

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO 1004-0135
Expires July 31, 2010

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No NMSF078139
2. Name of Operator BP AMERICA PRODUCTION CO. Contact: RANAD ABDALLAH E-Mail: ranad.abdallah@bp.com		6. If Indian, Allottee or Tribe Name
3a. Address 200 ENERGY COURT FARMINGTON, NM 87401	3b. Phone No. (include area code) Ph: 281-366-4632	7. If Unit or CA/Agreement, Name and/or No. SRM1358
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 9 T30N R9W SENE 1535FNL 1090FEL		8. Well Name and No ELLIOTT GAS COM X 1E
		9. API Well No 30-045-33020-00-C1
		10. Field and Pool, or Exploratory BASIN DAKOTA BLANCO MESAVERDE
		11. County or Parish, and State SAN JUAN COUNTY, NM

12. CHECK 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 checked="" type="checkbox"/> Other
	<input 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 recompleat 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Basic Job Procedure:

MIRU
Pull existing tubing
Run Bit and scraper
RIH and set cement retainer @ 7440'
Pump 4 bbls cement below the cement retainer to plug off perfs
Pump 3.1 bbls cement (200') on top of retainer fr. 7440'-7420'
Set CIBP at 5570' 5618' Per Dave Wages 7/24/12
Run new tubing and land @ 5370' on 6/18/12
RDMO service unit.

RCVD MAY 30 '12

OIL CONS. DIV.

DIST. 3

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #138846 verified by the BLM Well Information System For BP AMERICA PRODUCTION CO., sent to the Farmington Committed to AFMSS for processing by STEVE MASON on 05/24/2012 (12SXM0220SE)	
Name (Printed/Typed) RANAD ABDALLAH	Title AUTHORIZED REPRESENTATIVE
Signature (Electronic Submission)	Date 05/23/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By STEPHEN MASON	Title PETROLEUM ENGINEER	Date 05/24/2012
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.		Office Farmington

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

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NMOCDA



Elliot GC X 1E Cleanout & P&A Dakota

General Information:

Job Objective:	Clean Out	Date:	1/24/12
Cleanout Project #:		Total AFE Amount:	\$105,000
P&A Dakota Project #:		Total AFE Amount:	\$42,000
<u>Contact:</u>			
Intervention Engineer:	David Wages	p. (281) 366-7929	c. 406-231-4679
Base Management Engr:	Shola Adegoke	p. (281) 504-9018	c.
Production Team Leader	Chuck Anderson	p. (505) 326-9253	c.
Intervention Engineer	Phyllis Loose	p. (970) 247-6829	c. (970) 759-5202
Intervention Engineer	Trevor McClymont	p. (281) 366-1425	c. (281) 546-2477

Well Information:

API Number:	30-045-33020
Present Status	Producing
PBTD	7630'
	lat 36.82877
GPS Coordinates:	long 107.78075
County	San Juan
State	New Mexico
	H SEC. 09, T30N,
Surface Location:	R09W
Cost Center:	1000077909
Well FLAC:	72940303
Lease FLAC:	151945
Lateral/Run	3b-45 Lateral/30
Meter #:	86153
BP WI:	
Reg Approval Req'd:	Yes
Partner Approval Req'd	Yes
Landowner Approval Req'd	No
Additional Approvals	No
Restrictions:	No
Compliance/Issues	No

Production Data:

Artificial Lift Type	Plunger
Current Production Rates	
Gas (mcf/d)	0
Oil/Cond (bpd)	0
Water (bpd)	0
Expected Production Rates	125mcf/d/1bcpd/2bwpc
Compressed (Y\N)	Y
Flowing Pressures (psig)	
Tubing	100
Casing	100
Line	100
Shut-in Pressures	
Tubing	150
Casing	150
Bradenhead	0
MASP	170 psig
CO ₂ %	1.46%
H ₂ S (ppm)	no history
Area Classification:	LCO

Prepared By: _____

Reviewed By: _____

Approved By: _____

Policy Reminder

Any changes to the written procedure requires an MOC
MOC (except BoD/SoR) approvals during execution have been delegated to the OTL

Objective: Cleanout and P&A Dakota

Basic Job Procedure:

1. Set Plugs
2. MIRU
3. Pull Tubing
4. Run Bit and scraper
5. P&A Dakota
6. Acidize as necessary
7. RIH w/ completion string
8. RDMO

Well History:

Spud Date: 6/27/06

- Full returns to surface on intermediate casing
- Drilled 6-1/4" hole to 7663' TD. Land 4-1/2" 11.6#, P-110 LT&C csg @ 7662'
- Cmt w/ 142 sx lead, 9.5 ppg, 2.520 cu ft/sk. Tail with 211 sx, 13 ppg, Yield 1.44 cu ft/sk. 662 cu ft total.

Completed Dakota: 10/2006

- PT casing to 7500 psi for 15 minutes OK.
- Perforate Dakota from 7480'-7610 w/ 2spf
- Frac down the 4-1/2" casing @ 65 bbls/min using 255,000# of 16/30 sand w/ 65Q N2 foam. Last 60,000# of sand was treated with propnet.

Completed Mesa Verde: 1/2007

- Set BP at 5600', PT casing and CIBP to 7300 psi OK
- Perforate the MV from 5275'-5418'
- Frac down 4-1/2" casing @ 60 bbl/min using 150,000# 16/30 sand in 70Q N2 foam. Screen out on Flush.
- C/O and drill out CIBP @ 5600'
- Land tubing at 7611'

Well Servicing: 5/2009

- C/O, 30' of fill
- Land tubing @ 7503'

Swab: 6/2010

- Initial FL: 7000', pulled 11.5 bbls day 1
- Turn well over day 2

Well Servicing: 5/2011

- Tag fill @ 7590' (40' fill)
- Several days cleaning out, still have sand coming in, decide to land tubing.
- Land tubing @ 7449'

Swab: 6/2011

- 20 bbls day 1
- 9 bbls day 2

Completion Information

End of Tubing: <u>7449'</u> Intermediate Casing: <u>7" 20#</u> PBTD: <u>7663'</u>	Tubing Size <u>2-3/8"</u> Casing size <u>4-1/2" 11.6#</u> Packer: <u>N/A</u>
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Pressure Testing Values	
Low Pressure Test	High Pressure Test
250 psi	500 psi

Standard Site Preparations

1. Perform pre-rig site inspection. Per Applicable documents and/or checklists.

1. Size of Location	6. Wash (dikes requirements)	11. Landowner Issues
2. Gas Taps, (notify land owners)	7. Raptor nesting	12. Protection Barriers Needed
3. Other Wells	8. H ₂ S	13. Critical Location
4. Other Operators	9. Wetlands	14. Anchors
5. Production Equipment	10. Location of Pits	15. ID Wellhead for proper flange connection

2. Work with OC through CoW and w/P&S to develop a plan to move or temporarily relocate equipment that prohibits well servicing/plugging objectives.
3. Perform a second site visit after lines are marked to ensure all lines locations are clearly marked and that Planning & Scheduling has stripped equipment and set surface barricades as needed.
4. Have wellhead service company check out wellhead to identify wellhead components and pressure test hanger seals to specified high and low pressures.
5. If the data bases indicate H₂S is present then have a Service Company check for H₂S on tubing and all casing annuli with Dreiger Tube. If H₂S is present then notify WIE to discuss options.
6. Complete Handover Documentation between Operations and Functional Wells Team per ADM 61006.
7. Check and record shut in casing pressure (SICP), shut in tubing pressure (SITP), intermediate casing pressure (SIICP), Bradenhead pressures (SIBH), and or flowing pressures (FTP, FCP) in Open Wells daily.
8. If SIICP or SIBH exist then notify the Well Intervention Engineer (WIE) and Wells Field Superintendent (WFS). Notify WIE if water or gas flow is observed from any annulus.

Slickline diagnostics:

9. Ensure production equipment is LOTO and well is shut in.
10. Move in slickline unit, equipment and crew.
11. RU slickline using slickline NOP (NAG-NOP-SL01). Pressure test lubricator 250 psi low and 500 psi high for 5 minutes for each test. Record passing test in Open Wells.
12. RIH with 1.9" gauge ring to nipple/plunger equipment at ~7441' to locate any tools or tubing obstructions. POOH. Record depth of tag.

!!!!!!!!!!!!Report depth of Fluid level tag to engineer!!!!!!!!!!!!

13. If possible RIH and retrieve plunger equipment.

Set Barriers

14. There must be a minimum of 1 mechanical pressure barrier in tubing in order to break containment, barriers shall conform with DWOP, NAG-GP 10-36-1, and SJ-SOP-WI-BKCNT-Rev01. Plugs shall be one of the following:
- Pump through plug installed in a nipple
 - A tubing pack-off with pump through plug and appropriate stops set above and below the plug
 - Setting a cement retainer in the tubing after discussing with WIE and WFS.
 - Two way check installed in the tubing hanger

Setting Plugs in Profile Nipple

- NAG-NOP-SL01 shall be followed for all slickline operations.
- Make gauge ring run with the appropriate sized gauge ring to locate profile or seating nipples.
- RIH and tag for fill below end of tubing (EOT). Record tag depths in Open Wells.
- If Slickline operations tagged nipple profile, then set the appropriate plug in profile nipple. X Nipple @ 7441' ID is 1.875", F-Nipple @ 7446' ID is 1.780" from previous tubing string in hole. POOH.
- Negative test plug by releasing partial wellhead pressure, shutting well in and monitoring well. If pressure does not increase in 15 min after shutting in well then this is a negative test of the barrier. If pressure increases then discuss options with WIE.
- RD SL and go to MIRUSU.
- If unable to set plug in nipple then use **Setting Pump Through Plugs and Stops in Tubing**

Setting Pump Through Plugs and Stops in Tubing

- NAG-NOP-SL01 shall be followed for all slickline operations.
- Determine safe depth from tag run in previous step of procedure.
- RIH and set tubing stop above nipple at safe depth determined from previous step. POOH
- RIH and set pump through plug on top of stop. POOH
- RIH and set triple stop on top of plug. POOH
- Negative test plug by releasing partial wellhead pressure, shutting well in and monitoring well. If pressure does not increase after shutting in well then this is a negative test of the barrier. If pressure increases then discuss options with WIE.
- RD SL and go to MIRUSU.
- If unable to set plug in nipple then discuss options with WIE and WFS.

Setting Cement Retainers in Tubing

If unable to set a plug in the nipple or in the tubing then a cement retainer can be set in the tubing after discussing with the WIE and WFS.

- RU E-Line lubricator to top of tree
- Pressure test lubricator to specified low and high pressures.
- RIH with appropriate sized cement retainer for tubing and set at safe depth determined from slick line diagnostics
- Negative test retainer by releasing partial wellhead pressure, shutting well in and monitoring well. If pressure does not increase after shutting in well then this is a negative test of the barrier. If pressure increases then discuss options with WIE.
- RD E-Line and go to MIRUSU.
- If unable to set retainer then discuss options with WIE and WFS.

MIRUSU

15. MI Service Unit

16. Ensure lock-down pins are fully engaged and functional, check and lubricate casing valves, individually work each flange nut and stud, and replace any corroded bolts and or nuts in preparation for breaking containment.

Note:

- ❖ Reference Nag-GP 42-0100 - Hot and Odd Bolting Group Practice
- ❖ If any problems are encountered or any wellhead equipment does not function with ease or if any problems are encountered outside of normal operations then the equipment will be repaired when the rig is on location.

17. Remove flowline piping.

18. Install second casing valves. Open inside casing valve to negative pressure test valve.

19. Install diversion lines from casing valves to flowback tank.

20. If plugs are installed and have been tested then bleed down tubing pressure to 0 psi.

21. Release pressure from tubing x casing annulus by opening casing valves and flowing well to flowback tank

22. RU rig

23. Using SJ-SOP-WI-BKCNT-Rev01

- If stabilized flowing casing pressure is above 10 psi then kill the well by pumping inhibited (2% KCl equivalent) water down casing. Then wait until stabilized casing pressure is below 10 psi then proceed with breaking containment.
- If stabilized flowing casing pressure is below 10 psi then proceed with breaking containment.
- If lock down pins are not installed or not on the wellhead then flow well down to flowback tank until stabilized flowing casing pressure is at 0 psi and well is dead.

ND WH / NU BOP

24. If the downhole barrier was negative tested then ND tree to tubing hanger.

25. If the downhole barrier will not test then RU wellhead lubricator to the tree then test lubricator to specified low and high pressure

26. Install two way check in back pressure threads in hanger. If unable to install two way check then use Kill Well Contingency.

Kill Well Contingency

This contingency will be used if no mechanical barriers can be set in the well after consulting with the WIE and the WFS.

- 1) The well will be killed using **SJ-SOP-WI-BKCNT-Rev01, section 7.4.**
- 2) RU pump and hard lines to casing valve.
- 3) Pressure test pump and lines to specified high and low pressures to confirm integrity.
- 4) Kill well as needed to ensure well is dead prior to removing tree.
- 5) Nipple down tree to tubing hanger.
- 6) Install H-prep sub with two way check for BOP testing.
- 7) Go to **NU NOP.**

27. Nipple down tree to tubing hanger.

NU BOP

28. NU San Juan South BOPE using attached BOP Diagram. Rams will be sized for the tubing in the well.

29. Function test and pressure test BOPs to specified high and low pressures. Perform accumulator test. Record in Open Wells.

30. Monitor flowing casing pressure with gauge (with casing flowing to flow back tank) throughout workover to comply with Underbalanced Tripping Practice, NOP 7812.

Completion Removal

31. Kill annulus as necessary by pumping 2% KCL equivalent water down production casing x tubing annulus.
32. If H-prep sub was installed then use the following Pull H-prep Sub Contingency.

Pull H-prep Sub Contingency

This contingency will be used if the H-prep sub was installed.

- Pick up landing joint. RIH and screw into the H-prep sub.
- Pull hanger to rig floor.
- RU lubricator. If downhole barriers are installed then testing of lubricator is not necessary other wise test lubricator to specified low and high pressures. Hold each pressure test for 5 minutes to confirm lubricator's integrity.
- Pull two way check.
- LD hanger and H-prep sub.
- Lower tubing and install stripping rubber.
- Prepare to TOH with tubing.

33. Screw in lifting pup into hanger. Pull tubing hanger up to floor. If two way check was installed then use Pull Two Way Check Contingency.

Pull Two Way Check Contingency

- RU lubricator to tubing hanger or hanger adapter to remove two way check.
- If downhole barriers were tested then testing of lubricator is not necessary, other wise test lubricator to specified low and high pressures. Hold each pressure test for 5 minutes to confirm lubricator's integrity.
- Pull two way check if used.
- RD Lubricator

34. Lower tubing and install stripping rubber.
35. Prepare to TOH with tubing
36. Pull up on tubing to make sure tubing is free. If possible, RIH and tag fill with tubing. Report tag depth to engineer. If pipe is stuck, follow **Stuck Pipe Contingency**.
37. POOH with 2-3/8" J-55 4.7#/ft production tubing currently set @ 7449'. Visually inspect tubing as its being pulled out and make note of the depth of any external or internal scale buildup, paraffin or tubing integrity issues on the tubing in Open Wells. Contact engineer if scale or paraffin is or is not present.
38. LD and replace any joints that appear to have significant corrosion or scale buildup that can not be easily removed with a hammer.

Note: Bit and scraper run will be performed at this time if scale is believed to be built up on the inside of the production casing. Follow **Bit and scraper run Contingency**

Bit and scraper run (if necessary and agreed on with engineer)

1. Make up BHA for bit and scraper run (from bottom to top):
 - Bit
 - Scraper
 - Bit sub or float
 - Workstring
2. RIH w/ bit and scraper for 4-1/2" casing to Dakota perfs @ 7480'. Reciprocate across MV perfs @ 5275'-5418'.
3. POOH with bit and scraper.

Note: Mill run will be performed at this time if scale is believed to be too heavy or too hard to get a bit and scraper through the production casing/liner. Follow **Mill run Contingency.**

Mill run (if agreed on with engineer)

1. Make up BHA for cleaning out scale on casing (from Bottom to top):
 - Mill for 4-1/2" casing
 - Bit sub or float
 - Workstring with replaced joints
2. RIH with mill and mill up all tight spots to fill or depth agreed on with engineer.
3. POOH.

P&A Dakota

39. RIH with workstring, BHA (bottoms up):
 - 4-1/2" Cement Retainer
 - Cement Retainer Stinger
 - 2'-4' Perforated sub if necessary
 - 1500' of 2-3/8" tubing
 - Retrievmatic style packer (left hand set, do not want to set the packer and the retainer at the same time, retainer takes 12 turns to the right then set down)
 - 2-3/8" tubing workstring

Note: When stung into the retainer, this should set the packer below the MV perfs, since this is a new drill and P-110 casing, we should have integrity of the casing.

40. RIH and Set Cement Retainer @ ~7440' (within 50' of top Dakota perf)
41. Unsting from retainer
42. Set packer to PT casing below retainer and retainer.
43. PT down the tubing to 250 psi low for 5 min and 600 psi high for 15 min.
 - An acceptable high test is where pressure drop is <10% over 15 min.
44. Unseat packer and re-sting into cement retainer.
45. RU cement pump and lines to valve on top of tubing string
46. Pressure test lines against closed valve on top of tubing string to 250 psig low and 750 psig high. This will confirm the integrity of the cement pump, lines, and valve on top of tubing
47. Batch mix 17 sacks of type III cement (yield - 1.32 ft³/sk @ 6.6 gal H₂O per sk,) to yield 4 bbls (22.5 ft³) of 14.7 ppg cement
 - Capacity of 4-1/2" 11.6# csg: 0.0155 bbl/ft
 - Lower Dakota Plug: 7663' - 7440' → 373' + 15% excess → 4 bbls
 - Total cement volume required = **4 bbl**

48. Pump cement plugs as follows:

Elliot GC X 1 E

- Pump a 30 bbl spacer of fresh water
- Pump 4 bbls of type III cement
- Displace cement by pumping 28.7 bbls of fresh water. Immediately unsting from cement retainer.
- Position EOT just above cement retainer

Note: Fluid level should be at about 4500' given 160 psi MV pressure and a 500' safety factor.

49. Batch mix 13 sacks of type III cement (yield - 1.34 ft³/sk @ 6.6 gal H₂O per sk,) to yield 3.1 bbls (17.4 ft³) of 14.7 ppg cement
Capacity of 4-1/2" 11.6# csg: 0.0155 bbl/ft
Lower Dakota Plug: 7440' - 7290' → 150' + 50' excess → 3.1 bbls
Total cement volume required = **3.1 bbl**

50. Pump cement plugs as follows:
- Pump a 3 bbl spacer of fresh water
 - Pump 3.1 bbls of type III cement
 - Displace cement by pumping 12.5 bbls of fresh water.
 - Let water and cement fall and equalize for 30 minutes **minimum**
 - Slowly POOH
51. POH and lay down packer.
52. RD cement truck and equipment
53. RU E-line to set a CIBP @ 5570'
54. Pull CIBP into lubricator and stab onto BOPE.
55. RIH and set CIBP @ 5570'
56. POH, RD E-line

Depending on where scale is seen on the outside of the tubing, consult with engineer as to if acidizing is necessary.

MV acidizing procedure

1. Insure chokes are installed in flowback lines.
2. Pressure test choke and lines to specified pressure testing values in original procedure.
3. RIH with cleanout BHA to bottom MV perfs @ 5418'
 - 2-3/8" Mule shoe
 - Float
 - 2-3/8" Tubing
 - Install floats as needed.
4. Install TIW valve on tubing
5. RU air unit and lines to pump down the tubing. RU pump and lines to pump paraffin solvent down tubing.
6. Pressure test both pump lines to 250 psi low and 1500 psi high for 5 minutes each.
7. Blow wellbore dry with air only @ 5418'.
8. If necessary, pump 2 drums of paraffin solvent down the tubing:
 - Once returns are clean, shut down air unit.
 - Pump 2 drums of paraffin solvent down the tubing (PAO-100 and/or PAO-103).
 - RD pump equipment.
9. Close choke on flowback lines.
10. RU air unit and acid truck to pump down the tubing.
11. Pressure test all iron to specified pressure testing values in original procedure.

12. Pump air down the tubing (do not pump foamer or corrosion inhibitor, mist pump will be off). Allow pressure on return line to stabilize for 15 minutes or to build to 1000 psi. (Please chart pressure vs time or have a rig hand take pressure reading at 1 min time intervals, accuracy is very important)
13. Pump 2500 gals of 15% HCl (Acid recipe should consist of 15% HCl with 5% by weight corrosion inhibitor) down tubing @ 2-3 bpm. Max treating pressure: 1000 psi, lower rates as required. This should treat 3' at a minimum of pore space around the casing for the MV perfs.
14. Displace acid with air using Air displacement time chart.
Note: Read the pressure at the air unit's discharge, this is the X axis on the chart. Move up vertically until intersect line indicating flowrate that the unit is pumping. From this, the pump time is indicated on the Y axis.
Note: In the past, a 30-200 psi spike in casing pressure is seen at about 3-5 minutes after starting displacement.
15. Shut down air unit, shut in tubing.
16. Open casing valves then completely open choke and flow through choke to flowback tank.
17. Once flowback pressure has died or acid has flowed back, RD pumping equipment.

Alternate MV Acidizing Procedure

1. MU cleanout/acidizing assembly bottom to top:
 - 2-3/8" Mule shoe
 - Float
 - 2-3/8" Tubing
 - Install floats as needed.
2. RIH to bottom MV Perf @ 5418'
3. RU pump and lines to pump down tubing.
4. Pressure test pump and lines to 250 psi low and 1000 psi high.
5. Set Pressure Relief Valves at 800 psi.
6. Leave casing valves open during acid treatment.
7. Pump following schedule using Baker Petrolite Chemicals:
 - Pump 5 bbls preflush of 2% KCl water or equivalent down tubing.
 - Pump 1500 gals 15% HCl (Acid recipe should consist of 15% HCl with 5% by weight corrosion inhibitor) down tubing.
 - Displace with 18.5 bbls 2% KCl water or equivalent at low rates-less than 1 bbl /min.
8. Wait 5 minutes after displacement, then open casing valve and flow to flowback tank for 15 minutes or until casing pressure reduces below 10 psi.
9. POOH to top of MV perforations.

Continue to **Air Cleanout**

Air Cleanout

Air cleanout can be omitted at this time, discuss with engineer.

57. MU BHA to RIH and cleanout any fill in the wellbore, bottom to top:
 - 2-3/8" J-55 Mule shoe
 - 1.875" profile X-nipple with pump through plug pre-installed
 - 2-3/8" workstring w/ floats as needed.
58. RIH and tag for fill.

59. Rig up air package/unit, pressure test all lines to 250 psi low and 1500 psi high.
60. Break circulation at top of MV perfs according to air package cleanout procedure, if necessary.
61. Once returns are clean, RIH and tag fill, RU power swivel or tubing swivel as necessary and begin cleaning out to PBTD according to Air package cleanout procedure.

Air package cleanout procedure

4. RU air/foam unit to pump down tubing and take returns from the casing flowing to the flowback tank. Note: should be able to take bucket samples off flowline using flow "T" and valve.
5. Pump a foam sweep (1-2 gal foamer pill) at start of clean out
6. Air/foam should include, but can be adjusted as WSL and well conditions deem necessary:
 - o 5-10 bbls of water per hour
 - o 1-2 gal of foamer per 10 bbls (if using water, this ratio can be adjusted depending on returns and well conditions).
 - o 1gal of corrosion inhibitor per 10 bbls (if using water, this ratio can be adjusted depending on returns and well conditions).
 - o Circulating pressure should range from 500 to 600psi but pressures are dependant on wellbore geometry.
 - o Larger casings (larger flowing areas), deeper wells (more friction to flow) may require a second air/foam unit and/or more foamer per hour.
7. Bring pumps on at ~750 cfm, and establish circulation (rates may be adjusted as WSL deems necessary and should increase to air unit's max circulating rate as the well cleans up)
8. Circulate well until sand returns begin to diminish and returns become mostly air/foam
9. Confirm that returns are clean, then RIH with 1 joint and re-establish circulation and continue cleaning out.
10. If work-string becomes "sticky" and there are indications of getting stuck, record circulating tubing and return casing pressures (if available). Reciprocate pipe and rotate as string allows.
11. If work-string becomes stuck, continue circulating if possible and contact engineer for plan forward. Do not bleed down/off either tubing or casing, record final circulation pressures, return casing pressures (if available), and the max pull applied.

Note: Do not exceed 85% of new pipe yield strength without communication with WIE

Max pull = 85% new pipe yield = 50,190lbs

62. Blow well dry at PBTD.
63. POOH with cleanout string if necessary

RIH with completion string

64. RIH with 2-3/8" production tubing with BHA to +/- 5370'
 - Wireline re-entry guide/mule shoe
 - 1.875" profile X-nipple with plug pre-installed
 - 2-3/8" J-55 4.7# tubing

Note: If wellhead does not have test ports, install a blanking plug in the profile nipple, continue to run the tubing and land then follow **Test WH Flange Connection w/ Blanking Plug Contingency**

65. MU redressed tubing hanger and TIW valve on lifting pup. (If a plug was successfully set in nipple profile, the TIW valve is not necessary)
66. Land tubing @ 5370' +/- 15'. Remove lifting sub and TIW valve (if used)

- 67. ND BOPE to tubing hanger flange. NU tree.
- 68. If wellhead is equipped with test ports, test well head seals to rated working pressure

Return Well to Production

- 69. RU Slickline to top of tree referring to NAG-NOP-SL01
- 70. Pressure test SL lubricator to specified high and low pressures
- 71. RIH with appropriate tools to equalize and remove plugs in profile nipples. POOH
- 72. RIH with appropriate sized broach for tubing to top profile nipple. POOH
- 73. RD SL.
- 74. If well will not flow then RU to swab using NAG-NOP-Swab.
- 75. Swab well and return well to production.
- 76. Flow test well until there is stable FTP and FCP. Choke as necessary.

Install Plunger Stop

- 77. RU Slickline to top of tree referring to NAG-NOP-SL01
- 78. Pressure test SL lubricator to specified high and low pressures
- 79. RIH and set a plunger stop in the X profile nipple
- 80. If Air package used for circulation, run O2 test prior to handing over to Operations. Flow well until O2 test is passed.
- 81. RD and release all equipment. Remove all LOTO equipment
- 82. Follow CoW procedures to return well back to production
- 83. Complete Handover document between functional Wells Team and Operations per ADM 61006.
- 84. Ensure all well work details and wellbore equipment is entered in 'OPEN WELLS'.

Contingencies

Stuck Pipe Contingency

Follow the steps in this section if unable to free tubing. Be sure to contact WIE and WIOS before starting this contingency.

1. Estimate free point

- 1.1 Determine total string weight

Total String Weight = length of tubing x tubing weight.

If the weight indicator is zeroed with the block, add the block weight to string weight

- 1.2 If the wellbore is full of fluid refer to Table 2 to correct total string weight for buoyancy.
- 1.3 With the pipe stationary in the slips, mark a line to denote the pipes un-stretched position.
- 1.4 Apply sufficient pull to stretch pipe 3.5" Use Table 3 – Over Pull Weights for amount of pulled required.
- 1.5 With pull applied mark the position to denote stretched position.
- 1.6 Estimate location of free point using the formula below.

Free Point Estimate = (Distance between pipe marks (in) / 3.5) x 1,000

2. Determine Free point

- 2.1 RU E-Line unit w/ lubricator of sufficient length to accommodate the entire E-line BHA, WL BOP, pump-in tee to BOPE.
- 2.2 Test to pressures specified in the Well Specific Procedure.
- 2.3 Make-up E-Line BHA with free point tool and CCL and RIH to well above estimated free point.
- 2.4 Activate tool to bite into side of tubing. Once set, pull recommended stretch on tubing, and hold for duration prescribed by the E-line service hand to get accurate free point reading.
- If free point tool indicates free pipe movement, release tool and move down hole 100' and retest. Record stretch data.
 - If free point tool indicates little or no movement, move up hole 100' and retest. Record stretch data.
- Location of free pipe is determined by the deepest point where free point tool indicates full stretch.*
- 2.5 Once stuck point is located, Record and POOH with free point tool.

3. Cut Tubing

- 3.1 RU E-line with chemical cutter and CCL.
- Review Chemical Cutter manufacturer's explosive safety checklist as a guide to ensure that all explosive and chemical safety measures are identified and being followed..*
- 3.2 RIH with chemical cutter to cut tubing at determined free point.
- Ensure MSDS sheets are available for any chemical used in cutting operations, personnel involved with cutting operations are trained and qualified, and emergency medical treatments are available in the event of exposure (e.g. eyewash stations, drench showers and antidotes/neutralizing agents) per DWOP 19.3.1.*
- 3.3 Position chemical cutter so the cut is made well into the body of pipe and is **NOT** positioned on an upset or collar.
- 3.4 Pull pipe and hold in tension, activate cutting tool.
- 3.5 POOH with chemical cutter, ensure cutter fired.
- 3.6 RD E-line and POOH with recovered tubing if successful. It may be necessary to apply pull to tubing to get free. **DO NOT EXCEED 85% of new tubing yield without consulting the WIE.**
- 3.7 Determine amount of fish left in the hole.

3.8 Contact WIE and move to **Fishing Contingency**

Fishing Contingency

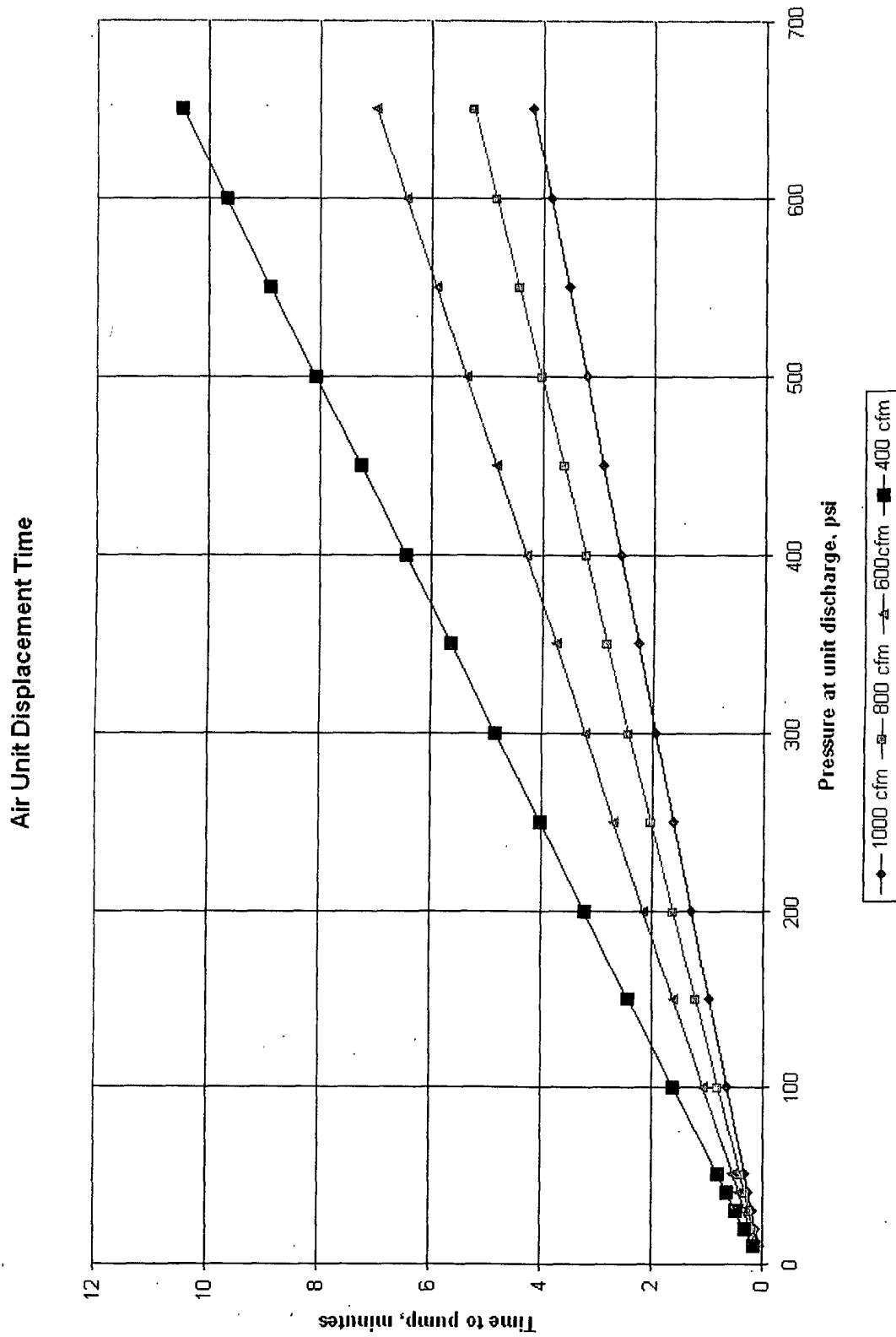
Follow the steps in this section to recover pipe. Be sure to contact WIE and WIOS before starting this contingency.

1. PU workstring.
2. If the location and condition of top of fish is unknown, MU workstring appropriate sized lead impression block.
3. RIH with impression block and carefully set down on top of fish only once. POOH with impression block and analyze impression block to determine best fishing tool.
4. MU fishing BHA with one of the following options.
 - Option A
 - Releasing Overshot appropriately sized for fish
 - Mechanical Jars
 - Option B
 - Releasing Spear appropriately sized for fish
 - Mechanical Jar
 - Option C
 - Fishing assembly suggested by WIE and documented via email MoC.
5. RIH with fishing tool and tag top of parted tubing.
6. Work fishing tool over (or into) the top of parted tubing and latch on tubing.
7. POOH with remainder of tubing out of well, lay down parted tubing and any bad joints . **DO NOT EXCEED 85% of new tubing yield without consulting the WIE.**

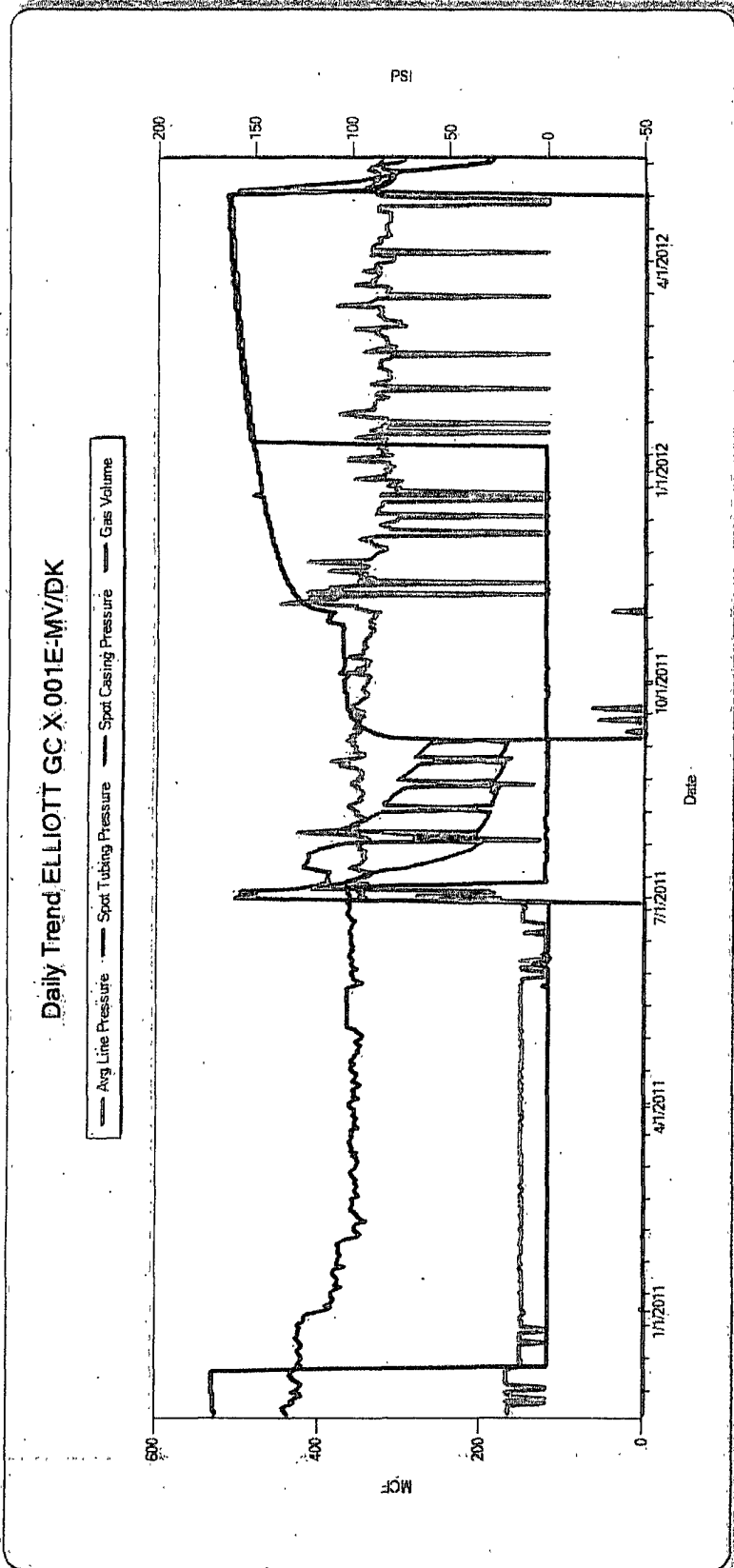
Test WH Flange Connection w/ Blanking Plug Contingency

1. ND BOPE to tubing hanger flange. NU tree
 2. Pump enough kill weight fluid down the tubing to overcome bottom hole pressure (~4 bbls fluid per 1000' 2-3/8" tubing)
 3. RU air unit to test the tubing
 4. PT tubing to 250 low and 1000 high for 5 minutes each.
- Note:** It may be necessary to PT the WH flange connection with the rig pump rather than the air unit. Be prepared to swab the well back in
5. RD air unit/rig pump

Acidizing with Air Chart



Production Curve



Elliot GC X 1 E

Current Wellbore



Elliot GC X 1 E
 MV/DK
 30-045-33020
 Unit H - Sec 09 - T30N - R09W
 San Juan

Well History

Spud date: 6/27/2006
 5/4/2009 Wellbore cleanout
 6/22/2010 Swabbed well and recovered 11.5bbl
 5/5/2011 wellbore cleanout

CH 4553

Mene 4861

PL 5250

Manc 5569

GH 7284

Gran 7336

TW 7385

Pag 7479

Cube 7524

Enci 7582

1.875" X-nipple @ 7441'

1.780" F-nipple @ 7446'

EOT @ 7449'

PBTD: 7663'
 T.D.: 7663'

KB 6205
 GL 6192

12-1/4" hole
 9 5/8" 32.3# H-40 Csg @ 229'
 Cmt w/ 68 sx TOC @ surf (circ.)

4-1/2" TOC @ 3080' per CBL

8-3/4" hole
 7" 20#, J-55 csg @ 3464'
 Cmt w/ 350 sx 11.7 ppg 2.61 cu ft/sk lead
 Tail w/ 68 sx 14.5 ppg 1.61 cu ft/sk
 Circ cement to surface

Tubing Details	Length
2 3/8" x 7.027" ID Tubing Hanger	0.56'
2 3/8" Tubing, 4.7# J-55 EUE, 235 jt	7428 96'
2 3/8" x 1.88" ID "X" Profile Nipple	0.95'
2 3/8" Pup Joint	3 95'
2 3/8" x 1.78" ID "F" Profile Nipple	0.95'
2 3/8" x 1 995" ID Wireline Re-entry 2'	

MV Perf Data
 5275'-5418'
 Frac'd w 150,000# 16/30 sand in 70Q N2 foam
 Screenout on flush

Dakota Perf Data
 7480'-7610' 2 spf
 Frac'd w/ 255,000# 16/30 sand in 65Q N2 foam
 Last 60,000# sand treated with propnet

6-3/4" hole
 4 1/2" 11.6# P-110 LT&C @ 7663'
 Cmt w/ 142 sx 9.5 ppg 2.52 cu ft/sk lead
 Tail w/ 211 sx 13 ppg 1.44 cu ft/sk
 TOC @ 3080'

Elliot GC X 1 E

Proposed Wellbore



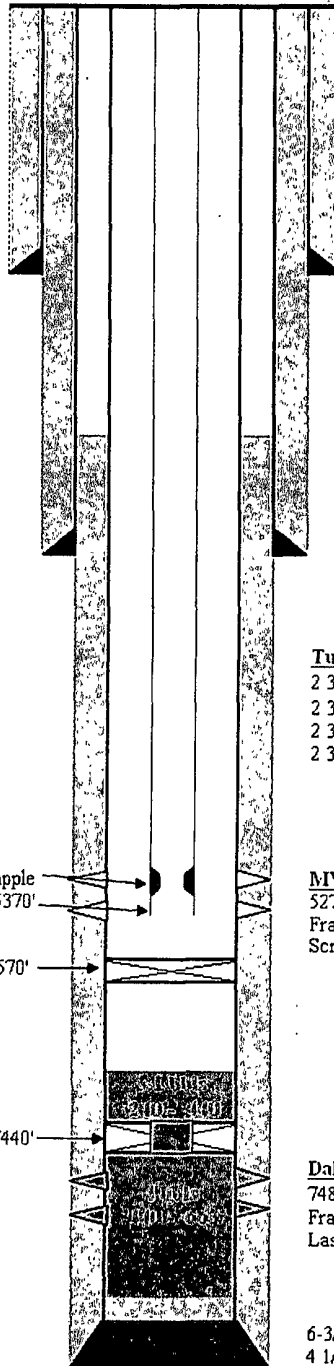
Elliot GC X 1 E
MV/DK
30-045-33020
Unit H - Sec 09 - T30N - R09W
San Juan

Well History

Spud date: 6/27/2006
3/4/2009: Wellbore cleanout
6/22/2010: Swabbed well and recovered 11 5bbl
5/5/2011: wellbore cleanout

CH	4553
Mene	4861
PL	5250
Manc	5569
GH	7284
Gran	7336
TW	7385
Pag	7479
Cube	7524
Enci	7582

2-3/8" x 1.875" X nipple
EOT @ ~5370'
CIBP @ 5570'
Cement Retainer @ 7440'



KB: 6205
GL: 6192

12-1/4" hole
9 5/8" 32 3# H-40 Csg @ 229'
Cmt w/ 68 sx TOC @ surf (circ.)

4-1/2" TOC @ 3080' per CBL

8-3/4" hole
7" 20#, J-55 csg @ 3464'
Cmt w/ 350 sx 11 7 ppg 2.61 cu ft/sk lead
Tail w/ 68 sx 14 5 ppg 1.61 cu ft/sk
Circ cement to surface

Tubing Details

2 3/8" x 7.027" ID Tubing Hanger
2 3/8" Tubing, 4.7# J-55 EUE, 235 jts
2 3/8" x 1.88" ID "X" Profile Nipple
2 3/8" x 1.995" ID Wireline Re-entry/Mule shoe

MV Perf Data

5275'-5418'
Frac'd w/ 150,000# 16/30 sand in 70Q N2 foam
Screenout on flush

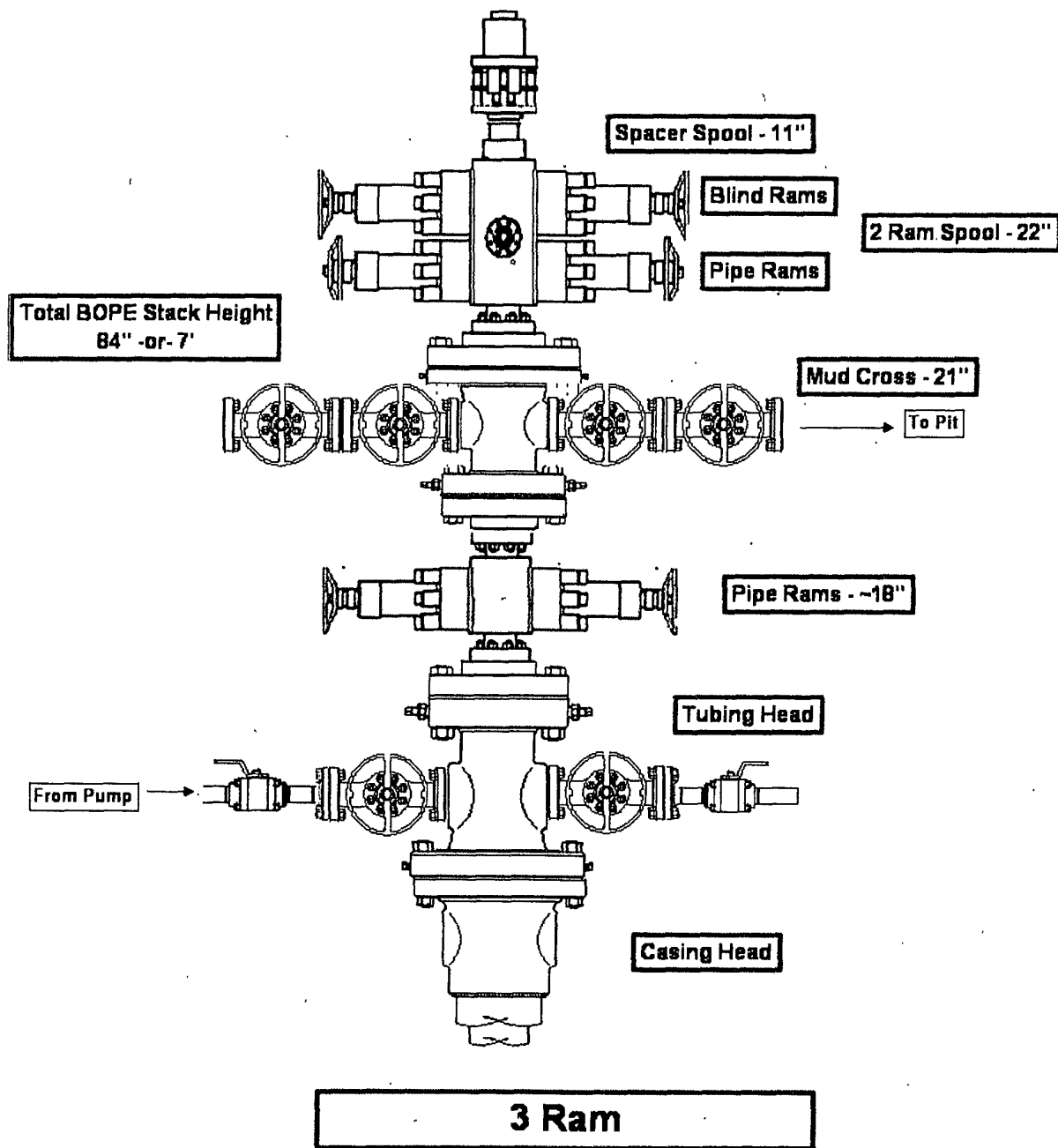
Dakota Perf Data

7480'-7610' 2 spf
Frac'd w/ 255,000# 16/30 sand in 65Q N2 foam
Last 60,000# sand treated with propnet

6-3/4" hole
4 1/2" 11.6# P-110 LT&C @ 7663'
Cmt w/ 142 sx 9.5 ppg 2.52 cu ft/sk lead
Tail w/ 211 sx 13 ppg 1.44 cu ft/sk
TOC @ 3080'

PBTD: 7663'
T.D.: 7663'

BOP configuration



Air Cleanout rig-up schematic

