

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DIST. 3

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2007 JAN 25 PM 2:30

| | |
|--|---|
| 1a. Type of Work DRILL | 5. Lease Number NMSP-012299 NMNMD12299 Unit Reporting Number BLM 210 FARMINGTON NM |
| 1b. Type of Well GAS | 6. If Indian, All. or Tribe |
| 2. Operator ConocoPhillips | 7. Unit Agreement Name San Juan 31-6 Unit |
| 3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700 | 8. Farm or Lease Name 9. Well Number #40G |
| 4. Location of Well Unit B (NWNE), 560' FNL & 1565' FEL, Latitude 36° .84731 N Longitude 107° 41254 W | 10. Field, Pool, Wildcat Basin DK/Blanco MV 11. Sec., Twn, Rge, Mer. (NMPM) B Sec. 1, T30N, R6W API # 30-039- 30177 |
| 14. Distance in Miles from Nearest Town | 12. County Rio Arriba |
| | 13. State NM |
| 15. Distance from Proposed Location to Nearest Property or Lease Line 560' | |
| 16. Acres in Lease | 17. Acres Assigned to Well DK- 272.81 - (R/2) MV - 226.61 - (E/2) |
| 18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease | |
| 19. Proposed Depth 8022' | 20. Rotary or Cable Tools Rotary |
| 21. Elevations (DF, FT, GR, Etc.) 6464' GL | 22. Approx. Date Work will Start |
| 23. Proposed Casing and Cementing Program See Operations Plan attached | |
| 24. Authorized by: Rhonda Rogers (Regulatory Technician) | 1-25-07 Date |

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

Archaeological Report attached

Threatened and Endangered Species Report 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 action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

NMOCD

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

4/18/07

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

PO Box 2088, Santa Fe, NM 87504-2088
JAN 25 PM 2:30

Form C-11
Revised February 21, 1995
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

RCVD MAY 18 '07

OIL CONS. DIV.

DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|------------------------------------|---|------------------------------------|--|
| *API Number 30-039-30177 | | *Pool Code 72319 / 71599 | *Pool Name BLANCO MESAVERDE / BASIN DAKOTA |
| *Property Code 31328 | *Property Name SAN JUAN 31-6 UNIT | | *Well Number 406 |
| *GRID No. 217817 | *Operator Name CONOCOPHILLIPS COMPANY | | *Elevation 6464' |

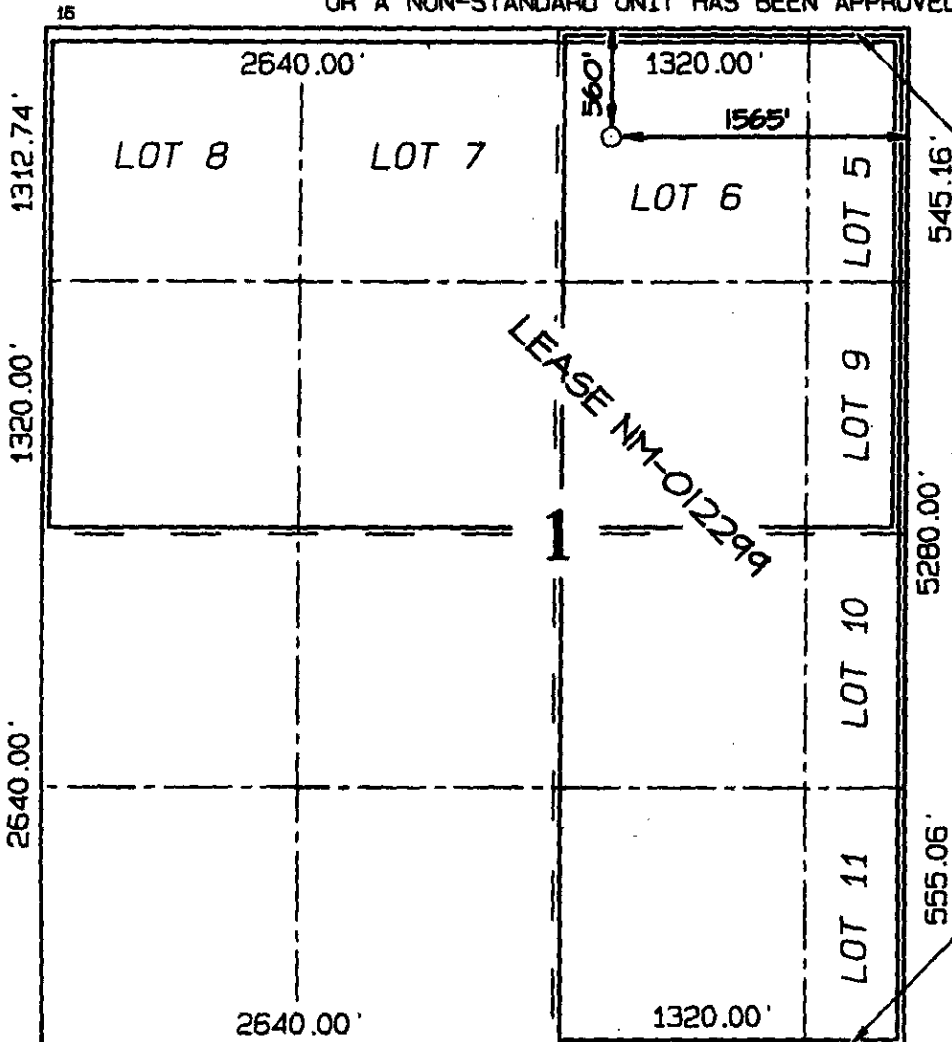
10 Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| B | 1 | 30N | 6W | | 560 | NORTH | 1565 | EAST | RIO ARriba |

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 |
|--|---------|----------|-------|---------|--------------------|-----------------------|------------------------------------|----------------|--------|
| | | | | | | | | | |
| 12 Dedicated Acres 226.61 Acres - E/2 (MV) 272.81 Acres - N/2 (DK) | | | | | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. R2046A (DK) | | |

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

1-24-07

Virgil E. Chavez
Signature

Printed Name
Virgil E. Chavez

Title
Projects & Operations Lead

Date
1-24-07

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: **APRIL 5, 2005**

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.

30-039- 3077

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

NM-012299

7. Lease Name or Unit Agreement Name

San Juan 31-6 Unit

8. Well Number

#40G

9. OGRID Number

217817

10. Pool name or Wildcat

Basin DK/Blanco MV

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

ConocoPhillips

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter B

:

560'

feet from the

North

line and

1565'

feet from the

East

line

Section 1

Township

30N

Rng

6W

NMPM

County

Rio Arriba

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

6464'

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

3200

1000'

Pit Liner Thickness:

12

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

☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

COMMENCE DRILLING OPNS. ☐

CASING/CEMENT JOB ☐

ALTERING CASING ☐

P AND A ☐

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 and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit will be a lined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 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. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office.

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

Rhonda Rogers

TITLE

Regulatory Technician

DATE

1-25-07

Type or print name

Rhonda Rogers

E-mail address:

rogerr@conocophillips.com

Telephone No.

505-599-4018

For State Use Only

APPROVED BY

Rhonda Rogers

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. 7

DATE

MAY 18 2007

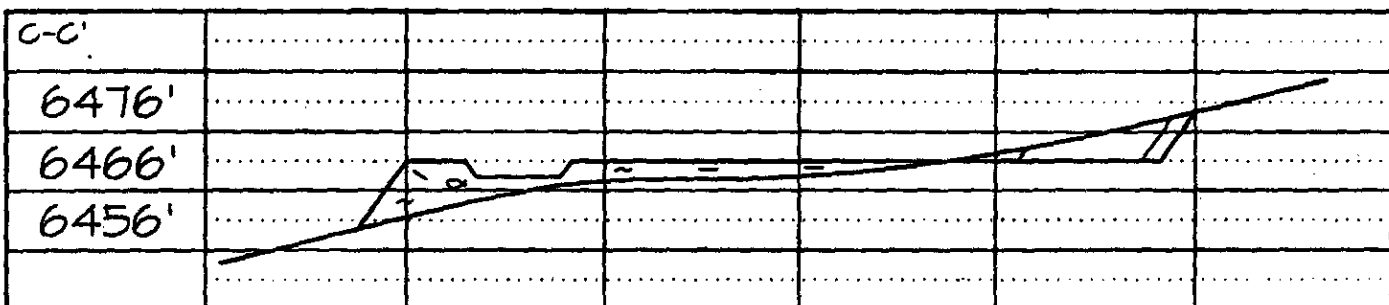
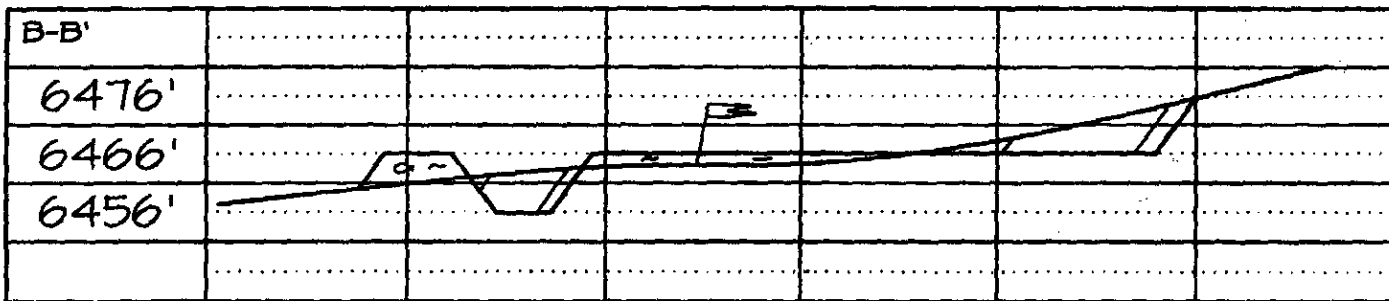
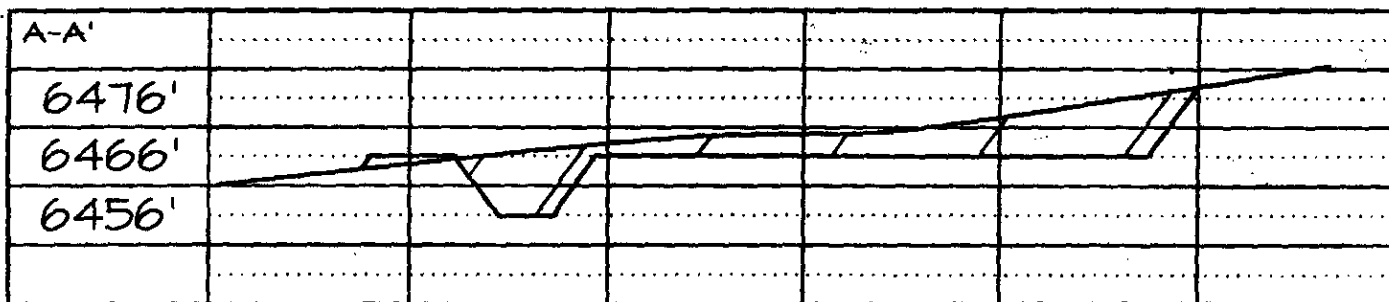
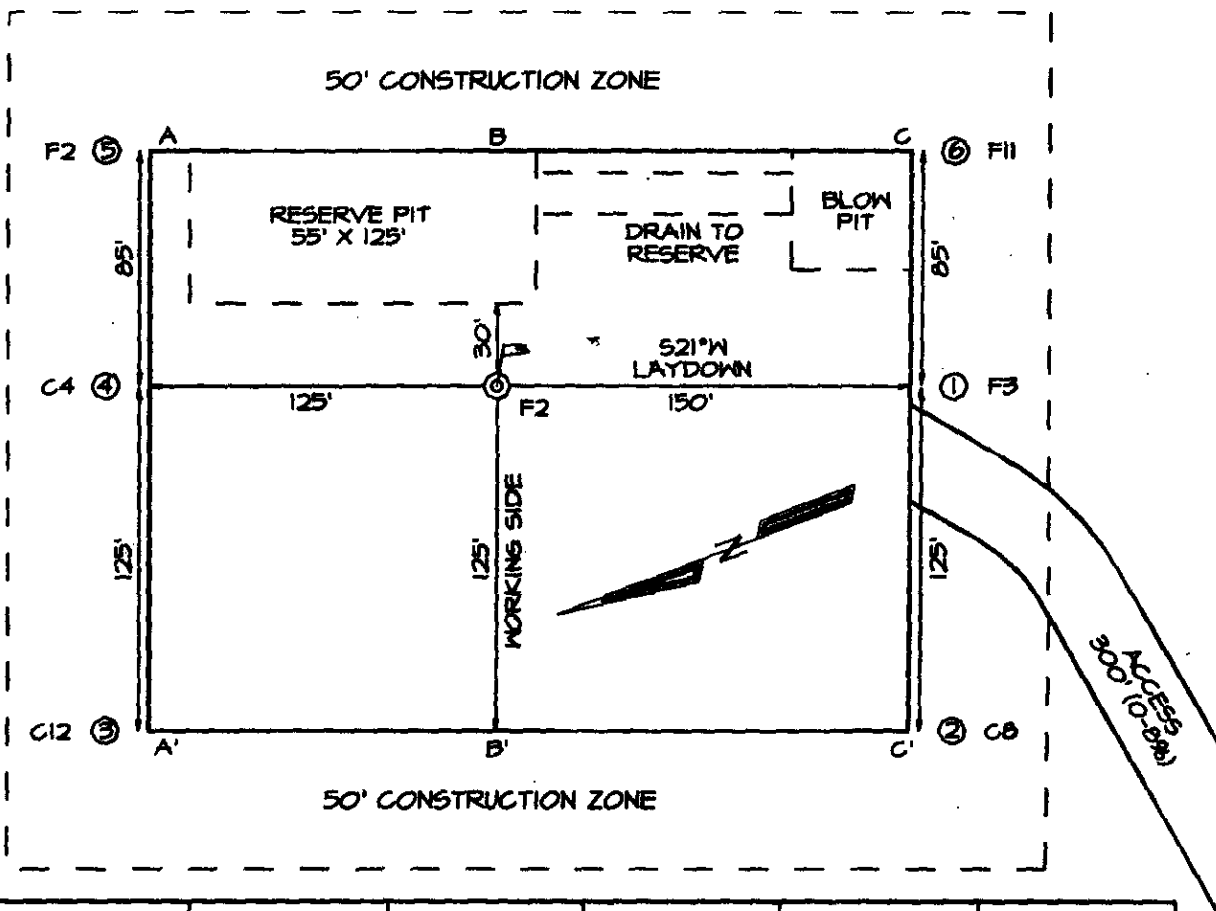
Conditions of Approval (if any):

CONOCOPHILLIPS COMPANY SAN JUAN 31-6 UNIT #40G
560' FNL & 1565' FEL, SECTION 1, T30N, R6W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6464'

LATITUDE: 36.84731° N
LONGITUDE: 107.41254° W
 DATUM: NAD(92)

PLAT NOTE:

SURFACE OWNER
 Bureau of Land
 Management



PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 31-6 40G

| | | | | | |
|------------------------------|--|------------------------|--|---|--------------------|
| Lease: | | AFE #: WAN.CNV.6213 | | AFE \$: | |
| Field Name: 31-6 | | Rig: Bearcat Rig 4 | | State: NM | County: RIO ARRIBA |
| Geoscientist: Riley, Brook | | Phone: +1 505-324-6108 | | Prod. Engineer: Phone: 486-2334 | |
| Res. Engineer: McKee, Cory J | | Phone: 505-326-9826 | | 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 | | Straight Hole | |
| Latitude: 36.847310 | Longitude: -107.412540 | X: 0.00 | Y: 0.00 | Section: 01 | Range: 006W |
| Footage X: 1565 FEL | Footage Y: 560 FNL | Elevation: 6464 (FT) | Township: 030N | | |

Tolerance:

| | | | |
|---|--------------------|------------------|--------------------|
| Location Type: Summer Only | Start Date (Est.): | Completion Date: | Date In Operation: |
| Formation Data: Assume KB = 6482 Units = FT | | | |

| Formation Call & Casing Points | Depth (TVD in Ft) | SS (Ft) | Depletion (Yes/No) | BHP (PSIG) | BHT | Remarks |
|--------------------------------|-----------------------|---------|--------------------------|------------|-----|--|
| Surface Casing | 202 200 | 6280 | <input type="checkbox"/> | | | 13-1/2 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface. |
| NCMT | 1282 | 5200 | <input type="checkbox"/> | | | |
| OJAM | 2512 | 3970 | <input type="checkbox"/> | | | Possible water flows. |
| KRLD | 2682 | 3800 | <input type="checkbox"/> | | | |
| FRLD | 3082 | 3400 | <input type="checkbox"/> | | | Possible gas. |
| PCCF | 3292 | 3190 | <input type="checkbox"/> | | | |
| LEWS | 3392 | 3090 | <input type="checkbox"/> | | | |
| Intermediate Casing | 3492 | 2990 | <input type="checkbox"/> | | | 8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface. |
| CHRA | 4557 | 1925 | <input type="checkbox"/> | | | |
| MENF | 5432 | 1050 | <input type="checkbox"/> | | | Gas. |
| PTLK | 5667 | 815 | <input type="checkbox"/> | | | Gas. |
| MNCS | 5917 | 565 | <input type="checkbox"/> | | | |
| GLLP | 6957 | -475 | <input type="checkbox"/> | | | Gas. Possibly wet. |
| GRHN | 7672 | -1190 | <input type="checkbox"/> | | | Gas possible, highly fractured |
| CBBO | 7852 | -1370 | <input type="checkbox"/> | | | Gas |
| TOTAL DEPTH DK | 8022 | -1540 | <input type="checkbox"/> | | | 6-1/4" hole possibly underreamed to 9.5". Optional Liner: 5.5", 15.5#, J-55 LTC - left uncemented. |
| Total Depth | 8022 | -1540 | <input type="checkbox"/> | | | |

Reference Wells:

| Reference Type | Well Name | Comments |
|----------------|-----------|----------|
|----------------|-----------|----------|

PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 31-6 40G

Logging Program:

Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☒ TDT

Additional Information:

| Log Type | Stage | From (Ft) | To (Ft) | Tool Type/Name | Remarks |
|----------|-------|-----------|---------|----------------|---------|
|----------|-------|-----------|---------|----------------|---------|

Comments: Location/Tops/Logging - DKNM030N006W01NE1 MVNM030N006W01NE1

Zones - DKNM030N006W01NE1 MVNM030N006W01NE1

General/Work Description - 12/15/06 C. Head- RAM would like to run openhole logs in order to better characterize the reservoir. This will also require that the Dakota be mud drilled, therefore increasing drilling costs.

This well is the replacement for the 31-6 #40M MV/DK which was converted to a Mancos completion after high pressure was encountered while drilling. The 40M was renamed the 31-6 54.

HOLE: 12.25"
 CSG OD: 9.625"
 CSG ID: 9.001"
 WGT: 32.3 pcf
 GRADE: H-40
 EXCESS: 125 %

SURFACE:**Option 1**

79 sx
 16.4 bbls
 91.9 cuft
 1.17 ft³/sx
 15.8 ppg
 4.973 gal/sx
 Class G Cement
 + 3% S001 Calcium Chloride
 + 0.25 lb/sx D029 Cellulophane Flakes

Option 2

76 sx
 16.4 bbls
 91.9 cuft
 1.21 ft³/sx
 15.6 ppg
 5.29 gal/sx
 Standard Cement
 + 3% Calcium Chloride
 + 0.25 lb/sx Floccale

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

8.20

DEPTH:

INTERMEDIATE LEAD:**Option 1**

229 sx
 111.2 bbls
 624.1 cuft
 2.72 ft³/sx
 11.7 ppg
 15.74 gal/sx
 Class G Cement
 + 3% D079 Extender
 + 0.20% D046 Antifoam
 + 10 lb/sx Phenoseal

Option 2

240 sx
 111.2 bbls
 624.1 cuft
 2.60 ft³/sx
 11.5 ppg
 14.62 gal/sx
 Type III Asphgrove Cement
 + 30 lb/sx San Juan Poz
 + 3% Bentonite
 + 5.0 lb/sx Phenoseal

Option 3

237 sx
 111.2 bbls
 624.1 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 pcf
 GRADE: J-55
 EXCESS: 50 %

TAIL:

698.4'

DEPTH:

3492'

INTERMEDIATE TAIL:**Option 1**

128 sx
 29.8 bbls
 167.1 cuft
 1.31 ft³/sx
 13.5 ppg
 5.317 gal/sx
 50/50 Poz: Class G Cement
 + 0.25 lb/sx D029 Cellulophane 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

126 sx
 29.8 bbls
 167.1 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

131 sx
 29.8 bbls
 167.1 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: 4.052"
 WGT: 10.5/11.6 pcf
 GRADE: J-55
 EXCESS: 30 %
 DEPTH: 8022'

PRODUCTION:**Option 1**

436 sx
 111.8 bbls
 627.9 cuft
 1.44 ft³/sx
 13.0 ppg
 6.47 gal/sx
 50/50 Poz: Class G Cement
 + 0.25 lb/sx D029 Cellulophane 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

433 sx
 111.8 bbls
 627.9 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-3 Retarder
 + 0.8% Halad-9 Fluid Loss Additive
 + 3.5 lb/sx Phenoseal

P

SURFACE:

HOLE: 12.25 "
CSG OD: 9.625 "
CSG ID: 9.001 "
WGT: 32.3 ppf
GRADE: H-40
EXCESS: 125 %

DEPTH: 120

INTERMEDIATE LEAD:

Option 4

| | |
|---------------------------|----------------|
| 217 sx | Comp. Strength |
| 111.2 bbls | 1.47 50 psi |
| 624.1 cuft | 12 hrs 350 psi |
| 2.88 ft ³ /sx | 24 hrs 450 psi |
| 11.5 ppq | |
| 16.85 gal/sx | |
| Standard Cement | |
| + 3% Econolite (Extender) | |
| + 10 lb/sx Phenoseal | |

Option 5

| | |
|-------------------------------------|-----------------|
| 297 sx | Comp. Strength |
| 111.2 bbls | 10.56 500 psi |
| 624.1 cuft | 42 hrs 1012 psi |
| 2.10 ft ³ /sx | |
| 11.7 ppq | |
| 11.724 gal/sx | |
| 75% Type XI / 25% Class G Cement | |
| + 0.25 lb/sx D029 Cellophane Flakes | |
| + 3% D079 Extender | |
| + 0.20% D046 Anticam | |

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

TAIL: 698.4

DEPTH: 3482

INTERMEDIATE TAIL:

If the 9 5/8" surface casing is preset drilled (NOTE) will cement w/75 sx Type I-II cement w/20% Flyash mixed @ 1.61 cft/sx. Will bring cement to surface. Wait on cement for 24 hours for pre-set hole before pressure testing or drilling out. If H&P rig is used to drill the well will use 13 1/2" surface hole then will adjust cement to insure cement reaches surface.

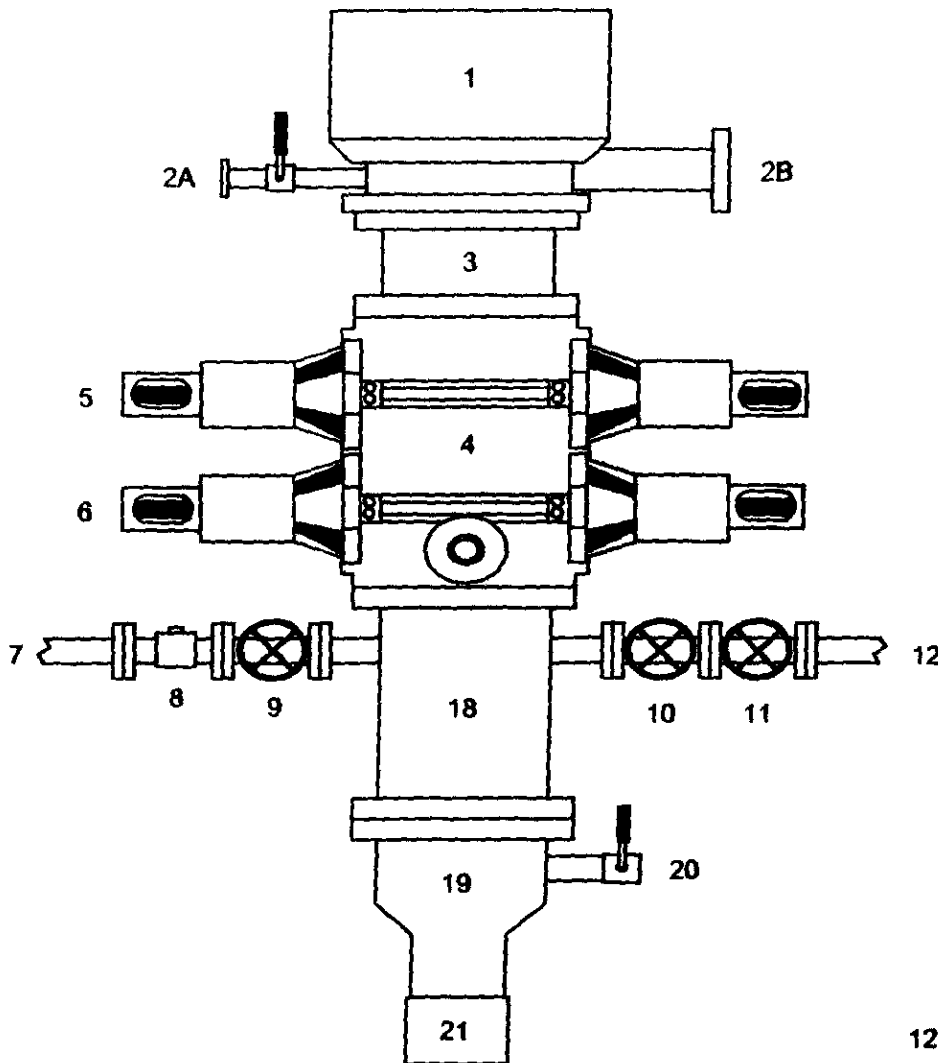
PRODUCTION:

HOLE: 6.25 "
CSG OD: 4.5 "
CSG ID: 4.052 "
WGT: 10.57116 ppf
GRADE: J-55
EXCESS: 30 %

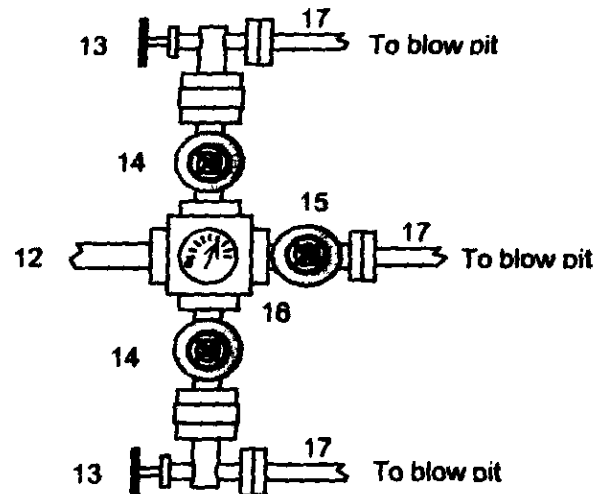
DEPTH: 8022

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



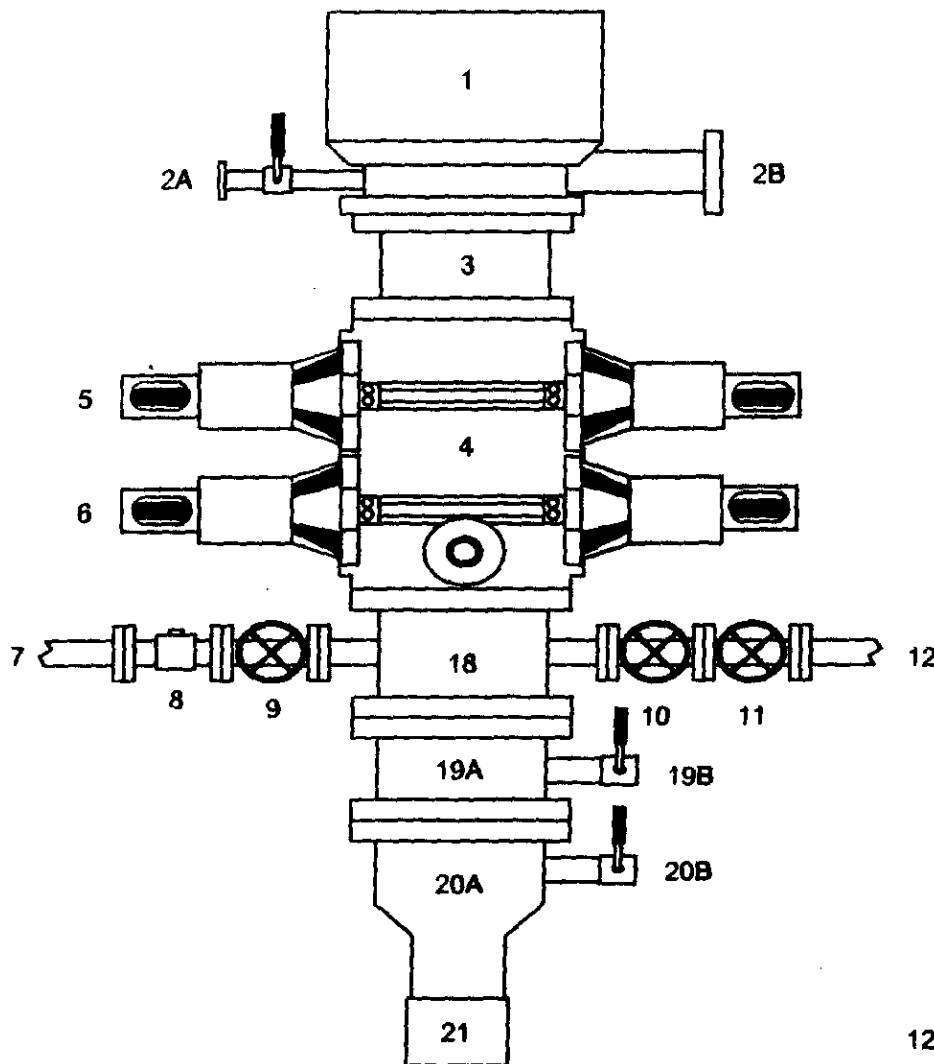
A 12-1/4" hole will be drilled to approximately 120' and the 9-5/8" surface casing will be run and cemented. The Casing Head 'A' Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head 'A' Section. A test plug will be set in the wellhead and the pipe 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:

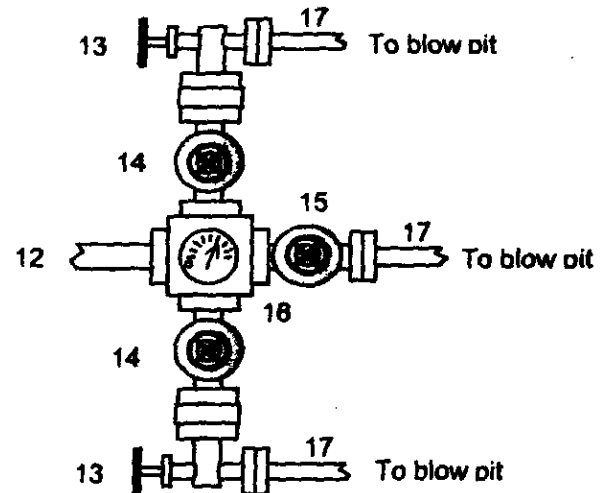
- Upper Kelly cock Valve with handle
- Stab-in TIW valve for all drillstrings in use

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Bleeed 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

Revision Date: September 1, 2004