

dugan production corp.

Jerome P. McHugh
Janet #2 (Fee Lease)
1850' FSL - 790' FEL
Sec. 21 T25N R2W
Rio Arriba County, NM

APPLICATION FOR DOWNHOLE COMMINGLING
Janet #2 Well
Jerome P. McHugh
T-25-N, R-2-W, NMPM
Sec. 21: Unit Letter I
1850' FSL & 790' FEL
Rio Arriba County, New Mexico
Case No. 7896 Exhibit No. 5

Morning Report

- 3-30-83 Moved in and rigged up Morrow Drlg. Co. Rig #1. Hauled in 8-5/8" casing to location. (Note: all loads had to be towed in to location with tractor. Roads are very muddy.) Shut down. will spud well 3-31-83.
- 3-31-83 Shut down. Will spud 3-31-83.
- 4-1-83 Spudded 12 1/4" hole at 9:30 a.m. 3-31-83. Drilled to 207' RKB. Prep to run 8-5/8" surface casing. Shut down overnight.
- 4-2-83 T.I.H. with drill pipe. Circ. and condition hole. Laid down drill pipe. Ran 7 jts. 8-5/8" O.D., 24#, 8' Rd, ST&C casing. T.E. 192.25' set at 205' RKB. Cemented with 145 sx (171 cu.ft.) class "B". Circ. 2 bbls. - good cement to surface. P.O.B. at 6:30 p.m. 4-1-83. W.O.C.
- 4-3-83 Waiting on cement.
- 4-4-83 Waiting on cement and shut down for Easter holiday.
- 4-5-83 Depth 245'. Pressure tested casing to 800 psi for 30 min. Held OK. Drilled out under surface casing with 6 1/2" hole. Made 40' new hole. S.D.O.N.
- 4-6-83 Depth 290' - Drilling 6 1/2" hole with water. Made 45'. S.D.O.N.
- 4-7-83 Drilling 6 1/2" hole with water at 330'. Made 40'. S.D.O.N.
- 4-8-83 362' - Drilled 6 1/2" hole to 362' RKB with water. S.D.O.N.
- 4-9-83 Move out Morrow Drilling Co. Rig. MI & RU Four Corners Rig #10.
1510' - Drilling. Wt. 816 Vis 28 WL 10.0
3/4° at 709' & 1/2° at 1205'

9 hrs. - MI & RU & Nipple up
1/2 hr. - rat & mouse hole
1/2 hr. - pick up drill collars
6 hrs. - drlg.
1/4 hr. survey 4-1/2 hrs. - wait on anchors

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4-10-83	3006' - Drilling Wt. 8.9 (Lost 900 bbls. 1900-2700')	Vis 33	W.L. 10	Trace L.C.M.
	2 hrs. trip	<u>Surveys</u>		
	19-1/2 hrs. drilling	3/4° at 200'	6° at 2346'	
	2-1/2 hrs. survey	1 400	5-3/4 2408	
		1-1/4 700	5-1/2 2533	
		3 1200	5 2686	
		5-3/4 1700	5 2880	
		6 1892	5 2976	
		6-1/2 2252		
4-11-83	3695' - Drilling Wt. 8.8	Vis 34	W.L. 9.0	Trace L.C.M.
	2-1/4 hrs trip	<u>Surveys</u>		
	18-1/4 hrs drilling	4-3/4° at 3021'	3-1/2° at 3402'	
	1/4 hr rig	4-1/2 3165	4-3/4 3663	
	1-1/4 hrs surveys	4-1/4 3280		
	2 hrs lost circ. (lost 600 bbls.)			
4-12-83	4145' - Drilling Wt. 8.9	Vis 35	W.L. 9.5	Trace L.C.M.
	3 hrs - trip	<u>Surveys</u>		
	19-1/2 hrs - drilling	4-3/4° at 3694'	3° at 3936'	
	1/2 hr - rig service	3-3/4 3810	2 4132	
	1 hr - surveys			
4-13-83	4760' - Drilling Wt. 9.0	Vis 37	W.L. 10	Trace L.C.M.
	23 hrs. drilling	1° at 4315'	1° at 4604'	
	1/2 hr. rig service			
	1/2 hr. survey			
4-14-83	5450' - Drilling Wt. 9.0	Vis 36	W.L. 9.2	
	23 hrs drilling	1-1/4° at 5102'		
	1/2 hr rig service			
	1/2 hr survey			
4-15-83	5937' - 10 stds. off bottom - mixing mud & L.C.M. Wt. 9.0 Vis 45 W.L. 11.0 15% L.C.M.			
	1/4 hr - trip	2° at 5805'		
	20-3/4 hrs - drilling			
	1/2 hr - rig service			
	1/4 hr - survey			
	2-1/4 hrs - lost circ. (lost 200 bbls. at 5543', 50 bbls. at 5640' and 50 bbls. 5665' and 300 bbls. at 5937')			

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4-16-83 6344' - Survey
Wt. 8.9 Vis 42 W.L. 11.0 20% L.C.M.
1/2 hr. trip 1-1/4° at 6304'
21-1/2 hrs drilling
1/4 hr. rig service
1-1/2 hr. mix mud & LCM - lost 400 bbls. at 6220'
1/4 hr. survey

4-17-83 6369' - Fishing for cones
Wt. 8.9 Vis 42 W.L. 11.0
17-1/2 hrs - trip
2-1/2 hrs - drilling
3/4 hrs - cut drilling line
1 hr - wait on magnet
2-1/4 hrs - fishing cones

4-18-83 6404' - drilling
Wt. 9.0 Vis 43 W.L. 10.0 15% L.C.M.
18-1/4 hrs - trip
2-1/4 hrs - drilling
2-1/2 hrs - fishing
1/2 hr - cut drilling line
1/2 hr - working by junk

4-19-83 6765' - Drilling Wt. 9.1 Vis 44 W.L. 10.0 5% L.C.M.
23-1/2 hrs - drilling
1/2 hr - rig service

4-20-83 7110' - Drilling Wt. 9.1 Vis 43 W.L. 10.5 3% L.C.M.
4-3/4 hrs - trip 1° at 6805'
18-1/4 hrs - drilling
1/2 hr - rig service
1/4 hr - survey
1/4 hr - wash 15' to bottom

4-21-83 7431' - Drilling Wt. 9.1 Vis 40 W.L. 11.5 Tr. L.C.M.
6-1/4 hrs - trip 1 1/4° at 7303'
16-1/2 hrs - drilling
1/4 hr - rig service
1/4 hr - survey
3/4 hr - cut drilling line

4-22-83 7824' - Drilling Wt. 9.1 Vis. 41 W.L. 10.5

23-1/4 hrs. drilling
3/4 hrs. rig service

4-23-83 8040' - Logging Wt. 9.2 Vis 63 W.L. 10.5

3-1/4 hrs - trip 1⁰/₄ at 7845'
16 hrs - drilling
1/2 hr - rig service
2 hrs - circ. and cond. hole
2 hrs - wait on loggers
1/4 hr - logging

4-24-83 8040' - Circulating at 4300'

9 hrs - lost circ. and mixing mud
2 hrs - trip in hole after logging
12 hrs- logging

4-25-83 Regained circulation. Finished T.I.H. to T.D. (Note drillers' TD 8040'; loggers' TD 8062'. Circ. hole two hours. Laid down drill pipe and collars. Rigged up and ran 205 jts. 4¹/₂" O.D., 11.6#, K-55, 8rd, LT&C casing. T.E. 8063.10' set at 8057' RKB.

Dowell cemented first stage with 10 bbls. mud flush followed by 350 sx 50-50 poz 2% gel, 6¹/₄# gilsonite per sk & ¹/₄# cello flake per sk followed by 100 sx class "B" with ¹/₄# cello flake per sk (total cement slurry 608 cu.ft.). Had good circulation throughout job. Reciprocated casing OK while cementing. Bumped plug with 1500 psi. Float held OK. Dropped opening bomb. Opened stage cementing tool at 5853'. Circulated with rig pump three hours.

Dowell cemented second stage with 10 bbls. mud flush followed by 275 sx 65-35 plus 12% gel and 6¹/₄# gilsonite per sk and ¹/₄# cello flake per sk followed by 340 sx 50-50 poz plus 2% gel & ¹/₄# cello flake per sk (total cement slurry 1075 cu.ft.). Good circulation throughout job. Closed stage tool with 2000 psi. Held OK. Dropped opening bomb. Opened stage tool at 3575'. Circulated with rig pump 2¹/₂ hrs.

Dowell cemented third stage with 10 bbls. mud flush followed by 485 sx 65-35 plus 12% gel and ¹/₄# cello flake per sk followed by 100 sx 50-50 poz 2% gel & ¹/₄# cello flake per sk (total cement slurry 1203 cu.ft.). Had good returns while mixing cement. Lost partial returns for first 20 bbls. displacement. Regained full returns on last 35 bbls. of displacement. Closed stage tool with 2500 psi. Held OK. Set 4¹/₂" casing slips. Cut off casing and released rig at 5:00 a.m. 4-25-83.

DAILY REPORT

- 5-4-83 MI & RU service unit. Install B.O.P. Unload tubing. T.I.H. with 3-7/8" bit and 100 jts. tbg. Shut in for night.
- 5-5-83 Completed T.I.H. with tubing. Drilling cement at 3565'. R.U. swivel and drilled stage tool. Rig down power sub and run in to 5835'. Rig up swivel and drill stage tool. Ran in to 7900' and tagged cement. Drilling cement to 8000'. Circ. hole clean. Shut in for night.
- 5-6-83 Drill cement to 8008'. Circ. hole clean. Rig up Western Co. Pressure test casing to 4000#. Held OK. Spotted 250 gals. 7 1/2% HCL 8000'-6515'. Pulled out with 2-3/8" tubing, sub and bit. Rig up Basin perforators and ran GR-CCL from PBTD 8008' to 7600', 7100-6600, 5800-5100, and 3500-3250'.
- Dakota* Perforate density log interval 7841, 7875, 7883, 7884, 7885, 7892; * 7973, 7991, 7992, 7993, 7994. Break down Dakota perfs with fresh water at 2150 psi. Resume pumping 7 BPM at 1500#. ISDP = 1000 psi. Drop 2 balls/bbl. - 6.7 BPM at 1800# average injection rate. Had complete ball-off. Attempted to run 4 1/2" junk basket. Could not get below D.V. at 3575' (O.D. of junk basket = 3.750") Surged balls off and shut in for night. *7971' & 7972' (13 holes)
- 5-7-83 SICP = 0. Rigged up Western and fraced Dakota perfs 7841-7994 down 4 1/2" casing with 36,000# of 20/40 sand in 19,320 gal. of Mini-Max 3 at 23-4 BPM and 3000-4150 psi. AIR = 18 BPM at 3200 psi. ISDP = 1500 psi. Well started to screen out when 3#/gal. sand hit formation. Shut down with 90 of 121 bbl. flush pumped and WHTP = 4150 psi. Left approx. 3750# of sand in well bore. (pumped 14,250# of sand in formation at 3#/gal.) Total load = 719 BW & 13 Bbl. diesel. Totals: Mini-Max 3 - 19,320 gal.
ungelled water in pad & flush - 11,460 gal.
20/40 sand - 36,000#
diesel - 540 gallons (2% in all treating fluid)
1 gal. Aqua Flow/1000 gal. treating fluid
- Shut well in 4 hrs. for gel to break. Rigged up Basin perforators and Perforated Gallup using Lubricator & 3-1/8" casing gun and 1 jet shot at each depth as follows: 6657, 6664; 6724, 6783, 6785, 6787, 6795; 6810, 6812, 6815, 6817, 6844, 6865, 6872, 6885, 6896; 6906, 6919, 6949, 6964, 6976, 6980, 6994; 7010, 7017, 7030, 7055. Total of 27 holes. SICP prior to perforating = 500 psi. SICP after perforating 500 psi. Rigged up Western and broke down Gallup perfs 6657-7055' using fresh water and dropping 40 7/8" ball sealers. Had 32 BPM at 3700 psi prior to dropping balls and balled off at 4150 psi. Surged balls off perfs. Started frac pad at 16 BPM & 3700 psi. Pumped 60 BW and shut down. ISDP = 1000 psi. Concluded only 4 holes, taking fluid. Shut down for night.
- 5-8-83 Shut down - Sunday.

5-9-83 Rigged up Basin Perforators and ran in with 3½" O.D. gauge ring. Tag sand at 6830'. R.U. and T.I.H. with saw tooth coupling and 2-3/8" tubing. Tag sand at 6791'. Clean out sand to 6941'. Ran into 7350' and had no fill 6941-7350'. T.O.H. with 2-3/8" tubing. R.U. Western and establish pump in rate at 40 BPM at 2200#.

Fraced Gallup perfs 6657-7055' down 4½" casing at 40-14 BPM & 2200-3750 psi using 59,260 gallons slickwater with 2% diesel and 81,000 lbs. 20/40 sand. Well attempting to screen off and did not exceed 2½#/gal. of sand. Rate on 1# - 40-29 BPM at 2200-3400 psi. Rate on 2# - 29 BPM at 3350 psi. Rate on 2½# - 25-14 BPM at 3350-3750-3400 psi. Flush with 4326 gal water at 14 BPM and 3400 psi. ISDP 700#; 5 min 500#; 10 min 400#; 15 min 300#. Left out 7350# of sand because of possible screen out.

14,000 gal. slick water pad with 2% diesel
14,000 gal. slick water w/ 1 ppg 20-40 sand with 2% diesel
8,000 gal. slick water w/ 2 ppg 20-40 sand with 2% diesel
20,260 gal. slick water with 2½ ppg 20-40 sand with 2% diesel
4,326 gal. water - flush

Shut in for night.

5-10-83 SICP = zero. R.U. and T.I.H. with saw tooth coupling, 1 jt., seat nipple and 2-3/8" tubing to clean out sand. Tag sand at 6935'. Clean out sand 6935-7100'. Ran in to 7470' with no sand and drilled sand from 7470 to PBTD 8008'. Circ. hole clean. Land tubing at 7900' - 247 jts. 2-3/8", 4.7#, J-55, 8 Rd, EUE. Nipple down BOP. Nipple up well head. Rig up to swab. Recovered water. Shut in for night.

5-11-83 Casing pressure zero. Tubing pressure TSTM. Made 10 swab runs to pit. Had slight show of oil. Good show of gas. Fluid level at surface at start of day. Swabbed down to 2500' after 10 swab runs. Released Well Tech rig at 12:00 noon. Prep to move in swabbing unit.

5-12-83 W.O. Swabbing Unit.

5-14-83 Moved in Ponderosa Service Co. swabbing unit. Casing pressure 275 psi; tubing pressure 50 psi. Blew down tubing. Did not unload. Made 23 swab runs. Swabbed estimated 250 bbls. total frac fluid. Very slight show of oil. Casing pressure at end of day 300 psi. Fluid level at start of day 1300' from surface; swabbed down to 3500' at end of day. Good show of gas with each swab run.

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5-15-83 Sunday - did not work

5-16-83 SICP - 375 psi SITP 50 psi. Well blew down. Made 29
1st new oil swab runs. Swabbed estimated 200 bbls. frac. water with
to tank 10 bbls. oil to tank. Fluid level at start of day 2300'.
Casing pressure droppped to 300 psi and went back up to 400
psi at end of day. Making good show of gas and 5% oil. S.D.O.N.
Fluid level at end of day 3500' from surface.

5-17-83 Casing pressure 425 psi. Tubing pressure 50 psi. Blew down
tubing. Swabbed well with 25 runs. Fluid level at start of
day 2300'. Swabbed down to 3500' after 3 runs and remained
at 3500'. Casing pressure at end of day 475 psi. Made 9 bbls.
oil and estimated 175 bbls. frac fluid. S.D.O.N.

5-18-83 Csg. press. 550 psi. Fluid level at start of day 2500'. Swabbed
fluid level to 3500'. At 2:00 p.m. fluid level started rising.
At end of day, fluid level 2600'. Well gasses 5-10 min. after
each run. Swabbed estimated 180 bbls. frac water and 17 bbls.
oil. S.D.O.N. Casing pressure at end of day 600 psi.

5-19-83 Casing pressure 725 psi. Tubing pressure 250 psi. Opened
well. Would not unload. Swabbed well with 23 runs (having some
trouble getting swab down due to ball sealers). Swabbed 17
bbls. oil and est. 150 bbls. frac fluid. Fluid level swabbed down
to 3300' and came back up to 2600' at end of day. Casing press.
went down to 650 psi during day and back up to 725 psi at end
of day. Well gassing 5-10 minutes after each swab run.

5-20-83 Casing press. 825 psi; tubing press. 310 psi. Opened well.
Kicked off and flowed 45 minutes to tank. Casing pressure
droppped to 750 psi. Swabbed well remainder of day. Made 32
bbls. oil and estimated 120 bbls. frac fluid. Well gassing
10-15 minutes after each run. Oil percentage increased to over
50% at end of day. Casing pressure 775 psi with fluid level
at 1500' at end of day. S.D.O.N.

5-21-83 Shut down swabbing unit for weekend

5-22-83 Swabbing unit did not work. Checked well. Casing pressure
900 psi. Opened tubing to tank. Well unloaded less than 5
bbls. oil and died. Shut well in.

5-23-83 Casing pressure 900 psi. Tubing pressure 60 psi. Well did
not unload through casing. Swabbed 18 bbls. oil and 85 bbls.
frac fluid. Casing pressure at end of day 900 psi. Equalized
casing and tubing pressure. S.D.O.N. Fluid level at end of
day 1200'.

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- 5-24-83 Casing and tubing pressure 675 psi. Opened well through tubing to tank. Unloaded 5 bbls. oil and died. Casing pressure 700 psi. Equalized tubing and casing pressures. Shut well in and released swabbing unit at 10:00 a.m. 5-24-83.
- 6-3-83 SICP = SITP = 600 psi (equalized).
Open tubing to tank; would not flow. Open casing to tank, and well unloaded. Flowed 45 minutes and died. Recovered 25 bbl. oil plus 0 bbl. water. Shut well in.