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

JUN 23 2016

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

[1] Operator Name and Address	[2] OGRID Number
Dugan Production Corp. 709 East Murray Drive Farmington, New Mexico 87401	006515
	[3] API Number 30-045- 35780

[4] Property Code	[5] Property Name	[6] Well No.
15564	Marley	#90

[7] Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
N	36	23N	9W		951	South	1437	West	San Juan

[8] Pool Information

Basin Fruitland Coal - 71629	

Additional Well Information

[9] Work Type	[10] Well Type	[11] Cable/Rotary	[12] Lease Type	[13] Ground Level Elevation
N	G	R	S	6627'
[14] Multiple	**[15] Proposed Depth**	**[16] Formation**	**[17] Contractor**	**[18] Spud Date**
N	950'	Fruitland Coal	TBD	ASAP

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
>110'	6,000'	4,300'

[19] 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'	98.25-cf	Surface
PC	7-7/8"	5-1/2"	15.5#, J-55 STC	950'	293-cf	Surface

Casing/Cement Program: Additional Comments

A water based gel-mud will be used to drill surface and production casing hole. Standard 2,000 psi BOP will be used to drill production casing hole. Fruitland Coal interval will be (approximately 790 - 805) stimulated.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	2,000 psi	Low Press. 250 psig High Press. 2,000 psig	Schrafer 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 ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☒. Well will be drilled using closed loop system.

Signature: Kurt Fagrelius

Printed name: Kurt Fagrelius

Title: Vice President Land and Exploration

E-mail Address: kfagrelius@duganproduction.com

Date: 6/20/2016 Phone: 505-325-1821

OIL CONSERVATION DIVISION

Approved By: Charlie Perrin 7-11-2016

Title: SUPERVISOR DISTRICT #3

Approved: JUL 11 2016 Expiration Date: JUL 11 2018

Conditions of Approval Attached: SEE ATTACHED NMOCD CONDITIONS OF APPROVAL

9

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State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 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	[2] Pool Code	[3] Pool Name
30-045-35780	71629	BASIN FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
15564	MARLEY	90

[7] OGRID No.	[8] Operator Name	[9] Elevation
006515	DUGAN PRODUCTION CORPORATION	6627'

[10] Surface Location

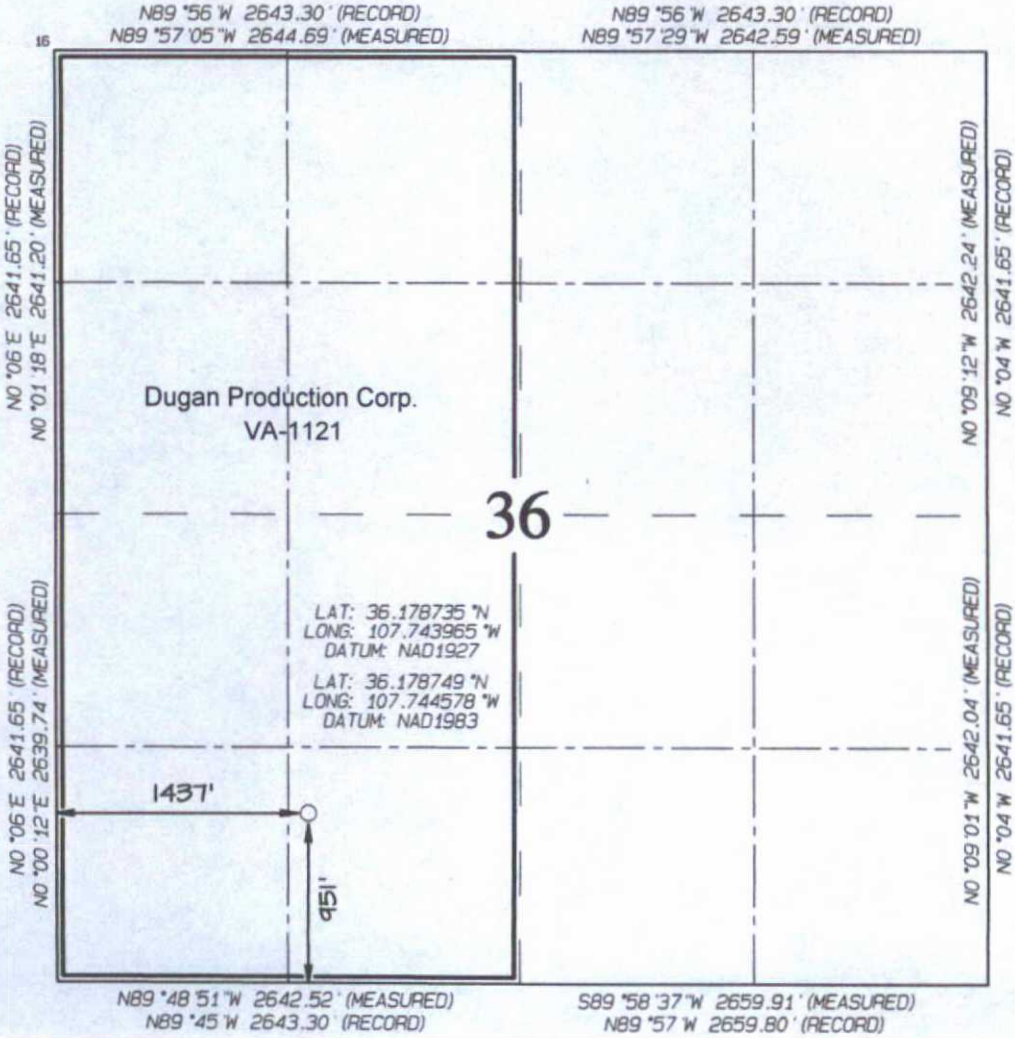
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	36	23N	9W		951	SOUTH	1437	WEST	SAN JUAN

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.00 Acres - W/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.

Kurt Fagrelius 6/20/2016
Signature Date

Kurt Fagrelius
Printed Name

kfagrelius@duganprouction.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: JUNE 9, 2016
Date of Survey: MARCH 12, 2016

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

Operations Plan
Marley #90
NM State Lease #VA-1121
SESW of Section 36, T23N, R9W
951' FSL and 1437' FWL
San Juan County, NM

1) Estimated Formation Tops:	Measured Depth	Sub-Sea
Nacimiento	Surface	N.A.
Ojo Alamo	110'	6517'
Kirtland Shale	265'	6362'
Fruitland Fmt.	475'	6152'
Fruitland Coal	790'	5837'
Pictured Cliffs Ss.	806'	5821'
Total Depth	950'	5677'

2) Estimated Depth of Water and Gas Zones:

Water	0 - 790'
Gas	790' – 950'

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:	Hole Size	Csg. Size	Csg. Wght.	Setting Dpth.
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	950'

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 Casing: Cement to surface with 75 sks (98.25 Cu.ft) Type III cement w/ 2 %

bwoc $CaCl_2$ + 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/ 78 sks Premium Lite FM + 8% bwoc Bentonite + 3% bwoc Calcium Chloride + 0.25 lbs/sk Cello Flake + 5 lbs/sack LCM-1 + 0.4% bwoc Sodium Metasilicate + 0.4 % bwoc FL-52A + 112.3% Fresh Water (12.1 lbs/gal, 2.13 cu.ft/ft – 166 cu.ft slurry). Tail w/ 92 sks 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/ft – 127 cu.ft). Total slurry for the job – 293 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

Gerald Wright	Kurt Fagrelius	John Alexander
(505)632-5150 (H)	(505)325-4327 (H)	(505)325-6927 (H)
(505)330-9585 (M)	(505)320-8248 (M)	(505)320-1935 (M)

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW###### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 01710		SJ	1	3		25	23N	09W	252985	4009203*	550	173	377

Average Depth to Water: **173 feet**

Minimum Depth: **173 feet**

Maximum Depth: **173 feet**

Record Count: 1

PLSS Search:

Section(s): 25, 26, 35, 36 **Township:** 23N **Range:** 09W

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 01706		SJ	3	4		12	22N	09W	253627	4003944*	762	362	400

Average Depth to Water: **362 feet**

Minimum Depth: **362 feet**

Maximum Depth: **362 feet**

Record Count: 1

PLSS Search:

Section(s): 1, 2, 11, 12 **Township:** 22N **Range:** 09W

***UTM location was derived from PLSS - see Help**

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

in Bloomfield, NM to Dugan Production Corporation Marley #90

951' FSL & 1437' FWL, Section 36, T23N, R9W, N.M.P.M., San Juan County, NM

Latitude: 36.178749°N Longitude: 107.744578°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 38.7 miles to Mile Marker 112.7;

Go Right (Southerly) on County Road #7900 for 2.3 miles to fork in road;

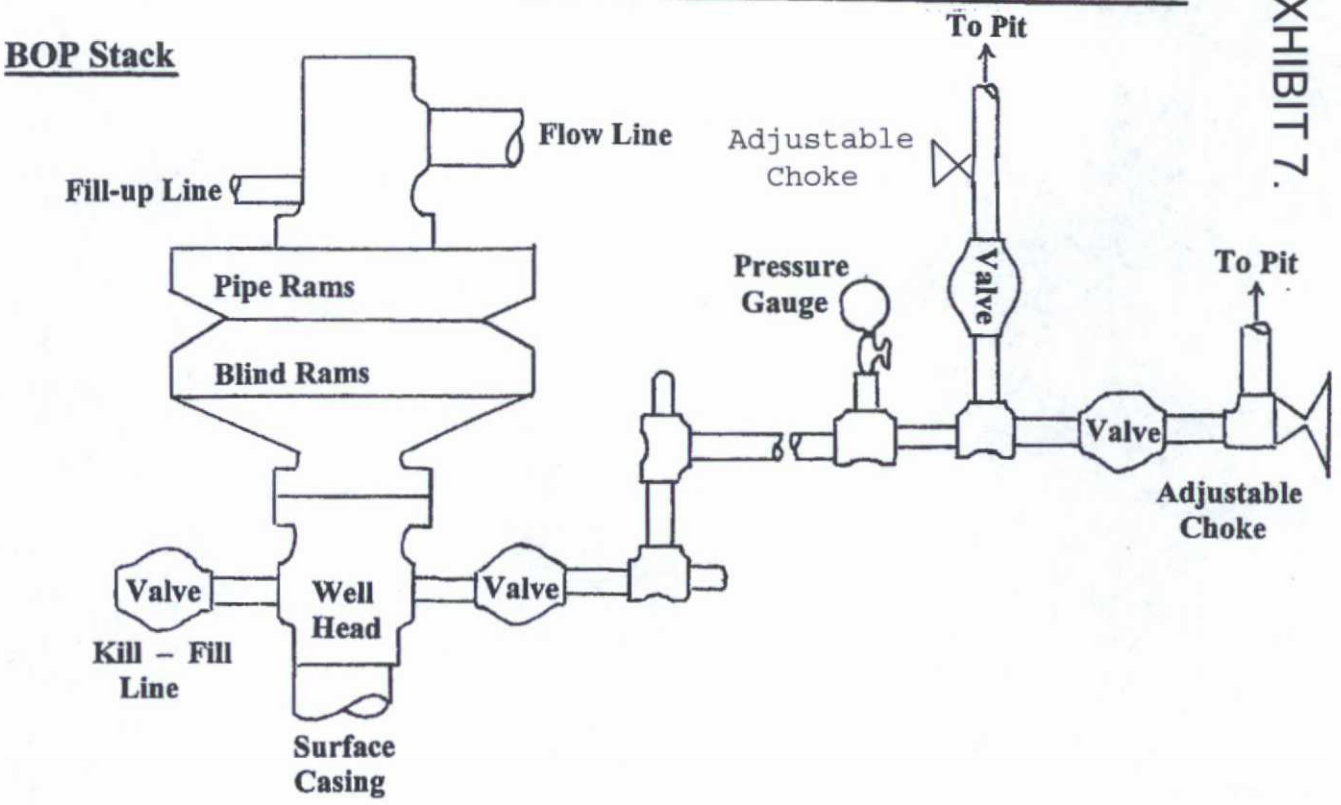
Go Right (Westerly) on County Road #7940 for 0.7 miles to fork in roadway;

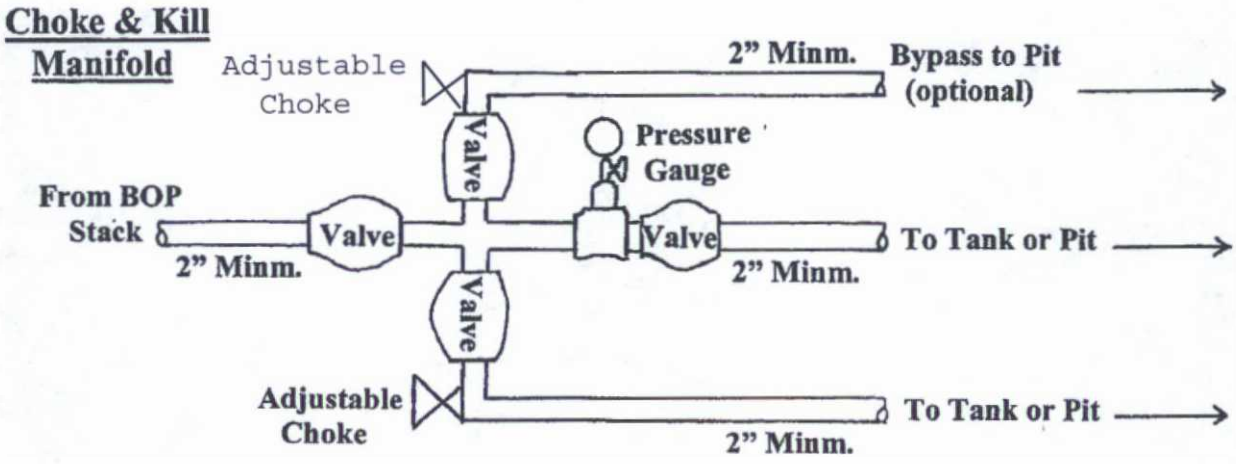
Go Left (South-westerly) which is straight remaining on County Road #7940 for 2.3 miles to fork in roadway @ Transmission Line;

Go Straight (South-westerly) proceeding underneath Transmission Line on un-improved roadway for 7648.4' to staked Dugan Marley #90 location.

EXHIBIT 7.

Well Control Equipment Schematic for 2,000 psi BOP





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

DUGAN PRODUCTION CORP.
Marley #90

State of New Mexico
Energy, Minerals and Natural Resources Department

New Mexico Oil Conservation Division Conditions of Approval (C-101 Application for permit to drill)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- o Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o 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.