

OCD-ARTESIA

ATS-11-118

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

EA 703

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-480904B
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator RKI Exploration & Production, LLC. (246289)		7. If Unit or CA Agreement, Name and No. Ross Draw Unit
3a. Address 3817 NW Expressway, Suite 950 Oklahoma City, Ok. 73112		8. Lease Name and Well No. RDU Federal 22-2H (38361)
3b. Phone No. (include area code) 405-996-5750		9. API Well No. 30-015-39262
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 330 FNL & 2105 FEL At proposed prod. zone 330 FSL & 1650 FEL		10. Field and Pool, or Exploratory Undesignated Bone Spring (97863)
14. Distance in miles and direction from nearest town or post office* Approximately 14 miles southeast of Malaga, NM.		11. Sec., T. R. M. or Blk. and Survey or Area Section 22, T. 26 S., R. 30 E.
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 ft.	16. No. of acres in lease 640	12. County or Parish Eddy
17. Spacing Unit dedicated to this well 160	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 865 ft.	13. State NM
19. Proposed Depth 8400 ft. ✓	20. BLM/BIA Bond No. on file NLM-NMB-000460	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3091' GL ✓	22. Approximate date work will start*	23. Estimated duration 30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must 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 BLM.

25. Signature <i>Barry W. Hunt</i>	Name (Printed/Typed) BARRY W. HUNT	Date 4/6/11
Title Permit Agent for RKI Exploration & Production, LLC.		
Approved by (Signature) <i>Isi Don Peterson</i>	Name (Printed/Typed)	Date JUL 19 2011
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.

(Continued on page 2)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

K 08/08/11

Temp 10-12

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

RKI EXPLORATION & PRODUCTION, LLC.

RDU 22-2H

Surface Location: 330' FNL & 2,105' FEL

Bottom Hole Location: 330' FSL & 1,650' FEL

Section 22, T26S, R30E

Eddy County, NM

1. The elevation of the unprepared ground is 3,091' 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 12,833' MD and run casing. This equipment will then be rigged down and the well will be completed with a workover rig.
4. Proposed total depth is 12,833' MD, 8,400' TVD.
5. Estimated tops of important geologic markers:

Rustler	800'
Salado	1,100'
Castile	1,640'
Lamar Lime	3,560'
Base of Lime	3,582'
Delaware Top	3,615'
Bell Canyon Sand	3,615'
Cherry Canyon Sand	4,690'
Brushy Canyon Sand	5,750'
KOP	7,827'
Bone Spring	7,440'
TVD	8,400' (135 degree F)

*Water possible above Rustler

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

Bell Canyon	Oil (1,565 psi)
Cherry Canyon	Oil (2,030 psi)
Brushy Canyon	Oil (2,489 psi)
Bone Spring	Oil (3,221 psi)

7. The proposed casing program is as follows:

Surface: 13-3/8" 54.5# J-55 ST&C new casing set from 0' - 900'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

See CoA

870

Intermediate: 9-5/8" 40# J-55 LT&C new casing set from 0' – 3,300'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

Production: 5-1/2" 17# P-110 LT&C new casing set from 0' – 12,833'
Tension SF 2.0, Collapse SF 1.125, Burst SF 1.8.

8. Casing setting depth and cementing program:

- a. 13-3/8" surface casing set at 900' in 17-1/2" hole. Circulate cement to surface with 675 sx "C" with 4% D20, 2% S1, .2% D46, .125 pps D130 mixed at 12.9 ppg (1.97 cf/sk) followed by 200 sx "C" with 1% S1, .125 pps D130 mixed at 14.8 ppg (1.34 cf/sk), excess - 100%.
- b. 9-5/8" intermediate casing set at 3,300' in 12 1/4" hole. Cement will be circulated to surface with 840 sx 35:65 Poz "C" with 5% D44, 6% D20, .2% D46, 2 pps D42, .125 pps D130, .1% D13 mixed at 12.6 ppg (2.07 cf/sk) followed by 200 sx "C" with .2% D13 mixed 14.8 ppg (1.33 cf/sk), excess - 25%.
- c. 5-1/2" production casing set at 12,833' in 8 3/4" hole. Cement will be calculated to bring TOC to 3,000'. The well will be cemented in two stages as follows: **Stage 1:** 1,410 sx PVL with 30% D151, 2% D174, .2% D46, .5% D79, .8% D800, .05 gps D177 mixed at 13.0 ppg (1.83 cf/sk), excess – 25%. **Stage 2:** 310 sx 35:65 Poz "C" with 5% D44, 6% D20, .2% D13, .2% D46, 2 pps D42, .125 pps D130 mixed at 12.6 ppg (2.07 cf/sk), excess – 25%. DV tool at approximately 5,000'.

9. Pressure Control Equipment (3,000 psi BOP):

Annular preventer, pipe ram, and blind ram. Drilling spool with 2 side outlets (choke side shall be 3" minimum diameter, kill line side shall be at least 2" diameter. 2 – 3" choke line valves, 2 chokes with 1 being remotely operated from rig floor. 2 – 2" kill line valves and a check. Upper kelly cock valve with handle available. Lower kelly cock valve with handle available. Safety valves and subs to fit all drill string connections in use. Inside BOP or float sub available. Pressure gauge on choke manifold. Fill up line above uppermost preventer.

BOP equipment will be tested to 250 psi low and 3,000 psi high. Annular will be tested to 1,500 psi. The 9 5/8" and 13 3/8" will be pressure tested to 1,000 psi before drilling out. Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log.

10. Mud Program:

- 0' - 900' ~~870~~ Fresh water/ Bentonite/Lime mud. Paper for losses and seepage. 8.4 to 9.0 ppg, PV 3 to 5, YP 5 to 7, WL NC.
- 900' - 3,300' Brine. As needed LCM for losses and seepage. 10.0 to 10.1 ppg, PV 1 to 3, YP 1 to 3, WL NC.
- 3,300' - 60 deg. Drill out fresh water/cut brine adding KCl increasing MW to 8.5 to 8.6 ppg, PV 1, YP 1, WL NC.
- 60 deg. - 12,833' 8.8 to 9.0 ppg, PV 12 - 14, YP 20 - 22, WL 12 - 15.

11. Testing, Logging and Coring Program: *See COA*

Testing program: No drillstem tests are anticipated.

Electric logging program: CNL/CAL/GR, DLL/CAL/GR. From 9 5/8" casing to kick off point. A gyro survey will also be run at kick off point.

Coring program: None.

12. No abnormal conditions or hazards are expected.

13. Drill strings:

17 1/2" hole section - 17 1/2" mill tooth or long button bit, shock sub, 8" DC, IBS, 8" DC's, 6 1/4" DC's. Drill pipe - 16.6# S-135.

12 1/4" hole section - 12 1/4" PDC bit, Vertical Scout, motor, IBS, shock sub, 8" DC's, 6 1/4" DC's, jars, 6 1/2" DC's. Drill pipe - 16.6# S-135.

3,300' to KOP (7827')

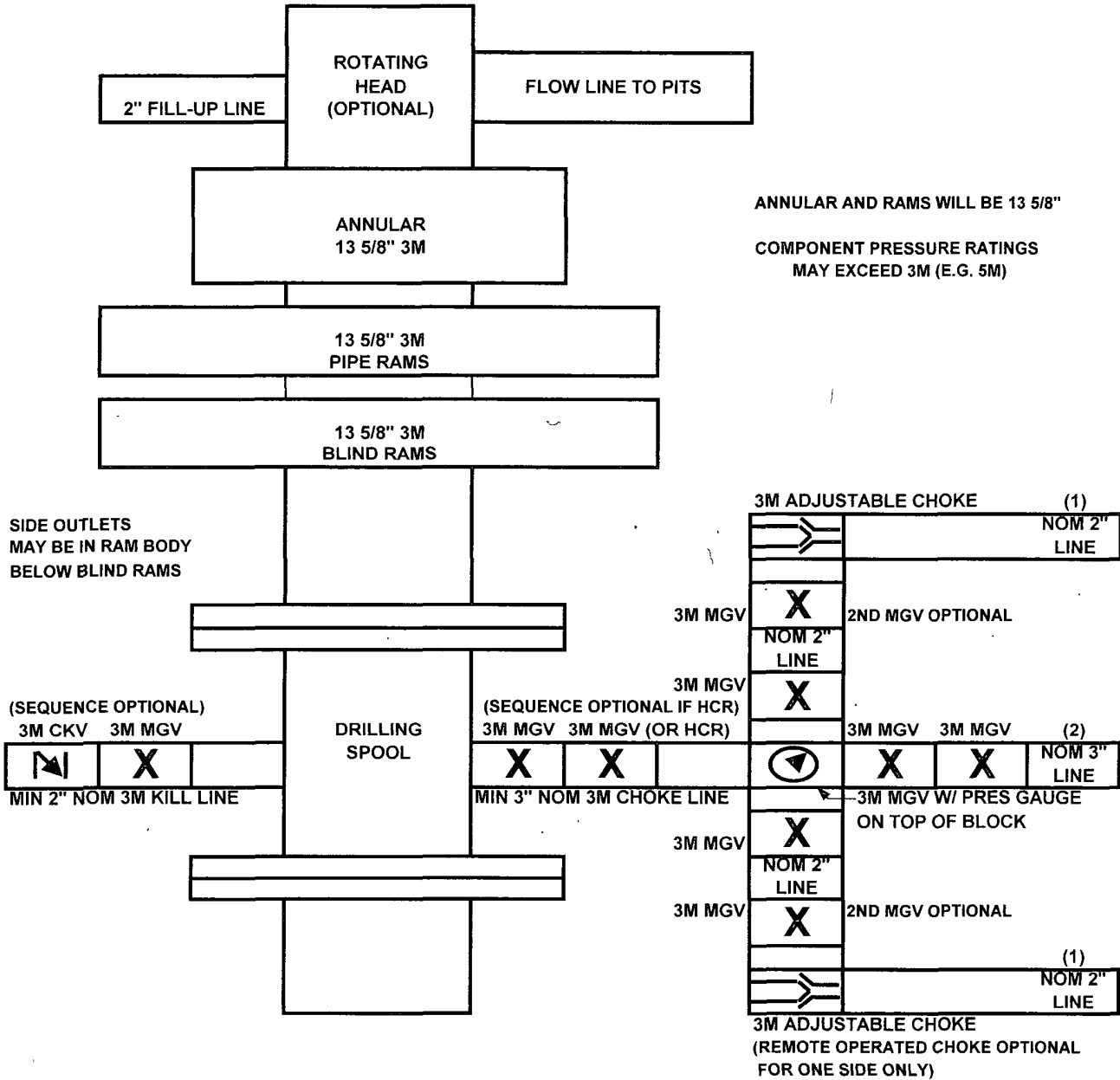
8 3/4" hole section - 8 3/4" PDC bit, Vertical Scout, motor, IBS, shock sub, 6 1/4" DC's, jars, 6 1/2" DC's. Drill pipe - 16.6# S-135.

KOP to 90 deg

8 3/4" build section - 8 3/4" button bit, motor, UBHO sub, monel, 4 1/2" DP (approximately 1,000'), HWDP, jars, HWDP. Drill pipe - 16.6# S-135.

8 3/4" Lateral - 8 3/4" PDC bit, motor, UBHO sub, monel, 4 1/2" DP, Agitator, HWDP, shock sub, HWDP. Drill pipe - 16.6# S-135.

3M BOP SCHEMATIC



(1) Line to mud gas separator and/or pit

(2) Bleed line to pit

MGV - Manual Gate Valve

CKV - Check Valve

HCR - Hydraulically Controlled Remote Valve

Choke Manifold

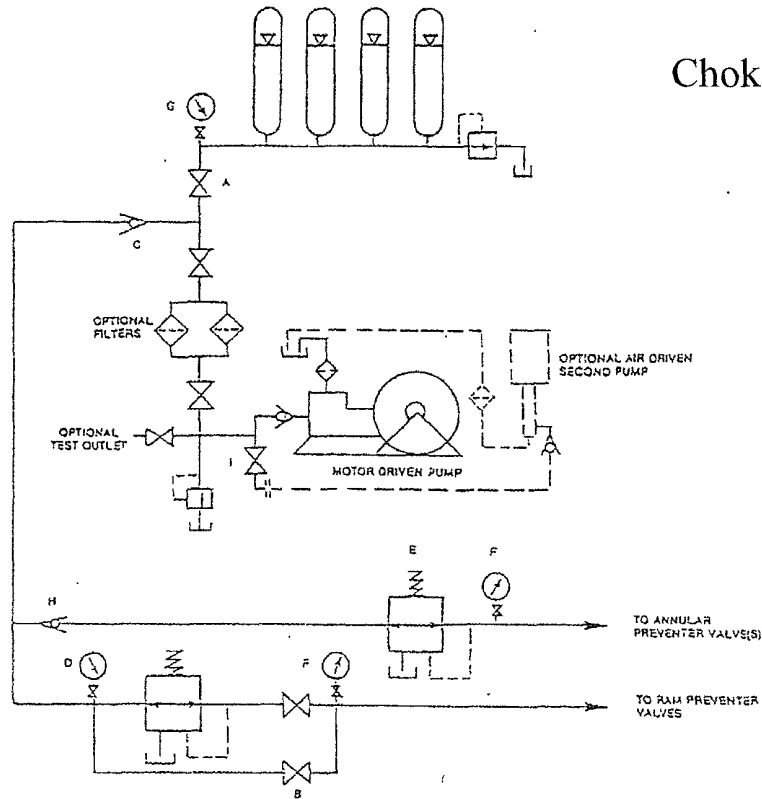


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

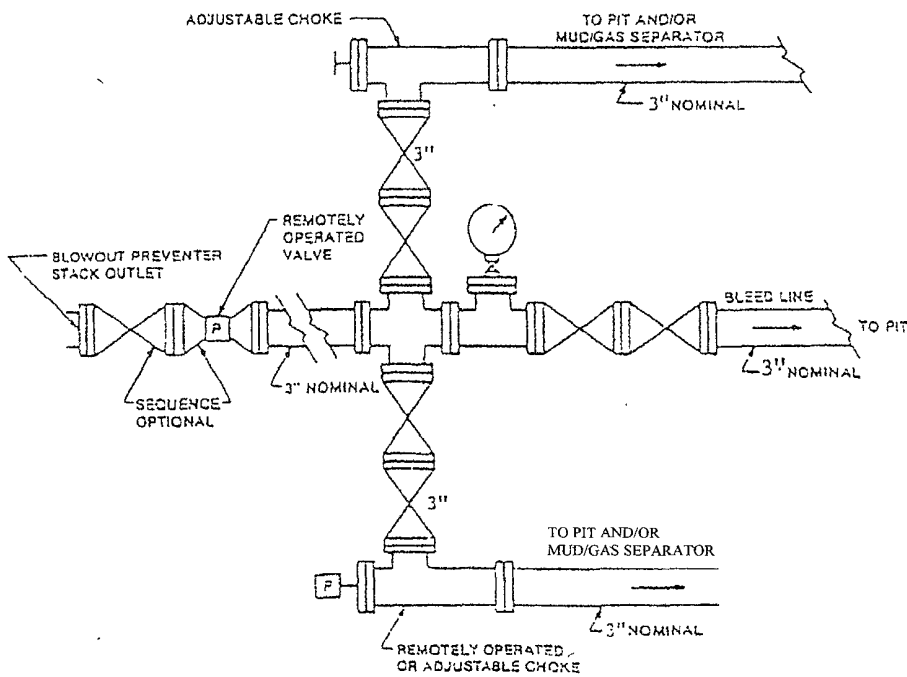
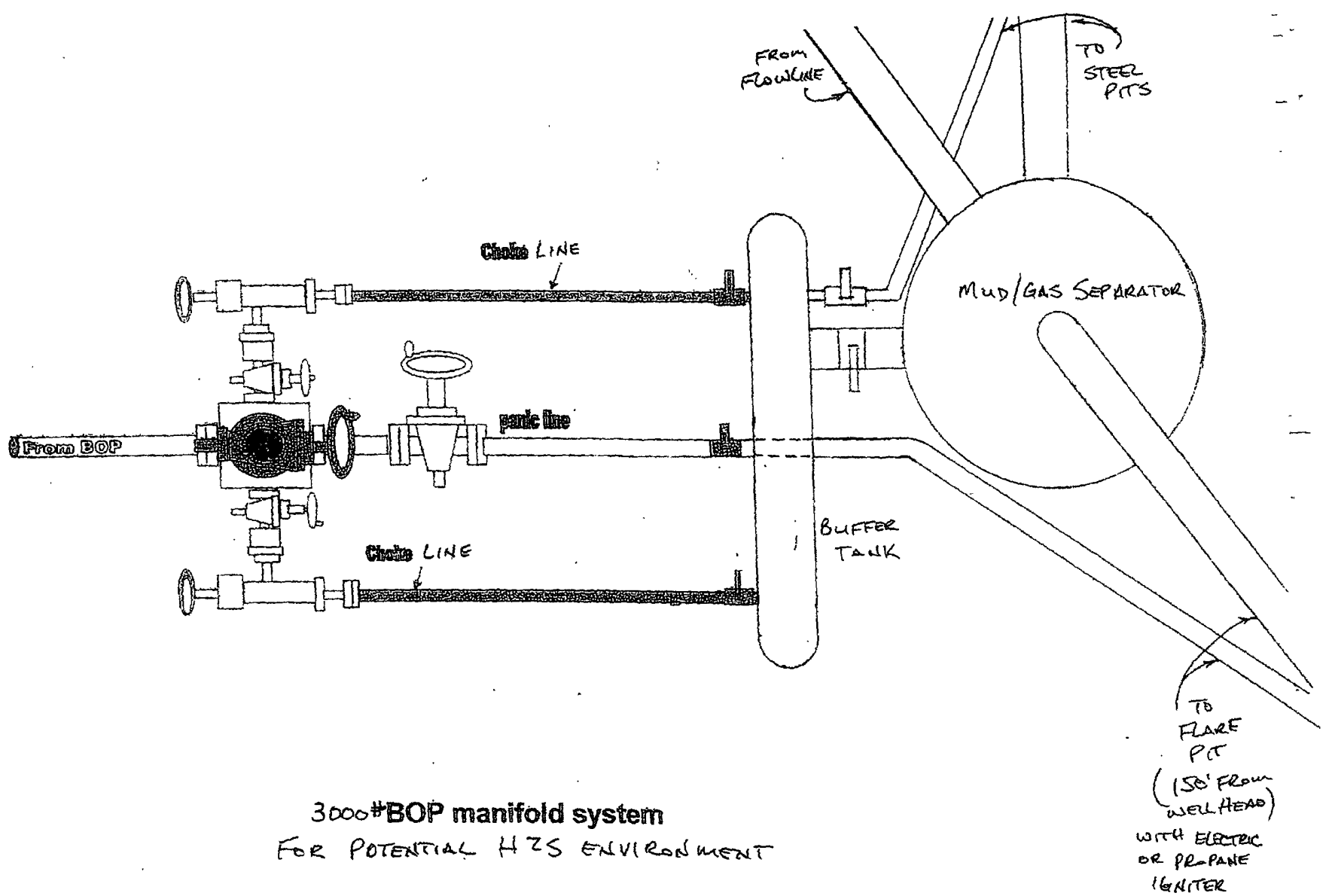


FIGURE K4-2 Typical choke manifold assembly for 5M rated working pressure service - surface installation



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator RKI EXPL + PROD LLC OGRID # 246289
 38361 Well Name & # RDU 22 FEDERAL # 2H Surface Type (F) (S) (P)
 Location: UL B, Sect 22, Township 26 s, RNG 30 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd / / C101 reviewed / /

B. 1. Check mark, Information is OK on Forms:

OGRID X, BONDING FED, PROP CODE , WELL # , SIGNATURE

2. Inactive Well list as of: 8/8/11 # wells 174, # Inactive wells 5

a. District Grant APD but see number of inactive wells:

No letter required X; Sent Letter to Operator , to Santa Fe

3. Additional Bonding as of: 8/8/11

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator , To Santa Fe

b. District Denial because of Inactive Well list and Financial Assurance:

No Letter required 25; Sent Letter to Operator , To Santa Fe

C. C102 YES , NO , Signature

1. Pool WILDCAT 6-035263016K; B3 Code Q97863

a. Dedicated acreage 160, What Units BOGD

b. SUR. Location Standard X; Non-Standard Location

c. Well shares acres: Yes , No X # of wells plus this well #

2. 2nd. Operator in same acreage, Yes , No X

Agreement Letter , Disagreement letter

3. Intent to Directional Drill Yes X No

a. Dedicated acreage 160, What Units BOGD

b. Bottomhole Location Standard X Non-Standard Bottomhole

4. Downhole Commingle: Yes , No X

a. Pool #2 , Code , Acres

Pool #3 , Code , Acres

Pool #4 , Code , Acres

5. POTASH Area Yes , No FED

D. Blowout Preventer Yes X, No

E. H2S Yes X, No , Part FED APD

F. C144 Pit Registration Yes , No , none

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes , No X, NSL #

2. Non-Standard Proration: Yes , No X, NSP #

3. Simultaneous Dedication: Yes , No X, SD #

Number of wells Plus #

4. Injection order Yes , No X; PMX # or WFX #

5. SWD order Yes , NO X; SWD #

6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date / /

API #30-015-- 39262

8. Reviewers