

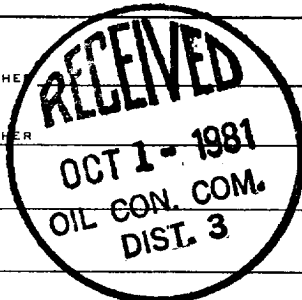
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Form O-105  
Revised 1-1-85

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. L-2986

1a. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER <input type="checkbox"/>
b. TYPE OF COMPLETION NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER <input type="checkbox"/>
2. Name of Operator Kenai Oil and Gas Inc.
3. Address of Operator 717 17th Street, Ste. 2000, Denver, CO 80202-3373
4. Location of Well



7. Unit Agreement Name None
8. Farm or Lease Name State of New Mexico 36
9. Well No. #21
10. Field and Pool, or Wildcat Lybrook Gallup Ext.

UNIT LETTER C LOCATED 590 FEET FROM THE North LINE AND 2030 FEET FROM THE West
LINE OF SEC. 36 TWP. 24N RGE. 8W NMPM

12. County San Juan
------------------------

15. Date Spudded 5/12/81	16. Date T.D. Reached 5/25/81	17. Date Compl. (Ready to Prod.) 7/27/81	18. Elevations (DF, RKB, RT, GR, etc.) 6890' GL; 6904' KB	19. Elev. Casinghead -----
20. Total Depth 5735' KB	21. Plug Back T.D. 5679'	22. If Multiple Compl., How Many None	23. Intervals Drilled By Rotary Tools Yes Cable Tools No	24. Producing Interval(s), of this completion - Top, Bottom, Name Lower Gallup: 5448-5562' Upper Gallup: 5331-5340'
25. Was Directional Survey Made No				26. Type Electric and Other Logs Run CBL/GR; CDL/CN/GR; DIFL/GR Logs are being forwarded under separate cover.
27. Was Well Cored Yes				

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"	23#	299' KB	12-1/4"	275 sxs	----
5-1/2"	14#	5735' KB	7-7/8"	1st stage: 300 sxs	----
				2nd: 1090 sxs	----

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
	NONE				2-3/8"	5594' KB	---

31. Perforation Record (Interval, size and number) SEE ATTACHED COMPLETION HISTORY	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	SEE ATTACHED COMPLETION HISTORY	

33. PRODUCTION							
Date First Production 9/23/81		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing	
Date of Test 9/23/81	Hours Tested 24	Choke Size 20/64"	Prod'n. For Test Period 175	Oil - Bbl. 210	Gas - MCF 0	Water - Bbl. 1200	Gas - Oil Ratio
Flow Tubing Press. 200	Casing Pressure 550	Calculated 24-Hour Rate 175	Oil - Bbl. 210	Gas - MCF 0	Water - Bbl. ---	Oil Gravity - API (Corr.)	

34. Disposition of Gas (Sold, used for fuel, vented, etc.) Will be sold when connected to gas pipeline.	Test Witnessed By Mr. Dave Howell
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35. List of Attachments Completion History, Wellsite Geologic Report, Core Analysis, other Logs run
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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 9/29/81

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 36 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1165.

### Southeastern 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 <b>1906'</b>	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House <b>3402'</b>	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout <b>4228'</b>	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos <b>4438'</b>	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup <b>5317'</b>	T. Ignacio Qtzte _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. <b>TD: 5735'</b>
T. Ibinebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	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 (Rough C) _____	T. _____	T. Penn. "A" _____	T. _____

### Northwestern New Mexico

OIL OR GAS SANDS OR ZONES

No. 1, from \_\_\_\_\_ to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 5, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 3, from \_\_\_\_\_ to \_\_\_\_\_ No. 6, from \_\_\_\_\_ to \_\_\_\_\_

## IMPORTANT WATER SANDS

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. ....

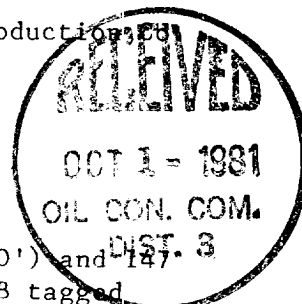
No. 4, from.....to.....feet. ....

FORMATION RECORD (Attach additional sheets if necessary)

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

Kenai Oil and Gas, Inc.  
New Mexico State 36-21  
NENW Section 36, T24N, R8W  
San Juan County, New Mexico

Elledge Consulting and Production



COMPLETION HISTORY

- 7-8-81 Rig up Action #6 - Pick up 4 3/4" Hughes bit and bit sub (3.20') and 147 jts. 2 3/8 tubing (4576.00') + 4' on #148 + 7' KB = 4590.20 KB tagged cement above DV tool. Rig up pump & power swivel to drill - DV tool at 4601' KB. Drill DV in 2 hrs. TIH to 5619 and tag cement. Rig up power swivel. Circulate hole clean. 76' of cement to drill. SIFN.
- 7-9-81 Drlg. cement 5619' to 5657' and on to 5688' KB. Circulate clean and POOH. Rig up Gearhart and ran CBL-VDL from 5679' to 1000' with 700 psi on casing. Top of good cement 5190'. Satisfactory 5190 and below. RIH with 180 jts. tbg. with SN 2 jts. up and placed EOT at 5624' KB. SIFN.
- 7-10-81 Rig up Nowsco and pressure test casing 3000 psi, 5 min., OK. Swab FL to 4000'. Rig up Gearhart and perforate lower Gallup 1 shot at the following depths: 5450, 53, 55, 58, 5501, 06, 22, 24, 54, 57, 60, 93, 95, and 97. RIH with Mountain States retrievable BP and Packer (13.92'), 1 jt. tbg. (30.65'), SN (.80') 180 jts. tbg. (5616.26') and set BP at 5640' KB. Move pkr. and left unset at 5630' KB. Gauged gas at 4.4 MCFPD. Swab FL to 5600. Gas rate increased to 6.5 MCFPD on 1/2" choke. Left open for night.
- 7-11-81 Flowing natural at 11.6 MCF/day - Stabilized after flowing nine hrs. Highest rate was 19.3 MCF/day after open 2 hrs. Total flow time was 15 1/2 hrs. Fluid level was 3700. Circulated hole with 2% KCl water. Set BP at 5640 and packer at 5630, tested to 3000 psi and held. Set packer at 5472. Break down perms between 5501 and 5597 at 2300 psi. Pumped 2 BPM at 2600 psi. Pumped 900 gal. 15% HCl with 2 gal./1000 NE and 2 gal./1000 claystay and 2 gal./1000 Inhib. with 20 ball sealers. Had good ball action but did not ball off completely. ISIP 600 psi 5 min. 600 psi 15 min. 600 psi. Opened to pit and flowed back 15 bbls. Released packer and retrieved BP to set at 5485'. Set packer at 5470' and tested to 3000 psi and held 5 min. Reset packer at 5340' and pumped 400 gal. 15% HCl with 8 ballsealers. Broke down at 2700 psi and pumped 3.8 BPM at 2300 psi. Balled off 3 holes and had small leak on 4th at 3000 psi. Surged off balls and finished displacing acid. Total load was 85 bbls. Flowed into pit 10 bbls. Released packer and retrieved BP and set at 5630' KB. Set packer at 5435' KB 174 jts. (5425.29) packer (4.0) SN (.80) and rig up to swab. Swabbed well to seating nipple in 7 runs. Small amount of gas and trace of oil. SIFN.
- 7-12-81 Sunday - Crew Off
- 7-13-81 SITP 300 psi - FL 1700' - Blew down oil and gas - 97% oil - approx. 3 bbls. Made swab run and had 70% oil on top of 3 bbls. water. Release packer and down to 5620. Circulate gel water. Retrieve BP and POOH with packer and BP. Rig up Go and run baseline temp. Survey from 5630' to 5200'. Rig up Nowsco and frac. with 63,000 gal. 40# crosslinked gel with 2% hydrocarbon and 600 SCF/BBL CO<sub>2</sub>. Fluid contained 2% KCl, 1 gal./1000 aquaflo, 1/2 gal./1000 xcide, 1/2 gal./1000 claysta, NBW-10 breaker. 99,000# 20/40 & 20,000# 10/20 sand. Flushed with 4550 gal. 2% KCl water AIR 32 BPM-FL 5.5 BPM-CO<sub>2</sub>= 37.5 BPM. Max trt. psi 1700 - Min trt. psi 1500 - Avg. trt. 1500 psi. ISIP 1100 psi 15 min 1000 psi. Total LW to be recovered 1500 bbls. Rig up Go & run temp. survey from top of fill at 5640' to 5300'. Run 2nd one hr. later from 5640' to 5300'. Rig down Go and open up well to pit 845 psi on casing 4:30 pm. Lyle's Oil Tools on loc. to watch & record pressure. 3/4 choke in 2" line.

Kenai Oil and Gas, Inc.  
New Mexico State 36-21  
NENW Section 36, T24N, R8W  
San Juan County, New Mexico

Elledge Consulting and Production



COMPLETION HISTORY CONTINUED

- 7-14-81 Flowing gas at 8:00 am 20 MCF/day. Rig up Go and reperforate lower casing 2 JSPF 5448 to 5460 - 24 holes, 5503 to 5508 - 10 holes, 5521 to 5526 10 holes 5552 to 5562 - 20 holes. Run Baker ret. BP on wireline and set at 5360'. TIH with 1 jt. 2 3/8 (30.65) = SSN (.80) and 170 jts. 2 3/8 tubing. Land at 5339' KB. Swab down well 1700' and came in. Flowing oil and gas for 1 hr. Circulated hole with 2% KCl water. Rigged up National Cementers kill truck and pressure tested casing and BP to 3000 psi. Held for 5 min. with no bleed off. SIFN.
- 7-15-81 SICP - 0 - SITP - 0 - Swab down to 4000' and TOH with tubing. Rig up GO and perf. 10 holes from 5331 to 5340. TIH with Mt. Sts. Packer (3.40), SSN (.80), & 169 jts. 2 3/8 tbg. (5268.04'). Set packer at 5279' KB. Swab well dry. Lyle's Oil Tools put on Merla Tester with 1/4" orifice tester. Tubing dry and no flow. Left open on chart to record overnight.
- 7-16-81 Had no measurable flow overnight. Made swab run and had no fluid in tubing. Rig up Nowsco and spot 5 gal. sand on BP after filling with 2% KCl water. Set packer at 5150 and trap 1000 psi on backside. Pump 24 bbls. 15% HCl with 2 gal./1000 NE, clay Stabilizer, and Inhibitor and 20 ball sealers. Broke down at 2200 psi. AIR 2 BPM at 1200 psi. Very little ball action. Total load 50 bbls. ISIP 1100 psi 15 min 1000 psi. Bled back to pit approx. 5 bbls. Rig up to swab. Swabbed 23 BLW in 6 runs and swabbed dry. SIFN. No show of oil or gas.
- 7-17-81 SITP 240 psi - bled off acid gas in 4 min. Ran swab, IFL 4000' 30% oil. Release packer and run thru perfs. POOH with packer. Rig up Nowsco and frac. with 17,000 gal. of 40# gel, 2% hydrocarbon and 400 SCF/BBL CO<sub>2</sub>. Fluid contained 2% KCl, 1 gal./1000 aqua flow, 1/2 gal./1000 xcide, 1/2 gal./1000 claysta. NBW - 10 breaker, 22,500# 20/40 sand, 7,500# 10/20 sand. Flushed with 110 bbls. 2% KCl water, AIR 22 BPM fluid 3 BPM CO<sub>2</sub>. Max. trt. 1600 psi, Min. trt. 1400 psi, Avg. trt. 1500 psi. ISIP 1400 psi, 5 min 1200 psi, 15 min. 1200 psi. Total load 514 bbls. Rig up Go to run temp survey tagged sand at 5170' - 161' above perfs. Rig down Go. Leave shut in 2 hrs. and open to pit with 930 psi on casing. 3/4" choke on 2" line. Lyle's Oil Tools representative on loc. with recorder.
- 7-18-81 Well blew down in 5 1/2 hrs. and brought up some sand. TIH with Baker retrieving head and 2 3/8 tbg. Tag sand at 4735'. Rig up Nowsco and blow down with N<sub>2</sub>. Made sand for 3 hrs. TIH to 5310 and blew down to BP at 5360. Latched onto plug and TOH. Rig up Go and reperforate from 5331 to 40 with 2 spf. Rig down Go and SIFN.
- 7-19-81 Sunday - Crew Off
- 7-20-81 SICP 100 psi. Flowed 7 BO and 3 BLW in 2 hrs. and gas at the rate of 500 MCFPD. Kill well with 50 bbls. 2% KCl water. RIH with 1 jt. open ended (30.65'), SN (.80') and 180 jts. tbg. & tag sn fill at 5653' KB. (56' of rat-hole) Placed EOT at 5594' with 179 jts. in hole. Rig to swab. Made 14 runs and recovered 60 BLW and 10 BO. FF1 3300', FCP 25 psi. SIFN.

Kenai Oil and Gas, Inc.  
New Mexico State 36-21  
NENW Section 36, T24N, R8W  
San Juan County, New Mexico

Elledge Consulting and Production Co.

COMPLETION HISTORY CONTINUED

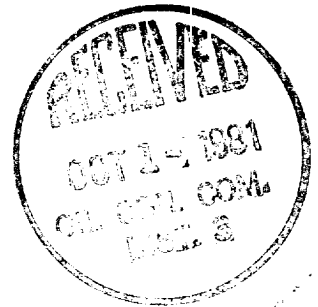
7-21-81 SICP 50 psi, SITP 140 psi - Tagged sand at 5650' KB, made 3' overnight, nipped down and landed tubing. Final proudction is as follows:

1 JT 2 3/8" tubing - open ended	30.65'
1.78" I.D. seating nipple	.80'
<u>178 JTS 2 3/8" tubing</u>	<u>5551.69'</u>
179 JTS	5583.14'

Landed below KB 10.86'

Tubing landed at 5594.00' KB

Top of SN at 5563' KB. Mipple down BOP and nipple up tree. Made 3 swab runs and recovered 15 BF, 50% oil. Released by David Howell to move to Jeffers Federal #2-23. Moved 6 jts. tbg. to Action yard. Job complete.



**dick harnly**  
consulting petroleum geologist  
1932 eastlawn ave, durango colorado, 81301, 303-247-1518

WELLSITE GEOLOGIC REPORT

KENAI OIL & GAS, INC.  
State of New Mexico, 36-21  
ne nw 36-T24N-R8W  
San Juan County, New Mexico

Prepared by Dick Harnly



**dick harnly**  
consulting petroleum geologist  
1932 eastlawn ave, durango colorado, 81301, 303-247-1518

OPERATOR: Kenai Oil & Gas, Inc

WELL: State of New Mexico #36-21

PROSPECT: Lybrook Gallup Ext.

LOCATION: ne nw 36-T24N-R8W  
590' FNL, 2030' FWL  
San Juan County, New Mexico

LOGGED: 1500' 5735'  
5-13-81/5-27-81

WELLSITE GEOLOGY: Dick Harnly

WELLSITE ENGINEERING: Elledge Consulting & Production  
L. Bixler

MUD LOGGING: None

MUD: American Mud Co.  
T. Smith

CORES: American Coldset Corp.  
D. Hackford

LOGGING: Dresser Atlas  
E. Vest

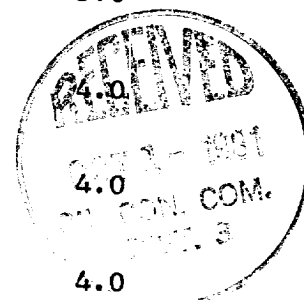
DRILLING CONTRACTOR: Westwind Drilling, Rig 51  
C. Porter, Pusher



**dick harnly**  
consulting petroleum geologist  
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SUMMARY OF MUD PROPERTIES (American Mud)

<u>DEPTH</u>	<u>WEIGHT</u>	<u>VISCOSITY</u>	<u>WATER LOSS</u>	<u>CAKE</u>	<u>ph</u>	<u>CHLORIDES</u>	<u>% SOLIDS</u>
305							
305	8.7	32	4.2	film	8.5	400	2.0
1781	8.8	34	5.6	film	8.5	400	3.0
2550	8.8	34	4.4	1	8.5	600	3.0
3183	8.9	40	4.0	2	8.5	400	3.0
3665	8.9	39	4.4	2	8.5	400	3.0
4275	8.9	40	4.0	2	8.5	450	3.0
4771	8.8	36	4.2	2	8.5	400	2.0
5061	9.0	44	4.6	2	9.5	400	3.0
5314	9.0	60	4.6	2	9.0	400	4.0
5360	9.0	60	4.0	2	9.0	600	4.0
5441	9.0	55	4.2	2	9.0	400	4.0





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FORMATION TOPS ( From "E" logs)

Elevations: 6890 GL, 6904 KB

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Pictured Cliffs	1906	4998
Cliff House	3402	3502
Point Lookout	4228	2676
Mancos	4438	2466
Gallup	5317	1587
Total Depth (Drilled)	5735	1169
Total Depth (Logged)	5731	1173



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1932 eastlawn ave, durango colorado, 81301, 303-247-1518

No oil shows were noted in samples above the Point Lookout formation, but in said formation a medium grained sandstone was encountered between 4220 and 30 feet. This subangular, slightly calcareous sandstone exhibited a fair spotty yellow fluorescence with a slow bleeding blue-white cut fluorescence. This sandstone, while exhibiting no visible porosity or permeability was laced with a few thin carbonaceous laminations. No further evidence of oil shows was found in the Point Lookout.

In the Mancos, between 4930-75 feet, a siltstone, grading in part to a very fine grained sandstone, exhibited a poor to fair blue-white fluorescence in about 30-50% of the sample throughout this interval. A poor to fair slow blue-white cut fluorescence was evident.

The Gallup formation was cored in this hole 5321-79 and 5441-5501 feet. No shows were evident in the first core...only a few chips were taken at the wellsite in order to preserve as much of the core as possible for detailed examination at the laboratory of Core Lab in Farmington, but there was no evidence of core bleeding of oil or water. Core two, 5441-5501 feet did show a spotty bleeding of oil between 5443 and 45 feet...good bleeding 5445½ - 48½ and fair spotty bleeding of oil 5448½ - 51 feet...a good sweet oil odor was noted throughout this zone of bleeding core (For detailed wellsite description see attached geologic log). Two minor oil shows were noted in drilling samples 5560-65 and 5595-5600 feet. These zones exhibited a sandstone (about 10% of each sample), light brown, calcareous with a dull gold fluorescence and a fair slow blue white cut fluorescence.

No significant hole problems were encountered in the drilling or logging of this hole...considerable difficulty was experienced by Dresser due to tool and instrument malfunction/failure but with parts and an engineer from Houston, Texas the logs were finally run.

