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

2007 MAY 31 PM 3:47

RECEIVED
070 FARMINGTON NM

5 Lease Serial No
NMSF-078763

6 If Indian, Allottee or Tribe Name

1a Type of Work ☒ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No
Rosa Unit

1b Type of Well ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8 Lease Name and Well No
400

2 Name of Operator
Williams Production Company, LLC

9 API Well No
30-039-30271

3a Address
P.O Box 640 Aztec, NM 87410

3b Phone No *(include area code)*
(505) 634-4208

10 Field and Pool, or Exploratory
Basin Fruitland Coal

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 1210' FNL & 1290' FEL, Section 9, T. 31N , R 5W
At proposed prod zone

11 Sec , T., R , M , or Blk and Survey or Area
Section 9, T 31N , R. 5W. NMPM
A

14 Distance in miles and direction from nearest town or post office*
approximately 35 miles northeast of Blanco, New Mexico

12 County or Parish
Rio Arriba

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of Acres in lease	17 Spacing Unit dedicated to this well
1210'	2,544.64	320 0 (E/2) Section 9
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	**19 Proposed Depth**	**20 BLM/BIA Bond No on file**
1200'	3,735'	~~UT0847~~ UT0899
21 Elevations (Show whether DF, KDB, RT, GL, etc)	**22 Approximate date work will start***	**23 Estimated duration**
6811' GR	June 1, 2007	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 Larry Higgins — Name *(Printed/Typed)* Larry Higgins — Date 5-31-07

Title
Drilling COM

Approved by *(Signature)* /s/ Manuel Manchego — Name *(Printed/Typed)* — Date 6/23/08

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)*

Williams Exploration and Production Company, LLC, 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 under jurisdiction of the U S Forest Service, Jicarilla Ranger District, Carson National Forest

This location has been archaeologically surveyed La Plata Archaeological Consultants Copies of their report have been submitted directly to the USFS, Jicarilla Ranger District

This APD is also serving as an application to obtain an access road and gas pipeline Required for this location is an approximate 1625-foot access road, and a gas pipeline of 89 80 feet This access road will also serve as the access road to the proposed Rosa 360A well The pipeline will be entirely within the proposed well pad

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

NOTIFY AZTEC OCD 24 HRS. PRIOR TO CASING & CEMENT

NMOCD

JUN 30 2008

SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

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

RCVD JUN 24 '08
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

Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

2007 MAY 31 PM 3:47
RECEIVED
210 FARMINGTON NM

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-30271	71629	BASIN FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
17033	ROSA UNIT	400

[7] OGRID No	[8] Operator Name	[9] Elevation
120782	WILLIAMS PRODUCTION COMPANY	6811'

[10] Surface Location

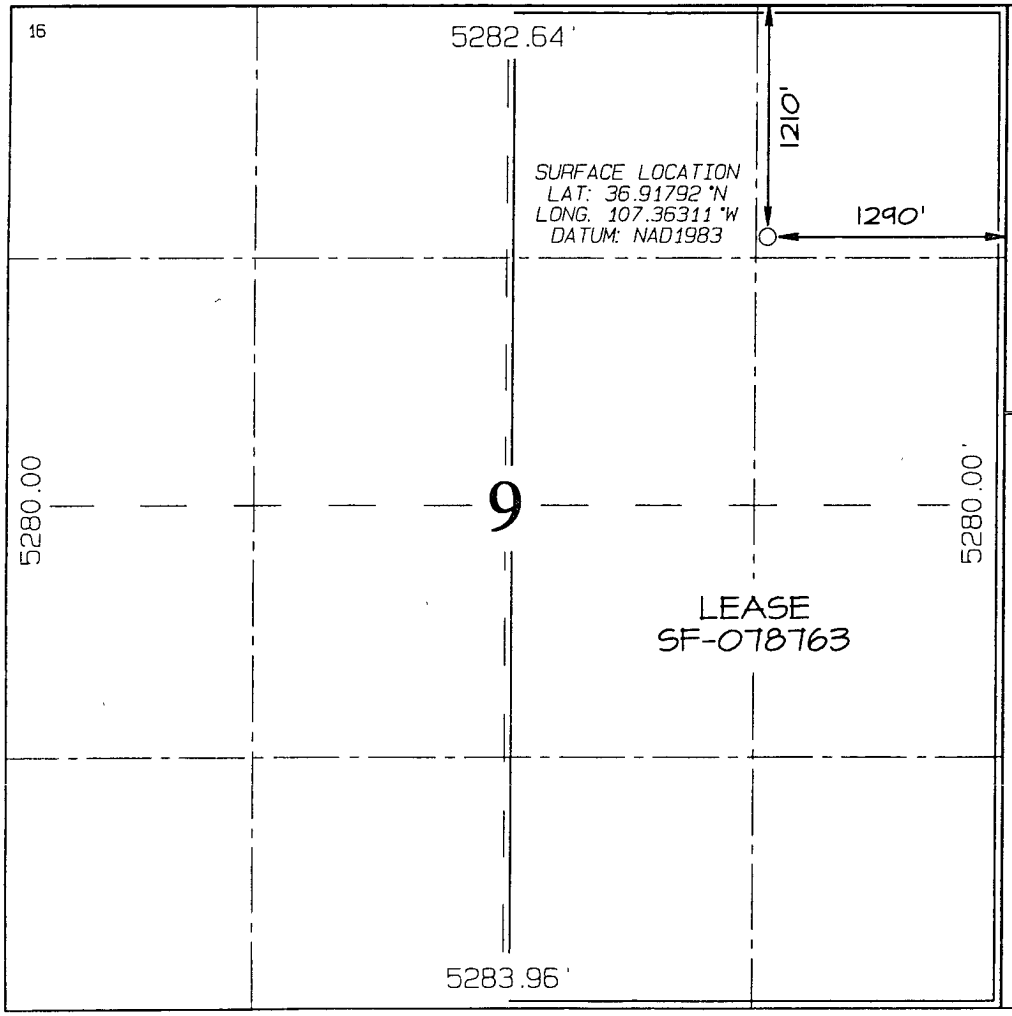
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	9	31N	5W		1210	NORTH	1290	EAST	RIO ARRIBA

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No
320.0 Acres - (E/2)			

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 — Date: 5-31-07

Printed Name: LARRY HIGGINS

[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

Survey Date: DECEMBER 7, 2006

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269

WILLIAMS PRODUCTION COMPANY

Operations Plan

(Note: This procedure will be adjusted on site based upon actual conditions)

DATE:	**5/14/2007**		
WELLNAME:	Rosa Unit #400	**FIELD:**	Basin Fruitland Coal
BH LOCATION:	NENE Sec 9-T31N-5W Rio Arriba, NM	**SURFACE:**	USFS
ELEVATION:	6,811' GR	**MINERALS:**	FED
TOTAL DEPTH:	**3,735'**	**LEASE #**	SF-078763

I. **GEOLOGY:** Surface formation - San Jose

A. **FORMATION TOPS:** (KB)

NAME		MD		NAME		MD
San Jose		Surface		Top Coal		3,500
Nacimiento		1,635		Bottom Coal		3,635
Ojo Alamo		2,890		Pictured Cliffs		3,635
Kirtland		3,005		**TD**		**3,735**
Fruitland		3,375				

B. **LOGGING PROGRAM:** SDR from TD to Intermediate casing. DSN from TD to surface casing.

C. **NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

D. **MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD.

II. **DRILLING**

A. **MUD PROGRAM:** Clear water with benex to 7" casing point. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before **3,480', DO NOT** drill deeper until Engineering is contacted.

B. **DRILLING FLUID**: Coal section will be drilled with Fruitland Coal water.

C. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)		CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12 1/4	300		9 5/8	36	K-55
Intermediate	8 3/4	3,480		7	20	K-55
Liner	6 1/4	3,380	3,635	5 1/2	15.5	J-55

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.

2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. **(NTL-FRA 90-1).**

3. PRODUCTION LINER / CASING: 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place centralizers as needed across selected production intervals.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. SURFACE: Use 160 sx (224 cu.ft.) of "Type III" with 2% $CaCl_2$ and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). **Use 120% excess** to circulate the surface. WOC 12 hours. Total volume = 206 cu.ft. Test to 1500#.

2. INTERMEDIATE: Lead - 435 sx (906 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% $CaCl_2$ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 50 sx (70cu.ft.) of "Type III" with 1/4# cello-flake/sk, and 1% $CaCl_2$ (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use **100% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry.** Total volume = 976 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.

3. PRODUCTION LINER: Open hole completion. No cement.

IV. COMPLETION

A. PRESSURE TEST

1. Pressure test 7" casing to 1500# for 15 minutes as per state regulations.

B. STIMULATION

1 Cavitate well with reciprocation and rotation. Surge wells with water and air and then flow back. Cavitate for 2 to 3 weeks. Maximum pressure not expected to exceed 2,000 psi.

C. RUNNING TUBING

1. *Fruitland Coal.* Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing approximately 50' above TD.

FOR Gary Sizemore
Sr. Drilling Engineer

Rosa #400 Op.doc

GENERAL ROSA DRILLING PLAN

Rosa Unit boundries:

T31N, R4W: all except sections 32-36
T31N, R5W: all except sections 1 & 2
T31N, R6W: all except sections 6,7,18,20, & 27-36
T32N, R6W: sections 32-36

FORMATION	LITHOLOGY	WATER	GAS	OIL/COND	OVER-PRES	LOST CIRC
Nacimiento	Interbedded shales, siltstones and sandstones	Possible	Possible	No	No	No
Ojo Alamo	Sandstone and conglomerates with lenses of shale	Fresh	No	No	No	No
Kirtland	Shale W/interbedded sandstones	No	Possible	No	No	No
Fruitland	Inter, SS, SiltSt, SH &Coals w/carb, SS, SiltSt, SH	Yes	Yes	No	Possible	Possible
Pictured Cliffs	Massive Sandstone w/thin interbedded shales	Possible	Yes	Possible	No	Possible
Lewis	Shale w/thin interbedded sandstones and siltstones	No	Possible	No	No	No
Cliff House	Transgressive sandstones	Possible	Yes	No	No	No
Menefee	Sandstones, carb shales and coal	Possible	Yes	No	No	No
Point Lookout	Regressive coastal barrier sandstone	Possible	Yes	Possible	No	Yes
Mancos	Marine shale and interbedded sandstone	No	Possible	Possible	No	Possible
Upr Dadota	Marine sand and shales	No	Yes	Possible	No	Possible
Lwr Dakota	Fluvial sands, shales, & coal	Possible	Yes	Possible	No	Possible

DRILLING

Potential Hazards:

1. There are no overpressured zones expected in this well.

2. No H2S zones will be penetrated while drilling this well.

Mud System:

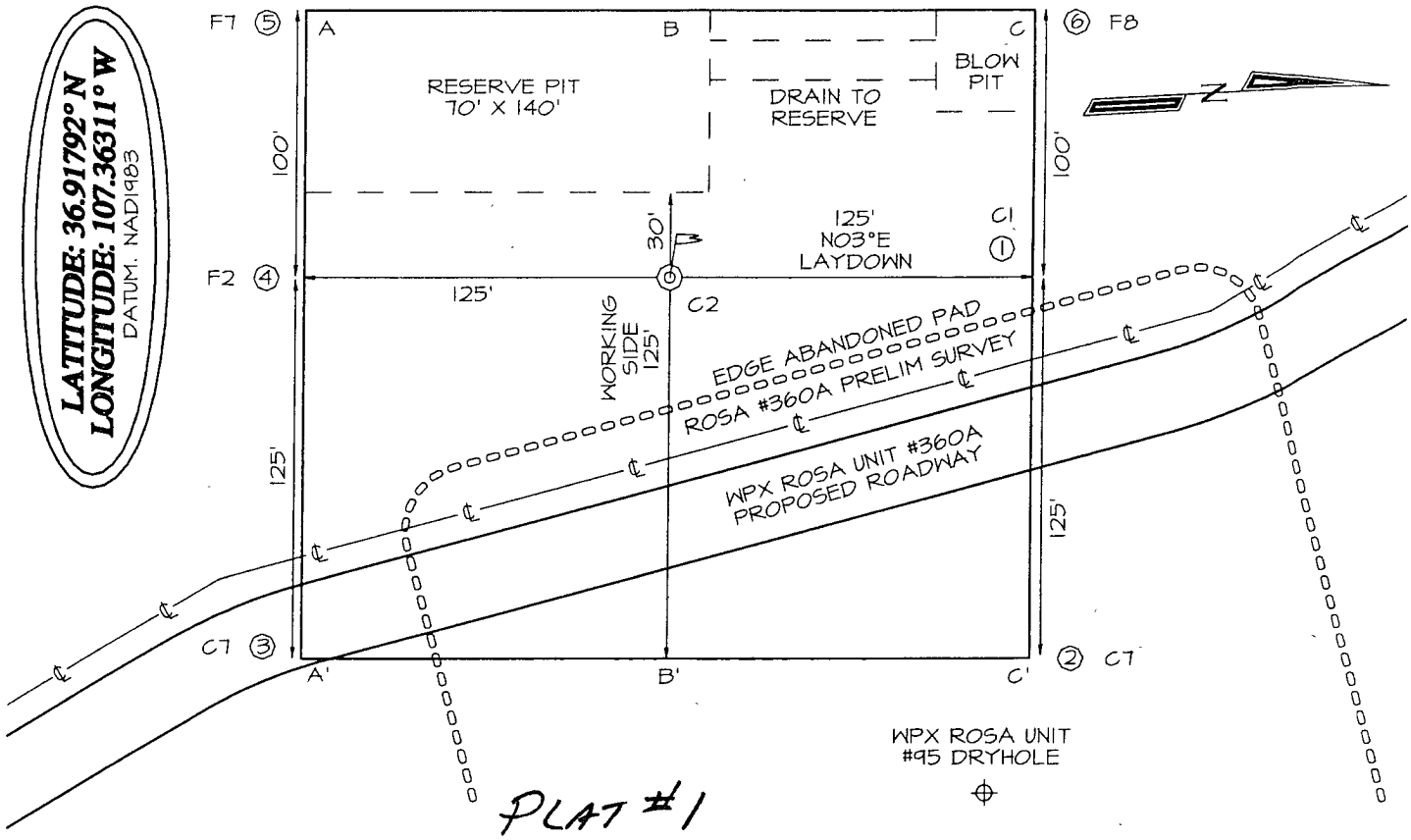
1. Surface - The surface hole will be drilled with a low-solids, non-dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 lb per gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.

2. Intermediate - The intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be low-solids, non-dispersed with mud weights in the 9 to 10 lb per gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.

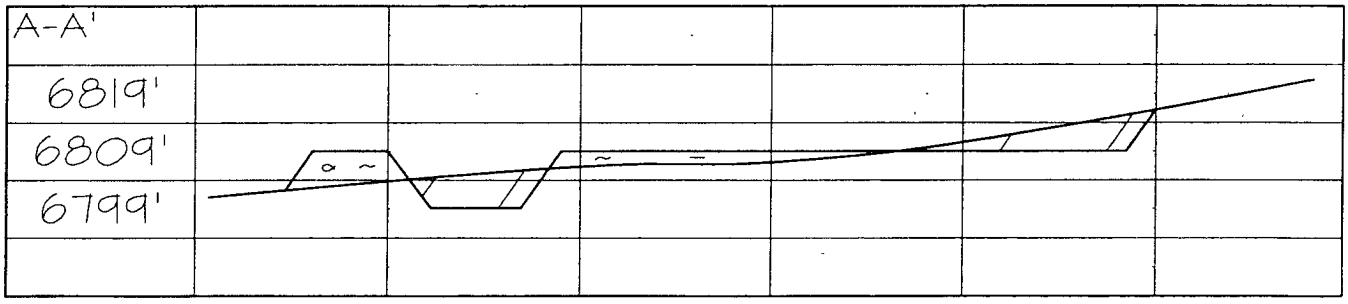
3. Production - The well will be drilled using air from the intermediate casing point to TD. For Fruitland Coal wells, the coal section will be drilled with air/mist.

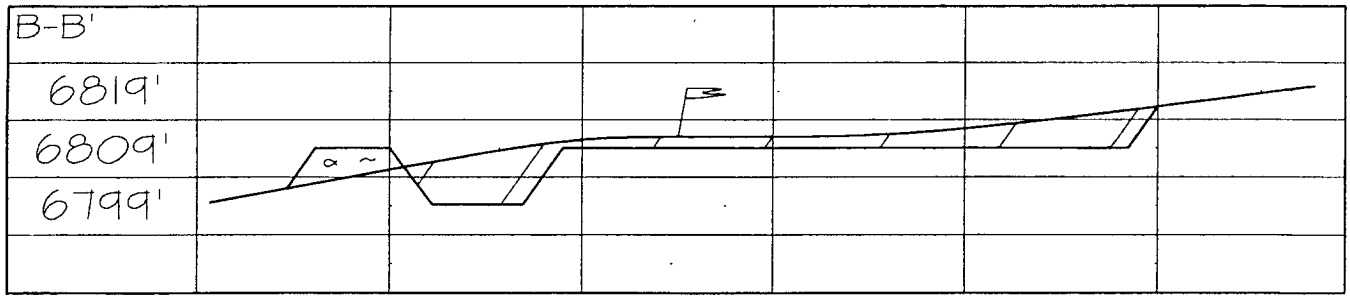
WILLIAMS PRODUCTION COMPANY ROSA UNIT #400
1210' FNL & 1290' FEL, SECTION 9, T31N, R5W, NMPM
RIO ARRIBA COUNTY, NEW MEXICO ELEVATION: 6811'

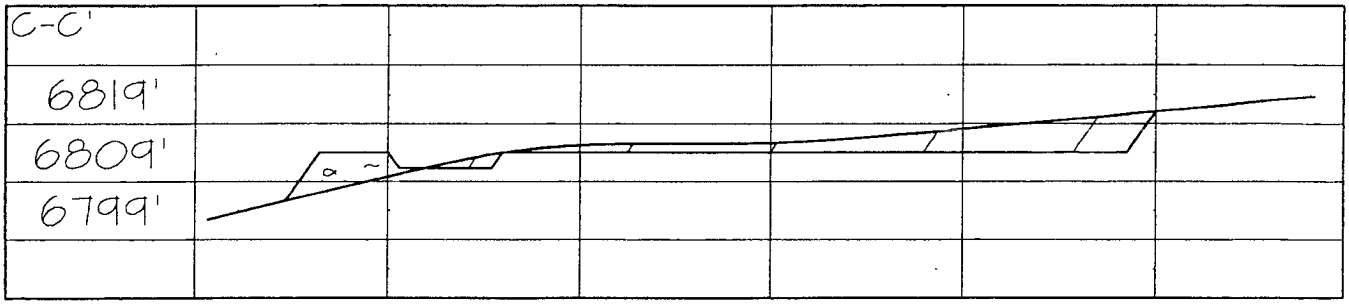
LATITUDE: 36.91792° N
LONGITUDE: 107.36311° W
DATUM: NAD1983



PLAT #1







FILENAME 3159AT	SHEET 2 OF 3	NCE SURVEYS, INC.	DRAWN BY EDO	CHECKED BY JCE

Well Control Equipment Schematic for 2M Service

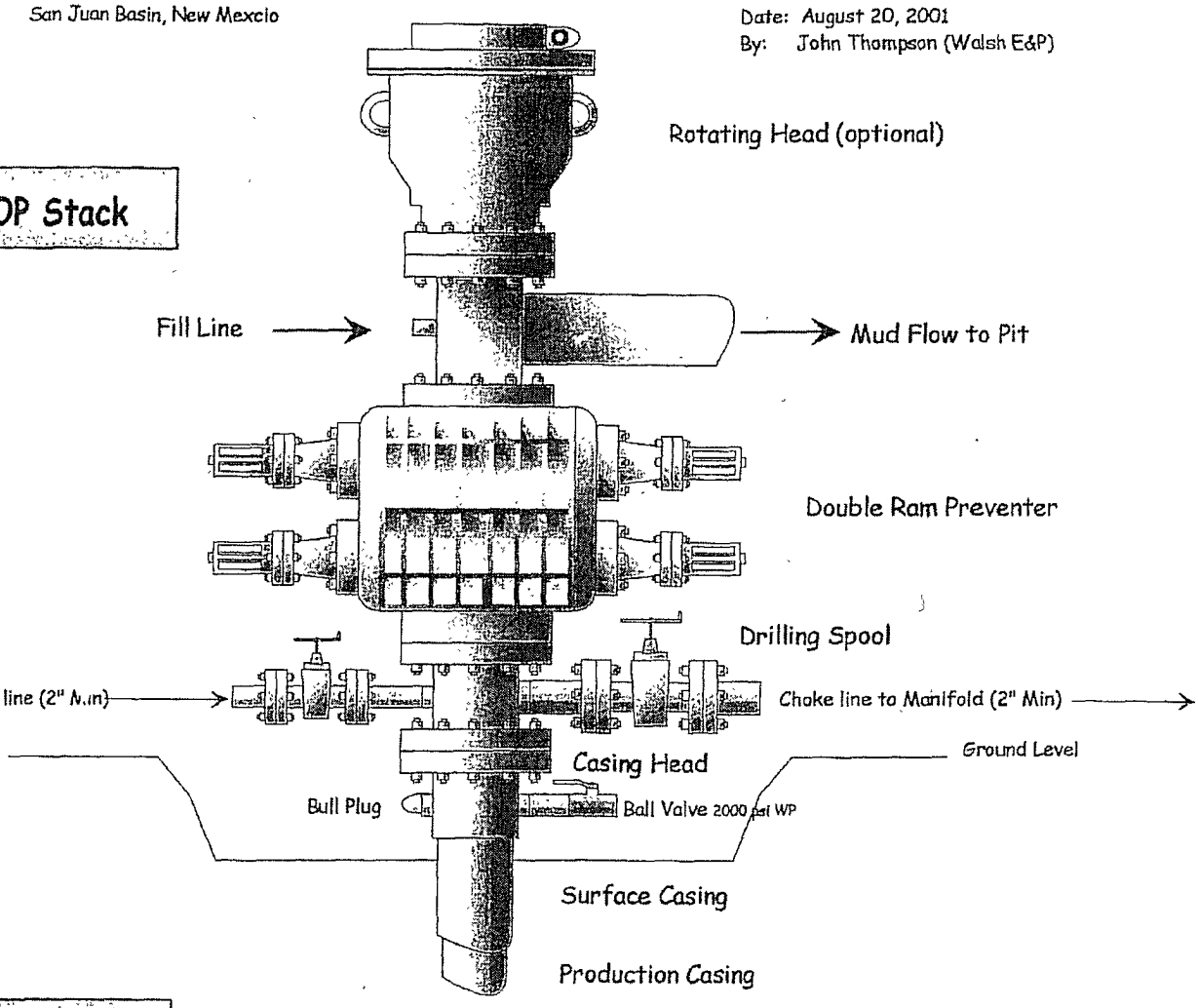
Attachment to Drilling Technical Program

Exhibit #1
Typical BOP setup

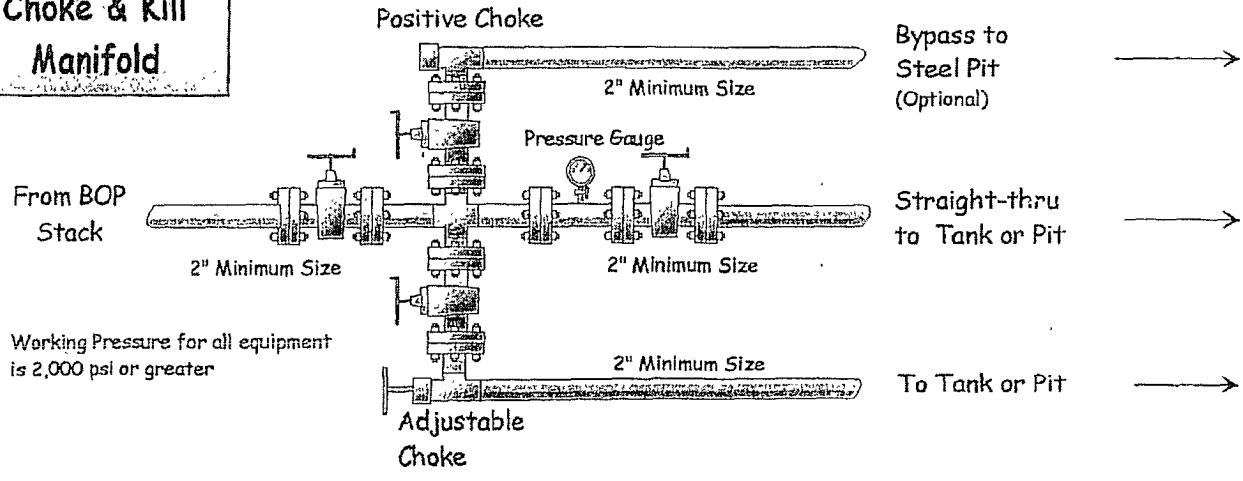
Location: San Juan Basin, New Mexcio

Date: August 20, 2001
By: John Thompson (Walsh E&P)

BOP Stack



Choke & Kill Manifold



Working Pressure for all equipment is 2,000 psi or greater