6. Display the proper colors warning all unsuspecting personnel of the danger at hand.
7. Contact the Company personnel as soon as possible if not at the location (use the enclosed call list as instructed)

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of the emergency response agencies and nearby residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S

1. All personnel will don the self contained breathing apparatus
2. Remove all personnel to the "safe area" (always use the buddy system)
3. Contact company personnel if not on location]
4. Set in motion the steps to protect and or remove the general public to and upwind "safe area" Maintain strict security & safety procedures while dealing with the source.
5. No entry to any unauthorized personnel
6. Notify the appropriate agencies: City Police -- City Street(s)
 State Police -- State Rd.
 County Sheriff -- County Rd.
7. Call the NMOCD

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If at this time the supervising person determines the release of H₂S cannot be contained to the site location and the general public is in harms way he will take the necessary steps to protect the workers and the public.

EMERGENCY CALL LIST: (Start and continue until ONE of these people has been contacted)

	OFFICE	MOBILE	HOME
RKI E&P	1-800-667-6958		
Gene Simer	575-885-1313	575-706-3225	575-885-6302
Tim Haddican	405-949-2329	405-823-2872	405-348-5515

EMERGENCY RESPONSE NUMBERS:

State Police	Eddy County		575 -748-9718
State Police	Lea County		575-392-5588
Sheriff	Eddy County		575-746-2701
Sheriff	Lea County		
Emergency Medical	Eddy County		911 or 505-746-2701
Service (Ambulance)	Lea County	Eunice	911 or 505-394-3258
Emergency Response	Eddy County SERC		575--476-9620
	Lea County		
Artesia Police Dept			575--746-5001
Artesia Fire Dept			575--746-5001
Carlsbad Police Dept			575-885-2111
Carlsbad Fire Dept			575--885-3125

EMERGENCY CALL LIST (CONT.)

Loco Hills Police Dept		575- 677-2349
Jal Police Dept		575- .395-2501
Jal Fire Dept		575- .395-2221
Jal Ambulance		575- .395-2221
Eunice Police Dept		575- 394-0112
Eunice Fire Dept		575- .394-3258
Eunice Ambulance		575- .394-3258
Hobbs Police Dept		575- .397-3365
Hobbs Fire Dept		575- .397-9308
NMOCD	District 1 (Lea, Roosevelt, Curry)	575- .393-6161
	District 2 (Eddy, Chavez)	575- .748-1283
Lea County Information		575- .393-8203
Callaway Safety	Eddy/Lea Counties	575- .392-2973
BJ Services	Artesia	575- .746-3140
	Hobbs	575- .392-5556
Halliburton	Artesia	1-800-523-2482
	Hobbs	1-800-523-2482
Wild Well Control	Midland	432-550-6202
	Mobile	432-553-1166

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PROTECTION OF THE GENERAL PUBLIC (ROE)

- 100 ppm at any public area (any place not associated with this site)
- 500 ppm at any public road (any road with the general public may travel)
- 100 ppm radius of ¼ mile in New Mexico will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H₂S could be present in concentrations greater than 100 ppm in the gas mixture

CALCULATIONS FOR THE 100 PPM (ROE) "PASQUILL-GIFFORD EQUATION"

$X = [(1.589) (\text{mole fraction}) (Q\text{-volume in std cu ft}) \text{ to the power of } (0.6258)]$

CALCULATION FOR THE 500 PPM ROE:

$X = [(.4546) (\text{mole fraction}) (Q - \text{volume in std cu ft}) \text{ to the power of } (0.6258)]$

Example:

If a well/facility has been determined to have 150 / 500 ppm H₂S in the gas mixture and the well/facility is producing at a gas rate of 100 MCFPD then:

150 ppm $X = [(1.589) (.00015) (100,000 \text{ cfd}) \text{ to the power of } (.6258)]$
 $X \approx 7 \text{ ft.}$

500 ppm $X = [(.4546) (.0005) (100,000 \text{ cfd}) \text{ to the power of } (.6258)]$
 $X \approx 3.3 \text{ ft.}$

(These calculations will be forwarded to the appropriate District NMOCD office when Applicable)

PUBLIC EVACUATION PLAN:

- Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
- A trained person in H₂S safety shall monitor with detection equipment the H₂S concentration, wind and area exposure (ROE). This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. (All monitoring equipment shall be UL approved, for use in class 1 groups A, B, C & D, Division 1, hazardous locations. All monitor will have a minimum capability of measuring H₂S, oxygen and flammable values.)

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- Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
- The company supervising personnel shall stay in communication with all agencies through out the duration of the situation and inform such agencies when the situation has been contained and the effected area(s) is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLABLE CONDITION:

1. Human life and/or property are in danger.
2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

INSTRUCTION FOR IGNITION:

1. Two people are required. They must be equipped with positive pressure, self contained breathing apparatus and a "D" ring style full body, OSHA approved safety harness. Non flammable rope will be attached.
2. One of the people will be qualified safety person who will test the atmosphere for H₂S, oxygen and LFL. The other person will be the company supervisor; he is responsible for igniting the well.
3. Ignite up wind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25 mm flare gun shall be used, with a \pm 500 ft. range to ignite the gas.
4. Prior to ignition, make a final check with combustible gases.
5. Following ignition, continue with the emergency actions & procedures as before.

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REQUIRED EMERGENCY EQUIPMENT:

1. **Breathing apparatus:**
 - Rescue packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
 - Work/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity
 - Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.
2. **Signage & Flagging:**
 - One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - A colored conditioned flag will be on display, reflecting the condition at the site at the time.
3. **Briefing Area:**
 - Two perpendicular areas will be designated by signs and readily accessible.
4. **Wind Socks:**
 - Two windsocks will be placed in strategic locations, visible from all angles.
5. **H2S Detectors & Alarms:**
 - The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible at 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer)
 - Rig Floor
 - Bell Nipple
 - End of flow line or where well bore fluid are being discharged.
6. **Auxiliary Rescue Equipment:**
 - Stretcher
 - Two OSHA full body harness
 - 100 ft. 5/8 inch OSHA approved rope.
 - 1 – 20# class ABC fire extinguisher
 - Communication via cell phones on location and vehicles on location.

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USING SELF CONTAINED BREATHING AIR EQUIPMENT (SCBA):

- (SCBA) SHOULD BE WORN WHEN ANY OF THE FOLLOWING ARE PERFORMED:
 - Working near the top or on the top of a tank
 - Disconnecting any line where H₂S can reasonably be expected
 - Sampling air in the area to determine if toxic concentration of H₂S can exist.
 - Working in areas where over 10 ppm on H₂S has been detected.
 - At any time there is a doubt as the level of H₂S in the area.
- All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.
- Facial hair and standard eyeglasses are not allowed with SCBA.
- Contact lenses are never allowed with SCBA.
- Air quality shall be continuously checked during the entire operation.
- After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.
- All SCBA shall be inspected monthly.

RESCUE AND FIRST AID FOR VICTIMS OF HYDROGEN SULFIDE (H₂S) POISONING:

- Do not panic
- Remain calm and think
- Get on the breathing apparatus

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- Remove the victim to the safe breathing area as quickly as possible. Up wind and uphill from source or cross wind to achieve upwind.
- Notify emergency response personnel.
- Provide artificial respiration and or CPR, as necessary.
- Remove all contaminated clothing to avoid further exposure.
- A minimum of two personnel on location shall be trained in CPR and First Aid.

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H₂S is extremely toxic. The acceptable ceiling for eight hours of exposure is 10 ppm, which is .001% by volume. H₂S is approximately 20% heavier than air (Sp. Gr = 1.19) (Air = 1) and colorless. It forms an explosive mixture with air between 4.3% and 46%. By volume hydrogen sulfide is almost as toxic as hydrogen cyanide and is 5-6 times more toxic than carbon monoxide.

COMMON NAME	CHEMICAL ABBREV.	SPECIFIC GRVTY.	THRESHOLD LIMITS	HAZARDOUS LIMITS	LETHAL CONCENTRATIONS
Hydrogen Sulfide	H ₂ S	1.19	10 ppm 15 ppm	100 ppm/hr	600ppm
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Sulfur Dioxide	SO ₂	2.21	2 ppm	N/A	1000 ppm
Chlorine	Cl ₂	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO ₂	1.52	5000 ppm	5%	10%
Methane	CH ₄	0.55	90,000	Combustible @ 5%	N/A

Threshold Limit: Concentrations at which it is believed that all workers may be repeatedly exposed, day after day without adverse effects.

Hazardous Limit: Concentrations that may cause death.

Concentrations: Concentrations that will cause death with short term exposure.

Threshold Limit: NIOSH guide to chemical hazards
(10 ppm)

PHYSICAL EFFECTS OF HYDROGEN SULFIDE:

CONCENTRATION	PHYSICAL EFFECTS
.001% 10 ppm	Obvious and unpleasant odor. Safe for 8 hr. exposure
.005% 50 ppm	Can cause some flu like symptoms and can cause pneumonia.
.01% 100 ppm	Kills the sense of smell in 3-15 minutes. May irritate the eyes and throat.
.02% 200 ppm	Kills the sense of smell rapidly. Severely irritates the eyes and throat. Severe flu-like symptoms after 4 or more hours. May cause lung damage and or death.
.06% 600 ppm	Loss of consciousness quickly, death will result if not rescued promptly.

SURFACE USE PLAN

RKI Exploration & Production, LLC

RDU Federal 27-2H

Surface Hole: 660' FNL & 1500' FWL

Section 27, T. 26 S., R. 30 E.

Bottom Hole: 660 FSL & 1650 FWL

Section 34, T. 26 S., R. 30 E

Eddy County, New Mexico

This plan is submitted with form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

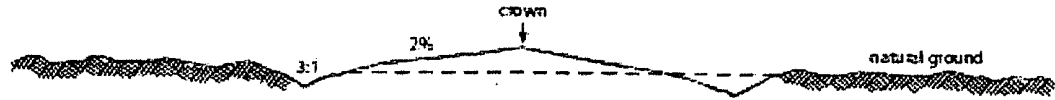
- A. **DIRECTIONS:** Go south of Carlsbad, NM, on Highway 285, for 24 miles. Turn east onto the Whitethorn Road (County Road 725) for 10.3 miles. From the junction of Tarbrush and Longhorn roads, go east 2.3 miles to a "Y" and go right for 1.6 miles to the end of County Road 725, go east for 2.6 miles to lease road, on lease road go north 0.6 miles then east 0.1 miles turning north for 0.2 miles to the RDU #19 well pad and the proposed new road of 174.4 ft. to the proposed well.

All existing roads are either paved or a caliche lease road.

- B. See attached plats and maps provided by Basin Surveys.
- C. The access route from Eddy County Road 725 to the well location is depicted on Exhibit C.
- D. Existing roads on the access route will be improved and maintained to the standard set forth in Section 2 of this Surface Use Plan of Operations.
- E. A right-of-way (ROW) is required to access the well, on the existing road system, since the access route crosses out of the unit boundary, and no previous ROW has been applied for to cover the existing roadway back to C.R. 725. RKI Exploration & Production LLC. is currently applying for a ROW grant from the BLM.

2. NEW OR RECONSTRUCTED ACCESS ROADS:

- A. The new access road will begin at the southwest corner of the RDU #19 well, running west, to the southeast corner of the proposed well location. The length of the new road will be 174.4 ft. This portion of new road construction is all within the unit boundary and will not require a ROW permit.
- B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



Level Ground Section

- C. Surface material will be native caliche. The average grade of the entire road will be approximately 3%.
- D. Fence Cuts: No
- E. Cattle guards: No
- F. Turnouts: No
- G. Culverts: No
- H. Cuts and Fills: Not significant
- I. Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.
- J. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route.
- K. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

3. LOCATION OF EXISTING WELLS:

See attached map (Exhibit D) showing all wells within a one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, production equipment will be installed on the well site. See Production Facilities Layout diagram (Exhibit B) for the proposed production facility layout and the areas of the well pad not required for production that will be reclaimed.
- B. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted to BLM specifications.
- C. Containment berms will be constructed completely around production facilities designed to hold fluids. The containment berms will be constructed or compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

5. LOCATION AND TYPE OF WATER SUPPLY:

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck using the existing and proposed roads shown in the attached survey plats. If a commercial water well is nearby, a temporary, surface poly line,

will be laid along existing roads or other ROW easements and the water pumped to the well. No water well will be drilled on the location.

6. SOURCE OF CONSTRUCTION MATERIALS:

Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from Federal lands without prior approval from the appropriate surface management agency. All roads will be constructed of 6" rolled and compacted caliche.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to an NMOCD approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Portable, self-contained chemical toilets will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location, not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.

8. ANCILLARY FACILITIES:

No campsite, airstrip, or other facilities will be built as a result of the operation of this well. No staging areas are needed.

9. WELL SITE LAYOUT:

- A. Exhibit A shows the dimensions of the proposed well pad.
- B. The proposed well pad size will be 300' x 325' (See Exhibit A). There will be no reserve pit due to the well being drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.
- C. The Basin Surveyor's plat, Form C-102 and Exhibit A, shows how the well will be turned to a V-Door North Northwest.
- D. A 600' x 600' area has been staked and flagged.
- E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad, and topsoil storage areas)

10. PLANS FOR SURFACE RECLAMATION:

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, all the equipment will be removed, the surface material, caliche, will be

removed from the well pad and road and transported to the original caliche pit or used for other roads. The original stock piled top soil will be returned to the pad and contoured, as close as possible, to the original topography. The access road will have the caliche removed and the road ripped, barricaded and seeded as directed by the BLM.

- B. If the well is a producer, the portions of the location not essential to production facilities or space required for workover operations, will be reclaimed and seeded as per BLM requirements.

C. Reclamation Objectives:

The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.

The long-term objective of final reclamation is to return the land to a condition approximating that which existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydro logical functioning, and vegetative productivity.

D. Reclamation Performance Standards

The following reclamation performance standards will be met:

Interim Reclamation – Includes disturbed areas that may be redisturbed during operations and will be redisturbed at final reclamation to achieve restoration of the original landform and a natural vegetative community.

- Disturbed areas not needed for active, long-term production operations or vehicle travel will be recontoured, protected from erosion, and revegetated with a self-sustaining, vigorous, diverse, native (or as otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious, invasive, and non-native weeds.

Final Reclamation – Includes disturbed areas where the original landform and a natural vegetative community will be restored and it is anticipated the site will not be redisturbed for future development.

- The original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors.
- A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community will be established on the site, with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.
- No single species will account for more than 30% total vegetative composition unless it is evident at higher levels in the adjacent landscape. Permanent vegetative cover will be determined successful when the basal cover of desirable perennial species is at least 80% of the basal cover on adjacent or nearby undisturbed areas where

- vegetation is in a healthy condition
- Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gulying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.
- The site will be free of State- or county-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds are controlled.

E. Reclamation Actions

Earthwork for interim and final reclamation will be completed within 6 months of well completion or plugging unless a delay is approved in writing by the BLM authorized officer.

The following minimum reclamation actions will be taken to ensure that the reclamation objectives and standards are met. It may be necessary to take additional reclamation actions beyond the minimum in order to achieve the Reclamation Standards.

Reclamation – General

Notification:

- The BLM will be notified at least 3 days prior to commencement of any reclamation operations.

Housekeeping:

- Within 30 days of well completion, the well location and surrounding areas(s) will be cleared of, and maintained free of, all debris, materials, trash, and equipment not required for production.
- No hazardous substances, trash, or litter will be buried or placed in pits.

Vegetation Clearing:

- Grass, forbs, and small woody vegetation, such as shinnery oak (if present) will be excavated as the topsoil is removed.
- Large woody vegetation, such as mesquite will be stripped and stored separately and re-spread evenly on the site following topsoil re-spreading.

Topsoil Management:

- Operations will disturb the minimum amount of surface area necessary to conduct safe and efficient operations.
- Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the topsoil will be stripped and stockpiled around the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil will include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.
- On sites where there is not at least an average of 6 inches of topsoil across the site available for stockpiling, soil amendments will be used to augment the available topsoil and improve plant germination and growth. Soil amendments will be agreed to by both the operator and the BLM prior to disturbing the site.

- Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment or so dry that dust clouds greater than 30 feet tall are created. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- No major depressions will be left that would trap water and cause ponding unless the intended purpose is to trap runoff and sediment.

Seeding:

- Seedbed Preparation. Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4 – 6 inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.
- If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
- Seed Application. Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used.
- If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.

Erosion Control and Mulching:

- Where applicable, the mitigation techniques such as surface roughening and mulching will be used to keep water on site, thereby enhancing re-vegetation of the site and controlling erosion and runoff.
- All erosion control devices and materials will be installed and maintained to be fully functional until revegetation is determined successful by the BLM.
- Silt fencing, waddles, hay bales, and other erosion control devices will be used where necessary to prevent soil movement from water erosion.
- Mulch will be used if necessary to control wind and water erosion, create vegetation micro-sites, and retain soil moisture on site. Mulches may include native grass hay, wood fiber, live mulch, cotton or jute. Mulch will be certified free of noxious or invasive weed seeds and free from mold and fungi.
- If loose hay mulch is used, it will be crimped into the soil to prevent blowing.
- All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species.
- Each site where the BLM has not approved interim or final reclamation success will be monitored annually between Mid-May and July to determine the presence of any invasive, noxious, and non-native species. Invasive, noxious, and non-native species that have been identified during monitoring will be promptly treated and controlled, prior to the production of seed heads. A Pesticide Use Proposal (PUP) will be submitted to the BLM for approval prior to the use of herbicides.

F. Interim Reclamation Procedures

Recontouring:

- Interim reclamation action will be completed no later than 6 months from when the final well on the location has been completed, weather permitting.
- All portions of the well pad not needed for daily production operations will be stripped of surfacing material before further reclamation begins.
- The portions of the cleared well site not needed for active operational and safety purposes will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. (See attached Interim Reclamation Diagram)
- If the well is a producer, the interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
- Roads and well production equipment, such as tanks, treaters, separators, vents, electrical boxes, and equipment associated with pipeline operation, will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment will be moved so proper recontouring and revegetation can occur.

Application of Topsoil & Revegetation:

- Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including road cuts & fills.
- In order to inspect and operate the well or complete workover operations, it may be necessary to drive, park, and operate equipment on restored, interim vegetation within the previously disturbed area. Damage to soils and interim vegetation will be repaired and reclaimed following use. To prevent soil compaction, under some situations, such as the presence of moist, clay soils, the vegetation and topsoil will be removed prior to workover operations and restored and reclaimed following workover operations.

Visual Resources Mitigation:

- Trees, if present, and tall vegetation will be left along the edges of the pads whenever feasible to provide screening.
- To help mitigate the contrast between the established perimeter vegetation and the newly established vegetation, sites will be seeded five feet further outside the disturbed area.
- To reduce the view of production facilities from visibility corridors and private residences, facilities will not be placed in visually exposed locations (such as ridgelines and hilltops).
- Production facilities will be clustered and placed away from cut slopes and fill slopes to allow the maximum recontouring of the cut and fill slopes.

G. Final Reclamation Procedures

- Final reclamation actions will be completed within 6 months of well plugging, weather permitting.

- All surfacing material will be removed from the well pad and roads before any further reclamation begins.
- All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Salvaged topsoil in the interim reclaimed areas will be respread evenly over the entire disturbed site to ensure successful revegetation.
- If necessary to ensure timely revegetation, the pad will be fenced to the BLM's standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4th Edition, or will be fenced with operational electric fencing.
- Final abandonment of pipelines and flowlines will involve flushing and properly disposing of any fluids in the lines. All surface lines and any lines that are buried close to the surface that may become exposed in the foreseeable future due to water or wind erosion, soil movement, or anticipated subsequent use, must be removed. Deeply buried lines may remain in place unless otherwise directed by the authorized officer.

11. SURFACE OWNERSHIP:

- A. The surface is owned by the U. S. Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.
- B. The grazing lessee is J & S Cattle Company (Lower Tucker Draw Grazing Allotment).

12. OTHER INFORMATION:

- A. The area surrounding the well site is in a very flat, shallow gravelly loam, rolling hills type area. The vegetation consists of Mesquite, Creosote, White-Thorn Acacia with three-awns and some dropseed species.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. A Class III Cultural Resources Examination has been completed by Boone Archaeological Services and the results will be forwarded to the BLM office.

13. BOND COVERAGE:

Bond Coverage is Nationwide; Bond Number NMB-000460.

OPERATORS REPRESENTATIVE:

The RKI Exploration and Production, LLC representatives responsible for ensuring compliance of the surface use plan are listed below:

Surface:

Barry W. Hunt – Permitting Agent
1403 Springs Farm Place
Carlsbad, NM 88220
(575) 885-1417 (Home)
(575) 361-4078 (Cell)

Drilling & Production:

Bill Aubrey – RKI Exploration and Production, LLC.
3817 NW Expressway, Suite 950
Oklahoma City, Ok. 73112
(405) 996-5748 (Office)
(405) 625-7838 (Cell)

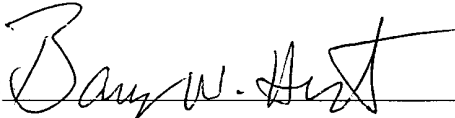
ON-SITE PERFORMED ON 7/21/10 RESULTED IN PROPOSED WELL LOCATION BEING MOVED 150 FT. TO THE WEST. THE ORIGINAL LOCATION WAS 660 FNL & 1650 FWL. DUE TO THE CLOSE PROXIMITY OF A SOUTHERN UNION GAS PIPELINE, THE LOCATION WAS MOVED TO THE PRESENT FOOTAGES OF 660 FNL & 1500 FWL. IT WAS AGREED THAT THE LOCATION WOULD BE TURNED TO A V-DOOR NORTH NORTHWEST.

PRESENT AT ON-SITE:

**BARRY HUNT – PERMITTING AGENT FOR RKI EXPLORATION & PRODUCTION
RANDY RUST – BLM
JEFF PANGBURN – BOONE ARCHAEOLOGICAL SERVICES
BASIN SURVEYORS**

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or RKI Exploration and Production, LLC am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 15th day of September 2010.

Signed:  _____

Printed Name: Barry Hunt

Position: Agent for RKI Exploration & Production, LLC.

Address: 1403 Springs Farm Place, Carlsbad, NM 88220

Telephone: (575) 361-4078

E-mail: specialtpermitting@gmail.com

Field Representative: Gene Simer

Address: P. O. Box 370, Carlsbad, NM 88221

Telephone: Office: (575) 885-1313, Cell: (575) 706-3225

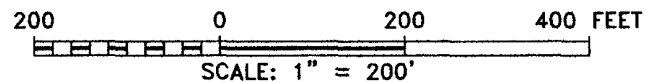
1



FROM THE JUNCTION OF TARBRUSH AND LONGHORN, GO EAST 2.3 MILES TO A "Y" GO RIGHT FOR 1.6 MILES TO END OF ROAD, GO EAST 2.6 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 0.6 MILES THENCE EAST 0.1 MILES TURNING NORTH 0.2 MILES TO WELL PAD AND PROPOSED LEASE ROAD.

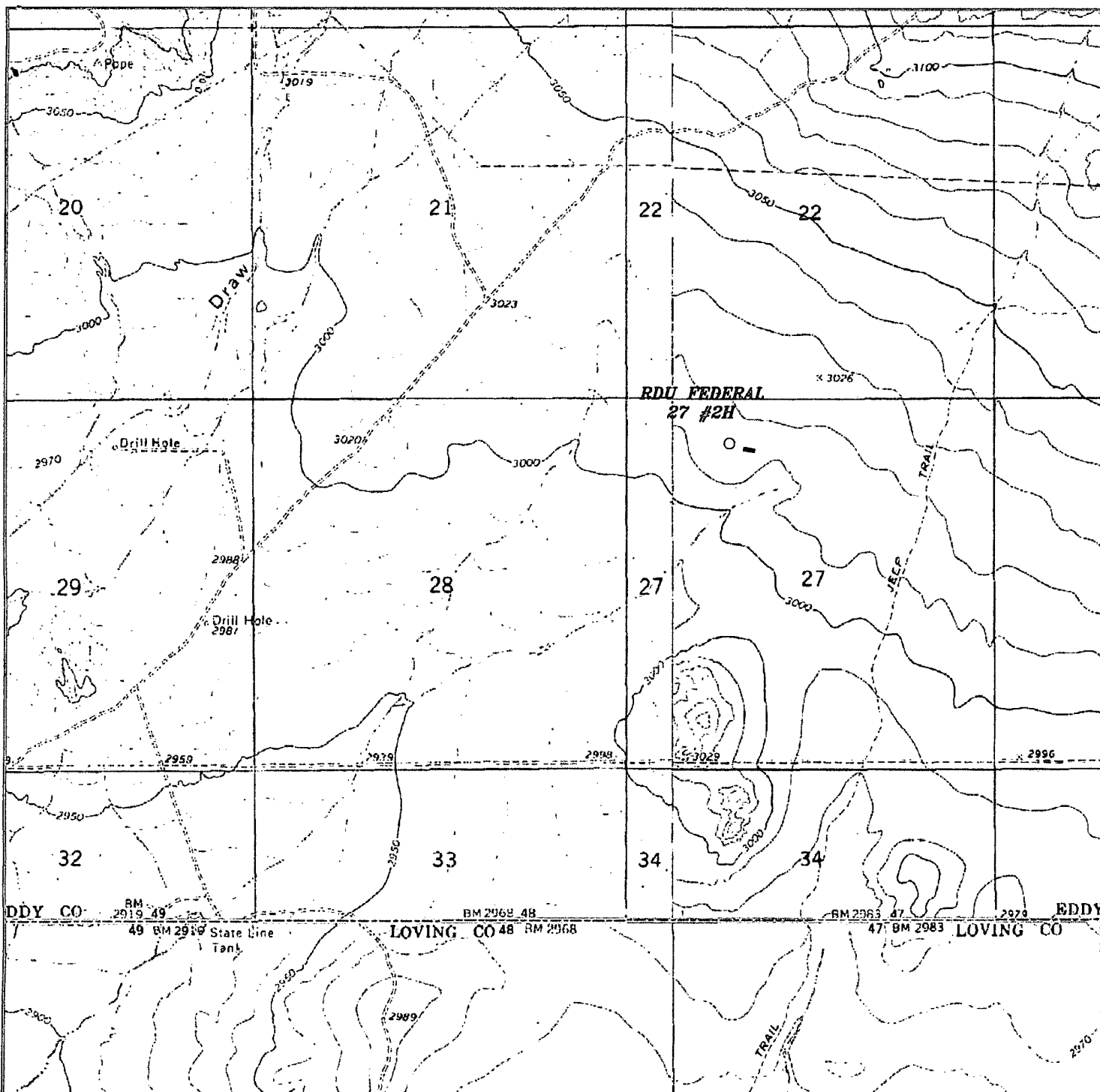
W.O. Number: 23093	Drawn By: J. SMALL
--------------------	--------------------

Date: 08-13-2010



Survey Date: 08-12-2010 Sheet 1 of 1 Sheets

Survey Date: 08-12-2010



RDU FEDERAL 27 #2H

Located 660' FNL and 1500' FWL

Section 27, Township 26 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

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surveys

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in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

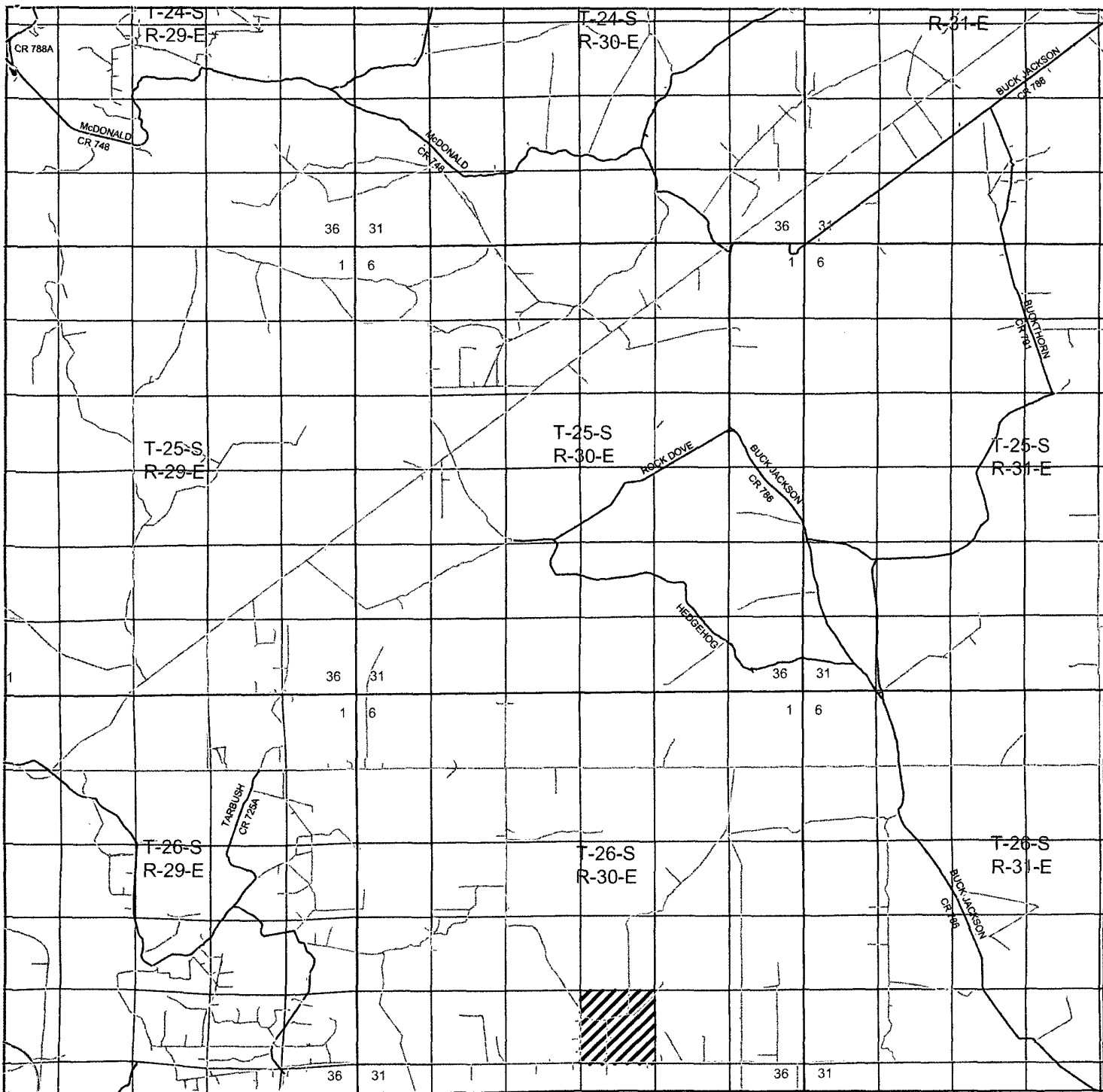
W.O. Number: JMS 23093

Survey Date: 08-12-2010

Scale: 1" = 2000'

Date: 08-13-2010

**RKI EXPLORATION
& PRODUCTION
LLC**



RDU FEDERAL 27 #2H

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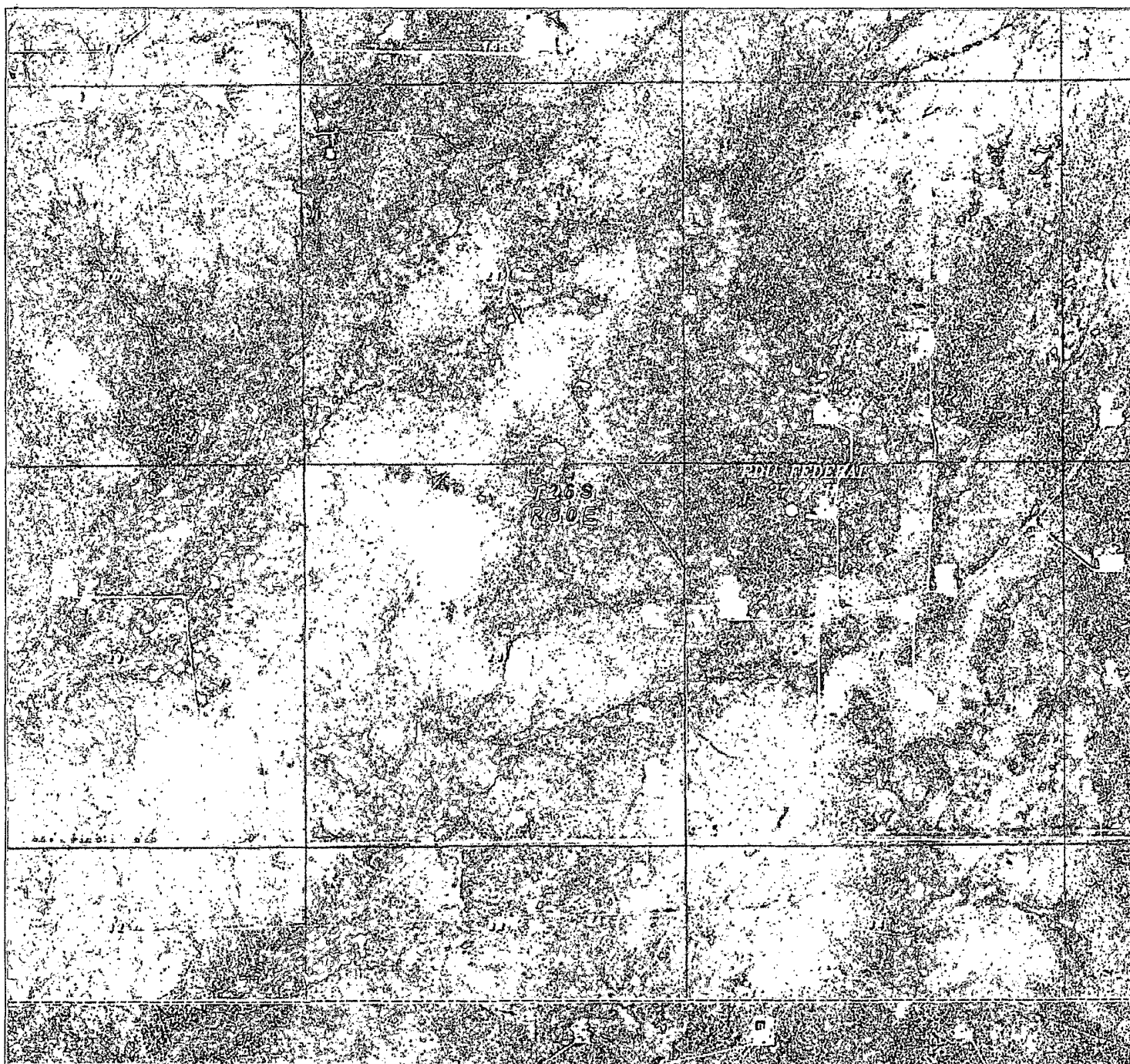
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Survey Date: 08-12-2010

Scale: 1" = 2 Miles

Date: 08-13-2010

**RKI EXPLORATION
& PRODUCTION
LLC**



RDU FEDERAL 27 #2H
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 Section 27, Township 26 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.

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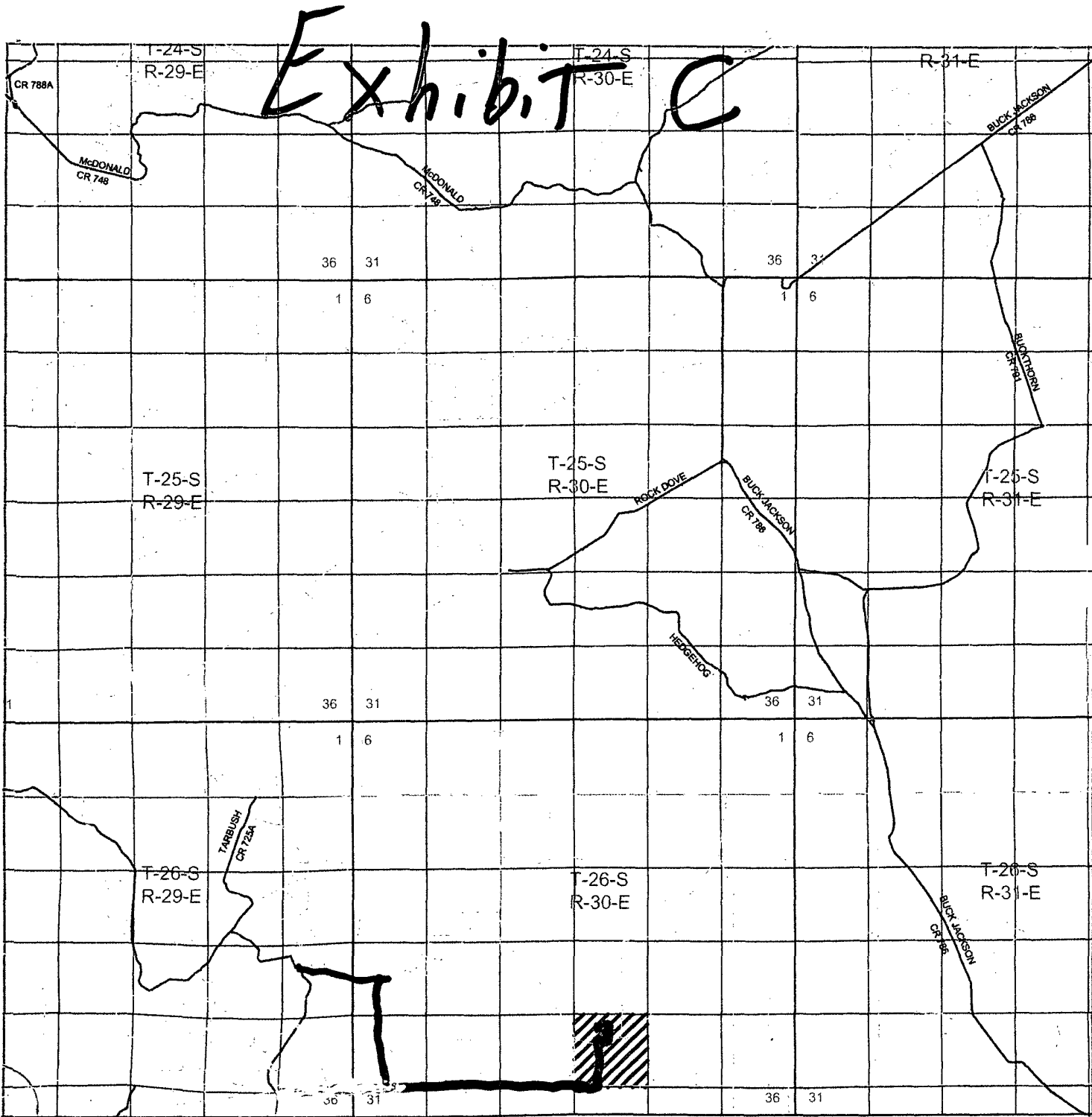
P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

W.O. Number: JMS 23093

Scale: 1" = 2000'

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND

**RKI EXPLORATION
 & PRODUCTION
 LLC**



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**RKI EXPLORATION
& PRODUCTION
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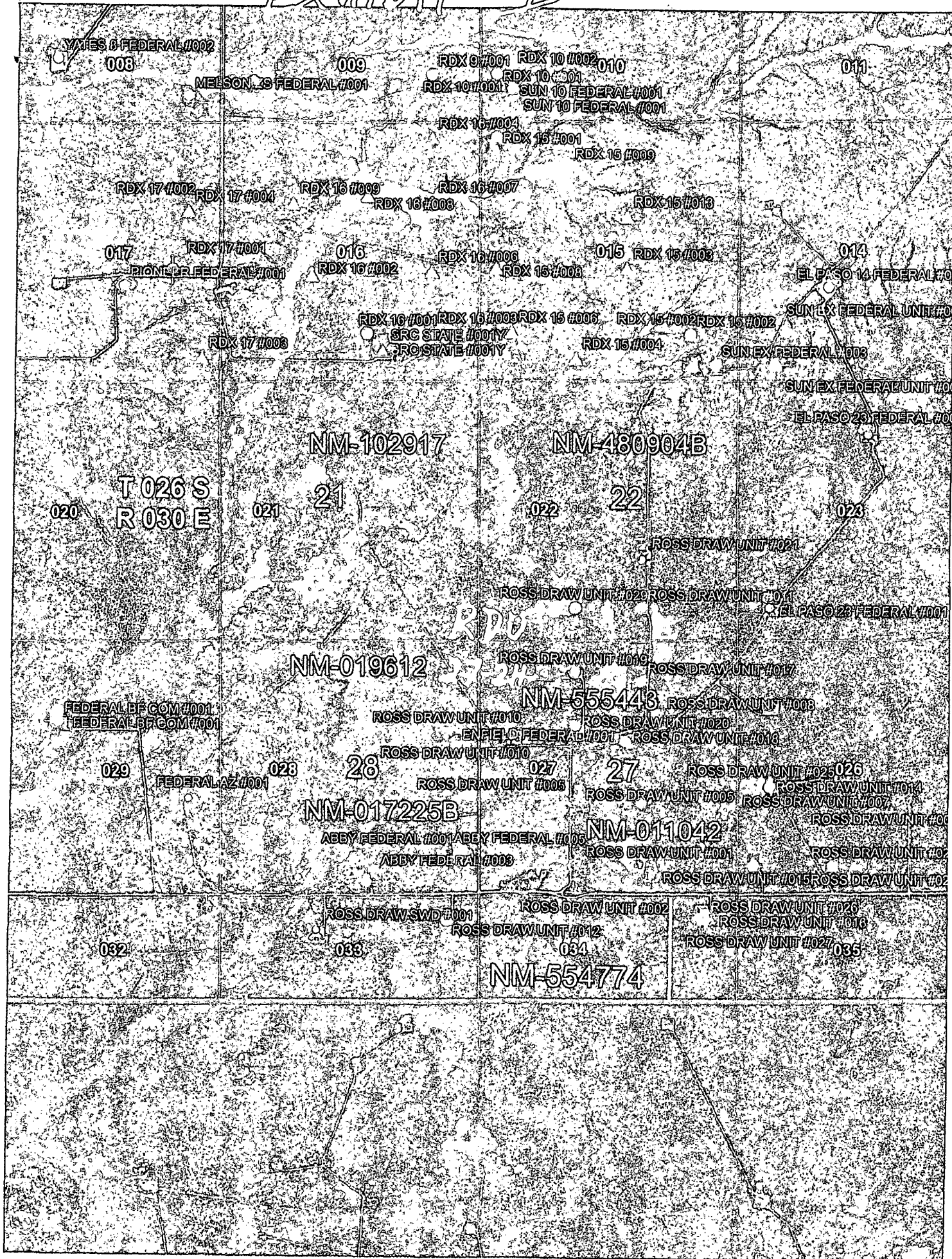


EXHIBIT 'A'

V-DOOR NORTH NORTHWEST

Rig Plat Only
Silver Oak Drilling, LLC
Rig #6, #7 & #9

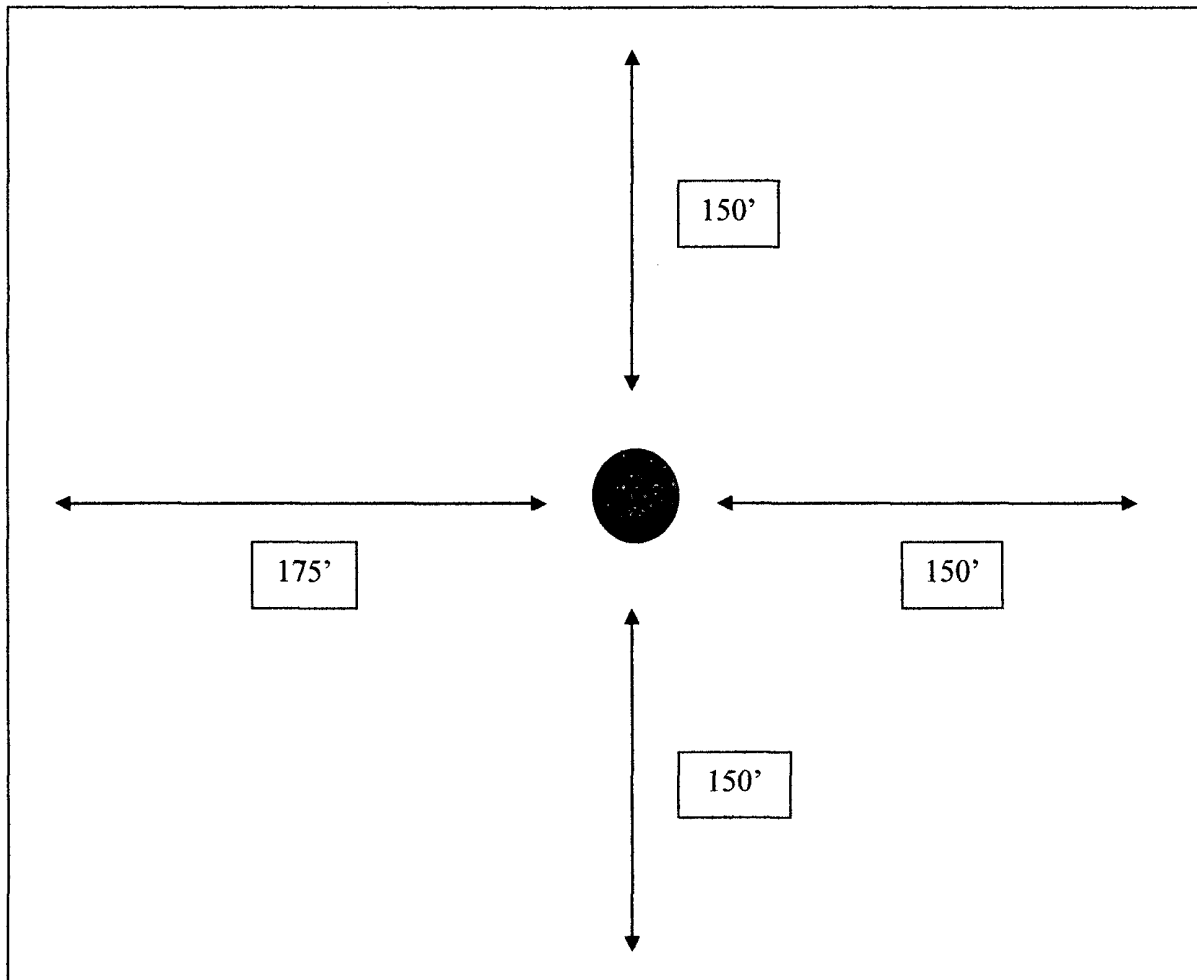
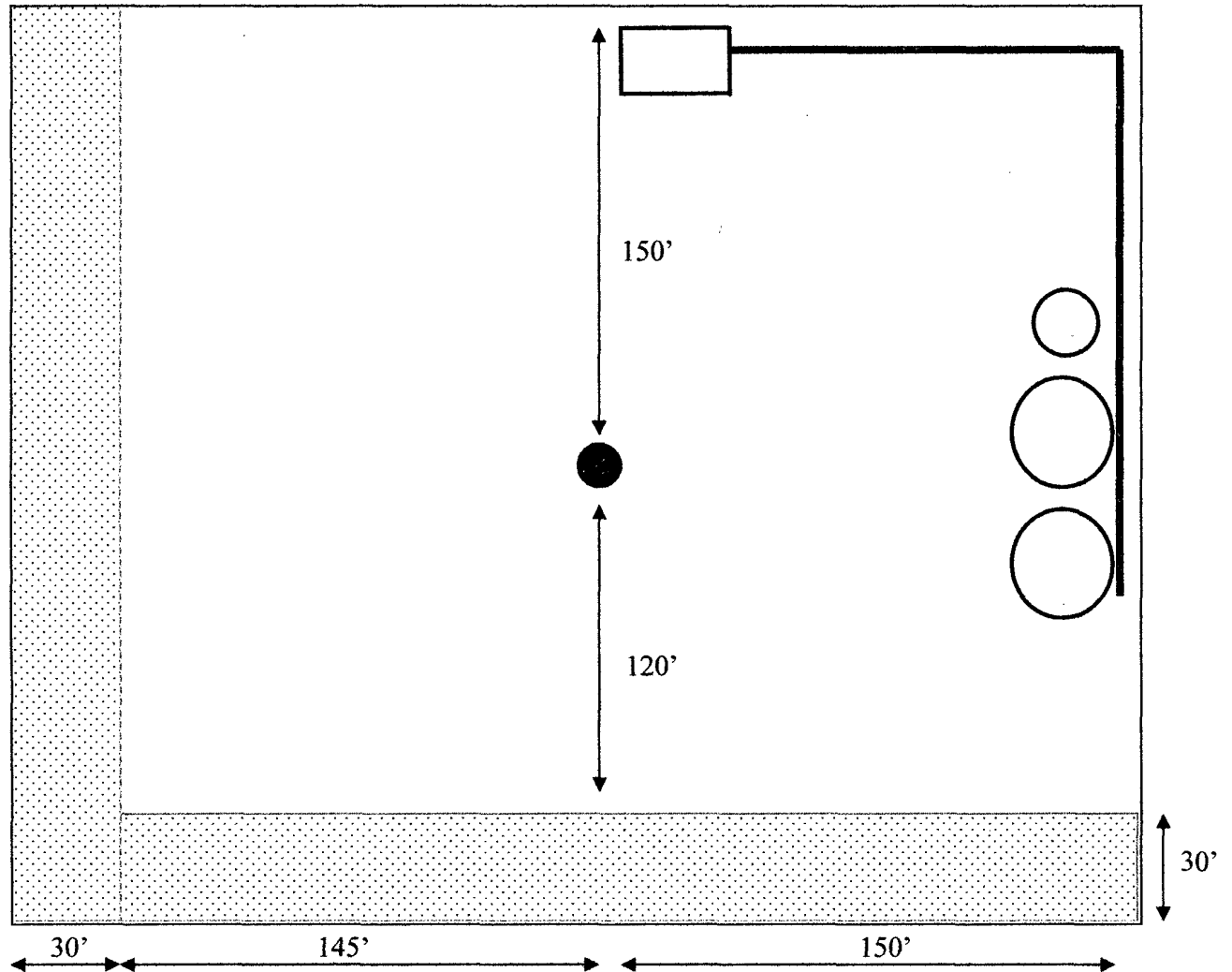


EXHIBIT 'B'
V-DOOR NORTH NORTHWEST

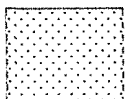
Interim Reclamation & Production Facilities



LEGEND



Well Bore



Interim Reclamation

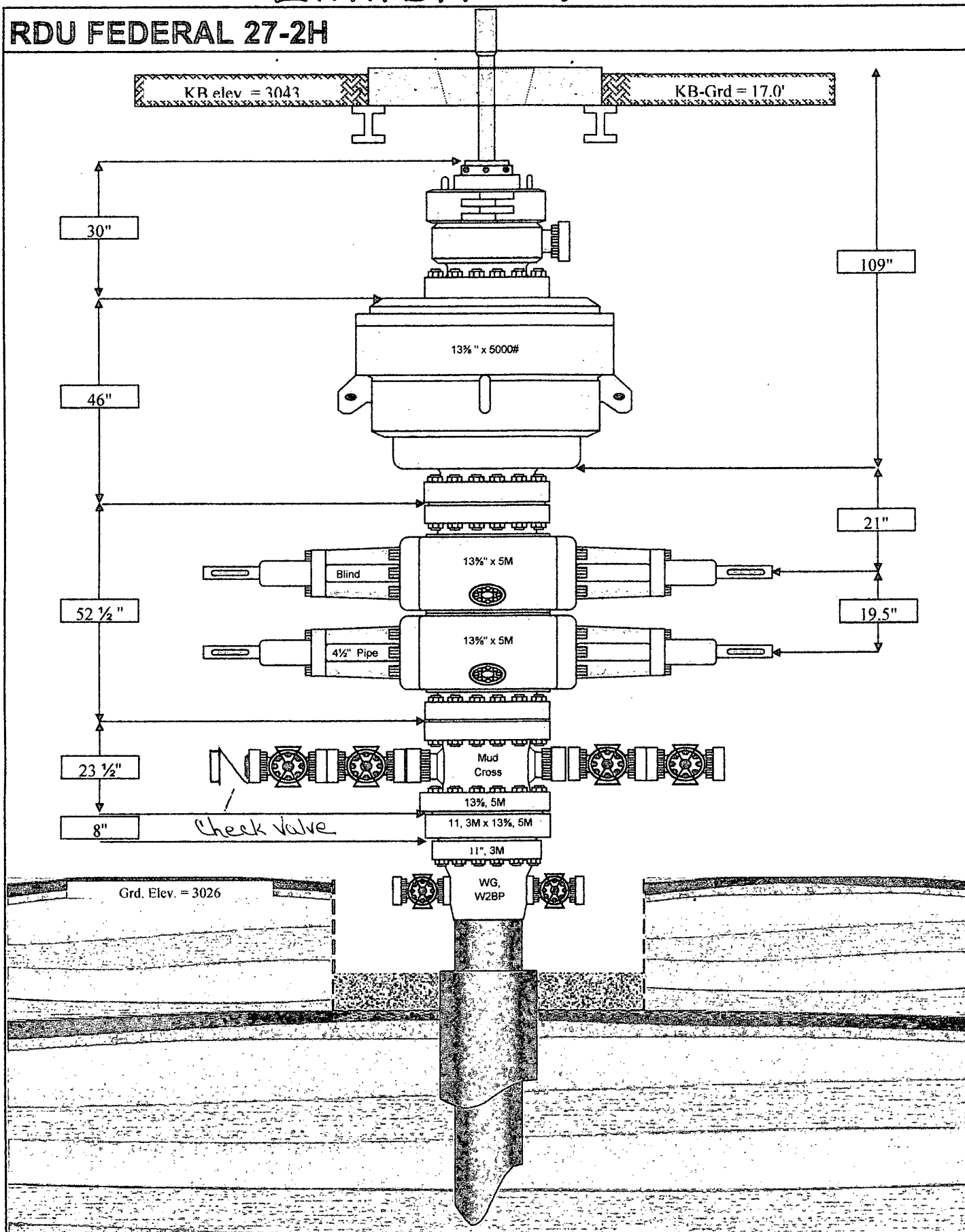


Production Facilities



WSW

RDU FEDERAL 27-2H



Choke Manifold

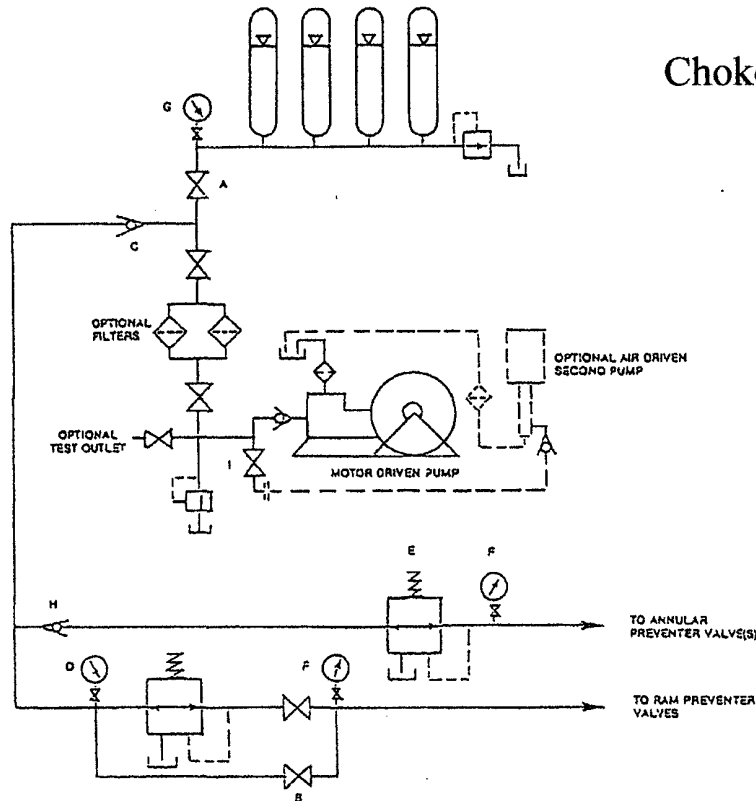


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

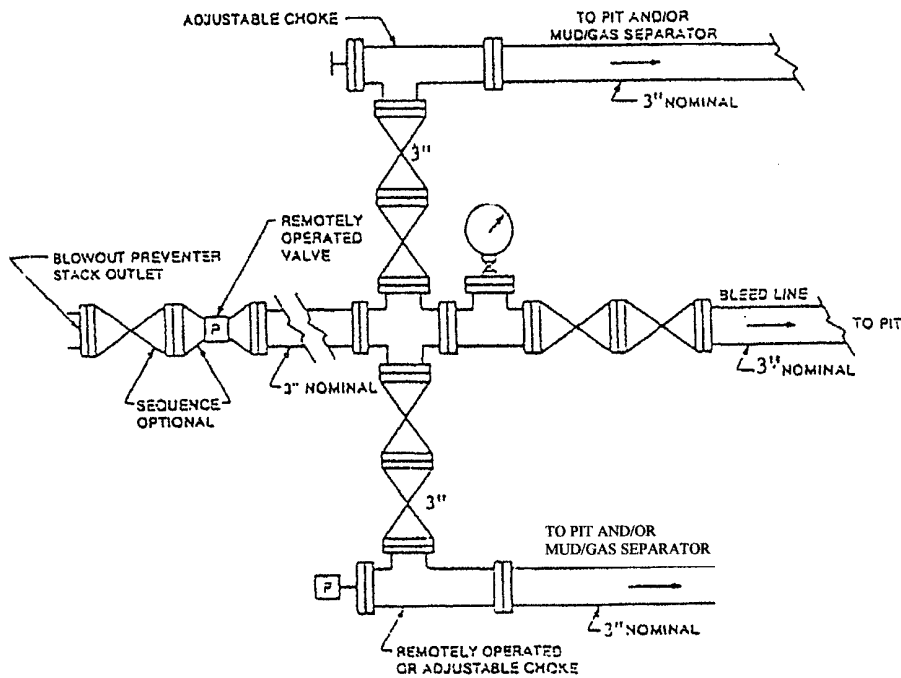


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service - surface installation.

