

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 1/30/2019

Well information;

Operator Black Expl., Well Name and Number Cerrito Negro #1

API# 30-043-21327, Section 33 Township 16 N/S, Range 20 E/W

Conditions of Approval: (See the below checked and handwritten conditions)

- Notify Aztec OCD 24hrs prior to casing & cement.
- Hold C-104 for directional survey & "As Drilled" Plat
- Hold C-104 for NSL, NSP, DHC
- Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Brand Bell

NMOCD Approved by Signature

7/30/19

Date

NMOCOD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DISTRICT III

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. 7902171419
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name ZIA PUEBLO
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator BLACK EXPLORATION LLC		8. Lease Name and Well No. CERRITO NEGRO 1
3a. Address 206 W 38th Street Farmington NM 87401	3b. Phone No. (include area code) (505)325-7855	9. API Well No. 30-043-21327
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <input checked="" type="checkbox"/> SESW / 1104 FSL / 1604 FWL / LAT 35.5709 / LONG -106.73757 At proposed prod. zone <input checked="" type="checkbox"/> SESW / 1104 FSL / 1604 FWL / LAT 35.5709 / LONG -106.73757		10. Field and Pool, or Exploratory Wildcat
11. Sec., T. R. M. or Blk. and Survey or Area SEC 33 / T16N / R2E / NMP		
14. Distance in miles and direction from nearest town or post office* 2 miles	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) 1536 feet	16. No of acres in lease 33840.13	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 40498 feet	19. Proposed Depth 3450 feet / 3450 feet	20. BLM BIA Bond No. in file IND: 46-2359774
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5621 feet	22. Approximate date work will start* 04/01/2019	23. Estimated duration 10 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

25. Signature (Electronic Submission)	Name (Printed/Typed) Jim Lovato / Ph: (505)320-7378	Date 01/30/2019
Title Consultant		
Approved by (Signature)	Name (Printed/Typed) Richard A Fields	Date MAY 23 2019
Title Field Manager		
Office FARMINGTON		

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.

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

DRILLING OPERATIONS AUTHORIZED ARE 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

District I
 1825 N. First St. P.O. Box 558871
 Phoenix, AZ 85001-8141 Fax: (602) 354-3222
 District II
 111 N. First St., Suite 400 SM 84211
 Phoenix, AZ 85004-1203 Fax: (602) 248-9220
 District III
 1300 N. 16th St., Suite 100 SM 87411
 Phoenix, AZ 85016-1504 Fax: (602) 394-3170
 District IV
 1225 N. 1st Street, Suite 100 SM 87501
 Phoenix, AZ 85004-1001 Fax: (602) 475-3407

State of New Mexico
 Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-192
 Revised August 1, 2014
 Submit one copy to appropriate
 District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAN

API Number 30-043-21327	Pool Code 98320	Pool Name WC; 16N2E33; Pennsylvania
Property Code 325997	Property Name CERRITO NEGRO	
OGRID No 371259	Operator Name Black Exploration, LLC	
		Well Number #1
		Elevation 5621'

Surface Location

1/4 or lot no.	Section	Township	Range	1/4 or Lot	Feet from the	North/South line	Feet from the	East/West line	County
N	33	T16N	R2E	678	1184'	GRANT	1604'	WEST	SANDOVAL

Bottom Hole Location If Different From Surface

1/4 or lot no.	Section	Township	Range	1/4 or Lot	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 40 ac.	Joint or Infill	Consolidation Code	Order No.
----------------------------------	-----------------	--------------------	-----------

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.

	<p>OPERATOR CERTIFICATION</p> <p>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 undivided mineral interests 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.</p> <p><i>Bruce A. Black</i> Signature _____ Date _____</p> <p>Bruce A. Black, Manager Printed Name</p> <p>koko16@earthlink.net E-mail Address</p> <hr/> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>06/29/15 (REVISED 05/18) Date of Survey</p> <p><i>JOHN BEMAYNE</i> Signature and Seal</p> <p style="text-align: center;"> PROFESSIONAL LAND SURVEYOR NEW MEXICO 9673 </p> <p>Certificate Number N.M. PLS #9673</p>
--	---

Federal Survey

Attachment to Application For Permit To Drill.
Drilling program

Black Exploration LLC

Cerrito Negro No.1

Surface Location: 1536' f Grant Line & 1604' FWL
Section 33, T16N, R2E
Ungraded GL Elev = 5621'

Sandoval County, New Mexico

Drilling program written in compliance with onshore Oil and Gas Order No. 1
(001 Ill.D.3, effective May 2007) and Onshore Order No. 2 Dated November 18, 1988.

1. **Geological Name of Surface Formation / Estimate Formation Top**

- a. The following table identifies the geologic markers and formation tops (depth in feet from surface) based on open hole logs from the nearest offset wells.

FORMATION	ESTIMATED FORMATION TOP
Quaternary Alluvium	Surface
Santa Fe Group	10'
Chinle Formation	700'
Agua Zarca Sandstone	1100'
Glorieta Sandstone	1250'
Yeso Formation	1500'
Mesita Blanca	1750'
Abo Formation	2150'
Madera	2700'
Sandia	3150'
Mississippian	3300'
Precambrian	3350'
Total Well Depth	~ 3450'

2. **Estimated Depth of all Zones Anticipated to Have Fluid Occurrences (Oil, Gas, Water)**

- a. All formations listed in the table above are expected to contain some water. The first potential valid objective formation that could contain oil and/or gas is the Triassic Agua Zarca sandstone. Any of the deeper Paleozoic formations listed in the table above could also contain oil and gas. However, our primary target zone is the Mississippian and the underlying fractured Precambrian which could also contain oil and gas.

3. **Pressure Control Equipment**

- a. Blowout Preventer (BOP) Equipment

DEPTH INTERVAL	BOP EQUIPMENT
0-325'	No pressure control required
325' – 3450'	11" 2000 psi double ram BOP

- i. Drilling spool to accommodate choke and kill lines with choke manifold rated at 2000 psi.
- b. Ancillary Equipment
 - i. Upper Kelly cock and lower Kelley cock will be installed while drilling.
 - ii. Inside BOP or stab in valve will be available in open position on rig floor at all times.
 - iii. Safety valves and subs to fit all string connections in use.
- c. Choke Manifold
 - i. Refer to Exhibit 1, Figure Drill-1 for detailed schematics, ~~for each hole section.~~
- d. BOP Testing
 - i. An 11" 2M BOP stack will be installed on casing head after setting 9-5/8" surface casing.
 - ii. The BLM and State of NM will be notified 24 hours in advance of all BOP pressure tests.
 - iii. Pressure tests will be conducted on the BOP stack using a test plug and independent test company after nipple up.
 - iv. Subsequent BOP tests will be conducted ~~a minimum of every 30 days. A new test will be conducted~~ each time the stack is altered.
 - v. All BOP and manifold tests will be conducted in accordance with the requirements of Onshore Order No. 2 and Farmington Field Office Policy.
- e. BOP Test Pressures

11" 2M BOP			
Pressure Test	Ram Test	Hydrill Test	Manifold Test
High Pressure	2000 psi	NA	2000 psi
Low Pressure	250 psi	NA	250 psi

4. Proposed Bit and Casing Program

- a. Bit Program
 - 12 1/4" Surface Hole = ~~Surface~~ to 325'
 - 8-3/4" Production Hole to 3450' = 3450' = Production Liner casing point

Casing Program – all casing strings are new casing

Casing & Hole Size	Weight	Grade	Coupling	Setting Depth (MD)	Comments
9-5/8" (12 <u>1/4" 1/4"</u>)	36 ppf	J or K-55	ST&C	0' - 325'	New casing. Cement to surface.
5-1/2" (<u>8 3/4"</u>)	15.5 ppf	J-55	LT&C	0' - 3450' MD	New Casing. Cement to surface.

Casing strings will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum casing design factors used:

Collapse -	1.125
Burst -	1.0
Jt. Strength -	<u>1.81-60</u>

Surface casing shall have a minimum of 1 centralizer per joint on the bottom three (3) joints, starting with the shoe joint for a total of (4) minimum centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars then every other joint to surface.

The production casing will be centralized using 1 centralizer on the first 10-jts and then every 4th joint to the surface.

5. PROPOSED CEMENTING PROGRAM

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation, which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

a. The proposed cementing program is as follows:

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

Surface Casing Single Stage Job – (0-325')
Excess – 125% over gauge hole – 12-1/4" hole and 9-5/8" casing
Top of Cement - Surface

Main Slurry: 200 sx Premium, - 15.8 ppg, yield 1.16 cf/sx

Production Casing – Single Stage Job (0' - 3450' MD):
Excess – 50% over gauge hole – 8-3/4 hole and 5-1/2" casing
Top of Cement – Surface

Lead Cement

HALCEM (TM) SYSTEM	Fluid Weight	12.3 lbm/gal
0.35 % HR-5 (Retarder Additive)	Slurry Yield:	1.99 ft ³ /sk
5 lbs/sx Kol Seal (Loss Circulation Additive)	Total Mixing Fluid:	6.75 Gal/sk
1 lb/sx Pheno Seal Medium (Low Fluid Loss Control)	Volume:	816 ft ³ - 145 bbls
0.125 lbs/sx Poly-E-Flake (Fluid Loss Control)	Calculated Sacks:	410 sks

Tail Cement

FRACCEM (TM) SYSTEM	Fluid Weight	12.50 lbm/gal
0.125 lbs/sx Poly-E-Flake (fluid loss Control)	Slurry Yield:	1.29 ft ³ /sk
0.7 % HALAD-R9 (Low Fluid Loss Control)	Total Mixing Fluid:	5.64 Gal/sk
0.15% CFR SA-1015 (Suspension Agent)	Volume:	493 ft ³ - 68 bbls
5 lbs/sx Kol Seal	Calculated Sacks:	382 sx

Total sacks of cement pumped = 992 sx

Cement volumes are minimums and may be adjusted based on caliper log results.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and State of New Mexico Oil & Gas Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

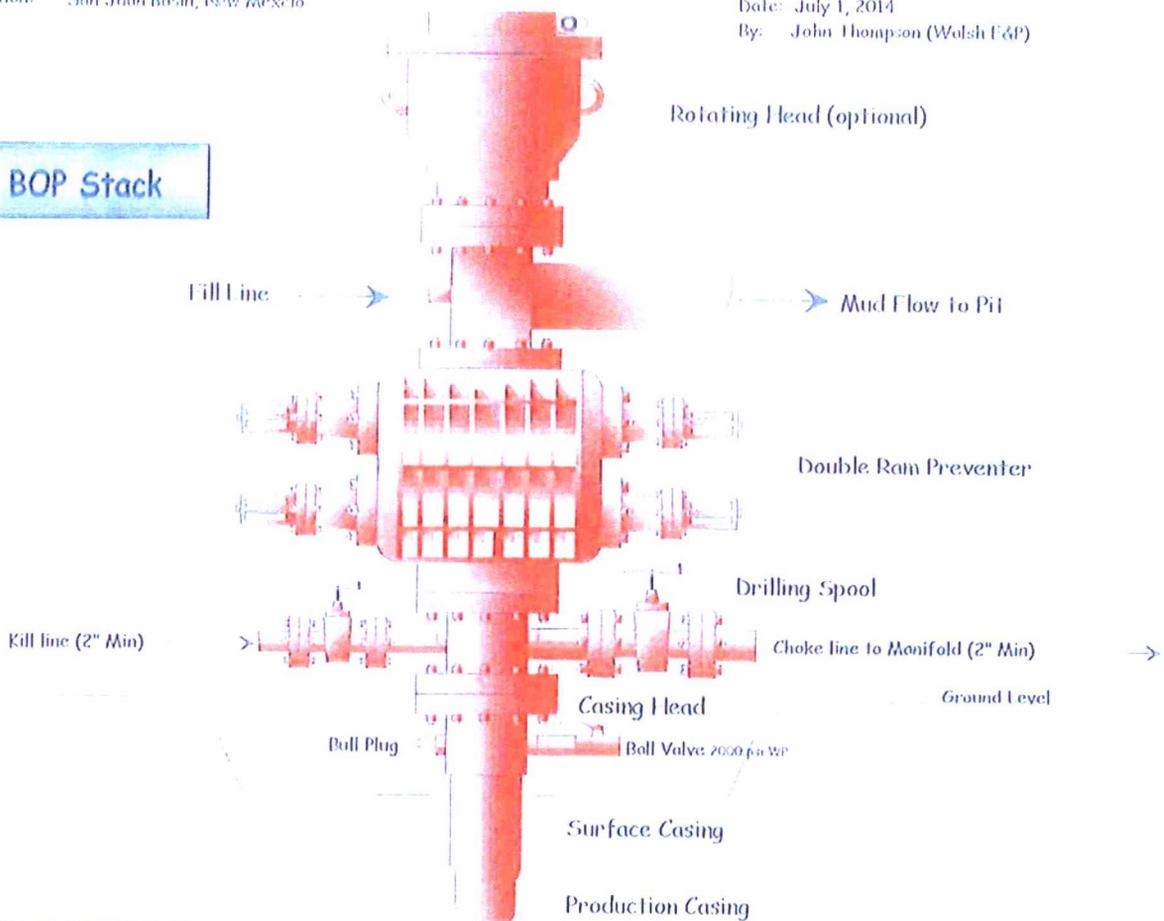
Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

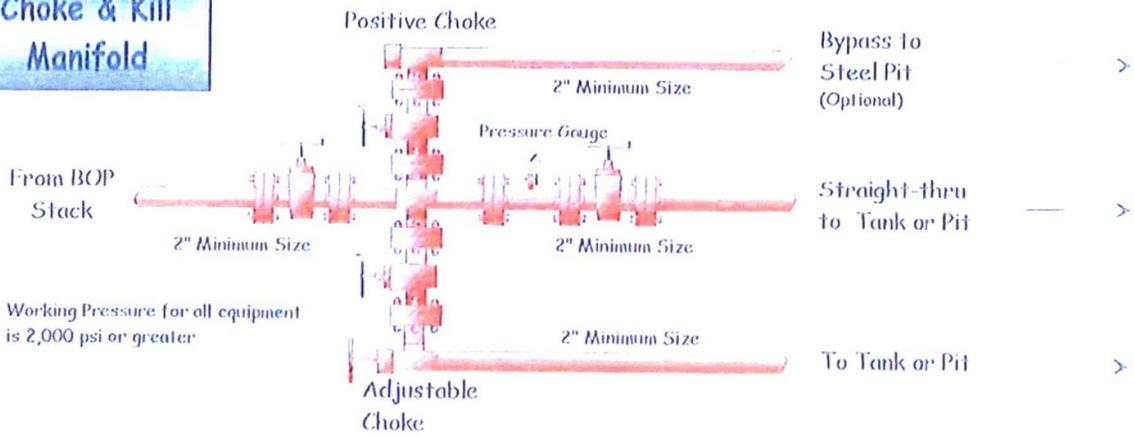
Date: July 1, 2014

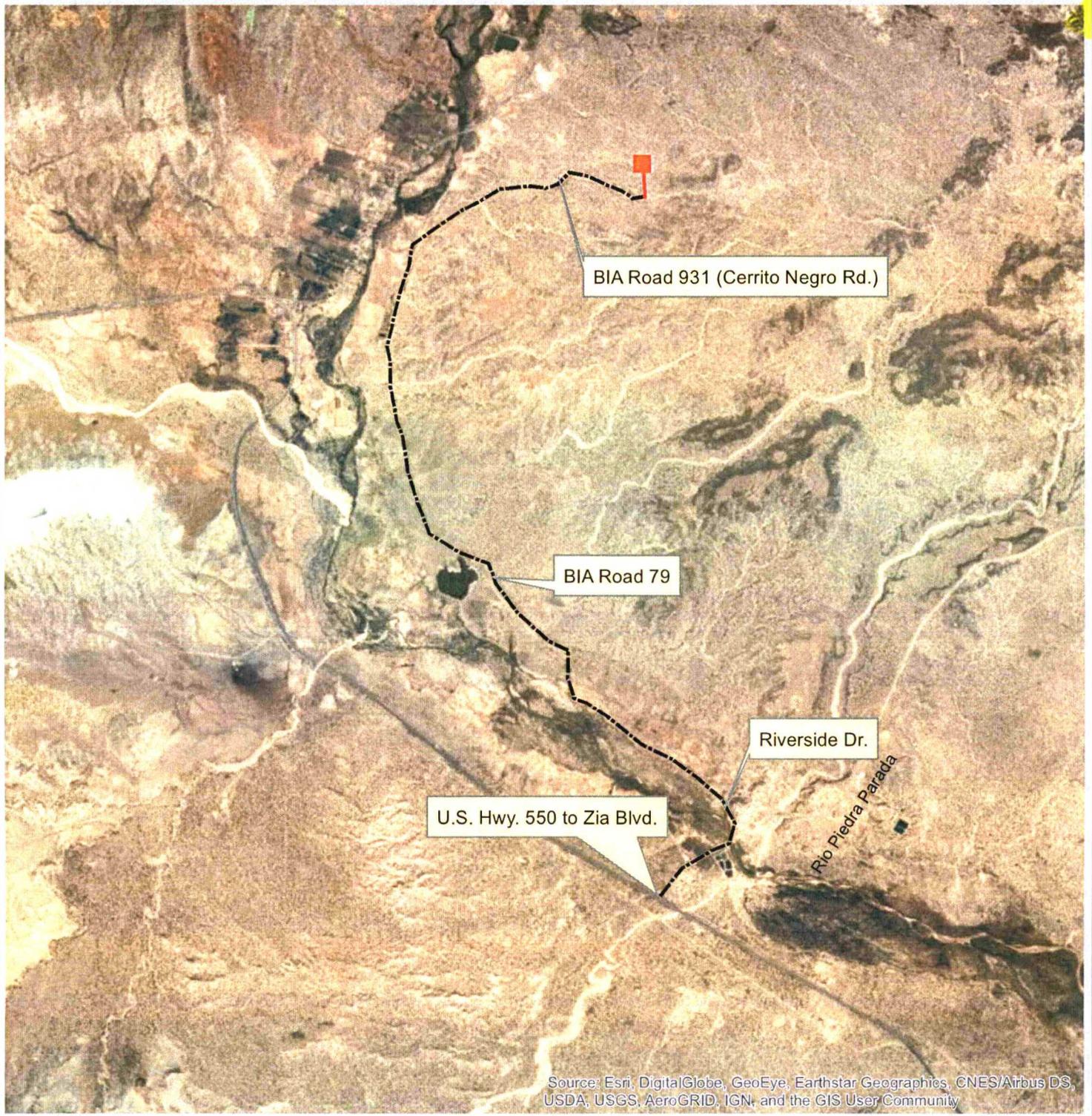
By: John Thompson (Walsh E&P)

BOP Stack



Choke & Kill Manifold





**Existing Roads to be used to
The Cerrito Negro Well #1 Map
Date: 1/28/2019**

-  Existing Roads to Cerrito Negro Well #1
-  Cerrito Negro Well #1
-  New Access Road

Cerrito Negro Well Point:
35.57090°N -106.73757°W
NAD 83

T16N, R02E, Section 33, NMPM
Sandoval County, NM
Base Map: San Ysidro, NM,
7.5' USGS Quadrangle
NAD 1983 UTM Zone 13N

Topographic Map Scale
1:60,000



The Cerrito Negro #001 well located in Sec 33, T 16N RNG 2E is a wildcat well that is to be drilled for exploration purpose. The anticipated gas drilled will be unusable gas and shale be flared. The closest gas producing well is in SEC 8 22N 2W Jicarilla Tribal 358 #009 which is roughly 61 miles. demonstrating that the economics of installing infrastructure would be uneconomic. This data was compiled through NMOCD GIS Mapping and Google Earth.

Cerrito Negro #001 to Jicarilla 358 #009 61 miles

