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 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

RECEIVED

Revised December 16, 2011

Form C-101

Permit

**NMOCD ARTESIA** 

JUL 17 2012

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE Operator Name and Address OGRID Number

Trek Operating, LLC 10159 E. 11<sup>th</sup> St., Ste. 401 Tulsa, OK 74128-3028

255281

30-015-

API Number

Pearl

Property Name

7 Surface Location

UL - Lot Lot Idn N/S Line F/W Line Section Township Feet from Feet From Range County 0 34 23-S 28-E 800 S 2,475 E Eddy

<sup>8</sup> Pool Information

Det. SWD; Bell Canyon-Cherry Canyon (refer to OCD Administrative Order SWD-1339, June 16, 2012)

**Additional Well Information** 

Well Type Work Type Cable/Rotary 12 Lease Type 13 Ground Level Elevation 3,031'
18 Spud Date N S Rotary P 16 Formation 17 Contractor 14 Multiple 15 Proposed Depth 8/15/2012 4,900' Cherry Canyon Delaware Unknown N Depth to Ground water Distance from nearest fresh water well Distance to nearest surface water

25'-50' 4,100' 7,500'

**Proposed Casing and Cement Program** 

Туре	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Conductor	24"	20"	53	0 – 40'	200	Surface
Surface	17.5"	13.375"	48	0 - 420'	500	Surface
Production	11"	8.625"	24 and 32	0 – 3,350'	1,000	Surface
Open Hole	7.875"			3,350 – 4,900'		

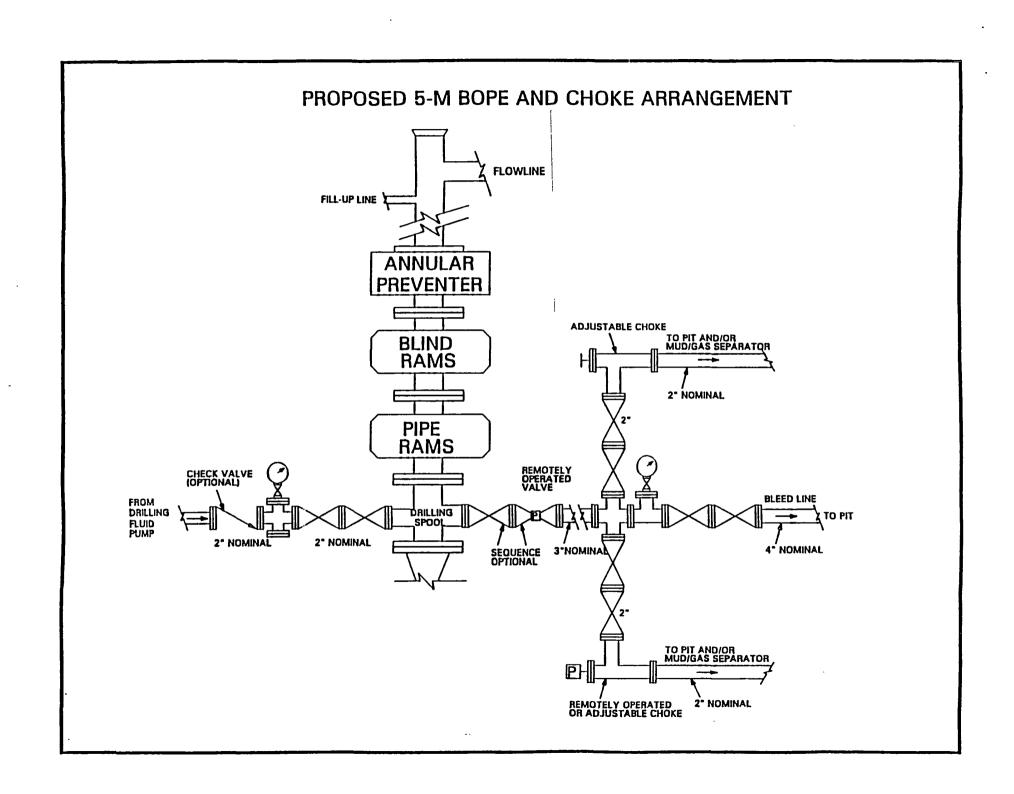
Casing/Cement Program: Additional Comments

Refer to attachments

**Proposed Blowout Prevention Program** 

Туре	Working Pressure	Test Pressure	Manufacturer
Refer to attachments			

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	OIL CONSERVATION DIVISION	
NMOCD guidelines, a general permit, or an (attached) alternative	Approved By:	
OCD-approved plan □.	Approved By.	
Signature: Brad D. Bul	1 C. Masserd	
Printed name: Brad D. Burks	Title: Goologist	
Title: General Manager	Approved Date: 7/18/2012 Expiration Date: 18/2014	
E-mail Address: office@bkxcorp.com		
Date: 7.16.2012 Phone: 918-582-3855 (x101)	Conditions of Approval Attached	



# NMOCD FORM C-101 APD ATTACHMENT

Trek Operating, LLC's Pearl Well #1 UL "O" Section 34 T-23-S R-28-E Eddy County, New Mexico July 16, 2012

# **Submitted Documents**

- NMOCD Form C-101 and Attachment
- NMOCD Form C-102
- NMOCD Approval of Operator's Blanket Letter of Credit
- NMOCD Administrative Order SWD-1339
- Proposed Blow-out Preventer Diagram
- Area Topographic Map
- NMOCD Form C-144-CLEZ with Exhibits A and B

# Well Objective

Drill and complete well as a vertical salt water disposal well, injecting into the Bell Canyon and Cherry Canyon sandstones via an open hole interval at 3,350' to 4,900'.

# **Road Directions**

From Carlsbad, New Mexico, go south on US 285 to village of Loving - go 1 block south of the convenience store, then turn left onto Ash Road - go east on Ash Road  $\frac{1}{2}$  mile, then turn right onto Onsurez Road - go south on Onsurez Road 1-1/2 miles, then turn left at blue cattle guard onto lease road  $\frac{1}{2}$  mile, then turn right onto lease road  $\frac{1}{2}$  mile on lease road, then turn right onto lease road  $\frac{1}{2}$  mile into location.

#### Formations to be Drilled

Alluvium, gypsum	Surface to 40'	Drilled with air, cased with conductor casing
Red beds, gypsum, gravel, salt	40' to 420'	Drilled with fresh mud, cased with surface casing
Gypsum, dolomite, salt, lime, sand	420' to 3,350'	Drilled with brine, cased with production casing
Sand	3,350' to 4,900'	Drilled with fresh water, open hole

#### **Cement Program**

Conductor Casing: 20" pipe set in air-drilled 24" hole, cemented with 200 sacks of redi-mix concrete

Surface Casing: 13-3/8" pipe set in fresh mud 17-1/2" hole, cemented with estimated 500 sacks of

premium cement with 2% CaCl2 and cello-flakes, circulated to surface; wait on cement

time when cement reaches compressive strength of 500 psi (minimum 8 hours,

maximum 18 hours) before testing and continuation of drilling operations

Production Casing: 8-5/8" pipe set in brine mud 11" hole, cemented with total estimated 1,000 sacks of

cement, in 2 stages as follows: (A) 800 sxs. 35/65 Poz/"C" with additives (yield 2.20, density 12.40); and (B) 200 sxs. Premium cement with additives (yield 1.35, density 14.8), cement circulated to surface; wait on cement time of 18 hours before testing and

continuation of drilling operations

NMOCD Form C-101 Attachment Pearl Well #1 Page 2 of 2 7-16-2012

# **Drilling Hazards**

No known drilling hazards have been observed in this Section 34. Ten other wells have penetrated the target formations in said section, and none have encountered abnormal formation pressures or hydrogen sulfide gas. It is therefore believed that a formal hydrogen sulfide contingency plan is not necessary for the proposed well operations. Nevertheless, drilling and completion personnel are equipped with H2S monitors as a precaution.

# Injection Tubing, Packer and Wellhead

Tubing: 3-1/2" (9.3 ppf, J-55, EUE, 8rd) API tubing internally coated with resin for corrosion

resistance, set from surface to approximately 3,300' (50' above 8-5/8" casing shoe)

Packer: Tension type packer, with profile nipple and on-off tool, all internally plated with nickel for

corrosion resistance

Wellhead: Flanged wellhead assembly, with either nickel plated, or stainless, steel valves and

connections for corrosion resistance

Tubing and packer to be set with inert liquid outside of tubing and tested per NMOCD MIT requirements.

# Logging

Open hole interval and 8-5/8" casing will be logged with gamma ray and cement bond tools

Within 2 years of commencement of injection operations, an injection profile log will be run in open hole section per NMOCD Administrative Order.

# State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D. Deputy Cabinet Secretary Jami Bailey
Division Director
Oil Conservation Division



Administrative Order SWD-1339
June 16, 2012

# ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of 19.15.26.8B NMAC, TREK OPERATING, LLC seeks an administrative order to utilize its proposed Pearl Well No. 1 (API 30-015-NA) to be located 800 feet from the South line and 2475 feet from the East line, Unit letter O of Section 34, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

# THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

# IT IS THEREFORE ORDERED THAT:

The applicant, TREK OPERATING, LLC, is hereby authorized to utilize its proposed Pearl Well No. 1 (API 30-015-NA) to be located 800 feet from the South line and 2475 feet from the East line, Unit letter O of Section 34, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the lower Bell Canyon and Cherry Canyon members of the Delaware Mountain Group through an open hole interval from approximately 3350 to 4900 feet through internally coated tubing and a packer set less than 100 feet above the permitted disposal interval.

The operator shall run a tracer/temperature injection survey (or equivalent) on this 1550 foot open-hole interval within 2 years of commencing disposal operations and supply a copy to the Division.

#### IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and 1220 South St. Francis Drive • Santa Fe, New Mexico 87505

Phone (505) 476-3440 • Fax (505) 476-3462 • email: www.emnrd.state.nm.us/ocd

equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 670 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

JAMI BAILEY

Director

JB/wvjj

cc: Oil Conservation Division – Artesia

