



New Mexico Energy, Minerals and Natural Resources Department

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Daniel Sanchez
Acting Division Director
Oil Conservation Division



Administrative Order IPI-395
March 21, 2011

Quantum Resources Management, LLC
1401 McKinney St., Suite 2400
Houston, Texas 77010

Attention: Mr. David Catanach (Agent)

RE: Injection Pressure Increase Request (pTGW1105651700)
R-2876, R-3311, WFX-330, WFX-347, WFX-374, WFX-385,
WFX-436, WFX-470, WFX-733 and WFX-768
Artesia Queen-Grayburg-San Andres Pool (3230)
Eddy County, New Mexico

Reference is made to your request on behalf of Quantum Resources Management, LLC ("Quantum", OGRID 243874) received by the Division February 25, 2011, to increase the surface injection pressure limit on a unit-wide basis for all injection wells within its Artesia Unit Waterflood Project located within the Artesia Queen-Grayburg-San Andres Pool(3230) located in portions of Sections 25, 26, 34, 35 and 36, township 17 South, Range 28 East, and Sections 2 & 3, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico.

The original Division Order R-2876 permitted injection wells in the Artesia Unit but failed to list the maximum allowed pressure. Division Order R-3311 expanded the original project encompassing the above described 2240.78 acres. There are currently twenty active or permitted injection wells within the unit area.

Administrative Orders WFX-768 granted a wellhead maximum pressure limit of 1,300 psi for Artesia Unit Well No. 29 (API 3001501742).

It is our understanding the wells are in need of additional surface injection pressure to balance injection and withdrawal rates in order to optimize the secondary recovery



operations within the Artesia Unit, thereby increasing the recovery of hydrocarbon from the Artesia Queen-Grayburg-San Andres Pool.

The basis for granting these pressure increases are the nine step rate tests five of which were run by Melrose Operating Company (the previous Operator) in 2006-2009, and four step rate tests in 2011.

Quantum Resources Management, LLC is hereby authorized to utilize a maximum surface injection pressure limit in the Artesia Unit of **1,200** psi (Well No. 29 has an exception of 1,300 psi) as the maximum surface injection pressure on the wells shown below, provided the tubing, size, type and perforation depths do not change. The packers shall be located within 100 feet of the top of the injection interval in the following-described wells for purposes of secondary recovery:

Well Name	Well #	API	Unit	Sec	Tsp	Rge	PSI
Artesia Unit	1	30-015-01564-00-00	L	26	17S	28E	1200
Artesia Unit	7	30-015-10080-00-00	D	36	17S	28E	1200
Artesia Unit	8	30-015-01751-00-00	A	35	17S	28E	1200
Artesia Unit	14	30-015-01755-00-00	G	35	17S	28E	1200
Artesia Unit	22	30-015-01747-00-00	K	35	17S	28E	1200
Artesia Unit	23	30-015-01746-00-00	L	35	17S	28E	1200
Artesia Unit	26	30-015-01708-00-00	O	34	17S	28E	1200
Artesia Unit	28	30-015-01732-00-00	M	35	17S	28E	1200
Artesia Unit	29	30-015-01742-00-00	N	35	17S	28E	1300
Artesia Unit	32	30-015-01764-00-00	M	36	17S	28E	1200
Artesia Unit	36	30-015-01782-00-00	D	2	18S	28E	1200
Artesia Unit	44	30-015-01796-00-00	E	3	18S	28E	1200
Artesia Unit	46	30-015-02541-00-00	F	3	18S	28E	1200
Artesia Unit	47	30-015-02545-00-00	G	3	18S	28E	1200
Artesia Unit	49	30-015-01779-00-00	E	2	18S	28E	1200
Artesia Unit	53	30-015-01788-00-00	J	3	18S	28E	1200
Artesia Unit	54	30-015-01801-00-00	K	3	18S	28E	1200
Artesia Unit	59	30-015-01792-00-00	M	3	18S	28E	1200
Artesia Unit	63	30-015-01781-00-00	M	2	18S	28E	1200
Artesia Unit	65	30-015-20273-00-00	G	3	18S	28E	1200
Artesia Unit	67	30-015-20327-00-00	K	3	18S	28E	1200

This approval is subject to Quantum being in compliance with all other Division rules, including but not limited to Division Rule 5.9.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected fluid is not being confined to the injection zone or is endangering any fresh water aquifers, or is causing waste of oil and gas. Quantum is prohibited from injecting at pressures that would induce fracturing in individual wells.

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The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into at least one of the subject wells, provided however, the Division, upon written request by the operator received prior to the one year deadline, may grant an extension thereof for good cause shown.



J. Daniel Sanchez
Acting Director

JDS/tw

cc: Oil Conservation Division –Artesia
New Mexico State Land Office - Santa Fe