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WELLSITE GEOLOGIC REPORT

KENAI OIL & GAS INC.
FEDERAL 6-41
ne ne 6-T23N-R8W
SAN JUAN COUNTY, NEW MEXICO

Prepared by: Dick Harnly
Consulting Petroleum Geologist

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OPERATOR:	Kenai Oil & Gas Inc
WELL:	Federal 6-41
CLASSIFICATION:	Escrito/Basin Dakota
DRILLING CONTRACTOR:	Kenai Drilling Pushers; Wilson,Wiley
MUD LOGGING:	Underwood Well Logging Service Logger: Russ Bouren,sr.
WELLSITE GEOLOGY:	Dick Harnly,Consultant
MUD:	American Mud Co. Engineer; J.Morris
LOGGING:	Welex Engineer; J.Bray
TESTING:	No Tests

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SUMMARY OF MUD PROPERTIES (AMERICAN MUD CO.)

DEPTH	WEIGHT	VISCOSITY	WATER LOSS	CAKE	ph	CHLORIDES	SOLIDS %
954	8.6	29	10.8	2	8.5	400	2
2415	9.0	30	8.0	2	9.0	500	5
2570	9.0	29	10.4	2	9.5	500	5
3312	9.0	29	10.2	2	9.0	550	5
3687	9.0	29	10.2	2	8.5	600	5
4241	9.1	31	10.8	2	8.5	600	6
4713	9.2	31	10.8	2	8.5	650	6
5027	9.2	32	10.6	2	8.5	450	6
5160	9.2	34	10.2	2	8.5	450	6
5382	9.2	34	10.0	2	9.0	400	6
5621	9.2	34	10.2	2	9.0	550	6
5699	9.0	38	10.0	2	9.0	600	5
5869	9.1	38	9.8	2	9.0	500	5
6259	9.2	37	10.2	2	8,5	350	6½
6300	9.2	55	10.4	2	9.0	400	6½
6405	9.0	54	12.0	2	9.0	450	5

6-41

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FORMATION TOPS (FROM "E" LOGS)

Elevations: 6937 KB, 6927 GL

FORMATION	DEPTH	ELEVATION
Ojo Alamo	955	+5982
Pictured Cliffs	1620	+5317
Cliff House	3099	+3838
Point Lookout	4060	+2877
Mancos	4250	+2687
Gallup	5115	+1822
Greenhorn	6027	+ 910
Graneros	6105	+ 832
Dakota	6177	+ 760
Total Depth (Drilled)	6440	+ 497
Total Depth (Logged)	6341	+ 596

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SUMMATION

MUD LOGGING

Mud Logging services were performed by Mr. Russ Bouren, Sr., of Underwood Well Logging Service, Farmington, New Mexico, from the bottom of the surface casing to the total depth of 6440 feet.

Gas shows were encountered in the Point Lookout, Gallup, and Dakota formations.

Samples were caught by members of the crews of Kenai Drilling Company with surveillance by both the mud logging operator and geologist, Harnly.

SAMPLE QUALITY

The quality of the samples were generally of a poor nature; being evidenced by the increasing proportion of uphole cavings as the depth of the well increased. The high proportion of caving undoubtedly being due to the low viscosity of the drilling mud (29-32) from the bottom of the surface pipe to 5100 feet. The second factor affecting the sample quality was the water loss of over 10 seconds per quart for most of the drilling time.

The soft and sometimes bentonitic upper formations are quite subject to invasion by filtrate water causing swelling, washing out, and bridging of the hole; all of this results in contamination of the samples collected. Another consideration should be the fact of the extreme difficulty being experienced when trying to obtain downhole logs. In this instance, no logs were run across the bottom 100 feet of the Dakota formation.

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It has been recommended by the Geologist that future holes should be drilled with a controlled viscosity and water loss as follows: 34 vis and a water loss of 6.0 when drilling out from under the surface casing. The viscosity to be increased one second per quart for each 1000 feet drilled, resulting in a viscosity of 40 by the time 6000 feet is reached. The water loss should not exceed 6.0 cc. It has been observed that water loss control is of very great importance when drilling these soft beds.

SHOWS

No gas shows were reported in formations above the Point Lookout in this test.

The Point Lookout formation was encountered at a depth of 4065 feet, consisting of white, slightly cream, fine grained sandstone which generally was infilled with a white clay material. A trace of good porosity and permeability was noted containing a light tan oil stan exhibiting fair dull yellow fluorescence and a good yellow-white cut fluorescence. A total of only 5 units of Methane gas was reported by the Underwood Well Logging operator. No drill-stem test was considered for this zone due to the slight nature of the indicators.

The Gallup formation topped at 5119 in the samples, exhibiting two zones of interest. The first being a drilling break from 5119-26 containing a very fine grained sandstone with no visible porosity or permeability. No staining, fluorescence, or cut was evidenced. Gas shows were reported as follows: Methane 275 units, Ethane 155, Propane 140, Butanes 85, Pentanes 11.

The second Gallup zone of interest was encountered at 5226-36 being a very fine grained light grey tan sandstone with no visible porosity or permeability. The sandstone, slightly calcareous, exhibited fair to good yellow-white fluorescence and a very slow milky cut fluourescence. The mud logger reported gas as follows: Methane 32, Ethane 21, Propane 17, Butane 2.

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The samples covered during the drilling of these zones were of very poor quality due to the abundance of cavings from up hole - and vicosity 34.

Three sands in the Dakota were encountered; the first being at 6181 feet, a white fine grained subangular sandstone without visible porosity or permeability. No staining, fluorescence, or cut were noted. No gas was recorded.

The second zone - 6257 by drilling break - was a white fine grained sandstone with some good porosity and permeability, a trace of euhedral quartz crystals and a gas show of Methane 56, Ethane 14, Propane 10, and Butane 2. No fluorescence or cut were present in these samples. At 6330 gas was recorded as 156 units of Methane, Ethane 20, and 12 units of Propane.

The third zone was encountered at 6370. This very fine grained slightly cream colored sandstone was tightly cemented and without shows in the samples; a hot wire reading of 68 units was reported.

The sample quality of cuttings from the Dakota zones was poor because of the poor condition of the hole, resulting in abundant cavings and bridges which prevented the completion of the electric logging operations.