NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
BETTY RIVERA
Cabinet Secretary

July 23, 2002

Lori Wrotenbery
Director
Oil Conservation Division

Dugan Production Corporation
709 E. Murray Dr
PO Box 420
Farmington, New Mexico 87499-0420

IPI-182

Attn: Mr. John Alexander

Re: Injection Pressure Increase
Sanchez O'Brien Well No. 1 SWD
San Juan County, New Mexico

Dear Mr. Alexander:

Reference is made to your request dated July 1, 2002 (received in this office July 3, 2002), to increase the surface injection pressure on the above referenced SWD well. This request is based on a step rate test conducted on the well on June 6, 2002. After reviewing test results, we feel an increase in injection pressure is justified at this time.

With size and type of tubing remaining 2 7/8 inch set at 3210 feet, you are authorized to increase the surface injection pressure to the following:

Well and Location	Maximum Surface Injection Pressure
Sanchez O'Brien Well No. 1 SWD (API: 30-045-25298) 1650 FSL, 990 FWL, Sec 6, T24N, R9W, NMPM, San Juan County	2200 PSIG Water

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,
Lori Wrotenbery (WJJ)
Lori Wrotenbery
Director

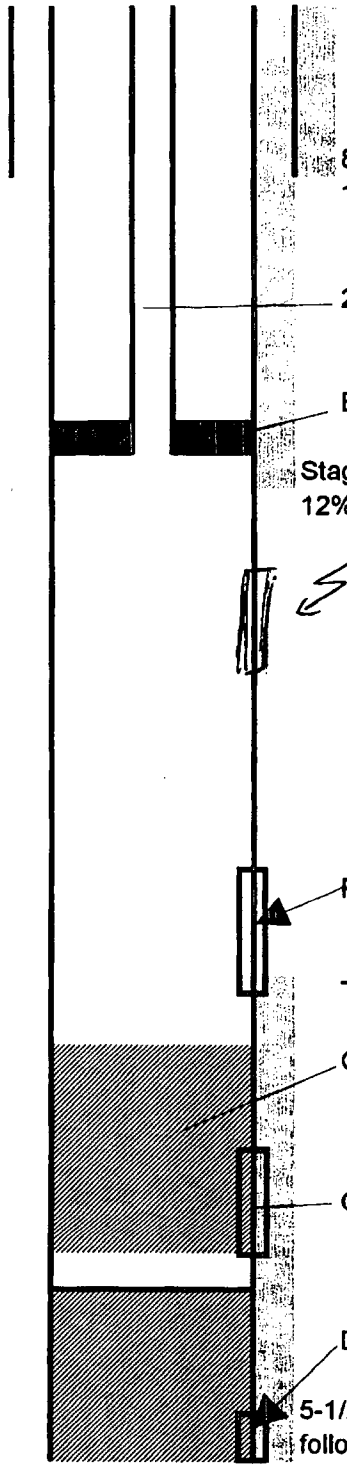
cc: Oil Conservation Division – Aztec
Files: SWD-694; IPI 2002

Application for Authorization to Inject
Part III A.

Dugan Production Corp.

Sanchez O'Brien No. 1

1650' fsl & 990' fwl
Sec. 6-Twn. 24N-Rng. 9W
San Juan Co., NM



Top of cement for 5-1/2" @ surface (circulated)

8-5/8" 24 lb. @ 294'. Cemented to surface w/ 200 sks. (circulated).
12-1/4" hole

2-7/8" J-55 6.5 lb. plastic lined tubing.

Baker Model AD-1 Stainless Steel Pakcer @ 3250'.

Stage tool at 3280'. Cemented second stage w/ 400 sks. 65/35 Poz w/ 12% gel, followed by 250 sks. 50/50 Poz w/ 2% gel (total slurry 1085 cu. ft.)

AS PER ERNIE BUSCH
APPROX. 3300'

Perforated Point Lookout interval 4255 - 4390 (1jspf)

Top of cement stage 1 @ 4360 by cement bond log

Gallup plug 4756 - 5483'

Gallup perforations 5246 - 5480'.

Dakota perforations 6338-92. Squeezed 100 sks. 5600-6472'.
Cast iron bridge plug @ 5600'.
5-1/2" 15.5 lb. @ 6527'. Cement first stage 260 sks. Halliburton Light followed by 250 sks. 50/50 Poz w/ 2% gel (total 861 cu. ft.). 7-7/8" hole

Application for Authorization to Inject
Part VI

Dugan Production Corp.
Sanchez O'Brien No. 1
1650' fsl & 990' fwl
Sec. 6-Twn. 24N-Rng. 9W
San Juan Co., NM

Wells Offset to Proposed Water Injection Well

Well	Location	Status	Spud Date	Total Depth	Surface Casing	Long String	Perforations	Stimulation	Plug Details	Remarks
EAST BISTI UNIT 108 AKA 16 G's Water Well	660' fnl & 660' fwl S.7-T.24N-R.9W	Water Source Well (Ojo) - Producting Zones Plugged	10/12/58	5592	8-5/8 @ 334' w/ 175 sks. (circulated)	5-1/2 @ 5592 w/300 sks. neat cement TOC @ 4060 (calc. w/ 75% fill) 7-7/8" hole	(Gallup) 5430-48, 5463-79	Frac 30,000 gal. oil w/ 30,000 lb. sand	5387-5487, Cut casing 1507, 1707-1857, 1457 1557, 1027-1127, 10' surface plug	Well re-entered, 5-1/2 set at 1003' and gravel packed to serve as Ojo Alamo water source well.
EAST BISTI UNIT 98	660' fsl & 1980' fel S.6-T.24N-R.9W	Plugged and Abandoned	5/1/59	5620	8-5/8 @ 223' W/160 sks. (circulated)	4-1/2 @ 5604 w/100 sks. 4% gel and 100 sks. neat. TOC 4707' (calculated @ 75% fill) 7-7/8" hole	(Gallup) 5462-88, 5501-18	Frac 47,250 gal oil w/ 48,000 lb. sand	5531-5431, cut 4-1/2 @ 1100', 1747-1896, 1025 1225, 10' surface plug	
SIXTEEN GS No. 3	660' fwl & 1950' fwl S.7-T.24N-R.9W	Gallup Producer Dakota Abandoned	7/7/81	6492	8-5/8 @ 207' W/135 sks. (circulated)	4-1/2 @ 6492'. DV tool @ 4503. Stg. 1= 250 sks. 4% gel & 150 B neat. Stg. 2= 400 sks. 65/35/12 & 100 sks. 4% gel. TOC estimated @ 750'. Hole 7-7/8"	(Dakota) 6428-34. (Gallup) 5323-5521	(Dakota) - acidized (Gallup) frac in two separate job with toal 163,000 gal. water and 194,000 lb. sand	Producing from Gallup, Dakota was not productive and abandoned with a mechanical plug @ 6280 and cement on top	
EAST BISTI UNIT 99	660' fsl & 660' fel S.1-T.24N-R.10W	Plugged and Abandoned	2/20/59	5580	8-5/8 @ 345' W/290 sks. (circulated)	5-1/2 @ 5575 w/300 sks neat. TOC 4045' (calculated @75% fill) 7-7/8" hole	(Gallup) 5441-59, 5473-86	frac 30,000 gal. oil w/ 120,000 lb. sand	5398-5498, cut 5-1/2 @ 1854, 1718-1904, 1028 1128, 10' surface plug	

Application for Authorization to Inject

Dugan Production Corp.

Sanchez O'Brien No. 1

Part VIII - Geological Data

The proposed injection interval is the Mesa Verde from 2635 - 4436. The Ojo Alamo is know to be a source of stock water in the area. The Ojo Alamo is at 938 - 1035 in this well. There are no drinking water sources below the Mesa Verde interval. The tops of all formations present in this well follow:

Ojo Alamo	938
Kirtland	1035
Fruitland	1490
Pictured Cliffs	1767
Chacra	2131
Cliff House	2635
Menefee	2831
Point Lookout	4252
Mancos	4436
Gallup	5042
Greenhorn	6182
Graneros	6246
Dakota	6285

Part IX - Stimulation

After injection rate tests, it may be necessary to stimulate the Mesa Verde by acidizing or fracturing. It may also be necessary to add perforations to the Mesa Verde interval in addition to that already perforated (4255-4390).

Part X - Logging and Test Data

All logs for the proposed injection well and offsets are on file with The Oil Conservation Division in Aztec, NM.

Part XI - Fresh water Samples

Two fresh water wells are present within one mile of the proposed injection well. Dugan Production Corp. 16 G's water well (also known as the East Bisti Unit No. 108), and a well at the Breathern In Christ Mission located in NE/4 S.12-T.24N-R.10W. Samples from both of these wells are attached.