Form 9-330
(Rev. 5-63)

N. M. O. C. C. SUBMIT IN DUPL.

Copy to SF

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(See other instructions on reverse side)

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: NM-0454018

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Wersell Federal Com

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Undesignated Morrow Gas

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 4, T-22S, R-27E

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

RECEIVED
NOV -2 1973
O. C. C.
ARTESIA, OFFICE

2. NAME OF OPERATOR: Union Oil Company of California

3. ADDRESS OF OPERATOR: P.O. Box 671 - Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 810' FNL & 1980' FWL
At top prod. interval reported below
At total depth

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
	7-27-73	Eddy	N.M.

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
8-30-73	10-15-73	10-26-73	3218' GR	

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
11660'	11580'		→	0 - 11660'	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
11268-11272' ; 11337-11348' Middle Morrow
11473-11477' ; 11501-11505' Lower Morrow

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: GRD: 0-5233' DL: 400-5220', 5266-11648'
GRCN: 2800-5266' GRFD-CN: 5266-11648'

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"	48	400'	17½"	600 sx circ. to surface	
9-5/8"	40	5262'	12¼"	2400 sx circ. to surface	
5½"	17	11660'	8½"	900 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8"	11135'	11100'

31. PERFORATION RECORD (Interval, size and number)

11268-11272'	½"	10
11337-11348'	½"	24
11473-11477'	½"	10
11501-11505'	½"	10

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11473-11505'	250 gals. acetic & 1500 gals. 15% MS
11268-11505'	3000 gals. 15% MS

RECEIVED
NOV 2 1973
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
10-26-73	Flowing	Shut-in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST. PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
10-27-73	1-point						

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
				AOF: 1673		Dry

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
Shut-in pending pipe line connection

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
Copies of logs to be forwarded from our Roswell, New Mexico, office.

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

SIGNED [signature] TITLE District Production Supt. DATE Oct. 31, 1973

*(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.
	11268	11272	
	11337	11348	Middle Morrow perfs.
	11473	11477	
	11501	11505	Lower Morrow perfs.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Delaware sand	1926	
Bone Springs	5096	
Wolfcamp	8798	
Strawn	10092	
Atoka	10444	
Morrow	10899	
Middle Morrow	11242	
Lower Morrow	11471	
Chester	11600	

U.S. GOVERNMENT PRINTING OFFICE: 1969—O-683636

Copy to SF
C-12

NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
APR 8 1974
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 2-26-74	
Company: Union Oil Co. of California	Connection: Llano, Inc.				
Pool: ~~A. Carlsbad~~ ~~Undesignated~~ Morrow Gas	Formation: Morrow			Unit	
Completion Date: 10-26-73	Total Depth: 11,660'		Plug Back TD: 11,580'	Elevation: 3152 GR	Farm or Lease Name: Wersell Federal Com
Csg. Size: 5-1/2" / Wt.: 17# / d: 4.767 / Set At: 11,600'			Perforations: From 11,268' To 11,505'		Well No.: 1
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.901 / Set At: 11,100'			Perforations: From To		Unit: C / Sec.: 4 / Twp.: 22-S / Rge.: 27-E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 11,100'		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 179 @ 11,660'	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,386	11,386	0.601	1.01	1.13	0		3.068	Flange

NO.	FLOW DATA: Prover Line Size x Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					2650	71	Pkr	71	72 Hrs
1.	3.068 x 3/4	780	8	91	2530	70	0	71	24 Hrs
2.	3.068 x 3/4	780	21	89	2040	69	0	71	24 Hrs
3.	3.068 x 3/4	780	36	90	1470	68	0	71	24 Hrs
4.	3.068 x 3/4	820	55	93	820	68	0	71	24 Hrs
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	2.672	79.659	793.2	0.9715	1.290	1.055	281
2.	2.672	129.063	793.2	0.9732	1.290	1.055	457
3.	2.672	168.983	793.2	0.9723	1.290	1.055	597
4.	2.672	214.070	833.2	0.9697	1.290	1.058	757
5.							

NO.	P_t	Temp. °R	T_f	Z
1.				
2.				
3.				
4.				
5.				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: - Deg.
Specific Gravity Separator Gas: 0.601 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 674 P.S.I.A. - P.S.I.A.
Critical Temperature: 354 R - R

P_c 3458 * P_c^2 11957.8

NO	P_t^2	P_w *	R_w^2	$P_c^2 - P_w^2$
1		3307	10936.2	1021.5
2		2694	7257.6	4700.1
3		1939	3759.7	8198.0
4		1106	1223.2	10734.5
5				

(1) $\frac{P_c^2}{P_c^2 - R_w^2} = \frac{11957.8}{10734.5}$ (2) $\left[\frac{P_c^2}{P_c^2 - R_w^2}\right]^n = 1.0940$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - R_w^2}\right]^n = 829$

Absolute Open Flow: 828 Mcfd @ 15.025 | Angle of Slope θ: 55.4° | Slope, n: 0.687

Remarks: * Bottom hole pressures calculated from surface data utilizing computer program of Cullender-Smith method for calculating both flowing and shut-in BHP.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	L. H. Pardue	John Roe	John Roe