

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary

Brett F. Woods, Ph.D.  
Deputy Cabinet Secretary

David R. Catanach 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: 4-1-16

Well information;

Operator Dugan, Well Name and Number Split Lip #1

API# 30-045-35765, Section 32, Township 24 N/S, Range 11 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
- ☒ 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.

Charles + Len  
NMOCD Approved by Signature

4-10-2016  
Date XC



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

OIL CONS. DIV DIST. 3

APR 05 2016

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

<sup>1</sup> Operator Name and Address Dugan Production Corp. 709 East Murray Drive Farmington, New Mexico 87401		<sup>2</sup> OGRID Number 006515
		<sup>3</sup> API Number 30-045- 35765
<sup>4</sup> Property Code 316094	<sup>5</sup> Property Name Split Lip	<sup>6</sup> Well No. #1

<sup>7</sup> Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
P	32	24N	11W		914	South	847	East	San Juan

<sup>8</sup> Pool Information

Basin Fruitland Coal - 71629
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Additional Well Information

<sup>9</sup> Work Type N	<sup>10</sup> Well Type G	<sup>11</sup> Cable/Rotary R	<sup>12</sup> Lease Type S	<sup>13</sup> Ground Level Elevation 6200'
<sup>14</sup> Multiple N	<sup>15</sup> Proposed Depth 750'	<sup>16</sup> Formation Fruitland Coal	<sup>17</sup> Contractor TBD	<sup>18</sup> Spud Date ASAP
Depth to Ground water > 100-ft.		Distance from nearest fresh water well > 1-Mile		Distance to nearest surface water 950-ft.

<sup>19</sup> 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# J-55 STC	120-ft.	98.25-cf	Surface
PC	7-7/8"	5-1/2"	14# J-55 STC	750-ft.	237-cf	Surface

Casing/Cement Program: Additional Comments

A water based gel-mud will be used to drill surface and production casing hole. Standard 2,200 psi BOP will be used to drill production casing hole. Standard 2,000 psi BOP will be used to drill production hole. Interval (approx. 545-590') will be stimulated.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	2,000 psi	Low Press. 250 psig Hi Press. 2,000 psig	Schafer 9" 2000 Series

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 <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input checked="" type="checkbox"/> . Well will be drilled using closed loop system.		OIL CONSERVATION DIVISION	
Signature: <i>Kurt Fagrelis</i>		Approved By: <i>Chad Serri</i> 4-10-2016	
Printed name: Kurt Fagrelis		Title: SUPERVISOR DISTRICT #3	
Title: Vice President Land and Exploration		Approved Date: APR 10 2016 Expiration Date:	
E-mail Address: kfagrelis@duganproduction.com			
Date: April 1, 2016	Phone: 505-325-1821	Conditions of Approval Attached	

AV



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State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to  
Appropriate District Office

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35765		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 316094	*Property Name SPLIT LIP		*Well Number 1
*GRID No. 006515	*Operator Name DUGAN PRODUCTION CORPORATION		*Elevation 6200'

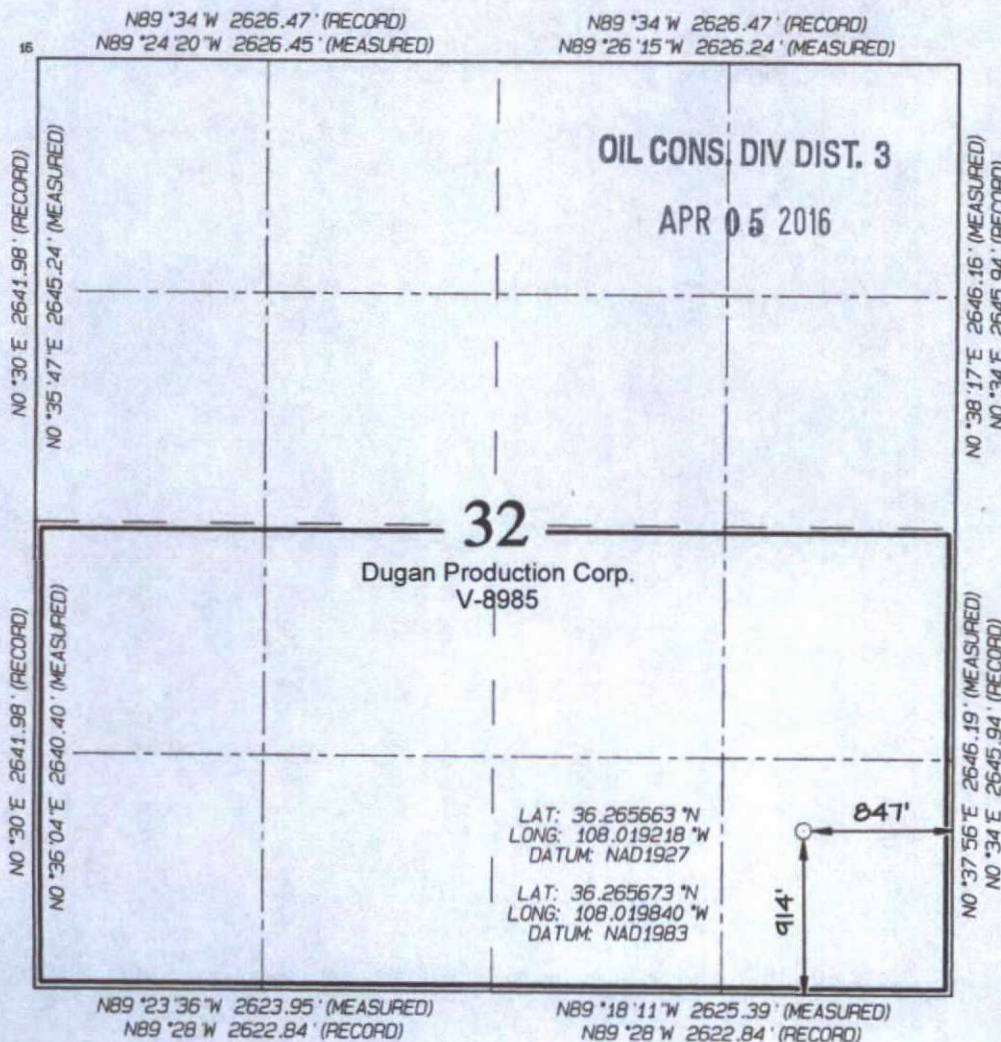
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	32	24N	11W		914	SOUTH	847	EAST	SAN JUAN

<sup>11</sup> 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
* Dedicated Acres 320.0 Acres - (S/2)					* 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



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.

*Kurt Fagrelus* April 1, 2016  
Signature Date

Kurt Fagrelus  
Printed Name  
kfagrelus@duganproduction.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 is true and correct to the best of my belief.

Date Revised: MARCH 31, 2016  
Date of Survey: MARCH 30, 2016

Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269



Operations Plan  
Split Lip #1  
NM State Lease #V-8985  
SESE of Section 32, T24N, R11W  
916' FNL and 1076' FWL  
San Juan County, NM

1) Estimated Formation Tops:	<u>Measured Depth</u>	<u>Sub-Sea</u>
Kirtland Shale	Surface	6200
Fruitland Fmt.	305'	5895'
Fruitland Coal	545'	5655'
Pictured Cliffs Ss.	590'	5610'
Total Depth	750'	5450'

2) Estimated Depth of Water and Gas Zones:

Water	100 - 305'
Gas	305' - 750'

3) Blow-Out Preventer Equipment (BOPE): Exhibit 1.

Annular preventer, double ram, or 2 rams with one being blind and one being a pipe ram.

Kill line (2" minimum)

1-kill line valve (2" minimum)

1-choke line valve

2-adjustable chokes

Upper kelly cock valve with handle available.

Safety valve and subs to fit all drill string connections in use.

Pressure gauge on choke manifold.

2" minimum choke line.

Fill-up line.

Working pressure for all BOPE will be 2,000 psi or greater. Will test BOPE (blind rams, pipe rams, choke manifold and surface casing) separately. Each test will include a low pressure test to 250-psig held for five minutes and a high pressure test to 800-psig held for thirty minutes (with no more than a 10-percent pressure drop during the duration of the tests). If a 10-percent or greater pressure drop occurs; a packer will be run to isolate the surface casing and BOPE to locate the source of the leak.

4) Proposed Casing Program:	<u>Hole Size</u>	<u>Csg. Size</u>	<u>Csg. Wght.</u>	<u>Setting Dpth.</u>
Surface Casing	12-1/4"	8-5/8"	24# J-55 STC	120'
Production Casing	7-7/8"	5-1/2"	15.5# J-55 STC	750'

Plan to drill a 12-1/4" hole and set 120' of 8-5/8" OD, 24#, J-55 surface casing. Then plan to drill a 7-7/8" hole to total depth with gel-water mud program to test the Fruitland Coal. 5-1/2", 15.5#, J-55 production casing will be run and cemented. Cased hole GR-CCL-CNL log will be run. Productive zone will be perforated and fractured. After frac, the well will be cleaned out and production equipment will be installed.

5) Proposed Cementing Program:

Surface: Cement to surface with 75-sks (98.25-cu.ft) Type III cement w/2 % bwoc  $\text{CaCl}_2$  + 0.25-lbs/sk Celloflake + 53.6% fresh water (15.00-lbs/gal, 1.31-cu.ft/sk). Circulate cement to surface.

Production: Cement w/172 sks (237 Cu.ft) Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sk Cello flake + 0.2% bwoc FL-52A + %59 Freshwater (14.6 lbs/gal, 1.38 cu.ft/sk). Total slurry for the job – 2.3 Cu.ft. Circulate cement to surface.

An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement. An adequate number of casing centralizers will be run through useable water zones to ensure that casing is centralized through these zones. The adequate number of centralizers will be determined based on API standards. Centralizers to impart a swirling action around the casing will be used just below and into the base of the lowest usable water zone. These devices will assist mud displacement, increase cement bonding potential And create an effective hydraulic seal. A chronological log will be kept which records the pump rate, pressure, slurry density, and slurry volume for the cement job. The log will be sent to the BLM after completion of the job.

6) Mud Program:

0 – 120' Spud with fresh water and gel.

120 – TD Water based gel-mud with polymer.

7) Testing, Logging and Coring:

No drill stem tests or cores will be taken. CBL log will be run if cement does not circulate to surface on production string. Cased hole gamma ray neutron log will be run.

8) Expected Pressures:

Fruitland Formation 300 psi

Bottom Hole 300 psi

No abnormal pressure, temperature or poisonous gas is anticipated.

9) Contacts: Dugan Prod.Corp. Office & Radio Dispatch; (505) 325-1821

<u>Gerald Wright</u>	<u>Kurt Fagrelus</u>	<u>John Alexander</u>
(505)632-5150 (H)	(505)325-4327 (H)	(505)325-6927 (H)
(505)330-9585 (M)	(505)320-8248 (M)	(505)320-1935 (M)



**Directions from the Intersection of US Hwy 64 & US Hwy 550**

**in Bloomfield, NM to Dugan Production Corporation Split Lip #1**

**914' FSL & 847' FEL, Section 32, T24N, R11W, N.M.P.M., San Juan County, NM**

**Latitude: 36.265673°N Longitude: 108.019840°W Datum: NAD1983**

From the intersection of US Hwy 64 & US Hwy 550 in Bloomfield, NM, travel Southerly on US Hwy 550 for 24.0 miles to County Road #7500 @ Mile Marker #127.4;

Go Right (South-westerly) on County Road #7500 for 7.2 miles to fork in roadway;

Go Left (Westerly) which is straight remaining on County Road #7500 for 1.0 mile to fork in roadway;

Go Left (Southerly) which is straight remaining on County Road #7500 for 7.4 miles to fork in roadway;

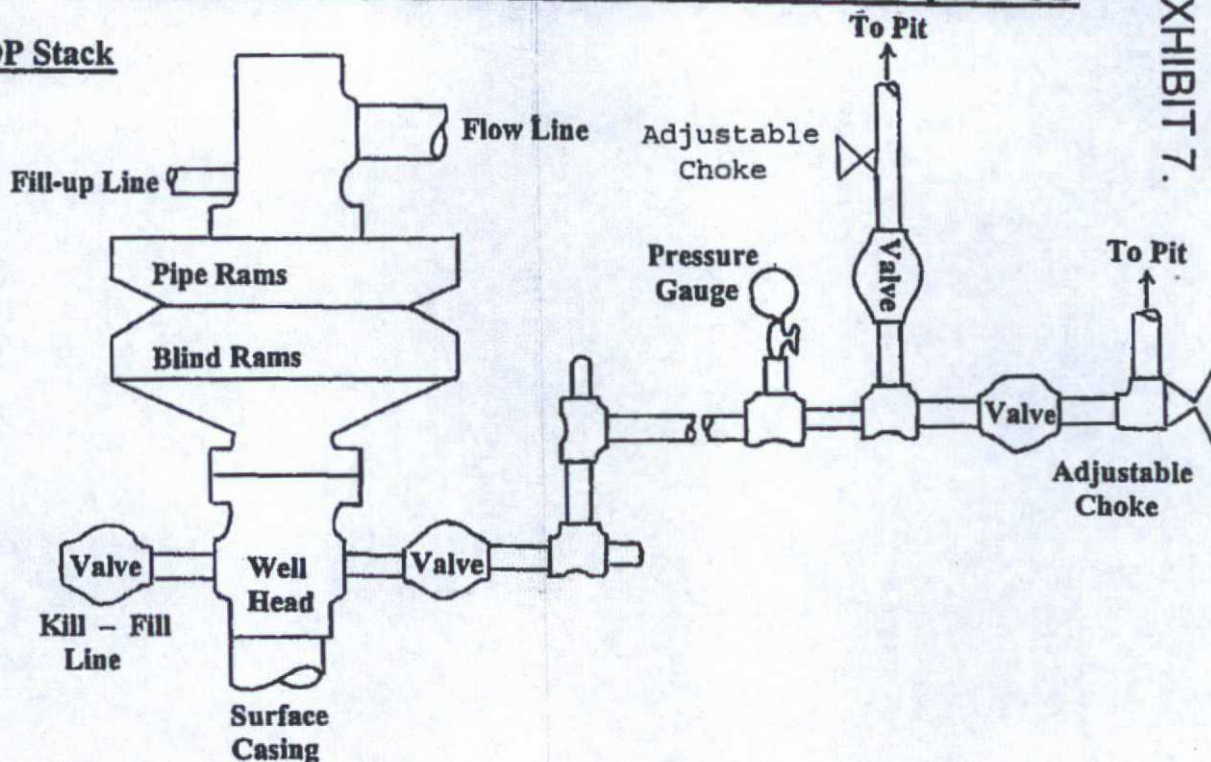
Go Left (South-westerly) exiting County Road #7500 for 1.7 miles to staked Dugan Split Lip #1 location which overlaps existing roadway.



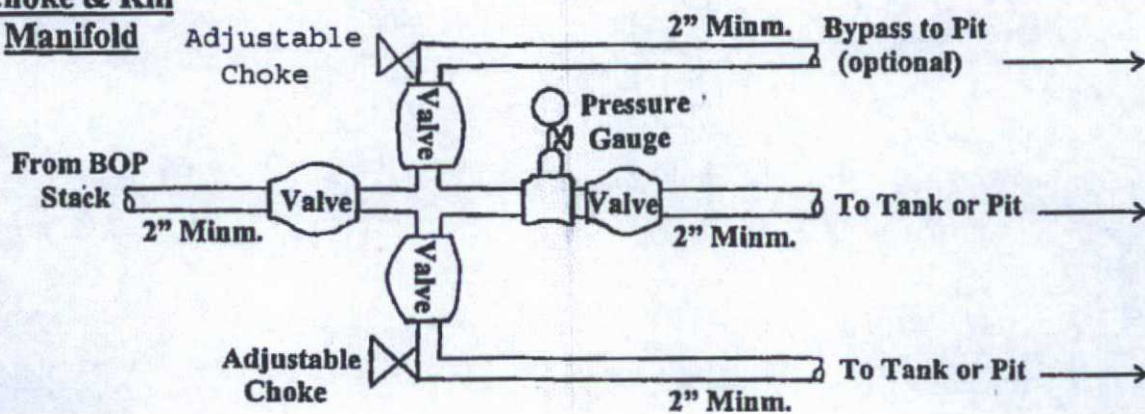
## Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT 7.

### BOP Stack



### Choke & Kill Manifold



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

OIL CONS. DIV DIST. 3

APR 06 2016

**DUGAN PRODUCTION CORP.**  
Split Lip #1