

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG1. Indicate Type of Lease
State ☒ Free ☐
2. State Oil & Gas Lease No.
LH-00073. Well Agreement Name
4. Name of Lease Owner
State of New Mexico
5. Well No.
16-43
6. Field and Foot, or Wildcat
Nageezi7. County
San Juan8. Elevations (DF, RKB, RT, GR, etc.)
6870 RKB
9. Elev. Casinghead
685710. Was Directional Survey Made
No11. Was Well Cored
No

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

CASING SIZE	WEIGHT LB. FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	24	257	12 1/4"	200 sacks	None
4 1/2	10.5	5306	7 7/8"	1125 sacks	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 3/8"	4799	None

31. Perforation Record (Interval, size and number)

14 holes:

4855	4942	5025	5164
4865	4968	5039	5175
4886	4993	5076	
4912	5000	5085	

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4855--5174	105,000 gal 70 quality N ₂ foam and 120,000 * 10/20 sand

33. PRODUCTION

Date First Production 10-09-85	Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing	Well Status (Prod. or Shut-in) Prod.
Date of Test 10-24-85	Hours Tested 21	Choke Size 3/4
Flow Turning Press. 50 psi	Casing Pressure 600 psi	Calculated 24-Hour Rate 57
	Oil - BBL 50	Gas - MCF 45
	Water - BBL 0	Gas - Oil Ratio 900/1
	Oil Gravity - API (Corr.) 40.0	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

Test Witnessed By

Doyle Post

35. List of Attachments

Wellsite Geologic Report

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

TITLE

Manager of Operations

DATE

12/3/85

SEE ATTACHED GEOLOGIC REPORT

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____	T. Ignacio Quartz _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Padlock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Bluebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilite _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

No. 1, from _____ to _____ No. 4, from _____ to _____
No. 2, from _____ to _____ No. 5, from _____ to _____
No. 3, from _____ to _____ No. 6, from _____ to _____

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.

No. 2, from to feet.

No. 3, from to feet.

No. 4, from to feet.

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation

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WELLSITE GEOLOGIC REPORT

KENAI OIL & GAS INC
State of New Mexico 16-43
ne se 16-T23N-R8W
San Juan County, New Mexico

Prepared by: Dick Harnly

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OPERATOR: Kenai Oil & Gas Inc

WELL: State of New Mexico 16-43

PROSPECT: Juan No. 1
Nageezi Gallup

LOCATION: ne se 16-T23N-R8W
San Juan County, New Mexico

DRILLING CONTRACTOR: Young Drilling Co., Rig 2
Pusher: Gary Hawkins

MUD LOGGING: Durango Well Logging
Logger: Mark Harnly

WELLSITE GEOLOGY: Dick Harnly

MUD: Shiprock Mud Co.
Scott Smith

LOGGING: Schlumberger
S. Johnson/J. Kean

TESTING: No Cores or Tests

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FORMATION TOPS (from "E" logs)

Elevations: 6857 GL, 6871 KB

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Pictured Cliffs	1415	+5456
Cliff House	2887	+3984
Point Lookout	3810	+3061
Mancos	4005	+2866
Gallup	4831	+2040
Total Depth (Drilled)	5300	+1571
Total Depth (Schlumberger)	5306	+1565

For Bit Record and Mud Properties see mud log.

WELLSITE GEOLOGY & MUD LOGGING

These services were performed by Durango Well Logging from the depth of 2500 feet to the total depth of 5300 feet. Mud logging operations were conducted by Mark Harnly under the supervision of the wellsite geologist Dick Harnly. This one man mud logging operation included preparation of the drill cutting samples, monitoring of the gas detection and analysis equipment and preparation of the mud log with lithologic interpretation by the geologist.

Samples were caught by members of the drilling contractor's crews and were of a fair to good quality except where noted. The quality of the samples and the magnitude of the gas readings in the Gallup section were adversely affected by the variations in the mud properties... ie viscosity ranging from 100 to 37 resulted in an excessive amount of cavings and affected the credibility of the lag times...the 9.2 mud weight produced hydrostatic pressures of about 2400psi on the formation resulting in diminished gas entry into the mud system and reduced gas recordings.

OIL & GAS SHOWS

Mud logging services and wellsite geology were started at a depth of 2500 feet and no oil or gas shows were detected from that depth until well into the Point Lookout...with the exception of several coals with the associated small amounts of methane.

Deep in the Point Lookout between 3941 and 3992 feet a show of hydrocarbons was noted in a very fine grained sandstone. This slightly calcareous sandstone exhibited a fair spotty yellow fluorescence which yielded a fair to slow white cut fluorescence. This zone produced a maximum total gas reading of 14 units containing 7 units of methane, 4 ethane and one each of propane and butane. No shows were encountered in the upper portion of the

Point Lookout formation.

The next indication of hydrocarbons was detected in the Mancos formation about 100 feet above the Gallup. In this zone 4660 to 4670 feet a light gray calcareous siltstone exhibited a good yellow fluorescence in about 5% of the sample. A slow yellow white cut was obtained but no gas was detected while drilling this zone. This siltstone graded in part to a very fine grained sandstone with the same fluorescence and cut as above. While the show is of a minor nature these indications in an area of fractures or better porosity could be of economic interest.

The uppermost show in the Gallup was found in a calcareous siltstone between 4845 and 4854 feet5-10% of the sample had a good yellow fluorescence with a slow yellow white cut fluorescence. Gas readings from this zone were slight...6 units total gas, 4 methane, 1 ethane and a trace of propane. While drilling the Gallup zones the weight of the mud varied between 9.0 and 9.2; at this depth hydrostatic pressures between 2271 and 2498 psi were being exerted on the formation and gas entry into the mud system reducing the magnitude of the gas readings....this will always be the case when the hydrostatic pressure of the mud column is greater than the reservoir pressure.

Between 4960 and 4980 feet the second Gallup show was recorded on the gas detection equipment with a total gas reading of 16 units; 10 of ethane, 4 ethane and 1 unit each of propane and butane. No shows were found in the samples due to the abundant cavings present ...this condition was due variations in the viscosity of the mud...ranging from 100 to 42 seconds in less than 100 feet.

The next show evidenced in the drilling of this hole was encountered was in the interval 5030-45 feet in a very fine grained sandstone with some

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light tan oil staining, bright yellow fluorescence and a slow blue white cut fluorescence. The best gas shows in the Gallup was recorded in this zone; 22 units total gas, 13 units of methane, 5 ethane, 2 of propane and 1 unit of butane.

Shows in samples were also noted 5070-80 feet in a very fine grained silty sandstone with dull yellow fluorescence and a slow milky cut fluorescence : at 5087-95 feet in a very fine grained sandstone with fluorescence and cut as seen at 5070-80 the final sample show at 5100-05 feet in a tan very fine grained sandstone exhibiting good yellow fluorescence and a fair to poor blue white cut fluorescence. The evidence found in the samples covering these last three zones was slight...traces to 5% of the total samples...no gas was recorded in these later zones.

It is recommended that closer control should be utilized in the future mud programs ie: lower mud weight and constant viscosities.