

District I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S St Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised December 16, 2011

Permit

RCVD AUG 2 '12
OIL CONS. DIV.
DIST. 3

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Koch Exploration Company, LLC PO Box 489, Aztec, NM 87410		OGRID Number 12807
Property Code 39315		API Number 30-045-35392
Property Name Bisti 2		Well No 1M

Surface Location

UL - Lot A	Section 2	Township 24N	Range 13W	Lot Idn 1	Feet from 810	N/S Line North	Feet From 660	E/W Line East	County San Juan
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Pool Information

Basin Dakota

Additional Well Information

Work Type N	Well Type G	Cable/Rotary R	Lease Type S	Ground Level Elevation 6297'
Multiple N	Proposed Depth 5700'	Formation Dakota	Contractor TBD	Spud Date 10-01-12
Depth to Ground water 615'		Distance from nearest fresh water well >1 Mile		Distance to nearest surface water >24 miles

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
SC	12 1/4"	8 5/8"	24.0# K-55 STC	350'	260	Surface
PC	7 7/8"	5 1/2"	15.5# K-55 LTC	5700'	845	Surface

Casing/Cement Program: Additional Comments

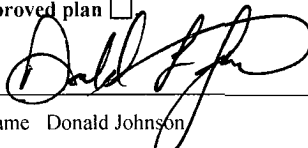
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Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double-gated with pipe rams and blind rams with rotation	3000 psi	250 psi - low pressure 3000 psi - high pressure	

I hereby certify that the information given above is true and complete to the best of my knowledge and belief

I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐

Signature 
Printed name Donald Johnson

Title. Operations Manager

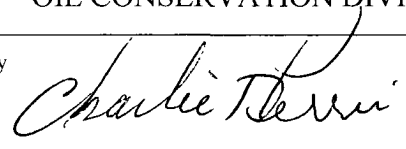
E-mail Address johnso4d@kochind.com

Date: 08/02/2012

Phone 505-334-9111

OIL CONSERVATION DIVISION

Approved By

 8-8-2012

Title

SUPERVISOR DISTRICT # 3

Approved Date

AUG 10 2012

Expiration Date.

AUG 10 2014

Conditions of Approval Attached

Provide SMA Agreement/Notice

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.

AV

AUG 10 2012 ca

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

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State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35392	² Pool Code 71599	³ Pool Name Basin Dakota
⁴ Property Code 39315	⁵ Property Name BISTI 2	⁶ Well Number 1M
⁷ GRID No 12807	⁸ Operator Name KOCH EXPLORATION	⁹ Elevation 6297

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	2	24 N	13 W	LOT 1	810	NORTH	660	EAST	SAN JUAN

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 328 E/2 299.01	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

16	N 89°46'32" W	5281.77'	810'	2293.38'
LOT 4 (29.47)	LOT 3 (29.48)	LOT 2 (29.50)	LOT 1 (29.51)	
		LAT: 36.3482106° N LONG: 108.1876923° W NAD 83		
		LAT: 36°20.89214' N LONG: 108°11.22388' W NAD 27		
SECTION 2				
LEGEND: ○ = SURFACE LOCATION ● = 1911 U.S.G.L.O. BRASS CAP ● = 1911 U.S.G.L.O. BRASS CAP (C.C.)				

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.

Donald L. Johnson 8/1/12
Signature Date
Donald L. Johnson
Printed Name
johnso4d@kochind.com
E-mail Address

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 are true and correct to the best of my knowledge.

03/07/12
Date of Survey
Signature and Seal of Professional Surveyor
JOHN A. VORONCH
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
14831

14831
Certificate Number
3-9-2012

Bisti 2 1M

Surface: 810' FNL & 660' FEL, Sec. 2, T24N, R13W (A)

San Juan Co., New Mexico

Lease # ST NM VO-8293-0000

Drilling Program**1) Formation Tops**

Estimated tops of important geological markers:

	<u>Measured Depth</u>
Ojo Alamo	90'
Fruitland	640'
Pictured Cliffs	920'
Lewis Shale	995'
Cliff House	2495'
Menefee	2510'
Point Lookout	3425'
Mancos	3695'
Gallup	4510'
Greenhorn	5430'
Dakota	5515'
TD	5700'

2) Estimated depths of Notable Zones:

Water	0' to 640'
Oil and Gas	640' to 5700'

3) Pressure Control Equipment:

- a. 10-inch 900 series or 3,000 psi test double gate hydraulic with 4-1/2" pipe rams and cross spool with flanged outlets. See BOP diagram at **Exhibit F-1** for drawing of choke lines, kill lines and choke manifold. Procedures will include waiting on cement 12 hours, nipple up blowout preventer (BOP) assembly and test to 70% of yield of casing or 1000 psi maximum. The production casinghead pressure rating will be 5,000 psi.
- b. Type of BOP rams: Blind rams and pipe rams are used as shown on the BOP diagram at **Exhibit F-1**. Occasionally, the position of the rams is reversed depending on the drilling contractor's methods.
- c. The choke manifold and header will have 2 - 2" choke outlets and a 2" straight through line. A 2" adjustable choke will be installed on each of the choke outlets. The manifold inlet from the drilling spool will be a 2" line. All lines, valves, chokes and fittings will be rated to 3,000 psi. The choke manifold and header system will have manual control valves. No hydraulic valves will be installed. Casing testing procedure – Surface casing will be tested at 1000 psi maximum for 30 minutes, after cementing in place and before drilling out of shoe. Production casing will be tested to 3,800 psi for 30 minutes, after drilling to the required depth, and after cementing in place.
- d. The BOPS are hydraulic controlled.
- e. BOP testing procedures and frequency:

Bisti 2 1M

Surface: 810' FNL & 660" FEL, Sec. 2, T24N, R13W (A)

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BOP tests will be performed using an appropriately sized test plug. The test will be performed and recorded using a test pump, calibrated test gauges, and a properly calibrated strip or chart recorder. The test will be recorded in the driller's log and will include a low pressure test of 250 psi held for five minutes and a high pressure test of 3,000 psi for ten minutes as described in Onshore Order No. 2.

- f. Casing head connections will be 2-inch; these outlets will usually be bull plugged during drilling operations. No pumping through these connections is allowed except in emergency to keep from wearing out the head.
- g. The drilling spool will be a series 900 3,000 psi WP with a 2-inch kill line and a 2-inch outlet.

4) Proposed Casing Program:

Surface Casing Program:	Hole Size			Depth
Surface Casing	12 1/4"	8 5/8"	24.0# K-55	350'
Production Casing	7 7/8"	5 1/2"	15.5# K-55	5700'

Proposed setting depth, amount and type of cement including additives:

8 5/8" Surface Casing – Surface to 350' – Cement with 270 sks Premium Cement (15.80 ppg, yield 1.17 cf/sk) Cement + 2% Calcium Chloride + .125 lbs/sk. Poly-E-Flake, volume: 316 cf., includes 100% excess. Centralizers will be run on all joints starting at the shoe joint.

5 1/2" Production Liner – Surface to 5700' – 1st Stage 3745'-5700' Lead cement with 186 sks. Premium Light + 5 lb/sk Kol-Seal + .125 lb/sk Poly-E-Flake (wt. 12.4 ppg, yield 1.90) volume: 353 cf., includes 40% excess. Tail with 135 sks. Premium Cement + 0.1% Halad(R)-9 + .125 lb/sk Poly-E-Flake (wt 15.8 ppg, yield 1.15) volume: 155 cf. includes no excess. 2nd Stage Surface-3745' Lead cement with 466 sks. Lite Premium + 5 lb/sk Kol-Seal + .125 lb/sk Poly-E-Flake (wt. 12.4 ppg, yield 1.93) volume: 900 cf., includes 50% excess. Tail with 50 sks. Premium Cement (wt 15.8 ppg, yield 1.15) volume: 58 cf. includes 50% excess. Centralizers will be run on the bottom 2 joints, then every 10th joint thereafter or +/- 400'. (Note: DV tool to be set 50' into Mancos.)

5) Mud Program:

0' – 350' – Spud mud and water treated with gel lime.

350' – 5700' – Fresh water gel system, weight 8.5-9.0 ppg 35-45 FV, 8-10 FL, 9.0 pH, viscosity as needed to clean hole.

6) Testing, Logging, and Coring Program:

No drill stem tests or cores will be taken. CBL will be run if cement does not circulate to surface on production casing. The following open hole logs will be run:

LOGGING PROGRAM	INTERVAL	SCALES
Gamma Ray	5,700' – Surface	2" & 5"
Platform Express: CNL/Three Detector Density	5,700' – Surface Csg Shoe	2" & 5"

Bisti 2 1M

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Platform Express: Array Induction Tool	5,700' – Surface Csg Shoe	2" & 5"
Sonic	5,700' – Surface Csg Shoe	2' & 5"
Note: On Platform Express- Change scales when necessary.		
Directional (GPIT)	4,500' – Surface Csg Shoe	

7) Expected Pressures –

Basin Dakota 2500 psi

Bottom Hole 2500 psi

No abnormal pressures, temperature or poisonous gas anticipated.

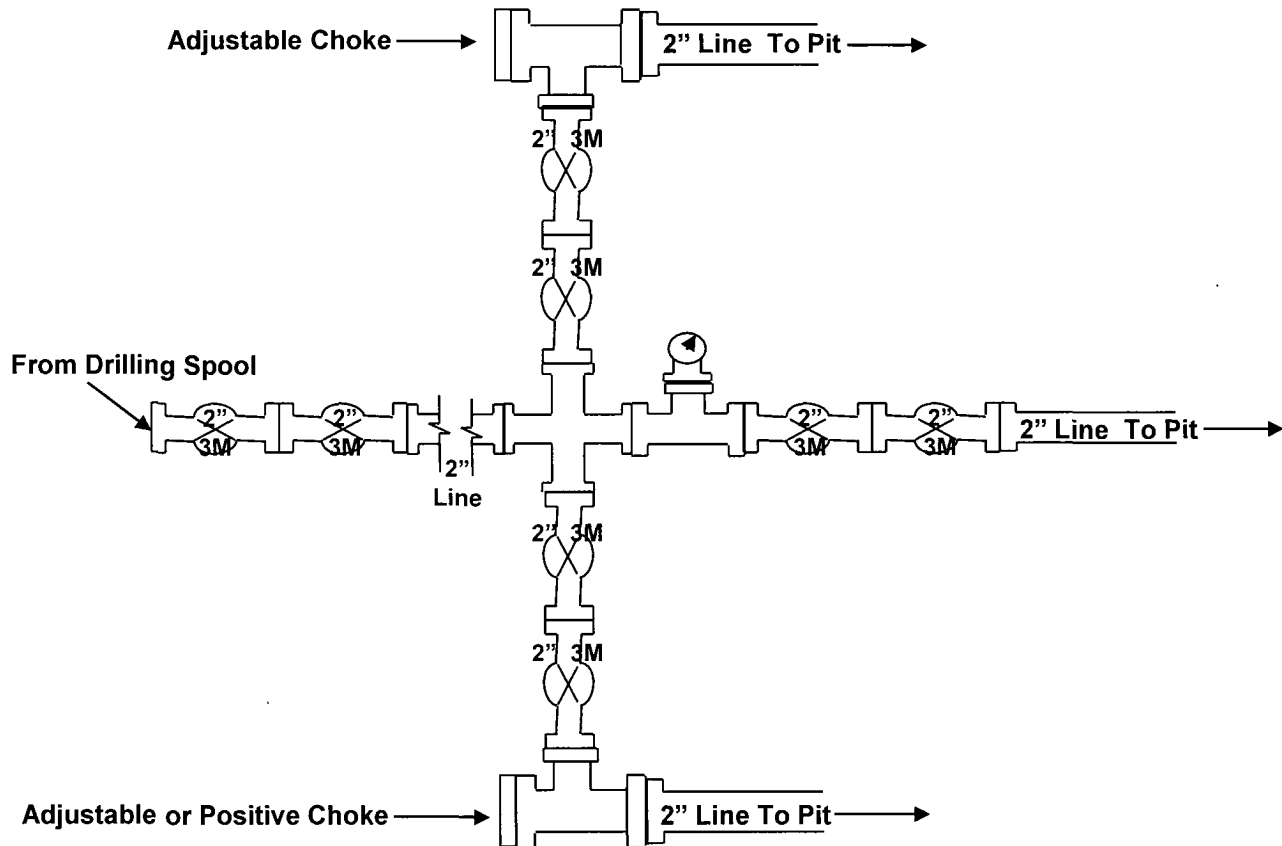
Anticipated Spud Date:

October 1, 2012

Anticipated Completion Date:

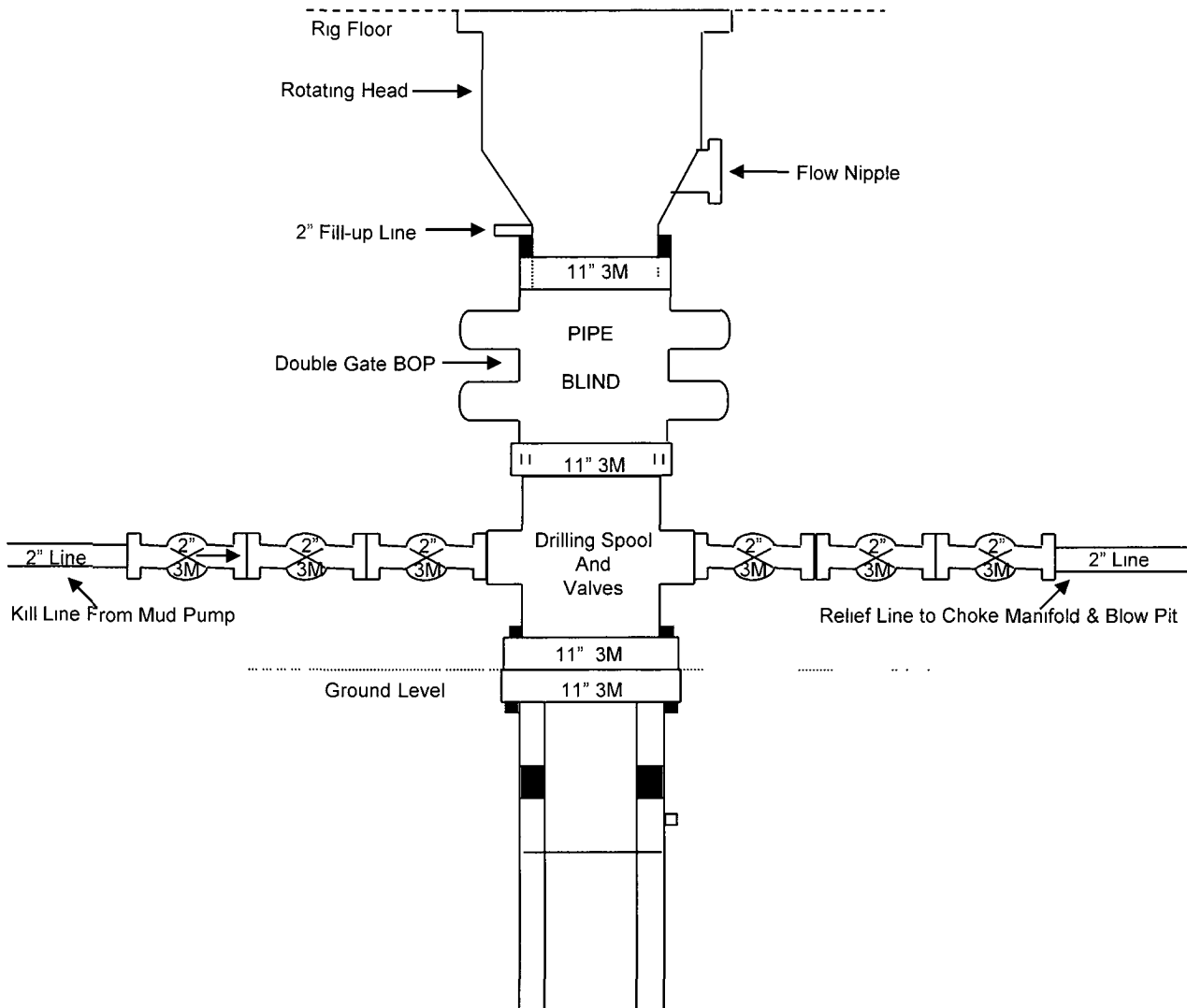
November 1, 2012

Drilling Rig Choke Manifold Configuration 3000 psi System



3000 psi working pressure equipment with two chokes.

DRILLING RIG 3000 psi System



11" Bore (10" Nominal). 3000 psi working pressure minimum double Gate BPO to be equipped with blind and pipe rams. A rotating head On the top of the rams. All BOP equipment is 3000 psi working pressure.

NOTE: A floor safety valve and upper kelly cock with handle will be available.

EXHIBIT F-1