N. M. O. C. C.

Form 9-330
(Rev. 5-63)

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-1128

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Morrison Federal

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 26, T-26-S, R-23-E

12. COUNTY OR PARISH:

13. STATE:

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

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

RECEIVED
JUN 1974
O. C. C.
ARTESIA, OFFICE

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

2. NAME OF OPERATOR: C & K Petroleum, Inc.

3. ADDRESS OF OPERATOR: 607 Midland National Bank Bldg., Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 660' FN & 1980' FE Lines, Sec. 26, T-26-S, R-23-E
At top prod. interval reported below
At total depth

14. PERMIT NO. | DATE ISSUED

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
1-15-74	2-22-74	Dry Hole	4110 Gr.	4108

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
9200'	--	--	⟶	0-TD	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: Dry Hole

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Comp. Acoustic Vel., Forxo, and Guard Logs

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
12-3/4"	Conductor	165'	17-1/2"	275 sx. cement circ.	-0-
8-5/8"	24, 28 & 32#	1870'	11"	700 sx. cement circ.	-0-

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number): Dry Hole

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
Dry Hole	

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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)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD ⟶	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE ⟶	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

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

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: Geological & DST Report, and Well Logs

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

SIGNED _____ TITLE Administrative Supervisor DATE 5-31-74

*(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.
SEE ATTACHMENT			

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Bone Spring Ls.	3750'	
3rd BS ss	6200'	
Strawn	7745'	
Morrow Ls	8365'	
L/Morrow (M_3)	8784'	
Barnett	9157'	

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

EARL E. GAERTNER
CONSULTING GEOLOGIST
703 GIHLS TOWER WEST
Midland, Texas 79701

Off. 682-2333
Res. 682-0773

March 7, 1974

Mr. Edward W. Hooper
C&K Petroleum, Inc.
607 Midland National Bank Bldg.
Midland, Texas 79701

Re: C&K Petroleum, Inc. No. 1
Morrison-Federal
660' FNL & 1980' FEL of
Section 26, T-26-S, R-23-E,
Eddy County, New Mexico.

SPUDDED:	6:30 PM, January 15, 1974
PLUGGED & ABANDONED	February 25, 1974
ELEVATION:	4110' GL, 4125' KB
TOTAL DEPTH:	9200' Hondo, Rig 3, 9203' Welex
CASING:	Set 12 3/4" @ 165' w/275 sxs Class H with 2% CaCl. Circulated out 40 sxs. PD 3:30 AM, 1-17-74. Set 8 5/8" @ 1877' w/500 sxs (50-50 poz mix) w/4% gel and 200 sxs Class H w/2% CaCl. Circulated out 200 sxs. PD 4:20 AM, 1-21-74.
CONTRACTOR:	Hondo Drilling Company, Rig 3, Midland, Texas
	Pushers: Tommy Richey J. D. Berry Hobbs, New Mexico

DRILLING MUD:

Tiger Mud Company
Eldon March
Midland, Texas

DRILL STEM TESTING:

Johnston Testers
Bruce Hart
Hobbs, New Mexico

ELECTRIC LOGGING:

Welex, Inc.

Engineer: Paul Campbell
Hobbs, New Mexico

Log Calculations: Bob Mallett
Midland, Texas

PARTICIPANTS:

The Desana Corporation
Midland, Texas

Kerr-McGee
Oklahoma City, Oklahoma

J. M. Huber Corp.
Midland, Texas

Superior Oil Company
Midland, Texas

David Fasken
Midland, Texas

Marshall & Winston
Midland, Texas

HYDROCARBON LOGGING:

Core Lab
Midland, Texas

Logger: Wayland Noles
Throckmorten, Texas

GEOLOGIST:

Earl E. Gaertner
Midland, Texas

Ten foot drilling time was recorded from 1000' to 9200' and Xerox copies were delivered to the participants. A two-foot drilling time log on a 5-inch scale was prepared from 8360' to 9200' to be used in conjunction with the Welex porosity logs.

Samples were caught from 1000' to total depth and delivered to the Midland Sample Cut for distribution. A Core Lab field cut was made and boxed for permanent reference from 7000' to total depth.

A sample log was prepared with the lithologic description plotted from 1000' to total depth. Drilling time, deviations, daily progress, mud properties, etc., were also posted on the log.

DELAWARE

Sample evaluation commenced at 1000' in the Delaware (Cherry Canyon?) sandstone. The section down to the Bone Spring limestone at 3914' consisted mainly of light gray or clear, fine, sub-rounded sandstone and much loose sand, along with interbedded, brown, fine crystalline, limestone; tan crystalline dolomite, and black shale. No oil stain, odor, fluorescence or oil on the pits was observed throughout this section.

BONE SPRING LIMESTONE

The Bone Spring limestone top was picked at 4000' by samples and 3914' by electric log. Samples appear to have been "boilerhoused" through part of this section with intervals completely missing from 3600-3800', and from 3950-4000'. The Bone Spring carbonate facies was the typical, brown, very fine crystalline, limestone found throughout this area.

The section down to the third Bone Spring sandstone consisted of a continuation of the limestone - which became shalier with depth; black shale, and some siltstones.

No shows were observed in this interval.

THIRD BONE SPRING SANDSTONE

The third Bone Spring sandstone top was picked at 6200' by electric log, although siltstone was logged above this point commencing

at 6150' and extending down to 6270' where light gray, white, and light tan, fine, sandstone or loose sand was then logged down to 6420'. At this point more siltstone was described giving way to nearly 100% black shale at 6500'.

WOLFCAMP

The Wolfcamp limestone top was picked at 6670' by electric log and 6680' by samples. Below 6717', black shale, some limestone, and dark brown cherts were logged down to the Cisco-Canyon at 6943'.

CISCO CANYON

The Cisco-Canyon carbonate facies came in as a tan to brown, very fine crystalline limestone, accompanied by 10-30 per cent light tan, smokey, light blue, and white, transparent to translucent chert. No porosity, drilling breaks, or shows were observed in this section. Below 7320', mostly black, carbonaceous shale with varying percentages of interbedded brown to gray-brown, fine crystalline, sometimes mottled, slightly shaly limestone was logged down to the Strawn at 7745'.

STRAWN

The Strawn carbonate section came in much lower structurally than anticipated due to the extended shale section overlying it. The carbonate facies in turn was shaly and impervious with none of the dolomitization occurring that was present in the Samedan-Monsanto-Federal and Gulf-Mescal Wash wells located three miles to the northwest.

ATOKA

The Atoka top was picked at 7910' by electric log. A drilling break that occurred at 7910' was circulated out at 7925'. Gas readings were C_1 - 1200 units, C_2 - 300 units, C_3 - 50 units and 400 units on the hot wire.

No porosity was observed in the circulated limestone samples and later the electric log indicated an impervious section.

The Atoka down to the Morrow carbonate at 8360' consisted [illegible] the usual dark brown to gray-brown mottled limestones, interbedded with

clean tan to light brown, fine crystalline limestone, black shale, and blue-brown to dark brown translucent to opaque chert.

MORROW CARBONATE

The Morrow carbonate section came in at 8360' by samples and drilling time and at 8365' by electric log. Samples consisted of light tan to tan, fine crystalline, fossiliferous limestone devoid of porosity and/or shows. This top provided our first good structural and stratigraphic reference point below the third Bone Spring sandstone. Clean limestones were logged down to the Lower Morrow clastic section at 8744'.

MORROW CLASTICS

The first drilling break occurred from 8874-82' in an interval containing clear, medium to scattered coarse angular quartz sandstone and loose sand. No gas readings occurred opposite this zone.

A good drilling break then occurred from 8923-33' which was circulated out at 8936'. Gas readings were 310 units of methane and 80 units on the hot wire. Light tan to clear, medium, angular, slightly porous, poorly sorted sandstone containing embedded coarse quartz pebbles along with loose sand was described in the samples.

Another break occurred from 8962-67' and samples contained light tan to clear, fine to medium, angular, poorly sorted sandstone with some coarse, angular loose sand. Gas readings were 450 units of methane and 110 units on the hot wire.

The next break occurred from 8975-80' and the test was circulated at 8982' for a drill-stem test. Samples contained white to light tan, fine to some medium, angular, slightly porous sandstone and clear medium to coarse, angular quartz sand. Gas readings were C_1 165 units and 40 units on the hot wire.

DST No. 1 8790-8982'. Open 1' 45", 15" pre-flow, strong blow. 15 psi maximum pressure on 1/8" chk (9800 CFGPD). Shutin for 90". Gas to the surface 21" after shuting in tool. Reopened tool for 90" flow test with fair blow thru 1/2" chk. Reduced chk size to 1/8" after 20". Pressure increased to 8 psi at end of test (Estimated 6-7000 CFGPD)

Recovered 280' SI GCM, 190' SI G&WCM & 1320' SI GCW. (Total recovery 1790'). Sample chamber rec: 3.5 CFG + 2000 cc water under 450# pressure. BHT 175°F, IHP 4428#, FHP 4428#, 15" preflow: IFP 201#, FFP 404#; 90" Final Flow: IFP 443#, FFP 1052#; 90" ISIP 3764#, 3' FSIP 3742#.

	Rw	Temperature	Chlorides
Pit Water:	.10	56°F	60,000
Top-R/fluid	.10	68°F	67,000
Middle	.06	68°F	117,000
Bottom	.06	68°F	117,000
Samples	.06	68°F	119,000

After testing the well was drilled to a total depth of 9200' and the hole conditioned for logging. Additional sand was logged in the Lower Morrow but was described as either a fine, calcareous sandstone or siltstone interbedded with black carbonaceous shale and very sandy limestones. No drilling breaks occurred and no gas readings were monitored.

Welex, Inc. commenced logging operations at 10:00 PM, February 22, 1974, and completed the job at 8:00 PM, February 23, 1974. Compensated acoustic gamma ray, guard, and Forxo surveys were conducted.

ELECTRIC LOG CALCULATIONS
Bob Mallett - Welex

(Vm = 22,000 - Rw = .04)

Depth	Porosity%	Rw%
8851-55'	10	23
	(Vm = 20,000 - Rw = .04)	
8932-35'	7	27
8936-40'	7	39
8965-69'	12	37
8971-73'	4	80

(Vm = 20,000 - Rw = .04)

Depth	Porosity%	Rw%
8974-75'	6	31
8982-84'	13	81
8984-87'	9	68
9128-32'	8	20
9142-46'	7	18

Logger's total depth 9203'
Driller's total depth 9200'

After logging, a decision was made to run a hook-wall packer drill-stem test over an interval from 8870' to 8966'. However, the packers failed 10 minutes into the second flow period and a decision was then made to plug and abandon.

PLUGS

Amount - Sacks	Depth
15	Surface pipe
40	1830-1930'
40	3200-3300'
40	4700-4800'
40	6150-6250'
40	7700-7800'
40	8700-8800'

EARL E. GAERTNER

COMPARISON OF ELECTRIC LOG TOPS
T-26-S, R-23-E

	C&K Petr., Inc. Morrison-Federal Section 26 Elev: 4125' KB	Samedan No. 1 Monsanto-Federal Section 9 Elev: 4348' KB	Gulf No. 1 Mescal-Wash Section 17 Elev: 4413' KB
Bone Spring Ls	3750' (+211')	4348' (+898')	4413' (+925')
3rd Bone Spring ss	6200' (-2075')	5780' (-1432')	5720' (-1307')
Strawn	7745' (-3620')	6812' (-2464')	6890' (-2477')
Morrow Ls	8365' (-4240')	7595' (-3247')	7655' (-3242')
L/Morrow (M_3)	8784' (-4659')	7960' (-3612')	8035' (-3625')
Barnett	9157' (-5032')		8417' (-4004')
Total Depth	9200' (-5075')	8400' (-4052')	8500' (-4087')