

RECEIVED

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Farmington Field Office  
APPLICATION FOR PERMIT TO DRILL OR REENTER

APR 29 2011

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-78060
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other SWD <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Dugan Production Corp.		7. If Unit or CA Agreement, Name and No.
3a. Address 709 East Murray Drive Farmington, NM 87401		8. Lease Name and Well No. St. Moritz SWD #2
3b. Phone No. (include area code) 505-325-1821		9. API Well No. 30-045-35281
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 2200' FSL & 1780' FEL Lat. 36.28369 N At proposed prod. zone Same as above Long. 107.86301 W		10. Field and Pool, or Exploratory Entrada SWD
11. Sec., T. R. M. or Blk. and Survey or Area Sec. 26, T24N, R10W NMPM		12. County or Parish San Juan
13. State NM		
14. Distance in miles and direction from nearest town or post office* Approx. 40-miles SE of Farmington, New Mexico	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1780-Feet	16. No. of acres in lease 760-acres
17. Spacing Unit dedicated to this well N.A.	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 7260-ft.
20. BLM/BIA Bond No. On File	21. Elevations (Show whether DF, KDB, RT, GL, etc.) G.L. 6748-Feet	22. Approximate date work will start* ASAP
23. Estimated duration 5-Days	24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Kurt Fagrelus</i>	Name (Printed/Typed) Kurt Fagrelus	Date 4-27-2011
Title Geologist		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 9/6/11
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 page 2)

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 hole. The Entrada Sandstone will be completed from approximately 6960' - 7125'. The interval will be stimulated with acid.

\* Requires SWD order and approval from SF\*

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

SEP 20 2011

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

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

NOTIFY AZTEC OCD 24 HRS. PRIOR TO CASING & CEMENT

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35281</b>		*Pool Code <b>96436</b>	*Pool Name <b>ENTRADA SWD</b>
*Property Code <b>38820</b>	*Property Name <b>ST. MORITZ SWD</b>		*Well Number <b>2</b>
*OGRID No <b>006515</b>	*Operator Name <b>DUGAN PRODUCTION CORPORATION</b>		*Elevation <b>6748'</b>


<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
J	26	24N	10W		2200	SOUTH	1780	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
<sup>12</sup> Dedicated Acres					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

16		5254.26'				<sup>17</sup> 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.	
Dugan NO-G-0502-1720		Dugan NM-78060				Signature <u>Kurt Fagrelis</u> Date <u>4-26-2011</u>	
						Printed Name <u>Kurt Fagrelis</u>	
5299.14'		26				<sup>18</sup> 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 of Survey <u>APRIL 18, 2011</u>	
						Signature and Seal of Professional Surveyor	
		LAT: 36.28369 "N LONG: 107.86301 "W DATUM: NAD1983		1780'			
		2200'		2645.61'		JASON C. EDWARDS	
2625.48'				2625.48'		Certificate Number 15269	

**EXHIBIT B**  
**OPERATIONS PLAN**  
St. Moritz SWD #2

**APPROXIMATE FORMATION TOPS:**

Ojo Alamo	480'	Gallup	4530'
Kirtland	565'	Skelly	4740'
Fruitland	970'	Greenhorn	5625'
Pictured Cliffs	1275'	Graneros	5690'
Lewis	1425'	Dakota	5725'
Cliff House	2025'	Morrison	6005'
Menefee	2585'	Bluff	6530'
Point Lookout	3710'	Todilto	6905'
Mancos	3885'	Entrada	6960'
		Chinle	7125'
		<b>Total Depth</b>	<b>7260'</b>

Catch samples every 30-foot from surface to 4500-feet; every 10-foot from 4500-4900 feet; every 30-foot from 4900-6800 feet; and every 10-foot from 6800-feet to total depth.

**LOGGING PROGRAM:**

Run cased hole GR-CCL-CNL from total depth to surface.

**CASING PROGRAM:**

Hole Size	Casing Size	Wt./ft.	Setting Depth	Grade and Condition
12-1/4"	8-5/8"	24#	360'	J-55
7-7/8"	5-1/2"	15.5#	6500'	J-55
7-7/8"	5-1/2"	17.0#	7260'	J-55

Plan to drill a 12-1/4" hole and set 360' of 8-5/8" OD, 24#, J-55 surface casing. Then plan to drill a 7-7/8" hole to total depth (7,260-ft) with gel-water mud program. K-55 production casing will be run and cemented in two stages with DV tool set at 4085' (200' below base of Point Lookout). Cased hole GR-CCL-CNL log will be run. Injection zone will be perforated and acidized. After completion, the well will be cleaned out and injection equipment will be installed.

**CEMENTING PROGRAM:**

Surface:

Cement to surface with 325-cf (275-sks) of Type 5 cement with 2% CaCl<sub>2</sub> with 1/4# cello-flake/sk.  
Circulate to surface.

1<sup>st</sup> Stage:

10-bbls mud flush followed by 10-bbls water followed by 400-cf (210-sks) Premium Light w/5#/sk of Gilsonite & 0.5% fluid loss additive; followed by 400-cf (307-sks) 50/50 Poz Standard w/2% gel & 5#/sk of Gilsonite & 0.5% fluid loss additive.  
Circulate to surface.

2<sup>nd</sup> Stage:

10-bbls chemical wash followed by 600-cf (312-sks) 65/35 Class G Poz w/6% Gel & 5#/sk of Gilsonite; followed by 400-cf (308-sks) 50/50 Standard Poz w/2% gel, 5#/sk of Gilsonite and 0.5% fluid-loss additive. Circulate to surface.

Total cement for both stages is 1800-cf.

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.

**Maximum Anticipated Bottom Hole Pressure** - 3,000-psi.

**Drilling Fluid** - will be fresh water with bentonite 8.9#/gal.

**WELLHEAD EQUIPMENT:**

Huber 8-5/8"x5-1/2" casing head, 3000# WP, tested to 6000#.

Huber 5-1/2"x2-7/8" tubing head, 3000# WP, tested to 6000#.

**Blow-Out Preventer Equipment (BOPE): Exhibit D.**

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.

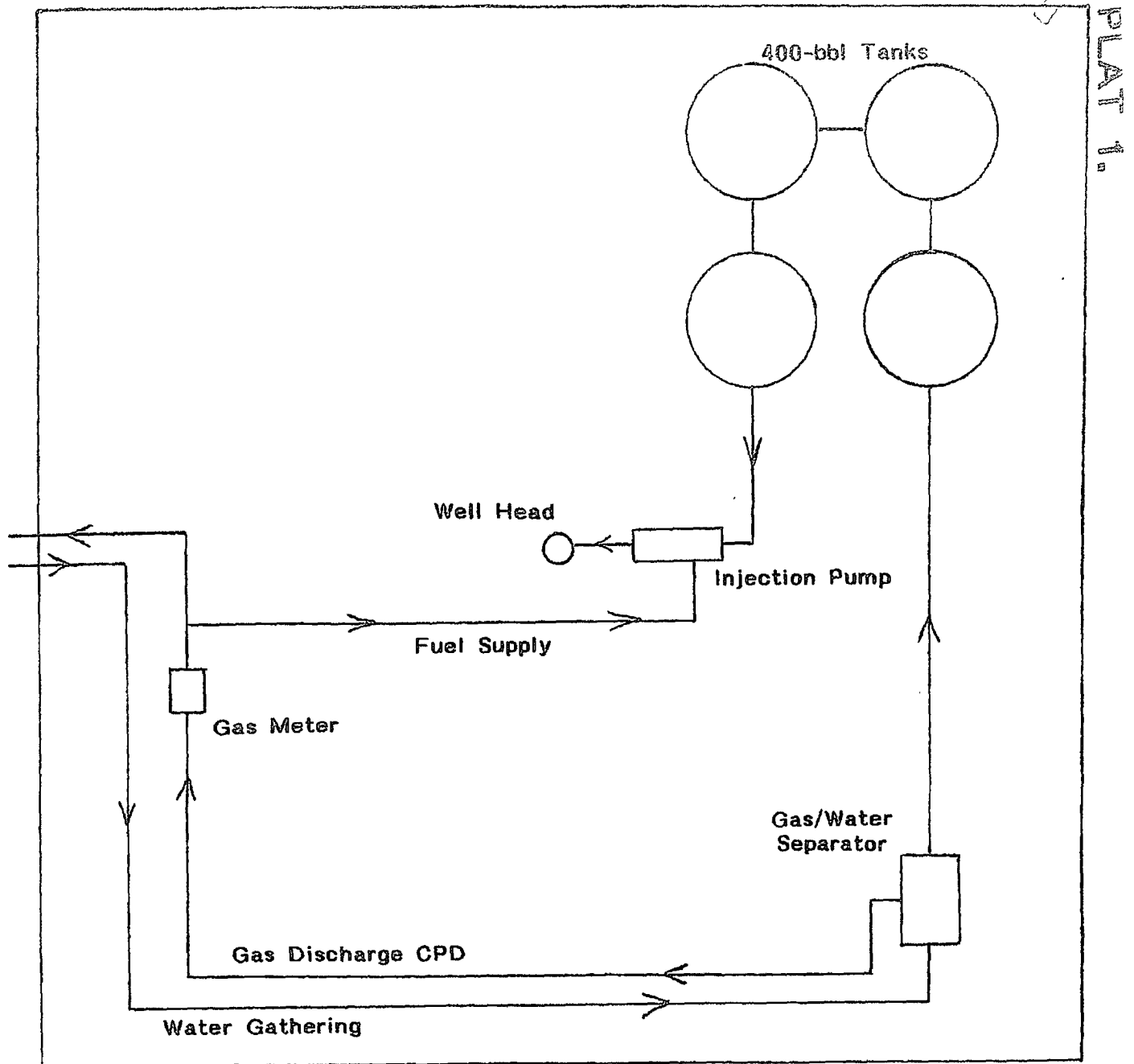
Working pressure for all BOPE will be 3,000 psi or greater.

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.

**Contacts:** Dugan Prod. Corp. Office & Radio Dispatch: 325-1821

<u>Mark Brown</u>	<u>Kurt Fagrelus</u>	<u>John Alexander</u>
327-3632 (H)	325-4327 (H)	325-6927 (H)
320-8247 (M)	320-8248 (M)	320-1935 (M)

Jerald Wright  
632-5150 (H)  
330-9585 (M)



## Anticipated Disposal Facilities

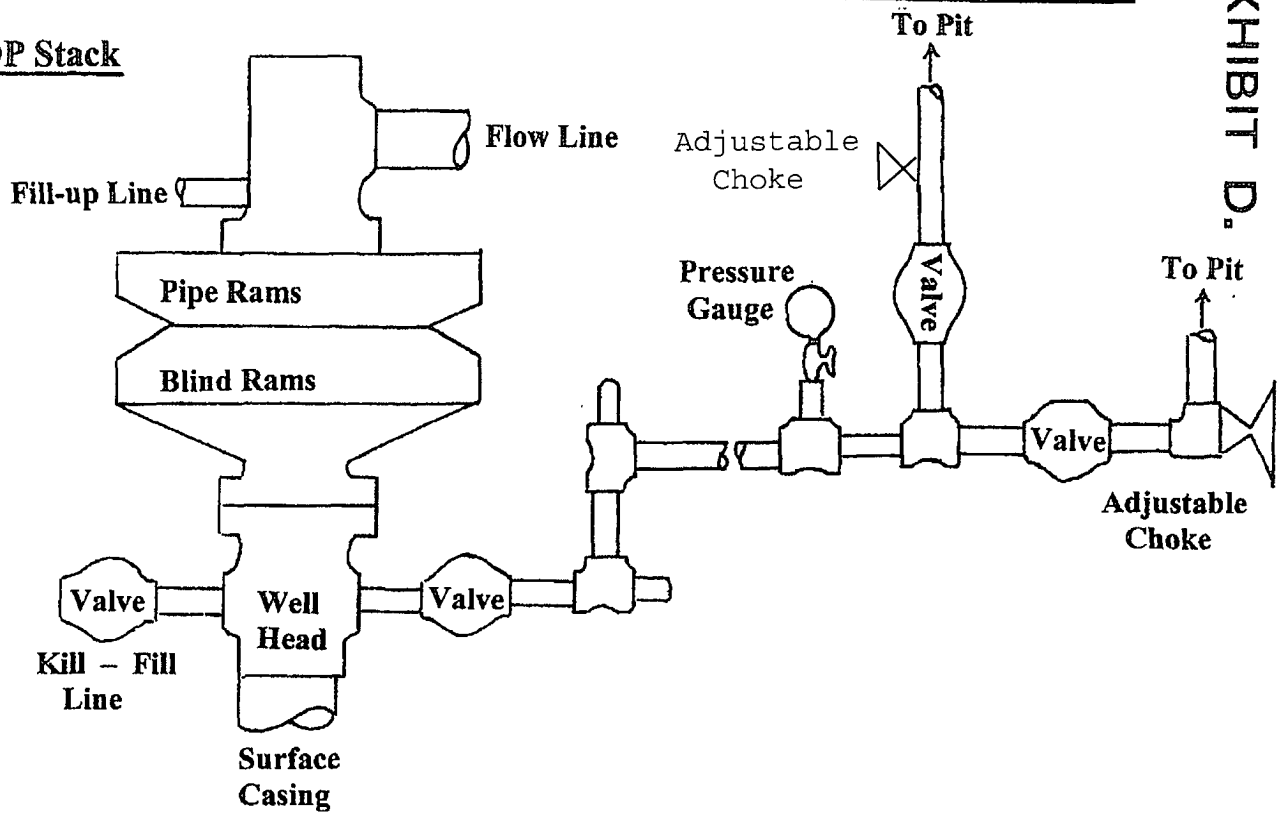
Entrada Saltwater Disposal Well

DUGAN PRODUCTION CORP.  
St. Moritz SWD #2

# Well Control Equipment Schematic for 3,000 psi BOP

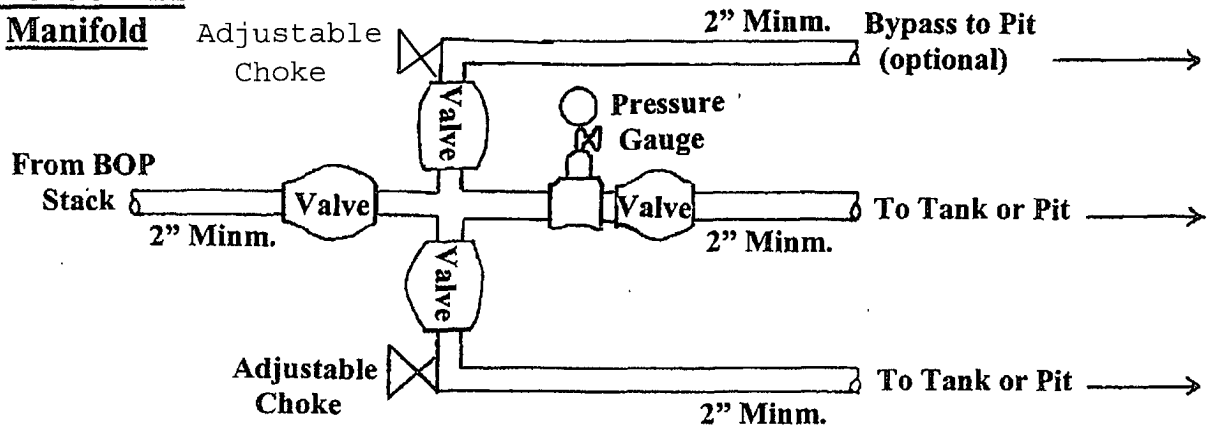
EXHIBIT D.

## BOP Stack



## Choke & Kill

### Manifold



Working Pressure for all equipment is 3,000 psi or greater

DUGAN PRODUCTION CORP.  
St. Moritz SWD #2