EXHIBIT #3

ADDITIONAL DATA

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Hilliard EXHIBIT NO. 3
CASE NO. 5422

HILLIARD OIL & GAS, INC.
DRILLING & COMPLETION REPORT

OPERATOR:	HILLIARD OIL & GAS, INC.	TD:	14,075'
WELL:	McELVAIN-FEDERAL #1 (La Rica North)		
FIELD:		PBTD:	9650'
COUNTY:	LEA STATE: NEW MEXICO	ELEV. RKB:	3921'
LOCATION:	1980' FSL & 1980' FEL, Sec. 30, T-18S, R-34E	GR:	3903'
		SPACING:	18'
CONTRACTOR:	Tri Service Drilling Company Rig #6		

15,000' Devonian

5-29-74 Road & location complete - WORT

5-30-74 WORT

5-31-74 MI & RURT. Prep to spud well today.

6- 1-74 Spudded well @ 10:00 AM 6-1-74. 355' Redbed. Dev. ½ @ 331'. Mud 9.0#, Vis 33. Bit #1 - 17½" Hughes OSC3AJ-re-tip, in @ surface. Top of Redbed @ 105'. Ran 9 jts (358.45') 13-3/8" 54.50#, K-55, ST&C csg. Set @ 355' w/370 sx Class "C", 2% CaCl. Cmt circ. Plug down @ 8:30 PM. WOC & Nippling up.

6- 2-74 1521' Anhy. Dev. ½ @ 840', ½ @ 1340'. Mud 9.5#, Vis 33. Bit #2 - 11" Hughes OSC3AJ, in @ 355'. Finished nippling up. Tested 13-3/8" csg w/800# for 30 min held ok.

6- 3-74 1834' Anhy & Gyp. 1¼ @ 1777'. Mud 10.2#, Vis 32. Bit #2 - 11" Hughes, OSC3AJ, in @ 355'.

6- 4-74 2997' Anhy & Salt. Dev. 1 @ 2274', 1 @ 2777'. Mud 10.4#, Vis 33. Bit #3 - 11" Security M4N, in @ 1834'.

6- 5-74 3258' Anhy. Dev. 1¼ @ 3174'. Mud 10.4#, Vis 33. Bit #3 - 11" Security M4N, in @ 1834'. Bit #4 - 11" Smith V2J, in @ 3197'.

6- 6-74 3558' Anhy. Dev. ½ @ 3274'. Mud 10.5#, Vis 33. Bit #4 - 11" Smith V2J, in @ 3197'

6- 7-74 3693' Anhy. Dev. 1 @ 3645'. Mud 10.5#, Vis 33. Bit #4 - 11" Smith V2J, out @ 3585'. Bit #5 - 11" Smith 5JS, in @ 3585'.

6- 8-74 3888' Anhy. No dev. surv. Mud 10.5#, Vis 33. Bit #5 - 11" Smith 5JS, in @ 3585'.

6- 9-74 4098' Anhy. Dev. ½ @ 4051'. Mud 10.6#, Vis 33. Bit #5 - 11" Smith 5JS, in @ 3585'.

6-10-74 4304' Anhy. No dev. surv. Mud 10.6#, Vis 33. Bit #5 - 11" Smith 5JS, in @ 3585'.

6-11-74 4431' Anhy. Dev. ½ @ 430'. Mud 10.6#, Vis 33. Bit #5 - 11" Smith 5JS, out @ 4320'. Bit #6 - 11" Smith 5JS, in @ 4320'.

6-12-74 4606' Anhy. No dev. surv. Mud 10.7#, Vis 33, added 40 Bbls oil to mud. Bit #6 - 11" Smith 5JS, in @ 4320'.

6-13-74 4764' Anhy. No dev. surv. Mud 10.7#, Vis 34. Bit #6 - 11" Smith 5JS, in @ 4320'.

6-14-74 4876' Anhy. Dev. ¼ @ 4803'. Mud 10.6#, Vis 33. Bit #6 - 11" Smith 5JS, out @ 4787'. Bit #7 - 11" Smith 6JS, in @ 4787'.

6-15-74 5020' Anhy. No dev. surv. Mud 10.7#, Vis 33. Bit #7 - 11" Smith 6JS, in @ 4787'.

6-16-74 5120' Dolo. Dev. ½ @ 4083'. Mud 10.6#, Vis 33. Bit #7 - 11" Smith 6JS, out @ 5120'. Running 8-5/8" csg.

6-17-74 5120' Dolo. Ran 145 jts - 8-5/8" csg as follows:

Halliburton Guide Shoe	1.00
1 jt - 8-5/8", 32#, K-55, ST&C	30.40
Halliburton Insert Float	0.00
88 jts - 8-5/8" 32#, K-55, ST&C	2697.40
56 jts - 8-5/8" 24#, K-55, ST&C	2396.40
145 jts & equipment	5125.20
Less above RKB	-10.20
Csg set @	5115.00
Less shoe jt	-31.40
Insert Float @	5083.60

Csg stuck 5' above bottom (acted as if stuck shallow in RedBeds). Preceeded cmt w/200 Bbls Baroid Casing Pack. Cmtd w/300 sx Halliburton "Light", 8# salt/sx, followed w/200 sx Class "C", 0.5% CFR-2. Plug down @ 12:00 Noon. Nippled up head & 10" BOP's. Tested 8-5/8" csg w/1500# for 30 min - held ok. Ran Temperature Survey - top of cmt @ 2750'. Going in hole w/7-7/8" bit & 6" drl collars. Top of San Andres 5080' (-1159).

6-18-74 5381' Li. Dev. ½ @ 5115'. Mud-wtr, 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, in @ 5120'. Correction on 6-17-74 report - Top of cmt 2300'.

McELVAIN-FEDERAL #1 HILLIARD OIL & GAS, INC.

6-19-74 5683' Li. Dev. ¼ @ 5566'. Mud-wtr 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, in @ 5120'.

6-20-74 5955' Sd & Dolo. No dev. surv. Mud-wtr 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, in @ 5120'.

6-21-74 6251' Li, Sh & Sd. Dev. 3/4 @ 6001'. Mud-wtr 8.4#, Ph 10.5.Bit #8 - 7-7/8" Hughes J-55, in @ 5120'.

6-22-74 6565' Li & Sd. Dev. ¼ @ 6466'. Mud-wtr 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, in @ 5120'.

6-23-74 6910' Li & Sd. No dev. surv. Mud-wtr 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, in @ 5120'.

6-24-74 7273' Li, Sd. & Sh. Dev. 3/4 @ 6903'. Mud-wtr 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, in @ 5120'.

6-25-74 7501' Li & Sd. Dev. ½ @ 7274'. Mud-wtr 8.4#, Ph 10.5. Bit #8 - 7-7/8" Hughes J-55, out @ 7303'. Bit #9 - 7-7/8" Hughes JD-8, in @ 7303'.

6-26-74 7738' Li. Dev. ½ @ 7661'. Mud-wtr 8.4#, Ph 10.5. Bit #9 - 7-7/8" Hughes JD8, out @ 7690'. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

6-27-74 8131' Li. No dev. surv. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

6-28-74 8484' Li & Sd. Dev. ½ @ 8132'. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

6-29-74 8765' Li & Sh. Dev. 1¼ @ 8630'. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

6-30-74 8955' Li & Sh. Dev. 1 @ 8786'. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

7- 1-74 9152' Li & Sh. Dev. 3/4 @ 8943'. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

7- 2-74 9382' Li & Sh. No dev. surv. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, in @ 7690'.

7- 3-74 9469' Li & Sh. Dev. 3/4 @ 9350'. Mud-wtr 8.4#, Ph 10.5. Bit #10 - 7-7/8" Hughes J-55, out @ 9382'. Bit #11 - 7-7/8" Hughes J-55, in @ 9382'.

7- 4-74 9607' Li & Sh. Dev. ½ @ 9591'. Mud - wtr. 8.4#, Ph 10.5. Bit #11 - 7-7/8" Hughes J-55 in @ 9382'. Running DST #1.

7- 5-74 9708' Li & Sh. No dev. surv. Mud - wtr, 8.4#, Ph 10.5. Bit #11 - 7-7/8" Hughes J-55 in @ 9382'. DST #1 (Bone Springs) 9500-9607' (107') 15" IF, 90" FF, 30" ISI, 120" FSI. Tool opened w/very weak blow. Tool re-opened w/very weak blow incr to good blow in 30". Rec 2615' GIDP & 10' free oil (Gr 38.5 deg. @ 85 deg. F.) & 170' GCDF (16,000 ppm cl - may be wtr cut also - Resistivity 1.55 ohms @ 78 deg. F) Sample chamber 0#, 980 cc oil, 920 cc drlg fluid. ISIP 3171#, FSIP 3882#, IFP 100-112#, FFP 125-138#, IHP 4174#, FHP 4174#, BHT 139 deg. F.

7- 6-74 9937' Li & Sh. No dev. surv. Mud - wtr, 8.4#, Ph 10.5. Bit #11 - 7-7/8" Hughes J-55, in @ 9382'.

7- 7-74 10,148' Li & Sh. Dev. 3/4 @ 10,050'. Mud - Kcl Brine, 10.2#, Ph 9.5. Bit #11 7-7/8" Hughes J-55 in @ 9382'.

7- 8-74 10,363' Li & Sh. No dev. surv. Mud - Kcl Brine 10.2#, Ph 10.0. Bit #11 - 7-7/8" Hughes J-55 in @ 9382'.

7- 9-74 10,593' Li, Sh & Sd. No dev. surv. Mud - Kcl Brine, 10.2#, Ph 9.5. Bit #11 7-7/8" Hughes J-55 in @ 9382'.

7-10-74 10,700' Li, Sh & Sd. No dev. surv. Mud - Kcl Brine, 10.1#, Ph 9.5. Bit #11 7-7/8" Hughes J-55 out @ 10,611'. Bit #12 - 7-7/8" Hughes J-55 in @ 10,611'.

7-11-74 10,876' Li & Sh. No dev. surv. Mud 10.1#, Vis 35, WL 10, FC 1/32, Ph 9.5. Bit #12 - 7-7/8" Hughes J-55 in @ 10,611'.

7-12-74 11,012' Li & Sh. No dev. surv. Mud 10.0#, Vis 34, WL 10.2, FC 1/32, Ph 9.5. Bit #12 - 7-7/8" Hughes J-55 in @ 10,611'.

7-13-74 11,158' Li & Sh. No dev. surv. Mud 10.0#, Vis 34, WL 10.8, FC 1/32, Ph 10. Bit #12 - 7-7/8" Hughes J-55, in @ 10,611'.

7-14-74 11,207' Li, Sh & Sd. Dev. 2° @ 11,174'. Mud 10.0#, Vis 34, WL 12.2, FC 1/32, Ph 9.5. Bit #12 - 7-7/8" Hughes J-55, out @ 11,186'. Bit #13 - 7-7/8" Hughes J-55, in @ 11,186'.

7-15-74 11,278' Li & Sh. No dev. surv. Mud 9.9#, Vis 34, WL 10.0, FC 1/32, Ph 9.5. Bit #13 - 7-7/8" Hughes J-55, in @ 11,186'.

7-16-74 11,376' Li, Sh & Sd. No dev. surv. Mud 9.9#, Vis 33, WL 9, FC 1/32, Ph 9.5. Bit #13 - 7-7/8" Hughes J-55, in @ 11,186'.

7-17-74 11,507' Li & Sh. No dev. surv. Mud 9.9#, Vis 33, WL 9, FC 1/32, Ph 10.5. Bit #13 - 7-7/8" Hughes J-55, in @ 11,186'.

7-18-74 11,620' Li & Sh. No dev. surv. Mud 10.0#, Vis 34, WL 9.0, FC 1/32, Ph 9.5. Bit #13 - 7-7/8" Hughes J-55, in @ 11,186'.

7-19-74 11,699' Li & Sh. Dev. 3/4° @ 11,643'. Mud 10.0#, Vis 34, WL 8.2, FC 1/32, Ph 10.0. Bit #13 - 7-7/8" Hughes J-55, out @ 11,669'. Bit #14 - 7-7/8" Hughes J-55, in @ 11,669'.

7-20-74 11,751' Sh. No dev. surv. Mud 10.0#, Vis 36, WL 8.2, FC 1/32, Ph 9.5. Bit #14 - 7-7/8" Hughes J-55, in @ 11,669'.

7-21-74 11,849' Li & Sh. No dev. surv. Mud 10.0#, Vis 35, WL 7.2, FC 1/32, Ph 9.5. Bit #14 - 7-7/8" Hughes J-55, in @ 11,669'.

7-22-74 11,938' Li, Sh & Sd. No dev. surv. Mud 10.0#, Vis 35, WL 8.2, FC 1/32, Ph 10.0. Bit #14 - 7-7/8" Hughes J-55, in @ 11,669'.

7-23-74 12,007' Li & Sh. No dev. surv. Mud 10.0#, Vis 35, WL 8.0, FC 1/32, Ph 10. Bit #14 - 7-7/8" Hughes J-55, in @ 11,669'.

7-24-74 12,072' Li & Sh. Dev. 0° @ 12,048'. Mud 10.0#, Vis 34, WL 8.0, FC 1/32, Ph 10. Bit #14 - 7-7/8" Hughes J-55, out @ 12,072'.

7-25-74 12,126' Sh. No dev. surv. Mud 10.0#, Vis 34, WL 9.0, FC 1/32, Ph 10. Bit #15 - 7-7/8" Hughes J-55, in @ 12,072'.

7-26-74 12,209' Li & Sh. No dev. surv. Mud 10.0#, Vis 34, WL 9.2, FC 1/32, Ph 10. Bit #15 - 7-7/8" Hughes J-55, in @ 12,072'

7-27-74 12,278' Li & Sh. No dev. surv. Mud 10.0#, Vis 33, WL 8.0, FC 1/32, Ph 10.0. Bit #15 - 7-7/8" Hughes J-55, in @ 12,072'.

7-28-74 12,397' Li & Sh. No dev. surv. Mud 10.1#, Vis 33, WL 8.5, FC 1/32, Ph 10.5. Bit #15 - 7-7/8" Hughes J-55, in @ 12,072'.

7-29-74 12,507' Li & Sh. No dev. surv. Mud 10.0#, Vis 33, WL 8.6, FC 1/32, Ph 10. Bit #15 - 7-7/8" Hughes J-55, in @ 12.072'.

7-30-74 12,554' Sh. No dev. surv. Mud 10.1#, Vis 33, WL 9.5, FC 1/32, Ph 10. Bit #15 - 7-7/8" Hughes J-55, in @ 12,072'.

7-31-74 12,605' Li & Sh. Dev. ½° @ 12,539'. Mud 10.1#, Vis 35, WL 9.6, FC 1/32, Ph 10.5. Bit #15 - 7-7/8" Hughes J-55, out @ 12,575'. Bit #16 - 7-7/8" Hughes J-44, in @ 12,575'.

8- 1-74 12,744' Li & Sh. No dev. surv. Mud 10.1#, Vis 34, WL 9.6, FC 1/32, Ph 10. Bit #16 - 7-7/8" Hughes J-44, in @ 12,575'.

8- 2-74 12,898' Li, Sh & Sd. No dev. surv. Mud 10.1#, Vis 34, WL 9.8, FC 1/32, Ph 10. Bit #16 - 7-7/8" Hughes J-44, in @ 12,575'.

8- 3-74 13,005' Li & Sh. No dev.surv. Mud 10.2#, Vis 34, WL 9.0, FC 1/32, Ph 10. Bit # 16 - 7-7/8" Hughes J-44, in @ 12,575'.

8- 4-74 13,149' Li & Sh. No dev. surv. Mud 10.1#, Vis 34, WL 8.6, FC 1/32, Ph 10. Bit #16 - 7-7/8" Hughes J-44, in @ 12,575'.

8- 5-74 13,235' Li, Sh & Sd. Dev. 3/4° @ 13,209'. Mud 10.1#, Vis 35, WL 8.0, FC 1/32, Ph 10.5. Bit #16 - 7-7/8" Hughes J-44, out @ 13,235'. Bit #17 - 7-7/8" Hughes J-44, in @ 13,235'.

8- 6-74 13,286' Li, Sd & Sh. No dev. surv. Mud 10.3#, Vis 37, WL 5.6, FC 1/32, Ph 10. Bit #17 - 7-7/8" Hughes J-44, in @ 13,235'. Taking DST #2 - 13,130' to 13,286' (156').

8- 7-74 13,291' Li, Sh & Sd. No dev. surv. Mud 10.2#, Vis 36, WL 6.0, FC 1/32, Ph 10. Bit #18 - 7-7/8" Hughes J-55, in @ 13,286'. DST #2 - 13,130' - 13,286' (156'), 3000' wtr cushion. 30" IF, 120" ISI, 140" 2nd F, 80" 2nd SI, 120" 3rd F, 220" FSI. Tool op w/good blow, increasing to strong blow in 2 min. GTS during ISI. Tool op for 2nd flow w/strong blow of gas, 1# on ½" ck. Wtr cushion to surface in 98" total flow time, salt wtr to surface in 148" of total flow time. Flwg salt wtr & gas w/490# on ½" ck. Tool op for 3rd flow making salt wtr & gas. Well started making recognizable amounts of condensate after 209" total flow time, cutting 25-30% condensate in salt wtr to end of test, w/335# on ½" ck. Reversed out est. 8 Bbls condensate, 16 Bbls salt wtr (33,000 ppm Cl). Sample Chamber - unable to record pressure, 3.97 cu ft gas, 200 cc condensate (52° API), 520 cc salt wtr (33,000 ppm Cl). Pit sample 138,000 ppm Cl.

IHP	7094#	FFP	1676 - 2434#
IFP	1733 - 2434#	FSIP	6563#
ISIP	6828#	FHP	7037#
2nd FP	2623 - 2983#	BHT	184°F
2nd SIP	6620#		

8- 8-74 13,369' Li & Sd.
No dev. surv.
Mud 10.2#, Vis 37, WL 5.2, FC 1/32, Ph 10.
Bit #18 - 7-7/8" Hughes J-55, in @ 13,286'.
Prep to DST #3 13,270 - 13,369'.

8- 9-74 13,369' Li & Sd.
No dev. surv.
Mud 10.0#, Vis 45, WL 4.4, FC 1/32, Ph 10.5.
DST #3 13,270 - 13,369' (99') 3000' wtr cushion. Packers failed, test was a mis-run. Went in hole to condition mud & hole. Had moderate amount of gas for 4 hrs. Raised viscosity to 45. Circ. Prep. for DST #4 13,251 - 13,369'.

8-10-74 13,369' Li & Sd.
No dev. surv.
Mud 10.0#, Vis 44, WL 4.2, FC 1/32, Ph 10.0.
C & C hole. Made short trip & had bridge 105' off bottom. Cleaned out & C & C hole. Made short trip & had bridge 65' off bottom. Cleaned out & cond hole. Made short trip, no bridge, no fill. C & C hole. Made short trip, no bridge, no fill. POH. Picked up test tools. Taking DST #4.

8-11-74 13,389' Sh.
No dev. surv.
Mud 10.2#, Vis 48, WL 4.0, FC 1/32, Ph 9.5.
Bit #18 - 7-7/8" Huhges J-55, in @ 13,286'.
DST #4, 13,251' - 13,369' (118'), 3000' WC, 20" IF, 70" ISI, 60" FF, 120" FSI. Tool op w/weak blow, continued weak through IF. Tool re-op w/fair blow incr slowly, to bottom of 5 gal bucket in 15". Incr slowly to end of test. Blow continued through FSI - GTS in 96" of FSI. Max flow rate est @ 17.5 MCF/D (34 psi on 1/8" ck). Attempted to re-open for third flow. Apparently stuck above test tools; could not operate tester. Pulled loose & POH. Rec 10,000' GIDP, 3000' GCWC, 210' GCDF, no wtr indicated. Sample chamber - no recovery (hydraulic tool was damaged when pulling loose & allowed tester to op above floor).

IHP	7176'	FFP	1512 - 1512#
IFP	1494 - 1494#	FSIP	6658#
ISIP	5425# & building	FHP	7176#
		BHT	184°F.

8-12-74 13,495' Li & Sh.
No dev. surv.
Mud 10.1#, Vis 45, WL 6.0, FC 1/32, Ph 10.
Bit #18 - 7-7/8" Hughes J-55, in @ 13,286'.

8-13-74 13,545' Sh.
No dev. surv.
Mud 10.2#, Vis 44, WL 4.0, FC 1/32, Ph 10.
Bit #18 - 7-7/8" Huhges J-55, in @ 13,286'.

8-14-74 13,621' Li, Sh & Sd.
No dev. surv.
Mud 10.2#, Vis 44, WL 4.6, FC 1/32, Ph 10.
Bit #18 - 7-7/8" Hughes J-55, in @ 13,286'.

8-15-74 13,629' Li & Sh.
Dev. 3/4° @ 13,610'.
Mud 10.2#, Vis 46, WL 4.2, FC 1/32, Ph 10.
Bit #19 - 7-7/8" Hughes J-44, rerun, in @ 13,629'.
Bearing out of rotary table. Repaired same.

8-16-74 13,708' Li & Sh.
No dev. surv.
Mud 10.3#, Vis 44, WL 4.0, FC 1/32, Ph 10.
Bit #19 - 7-7/8" Hughes J-44 rerun, in @ 13,629'.
Sample top of Upper Mississippian Ls 13,630' (-9709)
49' low to Aztec Fed "M"
131' low to Pan Am #5 Buffalo Unit
8' high to Humble #3 Mescalero Unit
77' low to Union Pipeline Fed
138' low to Continental Tonto Unit

McELVAIN-FEDERAL #1 HILLIARD OIL & GAS, INC.

8-17-74 13,768' Sh.
No dev. surv.
Mud 10.3#, Vis 45, WL 4.0, FC 1/32, Ph 10.
Bit #19 - 7-7/8" Hughes J-44, rerun, in @ 13,629'.

8-18-74 13,795' Sh.
No dev. surv.
Mud 10.3#, Vis 45, WL 4.6, FC 1/32, Ph 10.5.
Bit #19 - 7-7/8" Hughes J-44, out @ 13,768'.
Bit #20 - 7-7/8" Hughes J-8, in @ 13,768'.

8-19-74 13,876' Sh.
No dev. surv.
Mud 10.3#, Vis 44, WL 4.8, FC 1/32, Ph 10.
Bit #20 - 7-7/8" Hughes J-8, in @ 13,768'.

8-20-74 13,921' Sh.
No dev. surv.
Mud 10.3#, Vis 46, WL 4.2, FC 1/32, Ph 10.
Bit #20 - 7-7/8" Hughes J-8, out @ 13,892'.
Bit #21 - 7-7/8" Smith FS, in @ 13,892'.

8-21-74 13,990' Sh.
No dev. surv.
Mud 10.3#, Vis 44, WL 4.6, FC 1/32, Ph 10
Bit #21 - 7-7/8" Smith F-5, in @ 13,892'.

8-22-74 14,060' Sh.
No dev. surv.
Mud 10.2#, Vis 44, WL 6, FC 1/32, Ph 10.
Bit #21 - 7-7/8" Smith F5, in @ 13,892'.

8-23-74 14,075' Li & Sh.
No dev. surv.
Mud 10.2#, Vis 45, WL 6.2, FC 1/32, Ph 10.5.
Bit #21 - 7-7/8" Smith F-5, out @ 14,075'.
Running open hole logs.
Log Top of Lower Mississippian Limestone 14,027' (-10,106')
127' low to Continental Tonto Deep Unit
137' low to Union Pipeline Federal
51' low to Humble #3 Mescalero Unit
413' low to Pan American #5 Buffalo Unit

8-24-74 14,075' Li & Sh Td
No dev. surv.
Mud 10.2#, Vis 45, WL 6.2, FC 1/32, Ph 10
Finished running Schlumberger DLL, BHC-Sonic, FDC-CNL, MLL & Velocity Survey.
Went in hole & conditioning mud. WOO

8-25-74 14,075' Li & Sh TD
Mud 10.2#, Vis 45, WL 6.2, FC 1/32, Ph 10
Plugged back to set casing @ 9560'.
Set cement plugs as follows:
50 sx cmt plug @ 12,950' - 13,100'
55 sx cmt plug @ 10,300' - 10,450'
75 sx cmt plug @ 9,700' - 9,900'
WOC & Waiting on csg delivery.

8-26-74 9650' PBTD
Mud 10.2#, Vis 46, WL 4.6, FC 1/32, Ph 10
Tagged cmt @ 9548'. Drilled plug to 9650'. Casing on loc. WO parts for liner hanger.

McELVAIN-FEDERAL #1 HILLIARD OIL & GAS, INC.

8-27-74 9650' PBTD
Waited on Liner Hanger Equip. until 4:00 PM
Ran 148 jts 4½" csg as liner as follows:

Halliburton Float Shoe	1.70'
1 jt 4½", 11.60#, K-55, LT&C	32.76'
Halliburton Float Collar	1.40'
TIW hatch collar	0.80'
147 jts 4½", 11.60#, K-55, LT&C	4728.72'
5½" X 4½" 8 Rd Crossover	0.80'
TIW Type "EJ", 8-5/8" X 5½" Liner Hanger	5.16'
6-5/8" X 5½" 8 Rd Crossover	1.11'
TIW Packoff w/tie-back sleeve, 7-9/16" OD X 6" ID	6.88'
148 jts. & equipment	4779.33'
Plus below RKB	4869.67'
Liner Shoe set @	9649.00'
Less Shoe jt.	-36.66'
Top of Float Collars @	9612.34'
Less liner & hanger assembly	-4742.67'
Top of Liner Hanger & Tie-back sleeve	4869.67'

cmtd w/500 sx Class "H", 50-50 Pozmix, 2% gel, 8.6# salt/sx, 3/10% HR-7. Plug down @ 2:30 AM. Set Packoff. Circ mud out of 8-5/8" csg w/fresh wtr. Laying down drillpipe.

8-28-74 Finished laying down drl pipe. Removed BOP's. Cleaned pits. Rel Tri-Service Rig 6 @ 4:00 PM 8-27-74. Waiting on compl.

8-29-74 WO Completion - Unable to MORT due to wet weather and lack of trucks.

8-30-74 WO Completion - Unable to MORT due to wet weather and lack of trucks.

8-31-74 WO Completion
thru
9- 5-74

9- 6-74 MI & RU Select Well Service. Starting completion.

9- 7-74 Nippled up wellhead & BOP's. Ran 310 jts. tbg. Tagged bottom @ 9570'. Pulled up & set tbg @ 9525', prep to circ hole w/treated wtr & spot acid on bottom. SDFN.

9- 8-74 Displaced hole w/2% Kcl wtr. Spotted 100 gal 7½% Morrow Flow acid fr 9375-9525'. Pulled tbg. RU Schlumberger & attempted to run CBL-Gamma Collar Log. Two sets of tools failed to operate. SDFN.

9- 9-74 SD for Sunday.

9-10-74 Ran CBL-Gamma Ray & Collar Logs. Log indicated adequate bond thru zone of interest. Perf 9498-9512' & 9518-24' w/1 shot/ft. Ran tbg & pkr as follows:

2 jts.	2-3/8" 4.70#, N-80, EUE 8 Rd		60.95'
	Baker Model "R" Double Grip Pkr		6.00'
	Seating Nipple - 1-25/32"		1.00'
301 jts.	2-3/8" 4.70#, N-80, EUE 8 Rd		9309.24'
303 jts.	Tbg & Equip.		9377.19'
	Plus below RKB	+	14.00'
	Tbg set @		9391.19'
	Minus	-	66.95'
	Top of pkr @		9324.24'

Removed BOP's, set pkr w/15,000# compression, nippled up wellhead & SION.

9-11-74 Swbd well down & dry. Waited 2 hrs - had 200' fluid accumulation. Swbd well dry again - no show of oil or gas.

McELVAIN-FEDERAL #1 HILLIARD OIL & GAS, INC.

9-12-74 SITP 0#, on slight vacuum. Ran swb, 1000' fluid in hole, rec 400' wtr, NSO&G. Dropped swb mandrel in tbg while changing swb cups. Fished same out of hole. Ran swb - found 1000' fluid in hole, rec 400' wtr, NSO&G. RU Halliburton & treated perfs 9498-9512' & 9518-24' w/3000 gal 7½% Morrow Flow acid, split into 6 stages w/five drops of 6 ball sealers. Initial Treating press 3900# @ 4.5 BPM. Pressure increased by 100-200# on each stage of ball sealers. Final treating pressure 4500# @ 4.2 BPM. Avg press 4200# @ 4.3 BPM. ISIP 3100#, 5" SIP 2800#, 15" SIP 2400#. Blead off press & started swbg. Fluid level dropped steadily to 6700' & then began to get fluid out of formation. Fluid level began to hold @ 6000'. Fluid from formation began cutting hihg percentage of oil almost immediately. Acid gas & formation gas sufficient to scatter fluid from 3000' to 9000'. On last run of swb, solid fluid level 8400', pulled from seating nipple @ 9324'. Rec 3.5 BF, 75% oil, 25% spent acid wtr. Have rec 60 Bbls of 110 Bbls acid & load wtr.

9-13-74 SITP 600#. Op well on 1" choke. Flwd 25 BF - 10% wtr & died. Ran swb, found fluid scattered in hole. Made 3 runs & rec 6 BF - 50% wtr. SD 1 hr - FL 6000'. Swbd 6 BF, 100% oil. SD 1 hr - FL 8100', swbd 3 BF, 100% oil. Continued swbg & recovering approx 3 BF/hr - 90-100% oil. SDON.

9-14-74 SITP 800#. Opened well on 20/65 ck. Pressure bled off & well started flwg by heads. Flwd est 25 BO, no wtr, to pit. Ran swb & found scattered fluid in hole. Swbd 3 BF/hr - 90-100% oil. SD, unable to get frac equipment.

9-15-74 SITP 700#. Opened on 20/64 ck. Bled off pressure & well flwd about 20 BO to pit. Ran swb & found scattered fluid, rec 10% wtr. RU Halliburton & fraced w/30,000 gal gelled 2% Kcl wtr (low-gel system) & 31,500# 20/40 sand. Avg treating press 6600# @ 10 BPM down 2-3/8" tbg. ISIP 3400#, 5" SIP 3300#, 15" SIP 3100#. Total Load - 950 Bbls. Left well SION.

9-16-74 18 hr SIP 400#. Opened well on 20/64 ck. Pressure bled off to 0# rapidly. Started swbg, rec 40 BLW, FL 3700'. SD due to heavy rain. 910 BLWTR. SDON.

9-17-74 SITP 300#. Bled off press. Ran swb & found FL @ 300'. Swbd well down to seating nipple w/little fluid feed in. After 2 hrs, fluid started feeding in. Having trouble w/swb cups tearing up. At end of day FL 7500' making 20% oil. Swbd 85 BLW; 825 BLWTR. SION.

9-18-74 SITP 500#. Opened on 20/64 ck & flwd 15 BO & died. Ran swb, found FL @ 6500'. Continued swbg, recovering 4 BF/hr, 10% wtr. Rec 55 BF - est 50 BO, 5 BLW. 820 BLWTR. SION.

9-19-74 SITP 650#. Opened well on 20/64 ck. Flwd 10 BO. Ran swb, found FL @ 5500'. Swbd & flwd 55 BF, 10% wtr. Fluid level went down to seating nipple. SD @ 5:00 PM due to heavy rain. Put well on 16/64 ck. Well flwd 35 BF over night. TP 0# & dead this AM.

9-20-74 Swbd 45 BF in 10 hrs, 95% oil, 5% load wtr. Fluid level 7000'± & scattered. Left well open on 16/64 ck. Flwd 30 BF to tank over night. TP 0#, gassing lightly.

9-21-74 Rel pkr. Pulled tbg & pkr. Went in hole w/tbg & tbg anchor. Tagged sd @ 9504'. SDON.

9-22-74 SD for wet weather. Prep to wash out sand fill.

9-23-74 SD for Sunday & wet weather.

McELVAIN-FEDERAL #1 HILLIARD OIL & GAS, INC.

9-24-74 RU pump truck & washed out sd fill up from 9504' to 9545'. Pulled up & set tbg @ 9519' as follows:

1 jt - 2-3/8", 4.7#, N-80, EUE 8 Rd	30.12'
Pump Seating Nipple - 1-25/32"	1.00'
2 jts - 2-3/8", 4.7#, N-80,EUE 8 Rd	61.20'
Guiberson TM Anchor-Catcher	2.50'
304 jts - 2-3/8", 4.7#, N-80, EUE 8 Rd	9401.82'
307 jts & equip.	9496.64'
Plus below RKB when set	+22.36'
Tubing set @	9519.00'
Minus	-31.12'
Pump Seating Nipple @	9487.88'
Minus	-63.70'
Tubing Anchor set @	9424.18'

Set tubing anchor w/54" stretch (18,000# tension). Hooked up well head. SD due to rain.

9-25-74 Swbd 250 Bbls wtr. SD for night.

9-26-74 Swbd 175 Bbls fluid, running 30% oil by end of day. FL 7500'. Prep to run rods & pump.

9-27-74 SITP 300#, SICP 300#. Swbd 135 BF, 10 hrs. At end of day, fluid was 80% oil, 20% load wtr. FL about 6500'. Good gas volume. Rods & pump arrived on location late. Will run rods & pump today.

9-28-74 Ran 2" X 1¼" pump on 7/8" & 3/4" rod string. Rel Select Well Service. WO pumping unit installation.

9-29-74 thru 10-1-74 WO pumping unit installation.

10-2-74 WO pumping unit installation - engine overhaul to be completed today.

10-3-74 thru 10-10-74 WO pumping unit installation.

10-11-74 Set American 228-212-86 pump unit w/Fairbanks Morse AC 739 gas engine. Hooking up fuel gas system.

10-12-74 Hooked up well head. SITP 500#, SICP 1100#. Cracked valves on csg & tbg to bleed off pressure.

10-13-74 Flwd 180 BO, 20 BLW, 24 hrs. After 24 hrs, TP 0-50#, CP 60#, flwg oil by heads. Shut well in w/storage full.

10-14-74 Well shut in. Storage full. Unable to move oil due to wet weather.

10-15-74 Well shut in. Storage full. Unable to move oil due to wet weather.

10-16-74 Moved oil from test tank. Will re-open well today & start up pump unit.

10-17-74 Treating oil in test tank & moving today. Will start pump tomorrow.

10-18-74 Re-treating oil in test tank.

10-19-74 Re-treated oil. Will empty test tank today.

10-20-74 Emptied test tank. SITP 500#, SICP 900#. Cracked tbg & csg valves to bleed off pressure. Left well flwg.

10-21-74 Flwd 260 BO, 20 BLW, 24 hrs. TP 0 - 50#, CP 60#. Plan to start up pump unit today.

McELVAIN-FEDERAL #1 HILLIARD OIL & GAS, INC.

10-22-74 F: 110 BO, 10 BW, 18 hrs, valves cracked, TP 0 - 50#, CP 100#, flwg by heads. Shut well in. Storage full. Will have to treat oil.

10-23-74 SI - treating oil in test tank.

10-24-74 Unable to move oil from storage tank due to wet weather.

10-25-74 Moving oil today. Should be able to open up well this PM.

10-26-74 Moved oil & opened up well.

10-27-74 F: 280 BO, 20 BW, 24 hrs. TP 0 - 50#, CP 100#. No choke on well head, flwg through cracked valves.

10-28-74 SI - treating oil in test tank. Tank pad built, prep to set battery tanks & treater.

10-29-74 Re-treating oil in test tank. Setting tank battery and treater.

10-30-74 thru 11- 2-74 Building tank battery. Well SI.

11-3-74 F: 214 BO, 18 BW, 24 hrs. TP 0 - 50#, 24/64" ck.

11-4-74 Completing tank battery. No report on production.

11-5-74 F: 120 BO, 12 BW, 24 hrs, 24/64" ck. TP 0-50#, CP 250#. Battery completed. Started pumping @ 3:00 PM, 11-4-74.

11-6-74 P: 130 BO, 12 BW, 24 hrs.

11-7-74 P: 103 BO, 5 BW, 24 hrs.

11-8-74 P: 101 BOPD, 6 BWPD, 24 hrs.

11-9-74 P: 146 BO, 10 BW, 24 hrs, CP 300#.

11-10-74 P: 112 BO, 8 BW, 24 hrs, CP 350#.

11-11-74 P: 132 BO, 9 BW, 24 hrs, CP 400#.

11-12-74 P: 119 BO, no wtr, 24 hrs, CP 420#.

11-13-74 P: 130 BO, 1 BW, 24 hrs, CP 400#, 24/64" ck. Initial Potential: 11-11-74: P: 132 BO, 9 BW, 54.7 MCF, GOR 414. Oil gravity 35 API, TP 30#, CP 400#. Final Report.

Form 9-330
(Rev. 5-68)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.: NM 0245247

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: McElvain-Federal

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 30, T-18-S, R-34-E

12. COUNTY OR PARISH: Lea

13. STATE: New Mexico

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: HILLIARD OIL & GAS, INC.

3. ADDRESS OF OPERATOR: 906 Building of the Southwest, Midland, Texas 79701

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1980' FEL & 1980' FSL
At top prod. interval reported below: random
At total depth: random

14. PERMIT NO.:

DATE ISSUED: 5-17-74

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
6-1-74	8-22-74	10-27-74	GR 3903, RKB 3921	3903

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
14,075'	9570'		→	0-14,075'	--

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 9498' - 9524' Bone Spring Sand

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: DLL, BHC-Sonic, FDC-CNL, MLL

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	54.40#	355	17½"	370 sx Class "C"	None
8-5/8"	24 & 32#	5115	11"	300 sx Hal Lite, 200 sx "C"	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
4-1/2"	4870'	9649'	500	No

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8"	9515'	Anchor @ 9420'

31. PERFORATION RECORD (*Interval, size and number*)
9498-9512' (15 - 0.40" shots)
9518-9524 (7 - 0.40" shots)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
9498-9524	3000 gal 7½% acid
	Fraced w/30,000 gal gelled 2%
	KCL water & 31,500# Sd.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
10-27-74	Pumping - 2"X1¼" Rod pump	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
11-11-74	24	Open		132	54.7	9	414

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
	400#		132	54.7	9	35

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): fuel & vented

TEST WITNESSED BY: G. L. McCormick

35. LIST OF ATTACHMENTS: Logs, DST reports, Mud Log, Geological Report furnished under separate cover

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED David K Ramey TITLE Mgr. of Operations DATE 11-12-74

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Bone Springs	9500'	9607'	DST #1 15" IF, 30" ISI, 90" FF, 120" FSI. Rec. 2615' GIDP, 10' Free oil, 170' GCDF. IHP 4174#, IFP 100-112#, ISIP 3171#, FFP 125-138#, FSIP 3882#, FHP 4174#.
Morrow	13130'	13286'	DST #2 30" IF, 120" ISI, 140" 2nd F, 80" 2nd SI, 120" FF, 220" FSI. GTS during ISI. Flowed gas, cond. & water. Sample Chamber - 3.97 cu ft gas, 200 cc cond., 520 cc water. IHP 7094#, IFP 1733-2434#, ISIP 6828#, 2nd FP 2623-2983#, 2nd SIP 6620#, FFP 1676-2434#, FSIP 6563#, FHP 7037#.
Morrow	13270'	13369'	DST #3 Mis-Run
Morrow	13251'	13369'	DST #4 20" IF, 70" ISI, 60" FF, 120" FSI. Flowed gas at max. rate 17.5 MCF/D. Tools stuck. Rec 3000' WC, 210' GCDF. IHP 7176#, IFP 1494#. ISIP 5425#, FFP 1512#, FSIP 6658#, FHP 7176#.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Anhydrite	1697'	
Top of Salt	1900'	
Base of Salt	2950'	
Yates	3200'	
San Andres	5064'	
Delaware	5678'	
Bone Spring	7611'	
Wolfcamp	10446'	
Strawn	12240'	
Atoka	12479'	
Morrow	13124'	
Miss. Lime	14027'	

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636

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SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0514	0	1/8"
VERY WEAK BLOW			
CLOSED FOR INITIAL SHUT-IN	0529	0	"
FINISHED SHUT-IN	0559	0	"
RE-OPENED TOOL	0600	0	"
VERY WEAK BLOW INCREASING TO GOOD BLOW			
OPENED ON 1" CHOKE	0635	0	1"
BLOW DIED	0640	0	"
CLOSED CHOKE	0640	0	CLOSED
BLOW INCREASED TO GOOD BLOW			
CLOSED FOR FINAL SHUT-IN	0730	0	"
FINISHED SHUT-IN	0930	0	"
PULLED PACKER LOOSE	0932	-	-

Cushion Type	Amount	Pressure	Bottom Choke
	-		Size 5/8"

MUD DATA

Mud Type FRESH WATER Wt. 8.4
Viscosity 28 Water Loss - C.C.
Resist. of Mud 1.55 @ 78 °F; of Filtrate 1.55 @ 78 °F
Chloride Content 1600 PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. OPEN HOLE
Formation Tested PENNSYLVANIAN
Elevation - Ft.
Net Productive Interval - Ft.
Estimated Porosity - %
All Depths Measured From KELLY BUSHING
Total Depth 9607 Ft.
Main Hole/Casing Size 7 7/8"
Rat Hole/Liner Size -
Drill Collar Length 600' I.D. 2.25"
Drill Pipe Length 8863' I.D. 3.8"
Packer Depth(s) 9494' & 9500 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure 0 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas 0
cc. Oil 980
cc. Water 920
cc. Mud -
Tot. Liquid cc. 1900
Gravity 36.7°API @ 60 °F.
Gas/Oil Ratio - cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	2.1 @ 84 °F.	1700 ppm
Recovery Mud	- @ - °F.	
Recovery Mud Filtrate	- @ - °F.	- ppm
Mud Pit Sample	1.55 @ 78 °F.	
Mud Pit Sample Filtrate	1.55 @ 78 °F.	1600 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
GAS	2615	-				@ °F.	@ °F.	
FREE OIL	10	0.05				36.7@ 60 °F.	@ °F.	
DRILLING FLUID	170	0.83				@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address 906 BUILDING OF THE SOUTHWEST; MIDLAND, TEXAS 79701

Company HILLIARD OIL & GAS, INC. Field WILD CAT
Well MC ELVAIN-FEDERAL #1 Location SEC. 30-T18S-R34E
Test Interval 9500' TO 9607' Test # 1 Date 7-4-74

County LEA State NEW MEXICO Field Report No. 05545 C
Technician HART(HOBBS) Test Approved By MR. ELMER S. LYNN No. Reports Requested 20(9 x's)

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PRESSURE DATA

Instrument No.		J-112		
Capacity (P.S.I.G.)		6400		
Instrument Depth		9601'		
Instrument Opening		INSIDE		
Pressure Gradient P.S.I./Ft.				
Well Temperature °F.		139		
Initial Hydrostatic Mud	A	4216.9		
Initial Shut-in	B	* 3200.4		
Initial Flow	C	100.1		
	C-1	107.7		
	C-2	142.0		
Final Flow	D	162.4		
Final Shut-in	E	* 3919.2		
Final Hydrostatic Mud	F	4225.8		

Field Report No. 05545 C

TIME DATA

Time Given	Time Computed
30 Mins.	31 Mins
15 Mins.	16 Mins
- Mins.	- Mins
- Mins.	- Mins
90 Mins.	88 Mins
120 Mins.	121 Mins

Remarks:

INCREMENTAL BREAKDOWN DONE ON FOLLOWING PAGE.

*Shut in pressure did not reach static reservoir pressure.

Clock Travel 0.02078 inches per min.

PRESSURE INCREMENTS

Point Minutes	Pressure	$\frac{T+\Delta t}{\Delta t}$	Point Minutes	Pressure	$\frac{T+\Delta t}{\Delta t}$	Point Minutes	Pressure	$\frac{T+\Delta t}{\Delta t}$

HILLIARD OIL & GAS, INC

COST ESTIMATE & AUTHORITY FOR EXPENDITURE

Date 1-23-75 AFE. No.

Lease & Well No. UNION-STATE #1 Field or Area E-K Bone Spring
Location 660' FNL & 660 FWL, Sec. 32, T-18-S, R-34-E
County Lea State New Mexico Projected TD 9700'
Spud Date Requirement As soon as possible
Classification: Exploratory ( ) Development (X) Oil (X) Gas ( )

Justification: Drill development well to productive zone in McElvain-Federal #1.

	ESTIMATED GROSS COST			
Tangible Lease & Well Equip.	Drilling	Completion	Total	Remarks
1. Surface Casing	$ 6,250	$	$ 6,250	350' - 13-3/8" 54.5# K-55
2. Intermediate Casing	47,000		47,000	5200' - 8-5/8" 24&32#,K-55
3. Production Casing		21,500	21,500	4800' - 4-1/2" Liner
4. Tubing		22,500	22,500	9600' - 2-3/8" 4.7#, N-80
5. Wellhead Equipment	2,500	2,500	5,000	Series 900
6. Artificial Lift Equip.		35,000	35,000	Beam unit w/gas engine
7. Flow Line		750	750	500' - 2" L.P.
8. Process & Storage Equip.		23,000	23,000	2 - 500's & Treater
9. Power Supply Equipment				Not included
10. Packers, Anchors, Misc.	250	2,750	3,000	Baker Model "R" & etc.
Total Lease & Well Equip.	$ 56,000	$108,000	$164,000	
Intangibles				
1. a. MI, RU & RD ~~Footage ft @~~	$ 16,000	$	$ 16,000	
b. Daywork WDP 35 Day @ 3000	105,000		105,000	
c. Daywork WODP ____ Day @ ____				
d. Service Rig		6,000	6,000	10 days @ $600/Day
e. Fuel & Water	5,000	500	5,500	
f. Mud & Chemicals	7,500		7,500	
2. a. Supervision	3,000	2,000	5,000	Includes overhead
b. Geol. and/or Anal.	2,000		2,000	
c. Well Surveys	7,200	1,500	8,700	DIL, FDC-CNL, CBL
d. Drill Stem Tests	1,400		1,400	1 DST
e. Coring Equipment	1,000		1,000	1 50' Core
3. a. Cement & Service	5,000	3,200	8,200	
b. Floating Equipment	500	5,500	6,000	Includes liner hanger
c. Welding	250	250	500	
4. a. Perforating		1,200	1,200	
b. Fracturing & Service		12,000	12,000	30,000 gal 2% KCL
c. Acidizing & Service		2,500	2,500	3000 gal Morrow Flow
5. a. Location & Roads	8,500	2,000	10,500	
b. Transp. & Freight	500	2,000	2,500	
c. Roustabout Labor	300	2,500	2,800	Fence pit, set prod. equip
6. a. Bits & Rental Tools	25,000	2,000	27,000	
b. Miscellaneous	5,850	3,850	9,700	
Total Intangibles	$194,000	$ 47,000	$241,000	
TOTAL	$250,000	$155,000	$405,000	

Grand Total $405,000

H.O.G., Inc. 50 % $ 202,500

Others 50 % $ 202,500

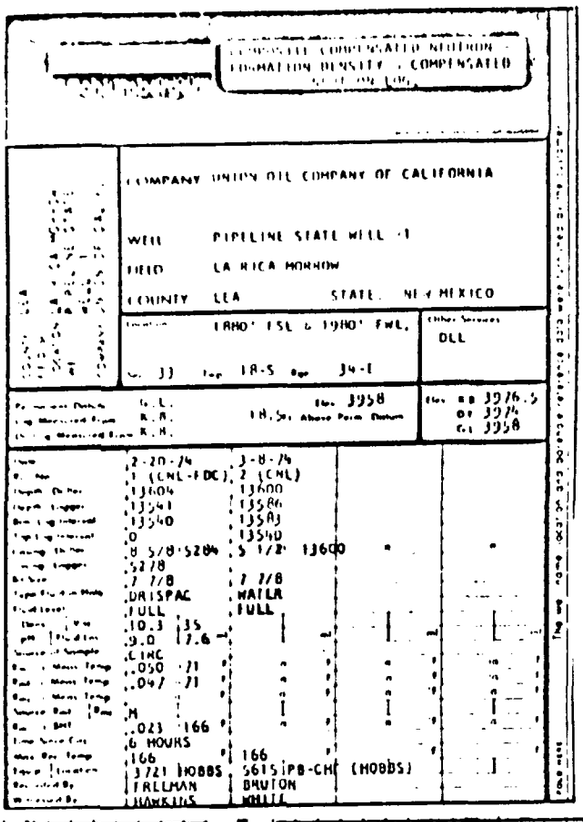
Prepared by: Darol K. Ramey
Darol K. Ramey

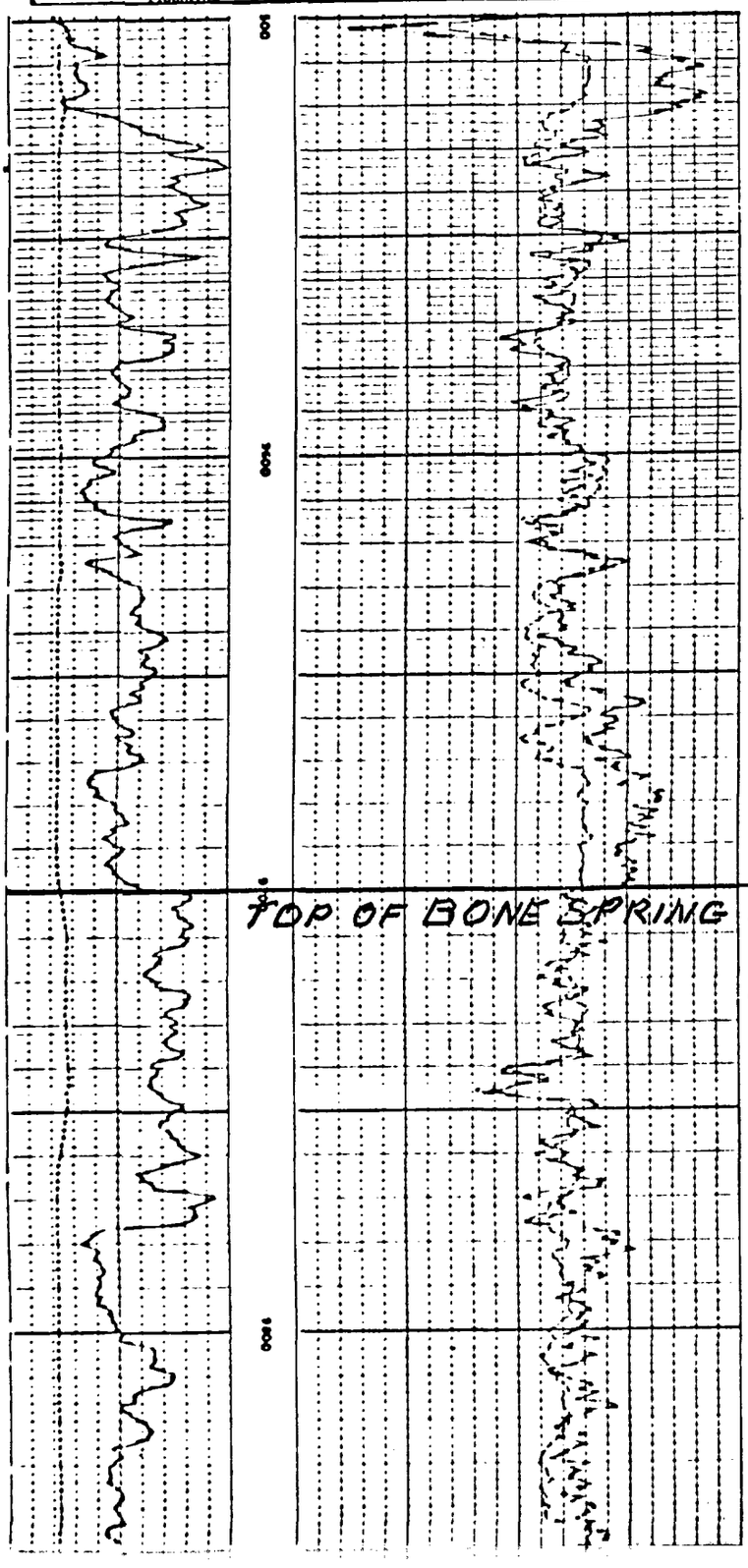
(Proposed Procedure & Details on reverse side)

APPROVALS

H.O.G., Inc. Date

Others Date





LOG ANALYSIS

TOP OF BONE SPRING SAND PAY 9700 (-5723)

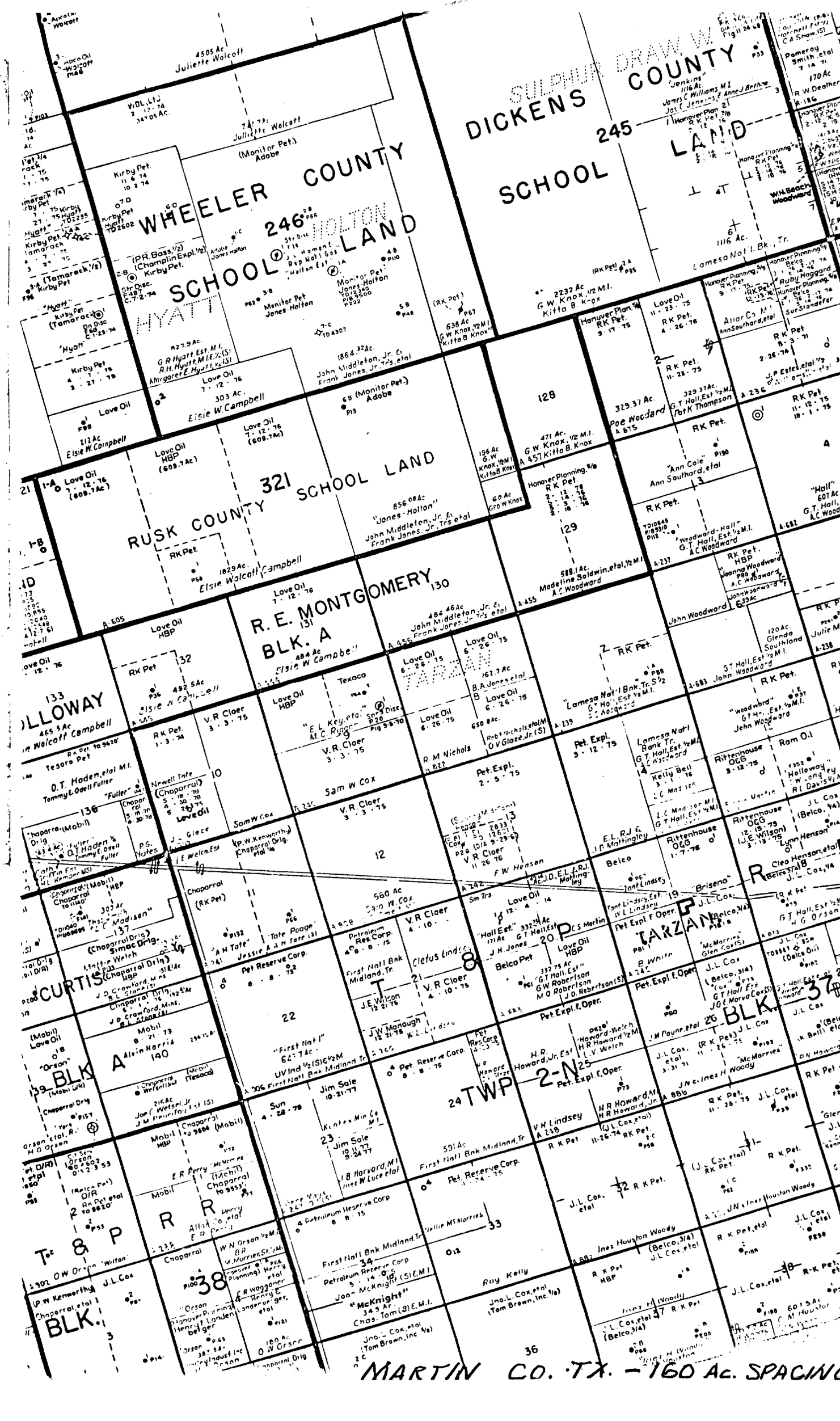
9725-9729 ϕ 6% Sw 52%

9740-9743 ϕ 10.5% Sw 59%

9745-9747 ϕ 13% Sw 67%

9756-9759 ϕ 7% Sw 54%

No Test


WHEELER COUNTY
DICKENS COUNTY
RUSK COUNTY
SCHOOL LAND
246
245
321
SULPHUR DRAW W.
HOLTON
HYATT
R. E. MONTGOMERY BLK. A
131
130
129
128
133
132
136
137
CURTIS
LOLLOWAY
TARZAN
BLK. 39
BLK. 37
BLK. 38
BLK.
24 TWP
2-N
T-2 & P
R R
Juliette Walcott
4505 Ac
Monitor Pet.
Adobe
Kirby Pet.
Hyatt TD2602
Hyatt TD2295
Tamarack
Love Oil
RK Pet.
Hanover Plan. RK Pet.
Hanover Planning RK Pet.
Lamesa Nat'l Bk., Tr.
Lamesa Nat'l Bk. Tr. S½
Elsie W. Campbell
303 Ac.
1029 Ac.
484 Ac.
496.46 Ac.
John Middleton, Jr. Et
Frank Jones, Jr. Trs. etal
856.08 Ac
"Jones-Holton"
638 Ac
G. W. Knox, ½ M.I.
Kitta B. Knox
471 Ac.
196 Ac
60 Ac
329.37 Ac.
Poe Woodard
Ann Southard, etal
Ann Cole
Joanna Woodward
John Woodward
588.1 Ac.
Madeline Baldwin, etal, ½ M.I.
A. C. Woodward
465.5 Ac
Tesoro Pet
O. T. Haden, etal M.I.
Tommy L. Odell Fuller
"Fuller"
Chaparral (Mobil)
Drlg.
Newell Tate
(Chaparral)
Love Oil
Sam W. Cox
V. R. Cloer
Texaco
"E. L. Key, etal"
M. C. Ryegan
Sam'l Disc.
Pet. Expl.
Lamesa Nat'l Bank Tr.
G. T. Hall, Est. ½ M.I.
J. C. Woodward
Kelly Bell
L. C. Madison
Rittenhouse
OGG
Ram Oil
"Woodward"
John Woodward
"Holloway"
W. Long Ley
R. L. Davis
Cleo Henson, etal
J. L. Cox
(Belco, 3/4)
Lynn Henson
"Briseno"
Belco
Tant Lindsey
Pet. Expl. & Oper.
"Hall Est."
J. H. Jones
Belco Pet
C. S. Martin
G. T. Hall, Est.
G. W. Robertson
M. O. Robertson
J. D. Robertson (S)
"McMorries"
Glen Cox (S)
Dalco Oil
Alvin Harris
Mobil
Chaparral
Jim Sale
Sun
Kenton Min. Co.
J. B. Harvard, M.I.
Ines W. Lucie etal
First Nat'l Bank Midland, Tr.
Petroleum Reserve Corp.
Cletus Lindsey
J. E. Wilson
J. W. Manaugh
H. R. Howard, Jr. Est
H. R. Howard ½ M
L. V. Welch
V. H. Lindsey
R K Pet
J. L. Cox, etal
Ines Houston Woody
Ray Kelly
Jno. L. Cox, etal
(Tom Brown, Inc. 5/8)
"McKnight"
Chas. Tom (3/8) E. M.I.
Petroleum Reserve Corp
Ellie M. Morries
Jno. L. Cox, etal
(Belco, 3/4)
J. L. Cox, etal
R K Pet HBP
J. L. Cox, etal
(Belco, 3/4)
O. W. Orson
J. L. Cox
(P. W. Kenworthy
Chaparral, etal
Orson
Hanover Planning
Henry Landenberger, etal
Chaparral Drlg
Orson Industries Inc
MARTIN CO. TX. — 160 Ac. SPACING

WELL PERFORMANCE DATA

McElvain-Federal #1
EK Bone Spring Field
Lea County, New Mexico

Nov. 74 Day	Prod. Bbls. Oil	Dec. 74 Day	Prod. Bbls. Oil	Jan. 75 Day	Prod. Bbls. Oil	Feb. 75 Day	Prod. Bbls Oil
2	74	1	99	1	87	1	105
3	214	2	133	2	99	2	110
4	124	3	93	3	93	3	110
5	103	4	140	4	85	4	102
6	115	5	89	5	65	5	98
7	102	6	110	6	97	6	98
8	146	7	105	7	85	7	102
9	132	8	104	8	98	8	113
10	112	9	104	9	99	9	112
11	118	10	107	10	99	10	110
12	130	11	111	11	22		
13	121	12	114	12	133		
14	107	13	113	13	104		
15	109	14	107	14	57		
16	110	15	108	15	116		
17	118	16	110	16	116		
18	111	17	109	17	118		
19	117	18	104	18	105		
20	121	19	105	19	107		
21	106	21	102	20	101		
22	110	21	94	21	99		
23	115	22	104	22	86		
24	110	23	97	23	93		
25	112	24	99	24	91		
26	121	25	89	25	101		
27	109	26	99	26	104		
28	110	27	94	27	105		
29	115	28	94	28	107		
30	108	29	98	29	112		
		30	99	30	98		
		31	97	31	99		

RESERVE ESTIMATE

McElvain-Federal #1
EK Bone Spring Field
Lea County, New Mexico

Pressure history is not available at this time and production history is too short to use for reserve estimation. Therefore a volumetric calculation of reserves is all that is available at this time.

It is assumed that the reservoir energy is primarily solution gas. Gas Oil Ratio is measured at approximately 500/1. Other estimates are made from log data.

$$OIP = \frac{7758\ (\emptyset)\ (1-Sw)}{B}$$

Where: OIP = Stock Tank Oil in place B/ac. ft.
$\emptyset$ = 13% from log data
Sw = 50% from log data
B = 1.4 estimated

$$OIP = \frac{7758\ (.13)\ (.50)}{1.4} = 360 \text{ B/ac. ft.}$$

Recovery Factor (Solution Gas Drive) - 20% Estimate

Recoverable Oil in place - 360 X 20 = 72 B/ac. ft.

Pay thickness - 20 ft. - based on log data

Reserves per 80 ac. - 72 B/ac. ft. X 20 ft. X 80 ac. = 115,200 Bbls.

WELL PERFORMANCE CURVE

McElvain-Federal #1

EK Bone Spring Field

Lea County, New Mexico

(From 11-2-74 to 2-10-75)

Oil Production BOPD

Hot oiled well

Cum 11000 to date

10 00
9 00
8 00
7 00
6 00
5 00
4 00
3 00
2 00
1 00
9 0
8 0
7 0
6 0
5 0
4 0
3 0
2 0
1 0
9
8
7
6
5
4
3
2
1

1 12 24 6 18 30 11 23 4 16 28 12 24 5 17 29

Nov. 74 Dec. 74 Jan. 75 Feb. 75 Mar. 75 Apr. 75