ATS-08-266

Form 3160-3
(April 2004)

7040 OCD-ARTESIA 42S

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 13 2008
OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of work: [X] DRILL [ ] REENTER	5. Lease Serial No. NM-100558
1b Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name ----------
2 Name of Operator (PAT McCOLLOM) RKI EXPLORATION & PRODUCTION, LLC. (405-996-5748)	7 If Unit or CA Agreement, Name and No. ----------
3a. Address 3817 N. W. EXPRESSWAY SUITE 950 OKLAHOMA CITY, OK 73112	8. Lease Name and Well No RDX "9" # 1
3b Phone No. (include area code) 405-996-5748	9 API Well No 30-015-36211
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface 990' FSL & 990' FEL SECTION 9 T26S-R30E At proposed prod. zone SAME Carlsbad Controlled Water Basin	10. Field and Pool, or Exploratory BRUSHY DRAW DELAWARE-EAST
	11. Sec., T. R. M or Blk. and Survey or Area SECTION 9 T26S-R30E
14 Distance in miles and direction from nearest town or post office* Approximately 17 miles Southeast of Malaga New Mexico	12. County or Parish EDDY CO. / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 990'	16 No. of acres in lease 320 / 17 Spacing Unit dedicated to this well 40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NA	19. Proposed Depth 7530 / 20 BLM/BIA Bond No. on file NMB-000460
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3098' GL	22 Approximate date work will start* WHEN APPROVED / 23 Estimated duration 40 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form:

1. Well plat certified by a registered surveyor
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer

25 Signature Joe T. Janica	Name (Printed/Typed) Joe T. Janica	Date 01/18/08
Title Permit Engineer		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date MAR 07 2008
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval 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.
Conditions of approval, if any, are attached. APPROVAL FOR TWO YEARS

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.

*(Instructions on page 2)

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-36211	8090	BRUSHY DRAW DELAWARE-EAST

Property Code	Property Name	Well Number
37054	RDX "9"	1

OGRID No.	Operator Name	Elevation
246289	RKI EXPLORATION & PRODUCTION	3098'

Surface Location

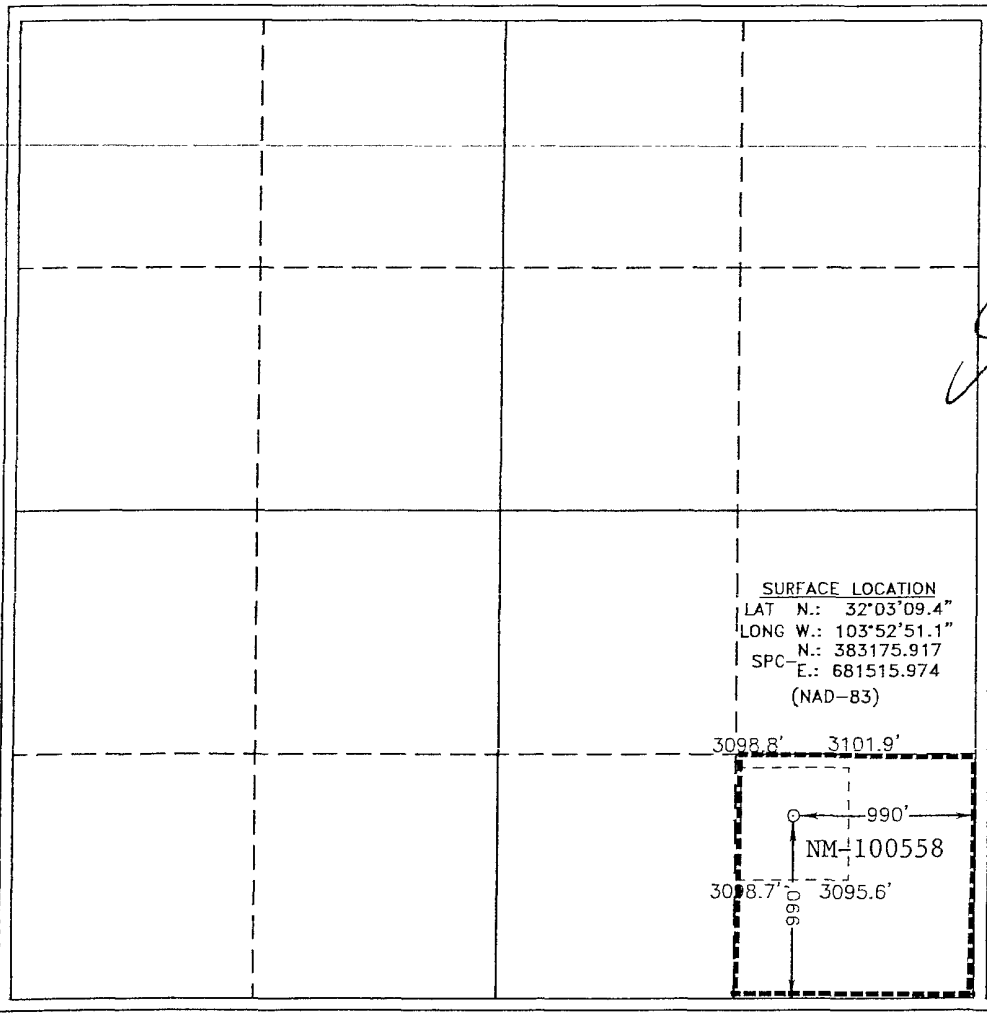
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	9	26 S	30 E		990	SOUTH	990	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Joe T. Janica
Signature

01/18/08
Date

Joe T. Janica
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

DECEMBER 27, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

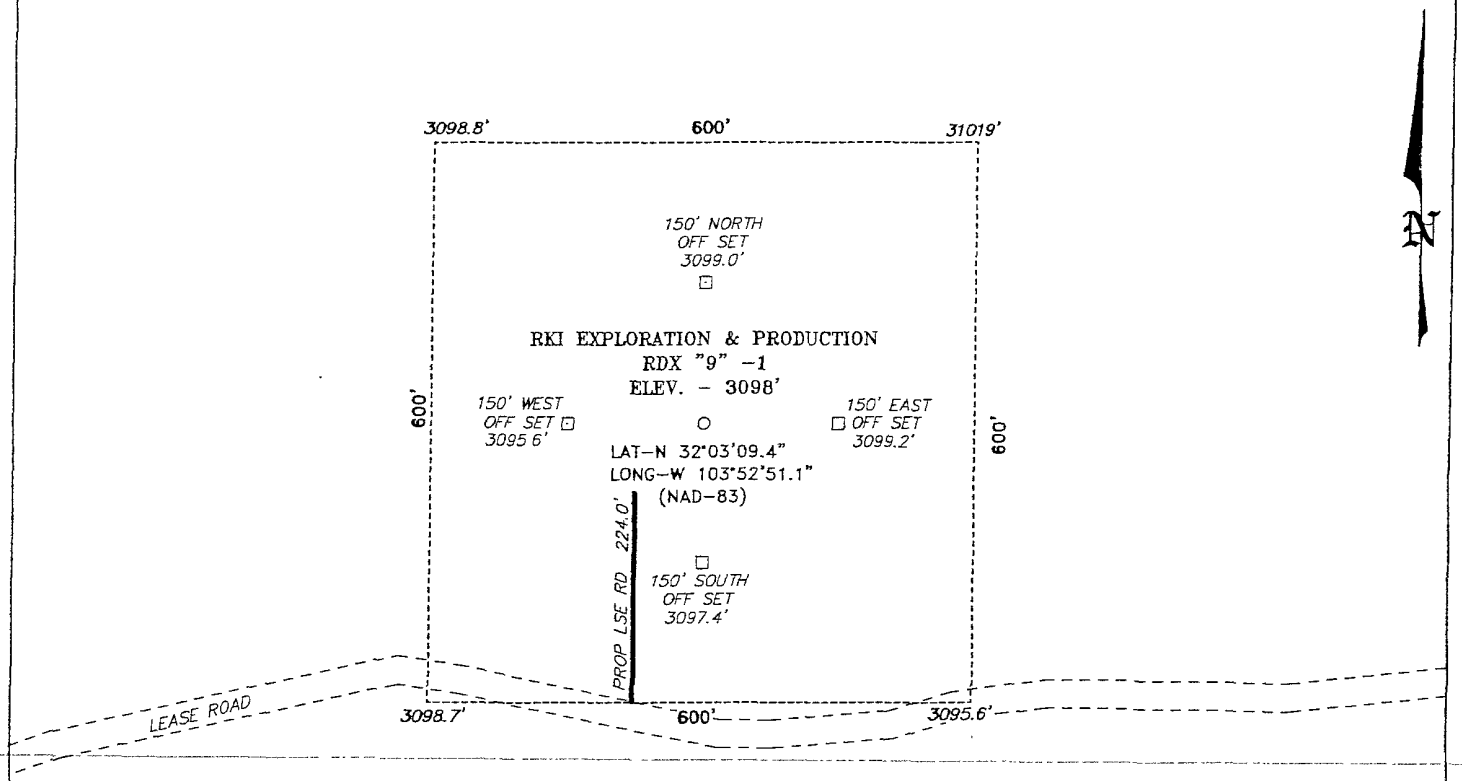
W.O. No. 18822

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

EXHIBIT "A"

SECTION 9, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION ON STATE HWY 18 AND HWY 128; GO WEST TO BUCK JACKSON ROAD, ON BUCK JACKSON, GO SOUTHWESTERLY APPROX 9.0 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 5.0 MILES THENCE SOUTH FOR 1.0 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST APPROX 0.9 MILES TO PROPOSED LEASE ROAD.

200 0 200 400 FEET

SCALE: 1" = 200'

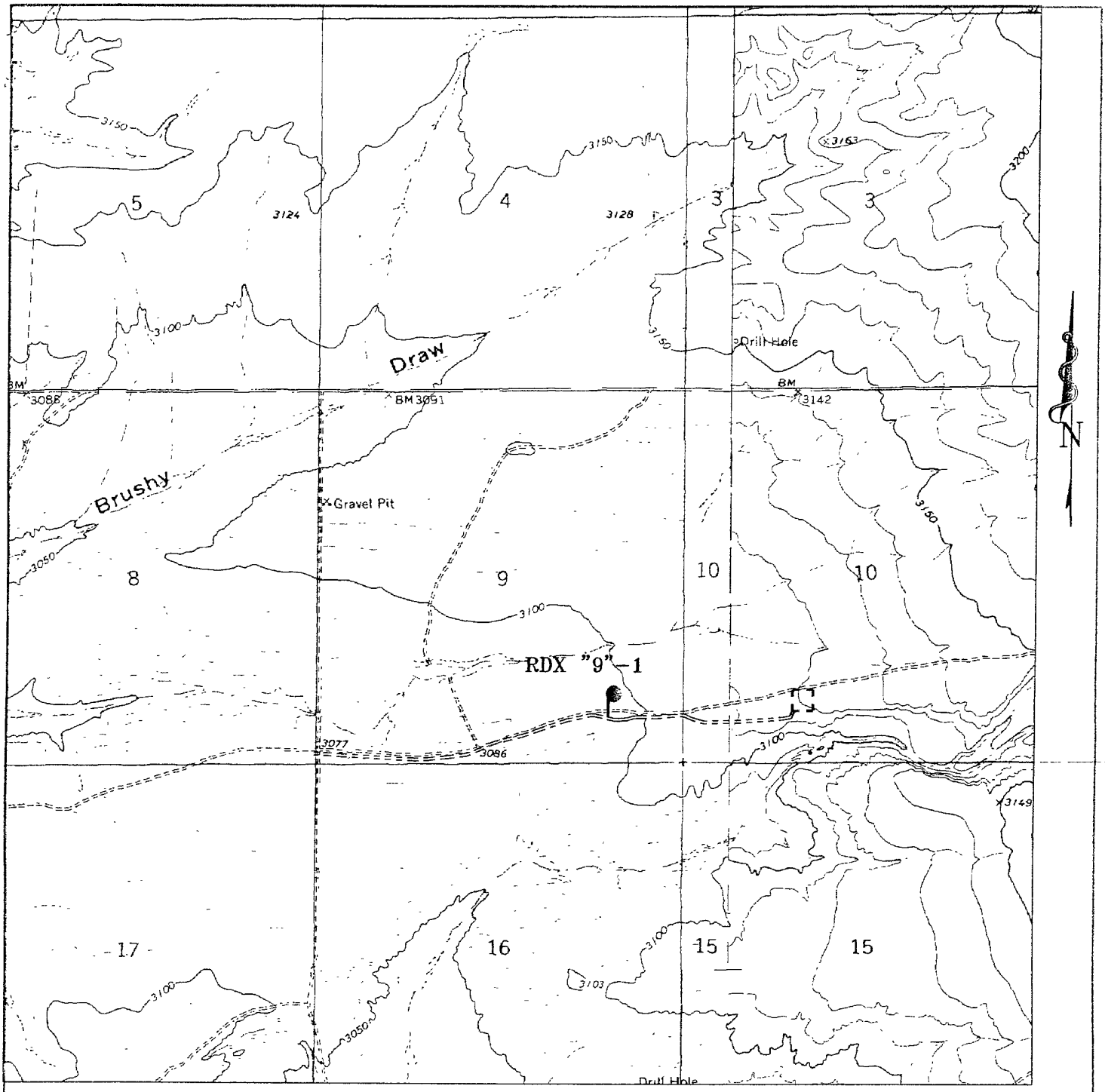
RKI EXPLORATION & PRODUCTION

REF: RDX "9"-1 / Well Pad Topo

THE RDX "9"-1 LOCATED 990' FROM THE SOUTH LINE AND 990' FROM THE EAST LINE OF SECTION 9, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 18822	Drawn By: J. M. SMALL		
Date: 12-28-2007	Disk: JMS 18822W	Survey Date: 12-27-2007	Sheet 1 of 1 Sheets



RDX "9" #1
Located at 990' FSL AND 990' FEL
Section 9, Township 26 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	18822T
Survey Date	12-27-2007
Scale:	1" = 2000'
Date	12-28-2007

RKI EXPLORATION & PRODUCTION

January 5, 2008

United States Department of the Interior
Bureau of Land Management
Roswell District Office
2909 West Second Street
Roswell, New Mexico 88201

Re: Application for Permit to Drill
RKI Exploration & Production, LLC.
RDX 9-1
Eddy County, New Mexico
Federal Lease NM-100558 and NMB-000460

Gentlemen:

RKI Exploration & Production, LLC. respectfully requests permission to drill our RDX 9-1 located 990' FSL and 990' FSL of Section 9-T26S-R30E, Eddy County, New Mexico, Federal Lease NM-100558 and NMB-000460. The proposed well will be drilled to a TVD of approximately 7,530'. The location and work area have been staked approximately 35 miles Southeast of Carlsbad, New Mexico.

In accordance with requirements stipulated in Federal Onshore Oil and Gas Order No. 1 under 43 CFR 3162.1, our Application for Permission to Drill and supporting evidence is hereby submitted.

1. Application for Permit to Drill:

    1. Form 3160.3, Application for Permit to Drill

    2. Form C-102 Location and Acreage Dedication Plat certified by Gary L. Jones, Registered Land Surveyor No. 7977 in the State of New Mexico dated Dec. 27, 2001.

    3. The elevation of the unprepared ground is 3,098 feet above sea level.

    4. The geologic name of the surface formation is Triassic.

    5. A rotary rig will be utilized to drill the well to 7,530' md. and run casing. This equipment will then be rigged down and the well will be completed with a pulling unit.

    6. Proposed total depth is 7,530' md.

APPLICATION TO DRILL

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1
UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

In response to questions asked under Section II of Bulliten NTL-6, the following information on the above will be provided.

1. LOCATION: 990' FSL & 990' FEL SECTION 9 T26S-R30E EDDY CO. NM

2. ELEVATION ABOVE SEA LEVEL: 3098' GL

3. GEOLOGICAL NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.

4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: 7530'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

Rustler Anhydrite	760'	Bell Canyon Sd.	3700'
Salado	1035'	Cherry Canyon	4770'
Castile	1530'	Brushy Canyon	5860'
Lamar Lime	3470'	Bone Spring	7480'
Delaware	3700'	TD	7530'

7. POSSIBLE MINERAL BEARING FORMATIONS:

Delaware	Oil
Bone Spring	Oil

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	
26"	0-40'	20"	NA	NA	NA	Conductor	New
17½"	0-~~475~~ see COA	13 3/8"	54.5#	8-R	ST&C	J-55	New
12¼"	0-3485'	9 5/8"	36#	8-R	ST&C	J-55	New
7 7/8"	0-7530'	5½"	17#	8-R	LT&C	J-55	New

Casing Design Factors: Burst 1.0 Collapse 1.25 Tension 8-R 1.8
Butt 1.6 Body Yield 1.5

7. Estimated tops of important geologic markers:

Triassic	Surface
Rustler	760' md.
Salado	1,135' md.
Castile	1,530' md.
Lamar Lime	3,470' md.
Delaware	3,700' md.
Brushy Canyon	5,860' md.
Bone Spring	7,480' md.

8. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Delaware	Oil	3,700' md.
Bone Spring	Oil	7,480' md.

9. The proposed casing program is as follows:

see COA

Surface: 13-3/8" 54.5# J-55 ST&C casing set from 0' - ~~775~~ 775'

Intermediate: 9-5/8" 36# J-55 ST&C casing set from 0' - 3,485'.

Production: 5-1/2" 17# J-55 LT&C casing set from 0' - 7,530'.

10. Casing setting depth and cementing program:

see COA

a. 13-3/8" surface casing set at ~~775~~ 775' in 17-1/2" hole. Circulate cement to surface with 432 sx. 35:65 Poz:Class C + 6% D20 + 5 pps D24 + 0.125 pps D130 + 3% S1 mixed at 12.7 ppg, Yield – 1.95 cf/sk and 200 sk Class C + 2% S1 + 0.125 pps D130 mixed @ 14.8 ppg, Yield – 1.34 cf/sk.

b. 9-5/8" 36# casing set at 3,485' in 12-1/4" hole. A fluid caliper will be ran to determine exact cement volume required. Cement will be circulated to surface with 845 sks 35:65 Poz:Class C + 5% D44 (bwow) + 6% D20 + 4 pps D24 + 0.125 pps D130 + 1% S1 mixed at 12.6 ppg, yield – 2.05 cf/sk and 200 sks Class C + 1% S1 + 0.125 pps D130 mixed at 14.8 ppg, yield – 1.33 cf/sk.
Fluid caliper ran to determine exact volume.

c. 5-1/2" 17# J-55 casing set at 7,530'. Hole will be logged to determine exact cement volume to bring TOC to 3,185'. A DV tool will be utilized at around 5,100' to assure cement reaches 3,185'.

Cement with:

First stage: 159 sks 40/60 (D961/D124) + 0.2 %bwob D46 + 0.3 % bwob D65 + 1 % bwob D153 + 0.35 % bwob D800 + 0.125 pps D130 mixed @ 10.22 ppg, yield 2.47 and 100 sks TXI Lightweight + 1.33% D44 (bwow) + 0.2% D167 + 0.1% D13 mixed @ 13.0 ppg, yield – 1.40 cf/sk.

Second Stage: 129 sks 35:65 Poz:Class C + 5% D44 (bwow) + 6% D20 + 0.125 pps D130 + 0.1% D13 mixed at 11.9 ppg, yield – 2.47 cf/sk and 100 sks Class C + 0.1% D13 mixed @ 14.8 ppg, yield – 1.32 cf/sk.

11. Pressure Control Equipment

0' - ~~75'~~ See COA None

~~75'~~ - 3,485' After setting the 13-3/8" casing, 2,000#-rated blowout prevention equipment or greater will be utilized. The blowout prevention equipment will consist of 13-5/8" pipe rams and blind rams. Prior to drillout the surface casing, blowout preventers and related control equipment shall be pressure tested to 1,000 psi. A choke manifold and accumulator with floor and remote operating stations and auxiliary power system. An armored 4" 3,000# (working pressure) hose will be utilized for drilling this interval. The hose itself is rated to 10,000# but the flanged end connections are rated to 3,000#.

A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

3,485' - 7,530' After setting the 9-5/8" casing, 3,000#-rated blowout prevention equipment will be utilized. The blowout preventers and related control equipment shall be pressure tested to 3,000 psi. Any equipment failing to test satisfactorily shall be repaired or replaced. Results of the BOP test will be recorded in the Driller's Log. The BOP's will be maintained ready for use until drilling operations are completed.

BOP drills will be conducted as necessary to assure that equipment is operational and each crew is properly trained to carry out emergency duties.

APPLICATION TO DRILL

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1
UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

SEE GEOLOGICAL PROGNOSIS

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3750± PSI, and Estimated BHT 165°±.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 18 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Brushy Canyon formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

Accumulatory shall maintain a pressure capacity reserve at all times to provide for the close-open-close sequence of the blind and pipe rams of the hydraulic preventers.

12. Mud Program: CLOSED LOOP MUD SYSTEM, RESERVE PIT NOT REQUIRED.

0' - 735' see COA	Fresh water/native mud. Lime for pH control (9-10). Paper for seepage. Wt. 8.4 - 9.4 ppg, viscosity 32 - 34 cp.
735' - 3,425'	Saturated brine. Sweep as necessary, weight 10.0 ppg.
3,425' - 7,300'	Fresh water/mud, weight 9.0 – 9.3. Sweep as necessary.
7,300' - 7,576'	Brine/mud system, weight 9.0 – 9.5 ppg viscosity 30 - 34 cp. Control fluid loss < 15cc.

13. Testing, Logging and Coring Program:

1. Testing program: No drillstem tests are anticipated.
2. Electric logging program: CNL/CAL/GR, DLL/CAL/GR.
3. Coring program: None.

14. Anticipated starting date is February 1, 2008. It should take approximately 24 days to drill the well and another 15 days to complete.

The Multi-Point Surface Use & Operation Plan is attached. If you need additional information to evaluate this application, please call me at (405) 949-2221.

Sincerely,

RKI Exploration & Production, LLC.

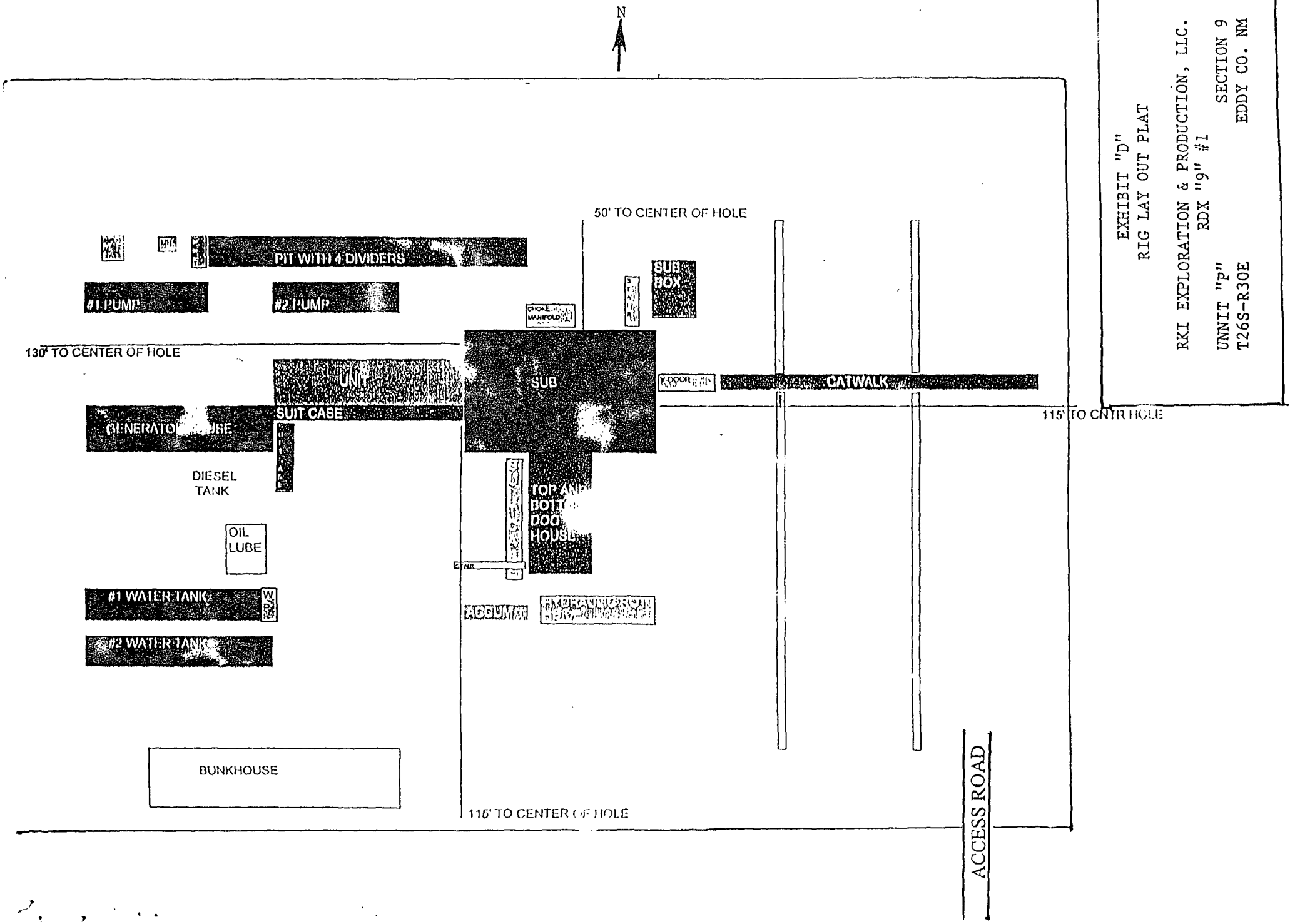


EXHIBIT "D"
RIG LAY OUT PLAT

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1
UNNIT "P"
T26S-R30E
SECTION 9
EDDY CO. NM

GEOLOGICAL PROGNOSIS

Well Name: RDX 9-1
API #:
Field: Ross Draw Extension

Location: 990 FSL 990 FEL
Sec. 9-26S-30E
Eddy Co., NM
Lat/Long: 32.0524973 / -103.8803021

Elevation: GL. Est.: (?) DF. Est.: KB. Est.: **(?)**

FORMATION	DEPTH (TVD)	SUBSEA
Rustler	760'	()
Salado	1,035'	()
Castile	1,530'	()
Lamar Lime	3,470'	()
Base of Lime	3,678'	()
Delaware Top	3,700'	()
Bell Canyon Sand	3,700'	()
Cherry Canyon Sand	4,770'	()
Brushy Canyon Sand	5,860'	()
Pipeline Shale	7,465'	()
Bone Spring Lime	7,480'	()
TD (includes 50 ft. rat hole)	7,530'	

Primary Objective(s): Brushy Canyon
Secondary Objective(s): Bell Canyon, Cherry Canyon

Mud Logger: No____, Yes X . Company Name: Morco . Starting Depth: Casing
Catch 30' Samples from Intermediate Casing to Total Depth.

Electric Logging Program: (Schlumberger)
Laterolog from Intermediate Casing to T.D.
Gamma Ray/Density/Neutron/Caliper Log from Intermediate Casing to T.D.
Magnetic Resonance Tool from Intermediate Casing to T.D.

Correlation Logs:

Sun-Ex Fed Unit #2	Sun '10' Fed #1	Sun-Ex Fed Unit #1
SE SE	SW SW	SE SW
9-26S-30E	10-26S-30E	10-26S-30E

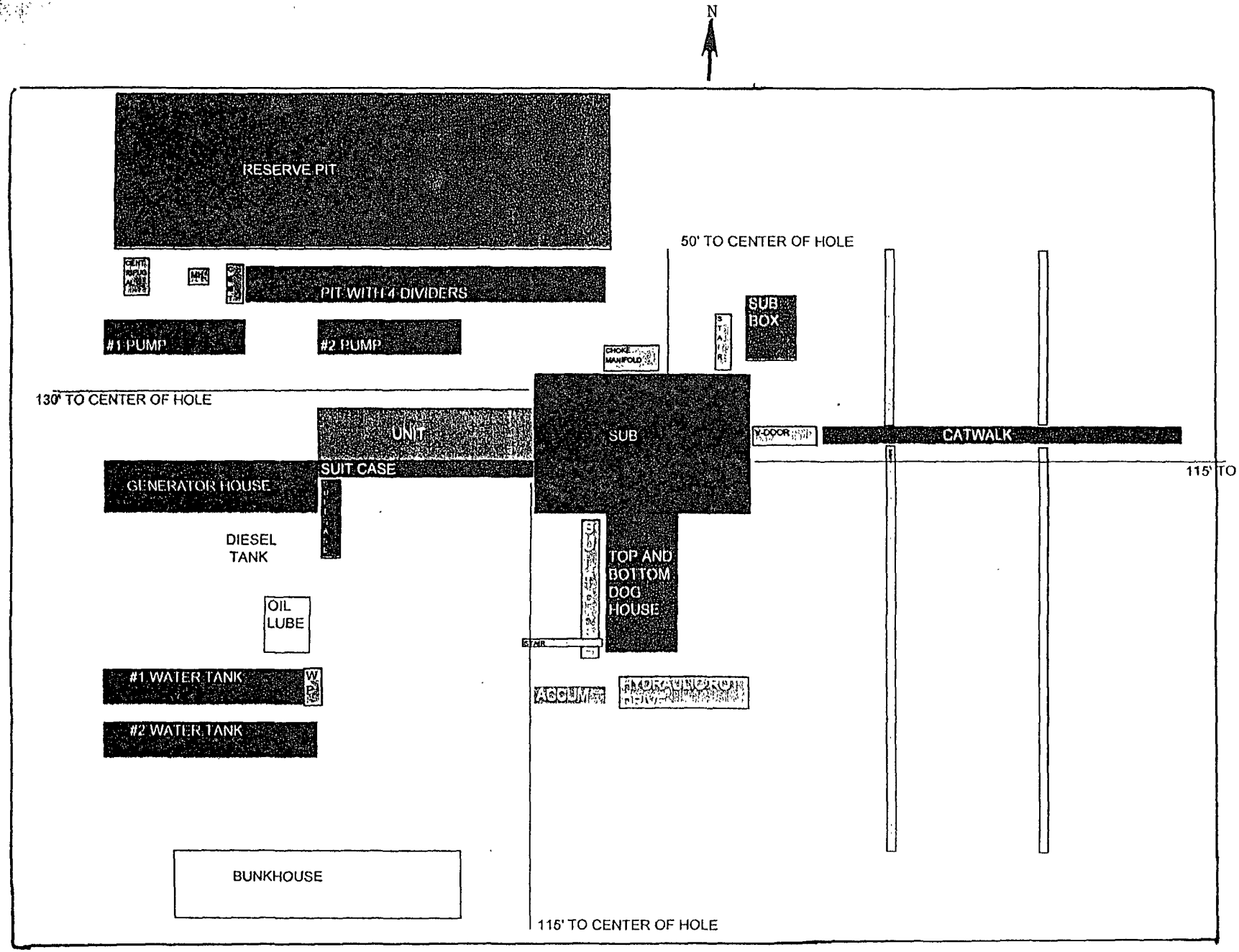
Remarks: All tops are based on MD and will be changed when an elevation is supplied. Tops are subject to change as drilling continues.

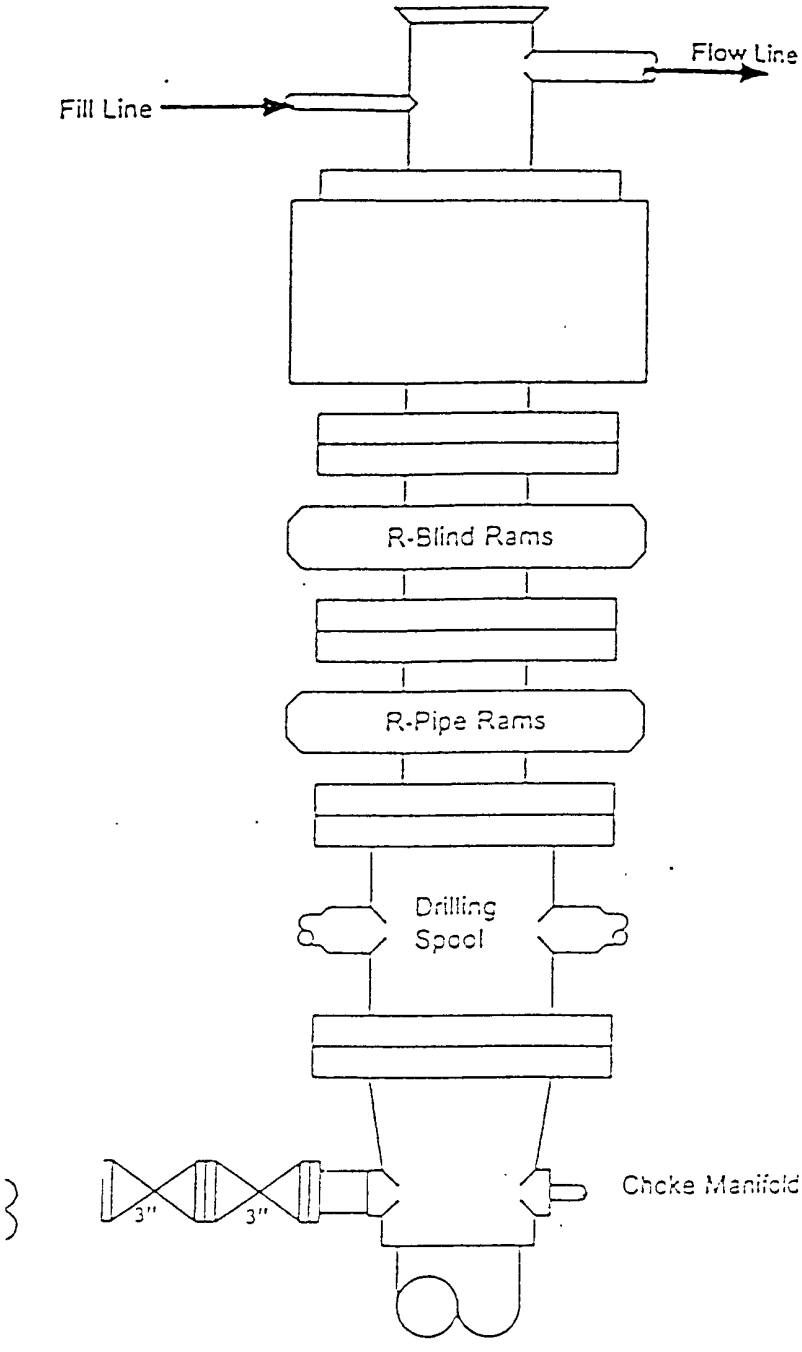
Date: 10-29-2007

Geologist: Matt Huhnke Office: (405) 996-5755
Cell: (405) 476-2355
E-mail: mhuhnke@rkixp.com
FAX: (405) 949-2223

Engineer: Pat McCollom Office: (405) 996-5748
Cell: (xxx) xxx-xxxx

EXHIBIT "D"
RIG LAY OUT PLAT
RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1
UNNIT "P"
T26S-R30E
SECTION 9
EDDY CO. NM





Type 900 Series
3000 psi WP

EXHIBIT "E"
SKETCH OF B.O.P. TO BE USED ON

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1
UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

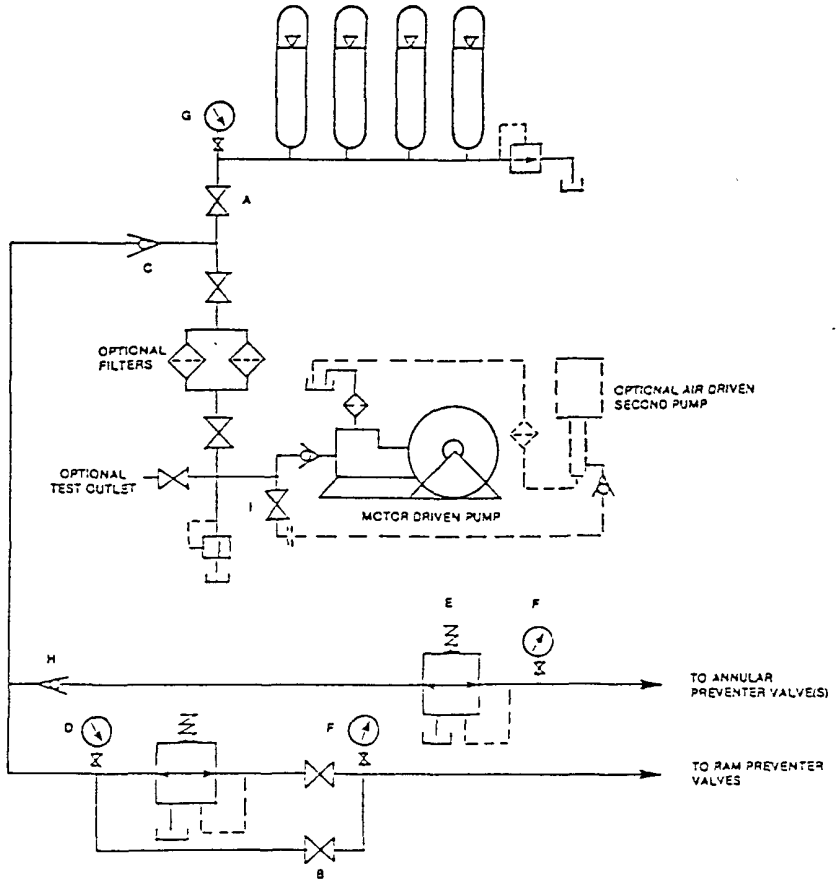


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

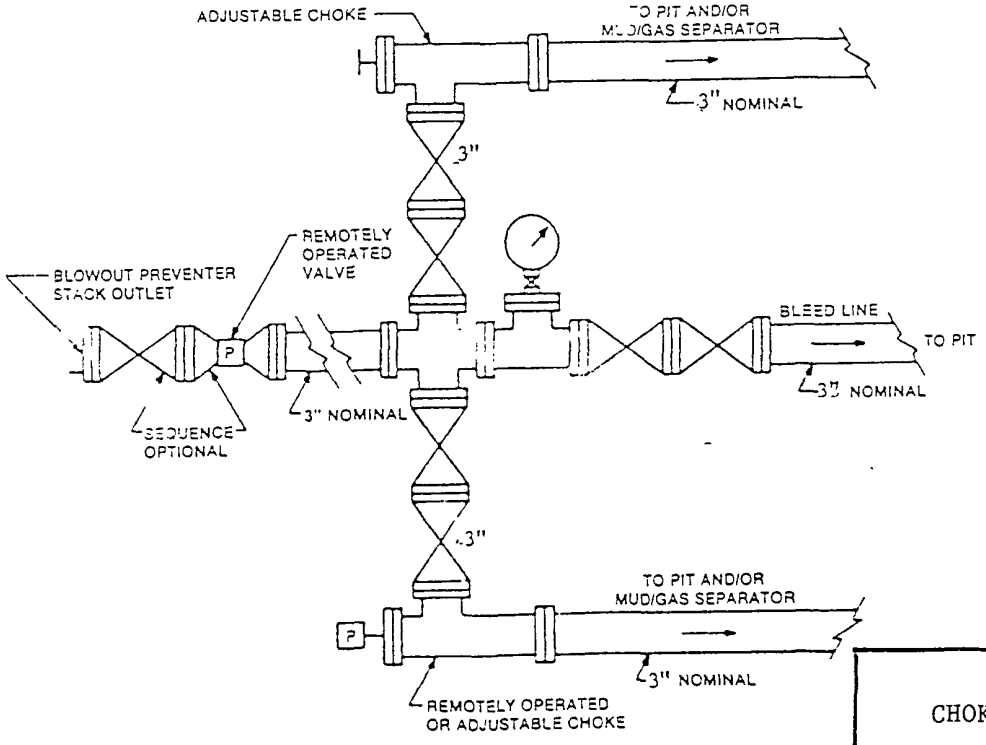


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1
UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazzards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2. H_2S Detection and Alarm Systems

   A. H_2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.

3. Windsock and/or wind streamers

   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.
   C. There should be a windsock at entrance to location.

4. Condition Flags and Signs

   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H_2S present in dangerous concentration. Only emergency personnal admitted to location.

5. Well control equipment

   A. See exhibit "E"

6. Communication

   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.

7. Drillstem Testing

   A. Exhausts will be watered.
   B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
   C. If location is near any dwelling a closed D.S.T. will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9. If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

SURFACE USE PLAN

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9"#1
UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

A. Exhibit "B" is a reporduction of a County General Hi-way map showing existing roads. Exhibit "C" is a reproduction of a USGS topographic map showing existing roads and and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. All new roads will be constructed to BLM specifications.

B. Exhibit "A" shows the proposed well site as staked.

C. Directions to location: From Loving New Mexico take U. S. Hi-way 285 South for 17.1± miles to CR-725, turn Left (East) go 4.2 miles take pipeline road East for 6.5 miles, turn Right (South) go 1 mile, then turn Left (East) follow lease road .9 miles and the location is on the North side of lease road.

D. Exhibit "C" is a topographic map showing location and roads in the area.

2. PLANNED ACCESS ROADS: No additional new roads will be required.

A. The access roads will be crowned and sitched to a 14' wide travel surface, within a 30' R-O-W.

B. Gradient of all roads will be less than 5%.

C. Turn-outs will be constructed where necessary.

D. If require new access roads will be surface with a minimum of 4-6" of caliche. this material will be obtained from a local source.

E. Center line for new roads will be flagged, road construction will be done as field conditions require.

F. Culverts will be placed in the access road as drainage conditions require. Roads will be constructed to use low water crossings for drainage as required by the topographic conditions.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS: EXHIBIT "A-1"

A. Water wells - None within 2 miles of location

B. Disposal wells - None Known

C. Drilling wells - None Known

D. Producing wells - as shown on Exhibit "A-1"

E. Abandoned wells - As shown on Exhibit "A-1"

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's.

5. LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

7. METHODS OF HANDLING WASTE MATERIAL:

A. Drill cuttings will be disposed of in the reserve pits.

B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.

C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.

D. Waste water from living quaters will be drained into holes with a minium of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for furthed drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pips will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

8. ANCILLARY FACILITIES:

A. No camps or air strips will be constructed on location.

9. WELL SITE LAYOUT:

A. Exhibit "D" shows the proposed well site layout.

B. This Exhibit shows the location of reserve pit, sump pits, and living facilities.

C. Mud pits in the active circulating system will be steel pits and the reserve pits will be unlined unless subsurface conditions encontered during pit construction indicate that a plastic liner is required to contain lateral migration.

D. If needed the reserve pits will be lined with polyethelene. The pit liner will be no less than12 mils thick and the liner will be extended at least 3 feet over the top of the dikes and secured in place to keep edge of liner in place.

E. The reserve pit will be fenced on three sides and fenced with four strands of barbed wire during drilling and completionphases. The 4th side will be fenced after drilling operations are complete and the drilling rig has moved out.If the well is a producer the mud pits will remain fenced in until the mud has dried up enough to break out the pits and reclaimed according to BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE:

Rehabilitation of the location and reserve pits will be allowed to dry properly, fluids may be moved and disposed of in accordance with article 7-E as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any will be reshaped to the original configuration with provisions made to alleviate furture erosion. In case of the well completed as a producer the drilling pad will be necessary to construct production facilities. After the area has been shaped and contoured top soil from the spoil pile will be placed over the disturbed area to the extent possible so that revegetation procedures can be accomplished to comply with the BLM specifications.

If the well is a dry hole the pad and road area will be contoured to match the existing terrain. Top soil will be spread to the extent possible and revegetation will be carried out according to the BLM specifications.

Should the well be a producer the previously noted procedures will apply to those areas which are not required for production facilities.

11. OTHER GENERAL INFORMATION:

A. Topography consists of low lying caliche hills with a gentle dip to the Southwest toward Brushy Creek. Soil is then sandy gray in color and very shallow with caliche base. Vegetation consists of mesquite, native grasses with various cacti.

B. The surface and minerals are owned by The U. S. Department of Interior and is administered by The Bureau of Land Management. The surface is used to graze livestock.

C. An Archaeological survey has been conducted and is on file with The Bureau of Land Management Carlsbad Field Office.

D. There are no dwellings located within 2 miles of the location.

E. Production facilities will be constructed on the location in case the well is completed as an oil well.

SURFACE USE PLAN

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9"#1
UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

CERTIFICATION

I HREBY CERTIFY THAT I OR PERSONS UNDER MY DIRECT SUPERVISION HAVE INSPECTED THE PROPOSED DRILL SITE AND THE ACCESS ROAD ROUTES, THAT I AM FIMILIAR WITH THE CONDITIONS THAT CURRENTLY EXIST , AND THAT THE STATEMENTS MADE IN THIS PLAN ARE TO THE BEST OF MY KNOWLEDGE ARE TRUE AND CORRECT , AND THAT THE WORK ASSOCIATED WITH THE OPERATIONS PROPOSED HERE IN WILL BE PERFORMED BY RKI EXPLORATION & PRODUCTION, LLC. ITS CONTRACTORS AND/OR IT'S SUB-CONTRACTORS AND IS IN CONFORMANCE WITH THIS PLAN AND THE TERMS AND THE CONDITIONS UNDER WHICH IT IS APPROVED. THIS STATEMENT IS SUBJECT TO THE PROVISIONS OF U.S.C. 1001 FOR FILING OF A FALSE REPORT.

OPERATOR'S REPRESENTATIVES

BEFORE CONSTRUCTION

TIERRA EXPLORATION,INC
HOBBS; NEW MEXICO 88241
P. O. BOX 2188
HOBBS, NEW MEXICO 88241
JOE T. JANICA
CELL 505-390-1598
OFFICE PHONE 505-391-8503

DURING & AFTER CONSTRUCTION

RKI EXPLORATION & PROD.
P. O. BOX 370
309 SOUTH HALAGUENO STREET
CARLSBAD, NEW MEXICO 88221-0370
GENE SIMER
CELL 505-706-3225
OFFICE 505-885-1313

NAME: Joe T. Janica

DATE: 01/18/08

TITLE Permit Engineer

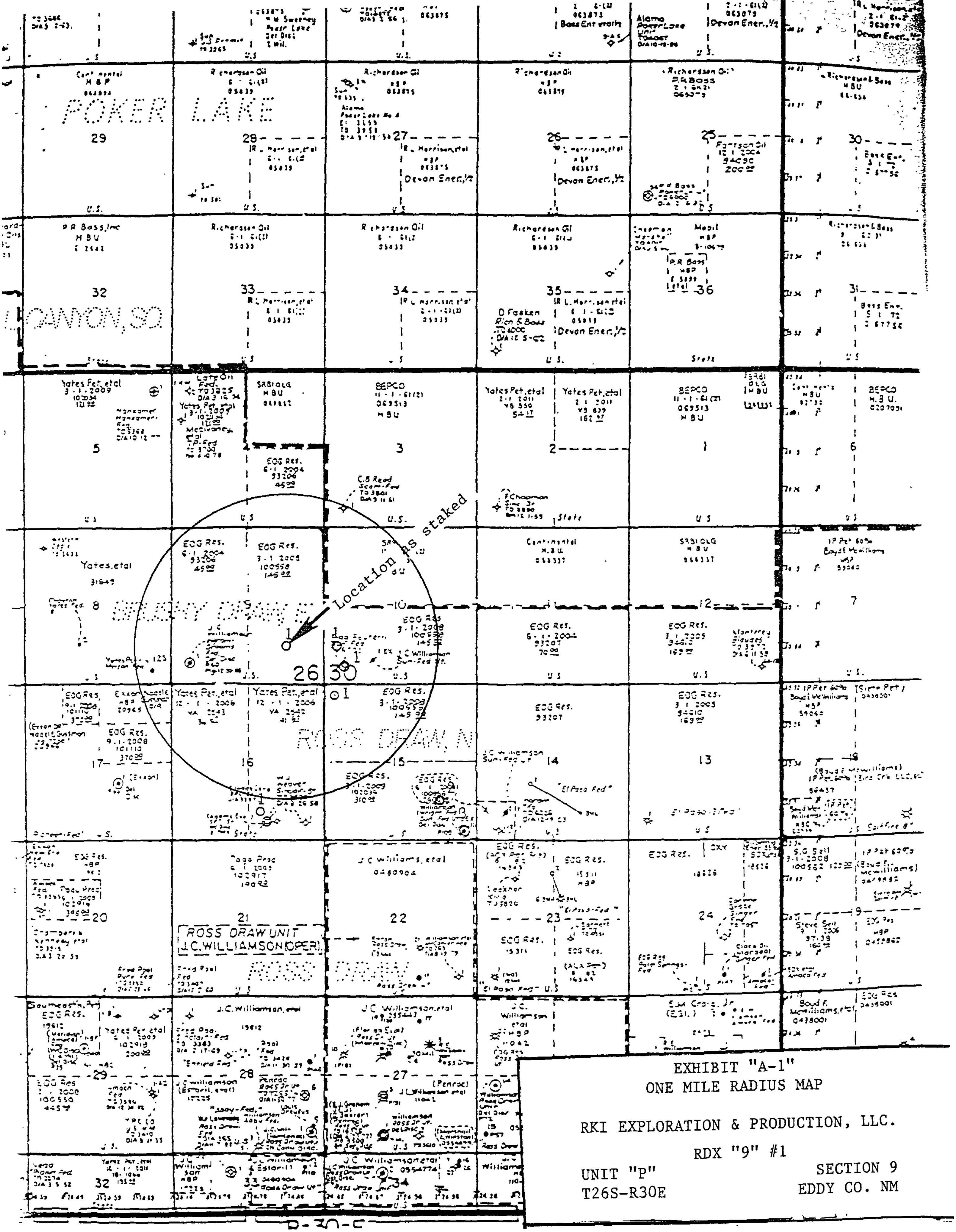


EXHIBIT "A-1"

ONE MILE RADIUS MAP

RKI EXPLORATION & PRODUCTION, LLC.

RDX "9" #1

UNIT "P"
T26S-R30E

SECTION 9
EDDY CO. NM

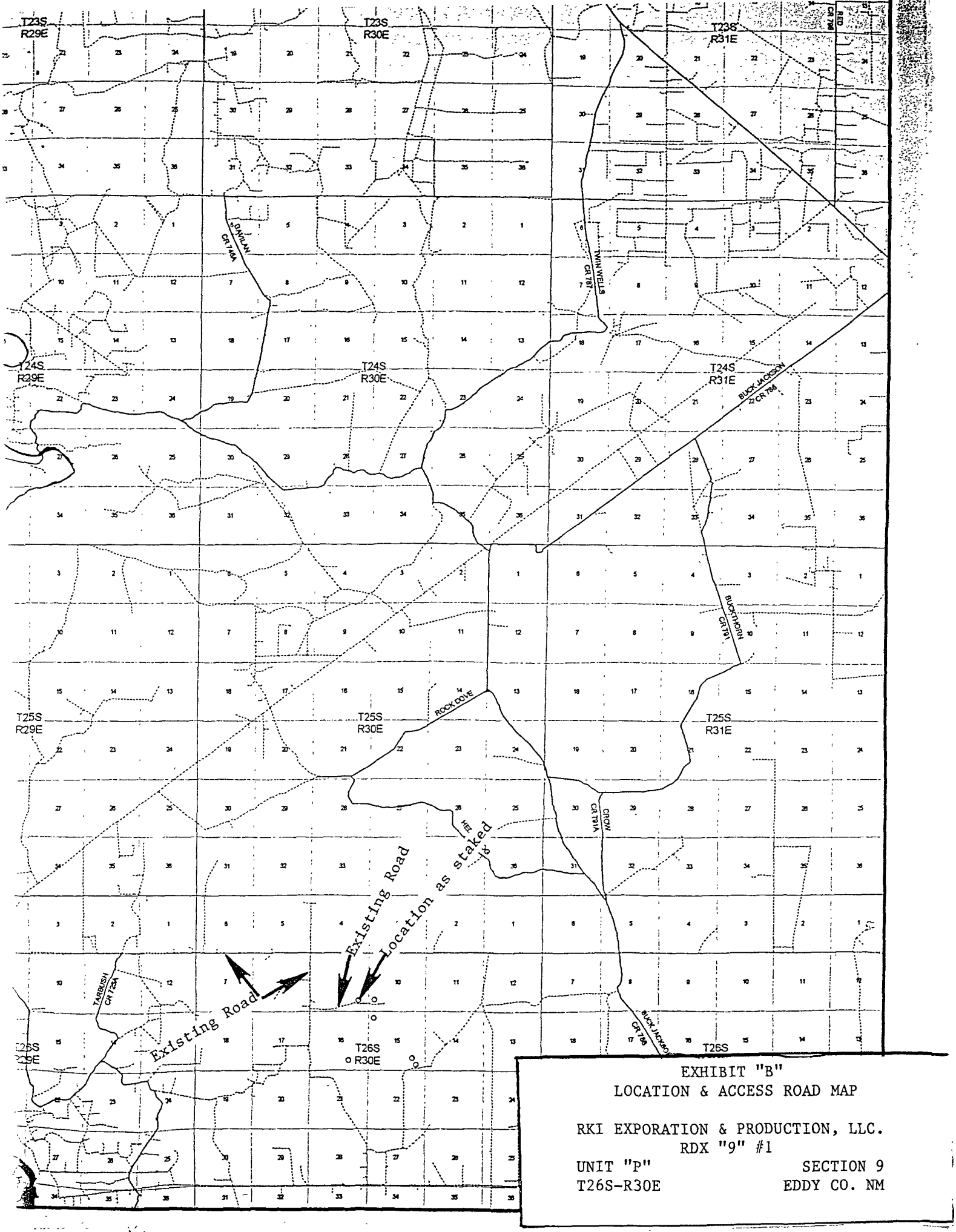
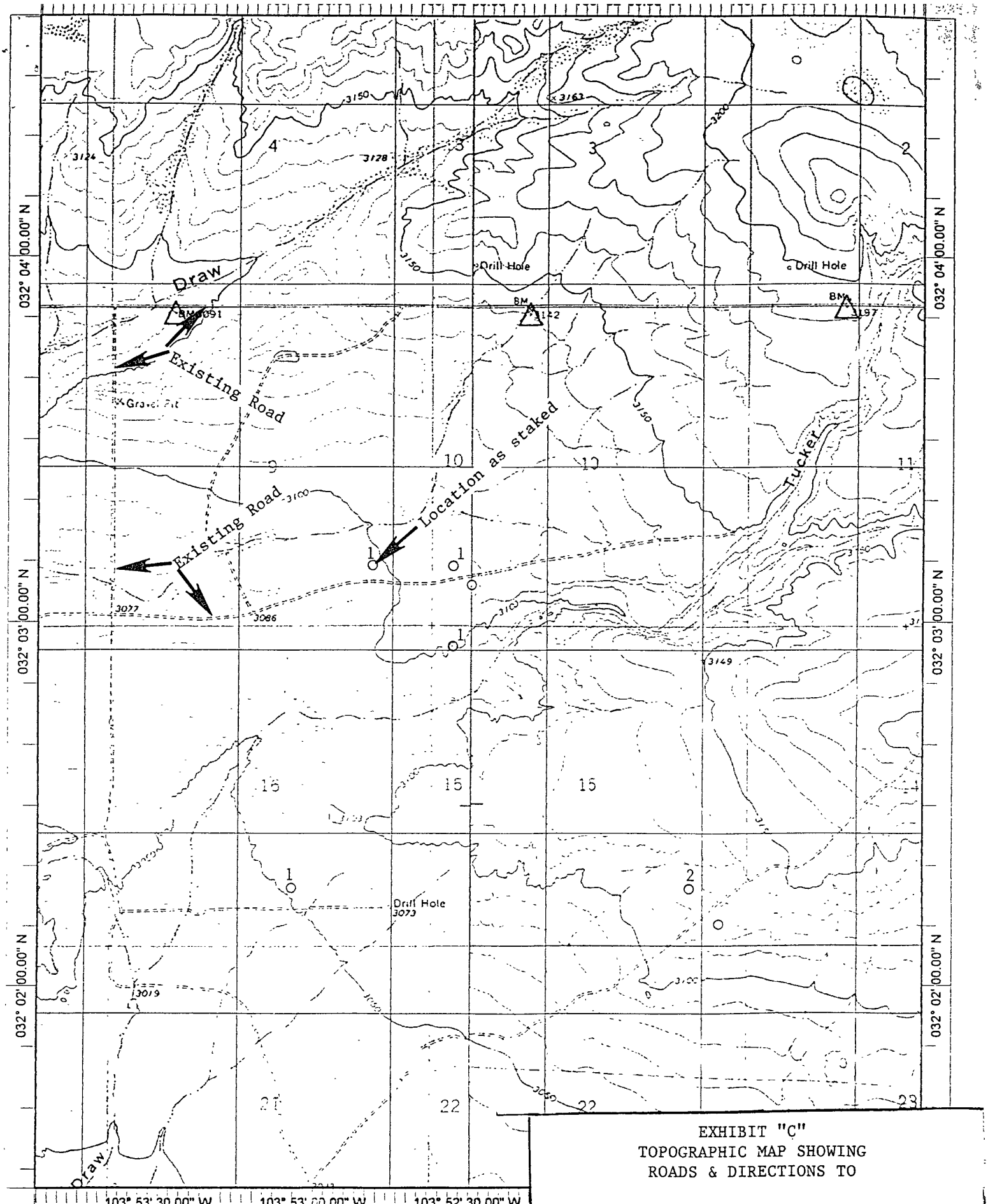


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

RKI EXPORATION & PRODUCTION, LLC.
RDX "9" #1

UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM



Datum: NAD27

EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

RKI EXPLORATION & PRODUCTION, LLC.
RDX "9" #1

UNIT "P" SECTION 9
T26S-R30E EDDY CO. NM

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI Exploration & Production, LLC
LEASE NO.:	NM100558
WELL NAME & NO.:	RDX 9 No. 1
SURFACE HOLE FOOTAGE:	990' FSL & 990' FEL
BOTTOM HOLE FOOTAGE	Same
LOCATION:	Section 9, T. 26 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Requested action is located within special management area: Phantom Banks Heronries. All management prescriptions stated in the 1997 CRA RMP Amendment; Appendix 4 (page AP4-121) will be set forth for overall compliance.

Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise. Well locations located within the 200 meter boundary of the 100 year flood plain must be bermed along with any collection facilities that are needed.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

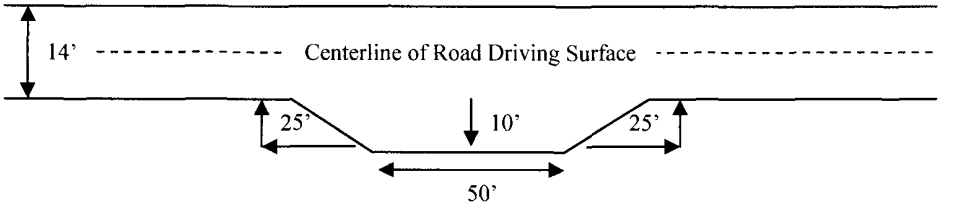
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

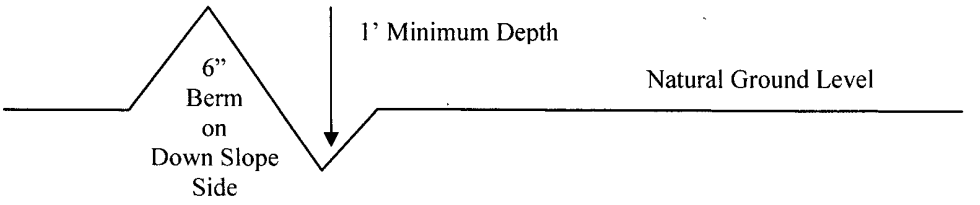


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

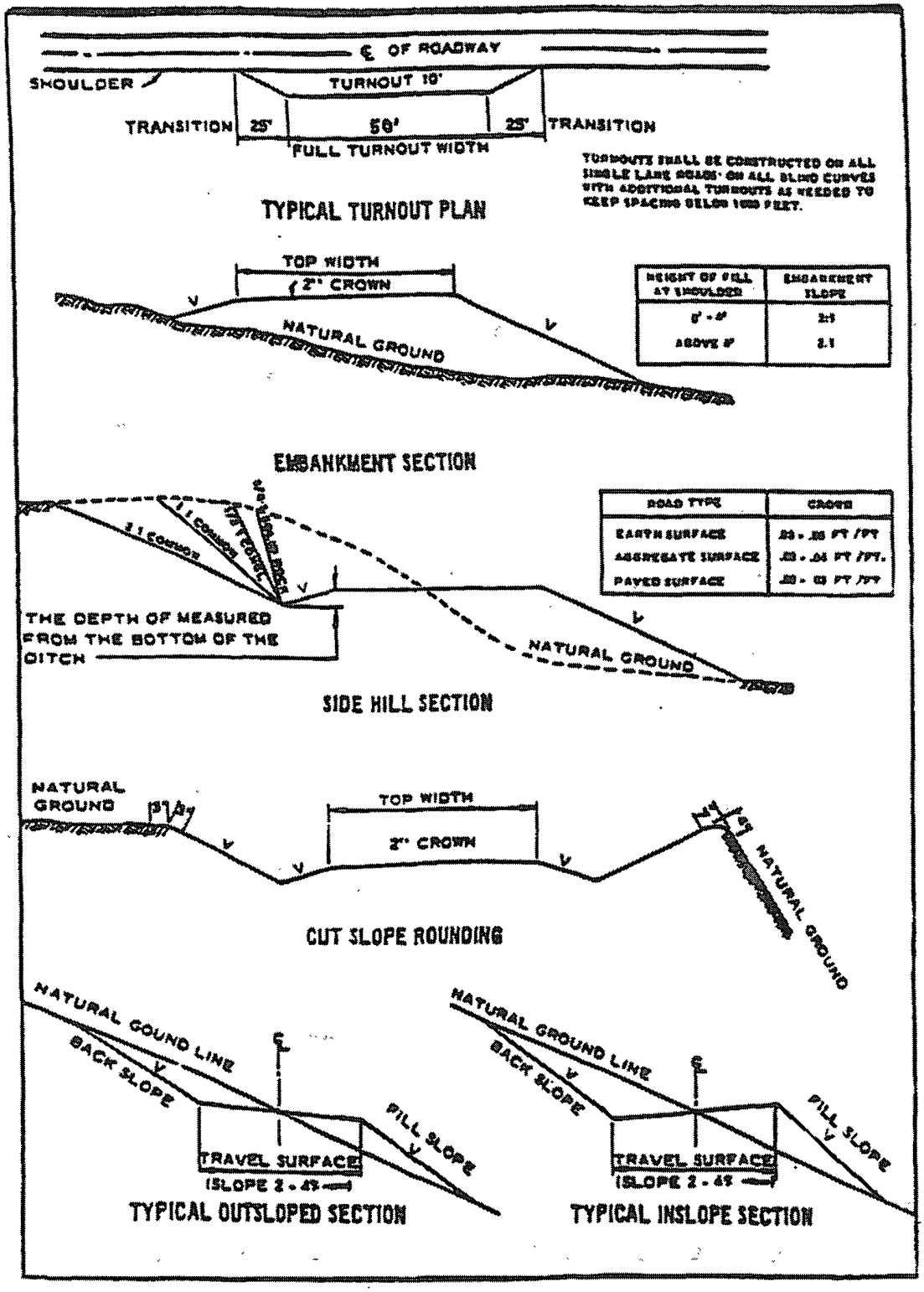
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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.

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 are located, this does not include the dog house or stairway area.

B. CASING

1. The **13-3/8** inch surface casing shall be set **at approximately 800 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth. Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

    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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time 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. (This is to include the lead cement). **Please provide WOC times to inspector for cement slurries.**

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 action will be done prior to drilling out that string.

Medium cave/karst.
Lost circulation in Redbeds, evaporites to base of Castile Group, Delaware and Bone Spring formations.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above. **Please provide WOC times to inspector for cement slurries. Casing to be set into the Lamar Limestone at approximately 3485'.**

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

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **First stage to circulate.**

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

NB! Check condition of 4" flexible line from BOP to BOPE, replace if exterior is damaged or if line fails test. Line to be as straight as possible. Flex line connection will be used for 2M and 3M systems. Variance approved for flex line per verbal request by operator.

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. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

c. 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.

d. 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.

e. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1000** psi with the rig pumps is approved.

D. DRILL STEM TEST

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

WWI 022908

VIII. 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, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

Seed Mixture 1, for Loamy Sites

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 bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper 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 (small/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:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent gemination = pounds pure live seed

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.