

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PCVD 11/13/06

BLM CHS. DIV.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number SF-077106 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator ConocoPhillips	7. Unit Agreement Name Lackey B LS
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name 9. Well Number 15M
4. Location of Well Surf Unit F (SENW), 2075' FNL & 1898' FWL, Bott Latitude 36° 38 3.96418 N Longitude 107° 48 49.95062 W	10. Field, Pool, Wildcat Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) F Sec. 29 T28N, R09W, NMPM
API # 30-045-34029	
14. Distance in Miles from Nearest Town 15 miles to Bloomfield	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1898	
16. Acres in Lease	17. Acres Assigned to Well 320 acres N/2
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease	
19. Proposed Depth 6812'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 5966' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Mary A. Monner</u> Regulatory Assistant	<u>10/24/06</u> Date

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY Chip Hamader TITLE Acting AFM DATE 11/3/06

Archaeological Report submitted separately
Environmental Assessment is attached.

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Title 18 U.S.C. Section 1001, makes 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 presentations as to any matter within its jurisdiction.

This is not an HPA well

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.2
and appeal pursuant to 43 CFR 3165.4

NMOCD

11/8

HOLD C104 FOR NSL

PERMITTING IS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Fee Lease - 3 Copies
State Lease - 7 Copies
Submit to Appropriate District Office
Revised June 10, 2003
Form C-102

2006 OCT 24 PM 9 57

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045- 34029	² Pool Code 71599 /72319	³ Pool Name DAKOTA / Mesaverde
⁴ Property Code 51820	⁵ Property Name LACKEY B LS	⁶ Well Number #15M
⁷ OGRID No. 217817	⁸ Operator Name GONOCOPHILLIPS COMPANY	⁹ Elevation 5,966.5'

¹⁰ SURFACE LOCATION

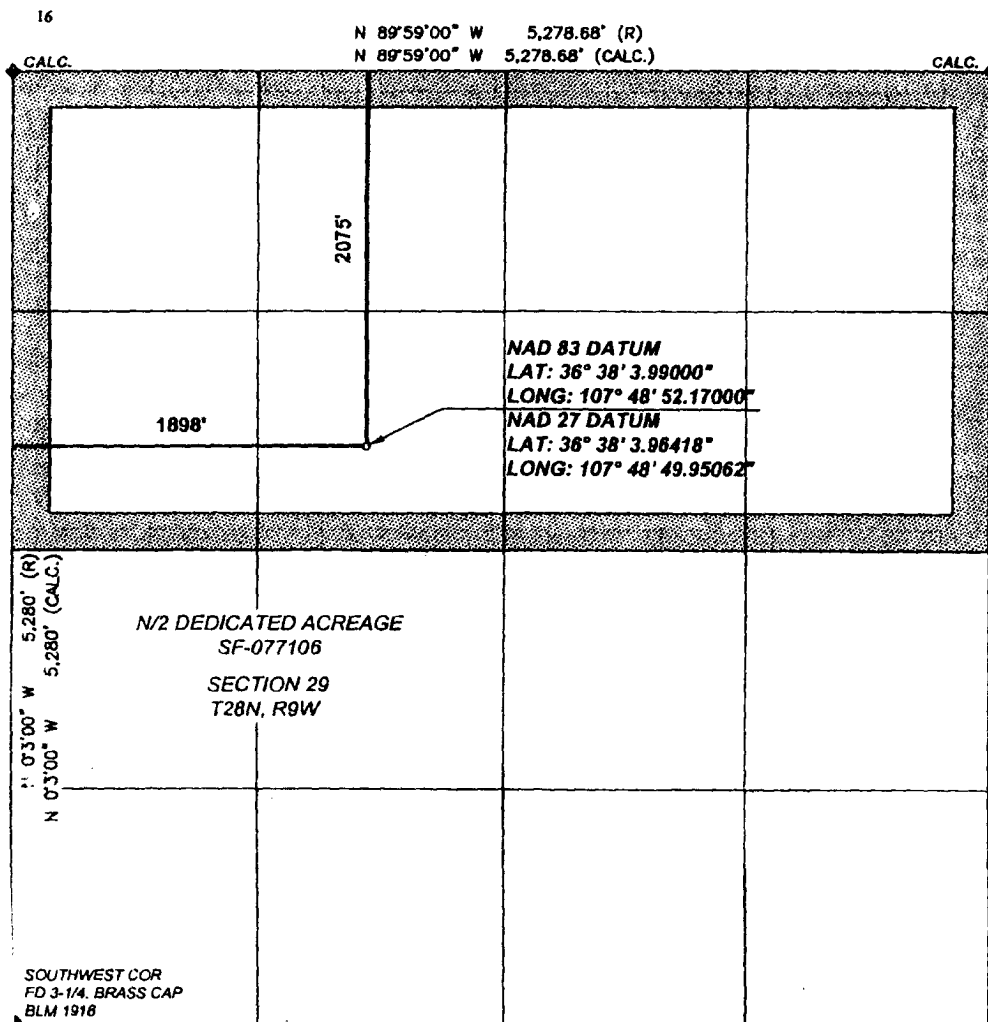
UL or lot no. F	Section 29	Township 28-N	Range 9-W	Lot Idn	Feet from the 2075	North/South line NORTH	Feet from the 1898	East/West line WEST	County SAN JUAN
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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



¹⁷ 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 or has a right to drill this well at this 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.

Signature

Patsy Clugston

Printed Name

Sr. Regulatory Specialist

Title and E-mail Address

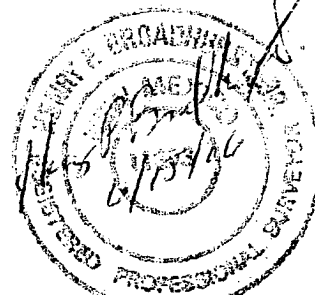
Date

¹⁸ 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 supervision, and that the same is true and correct to the best of my belief.

Date of Survey: 6/8/06

Signature and Seal of Professional Surveyor:



Certificate Number: NM-14395

Office

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., 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

Form C-103

May 27, 2004

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-045- 34029

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil & Gas Lease No.

SF-077106

7. Lease Name or Unit Agreement Name

Lackey B LS

8. Well Number

15M

9. OGRID Number

14538

10. Pool name or Wildcat

Basin Dakota

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well:

Oil Well ☐Gas Well ☒

Other

2. Name of Operator

BURLINGTON RESOURCES OIL & GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter F : 2075 feet from the North line and 1898 feet from the West line
Section 29 Township 28N Range 9W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

5967' GL

Pit or Below-grade Tank Application

☒ or Closure ☐

Pit type

New Drill

Depth to Groundwater

>100'

Distance from nearest fresh water well

>1000'

Distance from nearest surface water

Pit Liner Thickness:

n/a

mil

Below-Grade Tank:

Volume

bbls;

Construction Material

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐PLUG AND ABANDON ☐TEMPORARILY ABANDON ☐CHANGE PLANS ☐PULL OR ALTER CASING ☐MULTIPLE COMPL ☐

OTHER:

New Drill Pit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐P AND A ☐CASING/CEMENT JOB ☐OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

New Drill, Lined:

ConocoPhillips proposes to construct a new drilling pit, an associated vent/flare pit and a pre-set mud pit (if required). Based on ConocoPhillips' interpretation of the Ecosphere's risk ranking criteria, the new drilling pit and pre-set mud pit will be lined pits as detailed in ConocoPhillips' General Plan dated June 2005 on file at the NMOCD office. A portion of the vent/flare pit will be designed to manage fluids and that portion will be lined as per the risk ranking criteria. ConocoPhillips anticipates closing these pits according to the November 1, 2004 Guidelines.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE

Tracey N. Monroe

TITLE

Regulatory Assistant

DATE

10/5/2006

Type or print name

Tracey N. Monroe

E-mail address:

tmonroe@br-inc.com

Telephone No.

505-326-9752

For State Use Only

APPROVED BY

[Signature]

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. 6

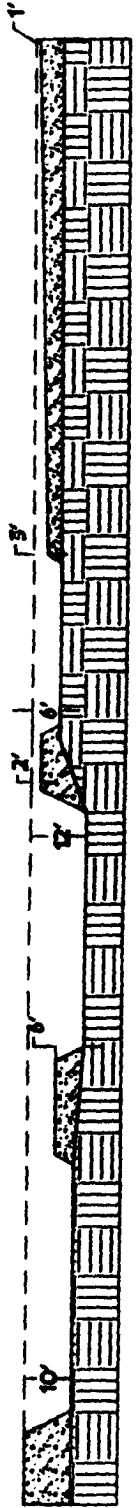
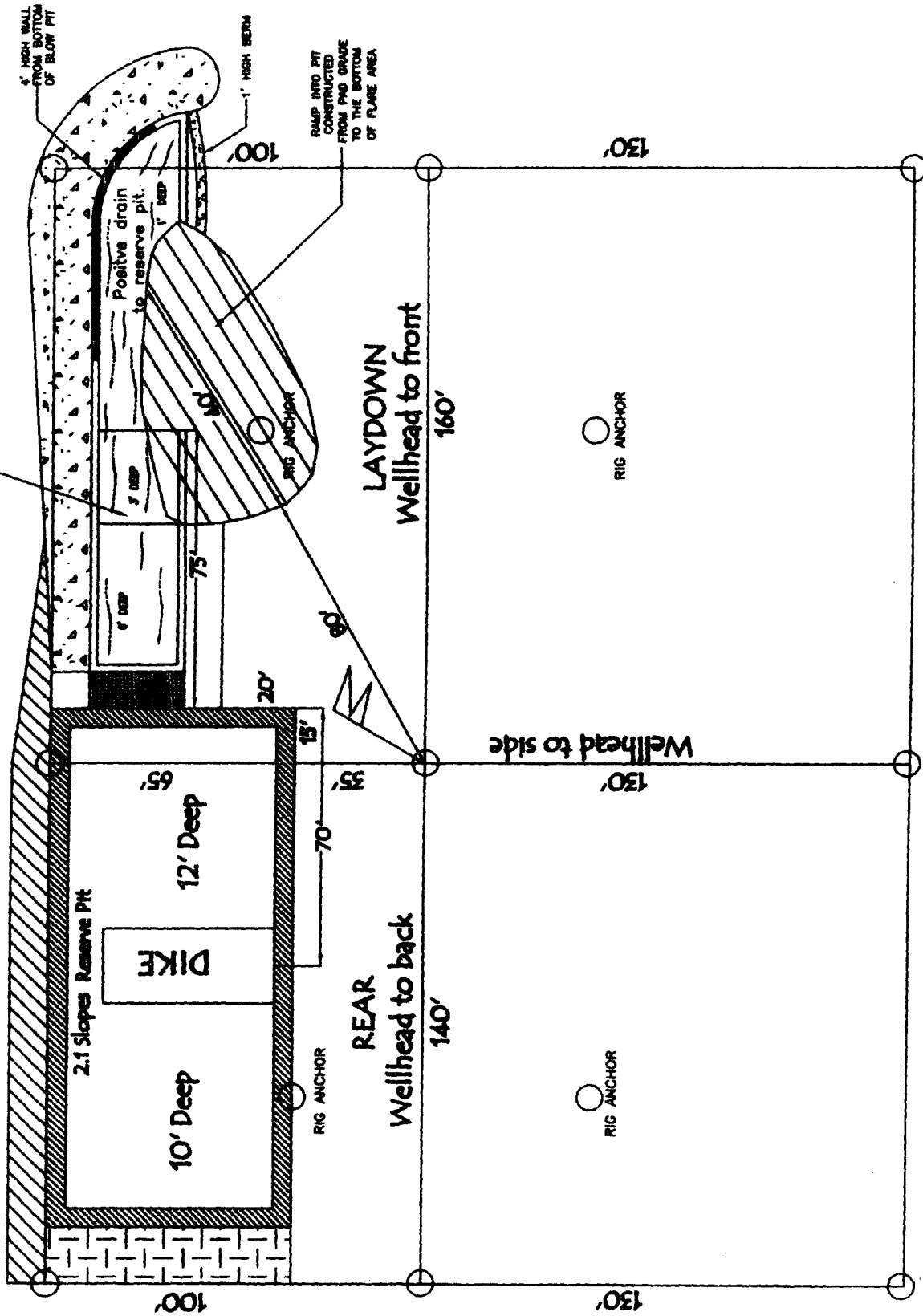
DATE

NOV 08 2006

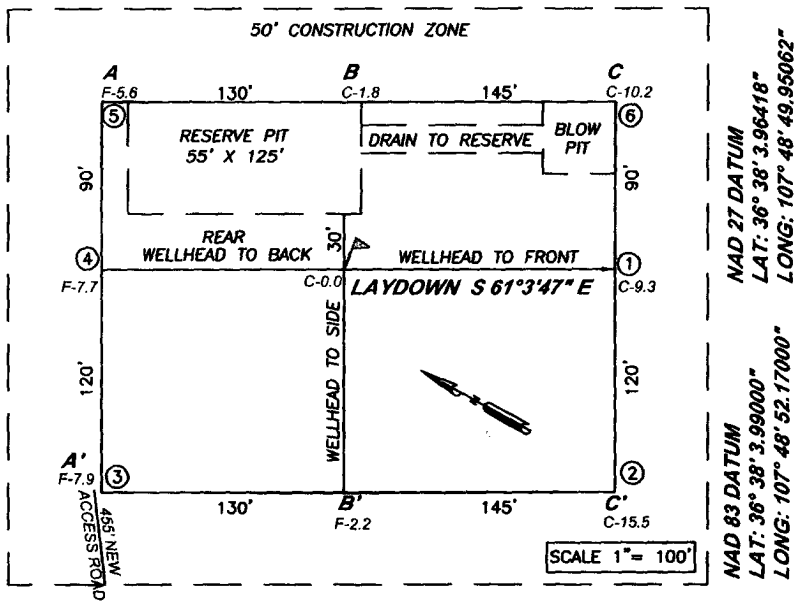
Conditions of Approval (if any):

Location is less than 200' from Navajo Irrigation Project
ditch. Pits shall be lined and treated accordingly.

MESAVERDE/DAKOTA LAYOUT



PIT CROSS SECTION

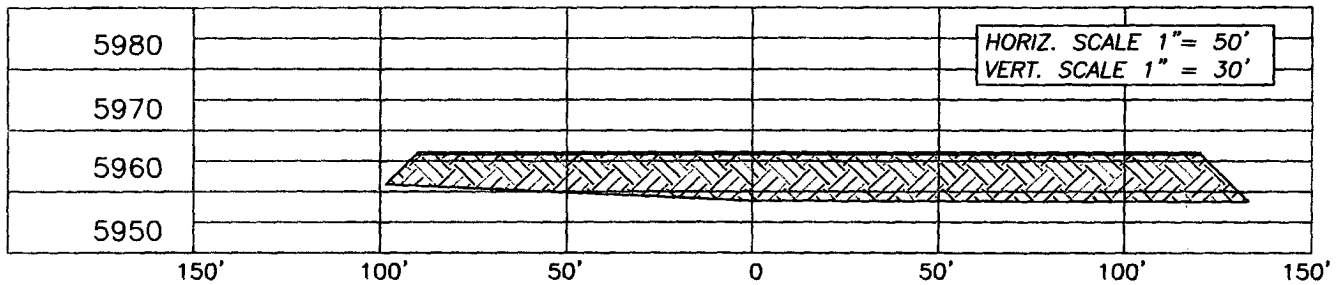


CONOCOPHILLIPS COMPANY

LACKEY B LS #15M
2075' FNL, 1898' FWL
SECTION 29, T28N, R9W,
SAN JUAN COUNTY, NEW MEXICO
ELEV.: 5,966.5' NADV88

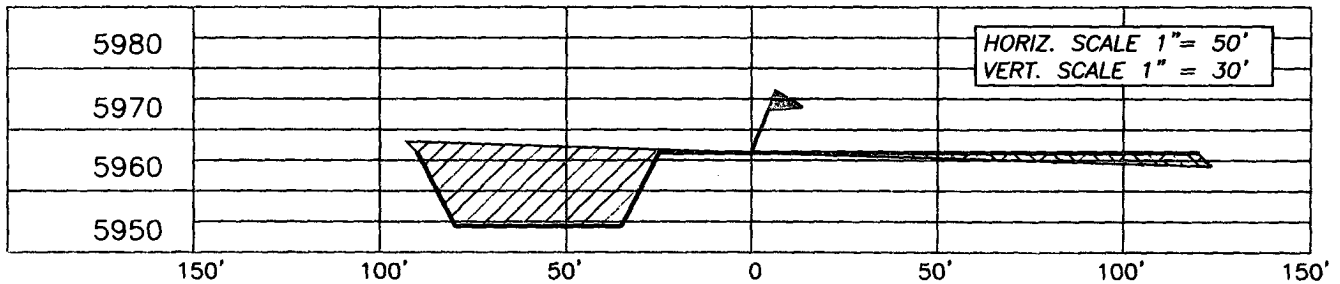
A - A'

C/L



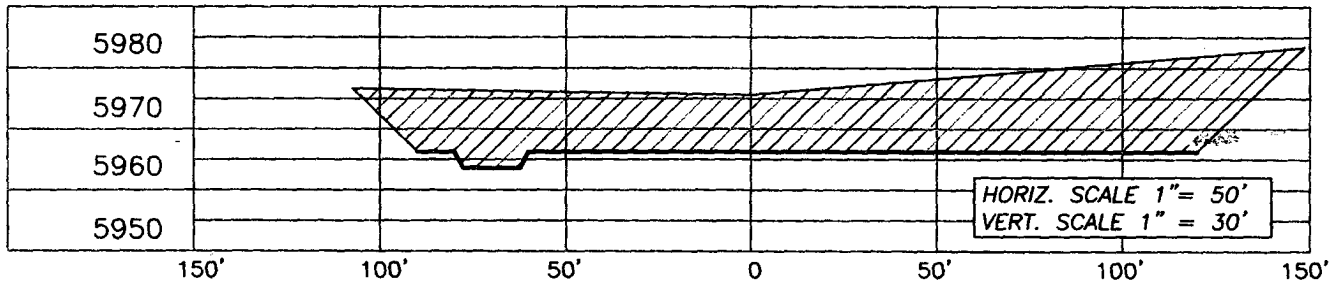
B - B'

C/L



C - C'

C/L



NOTE: CCI IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.

CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD PRIOR TO CONSTRUCTION.

REVISIONS

NO.	DESCRIPTION	REVISED BY	DATE

CCI

1300 W. BROADWAY
BLOOMFIELD, NM, 87413
PHONE: (505) 632-7777

CHENAULT CONSULTING INC.

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

LACKEY B LS 15M

Lease:		AFE #: WAN.CNV.7184		AFE \$:	
Field Name: NEW MEXICO-WEST		Rig:	State: NM	County: SAN JUAN	API #:
Geoscientist: Brain, Ted H.		Phone: 832-486-2592	Prod. Engineer:		Phone: 486-2334
Res. Engineer: Harrington, Tim R.		Phone: 832-486-2207	Proj. Field Lead: Fransen, Eric E.		Phone:
Primary Objective (Zones):					
Zone	Zone Name				
R20002	MESAVERDE(R20002)				
R20076	DAKOTA(R20076)				

Location: Surface		Datum Code: NAD 27			
Latitude: 36.634400	Longitude: -107.813900	X:	Y:	Section: 29	Range: 9W
Footage X: 1898 FWL	Footage Y: 2075 FNL	Elevation: 5966	(FT)	Township: 28N	
Tolerance:					
Location Type: Year Round		Start Date (Est.):		Completion Date:	
Formation Data: Assume KB = 5982		Units = FT			
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT
Surface Casing	216	5766	<input type="checkbox"/>		
OJAM	1067	4915	<input type="checkbox"/>		
KRLD	1202	4780	<input type="checkbox"/>		
FRLD	1857	4125	<input type="checkbox"/>		
PCCF	2112	3870	<input type="checkbox"/>		
LEWS	2312	3670	<input type="checkbox"/>		
Intermediate Casing	2412	3570	<input type="checkbox"/>		
CHRA	2657	3325	<input type="checkbox"/>		
CLFH	3672	2310	<input type="checkbox"/>		
MENF	3752	2230	<input type="checkbox"/>		
PTLK	4392	1590	<input type="checkbox"/>		
GLLP	5582	400	<input type="checkbox"/>		
GRHN	6362	-380	<input type="checkbox"/>		
PAGU	6532	-550	<input type="checkbox"/>		
TOTAL DEPTH DK	6812	-830	<input type="checkbox"/>		
Total Depth	6812	-830	<input type="checkbox"/>		

12 1/4" based on proposed cement volume
13 1/2" is acceptable based on rig availability.

13 1/2" hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
Possible water flows.

8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.

Gas; possibly wet
Gas.
Gas.
Gas. Possibly wet.
Gas. Possibly wet.
Gas. Highly Fractured.

6-1/4" Hole. 4-1/2", 11.6 ppf, N-80, LTC casing. Circulate cement a minimum of 100' inside the previous casing string. No open hole logs. Cased hole TDT with GR to surface.

Reference Wells:		
Reference Type	Well Name	Comments

PROJECT PROPOSAL - New Drill / Sidetrack

LACKEY B LS 15M

Logging Program:Intermediate Logs: ☐ Log only if show ☒ GR/ILD ☐ Triple ComboTD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☐ TDT**Additional Information:**

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Comments:

Lackey B L S #15M

APD Cement Calculations

HOLE: 12.25 "
 CSG OD: 9.625 "
 CSG ID: 9.001 "
 WGT: 32.3 ppf
 GRADE: H-40
 EXCESS: 200 %
 DEPTH: 120'

SURFACE:

Option 1
 99 sx
 20.7 bbls
 116.3 cuft
 1.17 ft³/sx
 15.8 ppg
 4.973 gal/sx
 Class G Cement
 + 3% S001 Calcium Chloride
 + 0.25 lb/sx D029 Cellophane Flakes

Option 2
 96 sx
 20.7 bbls
 116.3 cuft
 1.21 ft³/sx
 15.6 ppg
 5.29 gal/sx
 Standard Cement
 + 3% Calcium Chloride
 + 0.25 lb/sx Flocele

Option 3
 37 sx
 10.6 bbls
 59.3 cuft
 1.61 ft³/sx
 14.5 ppg
 7.41 gal/sx
 Type I-II Ready Mix
 + 20% Fly Ash

Comp. Strength
 8 hrs 475 psi
 24 hrs 1375 psi

INTERMEDIATE LEAD:

Option 1
 158 sx
 76.4 bbls
 429.2 cuft
 2.72 ft³/sx
 11.7 ppg
 15.74 gal/sx
 Class G Cement
 + 3% D079 Extender
 + 0.20% D046 Antifoam
 + 1.0 lb/sx Phenoseal

Option 2
 165 sx
 76.4 bbls
 429.2 cuft
 2.60 ft³/sx
 11.5 ppg
 14.62 gal/sx
 Type III Asgrove Cement
 + 30 lb/sx San Juan Poz
 + 3% Bentonite
 + 5.0 lb/sx Phenoseal

Option 3
 163 sx
 76.4 bbls
 429.2 cuft
 2.63 ft³/sx
 11.7 ppg
 15.92 gal/sx
 Class G Cement
 + 3% D079 Extender
 + 0.20% D046 Antifoam
 + 1.0 lb/bbl CemNet

HOLE: 8.75 "
 CSG OD: 7 "
 CSG ID: 6.456 "
 WGT: 20 ppf
 GRADE: J-55
 EXCESS: 50 %
 TAIL: 482.4'
 DEPTH: 2412'

INTERMEDIATE TAIL:

Option 1
 90 sx
 21.1 bbls
 118.4 cuft
 1.31 ft³/sx
 13.5 ppg
 5.317 gal/sx
 50/50 Poz: Class G Cement
 + 0.25 lb/sx D029 Cellophane Flakes
 + 3% S001 Calcium Chloride
 + 2% D020 Bentonite
 + 1.5 lb/sx D024 Gilsontite Extender
 + 0.1% D046 Antifoamer
 + 6 lb/sx Phenoseal

Option 2
 89 sx
 21.1 bbls
 118.4 cuft
 1.33 ft³/sx
 13.5 ppg
 5.52 gal/sx
 50/50 Poz: Standard Cement
 + 2% Bentonite
 + 6.0 lb/sx Phenoseal

Option 3
 92 sx
 21.1 bbls
 118.4 cuft
 1.28 ft³/sx
 13.5 ppg
 5.255 gal/sx
 50/50 Poz: Class G Cement
 + 2% D020 Bentonite
 + 5.0 lb/sx D024 Gilsontite Extender
 + 2% S001 Calcium Chloride
 + 0.1% D046 Antifoamer
 + 0.15% D065 Dispersant
 + 1.0 lb/bbl CemNet

HOLE: 6.25 "
 CSG OD: 4.5 "
 CSG ID: 4 "
 WGT: 11.6 ppf
 GRADE: N-80
 EXCESS: 30 %
 DEPTH: 6812'

PRODUCTION:

Option 1
 424 sx
 108.7 bbls
 610.5 cuft
 1.44 ft³/sx
 13.0 ppg
 6.47 gal/sx
 50/50 Poz: Class G Cement
 + 0.25 lb/sx D029 Cellophane Flakes
 + 3% D020 Bentonite
 + 1.0 lb/sx D024 Gilsontite Extender
 + 0.25% D167 Fluid Loss
 + 0.25% D065 Dispersant
 + 0.1% D800 Retarder
 + 0.1% D046 Antifoamer
 + 3.5 lb/sx Phenoseal

Option 2
 421 sx
 108.7 bbls
 610.5 cuft
 1.45 ft³/sx
 13.1 ppg
 6.55 gal/sx
 50/50 Poz: Standard Cement
 + 3% Bentonite
 + 0.2% CFR-3 Friction Reducer
 + 0.1% HR-5 Retarder
 + 0.8% Halad-9 Fluid Loss Additive
 + 3.5 lb/sx Phenoseal

Comp. Strength
 9.32 hrs 50 psi
 12 hrs 500 psi
 13.29 hrs 1026 psi
 24 hrs 2300 psi

Lackey B LS #15M

HOLE: 12.25 "
CSG OD: 9.625 "
CSG ID: 9.001 "
WGT: 32.3 ppf
GRADE: H-40
EXCESS: 200 %
DEPTH: 120'

SURFACE:

INTERMEDIATE LEAD:

Option 4

149 sx
76.4 bbls
429.2 cuft
2.88 ft³/sx
11.5 ppg
16.85 gal/sx
Standard Cement
+ 3% Econolite (Extender)
+ 10 lb/sx Phenosaal

Comp. Strength
1.47 50 psi
12 hrs 350 psi
24 hrs 450 psi

HOLE: 8.75 "
CSG OD: 7 "
CSG ID: 6.456 "
WGT: 20 ppf
GRADE: J-55
EXCESS: 50 %

TAIL: 482.4'
DEPTH: 2412'

Option 5

204 sx
76.4 bbls
429.2 cuft
2.10 ft³/sx
11.7 ppg
11.724 gal/sx
75% Type XI / 25% Class G Cement
+ 0.25 lb/sx D029 Cellophane Flakes
+ 3% D079 Extender
+ 0.20% D046 Antifoam

Comp. Strength
10:56 500 psi
42 hrs 1012 psi

INTERMEDIATE TAIL:

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4 "
WGT: 11.6 ppf
GRADE: N-80
EXCESS: 30 %
DEPTH: 6812'

PRODUCTION:

TOPSET FRUITLAND COAL Wells: (topset casing above coal to prepare for cavitation/DO/UR)

Drilling Mud Program:

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

CASE & FRAC FRUITLAND COAL Wells: (casing set below coal to prepare for frac completion)

Drilling Mud Program:

Surface: spud mud

Production: fresh water mud with bentonite and polymer as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints

Production: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

MESA VERDE Wells:

Drilling Mud Program:

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist drilling media with foamer, polymer, & corrosion inhibitor as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

DAKOTA Wells:

Drilling Mud Program:

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Below Intermediate: air/mist/nitrogen drilling media with foamer, polymer, & corrosion inhibitor as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints

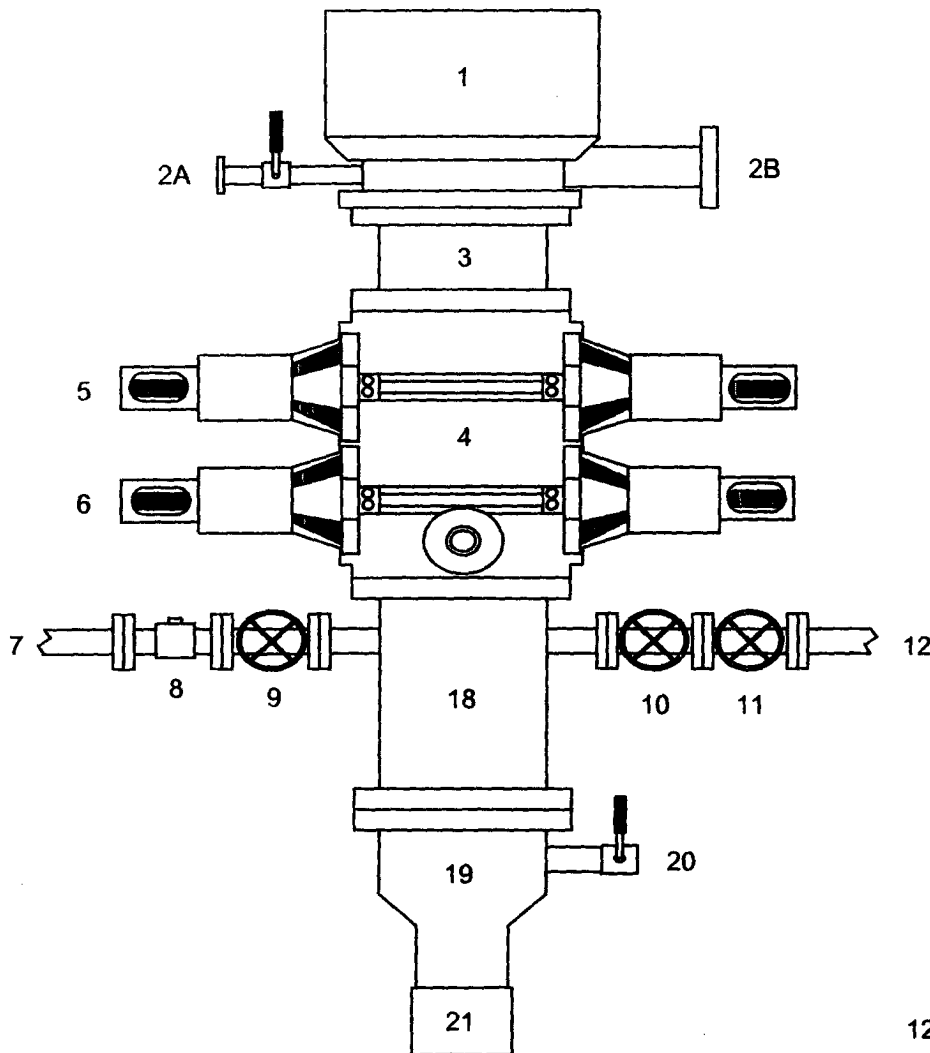
Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

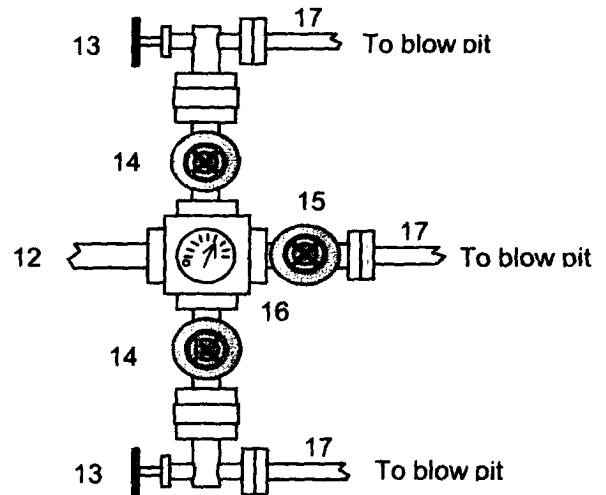
Below Intermediate: no centralizers used in air holes. In mud holes centralizers are spaced out appropriately

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to Intermediate Casing Point & Setting 7" Intermediate Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Flowline
3. Spacer Spool
4. Double Ram BOP (11", 3000 psi)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Choke Line (2")
18. Mud Cross Spacer Spool
19. Casing Head "A" Section
20. Casing Head "A" Section 2" Valve
21. 9 5/8" Casing Collar



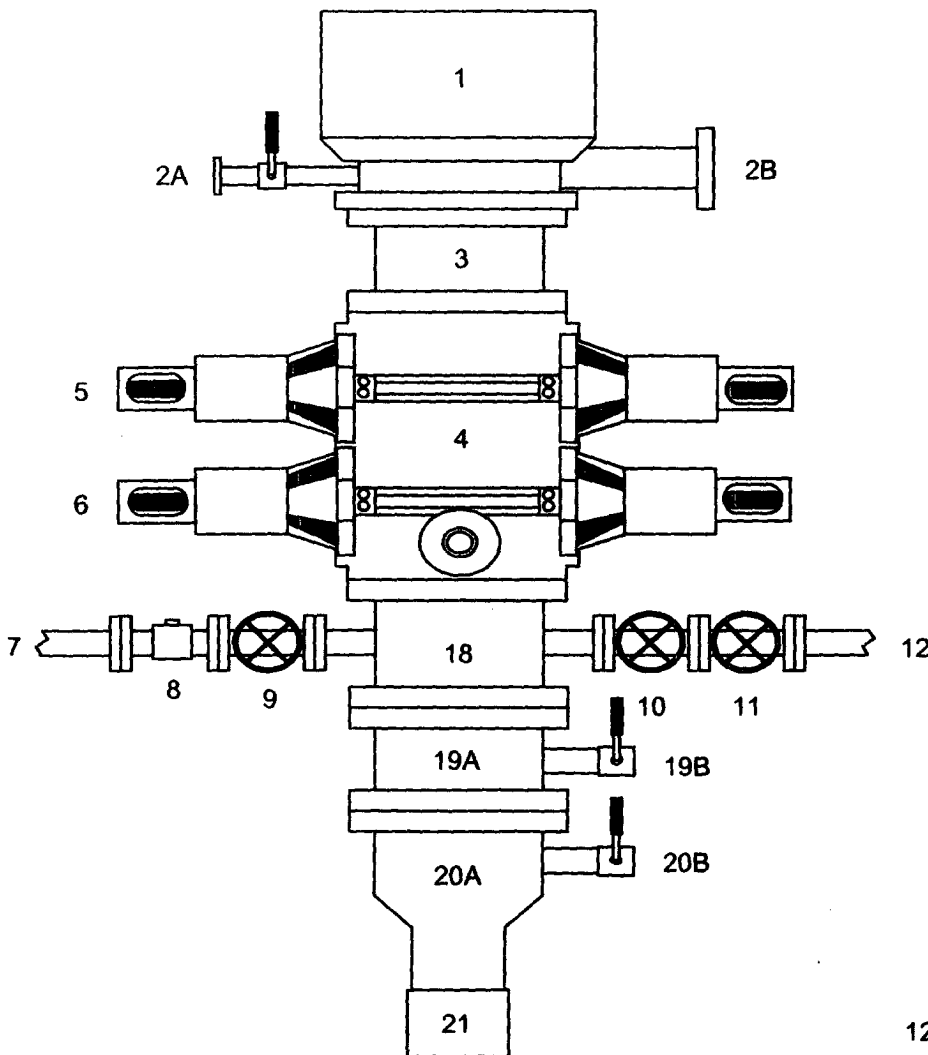
A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe rams and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 10 minutes and to 1000 psi (high pressure test) for 10 minutes. Then the test plug will be removed, and the 9-5/8" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 10 minutes and to 1000 psi for 30 minutes (this value is one 44% of the minimum internal yield pressure of the 9-5/8" casing). (Note: per regulatory requirements we will wait on cement at least 8 hrs after placement before testing the 9-5/8" surface casing). Then an 8-3/4" hole will be drilled to intermediate casing point and 7" intermediate casing will be run and cemented.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

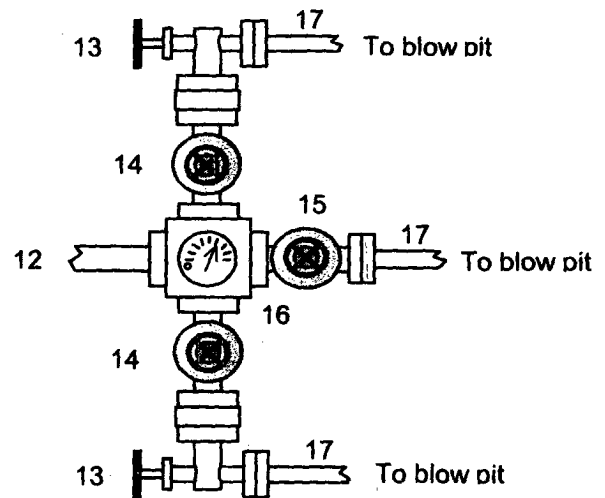
1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Bleeie Line (for Air Drilling)
3. Spacer Spool
4. Double Ram BOP (11", 3000 psi)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Choke Line (2")
18. Mud Cross Spacer Spool
- 19A Csg Spool "B" Section (11", 3M)
- 19B "B" Section Csg Valve (2", 3M)
- 20A Csg Head "A" Section (11", 3M)
- 20B "A" Section Csg Valve (2", 3M)
21. 9 5/8" Casing Collar



After the 7" intermediate casing has been run and cemented, the Casing Spool ("B" Section) will be installed on the wellhead ("A" Section) and the BOP will be installed on the Casing Spool. A test plug will be set in the wellhead and the pipe rams, blind rams, and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 10 minutes and to 3000 psi (high pressure test) for 10 minutes. Then the test plug will be removed and the 7" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 10 minutes and to 1800 psi for 30 minutes - this test pressure is 48% of the minimum internal yield strength of 3740 psi for the 7", 20#, J-55, STC casing. Then we will air drill the 6-1/4" hole to TD and run and cement the 4-1/2" casing.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use

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