Form 3160-3
(September 2001)

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

2006 SEP 6 PM 2 44

RECEIVED
070 FARMINGTON NM

RECEIVED
2006 NOV 15 PM 3:03
BLM
CONS. DIV.

| | |
|---|---|
| 1a. Type of Work: ☒ DRILL ☐ REENTER | 5. Lease Serial No. NOG-0108-1496 |
| 1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone | 6. If Indian, Allottee or Tribe Name Allottee No. 17101710 |
| 2. Name of Operator SG Interests I, LTD c/o NIKA Energy Operating | 7. If Unit or CA Agreement, Name and No. Navajo 21-6-20 |
| 3a. Address P.O. Box 2677 Durango, CO 81302 | 3b. Phone No. *(include area code)* (970) 259-2701 |
| 4. Location of Well *(Report location clearly and in accordance with any State requirements. *)* At surface 1266' FSL & 1931' FEL At proposed prod. zone | 8. Lease Name and Well No. 4 |
| | 9. API Well No. 30-043-21039 |
| | 10. Field and Pool, or Exploratory Basin Fruitland Coal |
| | 11. Sec., T., R., M., or Blk. and Survey or Area O Section 20, 21N, 6W |
| 14. Distance in miles and direction from nearest town or post office* approximately 22 miles southeast of Counselors, New Mexico | 12. County or Parish Sandoval / 13. State NM |

| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1266' | 16. No. of Acres in lease 160.00 | 17. Spacing Unit dedicated to this well S/2 320 |
|---|---|---|
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map | 19. Proposed Depth 960' | 20. BLM/BIA Bond No. on file PIB0003277 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,897 GR | 22. Approximate date work will start* as soon as permitted | 23. Estimated duration 1 month |

## 24. Attachments

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

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

| 25. Signature | Name *(Printed/Typed)* | Date |
|---|---|---|
| Title: President NIKA Energy Operating/ Agent for SG Interests I, LTD | William Schwab III | 9/6/06 |
| Approved by *(Signature)* | Name *(Printed/Typed)* | Date 11/13/06 |
| Title AFM | Office FFO | |

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.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on reverse)*

SG Interests I, LTD. proposes to drill a well to develop the Basin Fruitland Coal formation at the above described location in accordance with the attached drilling and surface use plans.

The surface is Navajo Allotted under jurisdiction of the Bureau of Indian Affairs (BIA) and the Federal Indian Minerals Office (FIMO).

This location has been archaeologically surveyed by Aztec Archaeological Consultants. Copies of their report have been submitted directly to the BIA and FIMO.

An approximate 1,371.61-foot gas and produced water pipeline ties would be constructed, connecting into the existing SG Interests I LTD, pipeline systems.

NMOCD
B 11/15/06

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

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

RCVD NOV 15'06
OIL CONS. DIV.
DIST. 3

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

2006 SEP 6 PM 2 44
RECEIVED
070 FARMINGTON NM

Form C-102
Revised June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| ¹API Number | ²Pool Code | ³Pool Name |
|---|---|---|
| 30-043-21039 | 71629 | Basin FRUITLAND Coal |

| ⁴Property Code | ⁵Property Name | ⁶Well Number |
|---|---|---|
| 36133 | NAVAJO 21-6-20 | 4 |

| ⁷OGRID No. | ⁸Operator Name | ⁹Elevation |
|---|---|---|
| 20572 | SG INTERESTS I, LTD. | 6897 |

## ¹⁰ Surface Location

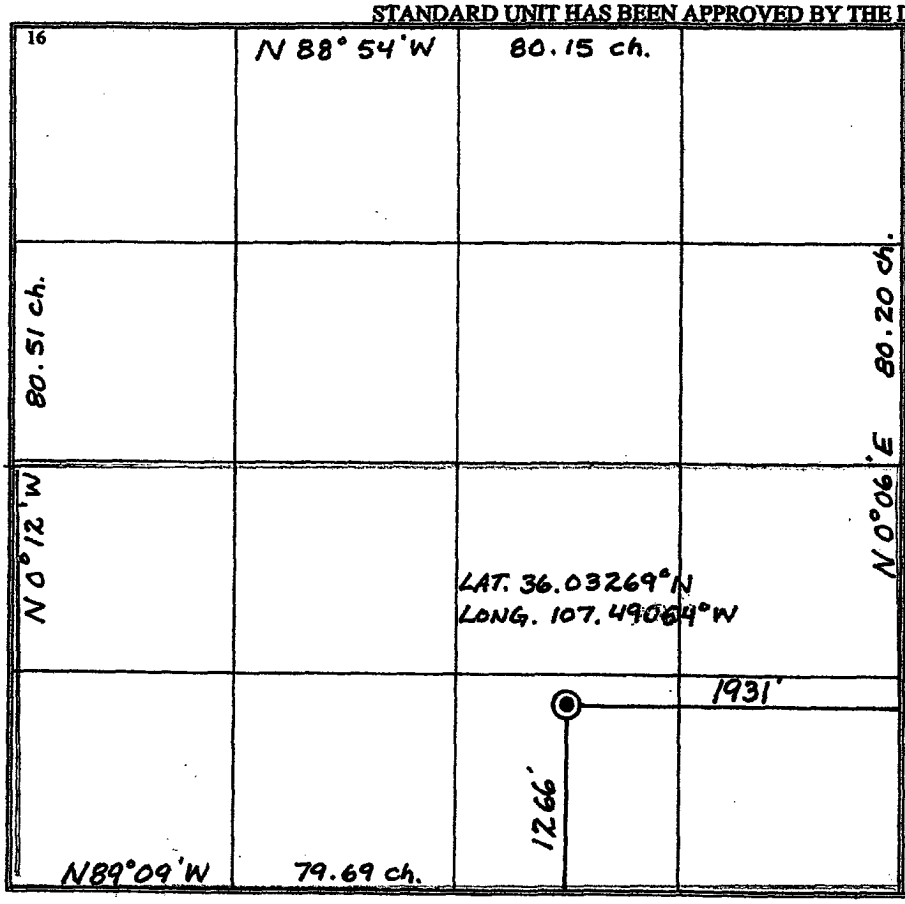
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| O | 20 | 21N | 6W | | 1266 | South | 1931 | East | Sandoval |

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| ¹²Dedicated Acres | ¹³Joint or Infill | ¹⁴Consolidation Code | ¹⁵Order No. |
|---|---|---|---|
| 320 | | | |

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.*

Wm Schwab III
Signature

WILLIAM SCHWAB III
Printed Name

AGENT - SG INTERESTS
Title and E-mail Address tripp@nikaenergy.com

Date 9/6/06

## 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.*

04 May 2006
Date of Survey

Signature and Seal of Professional Surveyor

William E. Mahnke II
Certificate Number 8466

Submit 3 Copies To Appropriate District 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

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO. 30-043-21039

5. Indicate Type of Lease STATE ☐ FEE ☒ Navajo Allotted

6. State Oil & Gas Lease No.

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.)

7. Lease Name or Unit Agreement Name
Navajo 21-6-20

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

8. Well Number #4

2. Name of Operator SG Interests I, Ltd

9. OGRID Number

3. Address of Operator
C/O Nika Energy Operating, PO Box 2677, Durango, CO, 81303

10. Pool name or Wildcat
Basin Fruitland Coal

4. Well Location
Unit Letter B: 1266 feet from the South line and 1931 feet from the East line
Section 20 Township 21N Range 6W NMPM County Sandoval

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
6,897'

**Pit or Below-grade Tank Application ☒ or Closure ☐**

>200'

**Pit type** Drilling **Depth to Groundwater** >300 **Distance from nearest fresh water well** >1000 ft **Distance from nearest surface water** <1,000 ft

**Pit Liner Thickness:** 12 mil **Below-Grade Tank: Volume** 1000 Bbls; **Construction Material** Synthetic

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

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | ☐ | PLUG AND ABANDON | ☐ | REMEDIAL WORK | ☐ | ALTERING CASING | ☐ |
| TEMPORARILY ABANDON | ☐ | CHANGE PLANS | ☐ | COMMENCE DRILLING OPNS. | ☐ | P AND A | ☐ |
| PULL OR ALTER CASING | ☐ | MULTIPLE COMPL | ☐ | CASING/CEMENT JOB | ☐ | | |
| OTHER: Pit Application | ☒ | | | 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.

Drilling/Completion pit to be located approximately 15 feet from well head. Pit multi-use drilling and completion to avoid additional site disturbance and pit will be considered out of service once production tubing set. Pit to be 75 feet long by 15 feet wide by 10 feet deep. Pit to be constructed, operated and closed in accordance with NMOCD guidelines and SGI procedures.

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 William Schwab III TITLE Agent for SG Interests, Ltd. DATE 9/6/06

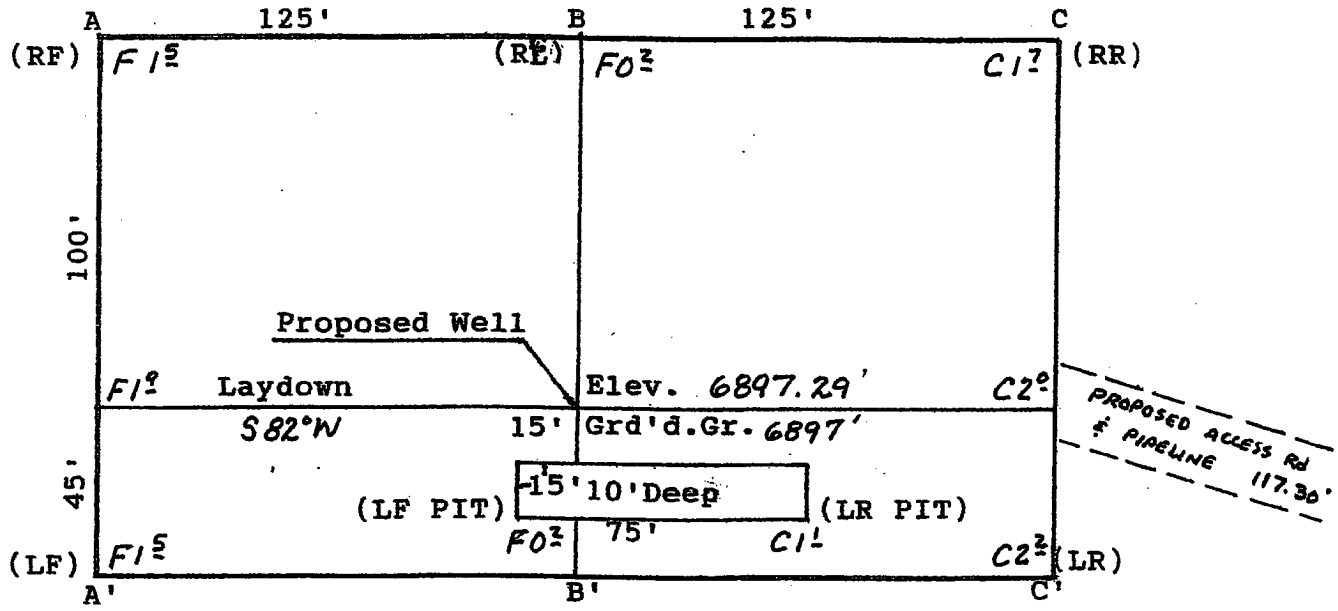
Type or print name William Schwab III E-mail address: tripp@nikaenergy.com Telephone No. 970-259-2701

**For State Use Only**

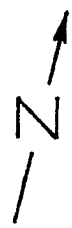
APPROVED BY: TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE NOV 15 2006

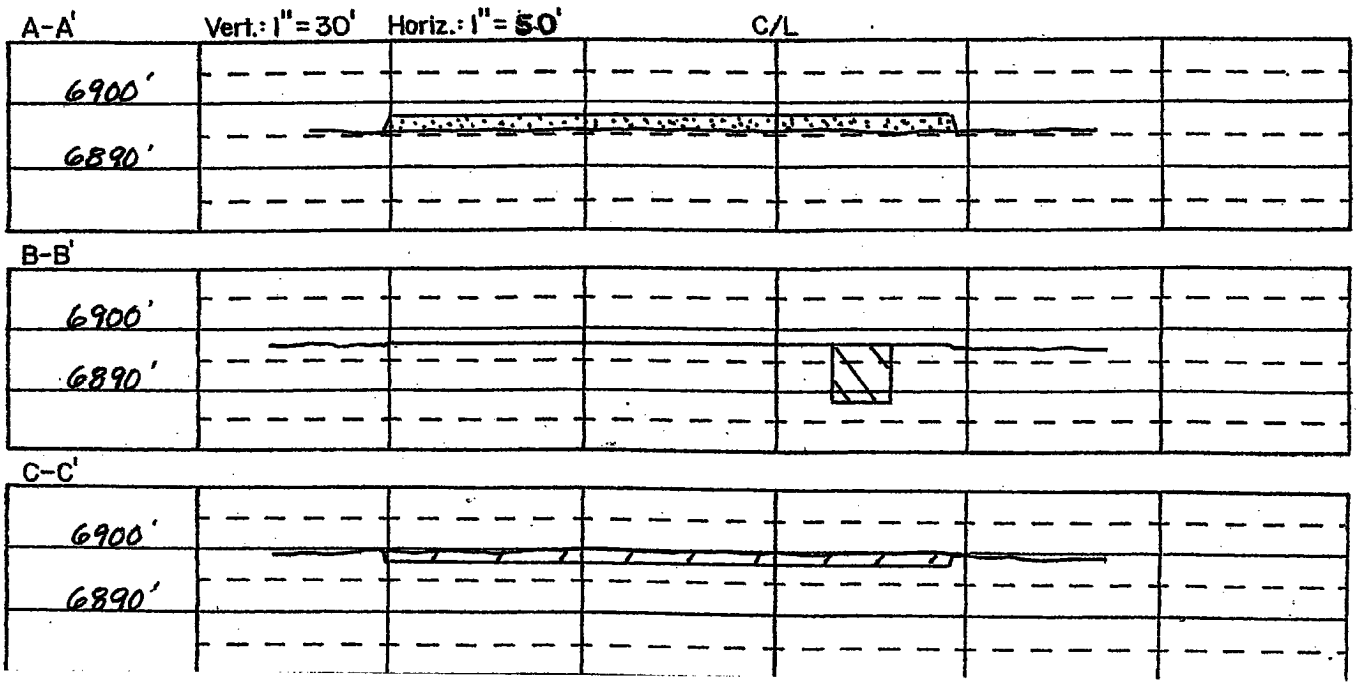
Conditions of Approval (if any):

SG INTERESTS I, LTD.
NAVAJO 21-6-20 #4
1266'FSL & 1931'FEL
Sec.20,T21N,R6W,NMPM
Sandoval Co., NM




Scale:1"=50'



SG Interests I, Ltd.
(Agent: Nika Energy Operating, LLC)
PO Box 2677
Durango, CO 81302
(970) 259-2701

Navajo 21-6-20 #4
SWSE Sec 20-21N-R6W
1266' FSL & 1931' FEL
Sandoval County, New Mexico

# EIGHT POINT DRILLING PROGRAM

1. Estimated Formation Tops:

| | |
|---|---|
| Ojo Alamo | 250' |
| Kirtland | 400' |
| Fruitland | 590' |
| PC | 810' |
| Total Depth | 960' |

2. Estimated Depth of Anticipated Minerals:

| | |
|---|---|
| Fruitland (Gas) | 785' |

3. Minimum Specifications for Pressure Control Equipment:

BOP equipment and accessories will meet or exceed BLM requirements outlined in 43 CFR Part 3160.

A 2000 psig double ram hydraulic BOP will be used (see attached diagram). Accessories to the BOP will meet BLM requirements for a 2000 psig system. The accumulator system capacity will be sufficient to close all BOPE with a 50% safety factor. Fill line, kill line and line to choke manifold will be 2". BOP's will be function tested every 24 hours and will be recorded on IADC log.

Surface casing will be tested to 1500 psig for 30 minutes.

Accessories to BOPE will include upper and lower Kelly cocks with handles, stabbing valve to fit drill pipe on floor at all times, string float at bit, 2000 psig choke manifold with 2" adjustable and 2" positive chokes, and pressure gauge.

4. Casing and Cementing Program:

| Hole Size | Interval | Csg Size | Wt, Grd, Jt |
|---|---|---|---|
| 12-1/4" | 0-150' | 8-5/8" | 24#, J-55, ST&C |
| 7-7/8" | 0-~~945~~ 9160 | 4-1/2" | 10.5#, J-55, ST&C |

Surface Casing will be cemented with 140 sx (165 cu ft) class B w/2% CaCl and 1/4#/sx of celloflake (Yield = 1.18 cuft/sx, Weight = 15.6 #/gal). Cement volumes include excess to circulate cement to surface. A guide shoe, insert float and three (3) centralizers will be used. WOC time is 8 hours. The casing will be pressure tested to 1500 psig.

Production Casing will be cemented with ~~100~~ 240 sx ~~(118~~ 283 cu ft) class B w/2% CaCl and 1/4#/sx celloflake (Yield = 1.18 cuft/sx, Weight = 15.6 #/gal). Cement volume includes excess to circulate cement to surface. In the event cement is not circulated a temperature survey will be run to determine the actual cement top. Cementing equipment will include a guide shoe, float collar and 7 centralizers. Class G or H cement may be used depending on availability of Class B.

5. Mud Program:

A native water based mud system (FW) will be used initially followed by a low-solids, non-dispersed gel system (LSND) as needed to condition the hole for logs. Adequate amounts of lost circulation and weighting material will be on location if needed as well as sorbitive agents to handle potential spills of fuel or lubricants.

| Depth | Type | Wt (ppg) | Vis (sec) | Wtr loss |
|---|---|---|---|---|
| 0-150' | FW | ± 8.5 | 30-33 | NC |
| 150'-TD | FW & LSND | ± 8.7-9.1 | 30-50 | 8-10 cc |

6. Testing, Coring and Logging Program:

No DST's or cores are planned. Openhole logs will include GR, Induction, Density and Caliper Logs. The GR-Density logs will be run from TD to the top of the Fruitland formation. GR-Induction-Caliper logs will be run from TD to the bottom of the surface casing.

7. Anticipated Abnormal Pressures and Temperatures:

No abnormal pressures or temperatures are expected in this well. Maximum anticipated Fruitland reservoir pressure is 300 psig with a normal temperature gradient.

8. Operations:

Anticipated spud date is September 2006 or as soon as permits are received and work can be scheduled. Estimated drilling time is 4 - 5 days. The Fruitland will be completed as a cased hole completion, perforated and hydraulically fracture stimulated. Completion operations are expected to take 5 - 7 days and will commence as soon after completion of drilling operations and scheduling allow.

NIKA ENERGY OPERATING, LLC
SG INTERESTS I, LTD.

WELL NAME: Navajo 21-6-20 #4

FIELD NAME: Basin Fruitland Coal

LOCATION: Sec 20-T21N-R6W
Unit: O 1266' FSL & 1931' FEL
Sandoval County, New Mexico

PROPOSED TD: 960'

DRILLING SKELETON:

| Interval | Hole Size | Casing Size | Depth |
|---|---|---|---|
| Surface | 12-1/4" | 8-5/8" | 150' |
| Production | 7-7/8" | 4-1/2" | 960' |

MUD PROGRAM:

| Interval | Mud Type | Mud Weight | Funnel Viscosity | Water Loss |
|---|---|---|---|---|
| 0 - 150' | Native | 8.5 - 9.1 | 30 - 50 | N/C |
| 150' - TD | Native/LSND | 8.5 - 9.1 | 30 - 50 | 8 - 10 cc |

CORE PROGRAM: None

ELECTRICAL LOGGING PROGRAM: Openhole logs will include a GR/Caliper and a DIL/Formation Density log from TD to the surface casing shoe

CASING AND CEMENTING PROGRAM:

| Interval | Size, Wt, Grade, Thread | Depth | Cement |
|---|---|---|---|
| Surface | 8-5/8", 24#, J-55, ST&C | 150' | 150 sx Class B w/2% CaCl + 1/4#/sx celloflake |
| Production | 4-1/2", 10.5#, J-55, ST&C | TD | 240 sx Class B. Both slurries to contain 1/4#/sx celloflake. |

WELLHEAD: 3000# Independent Style

BLOWOUT PREVENTION EQUIPMENT REQUIREMENTS:

| Description | Rating |
|---|---|
| Double Ram Type Preventer | 2000 psi |
| Rotating Head | 2000 psi |

BOPE testing will be done by third party testers in accordance with Onshore Order No. 2. The test must be performed and recorded using a test pump, calibrated test gauges and properly calibrated strip or chart recorder. The test gauges and recorders must be of the proper range and resolution commensurate with the authorized test pressure. The test must be recorded in the driller's log and will include a low pressure test requirement of 250 psig held for 5 minutes and a high pressure test requirement held for 10 minutes. Casing pressure tests must be held for 30 minutes with no more than 10 percent pressure drop during the test.

GEOLOGIC PROGNOSIS:

Elevations: GL ~ 6897', KB ~ 6902'

Formation Tops:

| Formation | Depth |
|---|---|
| Ojo Alamo | 250' |
| Kirtland | 400' |
| Fruitland | 590' |
| Coal Top | 785' |
| PC | 810' |
| Total Depth | 960' |

Note: TD will be 200' below the lowest coal. The company man will be on location once coals are penetrated until TD to monitor drilling breaks and to insure that 150' of rathole is drilled. When the hole is logged, if a coal zone is indicated within 150' of bottom, additional hole is to be drilled to provide 150' of rathole. Log of offset well(s) (Federal 21-6-30 #4, Federal 21-6-29 #3) are enclosed for correlation.

MUD PROGRAM:

A fresh water native mud (using lime, benex & gel additions) will be used to drill the surface hole. The 7-7/8" hole should be drilled with native mud and a LSND mud as necessary for hole stability just before the top of the Fruitland formation is encountered.

At the top of the Fruitland formation mud weights should be sufficient to control pressures; viscosity should be in the 30 - 50 sec range with a water loss of 8 - 10 cc, as needed.

The Fruitland Coals are expected to be under-pressured to normal-pressured and may encounter lost circulation. LCM should be stored on location and used as needed in the event of lost circulation. Barite should also be on location in the event an over-pressured zone is encountered and a kick is taken.

CASING AND CEMENTING PROCEDURE:

Note: Notify BLM 24 hours prior to spud and testing of BOP's and cementing. 505-599-8907. **Note the new (June 1, 2005) Federal (BLM) requirements for the testing and test recording of the Blow-out Preventer Equipment.** A copy is attached to the approved APD.

Surface Casing:

1. Drill to a minimum of 150' to accommodate tallied 8-8/5" casing plus 3'. Casing tally to be taken on location.
2. Use a landing joint of 8-8/5" casing to set casing at ground level. Guide shoe on casing should be not more than 2 feet off bottom. Casing head flange to be set at ground level.
3. Displace hole with casing volume of fresh water ahead of cement.
4. Pump Class B cement with 2% CaCl at 5-7 barrel per minute.
5. Drop top plug and displace with fresh water when preflush returns are observed at the surface. Do not over-displace.
6. If plug does not bump, hold pressure for a minimum of three hours.

   a. Wait on cement a minimum of 8 hours or until surface samples are hard *, whichever is longer **before** nippling up the BOP. Install test plug in casing head and pressure test stack to 2000 psig for 30 minutes.

      1. * Note: The BLM requirement is a minimum of 250 psi @ 60degrees F compressive strength **before** BOP may be nippled up.

      2. Notes: Use a standard 8-8/5" guide shoe, a 8-8/5" insert float, 3 centralizers and 1 stop ring. Set insert on top of first joint. Bakerlok shoe, float collar and bottom two joints of casing.

Production Casing:

1. Roll casing off truck with thread protectors in place.
2. Visually inspect, rabbit, number, and tally casing on racks. Remove thread protectors and clean threads. Use quick release protectors while running casing. Do not move or roll casing without thread protectors in place.
3. Change out pipe rams to accommodate 4-1/2" casing.
4. Bakerlok 4-1/2" float shoe to bottom of first joint of casing.
5. Bakerlok 4-1/2" differential float collar to top of first joint of casing. Bakerlok second joint of casing into top of float collar. Run "marker joint" 100' above top coal as per openhole logs.
6. Casing should be made up to proper torque (1320 ft-lb for 10.5# or 1540 ft-lb for 11.6#) using an API thread compound.
7. Casing should be run no faster than 2 feet per second (20 seconds per 40 foot joint). At the first indication of mud loss, the running time should be doubled to 40 seconds per joint (1 foot per second).
8. Break circulation at 325 feet and 625 feet and circulate a minimum of 15 minutes. Make sure that the hole is not flowing. Adjust mud properties as necessary. Circulate the last joint of casing to TD. Kick pumps in slowly to minimize surge pressures.
9. Turbolizing centralizers should be run on each of the first 7 joints. A stop-ring should be used to hold the first centralizer in place. Place the remaining centralizers on collars.
10. After casing is landed at TD, circulate hole until mud properties measured at the flowline are within the ranges given in the "Mud Program" of this drilling prognosis.
11. Rig up rotational cementing head and return lines. Chixson should be long enough to allow 25'-30' reciprocation.
12. Pump 10 barrels of fresh water. Pump 20 barrel chemical wash. Pump cement slurry. Wash lines.
13. Drop top plug and displace with water. Do not over-displace. Pipe should be rotated at 10-20 RPM or reciprocated at least 20 feet every two to three minutes throughout displacement.
14. Bump plug with 500 psi over final displacement pressure. Hold pressure for 5 minutes. If plug does not bump, hold initial shut down pressure on casing for 5 minutes. Then check to see that float is holding (flow back into cement pump tank).

Production Casing cont.

15. Set slips, cut off casing and nipple down BOP. A thread protector or some other appropriate obstruction should be place on the top of the casing stub to prevent loss of material downhole.

Cement Slurry Designs and Notes

| Slurry | Cement & Additives | Water Requirements | Weight | Yield |
|---|---|---|---|---|
| Surface | Class B + 1/4#/sx celloflake | 5.2 gals/sx | 15.6 ppg | 1.18 cu.ft/sk. |
| Production | Class B + 1/4#/sx celloflake | 5.2 gals/sx | 15.6 ppg | 1.18 cu.ft/sk. |

Figure slurry volume as follows: Calculate slurry using caliper volume + 50% excess. Cement volume shown in this prognosis is based on hole and casing size and surface/long string annular volumes plus percentage excess shown above.

NOTES:

1. Pump rates should be a minimum of 4 BPM through displacement.
2. Slurry weights should be measured using a mud balance at least every 10 minutes during mixing.
3. At least two samples of the tail should be caught and monitored at room temperature for thickening time.
4. Run Temperature Log if cement does not circulate.

Blow Out Preventer (BOP) Exhibit #1

2-M SYSTEM