

AGENT MUD CO., INC.

PHONE

PHONE

LIBERAL, KANSAS 316/624-5316

LIBERAL, KANSAS 316/624-3251

GUYMON, OKLA. 405/338-3830

ENGINEER'S TEST REPORT

Check No. 1

Date 12-8 19 71

OPERATOR Beacon Resources		CONTRACTOR RINE DRILLING CO.		RIG NO. 8	
ADDRESS WICHITA, Ks.		ADDRESS LIBERAL, Ks.			
REPORT FOR MR. ATKINSON		REPORT FOR MR. KEY			
WELL NAME AND NO. HITCH-REE #1		FIELD		STATE KANSAS	
COUNTY SEWARD		ANNULAR VEL. FT./MIN. <input type="checkbox"/> OPP DP <input type="checkbox"/> OPP CAL.			
SEC.	TWP.	RNG.	SPUD DATE 12-8-71	BIT NO.	PUMP LINER IN.
					STROKE IN.
					BBL./CYC.
					CYC./MIN.
					BBL./MIN.
MUD SAMPLE TAKEN		LAST CSG. DEPTH		EST. MUD VOL. BBL.	
FLOWLINE <input type="checkbox"/> PIT <input type="checkbox"/>		LAST CSG. DEPTH		PIT HOLE TOT.	
OPERATION		TIME		TOTAL CIRCULATING TIME	
		A.M. <input type="checkbox"/> P.M. <input type="checkbox"/>		CIRCULATING TIME BOTTOM - PP	
		FLOWLINE TEMP. °F			

Depth	MUD PROPERTIES	DRILLING FLUID SPECIFICATIONS
Weight of Mud <input type="checkbox"/> LB/GAL <input type="checkbox"/> LB/CU FT <input type="checkbox"/> PSI/1000 FT		Type Weight
Viscosity, Funnel, Sec., API _____ °F		Filtration Viscosity
App. Viscosity, cp, 600 rpm/2		Other Filler
Plastic Viscosity, cp _____ °F	SURFACE MOLE	ADDITIVES IN MUD
Yield Point, lb./100 sq ft	BUILD VIS TO 34-36	Super Bar <input type="checkbox"/> Starch <input type="checkbox"/>
Gels, lb/100sqft., Initial/10min.	WITH GEL & lime	Bentonite <input type="checkbox"/> Preservative <input type="checkbox"/>
pH ELECTRODE INDICATOR <input type="checkbox"/> FILTRATE MUD <input type="checkbox"/>	FIBER TO 4-6 #	Salt Gel <input type="checkbox"/> Caustic Soda <input type="checkbox"/>
Filtrate, ml, API		Driscose <input type="checkbox"/> Soda Ash <input type="checkbox"/>
Cake, 32nd In, API <input type="checkbox"/> 500 psi <input type="checkbox"/>	KICK FILLER TO	Oil <input type="checkbox"/> Lime <input type="checkbox"/>
Salt NACL CI ION <input type="checkbox"/> PPM GPG <input type="checkbox"/>	6-8 # TO DRILL	MATERIALS RECOMMENDED
Sand Content _____ % by Vol	GHORICITA	
Calcium Ion; ppm <input type="checkbox"/> epm <input type="checkbox"/>	Evening	
Sulphate ion _____ EPM <input type="checkbox"/> PPM <input type="checkbox"/>		
Alkalinity, API { PF, CC N/50 ACID <input type="checkbox"/> PM, CC N/50 ACID <input type="checkbox"/>	Bob check yoke's trees values	
Oil _____ % by Vol	single	
Water _____ % by Vol	GLANDULAR OIL	
Solids _____ % by Vol	four	
Lost Circulation _____ mat Vol		
Preservative _____ (lb./bbl.)		
		Mud Cost - Daily
		Cumulative
		EQUIPMENT
		Degasser <input type="checkbox"/> Mud Logging <input type="checkbox"/>
		Gas Detector <input type="checkbox"/> Desander <input type="checkbox"/>

<p>COMMENTS Keep Hole Full on Trips</p>	SERVICE ENGINEER	TELEPHONE
	NAME George Thomas	624-3251
	HOME ADDRESS LIBERAL, Ks	OR
WHSE. ADDRESS SCAT UNIT # 49	WHSE.	624-5316

THE RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY, AND ARE STATEMENTS OF OPINION ONLY.

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ENGINEER'S TEST REPORT

Check No. 2

Date 12-10, 1971

OPERATOR <u>Beacon Resources</u>				CONTRACTOR <u>R.W. Rine DRAG. CO.</u>				RIG No. <u>8</u>						
ADDRESS <u>WICHITA, KANSAS</u>				ADDRESS <u>LIBERAL, KANSAS</u>										
REPORT FOR MR. <u>ATKINSON</u>				REPORT FOR MR. <u>LAY</u>										
WELL NAME AND NO. <u>HITCH-lee #1</u>			FIELD <u>EVAN-CONDIT</u>			STATE <u>KANSAS</u>		COUNTY <u>SEWARD</u>						
SEC.	TWP.	RNG.	SPUD DATE <u>12-8-71</u>	BIT No.	PUMP LINER IN.	STROKE IN.	BBL./CYC.	CYC./MIN.	BBL./MIN.	ANNULAR VEL. FT./MIN. <input type="checkbox"/> OPP DP <input type="checkbox"/> OPP CAL.				
MUD SAMPLE TAKEN		LAST CSG. SIZE <u>8 5/8</u>		LAST CSG. DEPTH <u>1600</u>		LINER SIZE		LINER DEPTH		D.P. SEE <u>4 1/2</u>	BIT SIZE <u>7 1/8</u>	EST. MUD VOL. BBL. <u>300</u>	HOLE <u>136</u>	TOT. <u>436</u>
OPERATION <u>DRAG.</u>			TIME <u>4:20</u>			FLOWLINE TEMP. °F			TOTAL CIRCULATING TIME			CIRCULATING TIME BOTTOM - PP		

Depth 1719

Weight of Mud LB/GAL LB/CU FT PSI/1000 FT

Viscosity, Funnel, Sec., API _____ °F

App. Viscosity, cp, 600 rpm/2 _____ °F

Plastic Viscosity, cp _____ °F

Yield Point, lb./100 sq ft _____

Gels, lb/100sqft., Initial/10min. _____

pH ELECTRODE INDICATOR FILTRATE MUD

Filtrate, ml, API _____

Cake, 32nd In. API 500 psi

Salt NACL CI ION PPM GPG

Sand Content _____ % by Vol

Calcium Ion; ppm epm

Sulphate ion _____ E P M P P M

Alkalinity, API { PF, cc N/80 ACID PM, cc N/80 ACID

Oil _____ % by Vol

Water _____ % by Vol

Solids _____ % by Vol

Lost Circulation _____ mat Vol

Preservative _____ (lb./bbl.)

MUD PROPERTIES	DRILLING FLUID SPECIFICATIONS
WATER + NATIVE MUD	Type <u>SALT</u> Weight <u>9.5 OR 255</u>
	Filtration <u>N.C.</u> Viscosity <u>2500' 31-35</u>
	Other <u>- - -</u> Filler <u>4-6#</u>
	ADDITIVES IN MUD
	Super Bar <input type="checkbox"/> Starch <input type="checkbox"/>
	Bentonite <input type="checkbox"/> Preservative <input type="checkbox"/>
	Salt Gel <input type="checkbox"/> Caustic Soda <input type="checkbox"/>
	Driscose <input type="checkbox"/> Soda Ash <input type="checkbox"/>
	Oil <input type="checkbox"/> Lime <input type="checkbox"/>
MATERIALS RECOMMENDED	
	<u>AT 2500' - 2600' HAVE VIS</u>
	<u>AT 31-33 sec/QT + BUILD</u>
	<u>FILLER TO 4-6# BBL.</u>
	<u>USE 6-50# SALT GEL</u>
	<u>TO 1 BASCO-BESTOS FOR</u>
	<u>VISCOSITY</u>
	<u>USE 2 HULLS (100#) TO</u>
	<u>1 CEDAR FIBER FOR</u>
	<u>FILLER</u>
	Mud Cost - Daily
	Cumulative
EQUIPMENT	
	Degasser <input type="checkbox"/> Mud Logging <input type="checkbox"/>
	Gas Detector <input type="checkbox"/> Desander <input type="checkbox"/>

COMMENTS

Keep Hole Full ON TRIPS

SERVICE ENGINEER	TELEPHONE
NAME <u>George Thomas</u>	MOBILE <u>624-3251</u>
HOME ADDRESS <u>LIBERAL, KS.</u>	HOME <u>OR</u>
WHSE. ADDRESS <u>SEAT UNIT #49</u>	WHSE. <u>624-5316</u>

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GUYMON, OKLA. 405/338-3830

Check No. **3** **ENGINEER'S TEST REPORT** Date **12-12-1971**

OPERATOR BEACON Resources		CONTRACTOR R.W. RINE DRILLING CO.		RIG No. 8
ADDRESS WICHITA, KANSAS		ADDRESS LIBERAL, KS.		
REPORT FOR MR. ATKINSON		REPORT FOR MR. KAY		
WELL NAME AND No. HITCH-lee #1		FIELD EVAN-CONDIT	STATE KANSAS	COUNTY SEWARD
SEC.	TWP.	RNG.	SPUD DATE 12-5-71	BIT No.
MUD SAMPLE TAKEN		LAST CSG. SIZE 8 5/8	LAST CSG. DEPTH 1608	PUMP LINER IN.
FLOWLINE <input checked="" type="checkbox"/> PIT <input type="checkbox"/>		LINER SIZE		STROKE IN.
OPERATION TRIP-IN		TIME 12:30		A.M. <input type="checkbox"/> P.M. <input checked="" type="checkbox"/>
MUD SAMPLE TAKEN		LAST CSG. SIZE	LAST CSG. DEPTH	LINER SIZE
FLOWLINE <input checked="" type="checkbox"/> PIT <input type="checkbox"/>		EST. MUD VOL. BBL.		BIT SIZE
OPERATION		TOTAL CIRCULATING TIME		BIT SIZE
TIME		CIRCULATING TIME BOTTOM - P.F.		EST. MUD VOL. BBL.
PIT		HOLE		PIT
HOLE		TOT		HOLE

Depth	MUD PROPERTIES	DRILLING FLUID SPECIFICATIONS	
Weight of Mud	LB/GAL <input checked="" type="checkbox"/> LB/CU FT <input type="checkbox"/>	Type SALT Weight 9.5 OR LESS	
Viscosity, Funnel, Sec., API	29	Filtration N.C. Viscosity 21-33	
App. Viscosity, cp, 600 rpm/2	-	Other - - - Filler 4-6 #	
Plastic Viscosity, cp	-	ADDITIVES IN MUD	
Yield Point, lb./100 sq ft	-	Super Bar <input type="checkbox"/> Starch <input type="checkbox"/>	
Gels, lb/100 sq ft., Initial/10 min.	-	Bentonite <input type="checkbox"/> Preservative <input type="checkbox"/>	
pH	7.2	Salt Gel <input checked="" type="checkbox"/> Caustic Soda <input type="checkbox"/>	
Filtrate, ml, API	80+	Driscose <input type="checkbox"/> Soda Ash <input type="checkbox"/>	
Cake, 32nd In, API	3/32	Oil <input type="checkbox"/> Lime <input type="checkbox"/>	
Salt	23,500	MATERIALS RECOMMENDED	
Sand Content % by Vol	TRACE	Do NOT use BASCO-BESTOS	
Calcium Ion; ppm	Hvy.	AFTER 3600 -	
Sulphate ion	Hvy.	AT 4000' LOWER SURFACE	
Alkalinity, API	-	VOLUME - CUT OUT WATER	
Oil % by Vol	-	Mix 200# STARCH AT FLOW	
Water % by Vol	96.0	LINE - SHOW - MIX 45 SKS	
Solids % by Vol	4.0	STARCH - SHOW - GO TO	
Lost Circulation mat Vol	4#	5 SKS STARCH + 25#	
Preservative (lb./bbl.)	-	PRESERV. PER TOUR	
		Mud Cost - Daily	
		Cumulative	
		EQUIPMENT	
		Degasser <input type="checkbox"/>	Mud Logging <input type="checkbox"/>
		Gas Detector <input type="checkbox"/>	Desander <input type="checkbox"/>

COMMENTS Keep Hole Full on Trips	SERVICE ENGINEER		TELEPHONE
	NAME George Thomas		MOBILE 624-3251
	HOME ADDRESS LIBERAL, KS.		HOME OK
	WHSE. ADDRESS SCAT UNIT #49		WHSE. 624-5316

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GUYMON, OKLA. 405/338-3830

ENGINEER'S TEST REPORT

Check No. 4 MON Date, 2-13 1971

OPERATOR <u>BERCON RESOURCES</u>		CONTRACTOR <u>P.W. RINE DRG Co.</u>		RIG No. <u>8</u>
ADDRESS <u>WICHITA, Ks.</u>		ADDRESS <u>LIBERAL, Ks</u>		
REPORT FOR MR. <u>ATKINSON</u>		REPORT FOR MR. <u>LAY</u>		
WELL NAME AND NO. <u>HITCH - LEE #1</u>		FIELD	STATE <u>KANSAS</u>	COUNTY <u>SEWARD</u>
SEC.	TWP.	RNG.	SPUD DATE <u>12-8-71</u>	BIT No.
MUD SAMPLE TAKEN		LAST CSG. SIZE <u>8 5/8</u>	LAST CSG. DEPTH <u>1608</u>	PUMP LINER IN. STROKE IN.
FLOWLINE <input checked="" type="checkbox"/> PIT <input type="checkbox"/>	LINER SIZE		LINER DEPTH	D.P. SIZE
OPERATION <u>DRLG</u>	TIME <u>9:50</u>	A.M. <input type="checkbox"/> P.M. <input checked="" type="checkbox"/>	FLOWLINE TEMP.	°F
BBL./CYC.		CYC./MIN.	BBL./MIN.	ANNULAR VEL. FT./MIN. <input type="checkbox"/> OPP DP <input type="checkbox"/> OPP CAL.
EST. MUD VOL. BBL.		PIT <u>350</u> HOLE <u>328</u> TOT. <u>678</u>		
TOTAL CIRCULATING TIME		CIRCULATING TIME BOTTOM - PP		

Depth	MUD PROPERTIES	DRILLING FLUID SPECIFICATIONS
<u>4132</u>	Weight of Mud <u>9.1</u> LB/GAL <input checked="" type="checkbox"/> LB/CU FT <input type="checkbox"/>	Type <u>STARCH</u> Weight <u>9⁵ or less</u>
	<u>473²</u> PSI/1000 FT	Filtration <u>10-12 cc</u> Viscosity <u>38-42</u>
Viscosity, Funnel, Sec., API <u>31</u> °F		Other <u>4-6 #</u> Filler
App. Viscosity, cp, 600 rpm/2 <u>6</u>		ADDITIVES IN MUD
Plastic Viscosity, cp <u>3</u> °F		Super Bar <input type="checkbox"/> Starch <input checked="" type="checkbox"/>
Yield Point, lb./100 sq ft <u>6</u>		Bentonite <input type="checkbox"/> Preservative <input checked="" type="checkbox"/>
Gels, lb/100sq ft., Initial/10 min. <u>0/1</u>		Salt Gel <input checked="" type="checkbox"/> Caustic Soda <input type="checkbox"/>
pH <u>7</u>		Driscose <input type="checkbox"/> Soda Ash <input type="checkbox"/>
Filtrate, ml, API <u>128</u>		Oil <input type="checkbox"/> Lime <input type="checkbox"/>
Cake, 32nd In. API <input type="checkbox"/> 500 psi <input type="checkbox"/>		MATERIALS RECOMMENDED
Salt <u>21,800</u> NACI <input checked="" type="checkbox"/> PPM <input checked="" type="checkbox"/>		<u>CUT WATER DOWN TO A VERY SMALL STREAM</u>
Sand Content <u>TR.</u> % by Vol		
Calcium Ion; ppm <input type="checkbox"/> epm <input type="checkbox"/>	<u>Hwy</u>	
Sulphate ion <u>Hwy</u>		<u>EACH TOUR Ann.</u>
Alkalinity, API <u>-</u>		<u>5 SKS STARCH.</u>
		<u>25 # Pres.</u>
Oil <u>-</u> % by Vol		
Water <u>95</u> % by Vol		<u>RAISE LCM TO 4-6 #</u>
Solids <u>5</u> % by Vol		
Lost Circulation <u>2 #</u> mat Vol		
Preservative <u>.12</u> (lb./bbl.)		
		Mud Cost - Daily
		Cumulative
		EQUIPMENT
		Degasser <input type="checkbox"/> Mud Logging <input type="checkbox"/>
		Gas Detector <input type="checkbox"/> Desander <input type="checkbox"/>

COMMENTS <u>KEEP HOLE FULL ON TRIPS</u>	SERVICE ENGINEER	TELEPHONE
	NAME <u>DON WINTER</u>	<u>338-7831</u>
	HOME ADDRESS <u>GUYMON, OK.</u>	<u>338-3830</u>
	WHSE. ADDRESS <u>LIBERAL, Ks</u>	<u>624-3251</u>

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GUYMON, OKLA. 405/338-3830

ENGINEER'S TEST REPORT

Check No. 5 Date 12-14, 19 71

OPERATOR <u>Beacon Resources</u>				CONTRACTOR <u>R.W. Rine Drilling Co.</u>				RIG No. <u>8</u>		
ADDRESS <u>WICHITA, KANSAS</u>				ADDRESS <u>LIBERAL, KS.</u>						
REPORT FOR MR. <u>ATKINSON</u>				REPORT FOR MR. <u>CUAK'S</u>						
WELL NAME AND No. <u>HITCH-lee #1</u>			FIELD <u>EUALYN-CODDIT</u>			STATE <u>KANSAS</u>		COUNTY <u>SEWARD</u>		
SEC.	TWP.	RNG.	SPUD DATE <u>12-8-71</u>	BIT No.	PUMP LINER IN. IN.	STROKE	BBL./CYC.	CYC./MIN.	BBL./MIN.	ANNULAR VEL. FT./MIN. <input type="checkbox"/> OPP DP
MUD SAMPLE TAKEN			LAST CSG. SIZE <u>8 5/8</u>	LAST CSG. DEPTH <u>1608</u>	LINER SIZE	LINER DEPTH	D.P. SIZE <u>4 1/2</u>	BIT SIZE <u>7/8</u>	EST. MUD VOL. BBL. PIT <u>300</u> HOLE <u>344</u> TOT. <u>644</u>	<input type="checkbox"/> OPP CAL.
FLOWLINE <input checked="" type="checkbox"/> PIT <input type="checkbox"/>			OPERATION <u>DRAB.</u>			TIME <u>11:05</u>	A.M. <input type="checkbox"/> P.M. <input checked="" type="checkbox"/>	FLOWLINE TEMP. °F	TOTAL CIRCULATING TIME	CIRCULATING TIME BOTTOM - PP

Depth	MUD PROPERTIES	DRILLING FLUID SPECIFICATIONS
<u>4273</u>	Weight of Mud LB/GAL <input checked="" type="checkbox"/> LB/CU FT <input type="checkbox"/> PSI/1000 FT	Type <u>STARCH</u> Weight <u>9.5 OR 12.50</u>
Viscosity, Funnel, Sec., API ___ °F	<u>9.1</u>	Filtration <u>10-12 cc</u> Viscosity <u>40+ TO 60G</u>
App. Viscosity, cp, 600 rpm/2	<u>472.0</u>	Other <u>---</u> Filler <u>5-6 #</u>
Plastic Viscosity, cp ___ °F	<u>34</u>	ADDITIVES IN MUD
Yield Point, lb./100 sq ft	<u>17</u>	Super Bar <input type="checkbox"/> Starch <input checked="" type="checkbox"/>
Gels, lb/100sq ft., Initial/10min.	<u>10</u>	Bentonite <input type="checkbox"/> Preservative <input checked="" type="checkbox"/>
pH	<u>14</u>	Salt Gel <input checked="" type="checkbox"/> Caustic Soda <input type="checkbox"/>
Filtrate, ml, API	<u>3/4</u>	Driscose <input type="checkbox"/> Soda Ash <input type="checkbox"/>
Cake, 32nd In. API <input type="checkbox"/> 500 psi <input type="checkbox"/>	<u>7.0</u>	Oil <input type="checkbox"/> Lime <input type="checkbox"/>
Salt	<u>9.3</u>	MATERIALS RECOMMENDED
Sand Content % by Vol	<u>1/32</u>	<u>MIX 1 SALT GEL TO 1</u>
Calcium Ion; ppm <input checked="" type="checkbox"/> epm <input type="checkbox"/>	<u>22,500</u>	<u>FRESH GEL + BUILD</u>
Sulphate ion	<u>TR.</u>	<u>VIS TO 40+ TO LOG</u>
Alkalinity, API	<u>HVY.</u>	<u>HAVE VIS AT 40+ TO LOG</u>
Oil % by Vol	<u>HVY.</u>	
Water % by Vol	<u>-</u>	
Solids % by Vol	<u>-</u>	
Lost Circulation mat Vol	<u>93.0</u>	
Preservative (lb./bbl.)	<u>7.0</u>	
	<u>6 #</u>	
	<u>.25</u>	

COMMENTS <u>Keep Hole Full on trips</u>	SERVICE ENGINEER	TELEPHONE
	NAME <u>George THOMAS - 624-3251</u>	
	HOME ADDRESS <u>LIBERAL, KS.</u>	
	WHSE. ADDRESS <u>SCAT UNIT #49 624-5316</u>	

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