

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NM-480904B

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
RKI EXPLORATION & PRODUCTION, LLC

3a. Address
210 PARK AVENUE, SUITE 900
OKLAHOMA CITY, OKLAHOMA 73102

3b. Phone No. (include area code)
(405) 996-5767 (CODY REID)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
2310 FSL & 2310 FEL, SECTION 22, T. 26 S., R. 30 E.

7. If Unit of CA/Agreement, Name and/or No.
ROSS DRAW UNIT (NMNM71027X)

8. Well Name and No.
ROSS DRAW UNIT #33

9. API Well No.
30-015-40623

10. Field and Pool or Exploratory Area
ROSS DRAW; DELAWARE, EAST

11. County or Parish, State
EDDY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

RKI EXPLORATION & PRODUCTION, LLC. REQUESTS APPROVAL TO MOVE THE SURFACE LOCATION OF THIS PREVIOUSLY APPROVED APD, CHANGE TD, INTERMEDIATE CASING SIZE, PAD SIZE, PRESSURE EQUIPMENT, AND FROM AN APPROVED RESERVE PIT TO A CLOSED LOOP SYSTEM (SEE ATTACHMENTS).

RKI IS A PERMIAN BASIN MOA PARTICIPANT AND DUE TO OVERPAYMENT IS REQUESTING CREDIT TO BE APPLIED FOR THE NEW LOCATION, ACCESS ROAD AND POWER LINE.

Accepted for record

NMOCD *tes*
26-2014

SEE ATTACHED FOR
CONDITIONS OF APPROVAL



14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
BARRY W. HUNT

Title PERMIT AGENT FOR RKI EXPLORATION & PRODUCTION, LLC.

Signature *[Signature]* Date *11/15/13*

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date **JAN 30 2014**

Office CARLSBAD FIELD OFFICE

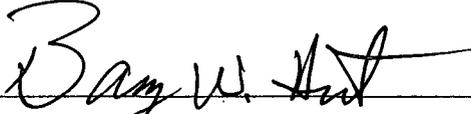
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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 18th day of November 2013.

Signed: _____



Printed Name: Barry Hunt

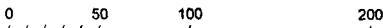
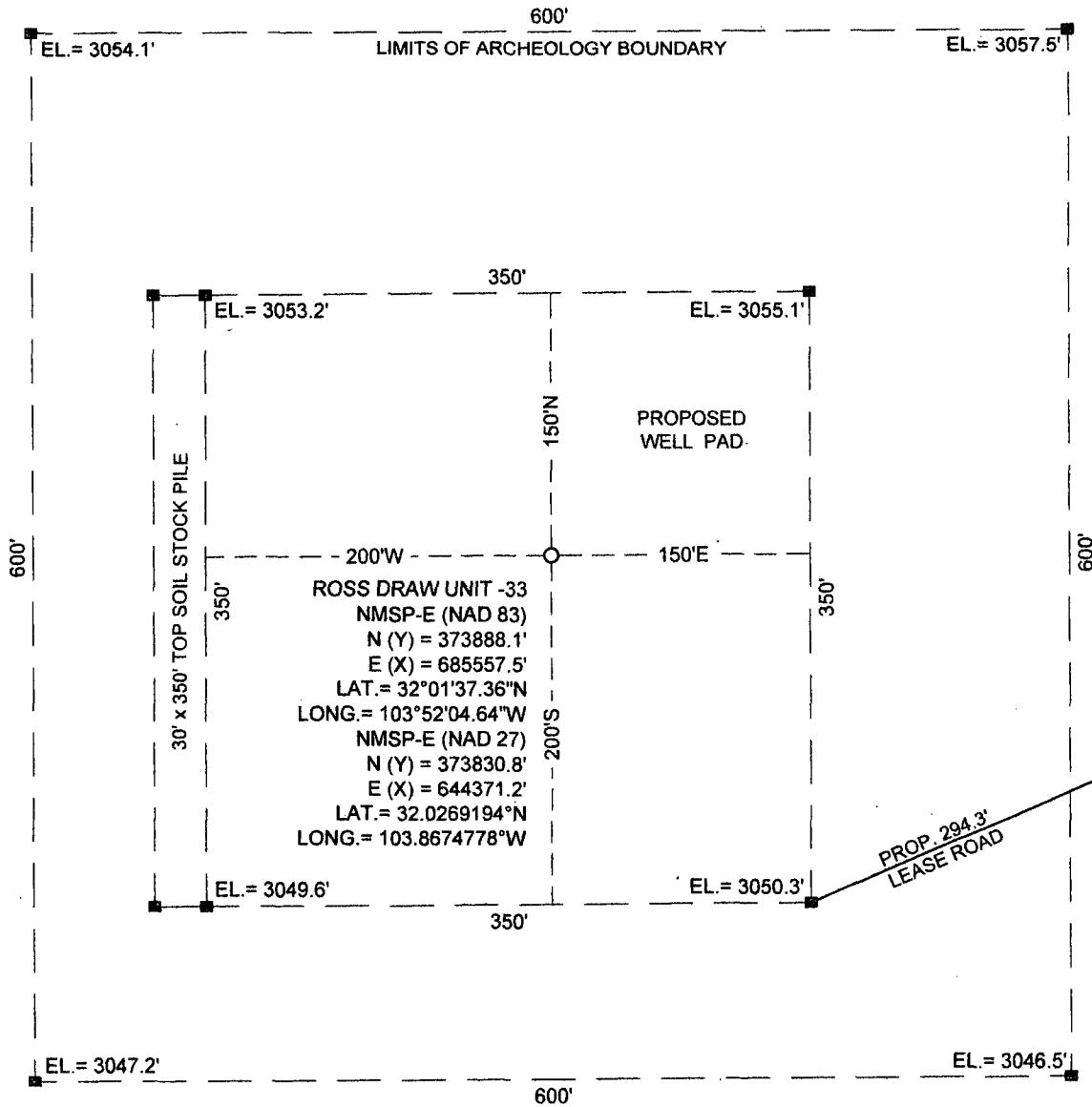
Position: Agent for RKI Exploration & Production, LLC.

Address: 1403 Springs Farm Place, Carlsbad, NM 88220

Telephone: (575) 361-4078

E-mail: specialtpermitting@gmail.com

SITE LOCATION



GRAPHIC SCALE 1" = 100'

SECTION 22, T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

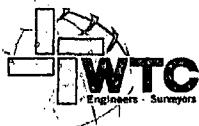
DESCRIPTION: 2310' FSL & 2310' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: ROSS DRAW UNIT 33

DRIVING DIRECTIONS:

From the intersection of Stateline Road and County Road 1, go west on Stateline Road 9.1 miles to a lease road right. Go north 0.6 mile and turn right. Go east 0.2 mile and turn left. 0.8 mile and location is 294 feet left.

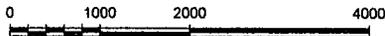
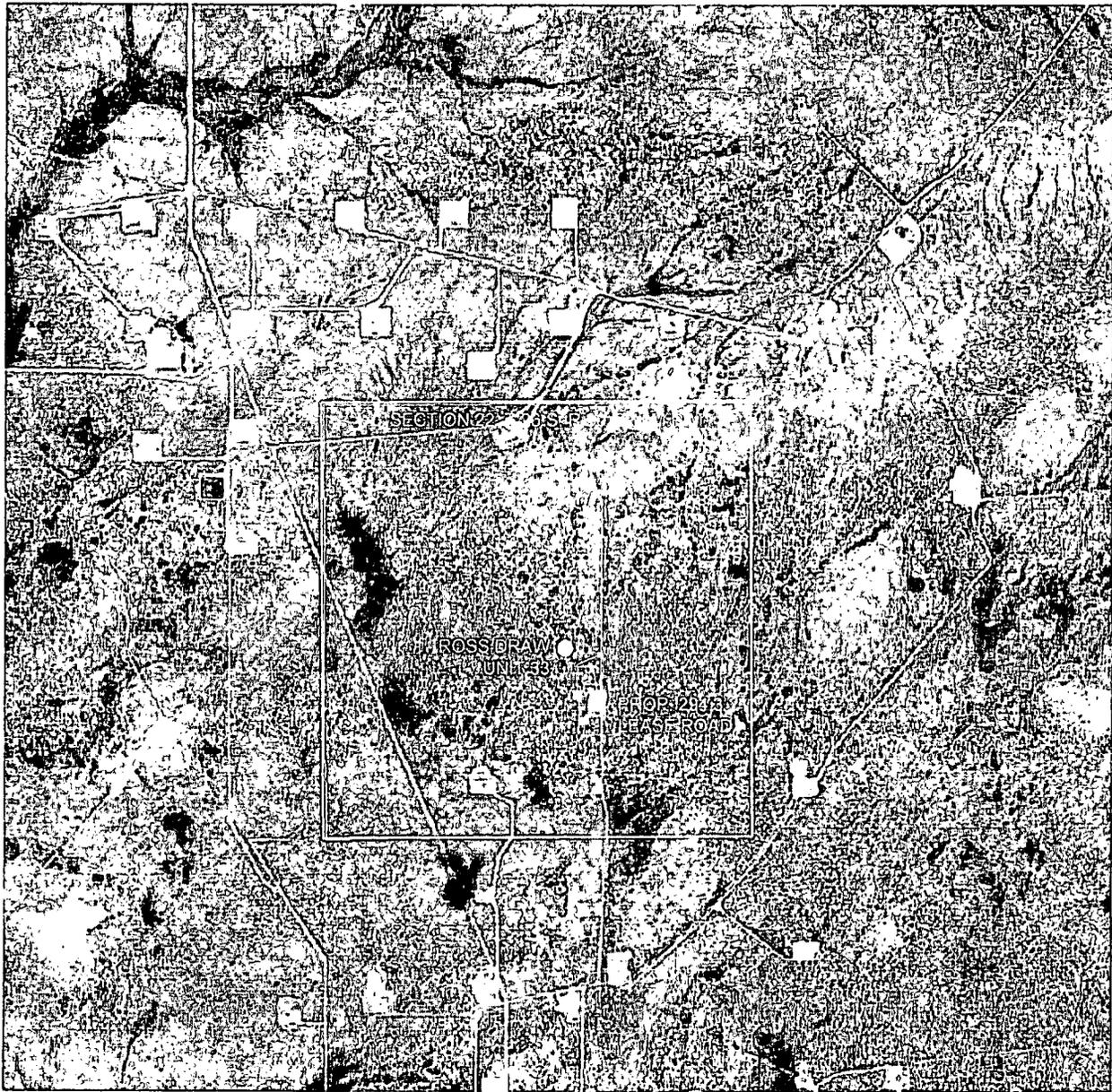


WEST TEXAS CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 405 S.W. 1st. STREET
 ANDREWS, TEXAS 79714
 (432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC48877

AERIAL MAP



GRAPHIC SCALE 1" = 2000'

SECTION 22, T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 2310' FSL & 2310' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: ROSS DRAW UNIT 33

DRIVING DIRECTIONS:

From the intersection of Stateline Road and County Road 1, go west on Stateline Road 9.1 miles to a lease road right. Go north 0.6 mile and turn right. Go east 0.2 mile and turn left. Go 0.8 mile and location is 294 feet left.

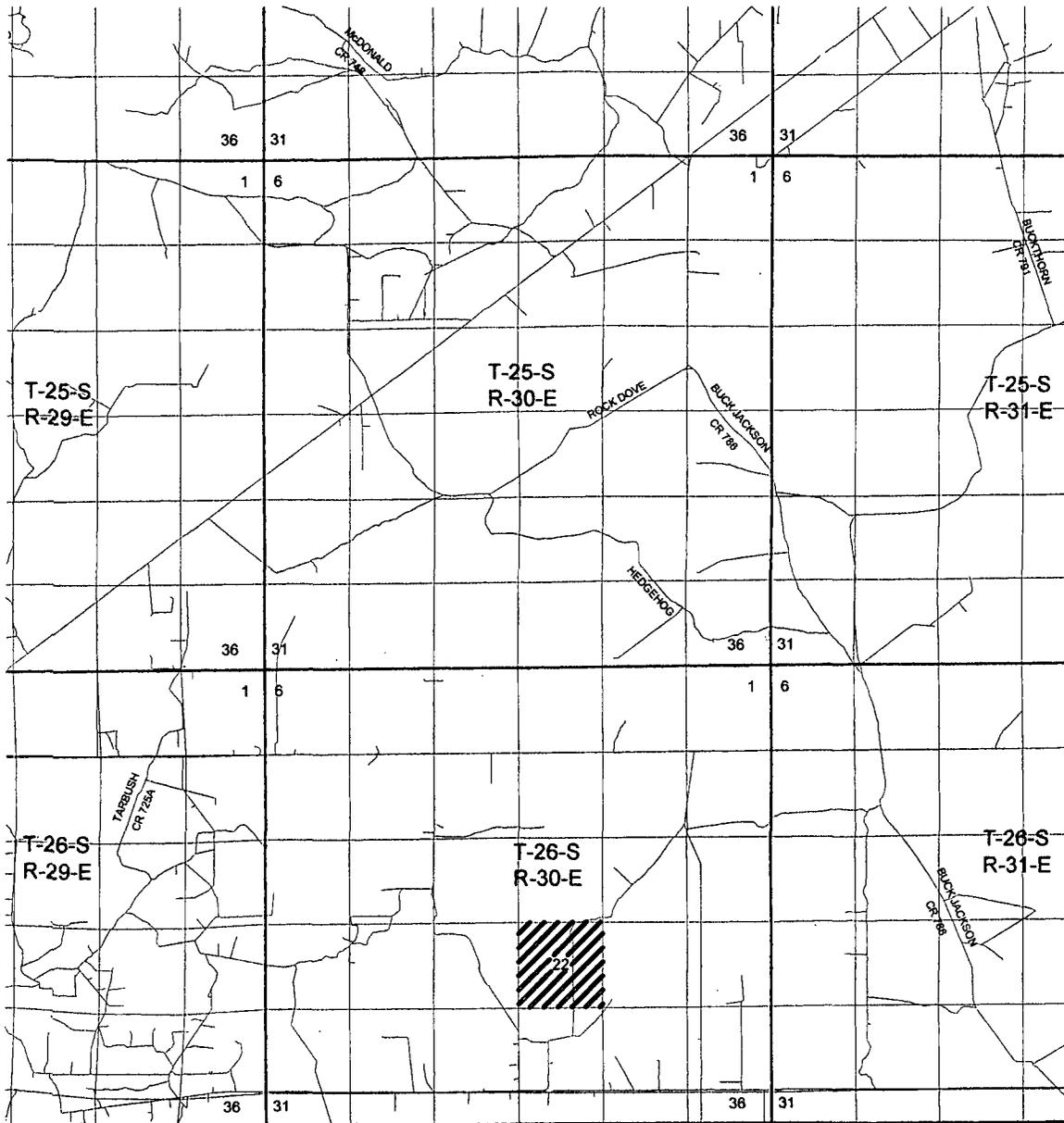


WEST TEXAS CONSULTANTS, INC.
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405 S.W. 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC48877

VICINITY MAP



GRAPHIC SCALE 1" = 2 MILES

SECTION 22, T 26 S, R 30 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 2310' FSL & 2310' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: ROSS DRAW UNIT 33

DRIVING DIRECTIONS:

From the intersection of Stateline Road and County Road 1, go west on Stateline Road 9.1 miles to a lease road right. Go north 0.6 mile and turn right. Go east 0.2 mile and turn left. Go 0.8 mile and location is 294 feet left.



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RKI EXPLORATION & PRODUCTION

JOB No.: WTC48877

Exhibit A

Access

1.6" = 1 mile

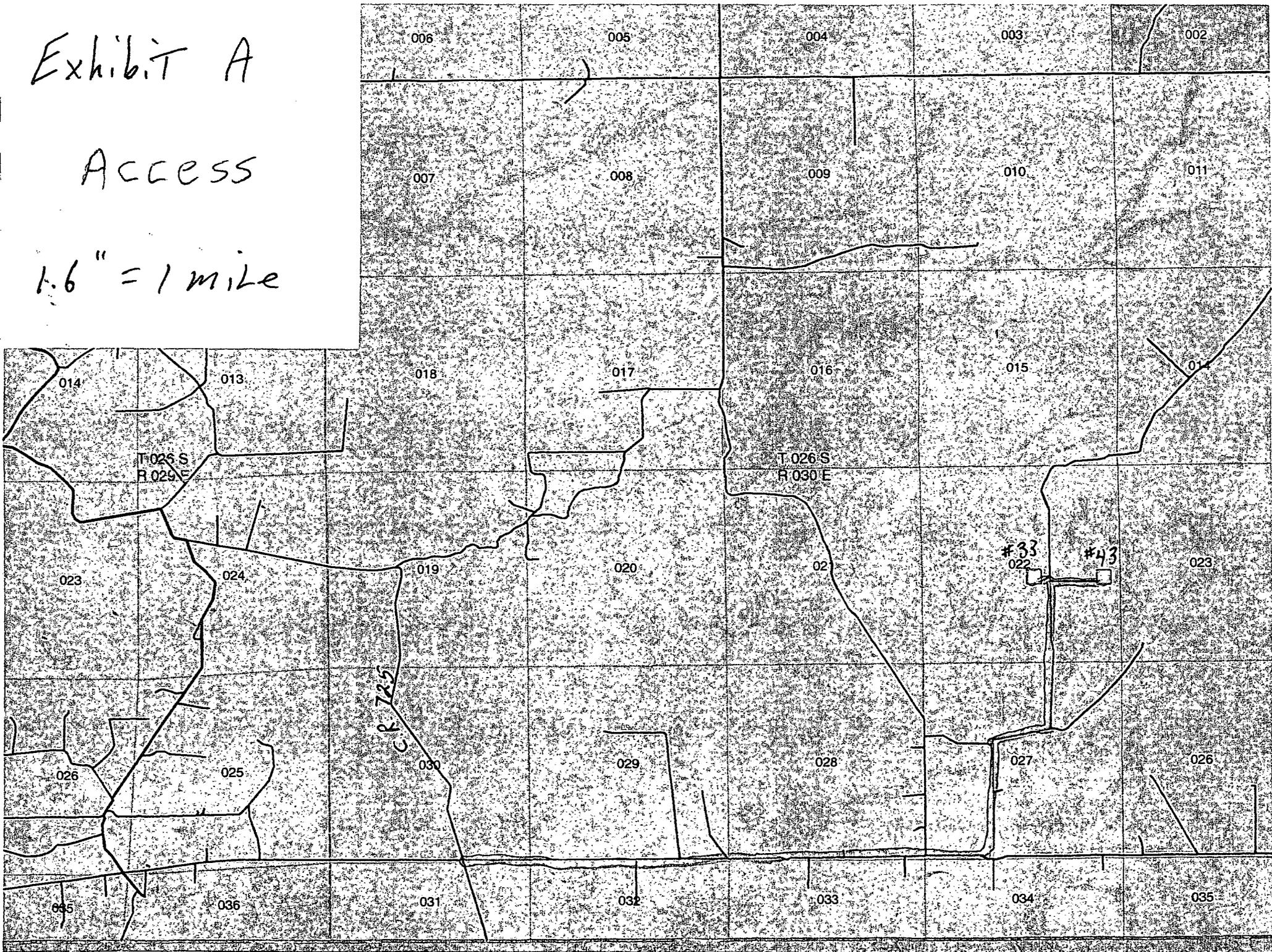
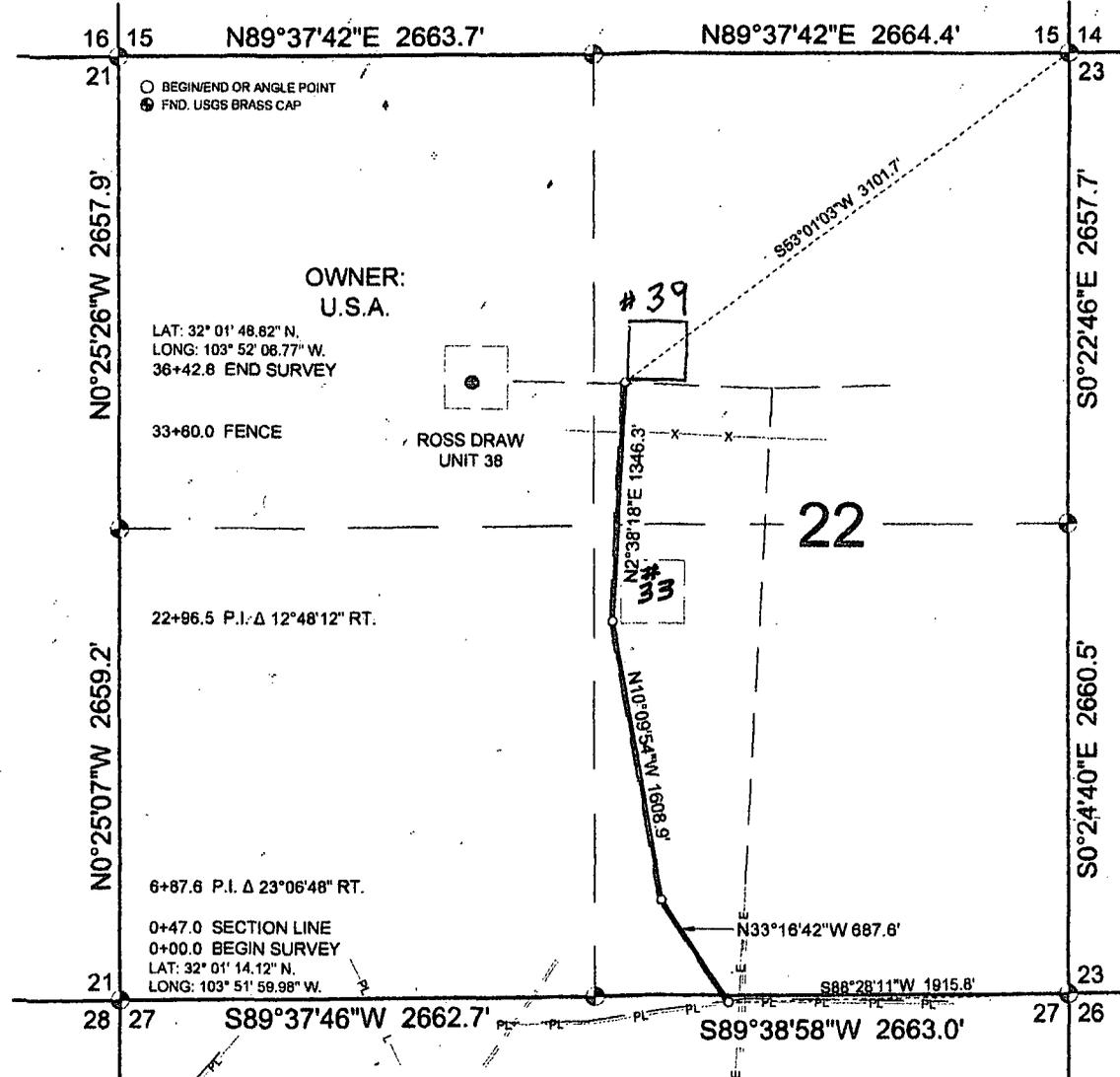


Exhibit E

SECTION 27 & 22, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY CO., NM.



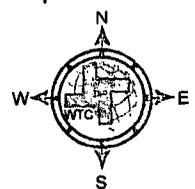
OWNER:
U.S.A.
LAT: 32° 01' 48.82" N,
LONG: 103° 52' 08.77" W.
36+42.8 END SURVEY

33+80.0 FENCE

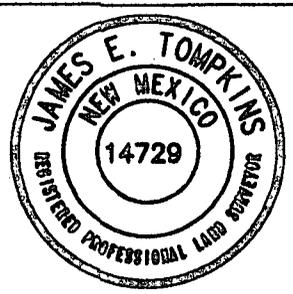
ROSS DRAW
UNIT 38

22+86.5 P.I. Δ 12°48'12" RT.
6+87.6 P.I. Δ 23°06'48" RT.
0+47.0 SECTION LINE
0+00.0 BEGIN SURVEY
LAT: 32° 01' 14.12" N,
LONG: 103° 51' 59.98" W.

A STRIP OF LAND 30 FEET IN WIDTH AND 3642.8 FEET, 0.69 MILE OR 220.78 RODS IN LENGTH, SITUATED IN SECTION 22, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 15 FEET LEFT AND 15 FEET RIGHT OF THE SURVEY OF CENTERLINE AS SHOWN HEREON.



NOTE:
1. BASIS OF BEARING IS A TRANSVERSE MERCATOR PROJECTION OF THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83.



I, JAMES E. TOMPKINS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14729, DO HEREBY CERTIFY THAT THIS PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

James E. Tompkins
JAMES E. TOMPKINS, N.M. P.L.S. No. 14729
SURVEY DATE: 11/08/2013
JOB NO.: 49438
DRAFT FH SHEET: 1 OF 1

RKI EXPLORATION & PRODUCTION
A PROPOSED GAS PIPELINE IN
SECTION 22, T26S, R30E, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

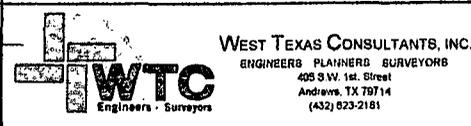
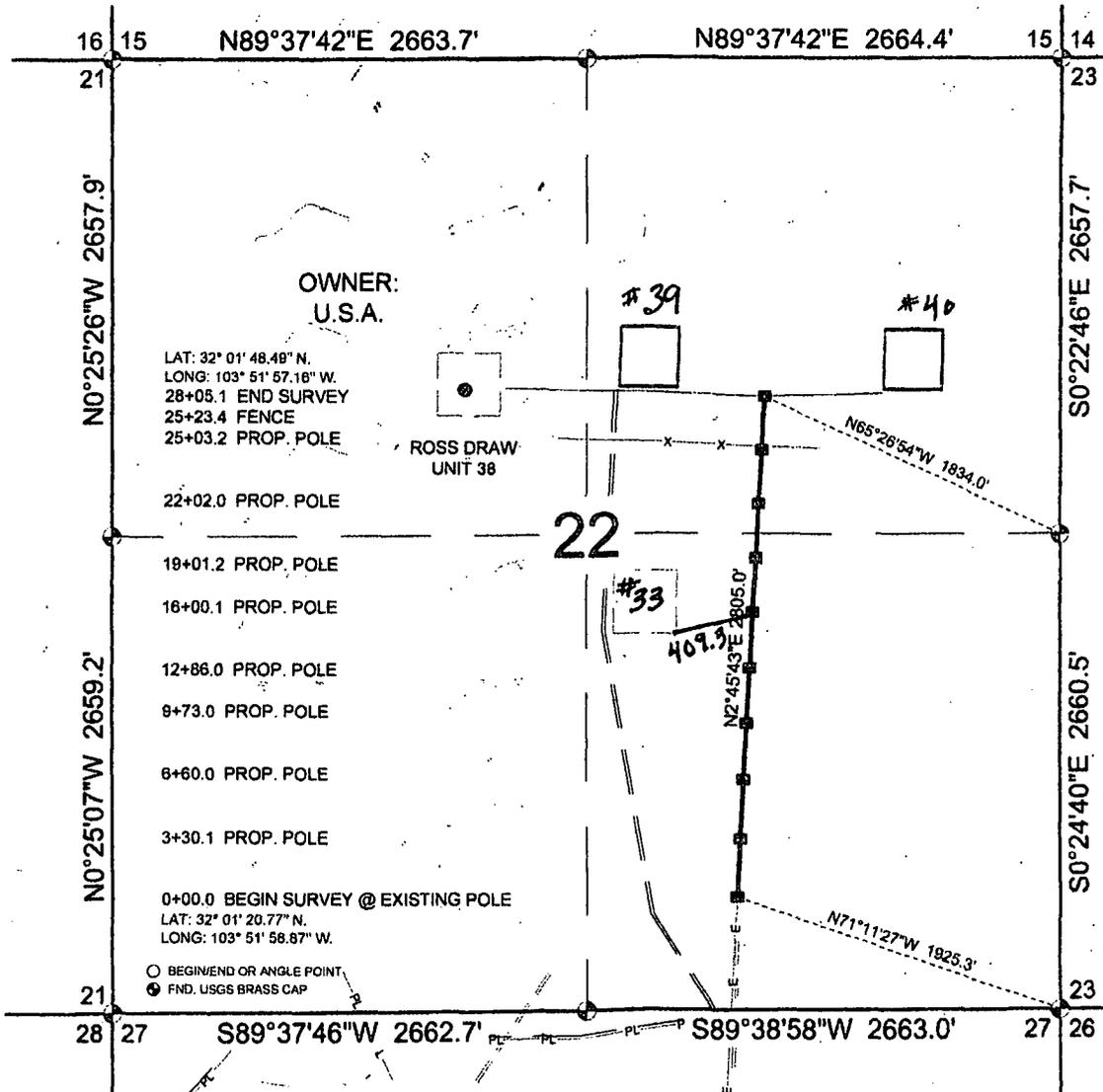
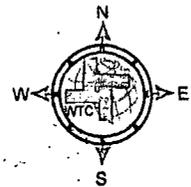


Exhibit F

SECTION 22, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY CO., NM.

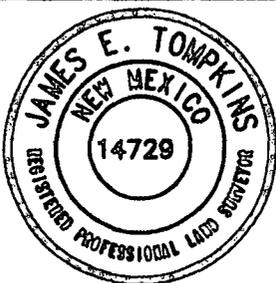


A STRIP OF LAND 30 FEET IN WIDTH AND 2805.1 FEET, 0.53 MILE OR 170.01 RODS IN LENGTH, SITUATED IN SECTION 22, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 15 FEET LEFT AND 15 FEET RIGHT OF THE SURVEY OF CENTERLINE AS SHOWN HEREON.



NOTE:

1. BASIS OF BEARING IS A TRANSVERSE MERCATOR PROJECTION OF THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83.



I, JAMES E. TOMPKINS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14729, DO HEREBY CERTIFY THAT THIS PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

James E. Tompkins
 JAMES E. TOMPKINS, N.M. P.L.S.

11/08/2013

No. 14729

SURVEY DATE: 11/08/2013
 JOB NO.: 49436

DRAFT FH
 SHEET: 1 OF 1

RKI EXPLORATION & PRODUCTION
 A PROPOSED POWER LINE IN
 SECTION 22, T26S, R30E, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO



WEST TEXAS CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 405 B.W. 1st. Street
 Andrews, TX 79714
 (432) 623-2181

DRILLING PLAN

Well Ross Draw Unit 33
 Location 2,310 FSL 2,310 FEL Surface
 2,310 FSL 2,310 FEL Bottom Hole
 Section 22-26S-30E

County Eddy
 State New Mexico

- 1) The elevation of the unprepared ground is 3,053 feet above sea level.
- 2) The geologic name of the surface formation is Quaternary - Alluvium.
- 3) A rotary rig will be utilized to drill the well to 7,500 feet and run casing & cement. This equipment will then be rigged down and the well will be completed with a workover rig.
- 4) Proposed depth is 7,500 feet.
- 5) Estimated tops:

Rustler	798		
Salado	1,140		
Castile	1,589		
Lamar Lime	3,361		
Base of Lime	3,548		
Delaware Top	3,578		
Bell Canyon Sand	3,578	Oil	1,549 psi
Cherry Canyon Sand	4,654	Oil	2,015 psi
Brushy Canyon Sand	5,710	Oil	2,472 psi
Bone Spring	7,466		
TD	7,500		146 degree F

The Bone Spring will be penetrated as rathole to enable the entire Brushy Canyon to be logged. Water anticipated at 180 feet.

6) Pressure control equipment:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram type (3,000 psi WP) preventer, a bag-type annular preventer (3,000 psi WP), and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and pipe rams (sized to accommodate the drill pipe size being utilized) on bottom. A 13 3/8" SOW x 13 5/8" 3M multi-bowl casing head will be installed on the 13 3/8" casing and utilized until total depth is reached. All BOP and associated equipment will be tested to 3,000 psi and the annular will be tested to 1,500 psi after initial installation. The 13 3/8" and 9 5/8" casing will be tested to .22 psi per ft of casing string length or 1,500 psi whichever is greater, but not to exceed 70% of the minimum yield.

See IOA

The 9 5/8" casing will be hung in the casing multi-bowl head and the stack will not be nipped down at this point. The stack will not be isolated and tested after running the 9 5/8" casing, but will be tested along with the 9 5/8" casing. Pipe rams will be operated and checked each 24 hour period and each time the drill string is out of the hole. These function test will be documented on the daily driller's log.

A drilling spool or blowout preventer with 2 side outlets (choke side shall be 3" minimum diameter, kill side shall be at least 2" diameter).

2 kill line valves, one of which will be a check valve.

2 chokes on the manifold along with a pressure gauge.

Upper kelly cock valve with handle available.

Safety valve and subs to fit all drill string connections in use.

All BOP equipment connections subjected to pressure will be flanged, welded, or clamped.

Fill up line above the upper most preventer.

7) Casing program: ALL NEW CASING

Hole Size	Top	Bottom	OD Csg	Wt/Grade	Connection	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 1/2"	0	950 ⁹¹⁰	13 3/8"	54.5#/J-55	ST&C	2.75	5.58	9.93
12 1/4"	0	3,540 ³⁵⁰⁰	9 5/8"	40#/J-55	LT&C	1.32	5.24	3.67
8 3/4"	0	7,500	5 1/2"	17#/N-80	LT&C	1.93	1.55	2.73

8) Cement program:

Surface 17 1/2" hole
 Pipe OD 13 3/8"
 Setting Depth ~~950~~ ft
 Annular Volume 0.69462 cf/ft
 Excess 1 100 %

Lead 606 sx 1.74 cf/sk 13.5 ppg
 Tail 200 sx 1.33 cf/sk 14.8 ppg

Lead: "C" + 4% PF20 gel + 2% PF1 CC + .125 pps PF29 Cellophane + .2% PF46 defoamer
 Tail: "C" + 1% PF1 CC

Top of cement: Surface

Intermediate 12 1/4" hole
 Pipe OD 9 5/8"
 Setting Depth ~~3,540~~ ft
 Annular Volume 0.31318 cf/ft 0.3627 cf/ft
 Excess 0.5 50 %

Lead 675 sx 1.92 cf/sk 12.6 ppg
 Tail 200 sx 1.33 cf/sk 14.8 ppg

Lead: 35/65 Poz/C + 5% PF44 salt + 6% PF20 gel + 3 pps PF42 Kolite + .125 pps PF29 Cellophane + 0.2% PF46 defoamer + 1% PF1 CC
 Tail: "C" + .2% PF13 retarder

Top of cement: Surface

Production 8 3/4" hole
 Pipe OD 5 1/2"
 Setting Depth 7,500 ft
 Annular Volume 0.1733 cf/ft 0.26074 cf/ft 300 ft
 Excess 0.4 40 %
 DV Tool Depth 5,500 ft

Stage 1

Lead: 328 sx 1.48 cf/sk 13.0 ppg
 Lead: PVL + 2% PF174 expanding agent + .3% PF167 + .1% PF65 + .2% PF13 retarder + .25 pps PF46 defoamer
 Top of cement: DV tool

Stage 2

Lead: 231 sx 1.89 cf/sk 12.9 ppg
 Tail: 100 sx 1.48 cf/sk 13.0 ppg
 Lead: 35/65 Poz "C" + 5% PF44 salt + 6% PF20 gel + 3 pps PF42 Kolite + .2% PF13 retarder + .125 pps PF130 + .25 pps PF46 defoamer
 Tail: PVL + 2% PF174 expanding agent + .3% PF167 + .1% PF65 + .2% PF13 retarder + .25 pps PF46 defoamer
 Top of cement: 3,240 ft

9) Mud program:

Top	Bottom	Mud Wt.	Vis	PV	YP	Fluid Loss	Type System
0	950	8.5 to 8.9	32 to 36	6-12	2-8	NC	Fresh Water
950	3,540	8.8 to 10.0	28 to 30	1-6	1-6	NC	Brine
3,540	7,500	8.9 to 9.1	28 to 36	1-6	1-6	NC	Fresh Water

The necessary mud products for weight addition and fluid loss control will be on location at all times. Electronic pit monitoring equipment will be utilized with a Pason system. Electronic mud monitoring and mud logging will be utilized below the 9 5/8" casing.

10) Logging, coring, and testing program:

No drill stem test are planned
Total depth to intermediate: CNL, Caliper, GR, DLL,
Intermediate to surface: CNL, GR
No coring is planned

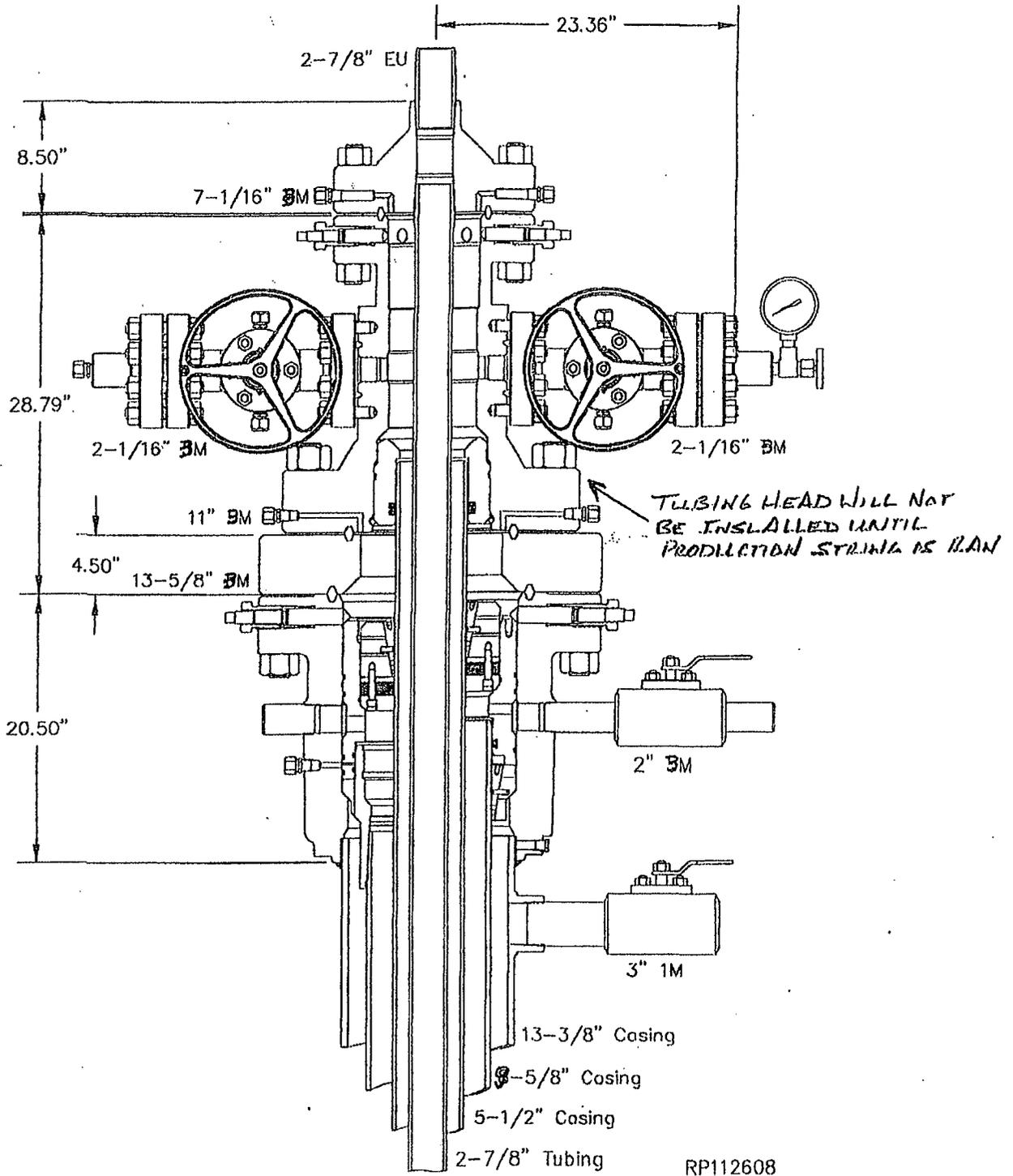
11) Potential hazards:

No abnormal pressure or temperature is expected. No H2S is known to exist in the area, although some form of H2S detection equipment will be utilized. If H2S is encountered the operator will comply with the provisions of Onshore Order No. 6. Lost circulation is not anticipated, but lost circulation material and weighting materials will be on location and readily available.

12) Anticipated start date ASAP
Duration 15 days

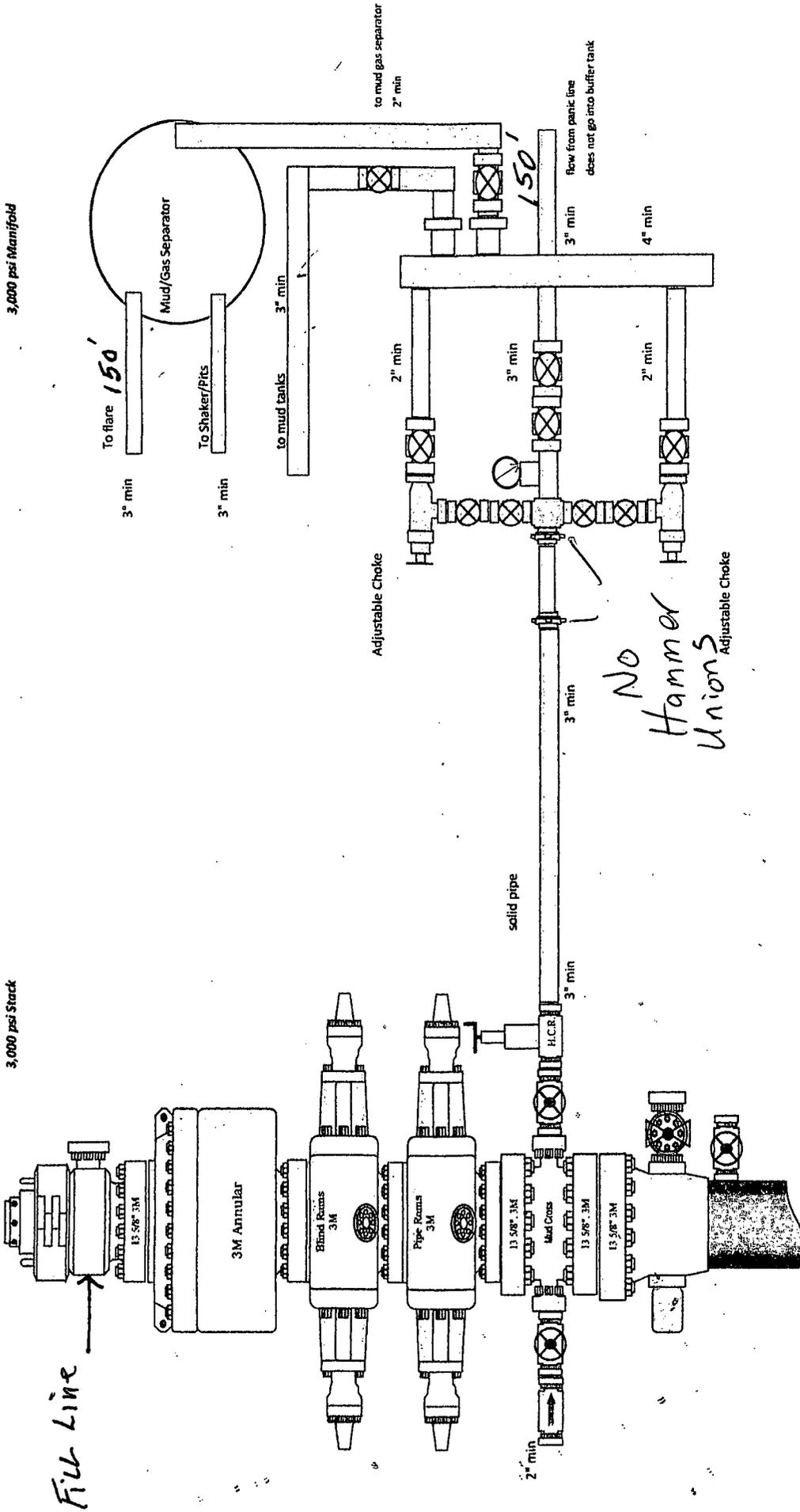
GE Oil & Gas multi-bowl wellhead

System Drawing



3,000 psi Stack

3,000 psi Manifold



RKI Exploration and Production
3817 N. W. Expressway, Suite 950
Oklahoma City, OK. 73112

Closed Loop System

Design Plan

Equipment List

- 2 – 414 Swaco Centrifuges
- 2 – 4 screen Mongoose shale shakers
- 2 – 250 bbl. tanks to hold fluid
- 2 – CRI Bins with track system
- 2 – 500 bbl. frac tanks for fresh water
- 2 – 500 bbl. frac tanks for brine water

Operation and Maintenance

- Closed Loop equipment will be inspected daily by each tour and any necessary maintenance performed
- Any leak in system will be repaired and/or contained immediately
- OCD notified within 48 hours
- Remediation process started

Closure Plan

During drilling operations, all liquids, drilling fluids and cuttings will be hauled off via CRI (Controlled Recovery Incorporated). Permit #: R-9166.

Plat for Closed Loop System

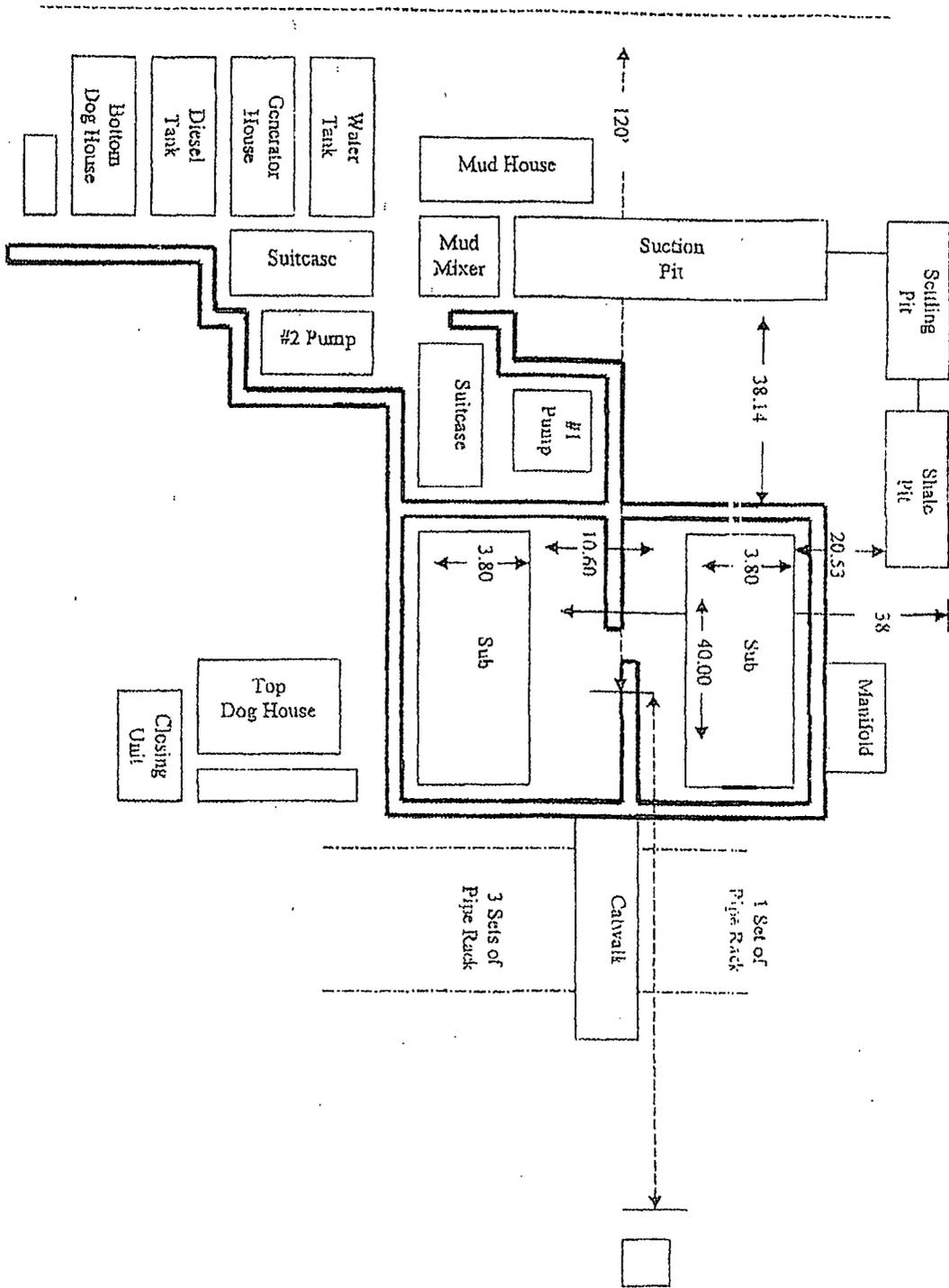


EXHIBIT D

**Rig Plat Only
ROSS DRAW UNIT #33
V-DOOR EAST**

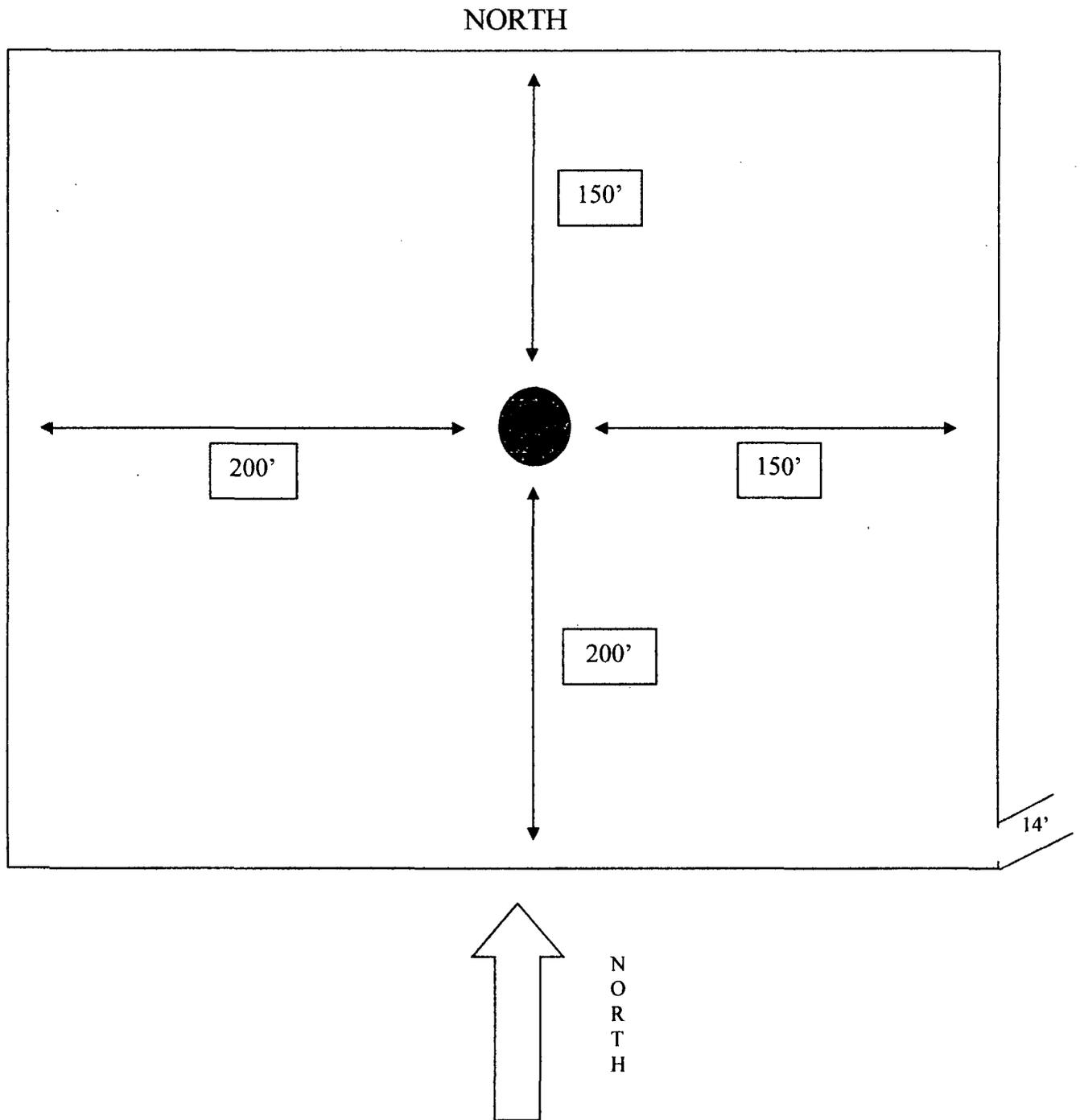
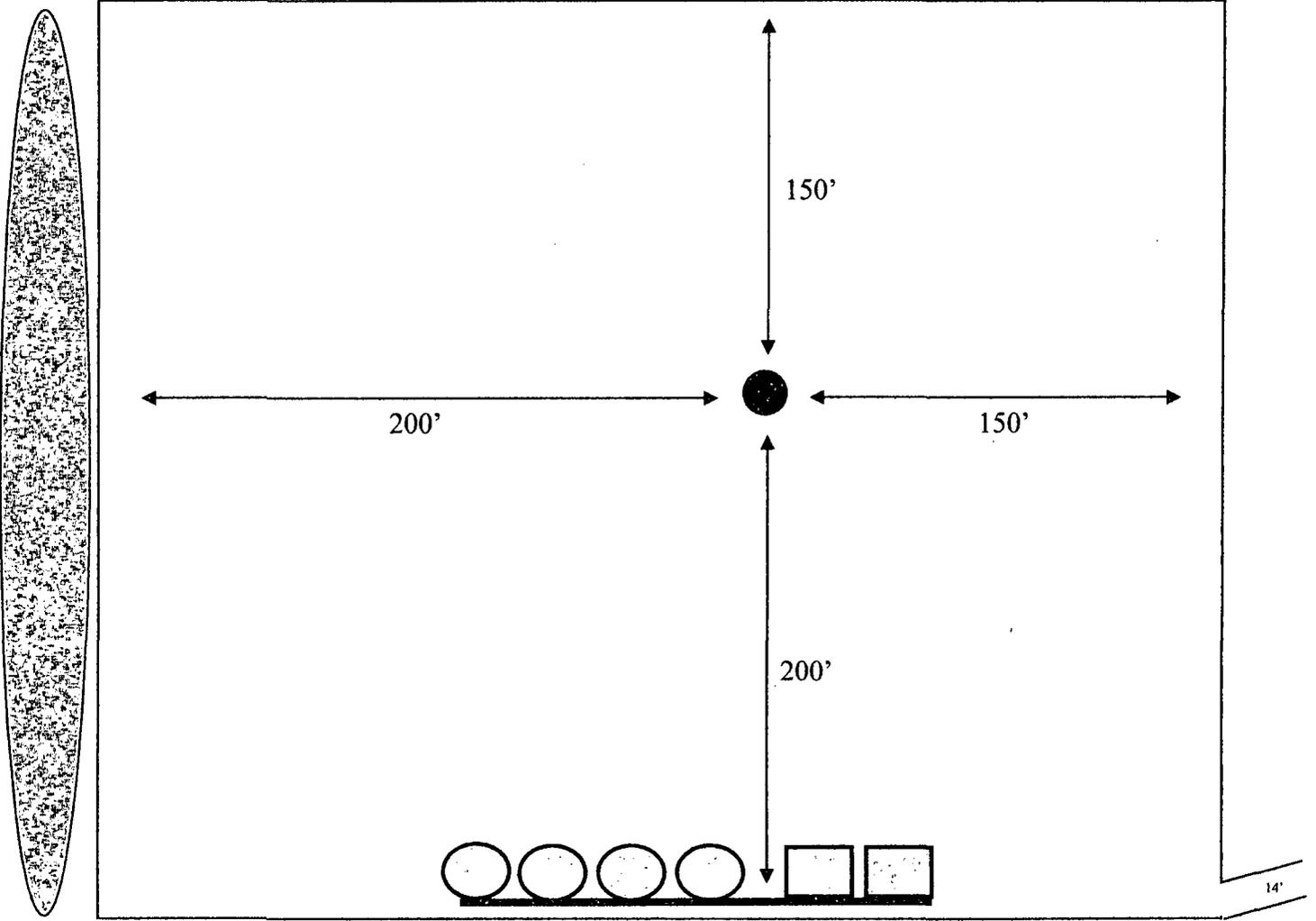


EXHIBIT C

**Interim Reclamation & Production Facilities
ROSS DRAW UNIT #33
V-DOOR EAST**



LEGEND

	Well Bore		Ditch and Berm
	Topsoil		Production Facilities
	Interim Reclamation		


**NORTH
NORTHWEST**

SURFACE USE PLAN
RKI Exploration & Production, LLC
ROSS DRAW UNIT 33
2310' FSL & 2310' FEL
Section 22, 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 25 miles. Turn east onto the Longhorn road for 3.7 miles. Continue south on County Road 725 for 8.4 miles. Turn east on stateline road for 2.5 miles. Turn north on lease road for 0.6 miles. Turn east for 0.2 miles. Turn north for 0.8 miles to proposed road. All existing roads are either paved or a caliche lease road.

B. See attached plats and maps provided by WTC Surveys.

C. The access routes from Eddy County Road 725 to the well location is depicted on **Exhibit A**. The route highlighted in red has been authorized under a ROW permit.

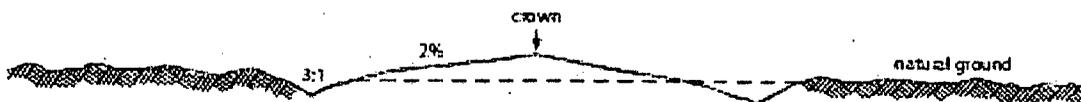
D. Existing roads on the access route will be improved and maintained to the standard set forth in Section 2 of this Surface Use Plan of Operations.

E. A right-of-way (ROW) was obtained in September of 2010 to access this well and other leases within the RDX and RDU field.

2. **NEW OR RECONSTRUCTED ACCESS ROADS:**

A. There will be 294.3 ft. of new access road required for this well. The new road will begin at the southeast corner, east northeast 294.3' to the existing lease road.

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 B**) 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, a TANK BATTERY, will be installed on the south portion of the pad (**EXHIBIT C**). There will also be a 6" buried steel pipeline and a 4" Poly SWD from the battery to the existing line that runs from the RDU #39 well south to the lateral E gas and SWD pipeline in the SW/4SE/4 of section 22. There will be no new disturbance involved (**SEE EXHIBIT E**). There will also be 409.3 ft. of a 12.5 KV overhead electric line, from the existing line near the Ross Draw Unit #43, following the proposed lease roads (**SEE EXHIBIT F**).
- 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. 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 D** shows the dimensions of the proposed well pad.
- B. The proposed well pad size will be a 350' x 350' (**See Exhibit D**). 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 **Exhibit D**, shows how the well will be turned to a V-Door East.
- 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. (**SEE EXHIBIT C FOR INTERIM RECLAMATION PLAT FOR THIS WELL**)
- C. 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.
- Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gullying, 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.

D. 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.

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.

- 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.

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.

12. OTHER INFORMATION:

- A. The area surrounding the well site is in a gentle sloped, shallow sandy 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. RKI is a participant with the Permian Basin MOA and has credit from overpayment therefore, no check is applied to this application.

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:

Ken Fairchild – RKI Exploration and Production, LLC.
210 Park Avenue, Suite 900
Oklahoma City, Ok. 73102
(405) 996-5764 (Office)
(469) 693-6051 (Cell)

ON-SITE PERFORMED ON 2/05/13 RESULTED IN PROPOSED LOCATION BEING OK WHERE STAKED. IT WAS AGREED TO TURN THE LOCATION TO A V-DOOR EAST, PLACE THE TOP SOIL TO THE WEST, PLACE THE BATTERY TO THE SOUTH. NO INTERIM RECLAMATION DUE TO BATTERY SITE.

PRESENT AT ON-SITE:

**BARRY HUNT – PERMITTING AGENT FOR RKI EXPLORATION & PRODUCTION
AMANDA LYNCH – BLM
BECKIE HILL - BOONE ARCHAEOLOGICAL SERVICES
WTC SURVEYORS**

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI Exploration & Production, LLC
LEASE NO.:	NM0480904B
WELL NAME & NO.:	33 Ross Draw Unit
SURFACE HOLE FOOTAGE:	2310' FSL & 2310' FWL
LOCATION:	Section 22, T. 26 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. **DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.** Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst

Possibility of lost circulation in Redbeds and evaporites from surface down to the base of the Castile Group.

Possibility of lost circulation in the Delaware and Bone Springs formations.

1. The **13-3/8** inch surface casing shall be set at approximately 910 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that

string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **3500** feet, is:

Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Operator has proposed DV tool at depth of 5500'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

- a. First stage to DV tool:

Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

- b. Second stage above DV tool:

Cement should tie-back at least 300 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. **Operator has proposed a multi-bowl wellhead assembly that has a weld on head with no o-ring seals. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**

- a. **Wellhead manufacturer is supplying the test plug/retrieval tool for the operator's third party tester to use during the BOP/BOPE test. Operator shall use the supplied test plug/retrieval tool.**
 - b. **Operator shall install the wear bushing required by the wellhead manufacturer. This wear bushing shall be installed by using the test plug/retrieval tool.**
 - c. **Wellhead manufacturer representative shall be on location when the intermediate casing mandrel is landed.**
 - d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
 - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer.**
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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II. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

III. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed