



# Appendix L

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## Profco / Mud Engineers' Daily Report



A PROFESSIONAL DRILLING FLUID SERVICE. THURS. MORN.

# DRILLING MUD REPORT

REPORT NO. **01**  
 DATE **24 OCT 1985** DEPTH **78**  
 STATE **CA** COUNTY **IMP** WELL  BT

OPERATOR **BECHTEL CORP - DOE** CONTRACTOR **CLEVELAND DRILG CO.** RIG NO. **6**  
 ADDRESS **RK** ADDRESS **RIG** SPUD DATE **24 OCT 85**

REPORT FOR MR. **GERALD REICH** REPORT FOR MR. **WILLARD NICKEL** SECTION, TOWNSHIP, RANGE **14-11S-13E**

WELL NAME AND NO. **STATE #2-14** FIELD OR BLOCK NO. **SALTON SEA** COUNTY, PARISH, OR OFFSHORE AREA **IMPERIAL** STATE OR PROVINCE **CALIF**

OPERATION		CASING		MUD VOLUME (BBL)		CIRCULATION DATA	
Present Activity <b>DRILLING 26" HOLE</b>		Surface <b>- In. at - Ft.</b>		Moisture <b>35</b>	Fine <b>560</b>	Pump Size <b>17 x 16</b>	In. Annular Vel. (FL/Min.) <b>30"</b>
Bit Size (in.) <b>17 1/2 x 26" H.O.</b>	No. <b>1</b>	Intermediate <b>- In. at - Ft.</b>		Total Circulating Volume <b>595</b>		Pump Make <b>NATL</b>	Opposite DP <b>= 20.4</b>
Drill Pipe Size <b>5" - 19.5#</b>	Type <b>42IF</b>	Production or Liner <b>- In. at - Ft.</b>		In Storage <b>8</b>		Model <b>N-1300</b>	Opposite Collar <b>= 20.4</b>
Drill Collar Size <b>2 x 2 7/8</b>	Length <b>38'</b>	Mud Type <b>GEL + WATER</b>				Stroke/Min. <b>214</b>	Circulating Pressure (psi) <b>= 10"</b>
						Bottoms up (Min.) <b>3</b>	System Total (Min.) <b>= 50</b>

Sample from  Flowline  Pit

MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °F		Centrifuge <b>BRAND-24100</b>	Size <b>17 1/2 x 16</b>
Time Sample Taken	<b>0430</b>	Degasser	Size <b>17 1/2 x 16</b>
Depth (ft.)	<b>78</b>	Desander <b>16-8x4 1/4</b>	Other <b>FX-10 G1 SMOOTH</b>
Weight <input checked="" type="checkbox"/> ppg <input type="checkbox"/> lb/cu. ft.	<b>8.8 (66)</b>	DAILY COST <b>\$3,036</b>	CUMULATIVE COST <b>\$3,036</b>
Mud Gradient (psm.)	<b>458</b>	MUD PROPERTIES SPECIFICATIONS	
Furnal Viscosity (sec./qt.) API at <b>70 °F</b>	<b>48</b>	F.L. WEIGHT <b>9.0</b> VISCOSITY <b>40-60</b> FILTRATE <b>NO CONTROL</b>	
Plastic Viscosity cps at <b>70 °F</b>	<b>8</b>	BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR	
Yield Point (lb/100 sq. ft.)	<b>24</b>	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.	<b>212</b>	MUD CONTAINS	
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter	<b>9.0</b>	TOUR TREATMENT	
Filtrate API (ml/30 min.)	<b>18.5</b>	<input checked="" type="checkbox"/> GEL	<b>45 BX</b>
API HP-HT Filtrate (ml/30 min.)	<b>=</b>	<input checked="" type="checkbox"/> BAR LIME	<b>1 BX</b>
Cake Thickness 32nd in. API <input type="checkbox"/> HP-HT <input type="checkbox"/>	<b>2 FIRM SLIK</b>	<input checked="" type="checkbox"/> PEP	<b>1 CASE</b>
Alkalinity, Mud (pH)	<b>=</b>	<b>FOR EVERY FOOT (186 BBL)</b>	
Alkalinity, Filtrate (pH)	<b>11.2</b>	<b>(1) MAINLY LIME @ 60+ W/LK</b>	
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpp Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpp	<b>660</b>	<b>ADDITIONAL GEL + LIME =</b>	
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) - TOTAL HARD	<b>120</b>	<b>50% GEL + 5% LIME MIX</b>	
Sand Content (% by Vol.)	<b>1/2</b>	<b>(2) KEEP PIT ABOUT 3 FT DEEP</b>	
Solids Content (% by Vol.)	<b>&lt; 4</b>	<b>(N.E.G. BLS) WITH SPUD MUD</b>	
Oil Content (% by Vol.)	<b>=</b>	<b>(3) IF WT INCREASES TO ABOVE</b>	
Water Content (% by Vol.) <input type="checkbox"/> Retort <input checked="" type="checkbox"/> Calculated	<b>96</b>	<b>8.9 - TURN ON MUD</b>	
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input checked="" type="checkbox"/> equiv. #bbt. bent.	<b>2.8 (39)</b>	<b>CLEAR UP - BOTH</b>	
ASG ALL SOLIDS	<b>2.4</b>		
APPROX 90 DRILL SOLIDS	<b>1.2</b>		

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @  
 Salt Water flow @  
 Gas kick @  
 Stuck pipe @  
 Tight hole @  
 Sloughing Shale @  
 Lost Returns @

ENGINEER **JERRY BEWICK** HOME ADDRESS **2410 ANS SERVICE 353-1692** PHONE **344-5100**  
 MOBILE UNIT **(619) 355-5158** WAREHOUSE LOCATION **BRANLY - PLANCH** PHONE **344-5100**

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

START/DEL / Cost - Time Summary / 24 Hours Ending **0430** @ Depth **78** FL.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BR No.-Type	RPM	WL	Hours	Footage
GEL	749	588	161	10.05	1,618.05					
BAR	494	294	-	9.07	-					
LIME	50	48	2	10.00	20.00					
CAUSTIC	40	40	-	46.30	-					
WELPAC	10	10	-	243.00	-					
SODA ASH	24	24	-	32.50	-					
CSH	24	24	-	19.80	-					
DMS	24	24	-	90.00	-					
PEP	12	8	4	155.00	620.00					
CEN.PINK	50	50	-	48.00	-					
T-PLX	24	24	-	110.00	-					
T-LIG	50	50	-	30.00	-					
ALSTAR	2	2	-	95.00	-					
AMIN-PLX	2	2	-	90.00	-					
ANTI-FOAM	5	5	-	68.00	-					
SANDUST	24	24	-	7.00	-					

COMMENTS/REMARKS  
**DRLG CONDUCTOR HOLE**

PRO 303/1-2  
 This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Profco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE.

# ILLING MUD REPORT

REPORT NO. 02

REPORT FOR FRI. MOEN

DATE 25 OCT 1985 DEPTH 141  
STATE COUNTY WELL BIT

OPERATOR <b>BECHTEL CORP. - DOE</b>	CONTRACTOR <b>CLEVELAND DRUG CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-115-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTRY, PARISH, OR OFFSHORE AREA <b>IMPERIAL</b>
		STATE OR PROVINCE <b>CALIF</b>

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
Present Activity <b>W.O.C. &amp; NIPPLE UP.</b>	Surface <b>30 in. at 120 ft.</b>	Hole, 2" Dia <b>242.558</b>	Pump Size (F) 7x16 <b>#27x16</b>
Bit Size (in.) <b>4 1/2" H.O.</b>	Intermediate <b>- in. at - ft.</b>	Total Circulating Volume <b>30</b>	Pump Make <b>NATIONAL</b>
Drill Pipe Size <b>5" - 19.5#</b>	Type <b>4 1/2 IF</b>	In Storage <b>2</b>	Model <b>N-1320</b>
Drill Collar Size <b>5 7/8</b>	Length <b>132'</b>	Mud Type <b>GEL + WATER</b>	SB/Stroke <b>0.214</b>
			SB/Min. <b>12.0</b>
			SB/Min. <b>503</b>

MUD PROPERTIES		EQUIPMENT	
Flowline Temperature - °F		SIZE	HRS./TOUR
Time Sample Taken	<b>0430</b>	Centrifuge BRAND	<b>1 1/2</b>
Depth (ft.)	<b>141</b>	Degasser	<b>1 1/1</b>
Weight (ppg) (lb./cu. ft.)	<b>9.5 (71)</b>	Desander	<b>0.144</b>
Mud Gradient (psi/ft.)	<b>0.94</b>	DAILY COST	<b>6.83</b>
Funnel Viscosity (sec./10) API at 70°F	<b>40</b>	MUD PROPERTIES SPECIFICATIONS	
Plastic Viscosity cps at 70°F	<b>6</b>	BY AUTHORITY:	<input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR
Yield Point (lb./100 sq. ft.)	<b>20</b>	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	<b>12.14</b>	MUD CONTAINS	TOUR TREATMENT
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter	<b>8.4</b>	<input checked="" type="checkbox"/> GEL	<b>4.5</b> SK
Filtrate API (ml/30 min.)	<b>37.5</b>	<input checked="" type="checkbox"/> 10 BAR LIME	<b>1</b> SK
API HP-HT Filtrate (ml/30 min.)	<b>-</b>	<input checked="" type="checkbox"/> DEP	<b>100%</b> SK
Cake Thickness 32nd in. API HP-HT <input type="checkbox"/>	<b>3 FEET, SUK</b>	<input type="checkbox"/>	<input type="checkbox"/>
Alkalinity, Mud (Ppm)	<b>-</b>	<input type="checkbox"/>	<input type="checkbox"/>
Alkalinity, Filtrate (PPM)	<b>0.140</b>	<input type="checkbox"/>	<input type="checkbox"/>
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpg	<b>2100</b>	<input type="checkbox"/>	<input type="checkbox"/>
Calcium <input type="checkbox"/> ppm <input type="checkbox"/> gyp (ppb)	<b>520</b>	<input type="checkbox"/>	<input type="checkbox"/>
Sand Content (% by Vol.)	<b>1.0</b>	<input type="checkbox"/>	<input type="checkbox"/>
Solids Content (% by Vol.)	<b>0.2</b>	<input type="checkbox"/>	<input type="checkbox"/>
Oil Content (% by Vol.)	<b>-</b>	<input type="checkbox"/>	<input type="checkbox"/>
Water Content (% by Vol.) <input type="checkbox"/> Retort <input checked="" type="checkbox"/> Calculated	<b>31 1/2</b>	<input type="checkbox"/>	<input type="checkbox"/>
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input checked="" type="checkbox"/> equiv. #/bbl. bent.	<b>2.30</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>ASG ALL SOLIDS</b>	<b>2.64</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>APPROX CEMENT SOLIDS</b>	<b>5 + 8</b>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @  
 Salt Water flow @  
 Gas kick @  
 Stuck pipe @  
 Tight hole @  
 Sloughing Shale @  
 Lost Returns @

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>21 HR. ANS. SERVICE 313-1692</b>	PHONE <b>253-3030</b>
MOBILE UNIT <b>(610) 355-5155</b>	WAREHOUSE LOCATION <b>PROWLEY - BLACH</b>	PHONE <b>344-5100</b>

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending **0430** @ Depth **141** ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	WT.	Hours	Footage
GEL	588	560	28	10.05	281.40					
BAR	434	434	-	9.67	-					
LIAE	46	46	-	10.00	-					
CAUSTIC	40	40	-	46.70	-					
WELFAE	10	10	-	243.00	-					
SADAASH	24	24	-	38.50	-					
ESH	24	24	-	19.00	-					
DAS	24	24	-	90.00	-					
PEP	6	6	2	155.00	310.00					
SH PENK	50	50	-	46.00	-					
FLEX	24	24	-	110.00	-					
FLIG	50	50	-	30.00	-					
AL SHAK	2	2	-	95.00	-					
THI FLY	2	2	-	55.00	-					
WHT FLY	5	5	-	26.00	-					
SALINE	24	24	-	7.00	-					

COMMENTS/REMARKS  
**DRILL 26" HOLE THEN OPEN TO 42" - 141' - RUN 30' CS (2" WALL) CMT. IN RACE 0430**

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A PROFESSIONAL DRILLING FLUID SERVICE.

# DILLING MUD REPORT

REPORT NO. 83

REPORT FOR SAT. MORN.

DATE 26 OCT 1985 DEPTH 150'  
STATE COUNTY WELL ST

OPERATOR <b>BECHTAL CORP. DOE-SSSDP</b>	CONTRACTOR <b>CLEVELAND DRIG CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL</b>
		STATE OR PROVINCE <b>CALIF</b>

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
Present Activity <b>PICK UP DRIG ASSY</b>	Surface <b>30 in. at 150 Ft.</b>	Hole Pits <b>122 682</b>	Pump Size #1 <b>7x16</b> in. Annual Vol. (Fl./Min.) <b>30" LSC =</b>
Bit Size (in.) <b>5-19.5</b>	Intermediate <b>- in. at - Ft.</b>	Total Circulating Volume <b>804</b>	Pump Make <b>NATIONAL</b>
Drill Pipe Size <b>4.281 O.D. 5-19.5</b>	Production or Liner <b>- in. at - Ft.</b>	In Storage <b>8</b>	Model <b>N-1300</b>
Drill Collar Size <b>8 x 2 7/8</b>	Mud Type <b>GEL+WATER</b>		Stroke/Min. <b>1.214</b> <b>2.214</b>

MUD PROPERTIES	EQUIPMENT
Flowline Temperature <b>70 °F</b>	SIZE HRS./TOUR <b>PIT CHIEK</b>
Time Sample Taken <b>0430</b>	SIZE HRS./TOUR <b>BRANDT</b>
Depth (ft.) <b>150'</b>	Disintegrator <b>RIG-8410</b>
Weight (p/gg) (lb./cu. ft.) <b>9.5 + (7+)</b>	Other <b>EX-106 SMITH</b>
Mud Gradient (psf/ft.) <b>494</b>	DAILY COST <b>60 =</b>
Funnel Viscosity (sec./Qt.) API at <b>70 °F</b>	CUMULATIVE COST <b>3783 =</b>
Plastic Viscosity cps at <b>70 °F</b>	MUD PROPERTIES SPECIFICATIONS
Yield Point (lb./100 sq. ft.) <b>14</b>	BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. <b>12/14</b>	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER
pH Strip Meter <b>8.4</b>	MUD CONTAINS
Filtrate API (ml/30 min.) <b>30.0 cc</b>	TOUR TREATMENT
API HP-HT Filtrate (ml/30 min.) <b>-</b>	<b>X GEL 45 SX</b>
Cake Thickness 32nd in. API HP-HT <b>3 FIRM SLK</b>	<b>X LIME 1 SX</b>
Alkalinity, Mud (Pm) <b>-</b>	<b>X LO SOL 5 SX</b>
Alkalinity, Filtrate (P/Wh) <b>8.35</b>	<b>X SODA ASH 1 SX</b>
Salt: ppm Chloride ppm <b>2260</b>	<b>X SODA ASH 2SX</b>
Calcium ppm Gyp (ppb) <b>648</b>	<b>X WEL PAC 1SX</b>
Sand Content (% by Vol.) <b>1/2</b>	<b>X THERMPLEX 4 CANS</b>
Solids Content (% by Vol.) <b>9</b>	
Oil Content (% by Vol.) <b>-</b>	
Water Content (% by Vol.) Retort Calculated <b>91</b>	
Methylene Blue Capacity (m/ml mud equiv. #Abbl. bent.) <b>30</b>	
ASG ALL SOLIDS <b>262</b>	
APPROX DRILL SOLIDS <b>NG</b>	

REMARKS—Give operation, depth and nature of any problems encountered

**① MAINTAIN VIS @ 60+**

**② RUN MUD CLEANERS**

**③ DUMP SAND TRAP EVERY CONNECTION**

**④ RUN CENTRIFUGE**

**⑤ KEEP PIT LEVEL ABOUT 3 FT DOWN**

**WHILE DRILLING, (CEMENTITE) 3 FT DOWN (T-PLEX 2 CANS)**

**TO LOWER VIS ADD WATER, THERMPLEX, & SODA ASH (SODA ASH 1 SX) HOME**

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>24 HR. A.S. SERV. 353-1692</b>	PHONE <b>353-3030</b>
MOBILE UNIT <b>(619) 355-5158</b>	WAREHOUSE LOCATION <b>BRAWLEY - BEACH</b>	PHONE <b>344-5100</b>

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

START/DEL

Cost - Time Summary / 24 Hours Ending 0430 @ Depth 150 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	Wt.	Hours	Feet
GEL	560	560		18.05						
BAR	494	494		9.07						
LIME	48	48		10.00						
CAUSTIC	40	40		46.70						
WEL PAC	10	10		243.00						
SODA ASH	24	24		32.50						
CSH	24	24		19.80						
DMS	24	24		90.00						
PEP	6	6		155.00						
CSH-PELLETS	50	50		48.00						
T-PLEX	24	24		110.00						
T-LIG	50	50		30.00						
ALSTOR	2	2		95.00						
OMNI-PLEX	2	2		90.00						
ANTI-FOAM	5	5		88.00						
SAWDUST	24	24		7.00						

COMMENTS/REMARKS  
**NIPPLE UP TO 30" W/ BAG -**

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A PROFESSIONAL DRILLING FLUID SERVICE.

ILLING MUD REPORT

DATE 27 OCT 1985 DEPTH 1000

REPORT FOR SUN. INORN

OPERATOR: BECHTEL CORP. D.O.E. ADDRESS: RIG REPORT FOR MR. GERALD REICH WELL NAME AND NO. SSSDP - STATE #2-14

CONTRACTOR: CLEVELAND DRIG CO. ADDRESS: RIG REPORT FOR MR. WILLARD NICKEL FIELD OR BLOCK NO. SALTON SEA COUNTY PARISH OR OFFSHORE AREA: IMPERIAL STATE OR PROVINCE: CALIF

Table with columns: OPERATION, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes data for Present Activity, Bit Size, Drill Pipe Size, etc.

Table with columns: FLOWLINE TEMPERATURE, TIME SAMPLE TAKEN, DEPTH (ft.), WEIGHT, MUD GRADIENT, FUNNEL VISCOSITY, PLASTIC VISCOSITY, YIELD POINT, GEL STRENGTH, pH, FILTRATE API, API HP-HT FILTRATE, CAKE THICKNESS, ALKALINITY, MUD (PM), ALKALINITY, FILTRATE (PFM), SALT, CALCIUM, SAND CONTENT, SOLIDS CONTENT, OIL CONTENT, WATER CONTENT, METHYLENE BLUE CAPACITY.

Table with columns: MUD CONTAINS, TREATMENT. Includes entries for GEL, LIME, LO-SOL, etc.

REMARKS - Give location, depth and nature of any problems encountered. 1 - KEEP HOLE FULL - CHK & FILL WHEN OUT OF HOLE (AT LEAST EVERY 30 MIN.)

2 - KEEP LOT AS LOW AS REASONABLE (9.8 MAX) - ADD WATER TO REDUCE. 3 - RUN ALL SOLIDS CONTROL EQUIP AT ALL TIMES

ENGINEER: JERRY BEWICK HOME ADDRESS: EL CENTRO PHONE: 353-3030

CAR-355-5158 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table: Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth 727 Ft. Columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage.

LABS TRAILER DELIV. TO LOCATION 27 OCT 85



A PROFESSIONAL DRILLING FLUID SERVICE.

# DRILLING MUD REPORT

REPORT FOR MON. MORN

DATE	28 OCT 19 85	DEPTH	1032
API WELL NO.	STATE	COUNTY	WELL
	CA	IMPERIAL	SSDP

OPERATOR	BECHTEL CORP. - D.O.E.	CONTRACTOR	CLEVELAND DRG CO.	RIG NO.	C
ADDRESS	RIG	ADDRESS	RIG	SPUD DATE	24 OCT 85
REPORT FOR MR.	GERALD REICH	REPORT FOR MR.	WILLARD NICKEL	SECTION, TOWNSHIP, RANGE	14-11S-13E
WELL NAME AND NO.	STATE #2-14	FIELD OR BLOCK NO.	SALTON SEA	COUNTY, PARISH OR OFFSHORE AREA	IMPERIAL
				STATE OR PROVINCE	CALIF

Present Activity	DRILLING AHEAD	CASING Surface	30 ft. 150 Ft.	MUD VOLUME (BBL)	702 1070	CIRCULATION DATA	Pump Size #1 7X16 #2 7X16	Annular Vol. (FL/MP)	30" CGS = 18 1/2
Bit Size (in.)	20 20 20	Intermediate		Total Circulating Volume	1772	Pump Make	NATIONAL	Opposite DP	3" = 22
Drill Pipe Size	26" H.O.	Production or Liner		In Storage	0	Model	N-1300	Opposite Collar	9" = 24
Drill Collar Size	5" 10.5" H.W. = 421F					Strain/MP	2.214 33	Jet Vel	207 1/2
TBHA	8 1/2" = 92 9" = 93	Mud Type	GEL+WATER			Blow/Min.	6PM	Circulation Pressure Psi	450
								Bottom Up (Min.)	43
								System Total (Min.)	125

Flowline Temperature	92 °F	MUD PROPERTIES	* BRANDT EQUIPMENT
Time Sample Taken	0330	SIZE	SIZE
Depth (ft.)	1012	Centrifuge	888
Weight (lb/cu. ft.)	9.7 (32.5)	Degasser	Shaker (2) 1600 888
Mud Gradient (psi/ft.)	.504	Descender RIG-848	Other EX-LOG 5 WITH
Funnel Viscosity (sec./qt.) API at	85 °F 50	DAILY COST	\$ 1963 =
Plastic Viscosity cps at	85 °F 10	MUD PROPERTIES SPECIFICATIONS	
Yield Point (lb/100 sq. ft.)	22	BY AUTHORITY:	OPERATOR'S WRITTEN DRILLING CONTRACTOR
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.	16.40 FRAGILE	OPERATOR'S REPRESENTATIVE	OTHER
pH Strip	8.34	MUD CONTAINS	TOUR TREATMENT
Filtrate API (m/30 min.)	16.0cc	GEL	5 SK
API HP-HT Filtrate (m/30 min.)		LO-SOL	1 SK
Cake Thickness 32nd in. API HP-HT	42 FIRM, SUK		SK
Alkalinity, Mud (Ppm)			SK
Alkalinity, Filtrate (Ppm)	2180		SK
Salt: ppm Chloride ppm	1150	KEEP HOLE	FULL-CHECK
Calcium ppm Gyp (ppb) T.H.	124	AT LEAST EVERY 30 MIN - EVEN	
Sand Content (% by Vol.)	1/2	WHEN "ON STRAIN"	
Solids Content (% by Vol.) UNDISSOLVED	10		
Oil Content (% by Vol.)		AT T.D. - AFTER WIPER TRIP	
Water Content (% by Vol.) Retort Calculated	90		
Methylene Blue Capacity ml/ml mud Requiv. #bol. bent. ~	32	ADD	6 CANS THERMPLEX OVER
ASG ALL SOLIDS	2.64		1 1/2 HRS (LAST
APPROX 9% DRILL SOLIDS	6 1/2		1 1/2 HR CIRC PRIOR
			TO P.O.H. FOR CSG)

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @

Salt Water Flow @

Gas kick @ NOTE: THIS MUD IS WORTH SAVING, IF POSSIBLE!

Stuck pipe @

Tight hole @

Sloughing Shale @

Lost Returns @

NO OTHER TREATMENT NEC!

ENGINEER	JERRY BEWICK	HOME ADDRESS	EL CENTRO	PHONE	353-3030
MOBILE UNIT	(619) 355-5158	WAREHOUSE LOCATION	BRAWLEY	PHONE	344-5100

24 HR. ANS. SERV. 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	Wt.	Hours	Footage?
GEL	530	544	-	10.05	-					
BAR	494	494	-	9.07	-					
LINIE	48	45	3	10.00	30.00					
CAUSTIC	40	40	-	46.70	-					
WELPAC	7	4	3	243.00	729.00					
T-PLEX	28	14	8	110.00	880.00					
LO-SOL	75	73	2	22.50	45.00					
MINI PLEX	2	2	-	90.00	-					
PRO TEND	-	-	-	150.00	-					
SODA ASH	20	17	3	32.50	97.50					
PEP	6	6	-	155.00	-					
DMS	24	24	-	90.00	-					
CSH	24	24	-	19.80	-					
" PELLETS	50	50	-	48.00	-					
AL-SIBER	2	2	-	95.00	-					
ANTI-FORM	5	5	-	88.00	-					
SAWDUST	20	18	2	7.00	14.00					
T-LIG	50	50	-	30.00	-					

Comments/Remarks: DRILL TO 1000' - 1 1/2" - OPEN HOLE TO 26" @ 1032' - DAILY TREATMENT -

PRO 303/1-2  
This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Proco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE.

**DILLING MUD REPORT**

REPORT NO. <b>86</b>
DATE <b>29 OCT 1985</b> DEPTH <b>1032</b>
API WELL NO. STATE COUNTY WELL ST

OPERATOR <b>BECHTEL CORP. - D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRLG CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL</b>
		STATE OR PROVINCE <b>CALIF.</b>

OPERATION <b>CIRC 20" / CMT.</b>	CASING Surface <b>30</b> ft. <b>150</b> Ft.	Hole Pits <b>354 1062</b>	CIRCULATION DATA Pump Size <b>7x16</b>
Bit Size (X) 16s 3x20s <b>1 7/8 RR + 26" H.O.</b>	No. <b>1</b>	Intermediate <b>20</b> ft. <b>20</b> Ft.	Total Circulating Volume <b>1416</b>
Drill Pipe Size <b>5" 19.5" (360)</b>	Type <b>42IF</b>	Production or Liner <b>-</b>	In Storage <b>0</b>
Drill Collar Size <b>8" = 91"</b>	Length <b>235'</b>	Mud Type <b>GEL + WATER</b>	Pump Make <b>NATIONAL</b>
<b>TBHA (9" = 93')</b>			Model <b>N-1300</b>
			Stroke <b>2.214</b>
			Stroke/Min. <b>11.77</b>
			Flow Rate <b>494</b>

Flowline Temperature <b>~120 °F</b>	MUD PROPERTIES <b>BTMS UP</b>	*BRANDT SOLIDS EQUIP. <b>CHGD</b>
Time Sample Taken <b>2200</b>	Centrifuge <b>888</b>	Deaer (2) <b>888</b>
Depth (ft.) <b>1032</b>	Degasser <b>220</b>	Shake (2) <b>888</b>
Weight (ppg) (to loc. ft.) <b>9.9 (74)</b>	Desander <b>RIG-EX4</b>	Other <b>EX LOG-SMITH</b>
Mud Gradient (psi/ft.) <b>.515</b>	DAILY COST <b>\$1485</b>	CUMULATIVE COST <b>\$8883</b>
Funnel Viscosity (sec./10) API at <b>100 °F</b>	<b>48</b>	MUD PROPERTIES SPECIFICATIONS <b>YP-720</b>
Plastic Viscosity cps at <b>100 °F</b>	<b>14</b>	<b>8.6 WEIGHT 9.2 VISCOSITY 35-40 FILTRATE 20cc PH</b>
Yield Point (lb/100 sq. ft.) <b>18</b>	<b>18</b>	BY AUTHORITY: <input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <b>9-10</b>
Gel Strength (lb/100 sq. ft.) 10 sec./10 min. <b>18.44</b>	<b>FRAGILE</b>	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter <b>8.5</b>	MUD CONTAINS	TOUR TREATMENT
Filtrate API (ml/30 min.) <b>12.6 cc</b>	<input type="checkbox"/> GEL	<input type="checkbox"/> SX
API HP-HT Filtrate (ml/30 min.) <b>-</b>	<input type="checkbox"/> BAR	<input type="checkbox"/> SX
Cake Thickness 32nd in. API HP-HT <input type="checkbox"/> <b>&lt;2 FIRM, SLIK</b>	<input type="checkbox"/>	<input type="checkbox"/> SX
Alkalinity, Mud (Ppm) <b>-</b>	<input type="checkbox"/>	<input type="checkbox"/> SX
Alkalinity, Filtrate (P/AM) <b>NIL 7.5</b>	<input type="checkbox"/>	<input type="checkbox"/> SX
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpg <b>1180</b>	<input type="checkbox"/>	<input type="checkbox"/> SX
Calcium: <input type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) <b>F.H.</b> <b>112</b>	<input type="checkbox"/>	<input type="checkbox"/> SX
Sand Content (% by Vol.) <b>1/4</b>	<input type="checkbox"/>	<input type="checkbox"/> SX
Solids Content (% by Vol.) <b>10 1/2</b>	<input type="checkbox"/>	<input type="checkbox"/>
Oil Content (% by Vol.) <b>-</b>	<input type="checkbox"/>	<input type="checkbox"/>
Water Content (% by Vol.) <input type="checkbox"/> Retort <input checked="" type="checkbox"/> Calculated <b>89 1/2</b>	<input type="checkbox"/>	<input type="checkbox"/>
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input checked="" type="checkbox"/> equiv. #/bbl. bent. <b>40</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>ASG ALL SOLIDS</b> <b>2.79</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>APPROX % DRILL SOLIDS</b> <b>6%</b>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS— Give operation, depth and nature of any problems encountered

Drilling @ **29" I.D.**

Salt Water flow @ **20" x 19.120 I.D.**

Gas kick @ **150'**

Stuck pipe @ **882**

Tight hole @ **2 ANTIPISTON = 30188L**

Sloughing **20" CAP = 36788L**

Lost Returns @ **355388P**

**WITH NO STAB-IN - DISP 352 BBLs - PLUG @ 40**

**WITH STAB IN @ 5 HOE 85' DISP =**

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>FL CENTRA</b>	PHONE <b>353-3030</b>
MOBILE UNIT <b>355-5158-CAR</b>	WAREHOUSE LOCATION <b>BRAWLEY</b>	PHONE <b>344-5100</b>

24-HR ANS. - 353-1692

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending **20:00** @ Depth **1032** Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No. - Type	RPM	Wt.	Hours	Footage
GEL	544	544	-	10.05	-					
BAR	494	494	-	9.07	-					
LIME	45	45	-	10.00	-					
CAUSTIC	40	40	-	46.70	-					
NELPAC	4	4	-	243.00	-					
F-FLEX	14	24	12	110.00	1320.00					
LO-SOL	73	73	-	22.50	-					
OMNI-	2	2	-	90.00	-					
SODD-ASH	17	17	-	32.50	-					
PEP	6	6	-	155.00	-					
DMS	24	24	-	90.00	-					
CSH	24	24	-	19.80	-					
PELLETS	50	50	-	48.00	-					
AL-STABR	2	2	-	95.00	-					
ANTI-FOAM	5	5	-	88.00	-					
SAWDUST	18	18	-	7.00	-					
F-LIG	50	50	-	30.00	-					
INP	5	5	-	360.00	-					
DRG TEMP	45	45	-	360.00	-					
TRAMP	50	50	-	360.00	-					

COMMENTS/REMARKS  
**T.D. 20" CSG - CMT @ RPT TIME!**

PRO 303/1-2  
P.D. = 60 = LAB = 25 = TRKG - 198.00

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PROFCO A PROFESSIONAL DRILLING FLUID SERVICE.

# DRILLING MUD REPORT

REPORT NO. 07

REPORT FOR WILDS. MORN.

DATE	30 Oct 1985	DEPTH	
STATE	CA	COUNTY	IMPERIAL
WELL	SEED	BT	

OPERATOR: BECHTEL CORP. - D.O.E. CONTRACTOR: CLEVELAND DRIG. RIG NO.: 6

ADDRESS: RIG. ADDRESS: RIG. SPUD DATE:

REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE:

WELL NAME AND NO. STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTRY, PARISH, OR TERRITORY: IMPERIAL STATE OR PROVINCE: CA.

OPERATION: NIPPLE DN & UP CASING: 30 in. 150 ft. MUD VOLUME (BBL): 438 400 CIRCULATION DATA: Pump Bow #1 7x16 #2 7x16 Annular Vol. (FL/Min.) 34

Drill Pipe Size: 5" - 19.5" Type: 4 1/2 IF Intermediate Production or Liner In Storage: 838 Pump Make: NATIONAL Opposite DP = 414

Drill Collar Size: 8" = 91 Length: 229' Mud Type: GEL + WATER Model: N-1300 Opposite Coker = 9" = 51

Sample from: BHT-116°F MUD PROPERTIES \* BRANDT EQUIP. EQUIPMENT

Flowline Temperature: 110°F Time Samples Taken: Depth (ft.): 1032 Centrifuge: 1 100x8 Deaerator: (2) 100x8 PAX 1

Weight (ppg) (lb./cu. ft.): 9.6 (72) Desander: RIG-8x4" Other: EX-LOG 5MMH 1

Mud Gradient (psi/ft.): 499 DAILY COST: MUD PROPERTIES SPECIFICATIONS: YP-20 PH-10

Funnel Viscosity (sec/30) API at 70°F 46 Plastic Viscosity cps at 12 Yield Point (lb./100 sq. ft.): 16

Gel Strength (lb./100 sq. ft.) 10 sec/10 min.: 1 1238 BY AUTHORITY: OPERATOR'S WRITTEN OPERATOR'S REPRESENTATIVE OTHER

pH Strip: Meter 8.5 MUD CONTAINS: TOUR TREATMENT

Filtrate API (ml/30 min.): 12.2 API HP-HT Filtrate (ml/30 min.): 2 FIPINE GUK

Cake Thickness 32nd in. API HP-HT: 2 Alkalinity, Mud (Ppm): 1 8.8

Alkalinity, Filtrate (PPM): 1 12.00

Salt: ppm Gyp Chloride: ppm Gyp: 120

Calcium ppm Gyp (ppb): 120

Sand Content (% by Vol.): 3/8

Solids Content (% by Vol.): 11

Oil Content (% by Vol.):

Water Content (% by Vol.): 89

Methylene Blue Capacity (ml/ml mud) (equiv. #/bbl. bent.): 40

ASG ALL SOLIDS APPROX 7% DRILL SOLIDS

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @: CUTD 20" CSG - GOOD CMT RETURNS

Ball Water flow @: CLEANED SHALE PIT

Gas kick @: SERVICED MUD CLEANERS

Stuck pipe @: CHGD RIG SHAKER SCREENS

Tight hole @:

Sloughing shale @:

Lost Returns @:

ENGINEER: JERRY BEWICK HOME ADDRESS: EL CENTRO PHONE: 353-3030

MOBILE UNIT: 353-5158 WAREHOUSE LOCATION: BRAWLEY PHONE: 344-5100

24HR SERV. - 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending 0800 @ Depth 1032 ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BR No.—Type	RPM	WL	Hours	Footage
GEL	544			10.05						
BAR	494			2.07						
LIME	45			10.00						
CAUSTIC	40			46.70						
WELPAC	4			243.00						
T-PLEX	26			110.00						
LO-SOL	73			22.50						
QMINI	2			30.00						
SODA ASH	17			32.50						
PEP	6			155.00						
DMS	24			90.00						
CSH	24			19.80						
PELLETS	50			48.00						
AL-STEAR	2			95.00						
HTI-FORML	5			88.00						
SAWBUST	18			7.00						
T-LIG	50			30.00						
NIP	50			26.00						

### COMMENTS/REMARKS

NIPPLE DN 30"  
NIPPLE UP ON 20"  
DAILY ...  
TAX ...  
P.O. ... 60.00  
LAB ... 25.00  
85.00  
FWD.. 53 26.25  
# 6411.25

PRO 303/1-2

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Profco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE, THURS. MARIN

HAPPY HALLOWEEN!

REPORT FOR

DRILLING MUD REPORT

DATE 31 OCT 1985 DEPTH 1563
AP Well No. STATE COUNTY WELL BIT

OPERATOR DECHTAI CORP. D.O.E CONTRACTOR CLEVELAND DRIG CO
ADDRESS REPORT FOR MR. GERALD REICH WILLARD NICKEL
STATE # 2-14 FIELD OR BLOCK NO. SAITON 51-A COUNTY PARISH OR OFFSHORE AREA IMPERIAL STATE OR PROVINCE CA.

Table with columns: OPERATION, CASING, MUD VOLUME (BSL), CIRCULATION DATA. Includes data for 9 7/8 BBL, 30 in. 150 ft, 520 BBL, etc.

MUD PROPERTIES and EQUIPMENT table. Includes columns for Temperature, Time Sample Taken, Depth, Weight, Mud Gradient, Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, etc.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes like 'LAST 30' BORE 1288', 'ADD WATER - MAINTAIN VOL 2-3 DN', etc.

ENGINEER JERRY BENICK HOME ADDRESS PHONE 353-3220
MOBILE UNIT 353-5158 WAREHOUSE LOCATION DRABILLY PHONE 344-5100

Cost - Time Summary / 24 Hours Ending 11:00 AM @ Depth 1563 ft. Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, etc.

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A PROFESSIONAL DRILLING FLUID SERVICE.

**ILLING MUD REPORT** REPORT NO. **09**

DATE **1 NOV 1985** DEPTH **1983**

STATE **CA** COUNTY **IMPERIAL** WELL **S/D/P**

REPORT FOR **FRI. MORN**

OPERATOR **BECHTEL CORP- DOE** CONTRACTOR **CLEVELAND DRUG CO** RIG NO. **6**

ADDRESS **RIG** ADDRESS **RIG** SPUD DATE **24 OCT. 85**

REPORT FOR MR. **GERALD REICH** REPORT FOR MR. **WILLARD NICKEL** SECTION, TOWNSHIP, RANGE **14-11S 13E**

WELL NAME AND NO. **STATE # 2-14** FIELD OR BLOCK NO. **SALTON SEA** COUNTY, PARISH, OR OFFSHORE AREA **IMPERIAL** STATE OR PROVINCE **CA**

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
TRIP FOR CORE BBL	30 in. at 150 Ft.	728 1209	Pump Size # <b>7X16</b> Annular Vol. (Fl./Min.) <b>33</b>
Bit Size (in.) <b>14-14-18</b>	Intermediate	Total Circulating Volume <b>1938</b>	Pump Make <b>NATIONAL</b> Opposite DP = <b>39</b>
Drill Pipe Size <b>5" 19.5</b>	Type <b>4 1/2 IF</b>	In Storage <b>0</b>	Model <b>N-1300</b> Opposite Collar = <b>49</b>
Drill Collar Size <b>8" = 91</b>	Length <b>229'</b>	Mud Type <b>GEL + CHEM.</b>	Flow Rate <b>50</b> Circulating Pressure @ Bottom Up (Min.) = <b>65</b>
BHA <b>9" = 93</b>			System Total (Min.) = <b>181</b>

MUD PROPERTIES	* BRANDT EQUIP	EQUIPMENT
Flowline Temperature <b>90</b> °F	SIZE <b>186</b>	TOUR <b>186</b>
Time Sample Taken <b>0500</b>	Centrifuge <b>895</b>	Deaerator <b>2</b>
Depth (ft.) <b>1983</b>	Degasser <b>CHRIST CORE 1</b>	Shaker <b>RIG 20x30 1688</b>
Weight <b>9.6 (72)</b>	DAILY COST <b>2702</b>	CUMULATIVE COST <b>13374</b>
Mud Gradient (psu/ft.) <b>4.99</b>	MUD PROPERTIES SPECIFICATIONS <b>YP (7-20)</b>	
Funnel Viscosity (sec./qt.) API at <b>90</b> °F <b>36</b>	BY AUTHORITY: <input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR	
Plastic Viscosity cps at <b>90</b> °F <b>7</b>	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
Yield Point (lb./100 sq. ft.) <b>20</b>	MUD CONTAINS <b>GEL</b> TOUR TREATMENT <b>5 SX</b>	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. <b>14.36</b>	<b>FRAGILE</b> <b>1 SX</b>	
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter <b>9.6</b>	<b>TOURISY TREATMENT</b>	
Filtrate API (ml/30 min.) <b>20.2 cc</b>	<b>2 IN COMBINATION</b>	
API HP-HT Filtrate (ml/30 min.) <b>2</b>	<b>TO INCREASE VIS</b>	
Cake Thickness 32nd in. API <input type="checkbox"/> HP-HT <input type="checkbox"/>	<b>2 ERM SLK</b>	
Alkalinity, Mud (Pm) <b>.36</b>	<b>2 THERM LIG</b>	
Alkalinity, Filtrate (P/AM) <b>103.30</b>	<b>2 CAUSTIC</b>	
Salt <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride <input type="checkbox"/> ppm <input type="checkbox"/> gpg <b>2900</b>	<b>2 WELPAC</b>	
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) <b>264</b>	<b>2 PRO TEMP</b>	
Sand Content (% by Vol.) <b>&lt; 1/4</b>	<b>2 POTASH</b>	
Solids Content (% by Vol.) <b>UNDISSOLVED</b>	<b>2 HI VIS</b>	
Oil Content (% by Vol.) <b>-</b>	<b>2 OR</b>	
Water Content (% by Vol.) <input checked="" type="checkbox"/> Retort <input type="checkbox"/> Calculated <b>90 1/2</b>	<b>2 CAUSTIC</b>	
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input checked="" type="checkbox"/> equiv. #/bbl. bent. <b>26</b>	<b>2 WELPAC</b>	
<b>ASG ALL SOLIDS</b> <b>2.60</b>	<b>2 MAINTAIN VIS @ 40-50</b>	
<b>APPROX 90 DRILL SOLIDS</b> <b>690</b>	<b>WITH WELPAC &amp; GEL</b>	

REMARKS—Give operation, depth and nature of any problems encountered.

Drilling @ **\* DRUG ANHYDRITE!**

Salt Water flow @ **T.H. INCREASING!**

Gas kick @

Stuck pipe @

Tight hole @

Sloughing Shale @

Lost Returns @

② KEEP PITS 700-900 BBL (LARGER)

③ DUMP SAND TRAP EACH CANN

④ RUN ALL SOLIDS CONTROL EQUIP

ENGINEER **JERRY BEWICK** HOME ADDRESS **EL CENTRO** PHONE **353-3030**

MOBILE UNIT **355-5158** WAREHOUSE LOCATION **(BEACH) BRAWLEY** PHONE **344-5100**

24 HR. AHS. **353-1692** THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending **MIDNITE** @ Depth **-** Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	Wt.	Hours	Footage
GEL	544	544	-	10.05	-					
BAR	494	494	-	9.07	-					
WELPAC	34	34	-	243.00	-					
T-PLX	46	40	6	110.00	660.00					
T-LIG	38	80	8	30.00	240.00					
NaOH	39	35	4	46.70	186.80					
CaOH	44	43	1	10.00	10.00					
BiCARB	9	9	-	18.00	-					
SODA ASH	17	17	-	32.50	-					
KCl	64	224	10	28.50	285.00					
SAWDUST	42	42	-	7.00	-					
PRO TEMP	45	39	6	150.00	900.00					
T-TRIL III	50	50	-	300.00	-					
DRUGS/PELLETS	24/50	24/50	-	95/48	-					
AL. STAIN/ANT	2/5	2/5	-	95/88	-					
W. SOL/CSH	73/24	73/24	-	2250/19.80	-					
PPR/NIO	6/6	6/6	-	155/124	-					

COMMENTS/REMARKS  
RETRIEVED 24.1' WIRE-TRIP AFTER DRUG TO 1983, FOR ANOTHER CORE  
WIPEUP 1454-1864 NO DRAG-CONVERTING TO HI-TEMP COREING FLUID

PRO 303/1-2

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TRK6 198+188 = 386 PD=60 LAB25



**PROFCO** A PROFESSIONAL DRILLING FLUID SERVICE.

**ILLING MUD REPORT**

DATE **2 NOV 1985** DEPTH **10**  
 AP. NO. STATE COUNTY WELL #  
 CA IMP SLSIDP

REPORT FOR **SAT. MORN.**

OPERATOR <b>BECHTAL CORP. - D.O.E</b>	CONTRACTOR <b>CLEVELAND DRUG CO.</b>	RIG NO <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL</b>
		STATE OR PROVINCE <b>CA</b>

Present Activity <b>DRUG BITHEAD 20-35 1/4</b>	CASING Surface <b>30 in. at 150 Ft</b>	MUD VOLUME (BBL) <b>844 1067</b>	CIRCULATION DATA Pump Size <b>7x16</b> Annual Vol. (Fl./Min.) <b>20"</b> = <b>33</b> Pump Make <b>NATIONAL</b> Opposite DP = <b>39</b> Model <b>N-1300</b> Opposite Collar = <b>49</b> Bbl/Stroke <b>0.214</b> Stroke/Min. <b>50</b> Jet Vel = <b>266 1/2</b> Bbl/Min. <b>10.7</b> System Total (Min.) = <b>178</b>
Drill Pipe Size <b>5"-19.5#</b> Type <b>RR3</b> No. <b>20</b> in. at <b>1032 Ft</b>	Production or Liner <b>4 1/2 IF</b>	Total Circulating Volume <b>1911</b>	
Drill Collar Size <b>8"-91</b> Length <b>229</b> Mud Type <b>GEL+CHEMICAL</b>			

Flowline Temperature °F Time Sample Taken Depth (ft.) Weight (ppg) □ lb./cu. ft. Mud Gradient (psi/ft.) Funnel Viscosity (sec./qt.) API #1 Plastic Viscosity cps at 90 °F Yield Point (lb./100 sq. ft.) Gel Strength (lb./100 sq. ft.) 10 sec./10 min. pH □ Strip □ Meter Filtrate API (ml/30 min.) API HP-HT Filtrate (ml/30 min.) Cake Thickness 32nd in. API (HP-HT) Alkalinity, Mud (Pm) Alkalinity, Filtrate (P/m) Salt: □ ppm □ gpg Chloride: □ ppm □ gpg Calcium □ ppm □ Gyp (ppb) Sand Content (% by Vol.) Solids Content (% by Vol.) Oil Content (% by Vol.) Water Content (% by Vol.) □ Reton □ Calculated Methylene Blue Capacity □ ml/ml mud □ equiv. #/bbl bent. ASG ALL SOLIDS APP POK % DRILL SOLIDS	0500 2380 9.6 (72) 4.99 110 °F 45 90 °F 10 26 18.40 10.0 20.8cc - 2 FIRM SLK .33 .03.4 3700 312 1/4 9 1/2 - 90 1/2 22 2.6 6+26	BRAND EQUIP SIZE HRS./TOUR CENTRIFUGE 1 B&B GASIFIER KLEIN MOUNT (2) DASANDER RIG-6-40 DAILY COST \$3089 = MUD PROPERTIES SPECIFICATIONS BY AUTHORITY: □ OPERATOR'S WRITTEN □ DRILLING CONTRACTOR □ OPERATOR'S REPRESENTATIVE □ OTHER MUD CONTAINS GEL WELPAC TOLTRY THERMPLEX PRO TEMP THERM TR III POTASH CALSTIC THERM LIG ① MAINTAIN VIS @ 40-50 INCREASIBLE WITH WELPAC	SIZE HRS./TOUR Degitter #2 180 & 100-888 Shaker (2) RIG-2430 R&E Other EX-LOG SMITH CUMULATIVE COST \$16,463 = Z USE RATIO FOR SMYING TO RAISE VIS SX SX SX 2 CANS 2 CANS 1 SX 2 SX 1 SX 4 SX ADD OVER 3 OR 6 HRS
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REMARKS—Give operation, depth and nature of any problems encountered

□ Drilling @ **CORED - RECOVERY .24 -**

□ Salt Water flow @ **DRILLERS**

□ Gas kick @ **(DERRICKMEN) PLEASE CHECK**

□ Stuck pipe @ **3 TIMES PER TOUR & WRITE IN**

□ Tight ht: @ **BOOK IN & VIS 2 DETERMINES**

□ Sloughing Shale @ **MTL'S IN & VIS TREATMENTS!**

□ Lost Returns @ **USED! (OUT & VIS)**

② MAINTAIN WT AS LOW AS POSSIBLE  
 RIN ALL CLEANING EQUIP  
 DUMP SAND TRAP EACH CONN

③ KEEP PITS 700-900 BBL

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>EL CENTRO</b>	PHONE <b>353-3030</b>
MOBILE UNIT <b>355-5158</b>	WAREHOUSE LOCATION <b>BRAWLEY-BEACH</b>	PHONE <b>344-5100</b>

24 HR. ANS. 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending **11:00 AM** @ Depth **-** Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Blt No. - Type	RPM	Wt.	Hours	Footage
GEL	544	544	-	10.05	-					
BAR	494	494	-	9.07	-					
WELPAC	34	32	2	243.00	485.00					
T-PLEX	40	34	6	110.00	660.00					
T-LIG	80	68	12	30.00	360.00					
NACH	35	31	4	46.70	186.80					
CACH	43	33	10	10.00	-					
BIDARB	9	9	-	18.00	-					
SOD ASH	17	17	-	32.50	-					
KCC	224	216	8	28.50	228.00					
SAWDUST	42	40	2	7.00	14.00					
PRO TEMP	39	33	6	150.00	900.00					
T-TROL III	50	50	-	300.00	-					
DNS/PELLETS	2450	2450	-	98=148=	-					
AL SEWANT	215	215	-	95=86=	-					
LD SOL CSH	73/24	73/24	-	2250/19.80	-					
PEP NIO	6/6	6/6	-	155=124=	-					
QNN	2	2	-	90.00	-					

COMMENTS/REMARKS  
 RETURN FROM MUD CLEANERS  
 MUD WT #1 = 10.2  
 #2 = 11.2  
 SUGGEST 325 MESH BOTH  
 CLEANERS!  
 TREATING MUD FOR HI TEMP  
 & CORE RUNS.-

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Proco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE

REPORT FOR SUN. MORN

**ILLING MUD REPORT**

REPORT NO. 11

DATE 3 NOV 1985 DEPTH 2524

STATE COUNTY WELL

CA IMPERIAL SDIP

OPERATOR: BECHTEL CORP - D.O.E. ADDRESS: CLEVELAND DRUG CO RIG NO. 6

RIG: RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE: 14-11S-13E

WELL NAME AND NO.: STATE #2-14 FIELD OR BLOCK NO.: SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL STATE OR PROVINCE: CA.

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
DRUG HEAD 25 FPH	30 in. at 150 Ft.	787 855	Pump Size 7 X 16 Annular Vel. (Ft./Min.) 20" = 34
17 1/2" HTG-3A2	20 in. at 1082 Ft.	1642	Opposite DP = 41
5" 19.5" H.W			Opposite Collar = 51
BHA			Model N-1300
			Bl/Stroke 214 Stroke/Min. 52
			Circulating Pressure 722 = 600
			Bottoms Up (Min.) = 67
			System Total (Min.) = 148

MUD PROPERTIES		* BRANDT EQUIP. EQUIPMENT	
Flowline Temperature 125°F		SIZE	HRS./TOUR
Time Sample Taken	0500	Centrifuge	688
Depth (ft.)	2524	Desander	*2-4WD-SUMP 888
Weight (ppg) lb./cu. ft.	9.4 (70.3)	Shaker	RIG-20A/37 B&E
Mud Gradient (psi/ft.)	489	Desander	RIG-84'0" +
Funnel Viscosity (sec./gt.) API at 112°F	40	DAILY COST	\$ 3937 =
Plastic Viscosity cps at 100°F	10	CUMULATIVE COST	\$ 20,400 =
Yield Point (lb./100 sq. ft.)	16	MUD PROPERTIES SPECIFICATIONS	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	8.24 FRAGILE	8.6 WEIGHT	9.2 VISCOSITY
pH Meter	9.8	BY AUTHORITY:	OP. WRITTEN DRILLING CONTRACTOR
Filtrate API (ml/30 min.)	17.2 cc	OP. REPRESENTATIVE	OTHER
API HP-HT Filtrate (ml/30 min.)	-	MUD CONTAINS	
Cake Thickness 32nd in. API	<2 FIRM SUK	TOUR TREATMENT	
Alkalinity Mud (Pm)	.35	X GEL	5 SX
Alkalinity Filtrate (P/M)	02.51	X WELPAC	1 SX
Salt: ppm Chloride	4000	2 USE RATIO 5:1 FOR INCREASING VIS.	
Calcium ppm TOTAL HARD	320	X THERMOLIX	1 SX
Sand Content (% by Vol.)	<1/4	X PRO TEMP	2 SX
Solids Content (% by Vol.)	8	X THERM TRILLI	1 SX
Oil Content (% by Vol.)	-	X POTASH	2 SX
Water Content (% by Vol.)	92	X CAUSTIC	1 SX
Methylene Blue Capacity (ml/ml mud)	22	X THERM LIG	2 SX
ASG ALL SOLIDS	2.60	ADD OVER 3 OR 6 HRS	
APPROX DRILL SOLIDS	5 1/2%	① MAINTAIN VIS @ 40-50 (USE ABOVE RATIO TO INCREASE)	

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ RAN CORE BBL & RETRIEVED

Soft Water flow @ ~1000 CORE GOOD SHAPE

Gas kick @ K-PROV. CAL. WIRE IN APPROX CAP. OF

Stuck pipe @ 20" INCORRECT!

Tight hole @

Sloughing Shale @

Lost Returns @

② MAINTAIN WT AS LOW AS POSSIBLE (RUN CLEANER UNDER FLOW TO SUMP) (RUN CENTRIFUGE VALVE ALL THE WAY OPEN)

③ MAINTAIN VOLUME 700-900 BBL (SEE LOGGER FOR VOL)

ENGINEER: JERRY BEWICK HOME ADDRESS: EL CENTRO PHONE: 353-3030

MOBILE UNIT: 355-5158 WAREHOUSE LOCATION: BRADLEY PHONE: 344-5100

24 HR. AHS, SERV. - 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending MIDDNITE @ Depth 2472 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BR No. - Type	RPM	WL	Hours	Footage
GEL	544	541	3	10.15	30.15					
BAR	404	404	-	3.07	-					
WELPAC	32	28	4	243.00	972.00					
T-PLUS	68 34	28	6	110.00	660.00					
T-LIG	31 68	58	10	30.00	300.00					
NaOH	43 31	27	4	46.70	186.80					
CaOH	43	43	-	10.00	-					
BICARB	9	9	-	18.00	-					
SODA ASH	17	17	-	32.50	-					
KCl	216	206	10	28.50	285.00					
SALINITY	40	40	-	7.00	-					
PRO TEMP	33	27	6	150.00	900.00					
T-TRILLI	50	49	1	300.00	300.00					
DMS/POUNDS	24/50	24/50	-	90/88	-					
AL STRENGTH	2/5	2/5	-	95/88	-					
LO SOL CSH	73/24	73/24	-	22.50/19.80	-					
PEP HHO	6/6	6/6	-	155/124	-					
PM	2	2	-	90.00	-					

COMMENTS/REMARKS: CORE O.K. - DAILY MAINT.

PRO 303/1-2

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Proco, Inc.





A PROFESSIONAL DRILLING FLUID SERVICE.

WILLING MUD REPORT

REPORT FOR MON. 1200N

REPORT NO. 12 DATE 4 NOV 1985 DEPTH 2962

OPERATOR BECHTAL CORP. - D.O.E. CONTRACTOR CLEVELAND DRUG CO. ADDRESS RIG RIG REPORT FOR MR. GERALD REICH WILLARD NICKEL

OPERATION CORING @ 25 FT/HR CASING 30" SURFACE 150' FIELD OR BLOCK NO. SALTONSEA COUNTY PARISH OR OFFSHORE AREA IMPERIAL STATE OR PROVINCE CA.

MUD PROPERTIES \* BRANDT EQUIP. Flowline Temperature 139°F Time Sample Taken 0500 Depth (ft.) 2962 Weight (lb/gal) 9.4 (30.3) Mud Gradient (psi/ft.) 4.89 Funnel Viscosity (sec./100 cc) 42 Plastic Viscosity (cp) 12 Yield Point (lb/100 sq. ft.) 1.8 Gel Strength (lb/100 sq. ft.) 6.26 FRAGILE pH 10.2 Filtrate API (ml/30 min.) 14.2 API HP-HT Filtrate (ml/30 min.) 20°F Cake Thickness 32nd in. API 2.40 Alkalinity, Mud (pH) 10.2 Alkalinity, Filtrate (P/P/M) 10.2

REMARKS - Give operation, depth and nature of any problems encountered. Drilling @ CORE TOOL IN @ 2970' Salt Water flow @ Gas lock @ NOTES TO BUILD NET VOLUME ADD 45 SX GEL Sluck pipe @ 2 SX WELPAC Tight hole @ 2 CHS THERMIPLEX Sloughing Shale @ Lost Returns @

ENGINEER JERRY BEWICK HOME ADDRESS EL CENTRO PHONE 1-353-3030 MOBILE UNIT (619) 355-5155 WAREHOUSE LOCATION BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending 11:00 AM @ Depth 2962 ft. Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., RPM, Wt., Hours, Footage.

COMMENTS/REMARKS: CORING - CALCULATED MUD LOSS. 66BBLS NEW MUD MADE & LOST. 395BBLS TOTAL MUD LOSS = 461BBLS

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Proco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE.

REPORT FOR TUES. MORN

DRILLING MUD REPORT

REPORT NO. 13 DATE 5 NOV 1985 DEPTH 3000

OPERATOR BECHTAL CORP. - DOE CONTRACTOR CLEVELAND DRLG CO. RIG NO. 6 ADDRESS RIG SPUD DATE 24 OCT 85

REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E

MUD PROPERTIES PIT CHECK \* BRANDT EQUIP EQUIPMENT \*\* KERN CONST COOLERS

REMARKS - Give operation, depth and nature of any problems encountered

ENGINEER JERRY BEWICK HOME ADDRESS EL CENTRO PHONE (951) 353-3050

24 HR AHS, SERVICE 353-1692

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., RPM, Wt., Hours, Footage

COMMENTS/REMARKS CORIED 2970-3030 - 100% OPENED HOLE TO 17 1/2 TO 3000

This report and any oral statements made in connection with it are statements of opinion only.



A PROFESSIONAL DRILLING FLUID SERVICE.

DRILLING MUD REPORT

REPORT NO. 14
DATE 6 NOV 1985 DEPTH 3000
STATE COUNTY WELL ST

REPORT FOR WEDS. MORN

OPERATOR BECHTEL CORP/DOE
CONTRACTOR CLEVELAND DRILG CO.
RIG RIG
REPORT FOR MR. GERALD REICH
REPORT FOR MR. JERRY GARDNER
STATE #2-14
FIELD OR BLOCK NO. SALTON SEA
COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL
STATE OR PROVINCE CA.

Table with columns: OPERATION, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes data for CIRC HOLE CLEAN & COOL, 30 in. at 150 ft, 950 540, #2 7x16, etc.

Table with columns: Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (ppg), Mud Gradient (ppm/ft.), Funnel Viscosity (sec./qt.) API at, Plastic Viscosity (cpe at), Yield Point (lb/100 sq. ft.), Gel Strength (lb/100 sq. ft.) 10 sec./10 min., pH, Filtrate API (ml/30 min.), API HP-HT Filtrate (ml/30 min.), Cake Thickness 32nd in. API (HP-HT), Alkalinity, Mud (Pm), Alkalinity, Filtrate (P/VM), Salt, Calcium, Sand Content (% by Vol.), Solids Content (% by Vol.), Oil Content (% by Vol.), Water Content (% by Vol.), Methylene Blue Capacity (m/ml mud equiv. #bbi bent).

Table with columns: MUD PROPERTIES, MUD PROPERTIES SPECIFICATIONS, MUD CONTAINS, TOUR TREATMENT. Includes data for 210°F FLOWLINE, 1400, 3000, 160°F, 9.4, 489, 180°F, 40, 130°F, 10, 16, 6.30 FRAGILE, 8.4, 16.0 cc, 2 FIRM, SLK, 0.38, 4.100, 400, 1/2, 8, 92, 18, 2.6, 6.92.

REMARKS - Give operation, depth and nature of any problems encountered. 3000-6000'
MUD PROGRAM - PRETREAT VAPPB BICARB &
Salt Water flow @ 1ppb PROTEMP - THEN 1/2-1ppb T-TROL 3
Gas kick @ ? DIESEL
Stuck pipe @
Tight hole @ REPAIRMENT WATER METER (2) PARALLEL
Sloughing shale @ TO MONITOR FLUID LOSSES - CHECK IN LOGS
Lost Returns @ KIDLY DOWN BY LOGGER OR DERRICKMAN.

PER REQUEST DR. R. NICKERSON, MUD PROPERTIES "OUT" WILL BE RECORDED FROM CASING POINT (13 3/8) FROM LOGS APPROX 18-20 HRS AFTER LAST CIRCULATION 250'

ENGINEER JERRY BEWICK HOME ADDRESS EL CENTRO PHONE 353-3030
MOBILE UNIT 355-5158 WAREHOUSE LOCATION BRAULEY PHONE 344-5100

24 HR - 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No.-Type, RPM, WI., Hours, Footage. Includes data for GEL, BAR, VEDPAC, T-PLER, T-LIG, P-TEMP, T-TROL 3, NaOH, CaOH, KCl, BICARB, SODA ASH, SAND LUT, DMS/PROVERS 24/50, AL STRO/AMT 1/5, LD SOL/CSH 72/24, PEP/NLO 6/6.

COMMENTS/REMARKS
RAN CONVENTIONAL LOGS + TEMP LOG - 250+
RIH CIRC. FOR MORE LOGS -

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A PROFESSIONAL DRILLING FLUID SERVICE.

# D. LING MUD REPORT

REPORT NO. 15

DATE 7 NOV 1985 DEPTH 3000  
STATE COUNTY WELL ST  
CA IMPERIAL S D P

REPORT FOR THURS, MORN

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRIG CO RIG NO. 6  
 ADDRESS: RIG ADDRESS: SPUD DATE: 24 Oct 85  
 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE: 14-11S-13E  
 WELL NAME AND NO. STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL STATE OR PROVINCE: CALIF.

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
LOGGING	30 in. at 150 Ft. Surface	250 553	Pump Size #1 7x16 in. Annular Vel. (Ft./Min.)
Bit Size (in.)	20 in. at 1032 Ft. Intermediate	Total Circulating Volume 1503	Pump Make NATIONAL Opposite DP
Drill Pipe Size 5" 19.5#	Production or Liner	In Storage	Model N-1300 Opposite Collar
5" H.W. 45#	Length 42 IF	Stroke/Min. 1.206	System Total (Min.)
Drill Collar Size 8" 9"	Mud Type GEL/PRO-TEMP	Stroke/Min. 2.206	
BHA 8" 9"		Stroke/Min. 6PM	

MUD PROPERTIES		* BRAND EQUIP EQUIPMENT	
Flowline Temperature °F		Centrifuge	Desilter
Time Sample Taken	0530	Shaker	
Depth (ft.)	3000	Disintegrator	
Weight (lb) (lb/cu. ft.)		Daily Cost	
Mud Gradient (psi/ft.)		MUD PROPERTIES SPECIFICATIONS	
Funnel Viscosity (sec. 4qt.) API at °F		8.8 WEIGH 0.3 VISCOSITY 32-40 FILTRATE 8-15cc	
Plastic Viscosity cps at °F		BY AUTHORITY: OPERATOR'S WRITTEN DRILLING CONTRACTOR	
Yield Point (lb/100 sq. ft.)		OPERATOR'S REPRESENTATIVE OTHER	
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.		MUD CONTAINS	TOUR TREATMENT
pH Strip Water		GEL	SK
Filtrate API (ml/30 min.)		BAR	SK
API HP-HT Filtrate (ml/30 min.) °F			SK
Cake Thickness 32nd in. API HP-HT			SK
Alkalinity, Mud (Ppm)		ENGINEER WILCOX ADVISE	
Alkalinity, Filtrate (Ppm)			
Salt: ppm gpg Chloride: ppm gpg			
Calcium ppm Gyp (ppb) TOTAL HARD			
Sand Content (% by Vol.)			
Solids Content (% by Vol.) UNDISSOLVED			
Oil Content (% by Vol.)			
Water Content (% by Vol.) Retort Calculated			
Methylene Blue Capacity ml/ml mud (equiv. #bbl. bent.)			
ASG ALL SOLIDS APPROX 90% DRILL SOLIDS			

REMARKS—Give operation, depth and nature of any problems encountered  
 Drilling @ CALIF  
 Salt Water flow @ WATER  
 Gas kick @  
 Stuck pipe @  
 Tight hole @  
 Sloughing Shale @  
 Lost Returns @

ENGINEER: JERRY BENWICK HOME ADDRESS: EL CENTRO PHONE: (951) 353-3030  
 MOBILE UNIT: (951) 355-5158 WAREHOUSE LOCATION: BRAVLEY-BEACH PHONE: 344-5100  
 24-HR PHONE: (951) 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

START/DEL 5401 Cost - Time Summary / 24 Hours Ending 0500 @ Depth 3000 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BR No.—Type	RPM	Wt.	Hours	Footage
GEL	433									
BAR	400									
WELPAC	8									
T-PLEX	17									
T-LIG	49									
P-TEMP	14									
T-TROL 3	46									
NaOH	20									
CaOH	42									
KCL	202									
BICARB	9									
SODA ASH	17									
SANDUST	64									
DMS/PELETS	24/50									
AL. STER/ANTI	1/5									
LO. SOL. CSH	72/24									
PEP/W/O	6/6									

COMMENTS/REMARKS  
 CALIF. WATER RESOURCES  
 RUNNING LOGS

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 TRKG 198+ PD#LAB 85 = 283 =



A PROFESSIONAL DRILLING FLUID SERVICE.

# DRILLING MUD REPORT

REPORT FOR FRI. MORN.

DATE	8 NOV 1985	DEPTH	3076
AP WELL NO.	CA 11MP	STATE	SS
COUNTY	SS	WELL	SS
ST	SS	ST	SS

OPERATOR	BECHTEL CORP / DOE	CONTRACTOR	CLEVELAND DRLG CO.	RIG NO.	6
ADDRESS	RIG	ADDRESS	RIG	SPUD DATE	24 Oct 85
REPORT FOR MR.	GERALD REICH	REPORT FOR MR.	JERRY GARDNER	SECTION, TOWNSHIP, RANGE	14-11S-13E
WELL NAME AND NO.	STATE #2-14	FIELD OR BLOCK NO.	SALTON SEA	COUNTY, PARISH, OR OFFSHORE AREA	IMPERIAL
				STATE OR PROVINCE	CA.

OPERATION	FISHING	CASING	30.0" at 150 Ft.	MUD VOLUME (BBL)	972 421	CIRCULATION DATA	Pump Size #1 7x16 in. Annular Vel. (FL/Min.) 35
Present Activity		Surface		Hole Pts			20' = 42
Bit Size (in.)	1 7/8" - 20, 20	Intermediate		Total Circulating Volume	1393		Opposite DP = 53
Drill Pipe Size	5" - 19.5" #4	Production of Liner		In Storage	0		Model N-1300 JETVEL = 148
Drill Collar Size	5" - H.W. 45" = 724'						Circulating Pressure @ 21" = 1200
BHA	{ 8" = 91' } { 9" = 93' }	Length	231.4	Mud Type	PRO-TEMP		Bottoms Up (Min.) = 80
							System Total (Min.) = 121

Flowline Temperature	F	TEMP =	PITCHER	SIZE	HRS/TOUR	SIZE	HRS/TOUR	
Time Sample Taken			0530	Centrifuge	*	Deaerator	(2) 180#/100	
Depth (ft.)			3076	Degreaser	** (1) 200 (2) 200	Shaker	(2) RIG 20X#30X	
Weight (kg) / lb. / cu. ft.			9.3 (69.6)	Densifier		Other	EX-LOG SMITH	
Mud Gradient (psi/ft.)			4.84	DAILY COST	\$ 328.80	CUMULATIVE COST	\$ 22,731.67	
Funnel Viscosity (sec./100) API at		95°F	34	MUD PROPERTIES SPECIFICATIONS PY/YP 1:1				
Plastic Viscosity cps at		120°F	8	8.8 WEIGHT	9.3 VISCOSITY	32-40	FILTRATE	B-15cc
Yield Point (lb./100 sq. ft.)		11	10	BY AUTHORITY: OPERATOR'S WRITTEN				
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.			6.25 FRAGILE	OPERATOR'S REPRESENTATIVE				
pH	Strip			MUD CONTAINS				
Filtrate API (ml/30 min.)		AMB	17.6cc	TOUR TREATMENT				
API HP-HT Filtrate (ml/30 min.)				GEL				
Cake Thickness 32nd in. API HP-HT			2 FIRM, SUK	BAR				
Alkalinity, Mud (Pm)				ENGINEER				
Alkalinity, Filtrate (P/100)			03.52	TO BUILD VOLUME				
Salt: ppm / gpg Chloride: ppm / gpg			3400	FOR EVERY FOOT OF WATER				
Calcium: ppm / gyp (ppb) TOTAL HARD			324	ADD 45x GEL				
Sand Content (% by Vol.)			1/4	25x WELPAC				
Solids Content (% by Vol.)			7	25x POTASH				
Oil Content (% by Vol.)				25x CAUSTIC				
Water Content (% by Vol.)			93	2.0N THIXEMPLEX				
Methylene Blue Capacity (ml/ml mud) equiv. #/bbl. bent.			~ 18					
ASG ALL SOLIDS			2.66					
APPROX 90 DEWELL SOLIDS			~ 5					

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ RTH TO MAKE MORE HOLE

Salt Water flow @ LOST 2 CONES - WAIT ON

Gas lock @ MAGNET AT RPT TIME

Stuck pipe @

Tight hole @

Sloughing Shale @

Lost Returns @

(1) MAINTAIN VOLUME PER CO. INSTRUCTIONS

(2) VIS @ 32-40

(3) WT @ 8.8-9.3

(CMT JOB WILL ADD 520± BBL OF MUD DURING DISPLACEMENT)

ENGINEER	JERRY BEWICK	HOME ADDRESS	EL CENTRO	PHONE	(1) 353-3030
MOBILE UNIT	(1) 355-5158	WAREHOUSE LOCATION	BEACH-BRAWLEY	PHONE	- 344-5100

24 HR. ANS (1) 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending 0500 @ Depth 3076 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Blk No.—Type	RPM	Wt.	Hours	Footage
GEL	433	423	10							
BAR	490	490								
WELPAC	8	7	1							
EPIEX	17	48	65							
F-LIG	49	66	115							
(6) P-TEMP	(14)	42	(14)	42						
I-TROL 3	46	46								
NaOH	20	70	90							
CaOH	42	42								
KCl	202	202								
BICARB	9	15	24							
SADA-BH	17	17								
SNULST	64	64								
DMIS/PELLETS	24/50	24/50								
AL-SIDE/ANTI	1/5	2/-	3/5							
LO-SOL/ESH	32/24	72/24								
PEP/WLO	6/6	-/5	6/11							
THIXEMPLEX	60	60								

COMMENTS/REMARKS: FISHING-

PRO 303/1-2

PD-LAB-85.00

This report and any other statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorization of any valid patent, and are made without assumption of any liability by any employee of Profco, Inc.



PROFCO A PROFESSIONAL DRILLING FLUID SERVICE.

L. MILLING MUD REPORT

REPORT FOR SAT. MORN.

DATE 9 NOV 19 85 DEPTH 3078
STATE COUNTY WELL S/T

OPERATOR BECHTEL CORP / DAE CONTRACTOR CLEVELAND DRUG CO.
ADDRESS RIG RIG
REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER

OPERATION CASING MUD VOLUME (BBL) CIRCULATION DATA
Present Activity R.I.H. WITH MILL Surface 30 in. at 150 Ft. 972 453
Bt Size (in.) No. 17 1/2 MILL Intermediate 20 in. at 1032 Ft.

MUD PROPERTIES PIT CHECK BRANDT EQUIPMENT \* \* \* KERN COOLING
Flowline Temperature - F 41.6
Time Sample Taken 0430
Depth (ft.) 3078
Weight of Mud (lb./cu. ft.) 9.2 (69)

REMARKS - Give operation, depth and nature of any problems encountered
NOTE: SAUNDUST MAY BE ADDED TO HELP CLEAN
NOTE - 1 SX SAUNDUST + 1 SX LIME WILL SWEEP HOLE CLEAN!

ENGINEER JERRY BEWICK HOME ADDRESS EL CENTRO PHONE 1-353-3030
MOBILE UNIT (1) 355-5158 WAREHOUSE LOCATION BEACH - BRAWLEY PHONE 344-5100

24 HR. ANS. (1) 353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., RPM, WL, Hours, Footage. Includes rows for GEL, BAR, HPS/TGEL, WELPAC, T-PLEX, T-LLG, T-TROL 3, T-FLURE/DIV, etc.

COMMENTS/REMARKS
RHH MAGNET NO RECOVERY -
RHH TEMP LOG
RHH WITH 17 1/2 MILL AT PRESENT

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A PROFESSIONAL DRILLING FLUID SERVICE

FILLING MUD REPORT

REPORT FOR SUN, MORN

DATE 10 NOV 1985 DEPTH 3080

REPORT NO. 18

OPERATOR: BECHTEL CORP./DOE; CONTRACTOR: CLEVELAND DRILG CO; RIG: RIG; REPORT FOR MR: GERALD REICH; JERRY GARDNER; WELL NAME AND NO: STATE # 2-14; FIELD OR BLOCK NO: SALTON SEA; COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO.; STATE OR PROVINCE: CA

Table with columns: OPERATION, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes data for FISHING WITH JUNK BSKT and JUNK BSKT.

MUD PROPERTIES table with columns: FLOWLINE TEMPERATURE, TEMPERATURE, CHEMICAL, BRAND EQUIP EQUIPMENT, KERN COULERS(2). Includes various chemical and physical property measurements.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes like 'RUN 17 1/2 MILL & JUNK SUB' and 'MAINTAIN VISC @ 4.2-4.8 WITH DRISPAK & GEL (1:10)'.

ENGINEER: JERRY BEWICK; HOME ADDRESS: EL CENTRO; PHONE: 1-353-1692; MOBILE UNIT: 1-355-5158; WAREHOUSE LOCATION: BRAWLEY; PHONE: 344-5100

24HR ANS = 1-353-1692

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending 1800 @ Depth 3080 Ft.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No.-Type, RPM, Wt., Hours, Footage. Lists various drilling fluids and their usage.

COMMENTS/REMARKS: RAN 17 1/2 phi MILL ON (2) COMES - NO JUNK BACK - RUN JUNK BASKET AT RPT TIME

PRO 303/1-2

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Procco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE.

# HILLING MUD REPORT

REPORT NO. 19

REPORT FOR MON. MORN

DATE	11 NOV 85	DEPTH	3107
API WELL NO.	CA 11 MP 55 SDP	STATE	CA
COUNTY	IMPERIAL	WELL	S/T

OPERATOR <b>BECHTEL CORP/DOE</b>	CONTRACTOR <b>CLEVELAND DRUG CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>JERRY GARDNER</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL</b>
		STATE OR PROVINCE <b>CA</b>

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
Present Activity <b>COREING F/3107</b>	Surface <b>30 in. at 150 Ft.</b>	Hole Pits <b>960 ~400</b>	Pump Size <b>#1 7x16</b>
Bit Size (in.) <b>60 FT. 9 3/8 CORE BBL -</b>	Intermediate <b>20 in. at 1032 Ft.</b>	Total Circulating Volume <b>1360</b>	Pump Make <b>NATIONAL</b>
Drill Pipe Size <b>5" HW-45# = 724'</b>	Type <b>4 1/2 IF</b>	In Storage <b>2</b>	Model <b>N-1308</b>
Drill Collar Size <b>8" = 91'</b>	Length <b>234</b>	Mud Type <b>PRO TEMP</b>	Flow Rate <b>4.74 GPM</b>
			Bottoms Up (Min.) <b>305</b>
			Flow Rate (Max.) <b>287</b>

MUD PROPERTIES		* BRAND EQUIP EQUIPMENT * * KERN COOLERS (2)	
Flowline Temperature	TEMP °F	SIZE	SIZE
Time Sample Taken	18:00	Centrifuge	Deister (2) 180x8100x1
Depth (ft.)	3107	Degasser	Shaker RIG 30K820K1
Weights (ppg) (lb./cu. ft.)	9.3 (70)	Descender	Other EX-LOG SMOOTH
Mud Gradient (psi/ft.)	484	DAILY COST	CUMULATIVE COST \$ 25,967.74
Funnel Viscosity (sec./qt.) API at	90 °F 36	MUD PROPERTIES SPECIFICATIONS PVKP VI	
Plastic Viscosity cps at	120 °F 6	BY AUTHORITY:	DRILLING CONTRACTOR
Yield Point (lb./100 sq. ft.)	120 °F 8	<input type="checkbox"/> OPERATOR'S WRITTEN	<input type="checkbox"/> DRILLING CONTRACTOR
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	120 °F 4.22 FRAGILE	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE	<input type="checkbox"/> OTHER
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter	9.8	MUD CONTAINS	
Filtrate API (m/30 min.)	15.4 cc	<input checked="" type="checkbox"/> GEL	10 SX } ADD TOGETHER OR
API HP-HT Filtrate (m/30 min.)	-	<input checked="" type="checkbox"/> WELPAC	1 SX } ALTERNATELY TO
Cake Thickness 32nd in. API HP-HT <input type="checkbox"/>	42 FIRM, SLK	<input type="checkbox"/>	SX } INCREASE VIS.
Alkalinity, Mud (Ppm)	36	<input type="checkbox"/>	SX } TOURLY TREATMENT
Alkalinity, Filtrate (PPM)	02.5	<input type="checkbox"/>	SX }
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpg	3200	<input checked="" type="checkbox"/> THERMPLEX	2 CAS }
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> gyp (ppb)	208	<input checked="" type="checkbox"/> PRO TEMP	1 CAN }
Sand Content (% by Vol.)	1/4	<input checked="" type="checkbox"/> CAUSTIC	1 SX }
Solids Content (% by Vol.)	7	<input checked="" type="checkbox"/> LIME	1 SX }
Oil Content (% by Vol.)	-	<input checked="" type="checkbox"/> POTASH	2 SX }
Water Content (% by Vol.) <input type="checkbox"/> Retort <input checked="" type="checkbox"/> Calculated	93	<input checked="" type="checkbox"/> THYRATRILL	1 SX }
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input checked="" type="checkbox"/> equiv. #bbl. bent.	18	<input type="checkbox"/>	
ASG ALL SOLIDS	2.66	<input type="checkbox"/>	
APPROX 90 DRILL SOLIDS	~ 5	<input type="checkbox"/>	

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ TD BUILD VOLUME -

Salt Water flow @ LET WATER = 186 BRIS. (2) RUN ALL CLEANING EQUIP.

Gas kick @ ADD 45 SX GEL (3) KEEP PITS MIN 500 BRIS VOLUME

Stuck pipe @ 2SX WELPAC

Tight hole @ 2SX CAUSTIC

Sloughing Shale @ 2SX POTASH

Lost Returns @ (4) DUMP SAND TRAP EARLY DOWN

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>EL CENTRO</b>	PHONE <b>1-353-8030</b>
MOBILE UNIT <b>1-355-5158</b>	WAREHOUSE LOCATION <b>BRAWLEY</b>	PHONE <b>344-5100</b>

24HR-1-353-1692

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending 1800 @ Depth 3107 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.-Type	RPM	Wt.	Hours	Footage
GEL, PRO	403	346	57			5-3-SJ		GLT 1-1-I		
BAR	490	486	4							
T-GEL	60	165	225							
WELPAC	3	65	64							
T-PLEX	65	64	1							
T-LIG	115	115	-							
T-TR3	46	46	-							
T-LUB/DML3	17/24	17/24	-							
(L) PRO TRIP	14/42	17/42	-							
KCL/SANDUST	22/64	199/54	3/10							
NaOH/COOH	8/41	86/41	-/-							
SODA ASH	17	17	-							
DMS/PLUETS	24/50	24/50	-							
AL ST/ANET	3/5	3/5	-							
LO SOL/CSH	68/24	59/24	9/-							
PEP/RHO	6/11	6/11	-							
BICARB	24	24	-							

COMMENTS/REMARKS

2 RUNS WITH JUNK BASKET - RIT WITH BIT# 5-3-SJ MADE 27' - NO PROB. TRIP FOR 60' CORE BBL

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2 LOADS DELIVERED TK6 = 396 =





A PROFESSIONAL DRILLING FLUID SERVICE.

# FILLING MUD REPORT

REPORT NO. 20

REPORT FOR TUES. MORN.

DATE 12 NOV 19 85 DEPTH 3356  
 API WELL NO. STATE COUNTY WELL S/T  
 CA IMP S S D P

OPERATOR: BECHTEL CORP / DOE CONTRACTOR: CLEVELAND DRILG CO RIG NO. 6  
 ADDRESS: RIG ADDRESS: RIG SPUD DATE: 24 OCT 85  
 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE: 14-119-13E  
 WELL NAME AND NO. STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA OFFSHORE AREA IMPERIAL CO STATE OR PROVINCE CA

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
Present Activity <b>DRILLING AHEAD</b>	Surface 30 in. at 150 Ft.	Hole 1028 560	Pump Size #1 7 X 16 in. Annular Vol. (FL/Min.) = 44 #2 7 X 16 Opposite DP = 53
Bit Size (in.) 18, 18, 18 17 1/2 SEC-535J RR #5	Intermediate 20 in. at 1032 Ft.	Total Circulating Volume 1588	Pump Make NATIONAL Model N-1300 Opposite Collar = 66
Drill Pipe Size 5 1/2-19.5 # 5" HW-45" = 724' Drill Collar Size {8" = 91' {9" = 93'}	Type 1 Production or Liner 42IF Length 232	In Storage 0	Bl/Stroke .206 Stroke/Min. 33 Circulating Pressure = 1300 Bottom up (Min.) = 67 System Total (Min.) = 110
Mud Type BHA	PRO TEMP	1442	606

TEMP °F	IN 100'	IN 150'	IN 193'	SIZE	NRS/TOUR	SIZE	NRS/TOUR
Flowline Temperature 147°	100°	150°	193°	Centrifuge #	1888	Desitter #2	180X 100X 888
Time Sample Taken	0645	0815	1630	Disposer #	(1) 888 (2) -	Shaker #	(2) 20X 420X 888
Depth (ft.)	3167	-	3356	Disposer RIG-8X4'	-	Other	EX-106 SMITH
Weight App (lb./cu. ft.)	9.3	9.3	9.3	DAILY COST	\$ 2,788.39	CUMULATIVE COST	\$ 28,756.13
Mud Gradient (psi/ft.)	4.84	4.84	4.84	MUD PROPERTIES SPECIFICATIONS			
Funnel Viscosity (sec./qt.) API at °F SEE TOP LINE	38	42	40	R/G WEIGHT	9.4	VISCOSITY	40-60
Plastic Viscosity cps at 120°	7	10	11	FLTRATE	20cc		
Yield Point (lb./100 sq. ft.) 120°	9	10	14	BY AUTHORITY: <input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR			
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. ALL FRAGILE	2.22	4.32	6.34	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER			
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter	10.3	9.8	10.2	MUD CONTAINS			
Filtrate API (m/30 min.) 130°	13.2	16.4	12.2	GEL	WELPAC	10 SX	Z MIX ALTERNATED
API HP-HT Filtrate (ml/30 min.)	-	-	-	WELPAC	1 SX	5	UNTIL VIS IS 40+
Cake Thickness 32nd in. API HP-HT <input type="checkbox"/>	< 2 FIRM	2 FIRM	< 2 FIRM	TOURLY TREATMENT			
Alkalinity, Mud (Ppm)	-	-	-	X THERMAPLEX	2 GALS	ADD OVER	
Alkalinity, Filtrate (Ppm)	03.36	02.36	05.45	X PRO TEMP	2 GALS	3-6 HRS	
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpg	2900	2900	3600	X THERM LIG	8 SX	(6 HRS COREING)	
Calcium <input type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb)	196	180	216	X CAUSTIC	1 SX		
Sand Content (% by Vol.)	1/4	2	1/4	X LIME	1 SX		
Solids Content (% by Vol.)	6 1/2	7	6 1/2				
Oil Content (% by Vol.)	-	-	-				
Water Content (% by Vol.) <input checked="" type="checkbox"/> Retort <input type="checkbox"/> Calculated	93 1/2	93	93 1/2				
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input type="checkbox"/> equn. #/bbl. bent	18	18	-	① MAINTAIN VIS @ 40-44 SEC.			
APPROX 2% DRILL SOLIDS	5	5 1/2	5	② USE GELT WELPAC (10:1) TO INCREASE			
FLUID LOSS PAST 24 HRS	-	-	?	③ RUN ALL SOLIDS CONTROL EQUIP - KEEP WT AS LOW AS POSSIBLE			

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @  
 Salt Water flow @  
 Gas kick @  
 Stack pipe @  
 Tight hole @  
 Sloughing Shale @  
 Lost Returns @

③ MAINTAIN PIT VOL @ 500-700  
 ④ RUN UNDERFLOW FROM CLEANER TO SUMP IF ABOVE 10.5 #/GAL  
 - USE PRO TEMP TO DECREASE

ENGINEER: JERRY BEWICK HOME ADDRESS: EL CENTRO PHONE: 1-353-1692  
 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BRAWLEY-BEACH PHONE: 344-5100

24HR. ANS 1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

START / DEL / Cost - Time Summary / 24 Hours Ending 1600 @ Depth ~3300 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	WL	Hour	Footage
GEL	346	252	94							
BAR	486	486	-							
T-GEL	225	225	-							
WELPAC	64	59	5							
T-PLEX	64	62	2							
T-LIG	115	107	8							
T-TROL3	46	46	-							
T-LUB/DMT3	17/24	17/24	-							
C) PRO TEMP	17/42	15/42	2/-							
KEL/SAND	199/54	197/54	2/-							
NaOH/CaOH	85/41	85/40	1/1							
SODAASH	17	17	-							
PMS/PELLETS	24/50	24/50	-							
ALST/ANTI	3/5	3/5	-							
LOW/CSH	57/24	57/24	2/-							
PEP/H2O	6/11	-/11	6/-							
BICARB	24	24	-							

COMMENTS/REMARKS  
 DRIG AHEAD - BUILD VOLUME & TREAT FOR COREING - (AV 15 FT/MIN.) HI GELS + YP

PRO 303/1-2  
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**L. MILLING MUD REPORT**

REPORT NO. 21

REPORT FOR WEDS. MORN.

DATE	13 NOV 1985	DEPTH	3515
API WELL NO.	CLAIMPSSIDP	STATE	COUNTY
		WELL	57

OPERATOR <b>BECHTEL CORP / D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRLG CO.</b>	RIG NO. <b>6</b>
ADDRESS	ADDRESS	SPUD DATE <b>24 OCT 85</b>
RIG <b>GERALD REICH</b>	RIG <b>JERRY GARDNER</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
REPORT FOR MR.	REPORT FOR MR. <b>WILLARD NICKEL</b>	
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL CO.</b>
		STATE OR PROVINCE <b>CALIF.</b>

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
Present Activity <b>TRIP OUT WITH CORE BBL</b>	Surface <b>30 n. at 150 Ft</b>	Note Pits <b>1100 560</b>	Pump Scaff # <b>7X16</b> in. Annular Vel. (Ft/Mn.) <b>40</b>
Bit Size (in.) <b>1 7/8 - SEC-5-4-FJ</b>	Intermediate <b>20 n. at 1032 Ft</b>	Total Circulating Volume <b>1660</b>	Opposite DP = <b>48</b>
Drill Pipe Size <b>5" - 19.5#</b>	Production or Liner	In Storage <b>0</b>	Pump Make <b>NATIONAL</b> Opposite Collar = <b>60</b>
5" HW-45# = <b>724</b>			Model <b>N-1300</b> Jet Vel = <b>238'</b>
Drill Collar Size <b>8" - 91'</b>			Bl/Stroke <b>.206</b> Circulating Pressure (psi) = <b>1300</b>
BHA <b>9" - 93'</b>			Bl/Min. <b>34</b> Bottoms up (Min.) = <b>79</b>
			Bl/Min. <b>13.18</b> System Total (Min.) = <b>126</b>

WHERE	IN	OUT	TEMP °F	* BRAND EQUIP	EQUIPMENT	* * * (2) KEEN COOLERS
Flowline Temperature <b>136 °F</b>						
Time Sample Taken	<b>07:00</b>	<b>17:00</b>	<b>17:30</b>	Centrifuge <b>*K</b>	SIZE <b>8BB</b>	Density <b>1804/100 888x2</b>
Depth (ft.)	<b>T</b>	<b>T</b>	<b>3511</b>	Regenerant <b>* (1) 888 (2) -</b>	Shank <b>(2) RIG-30X420X 8/8</b>	
Weight <input checked="" type="checkbox"/> ppg <input type="checkbox"/> lb/cu. ft.	<b>R</b>	<b>R</b>	<b>9.3</b>	Desander	Other <b>EX LOG SMITH</b>	
Mud Gradient (psi/ft.)	<b>1</b>	<b>1</b>	<b>.484</b>	DAILY COST <b>\$ 1,858.55</b>	CUMULATIVE COST <b>\$ 30,614.68</b>	

MUD PROPERTIES SPECIFICATIONS	BY AUTHORITY
Plastic Viscosity cps at <b>120 °F</b>	<input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR
Yield Point (lb/100 sq. ft.) <b>120 °F</b>	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER
Gel Strength (lb/100 sq. ft.) 10 sec./10 min. <b>120 °F</b>	
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter	
Filtrate API (ml/30 min.) <b>100 °F</b>	
API HP-HT Filtrate (ml/30 min.) <b>100 °F</b>	
Cake Thickness 32nd in. API <input checked="" type="checkbox"/> HP-HT <input type="checkbox"/>	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (P/Min)	
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpg	
Calcium <input type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) <b>TOTAL HARD</b>	
Sand Content (% by Vol.)	
Solids Content (% by Vol.)	
Oil Content (% by Vol.)	
Water Content (% by Vol.) <input checked="" type="checkbox"/> Retort <input type="checkbox"/> Calculated	
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input type="checkbox"/> equiv. #/bbl. bent.	

MUD CONTAINS	TOUR TREATMENT
<input checked="" type="checkbox"/> GEL	<b>10 SX 7 MIX ALTERNATELY</b>
<input checked="" type="checkbox"/> WELPAC	<b>1 SX SUNTIL VIS IS 40+</b>
<input type="checkbox"/> TOURLY TREATMENT	
<input type="checkbox"/> FOR REAMING	<b>30' TO 3500'</b>
<input type="checkbox"/> DRLG TO	<b>35' 5 NO TREATMENT</b>
<input type="checkbox"/> REQUIRED -	<b>SX</b>
<input type="checkbox"/> WHEN AT T.D. & PRIOR TO	
<input type="checkbox"/> POOH FOR TO GS - ADD	
<input type="checkbox"/> 6 CANS THERMPLEX	<b>OVER LAST</b>
<input type="checkbox"/> 3 CANS PROTEMP	<b>3 HRS</b>

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ **APPROX MUD LOSS PAST 24 HRS = 315 BBL/HRS SOME SANDS!**

Salt Water flow @ **CORE BBL - CHRT. 2 5/8" R-476**

Gas kick @ **20 spm @ 3000 si.**

Stuck pipe @

Tight hole @

Sloughing Shale @

Lost Returns @

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>EL CENTRO</b>	PHONE <b>1-353-3030</b>
MOBILE UNIT <b>(1) 355-5158</b>	WAREHOUSE LOCATION <b>BRAWLEY-BEACH</b>	PHONE <b>244-5100</b>
<b>24 HR - 1-353-1692</b>	THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.	

Cost - Time Summary / 24 Hours Ending **16:00** @ Depth **3511** Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bl No. - Type	RPM	Wt.	Hours	Footage
GEL	252	252	-							
BAR	486	486	-							
T-GEL	225	225	-							
WELPAC	59	59	-							
T-PLEX	62	56	6							
T-LIG	107	91	16							
T-TROL 3	46	45	1							
T-LUB/DML3	17/24	17/24	-							
(2) PROTEMP	15/42	10/42	5/-							
KEEN COOLERS	17/54	195/54	2/-							
NaOH/COH	85/40	82/37	3/3							
SODA ASH	17	17	-							
DML/DMLERS	24/50	24/50	-							
AL ST / AMT	3/5	3/5	-							
LO SOL / CEH	57/24	57/24	-							
NLO	11	11	-							
BICARB	24	24	-							

COMMENTS/REMARKS  
 DRILLED TO 3470 - CORED TO 3511 - CORE TOOL STOPPED - TRIP FOR BIT TO DRILL TO 3515 - LOG & RUN 133/8 CSG, DAILY MAINT. FOR CORE FLUID

PRO 303/1-2  
 This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Proco, Inc.



A PROFESSIONAL DRILLING FLUID SERVICE.

# DRILLING MUD REPORT

REPORT NO. 22

REPORT FOR THURS, MORN

DATE	14 NOV 1985	DEPTH	3515
API WELL NO.	STATE	COUNTY	WELL
	CA	IMPERIAL	SDP

OPERATOR	BECHTEL CORP / D.O.E.	CONTRACTOR	CLEVELAND DRLG CO.	RIG NO.	6
ADDRESS		ADDRESS		SPUD DATE	24 OCT 85
RIG		RIG		SECTION, TOWNSHIP, RANGE	14-11S-13E
REPORT FOR MR.	GERALD REICH	REPORT FOR MR.	WILLARD NICKEL	STATE OR PROVINCE	CA.
WELL NAME AND NO.	STATE #2-14	FIELD OR BLOCK NO.	SALTON SEA	COUNTY, PARISH, OR OFFSHORE AREA	IMPERIAL CO.

OPERATION	WIPER PRIOR TO CSG	CASING	30" at 150' Ft	MUD VOLUME (BBL)	1100 505	CIRCULATION DATA	Pump Size #1 7x16 in. #2 7x16	Annular Vel (Ft./Min.)	20" = 40
Bit Size (in.)	18.18.18	No.	RR#6	Total Circulating Volume	1605	Pump Make	NATIONAL	Opposite DP	= 60
Drill Pipe Size	5" - 19.5#	Type	42IF	In Storage	6	Model	N-1300	Jetting	= 23E/11
Drill Collar Size	5" HW-45# = 724'	Length	229'	Mud Type	PRO TEMP	Stroke/Min	206 34	Circulating Pressure @	1300
BHA	8" = 911'					Bottoms up (Min.)	206 34	System Total (Min.)	79
	9" = 93'						60pm		122

Flowline Temperature - °F	SAMPLE PIT TEMP °F	MUD PROPERTIES		EQUIPMENT		
		PIT	SIZE	HRS./TOUR	SIZE	HRS./TOUR
		80	* BRAND		* KERN	COOLER
Time Sample Taken		06:00	Centrifuge		(2) 180x120x1	
Depth (ft.)		3515	Desander	(1) - (2)	Shake (2) RIG 20x830x1	
Weight (ppg) □ lb./cu. ft.	L	9.3	Other	EX-LOG SMITH		
Mud Gradient (psi/ft.)	0	4.4	DAILY COST	918.16	CUMULATIVE COST	31,532.84
Funnel Viscosity (sec./qt.) API at 80 °F	80 °F	35	MUD PROPERTIES SPECIFICATIONS			
Plastic Viscosity cps at 80 °F	80 °F	10	8.6 WEIGHT	7.4 VISCOSITY	46.60 FILTRATE	20
Yield Point (lb./100 sq. ft.)		10	BY AUTHORITY: <input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR			
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.		21	<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER			
pH □ Strip □ Meter		9.9	MUD CONTAINS		TOUR TREATMENT	
Filtrate API (ml/30 min.)		11.84	<input type="checkbox"/> GEL	SX		
API HP-HT Filtrate (ml/30 min.)			<input type="checkbox"/> BAR	SX		
Cake Thickness 32nd in. API □ HP-HT □		< 2 FROM	SUK	SX		
Alkalinity, Mud (pH)				SX		
Alkalinity, Filtrate (pH)		02.45		SX		
Salt: □ ppm □ gpg Chloride: □ ppm □ gpg		3100		SX		
Calcium □ ppm □ gyp □ ppb		208		SX		
Sand Content (% by Vol.)		1/4		SX		
Solids Content (% by Vol.)		6 1/2		SX		
Oil Content (% by Vol.)				SX		
Water Content (% by Vol.) □ Retort □ Calculated		93 1/2		SX		
Methylene Blue Capacity □ ml/ml mud □ equiv. #/bbl. bent.				SX		
ASG ALL SOLIDS		2.67		SX		
APPROX 96 DRILL SOLIDS		4.3		SX		

REMARKS—Give operation, depth and nature of any problems encountered.

Drilling @

Salt Water flow @

Gas kick @

Stuck pipe @

Tight hole @

Sloughing Shale @

Lost Returns @

ENGINEER	JERRY BEWICK	HOME ADDRESS	EL CENTRO	PHONE	1-353-3030
MOBILE UNIT	1-355-5158	WAREHOUSE LOCATION	BRAWLEY	PHONE	344-5100

24 HR - 1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending 0600 @ Depth 3515 Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No. - Type	RPM	Wt.	Hours	Footage
GEL	252	252	-							
BAR	486	486	-							
FGEL	225	225	-							
WB-PAC	59	59	-							
T-PLEX	56	50	6							
T-LIG	91	21	-							
T-TRAIL 3	45	45	-							
T-LUB/MCS	17/24	17/24	-							
(W) PRO TEMP	10/42	7/42	3/4							
KCD/SUNDR	195/54	195/54	-							
NADH/CADH	82/37	82/37	-							
SADA-ASH	17	17	-							
DING PELLETS	24/50	24/50	-							
AL-STEEL/ANT	3/5	3/5	-							
LO-SOL/CSH	57/24	57/24	-							
H10	11	11	-							
BICARB	24	24	-							

COMMENTS/REMARKS  
WIPER AFTER LOGS.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Profco, Inc.



PROFCO A PROFESSIONAL DRILLING FLUID SERVICE.

# WILLING MUD REPORT

REPORT NO. 23  
DATE 15 NOV 1985 DEPTH 3515  
STATE COUNTY WELL BIT  
CA IMP S S D P

REPORT FOR FRI. MORN.

OPERATOR <b>BECHTEL CORP / D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRUG CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL CO.</b>
		STATE OR PROVINCE <b>CALIF.</b>

Present Activity <b>RUN CSG &amp; CMT</b>	CASING Surface <b>30 in. at 150 Ft</b>	MUD VOLUME (BBL) Mod. B.P. Pts <b>495 ~ 400</b>	CIRCULATION DATA Pump Size #1 7x16 in. Annular Vol. (Fl./Min.) <b>#2 7x16</b>
Bit Size (in.) <b>20 in. at 1032 Ft</b>	Type Intermediate <b>4 1/2 IF</b>	Total Circulating Volume <b>895</b>	Pump Make <b>NATIONAL</b>
Drill Pipe Size <b>5" - 19.5 #</b>	Type Production or Liner <b>4 1/2 IF</b>	In Storage <b>0</b>	Model <b>N-1300</b>
Drill Collar Size <b>BHA { 8" = - 9" = -</b>	Length <b>PRO TEMP</b>	Mud Type <b>PRO TEMP</b>	Stroke/Min. <b>206</b>
			Bottom Hole Pressure (psi) <b>206</b>
			System Output (Min.) <b>GPM</b>

Flowline Temperature °F	MUD PROPERTIES	* BRANDT EQUIP. EQUIPMENT * * KERN (2) COOLERS
Time Sample Taken		SIZE HRS./TOUR
Depth (ft.)		SIZE HRS./TOUR
Weight (lb./cu. ft.)		Centrifuge * <b>1</b>     Desitter * <b>(2) 180x100x1/2</b>
Mud Gradient (psi/ft.)	<b>R</b>	Degrees * <b>X(1) - (2) -</b>     Shaker <b>RIG (2) 30x1 &amp; 20x1/2</b>
Funnel Viscosity (sec./qt.) API at °F		Beander <b>RIG-6x4 1/2</b>     Other <b>EX-LOG SMITH</b>
Plastic Viscosity cps at °F	<b>L</b>	DAILY COST <b>85 =</b>     CUMULATIVE <b>31,617.84</b>
Yield Point (lb./100 sq. ft.)	<b>N</b>	MUD PROPERTIES SPECIFICATIONS
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.		<b>6.6 WEIGHT 9.4 VISCOSITY 40-60 FILTRATE 20cc</b>
pH <input type="checkbox"/> Strip <input checked="" type="checkbox"/> Meter	<b>13 3/8</b>	BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR
Filtrate API (m/30 min.)		<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER
API HP-HT Filtrate (m/30 min.) °F		MUD CONTAINS
Cake Thickness 32nd in. API <input type="checkbox"/> HP-HT <input type="checkbox"/>		TOUR TREATMENT
Alkalinity, Mud (Pm)		<input type="checkbox"/> GEL SX
Alkalinity, Filtrate (Pm/Mt)		<input type="checkbox"/> BAR SX
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg <input type="checkbox"/> Chloride <input type="checkbox"/> ppm <input type="checkbox"/> gpg		<input type="checkbox"/> SX
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) TOTAL HARD	<b>C</b>	<input type="checkbox"/> SX
Sand Content (% by Vol.)		<input type="checkbox"/> SX
Solids Content (% by Vol.)	<b>M</b>	<input type="checkbox"/> SX
Oil Content (% by Vol.)	<b>T</b>	<input type="checkbox"/> SX
Water Content (% by Vol.) <input type="checkbox"/> Assort <input checked="" type="checkbox"/> Calculated		<input type="checkbox"/> SX
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input checked="" type="checkbox"/> equiv. #bbt. bent.		<input type="checkbox"/> SX
<b>ASG ALL SOLIDS</b>		<input type="checkbox"/> SX
<b>APPRX 20 DRILL SOLIDS</b>		<input type="checkbox"/> SX

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ **REF - SAME FLO-CHEK**

Salt Water flow @ **MAX MAINT GREEN-FFFF**

Gas kick @ **BE BEAN RESTORED TO**

Stuck pipe @ **P IT BUT THIS MUD WAS**

Tight hole @ **USED FOR DISPLACEMENT**

Sloughing Shale @ **WILL BE MIXED WITH**

Lost Returns @ **TAIL SLURRY DISCARDED AT DRILL OUT!**

(PRIOR TO CMT DRILL OUT ADD 12SK BICARB & 6CONS PROTEMP)

ENGINEER <b>JERRY BEWICK</b>	HOME ADDRESS <b>EL CENTRO</b>	PHONE <b>1-353-3030</b>
MOBILE UNIT <b>1-355-5158</b>	WAREHOUSE LOCATION <b>BEACH-BRAWLEY</b>	PHONE <b>344-5100</b>

24 HR ANS, 1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	Wt.	Hours	Footage
GEL	252									
BAR	486									
T-GEL	225									
T-LIG	91									
I-PLEX	50									
T-TROL 3	45									
T-LUBE/DMS 17/24										
WELPAC	59									
(L) PRO-TEMP 7/42										
KOL/SAND 1195/54										
NO-DH/C.D.H 82/37										
SODA ASH	17									
DMS/PELLETS 24/50										
ALST/ANTI	3/5									
LA SOL/CSH	53/24									
NLO	11									
BICARB	24									

COMMENTS/REMARKS  
RAN CSG (13 3/8) & CMT.

NON-USED

PRO 303/1-2

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A PROFESSIONAL DRILLING FLUID SERVICE.

DRILLING MUD REPORT

REPORT NO. 24

REPORT FOR SAT MDRN

DATE	16 NOV 1985	DEPTH	3515
API WELL NO.	CAIMPSESDP	STATE	CA
COUNTY	IMPERIAL	WELL	SDP
RIG NO.	6		

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRUG CO. RIG NO. 6

ADDRESS: RIG ADDRESS: RIG SPUD DATE: 24 OCT 85

REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE: 14-115-13E

WELL NAME AND NO. STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL STATE OR PROVINCE: CALIF

Present Activity	CASING	MUD VOLUME (BSL)	CIRCULATION DATA
NIPPLE UP -	20 in. 1032 ft	453 400	Pump Size: 1 7x16 + 2 7x16 Pump Make: NATIONAL Model: N-1300
Bit Size (in.)	13 3/8 in. 3515 ft	Total Circulating Volume: 853	Opposite DP: Opposite Collar: Model: N-1300
Drill Pipe Size: 5 1/2-19.5#	Type: 4 1/2 IF	In Storage: X	Blow/Stroke: 206 Stroke/Min: 206 Blow/Min: 6 PM
5" HW-45#			Circulating Pressure (psi): Bottoms up (Min.): System Total (Min.):
Drill Collar Size: 6 1/2" =	Length: 9" =	Mud Type: PRO TEMP	
BHA			

MUD PROPERTIES		* BRANDT EQUIP EQUIPMENT * * KERN (2) COOLERS	
Flowline Temperature °F		SIZE	HRS./T.OUR
Time Sample Taken		SIZE	HRS./T.OUR
Depth (ft.)		Centrifuge *	Deaer (2) * # 180X8100X
Weight <input type="checkbox"/> spg <input type="checkbox"/> lb./cu. ft.	R	Residue ** (1) (2)	Shaker (2) RVG 30X820X
Mud Gradient (gm/cc)		Density	Other EX 1061 S1717H
Funnel Viscosity (sec./qt.) API at °F		DAILY COST	CUMULATIVE COST \$3,702.84
Plastic Viscosity cps at °F	C	MUD PROPERTIES SPECIFICATIONS	
Yield Point (lb./100 sq. ft.)	CSG.	WEIGHT	VISCOSITY
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.		BY AUTHORITY: <input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR	
pH <input type="checkbox"/> Strip <input type="checkbox"/> Meter		<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
Filtrate API (ml/30 min.)	P	MUD CONTAINS	
API HP-HT Filtrate (ml/30 min.)	P	TOUR TREATMENT	
Clay Thickness 32nd in. API <input type="checkbox"/> HP-HT <input type="checkbox"/>		<input type="checkbox"/> GEL	<input type="checkbox"/> SX
Alkalinity, Mud (pH)		<input type="checkbox"/> BAR	<input type="checkbox"/> SX
Alkalinity, Filtrate (pH)		<input type="checkbox"/>	<input type="checkbox"/> SX
Salt: <input type="checkbox"/> ppm <input type="checkbox"/> gpg Chloride: <input type="checkbox"/> ppm <input type="checkbox"/> gpg		<input type="checkbox"/>	<input type="checkbox"/> SX
Calcium <input type="checkbox"/> ppm <input type="checkbox"/> gpg (ppt)		<input type="checkbox"/>	<input type="checkbox"/> SX
Sand Content (% by Vol.)		<input type="checkbox"/>	<input type="checkbox"/> SX
Solids Content (% by Vol.)		<input type="checkbox"/>	<input type="checkbox"/>
Oil Content (% by Vol.)		<input type="checkbox"/>	<input type="checkbox"/>
Water Content (% by Vol.) <input type="checkbox"/> Retort <input type="checkbox"/> Calculated		<input type="checkbox"/>	<input type="checkbox"/>
Methylene Blue Capacity <input type="checkbox"/> ml/ml mud <input type="checkbox"/> equiv. #/bbl. bent.		<input type="checkbox"/>	<input type="checkbox"/>

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @

Salt Water flow @

Gas kick @

Stuck pipe @

Tight hole @

Sloughing Shale @

Lost Returns @

ENGINEER: JERRY BEWICK HOME ADDRESS: EL CENTRO PHONE: 1-252-3030

MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH, PRAWLEY PHONE: 344-5100

24 HR. A.S. 1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending \_\_\_\_\_ @ Depth \_\_\_\_\_ Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No.—Type	RPM	WL	Hours	Footage
GEL				7 =						
BAR				6.50						
T-GEL				5 =						
T-LIG				9 =						
I-PLY				80 =						
I-TROL 3				240 =						
TUBE DOWNERS				53.80/51 =						
WELPAC				150 =						
(W) PRO TEMP				102/240 =						
KOR/SAWDUST				19.38/4 =						
NaOH/COH				20/6 =						
SODA ASH				14 =						
ONS/PELLETS				6120/2214 =						
ALST/ANTI				40/53.82 =						
LO-SOL/CSH				10/10 =						
H2O				84.32						
BICARB				15.64						

COMMENTS/REMARKS: NIPPLE UP

PRO 303/1-2

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PROFCO A PROFESSIONAL DRILLING FLUID SERVICE.

# BILLING MUD REPORT

REPORT NO. 25

REPORT FOR SUN. MORN

DATE	17 NOV 1985	DEPTH	3530
API WELL NO.	CA 11 MP 5155 DP	STATE	CA
COUNTY	IMPERIAL	WELL	5155 DP
OFFSHORE AREA		ST	

OPERATOR <b>BECHTEL CORP / DOE</b>	CONTRACTOR <b>CLEVELAND DRUG CO.</b>	FIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>STATE #2-14</b>	FIELD OR BLOCK NO. <b>SAJON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL CO</b>
		STATE OR PROVINCE <b>CALIF.</b>

OPERATION	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
Present Activity <b>CIRC. PRIOR TO BOND LOG</b>	Surface <b>20 in. at 1032 ft.</b>	Hole <b>548</b> Pits <b>580</b>	Pump Size #1 <b>7x16</b> n. Annual Vel. (Ft./Min.) <b>13 3/8 = 85</b>
Bt Size (in.) <b>12 1/2-13</b>	Intermediate <b>13 3/8 in. at 3515 ft.</b>	Total Circulating Volume <b>1128</b>	Opposite DP <b>154</b>
Drill Pipe Size <b>5"-19.5#</b>	Type <b>4 1/2 IF</b>	In Storage <b>0</b>	Opposite Collar <b>JENK = 395'</b>
5" HW 45# = 743.96	Production of Liner <b>-</b>		Circulating Pressure (psi) <b>1100</b>
Drill Collar Size <b>8"-91'</b>	Length <b>199.73</b>	Mud Type <b>PRO TEMP</b>	Bottoms Up (Min.) <b>47</b>
BHA <b>9"-93'</b>			System Total (Min.) <b>110</b>

MUD PROPERTIES		* BRANDT EQUIPMENT		* * * * * KERN COOLERS	
Flowline Temperature <b>110 °F</b>		SIZE	HRS./TOUR	SIZE	HRS./TOUR
Time Sample Taken <b>0530</b>		Centrifuge <b>X</b>		Desilter <b>X (2) 180 - 15</b>	
Depth (ft.) <b>3530</b>		Gauges <b>X (1) &amp; (2) X</b>		Shaker <b>R (2) 30X &amp; 20X X</b>	
Weight (ppg) □ lb./cu. ft. <b>9.2 (69)</b>		Desander <b>RIG 8 1/2" X</b>		Other <b>EX LOG X</b>	
Mud Gradient (psi/ft.) <b>4.78</b>		DAILY COST <b>\$ 932.66</b>		CUMULATIVE COST	
Funnel Viscosity (sec./qt.) API at <b>100 °F 32</b>		MUD PROPERTIES SPECIFICATIONS PV:YP=1:1			
Plastic Viscosity cps at <b>120 °F 9</b>		8.8 WEIGHT <b>9.3</b>	VISCOSITY <b>32-40</b>	FILTRATE <b>8-15cc</b>	
Yield Point (lb./100 sq. ft.) <b>120 °F 7</b>		BY AUTHORITY: <input checked="" type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR			
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. <b>4.8</b>		<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER			
pH □ Strip <input checked="" type="checkbox"/> Meter <b>9.6</b>		MUD CONTAINS		TREATMENT	
Filtrate API (ml/30 min.) <b>100 °F 16.8cc</b>		X GEL	<b>10 SX</b>	USE THESE RATIOS	
API HP-HT Filtrate (ml/30 min.) <b>-</b>		X THERM GEL	<b>40 SX</b>	OF CHEMICALS	
Cake Thickness 32nd in. API □ NP-HT □ <b>2.2 FIRM, SLK</b>		X WEL PAC	<b>2 SX</b>	TO INCREASE VIS	
Alkalinity, Mud (Ppm) <b>.66</b>			<b>1 SX</b>		
Alkalinity, Filtrate (P/100 ml) <b>10.80</b>		TOURLY TREATMENT			
Salt: □ ppm □ gpg Chloride: □ ppm □ gpg <b>2600</b>			<b>1 SX</b>		
Calcium □ ppm □ Gyp (ppb) TOTAL HARD <b>120</b>		X PRO TEMP	<b>1 SX (50* SX)</b>		
Sand Content (% by Vol.) <b>1/4</b>		X THERM TREAT	<b>2 SX (50* SX)</b>	ADD OVER	
Solids Content (% by Vol.) <b>6</b>		X CAUSTIC	<b>1 SX</b>	2 OR 4 HRS	
Oil Content (% by Vol.) <b>-</b>		X LIME	<b>1 SX</b>		
Water Content (% by Vol.) □ Retort □ Calculated <b>94</b>		X THERM LIG	<b>4 SX</b>		
Methylene Blue Capacity □ ml/ml mud □ equiv. #/bbl. bent. <b>16</b>					
ASG ALL SOLIDS <b>2.73</b>		① MAINTAIN VISC @ 36-38			
APPROX 90% DRILL SOLIDS <b>4.2</b>		USING CHEMICAL COMBINATION			

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ **(3) DUMP SAND TRAP**

Salt Water flow @ **WATER 1/2 FULL!**

Gas lock @ **(2) KEEP WT BELOW 9.3 - RUN 325 MESH SCREENS ON CLEARERS IF NEE - CHK & RECORD UNDER FLOW FROM CLEARERS (TO PITS) 1 TIME PER TOUR -**

Stuck pipe @ **(4) ADD ALUM. STREAR (1 cup in 5 GAL DIESEL) TO CONTROL**

Tight hole @ **FOAM WHEN ADDING THERMAGEL**

Sloughing Shale @ **OR THERM LIG!**

Lost Returns @

ENGINEER <b>JERRY BENICK</b>	HOME ADDRESS <b>EL CENTRO</b>	PHONE <b>1-353-3030</b>
MOBILE UNIT <b>1-355-5158</b>	WAREHOUSE LOCATION <b>BLACK - BRAUN</b>	PHONE <b>344-5100</b>

24HR ANS.-1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Blt No.—Type	RPM	Wt.	Hours	Footage
GEL										
BAR										
BICARB			12							
PRO TEMP			6							
COMMENTS/REMARKS										
DRILL FLOAT & SHOE & 15 FT NEW HOLE - CIRC FOR BOND LOG & CHK D.P.										
Kust P/T @ 38cc										



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR MON. MORN.

DRILLING MUD REPORT

DATE 18 NOV 1985 DEPTH 3630

OPERATOR BECHTAL CORP/DOE CONTRACTOR CLEVELAND DRUG CO RIG NO G ADDRESS RIG SPUD DATE 24 OCT 85 REPORT FOR MR. GERALD REICH WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S-13E WELL NAME AND NO. STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CA.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size, jet size, casing surface, hole size, pump size, and circulation volume.

Table with columns: MUD PROPERTIES, BRANDT EQUIP EQUIPMENT, KERN COOLERS. Includes flowline temperature, time sample taken, depth, weight, mud gradient, funnel viscosity, plastic viscosity, yield point, gel strength, pH, filtrate API, cake thickness, alkalinity, salt, calcium, sand content, solids content, oil content, water content, methylene blue capacity, and drill solids.

REMARKS—Give operation, depth and nature of any problems encountered. # ADDING FRESH WATER. (1) MAINTAIN VISC @ 36-38 (USE CHEMICAL COMBINATION INDICATED TO INCREASE VISC) (2) KEEP WT BELOW 9.3 - CHK & RECORD WT OF UNDER FLOW FROM CLEANERS TO PITS - 1 TIME PER TOUR (3) KEEP SAND TRAP NO MORE THAN 1/2 FULL - DUMP -

ENGINEER JERRY BEWICK HOME ADDRESS EL CENTRO PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BRAWLEY PHONE 344-5100

24HR ANS = 1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage. Includes products like GEL, BAR, T-GEL, T-LIG, T-PLEX, T-TROL 3, T-LUBE/DML, WELPAC, PRO-TEMP, KCE/SANDLUST, NaOH/CODH, SODA ASH, OMS/PELLETS, AL STER/ANTI, LO SOL/ASH, N10, BICARB.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Profco, Inc.



PROCO "THE PROFESSIONALS IN DRILLING FLUIDS"

**DRILLING MUD**

**PORT** REPORT NO. 27  
 DATE 19 NOV 19 85 DEPTH 3790  
 STATE COUNTY WELL BIT  
 CA IMP S S S D P

REPORT FOR TUES. MORN.

OPERATOR BECHTEL CORP / D.O.E. CONTRACTOR CLEVELAND DRLG CO. RIG NO. 6  
 ADDRESS RIG ADDRESS RIG SPUD DATE 24 Oct 85  
 REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11 S-13 E  
 WELL NAME AND NO. STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CA.

DRILLING ASSEMBLY			CASING		MUD VOLUME (BBL)		CIRCULATION DATA		
BIT SIZE 12 1/4	TYPE 114 VAREL	JET SIZE 11, 12, 12	Surface 20 in. 1032 ft.	Intermediate 13 3/8 in. 3515 ft.	Hole 557	Pix 490	Pump Size #1 7x16	Annual Vel. (ft./min.) 13 3/8 = 63	Opposite DP = 68
DRILL PIPE SIZE # 5 1/2	TYPE 4 1/2 IF	LENGTH -	Production or Liner		Total Circulating Volume 1047		Pump Make NATIONAL	Opposite Color = 123	JETVEL = 352 1/2
DRILL PIPE SIZE # 5 1/2	TYPE 4 1/2 IF	LENGTH 723.96			In Storage 2		Model N-1300	Opposite DP = 123	JETVEL = 352 1/2
DRILL COLLAR SIZE 8" = 91 (9" = 93)		LENGTH 233.54	Mud Type PRO TEMP				Strokes/Min. 40	Circulating Pressure @ 300 GPM (Min.) = 1500	System Total (Min.) = 127

MUD PROPERTIES			* BRANDT EQUIP EQUIPMENT * * (2) KERN COOLERS			
PIT CHECK			SIZE	MRS./TOUR	SIZE	MRS./TOUR
Flowline Temperature - °F			Centrifuge # 24		Dean # (2) * 180x 24x24	
Time Sample Taken	0500		Separator # (1) 24 (2) 2		Shake (2) RIG 30x8x20x124	
Depth (ft.)	3790		DAILY COST		Other EX LOG SMITH	
Weight (ppg) (lb./cu. ft.)	9.4 (70)		\$ 2,320.29		CUMULATIVE COST	\$ 35,040.79
Mud Gradient (psm.)	489		WEIGHT	VISCOSITY	FILTRATE	
Funnel Viscosity (sec./qt.) API at 100 °F	40		8.8-9.3	32-40	8-15cc	
Plastic Viscosity cps at 100 °F	12		MUD CONTAINS			SUGGESTED TREATMENT
Yield Point (lb./100 sq. ft.)	10		X GEL	10 SX	7 USE THESE RATIOS	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	6.38 VERY FRAGILE		X THERM GEL	40 SX	(TO INCREASE VIS.)	
pH □ Strip X Meter	9.8		X WEL PAC	2 SX		
Filtrate API (ml/30 min.)	14.0cc					
API HP-HT Filtrate (ml/30 min.)	-					
Cake Thickness 32nd in. API HP-HT □	< 2 FIRM, VERY SLIK					
Alkalinity, Mud (Pm)	-					
Alkalinity, Filtrate (P/M)	.04, .65					
Salt: □ ppm □ gpg Chloride: □ ppm □ gpg	2800					
Calcium (ppm) □ Gyp (ppb)	224		X PRO TEMP	1 SX	(50% SX)	
Sand Content (% by Vol.)	< 1/4		X THERM TROL III	2 SX	(50% SX)	ADD OVER
Solids Content (% by Vol.)	> 6 1/2		X CALUSTIC	1 SX		3 OR 6 HRS
Oil Content (% by Vol.)	-		X LIME	1 SX		
Water Content (% by Vol.) □ Report X Calculated	< 93 1/2		X THERM LIG	4 SX		
Methylene Blue Capacity □ ml/ml mud X equiv. #/bbl. DMS*	-		X POTASH	2 SX		
ASG ALL SOLIDS	2.97		X THERM PLEX	2 CANS		
APPROX DRILL SOLIDS						

REMARKS—Give operation, depth and nature of any problems encountered

① MAINTAIN VIS @ 36-38  
 (USE CHEM COMBINATION INDICATED) TO INCREASE VIS

② KEEP WT BELOW 9.3-  
 ADD WATER, DUMP TRAP,  
 DIRECT (1) MUD CLEANER  
 DISCHARGE TO SLUMP

Drilling @ NOTE: RECOMMEND DISPLACEMENT OF MUD WITH 3-5% KCL H<sub>2</sub>O  
 Salt Water flow @ ~ 10-15 ppb KCL (POTASH) - 60 SX / 500 FLS  
 Gas lock @  
 Stuck pipe @  
 Tight hole @ UNDERFLOW MUD CLEANERS - 10.8 & 11.3  
 Sloughing Shale @  
 Lost Returns @ \*\*\* DOES NOT APPLY WITH THERM GEL

ENGINEER JERRY BEWICK HOME ADDRESS EL CENTRO PHONE 353-3030  
 MOBILE UNIT 1-353-5158 WAREHOUSE LOCATION BEACH-BRAWLEY PHONE 344-5100  
 24 HR ANS = 1-353-1692 THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth \_\_\_\_\_ Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No. - Type	RPM	Wt.	Hours	Footage
GEL	252	244	8							
BAR	486	486	-							
T-6BL	225	195	30							
T-LIG	91	83	8							
T-PLEX	50	50	-							
T-TROL 3	45	41	4							
T-LUBE/DML	17/24	17/24	-							
WEL PAC	59	57	2							
(L) PRO TEMP	1/42	1/40	-1/2							
KCL/SANDUST	95/54	193/54	2/-							
NaOH/CaOH	82/37	80/35	2/2							
SODA ASH	17	17	-							
DMS/PELLETS	24/50	24/50	-							
AL. STABILIZER	3/5	3/5	-							
LO. SOL. CSH	57/24	57/24	-							
WLO	11	11	-							
BICARB	12	12	-							

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
 RUNNING TEMP SURVEY PRIOR TO CORE

PRO 303/1-2  
 This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Proco, Inc.





"THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD

REPORT

NO. 28

REPORT FOR WEDS. MORN.

Table with columns: DATE (20 NOV 1985), DEPTH (4007), STATE (CALIF), COUNTY (IMPERIAL), WELL (S1SDP)

Operator: BEGTEL CORP. / D.O.E. Contractor: CLEVELAND DRIG.CO. Address: RIG. Report for MR: GERALD REICH. Well Name and No.: STATE #2-14. Field or Block No.: SALTON SEA. County, Parish or Off-shore Area: IMPERIAL CO. State or Province: CALIF.

Table with columns: #9 DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size, jet size, casing surface, mud volume, pump size, and circulation data.

Table with columns: PROPERTIES, EQUIPMENT, MUD CONTAINS, SUGGESTED TREATMENT. Includes flowline temperature, time sample taken, depth, weight, mud gradient, funnel viscosity, plastic viscosity, yield point, gel strength, pH, filtrate API, cake thickness, alkalinity, salt, calcium, sand content, solids content, oil content, water content, methylene blue capacity.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes on mud losses, drilling conditions, and treatment recommendations.

ENGINEER: JERRY BEWICK. HOME ADDRESS: EL CENTRO. PHONE: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH - BRAWLEY. PHONE: 344-5100.

24 HR. ANSWER - 1-353-1692. THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blt No., RPM, Wt., Hours, Footage. Includes products like GEL, BAR, T-GEL, T-LIG, T-PLEX, T-TROL3, T-LUBE, WELPAC, PRO TEMP, KOL-DML, SAWDUST, NaOH/CaOH, SOAP/BICARB, PELLETS/CSH, LO.SOL/NLO, AL.ST./ANTI, DMS.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. DAILY MAINT. - DRIG ANHYDRITE STRINGERS & CLAYSTONE -

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"THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR THURS. MORN

DATE 21 NOV 1985 DEPTH 4182

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO 6

DRILLING ASSEMBLY BIT SIZE 12 1/4 10 REED 11, 12, 16 CASING SURFACE 20 1/4 1032 FT

Table with columns for Temperature, Mud Properties, and Mud Treatment. Includes rows for Flowline Temperature, Time Sample Taken, Depth, Weight, Mud Gradient, etc.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes like 'CORDED 4007-4069.9' and 'KEEP WT BELOW 9.3 - PLEASE TELL LOGGERS...'.

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR ANS. SERV. 1-353-1692 PHONE 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blt No., Type, RPM, Wt., Hours, Footage. Lists products like GEL, BAR, T-GEL, etc.

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THE PROFESSIONALS IN DRILLING FLUIDS

REPORT FOR FRI. MORN.

DRILLING MUD REPORT

DATE 22 NOV 1985 DEPTH 4334

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRLG.CO. RIG NO 6

DRILLING ASSEMBLY #RC-476 CASING Surface 20 1032 FT MUD VOLUME (BBL) 631 530

Table with columns: FROM, OUT, MUD PROPERTIES, PIT, BRANDT EQUIP, KERN COOLERS. Includes data for Temperature, Viscosity, Filtrate, etc.

REMARKS - Give operation, depth and nature of any problems encountered. (1) BASE LINE CHECK FOR H.T.H.P. FILTRATE DECREASE

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR ANS - 1-353-1692 PHONE 353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth. Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. COREING SANDSTONE, SILTSTONE - DAILY MAIN - ADD INT T-TROL III TO CONTROL H.T. W.L.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR SAT. MORN.

DRILLING MUD REPORT

DATE 23 NOV 1985 DEPTH 4429

OPERATOR BECHTEL CORP./DOE CONTRACTOR CLEVELAND DRLG CO. RIG NO. 6 ADDRESS RIG SPUD DATE 24 OCT 85

REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E WELL NAME AND NO. STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA IMPERIAL STATE OR PROVINCE CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and various fluid properties like viscosity and density.

Table with columns: MUD CONTAINS, SUGGESTED TREATMENT. Lists additives like XGEL, THERM GEL, KWELPAC, and their recommended treatments.

REMARKS—Give operation, depth and nature of any problems encountered. NOTE: (TO BE) 2 PALLETS OF KCL RETURNED TO BRAWLEY.

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR ANS. = 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH - BRAWLEY PHONE 344-5100

Table: Cost - Time Summary / 24 Hours Ending 20:00 @ Depth ~4435 Ft. Columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bin No., Type, RPM, Wt., Hours, Footage.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRLG AHEAD 9-10 FPH - DAILY MAINT.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by any employee of Profco, Inc.



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR SUN. MORN.

DATE 24 NOV 1985 DEPTH 4641

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO 6

DRILLING ASSEMBLY BIT SIZE 1 1/4 TYPE VAREL JET SIZE 12/12/12 CASING 20 1032

MUD PROPERTIES Flowline Temperature 136 FROM TEMP 90 IN 90

MUD CONTAINS GEL, THERM 20 SX WELPAC 1 SX THERMOL III 1 SX

REMARKS - Give operation, depth and nature of any problems encountered

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR ANS - 1-353-1697

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DAILY MAINT. - RIG TO CORE

This report and any oral statements made in connection with it are statements of opinion only.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

FISHING!  
REPORT FOR  
WEDS. MORN

DRILLING MUD REPORT

REPORT NO. 56  
DATE 18 DEC 1985 DEPTH 6044  
STATE CA COUNTY IMP WELL SSSDDP BIT

OPERATOR BECHTEL CORP. / D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6  
ADDRESS RIG ADDRESS RIG SPUD DATE 24 OCT 85  
REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-115-13E  
WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

#	DRILLING ASSEMBLY	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE	8 1/2 CORE	TYPE CHRIST	JET SIZE .45 IN <sup>2</sup>	13 3/8 Surface 3515
DRILL PIPE SIZE	5-195	TYPE 4 1/2 IF	LENGTH -	9 5/8 in. at 6000
DRILL PIPE SIZE	5-45	TYPE 4 1/2 IF	LENGTH 482.66	-
DRILL COLLAR SIZE	6 1/4 X 2 3/4 BHA	LENGTH 409.09	Mud Type PRO-TEMP/THERMTR0L III	9.27 389

Flowline Temperature	TEMP	MUD PROPERTIES	* BRANDT EQUIP	EQUIPMENT (2) * KERN COOLERS
Flowline Temperature	161 °F	PIT CHECK!	SIZE	SIZE 180 X HRS./TOUR
Time Sample Taken		0530	Centrifuge *	24 (1) 24 (2) 24
Depth (ft.)		6044	Shaker ** (1) 24 (2) -	Shaker (2) RIG 30X320X 24 -
Weight (lb/gal) (b/cu. ft.)		8.7 (65)	Desander RIG 8X4 1/2	Other EX LOG-SMITH
Mud Gradient (psi/ft.)		4.52	DAILY COST	CUMULATIVE COST
Funnel Viscosity (sec./10 ml) API at 133 °F		34	8.8-9.5	32-38
Plastic Viscosity cps at 120 °F		8	10-12 cc	
Yield Point (lb./100 sq. ft.)		4		
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.		2.6		
pH □ Strip □ Meter		9.5		
Filtrate API (m/30 min.)		14.0cc	MUD CONTAINS	SUGGESTED TREATMENT
API HP-HT Filtrate (m/30 min.) 500psi @ 300 °F		48.0cc	X GEL THERM 30 SX	(1) TO INCREASE VIS
Core Thickness 32nd in. API HP-HT □		< 2 FIRM SLIX TANGH	X XC POLYMER 1 SX	(2) ADD THEN
Alkalinity, Mud (pH)		.44	X PROFCO GEL 5 SX	(3) THEN THEN
Alkalinity, Filtrate (pH)		10.100		ETC.
Salt: □ ppm □ gpg Chloride: □ ppm □ gpg		2900		SUGGESTED TREATMENT
Calcium □ ppm □ gyp (ppb)		140	X THERMTR0L III 1 SX	
Sand Content (% by Vol.)		0	X CAUSTIC 1 SX	ADD OVER 2 HRS
Solids Content (% by Vol.)		4	X LIME 1 SX	IF DRUG OR
Oil Content (% by Vol.)		8 1/2	X PRO TEMP 2 CANS	4 HRS IF
Water Content (% by Vol.) □ Resort □ Calculated		87 1/2	X THERM GEL 6	COREING!
Methylene Blue Capacity □ ml/ml mud □ cc/cc hbl. bent.		16		
ASG ALL SOLIDS		2.525		
APPROX 90 DRILL SOLIDS		~ 2		

REMARKS—Give operation, depth and nature of any problems encountered  
 Drilling @ TWIST OFF - LAST 20,000'  
 Salt Water flow @ POOH @ RPT TIME  
 Gas kick @  
 Stuck pipe @  
 Tight hole @  
 Sloughing Shale @  
 Lost Returns @

① MAINTAIN VIS @ 32-38 SEC / QT.  
 ② RUN ALL SOLIDS CONTROL EQUIP. # 2nd COOLER IF FLOWLINE 160+  
 ③ DUMP SAND TRAP WHEN 1/2 FULL!

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR SERV. 1-353-1692 (PHONE 1-353-3030) HOME  
 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH-BRAWLEY (PHONE 344-5100)

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending MONITE @ Depth - Ft.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Blt No. - Type	RPM	Wt.	Hours	Footage
GEL	109	109	-							
BAR	476	476	-							
T-GEL	325	313	12							
T-LIG	64	60	4							
T-PLEX	25	25	-							
T-TROL3	38	30	8							
T-LUBE	17	17	-							
RTEMP SX-L	69/48	68/48	1/-							
KAL-DML	145/24	145/24	-							
NaOH-COH	68/61	68/61	-							
SODA-BICARB	17/14	17/14	-							
PELLETS-CSH	50/24	50/24	-							
LOSOL-NIO	48/11	48/11	-							
ALST-ANIT	4/9	4/8	-/1							
DMS-BaCl2	24/5	24/5	-							
SAW-H2USS	74/23	74/19	-/4							
XC-POLYMER	15	12	3							

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
 DAILY MAINT. + ADDED DIESEL

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.  
 (C) DIESEL = MTL + TRK + 2A =



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR THURS. MORN.

DRILLING MUD REPORT

REPORT NO. 57 DATE 19 DEC 1985 DEPTH 6044

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRLG CO. RIG: RIG SPUD DATE: 24 Oct. 85

DRILLING ASSEMBLY: #19 DYNAL VAREL OPEN CASING: 13 3/8 Surface 3515 MUD VOLUME (BBL): 397 1008

MUD PROPERTIES: PIT CHECK R.H. BRANDT EQUIP. # BRANDT EQUIP. KERN COOLERS. Includes viscosity, yield point, and filtration data.

REMARKS: Give operation, depth and nature of any problems encountered. 1) MAINTAIN VISC @ 32-38 SEC/QT.

ENGINEER: JERRY BEWICK HOME ADDRESS: 24 HR. SERV. 1-353-1692 PHONE: 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., RPM, Wt., Hours, Footage.

PRO 303/1-2 CORROSION RINGS 27.50 = 174.90 XTRA WAITING TIME VAC TRUCK WITH DIESEL = \$440 =



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR FRI, MORN.

Table with columns: DATE (20 DEC 1985), DEPTH (6077), STATE (CA), COUNTY (IMPERIAL), WELL (S15D1P), BIT (D1P)

Operator: BECHTEL CORP. / D.O.E. Contractor: CLEVELAND DRIG. CO. Rig No: 6. Address: RIG. Report for Mr: GERALD REICH. Field or Block No: SALTON SEA. County: IMPERIAL CO. State: CA.

Table with columns: DRILLING ASSEMBLY (BIT SIZE, TYPE, JET SIZE, LENGTH), CASING (Surface, Intermediate, Production of Liner), MUD VOLUME (BBL, Pps, Total Circulating Volume, In Storage), CIRCULATION DATA (Pump Size, Pump Make, Model, Stroke, Flow Rate, Opposite DP, Opposite Collar, JET V, Bottoms up, System Used)

Table with columns: FLOWLINE TEMPERATURE (171°F), TEMPERATURE PROPERTIES (110°F), BRAND EQUIP (KERN COOLERS), SIZE (180X), HRS/Tour, DAILY COST (\$1,311.64), CUMULATIVE COST (\$93,996.23), MUD CONTAINS (THERMTR III, CAUSTIC, LIME, PROTEMP L, THERM GEL), SUGGESTED TREATMENT (ADD OVER 3 HRS IF DRUG, 6 HRS IF CORING)

REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VIS @ 32-38 SEC/QT. 2) RUN ALL SOLIDS CONTROL EQUIP. 3) RUN 1 COOLER ALL TIMES - RUN 2nd COOLER IF FLOWLINE @ 160+. 4) DUMP SAND TRAP WHEN FULL!

ENGINEER: JERRY BEWICK. HOME ADDRESS: 24 HR. SERV. 1-353-1692. PHONE: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BRAWLEY, BEACH. PHONE: 344-5100.

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW. Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth 6077 ft. (ALSO SAME @ 0500)

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage. Includes items like GEL, BAR, F-GEL, T-LIG, T-PLEX, T-TR03, T-LUBE, P-TEMP, KCL-DML, NaOH-CaOH, SODA-BICARB, PELETS-CSH, LD SOL-NIO, AL-SI-ANTI, DMS-BAL, SAW-H2LESS, X-C-POLYMER.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DAILY MAINT. DYNA DRIG.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.





THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR SAT. MORN.

REPORT NO. 59, DATE 21 DEC 1985, DEPTH 6112, STATE CALIF, COUNTY IMPERIAL, WELL C/A1 MP S E S D O P

OPERATOR: BECHTEL CORP./D.O.E., CONTRACTOR: CLEVELAND DRIG CO., RIG NO. 6, ADDRESS: RIG, SPUD DATE: 24 Oct '85, REPORT FOR MR. GERALD REICH, REPORT FOR MR. JERRY GARDNER, SECTION: 14-11S 13E, WELL NAME AND NO.: KENNECOTT STATE #2-14, FIELD OR BLOCK NO.: SALTON SEA, COUNTY: IMPERIAL CO., STATE OR PROVINCE: CA.

Table with columns: BIT SIZE, TYPE, JET SIZE, CASING, MUD VOLUME, CIRCULATION DATA. Includes data for 8 1/2" bit size, 13,13,13 jet size, 402 975 mud volume, and various circulation parameters.

Table with columns: TEMPERATURE, MUD PROPERTIES, BRAND EQUIPMENT, SUGGESTED TREATMENT. Includes temperature logs (102°F), mud properties (452 cP), and suggested treatments like 'GEL THERM', 'XC-POLYMER', and 'PROFCO GEL'.

REMARKS: Give operation, depth and nature of any problems encountered. Includes notes like 'DYNA DRIG - TOOL FAILED - FISHING TRIP FOR JUNK' and 'RUN ALL SOLIDS CONTROL EQUIP...'.

ENGINEER: JERRY BENICK, HOME ADDRESS: 24 HR SERV, 1-353-1692, PHONE: 1-353-3030, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH-BRAWLEY, PHONE: 344-5100

Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth 6112 Ft.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., RPM, Wt., Hours, Footage. Lists products like GEL, BAR, FGEL, T-LIG, T-PLEX, T-TROL 3, T-LUBE, P-TEMP SK-L, KCL-DML, NaOH-CO2H, SODA-BICARB, PELLETS-CO2H, LO-SOL-NLO, AL-ST-ANTI, DMS-FOAM, SAND-FLOESS, XC-POLYMER.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: FISH FOR JUNK AFTER DYNA DRIG RUN - WASH & REAM TO BTM @ RPT TIME DAILY MAINT!



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR SUN. MORN.

REPORT NO. 60 DATE 22 DEC 1985 DEPTH 6166

OPERATOR BECHTEL CORP / D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6

DRILLING ASSEMBLY DYNAL JET DRILL BIT SIZE 8 1/2 TYPE VAREL OUT CASING 13 3/8 Surface 3515 MUD VOLUME (BBL) 406 715

TEMP 119 FROM PROPERTIES \* BRANDT EQUIP EQUIPMENT (2) \* KERN COOLERS

MUD CONTAINS X GEL, THERM 30 SX (1) TO INCREASE VIS X XC-POLYMER 1 SX (2) ADD (1) THEN (2) THEN (3)

REMARKS - Give operation, depth and nature of any problems encountered. DYNAL DRILLING - LOSING SOME MUD ~ 4.5 BBL/HR

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR SERV. - 1-353-1692 PHONE 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage. Includes rows for GEL, BAR, T-GEL, T-LIG, T-FLEX, T-TROL3, T-LUBE, P-TEMP SX-L, KCL-DML, NaOH-CADPH, SODA-BICARB, POLYMER-CSH, LOSOL-NIO, ALST-ANTI, DMS-BACCL2, SAWN-WOODLESS, XC-POLY.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent.



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR MON. MORN.

REPORT NO. 61 DATE 23 DEC 1985 DEPTH 6228 STATE CA COUNTY IMPERIAL WELL S1S1D1P1

OPERATOR BECHTEL CORP. ADDRESS RIG. REPORT FOR MR. GERALD REICH WELL NAME AND NO. KENNECOTT STATE #2-14 CONTRACTOR CLEVELAND DRUG CO. ADDRESS RIG. REPORT FOR MR. JERRY GARDNER FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CA. RIG NO. 6 SPUD DATE 24 OCT 85 SECTION, TOWNSHIP, RANGE 14-11S-13E

#25 DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE VAREL JET SIZE OUT CASING 13 3/8 Surface 3515 Ft. MUD VOLUME (BBL) 410 764 PUMP SIZE 6 X 16 CIRCULATION DATA Pump Speed 6 X 16 Annular Vel. (Ft./Min.) Opposite DP = 310 DRILL PIPE SIZE 5-19.5 TYPE 4 1/2 IF LENGTH - 95 Intermediate 6000 Ft. Total Circulating Volume 1174 Pump Make NATIONAL Opposite Collar = 427 DRILL PIPE SIZE 5-46 TYPE 4 1/2 IF LENGTH 482.66 Production or Liner - - In Storage 0 Model N-1300 JETVEL = - DRILL COLLAR SIZE 6 1/2 X 2 1/4 BHA = 328.02 Mud Type PRO TEMP / THERMTR0L III 14.24 598

TEMP 144 F FROM 11 IN MUD PROPERTIES \* BRANDT EQUIPMENT (2) \*\* KERN COOLERS SIZE 24 HRS/TOUR SIZE 180X HRS/TOUR Centrifuge 24 Desalt 2 (1) 24 (2) 24 Depth (ft.) 6228 Degasser \*\* (1) - (2) 24 Shaker (2) RIG 20 X 8 30 X Weight (ppg) (lb./cu. ft.) 8.75 (65.5) Desander RG-8 X 4 8 Other EX LOG-SMITH Mud Gradient (ppm/l) 4.55 DAILY COST \$ 1,263.72 CUMULATIVE COST \$ 98,977.32 Funnel Viscosity (sec./qt.) API at 110 F 34 Plastic Viscosity cps at 120 F 6 Yield Point (lb./100 sq. ft.) 4 Gel Strength (lb./100 sq. ft.) 10 sec./10 min. 2 1/2 FRAGILE WEIGHT 8.8-9.5 VISCOSITY 32-38 FILTRATE 10-12cc pH 100 10.0 MUD CONTAINS SUGGESTED TREATMENT X GEL THERM 30 SX (1) TO INCREASE VIS X XC-POLYMER 1 SX (2) ADD (1) THEN (2) THEN (3) X PROFCO GEL 5 SX (3) THEN (1) ETC. Alkalinity, Mud (Ppm) 10.125 SUGGESTED HOURLY TREATMENT Salt: 4900 X PROTEMP 1 SX (50\* SX) Calcium 264 X CAUSTIC 2 SX OVER 3 HRS. Sand Content (% by Vol.) TR X H2 LESS 2 CANS Solids Content (% by Vol.) UNDISSOLVED 4 Water Content (% by Vol.) 89 (1) MAINTAIN VIS @ 32-38 SEC/QT. Methylene Blue Capacity 18 (2) RUN ALL SOLIDS CONTROL EQUIP. ASG ALL SOLIDS 2.60 APPROX 80 DRILL SOLIDS 2

REMARKS - Shear degradation, depth and nature of any problems encountered (3) RUN 1 COOLER UNTIL TEMP 160 THEN RUN BOTH COOLERS - (4) MAINTAIN VOLUME IN PITS @ 700+ - USING LOGGERS VOL TOTALIZER TO CONTROL MUD LOSSES ADD 10 SX PROFCO GEL RAPIDLY AT PUMP SUCTION - CIRC 30 MIN - 1 HR. IF LOSS DOES NOT DECREASE ADD ANOTHER 10 SX ETC UNTIL LOSS BELOW 5 SB/HR - CHECK WITH CO. MAN FIRST!!!

ENGINEER JERRY BENWICK HOME ADDRESS 24 HR. SERV. 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH-BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BH No., Type, RPM, Wt., Hours, Footage. Includes rows for GEL, BAR, T-GEL, T-LIG, T-PLX, T-TR0L3, FLUBE, P-TEMP-SX-L, KAO-DML, NaOH-CaOH, SODA-BICARB, PELLETS-CSH, LA SOL-MLO, AL-ST-ANTI, DMS-BALCO, SAN-H2LESS, XC-POLY.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DYNA DRILL - @ RPT TIME R/H WITH DRUG ASSY TO WASH & REAM DYNA DRILL RUN THEN CHANGE OVER TO H2O & FLOW TEST - MUD LOSSES 0-20 BPH 6170-6220 - (DAILY MAINT ON MUD)

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT #2 JAN 86 REPORT 622 F1

DATE 24 DEC 85 DEPTH 622F STATE CALIF COUNTY IMPERIAL WELL 1310 DP

REPORT FOR MRS. MORT...

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRLG. CO. RIG NO: 6 ADDRESS: RIG SPUD DATE: 24 OCT 85 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE: 14-115-13E WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

Table with columns: #, DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and MUD TYPE (PRO-TEMP/THERMTRAL III).

MUD PROPERTIES table with columns: TEMP FROM, MUD PROPERTIES, \* BRANDT EQUIP., EQUIPMENT (2) \*\* KERN COOLING. Includes rows for Flowline Temperature, Time Samples Taken, Depth (ft.), Weight (ppg), Mud Gradient (psf), Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Mud (Ppm), Alkalinity, Filtrate (PpM), Salt, Calcium, Sand Content, Solids Content, Oil Content, Water Content, Methylene Blue Capacity.

REMARKS—Give operation, depth and nature of any problems encountered. DRILLED TO 6226 - DISPLACED HOLE WITH BACL TREATED WATER - RAN FLOW TEST FOR (RIG UP ETC) RIG UP TEST, RIG DOWN TEST & DISPLACE HOLE WITH MUD - DEC 25, 26, 27, 28, 29, 30, 31, 1986 JAN 1 9 DAYS

ENGINEER: JERRY BEWICK HOME ADDRESS: 24 HR SERVICE 1-353-1692 PHONE: 1-353-3030 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH, BRAWLEY PHONE: 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table: Cost - Time Summary / 24 Hours Ending @ Depth Ft. Columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No. - Type, RPM, Wt., Hours, Footage. Includes handwritten notes: 'START DEL', 'NORMALS SUPPLIED', 'FLOW TEST', 'COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE'.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR FRI. MORN

REPORT # 72
DATE 8 JAN 1986 DEPTH 6323
STATE CALIF COUNTY IMPERIAL WELL CAINPISISDDP

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO.
ADDRESS RIG ADDRESS RIG SPUD DATE 24 Oct 85
REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E
WELL NAME AND NO. KENNECOTT STATE# 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. CALIF. STATE OR PROVINCE

# 28 DRILLING ASSEMBLY BIT SIZE 8 1/2" TYPE J-22 JET SET 13.13.13 SURFACE 3515' MUD VOLUME (BBL) 417 415
DRILL PIPE SIZE 5-19.5# TYPE 4 1/2 IF LENGTH 95' INTERMEDIATE 6000' TOTAL CIRCULATING VOLUME 832
DRILL PIPE SIZE 5-46# TYPE 4 1/2 IF LENGTH 482.66' PRODUCTION OF LINER -

Table with columns for Mud Properties (2nd, 3rd) and Suggested Mud Treatment. Includes data for Time Sample Taken, Depth, Weight, Mud Gradient, Viscosity, etc.

REMARKS - Give operation, depth and nature of any problems encountered.
CORROSION RING PULLED JUST PRIOR TO FLOW TEST (#61694) WAS RUN 6.9 HRS @ TOP OF COLLARS. RATE = .978 #/FT2/YR.
BUILD PIT VOLUME - MAINTAIN AT 700+ (LOGGERS TOTALIZER) 1 FT IN PITS = 176 BBLs - ADD 30 SX THERM GEL 5 SX PROFCO GEL 1 SX XC POLYMER 1 SX CAUSTIC

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR ANS. SERVICE PHONE 1-353-1692
MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION HOME PHONE 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.
START 11 AM PHYSICAL INVENTORY Summary / 24 Hours Ending 11 AM @ Depth 6228 Ft.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blt No.-Type, RPM, Wt., Hours, Footage. Lists items like GEL, BAR, T-GEL, T-LIG, T-PLEX, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE
LOSING MUD @ 50-100 BBL/HR.
DAILY MAINT.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.

DAILY COST = 1,391.94
TOTAL = 100,369.26



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT # 73

REPORT FOR SAT. MORN

DATE 4 JAN 1986 DEPTH 6516

OPERATOR BECHTEL CORP. / D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO 6 ADDRESS RIG ADDRESS RIG SPUD DATE 24 OCT 85 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CA

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and various flow and viscosity measurements.

Table with columns: TEMPERATURE PROPERTIES, BRAND EQUIPMENT, MUD CONTAINS, SUGGESTED TREATMENT. Includes rows for Flowing Temperature, Time Sample Taken, Depth, Weight, Mud Gradient, Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Salt, Calcium, Sand Content, Solids Content, Oil Content, Water Content, Methylene Blue Capacity, and ASG ALL SOLIDS.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes like 'LOSING MUD @ 20 BBL PER HR', 'CORE FROM 6506-6516', and 'CORE JAMMED - HARD FORM!'.

Corrosion Ring-on Bank 253 HRS = 5.119 #/FT/YR. Includes fields for ENGINEER (JERRY BEWICK), HOME ADDRESS (24 HR. AVE. 1-353-1692), MOBILE UNIT (1-355-5158), WAREHOUSE LOCATION (BEACH - BRAWLEY), and PHONE (344-5100).

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth 6510 ft. Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No. - Type, RPM, Wt., Hours, Footage. Lists items like GEL, BAR, T-GEL, T-LIG, T-PLEX, T-TRAL III, T-LUBE, P-TEMP, KCL-DML, NaOH-CaOH, SODA-BICARB, PELLETS-CST, URSOL-NIO, AL-SH-ANTI, DMS-BACK, SAW-LUBES, XC-POLY, WEL-PAC, HTB, and PROSANTHE.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. REDUCED MUD LOSS FROM 100 BBL/HR TO 20 BBL/HR WITH SAWDUST - MAINTAINING REASONABLE MUD PROPERTIES FOR DRILLING & CORING.

PRO 303/1-2. This report and any statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the management of any well, and are made without assumption of any liability by Profco, Inc. of any employee of Profco, Inc.

TRUCKING - 198.00



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 74

REPORT FOR SUN. MORN

Table with columns: DATE (5 JAN 1986), DEPTH (6661), STATE (CA), COUNTY (IMP), WELL (SSSDP), BIT (P)

Table with columns: OPERATOR (BECHTEL CORP./D.O.E.), CONTRACTOR (CLEVELAND DRUG CO.), RIG NO. (6), ADDRESS (RIG), SPUD DATE (24 OCT 85), REPORT FOR MR. (GERALD REICH, JERRY GARDNER), SECTION/TOWNSHIP/RANGE (14-11S-13E), WELL NAME AND NO. (KENNECOTT STATE #2-14), FIELD OR BLOCK NO. (SALTON SEA), COUNTY/PARISH/OFFSHORE AREA (IMPERIAL CO., CALIF.), STATE OR PROVINCE (CALIF.)

Table with columns: # 29 DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size (8 1/2), jet size (13.13.13), casing (13 3/8 Surface, 9 5/8 Intermediate, 8 in. Production of Liner), mud volume (434 525), circulation data (Pump Size #1 6x16, #2 7x16, Pump Make NATIONAL, Model N-1300, etc.)

Sample from Flowline  Pit  TEMPR. PIT CHECKED BY DRILG WITH \*BRANDT EQUIP EQUIPMENT 2\*\* KERN COOLERS

Table with columns: Flowline Temperature, Time Sample Taken, Depth, Weight, Mud Gradient, Funnal Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Salt, Calcium, Sand Content, Solids Content, Oil Content, Water Content, Methylene Blue Capacity. Includes handwritten notes like 'FROM IN WATER', 'W', 'A', 'E', 'R', 'ENGINEER WILL ADVISE'.

REMARKS - Give operation, depth and nature of any problems encountered. DRILLING WITH WATER FROM BAKER TANKS. LOST 100% RETURNS @ 6633-6637' MIXED LCM PILL - SAND/UST, CSH, GEL - SET ON BTM - PUMPED 70 BBL H2O 1st ANNULUS - HI RETURNS - MIX 2nd PILL HI VLS WITH P-GEL + PELLETS 3rd PILL HI VLS WITH P-GEL + PELLETS K-SOL - NO RETURNS - DRLG

Table with columns: ENGINEER (JERRY BEWICK), HOME ADDRESS (24 HR SERV.-1-353-1622), PHONE (1-353-3030), MOBILE UNIT (1-355-5158), WAREHOUSE LOCATION (BEACH - BRAWLEY), PHONE (344-5100)

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW. JUST LOST RETURNS - Cost - Time Summary / 24 Hours Ending 18:30 @ Depth 6637 Ft.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No.-Type, RPM, Wt., Hours, Footage. Lists products like GEL, P-TEMP, KOL-NIO, NaOH-CO2H, SODA-BICARB, PELLETS-CSH, LO-SOL-DMIS, Bact- PHOS, SANW-T-LIG, XC-WELPAK, HZLESS-HIBA, ALST-ANTI.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. LOST RETURNS - MIXING LCM PILLS @ RPT TIME - DRILLING WITH WATER FROM BAKER TANKS - NO RETURNS



PLEASE PULL CORRINGS

THE PROFESSIONALS IN DRILLING FLUIDS

REPORT FOR MON. MORN.

DRILLING MUD REPORT

REPORT NO. 75 DATE 6 JAN 1986 DEPTH 6771

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRIG CO. RIG NO. 6 ADDRESS RIG RIG SPUD DATE 24 OCT 85

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY PARISH OR OFF-SHORE AREA IMPERIAL STATE OR PROVINCE CALIF.

DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA, TEMPERATURE, MUD PROPERTIES, BRANDT EQUIP EQUIPMENT, KERN COOLING

REMARKS - Give operator, depth and nature of any problems encountered

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. SERV. 1-353-1692 PHONE 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Hand, Units Used, Unit Cost, Total Cost, BH No.-Type, RPM, Wt., Issues, Percentage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRILLED AHEAD WITH WATER - RAN CORE BBL WITH WATER-

TRUCKING 2 @ 198 = 396.00





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR TUES. MARN

DRILLING MUD REPORT

REPORT NO. 76 DATE 7 JAN 1986 DEPTH 6371 STATE CAL COUNTY IMPERIAL WELL WEL BT SDDDP

OPERATOR BECHTEL CORP. / D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 60 ADDRESS RIG SPUD DATE 24 OCT 85 REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S 13E WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL STATE OR PROVINCE CALIF

Table with columns: #, DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and various pump/motor specifications.

MUD PROPERTIES table with columns: FLOWLINE TEMPERATURE, TIME SAMPLE TAKEN, DEPTH, WEIGHT, MUD GRADIENT, FUNNEL VISCOSITY, PLASTIC VISCOSITY, YIELD POINT, GEL STRENGTH, pH, FILTRATE API, API HP-HT FILTRATE, CAKE THICKNESS, ALKALINITY, SALT, CALCIUM, SAND CONTENT, SOLIDS CONTENT, OIL CONTENT, WATER CONTENT, METHYLENE BLUE CAPACITY.

REMARKS - Give operation, depth and nature of any problems encountered. Includes checkboxes for Drilling, Salt Water flow, Gas kick, Stuck pipe, Tight hole, Sloughing Shale, Lost Returns.

ENGINEER JERRY BEWICK HOME ADDRESS 24HR SERV. 1-353-1692 PHONE HOME 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION PHONE

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW. Cost - Time Summary / 24 Hours Ending @ Depth Ft.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No. - Type, RPM, Wt., Hours, Footage. Lists various drilling materials and their usage.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE W.O.C.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR WEDS. MORN.

DATE 8 JAN 1986 DEPTH 6771
STATE COUNTY WELL BIT
CA IMP S S D D P

OPERATOR BECHTEL CORP. / D.O.E. CONTRACTOR CLEVELAND DRLG CO. RIG NO 6
ADDRESS ADDRESS SPUD DATE
RIG RIG 24 OCT 85
REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER WILLARD NICKEL SECTION: TOWNSHIP, RANGE 14-115-13E
WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL STATE OR PROVINCE CA

Table with columns: #, DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and MUD TYPE (PRO TEMP / THERMOTROLTU).

MUD PROPERTIES section including Flowline Temperature, Time Sample Taken, Depth (ft.), Weight, Mud Gradient, Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Mud (Pm), Alkalinity, Filtrate (PVM), Salt, Calcium, Sand Content, Solids Content, Oil Content, Water Content, Methylene Blue Capacity.

REMARKS—Give operation, depth and nature of any problems encountered. Includes checkboxes for Drilling, Salt Water flow, Gas kick, Stuck pipe, Tight hole, Sloughing Shale, Lost Returns.

ENGINEER JERRY BEWICK HOME ADDRESS 24-HR. SERVICE 1-353-1692 PHONE 1-353-3030
MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BLACH, BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No.—Type, RPM, WT., Hours, Footage. Includes handwritten note 'NO CHANGES' and 'W.D.C.' in the COMMENTS/REMARKS section.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 78

REPORT FOR THURS. MORN

DATE 9 JAN 1986 DEPTH STATE COUNTY WELL BIT

OPERATOR BECHTEL CORP. / P.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6 ADDRESS RIG REPORT FOR MR. JERRY GARDNER WILLARD NICKEL

FIELD OR BLOCK NO. SALTON SEA COUNTY PARISH OR OFF-SHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF. DRILL PIPE SIZE 5-19.5 TYPE 4 1/2 F LENGTH 9 5/8

MUD PROPERTIES table with columns for Flowline Temperature, Mud Gradient, Yield Point, Gel Strength, pH, Filtrate API, etc.

REMARKS—Give operation, depth and nature of any problems encountered. CHO SEAL MASTER VALVE - CIRC & COOL HOLE & FLUID - SOME PRODUCED FLUID MIXED WITH SURFACE WATER

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR SERVICE 1-353-1692 PHONE 1-353-3030

Product Usage Summary table with columns: Product, Units on location, Units Used, Unit Cost, Total Cost, BR No., Type, RPH, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE W.O.C. - REPAIR MASTER VALVE & CIRC COOL -

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR FRI. MORN.

REPORT NO. 79 DATE 10 JAN 1986 DEPTH 6771

OPERATOR BECHTEL CORP/ D.O.E. CONTRACTOR CLEVELAND DRIG CO RIG NO 6 ADDRESS RIG SPUD DATE 24 OCT 85

DRILLING ASSEMBLY CASING MUD VOLUME (BSL) CIRCULATION DATA BIT SIZE TYPE JET SIZE 1 3/8 Surface Hole Pits 420 950

MUD PROPERTIES \* BRANDED EQUIP EQUIPMENT (2) \*\* KERN COOLERS FLOWLINE TEMPERATURE TIME SAMPLE TAKEN DEPTH (ft.) WEIGHT MUD GRADIENT

REMARKS - Give operation, depth and nature of any problems encountered

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR ANS. SERV. 1-353-1692 PHONE 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage. Includes handwritten note 'NO CHANGES'.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Proco, Inc. or any employee of Proco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT 80

JAN 11 1986 DEPTH 6771

STATE COUNTY WELL BIT

CA IMP S S S D D P

OPERATOR BECHTEL CORP./D.O.F. CONTRACTOR CLEVELAND DRUG CO RIG NO 6 ADDRESS RIG REPORT FOR MR GERALD REICH REPORT FOR MR WILLARD NICKEL WELL NAME AND NO KENNECOTT STATE # 2-14 FIELD OR BLOCK NO SALTON SEA COUNTY PARISH OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

Table with columns: #33 DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE, DRILL COLLAR, and various flow and viscosity measurements.

Table with columns: R.I.H. MUD PROPERTIES, BRAND EQUIP, and various chemical and physical properties. Includes rows for Temperature, Mud Gradient, Viscosity, Filtrate, and Mud Contains.

REMARKS - Give operation, depth and nature of any problems encountered. (1) WHILE DRILLING CEMENT ADD THERM GEL... (2) AFTER CEMENT IS DRILLED BRING VIS UP TO 32-34 AND ADD TOUR TREATMENT -

ENGINEER JERRY BEWICK HOME ADDRESS 24HR AVE, STEV, 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-9158 WAREHOUSE LOCATION BRACH - BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No.-Type, RPM, WT, Hours, Footage. Includes rows for GEL THERM, GRP, and WEL PAC.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE ALLOWED CMT TO SET R.I.H TAG CMT @ 6410 - CIRC - WELL HAD PRODUCED WATER IN HOLE - @ RPT TIME R.I.H. TO DRILL PLUGS -



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR SUN. MORN.

REPORT NO. 81, 12 JAN 1986, DEPTH 6850, STATE CA, COUNTY IMP, WELL S, S, S, D, D, D, P

OPERATOR: BECTEL CORP./D.O.E., ADDRESS: RIG, REPORT FOR MR. GERALD REICH, WELL NAME AND NO. KENNECOTT STATE # 2-14, CONTRACTOR: CLEVELAND DRIG CO., ADDRESS: RIG, REPORT FOR MR. WILLARD NICKEL, FIELD OR BLOCK NO. SALTON SEA, COUNTY, PARISH OR OFFSHORE AREA: IMPERIAL CO., STATE OR PROVINCE: CA.

Table with columns: BIT SIZE (8 1/2), DRILLING ASSEMBLY (TYPE V627, JET SIZE 13.13.13), CASING (Surface 13 3/8, Intermediate 9 5/8, Production or Liner -), MUD VOLUME (BBL) (454, 530), CIRCULATION DATA (Pump Size #2 7x16, Pump Make NATIONAL, Model N-1300, etc.)

Table with columns: Flowline Temperature (95), TEMP FROM (SUCTION, SHAKER BYPASS), MUD PROPERTIES (SUCTION, SHAKER BYPASS), MUD CONTAINS (GEL, BAR, etc.), SUGGESTED TREATMENT (SX, etc.)

REMARKS - Give operation, depth and nature of any problems encountered. LAST RETURNS @ 6803 - MIXED TOTAL. COST INCLUDES BUILDING MUD FROM WATER - ENTIRE SYSTEM WITH 950 BBL IN PITS - TOTAL ~1300 BBL NEW MUD + LCM PILLS & BUILDING VAL. TO KEEP UP WITH LOSSES.

ENGINEER: JERRY BEWICK, HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692, PHONE: 1-353-3030, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH - BRAVLEY, PHONE: 344-5100

Table with columns: PRODUCTS, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No.-Type, RPM, WT., Hours, Footage. Includes rows for GEL, PROF, BAH, THERMAGEL, T-OROLIL, T-PLEX, T-LUBE, P-TEMP SA, KCR, NaOH, SODA ASA, PELLETS CSH, SANDUST, LA SOL, BUCK, KC-POLYMER, HZLESS, AL-STEAR.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: LOST CIRC. LOSING 100-230 BBL/HR..

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 82

REPORT FOR MON. MORN.

13 JAN 1986 DEPTH 6650

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRLG.CO. RIG NO: 6 ADDRESS: RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

Table with columns: BIT SIZE (8 1/2), TYPE (VAREL), JET SIZE (13.13), CASING (13 3/8 Surface, 9 5/8 Intermediate, 8 Production or Liner), MUD VOLUME (454, 1050, 1504), CIRCULATION DATA (Pump Size 6 X 6, 2 X 6, NATIONAL, Model N-1300, Stroke/Min 150, 206, 40, 8.24, 346)

Table with columns: Flowline Temperature (100 F), Time Sample Taken, Depth (6850), Weight (8.74), Mud Gradient (452), Funnel Viscosity (2), Plastic Viscosity (3), Yield Point (2), Gel Strength (2.8), pH (7.4)

Table with columns: Filtrate API (NO CONTROL), API HP-HT Filtrate (NO CONTROL), Cake Thickness, Alkalinity, Salt (13,800), Calcium (2,800), Sand Content (1/2 LCM), Solids Content (2), Oil Content, Water Content (98), Methylene Blue Capacity

REMARKS: Give operation, depth and nature of any problems encountered. WHILE DRILLING CEMENT NO TREATMENT REQUIRED! - RUN ALL SOLIDS EQUIP AFTER DRILLING CEMENT. OVER 3 HRS ADD: 3 SX THERMOTROL III, 5 SCANS H2 LESS, 1 SX PRO TEMP. MAINTAIN VIS @ 38

ENGINEER: JERRY BEWICK HOME ADDRESS: 24HR ANS SERV. 1-353-1692 PHONE: 1-353-3030 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH BRAWLEY PHONE: 344-SICC

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BE No., Type, RPM, WT., Hours, Footage. Includes items like GEL PROF, BAA, THERMAGEL, T-TROL III, T-PLEX, T-LUBE, P-TEMP SX, KOI, NaOH, SODA ASH, PELLETS-GH, SANDUST, LO.SOL, BAO, XC-POLYMER, H2 LESS, ALISTEAR, WELPAC.

3 LOADS OF MTL-TK6 = 3 X 198 = 574 =



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 83

REPORT FOR TUES. MORN.

Table with well details: DATE 14 JAN 1986, DEPTH 6530, STATE CALIF, COUNTY IMPERIAL, WELL C-11-M-P-S-S-I-D-D-P

OPERATOR BECHTEL CORP./P.O.E. CONTRACTOR CLEVELAND DRIG CO. RIG NO. 6

ADDRESS RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S-13E

FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

WELL NAME AND NO. KENNECOTT STATE # 2-14

DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE VAREL JET SIZE -OUT- CASING 13 3/8 SURFACE 3515 Hole 430 975

DRILL PIPE SIZE 5 1/2 TYPE 4 1/2 IF LENGTH 9 5/8 INTERMEDIATE 6000 Total Circulating Volume 1405

DRILL PIPE SIZE 5 1/2 TYPE 4 1/2 IF LENGTH 482.66 PRODUCTION OR LINER In Storage 0

DRILL COLLAR SIZE 6 1/4 x 2 1/4 BHA LENGTH 219.22 MUD TYPE DIRTY BRINE WATER

TEMP 108 MUD PROPERTIES \* BRANDT EQUIP EQUIPMENT (2) \* KERN COOLERS

Flowline Temperature FROM SUCTION SIZE HRS./TOUR SIZE 180 HRS./TOUR

Time Sample Taken 0520 Canonite \* Deante (2) \* (1) (2)

Depth (ft.) 6530 Separator \* (1) (2) SHAKE (2) RIG 30 x 8 20K

Weight (ppg) (lb./cu. ft.) 8.9 (65.6) Desander RIG-8x4' Other EX-LOG SMITH

Mud Gradient (psi/ft.) 4.3 DAILY COST \$1,370.15 CUMULATIVE COST \$131,537.55

Funnel Viscosity (sec./qt.) API at 108 Plastic Viscosity cps at 100

Yield Point (lb./100 sq. ft.) 3 Gel Strength (lb./100 sq. ft.) 10 sec./10 min. 0.2

pH Strip Water 7.5 MUD CONTAINS SUGGESTED TREATMENT

Filtrate API (ml/30 min.) NO CONTROL GEL THERM 30 SX (1) ? ADD TOGETHER TO

API HP-HT Filtrate (ml/30 min.) 500 psig @ 300' PROFCO GEL 3 SX (2) ? INCREASE VISC.

Cake Thickness 32nd in. API HP-HT 5/16+ WELPAC 1 SX (2) REPEAT AS NEEDED

Alkalinity, Mud (pH) 12.1, 20 SUGGESTED DAILY TREATMENT

Alkalinity, Filtrate (pH) 25.300 DAYLITE TOUR ONLY

Salt ppm Chloride ppm Calcium ppm Gyp (ppb) T.H. 3,904

Sand Content (% by Vol.) 1/2 + 1CM CAUSTIC 14SX (ADD OVER 3 HRS.)

Solids Content (% by Vol.) UNDISSOLVED 3+ H2LESS 6CHS

Oil Content (% by Vol.) - EVENING & MORN TOURS

Water Content (% by Vol.) 49.7

Methylene Blue Capacity (ml/ml mud equiv. #/bbl. bent) NIL

ASG ALL SOLIDS APPROX 90 DRILL SOLIDS 2

REMARKS - Give operation, depth and nature of any problems encountered

Drilling (1) AFTER DRIG CMT - VISC BRING VISC UP WITH THERMO GEL ETC AS YOU COMPLETE DRIG CEMENT

Salt Water flow (34-40) ADD: 6SX THERMO GEL III

Gas lock (2) ADD 1SX SAWDUST THEN 1SX 1SX PROTEMP OVER

Stuck pipe (HULLS (COTTONSEED) EVERY 20 MIN. 3SX HERAPHOS 6 HRS.

Tight hole (UNTIL FULL RETURNS ARE ESTABLISHED 6SX XC POLYMER

Sloughing shale (NOTE) - RUN BOTH CLEANERS & CENTRIFUGE! - SAND IS TOO HIGH

ENGINEER JERRY BEWICK HOME ADDRESS 24HR ANS. SERV. 1-353-1692 PHONE 1-353-3030

MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAWLEY PHONE 344-5100

MTL START/FINISH USED \$ MTL START/FINISH USED \$

Table with columns: Products, Units Ordered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRIG CMT PLUG @ 6530 WITH BRINE





THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR WEDS. MORN

REPORT NO. 84 DATE 15 JAN 86 DEPTH 6889 STATE CALIF COUNTY IMPERIAL WELL CA 11 M P S S I S O D P

OPERATOR BECHTEL CORP./D.O.E. ADDRESS RIG REPORT FOR MR. GERALD REICH WELL NAME AND NO. KENNECOTT STATE #2-14

FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF

Table with columns for Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (ppg), Mud Gradient (ppf/ft.), Funnel Viscosity (sec/100 sq. in.), Plastic Viscosity (cpa), Yield Point (lb/100 sq. in.), Gel Strength (lb/100 sq. in.), pH, Filtrate API (ml/30 min.), API MP-10T Filtrate (ml/30 min.), Cake Thickness (3rd in. API), Alkalinity (Mud (Ppm)), Alkalinity (Filtrate (Ppm)), Salt (ppm), Calcium (ppm), Sand Content (% by Vol.), Solids Content (% by Vol.), Oil Content (% by Vol.), Water Content (% by Vol.), Methylene Blue Capacity (ml/ml mud @ equiv. #/bbl. bent).

REMARKS—Give operation, depth and nature of any problems encountered. RAN CORE #18 W/ #5 CHEST. NOTE: TO AVOID SAND INCREASE FROM MUD (IF YOU ARE ABLE TO MUD UP) PICKING UP SAND FROM BTM OF BITS RUN CENTRIFUGE & BOTH CLEANERS & DUMP SAND TRAP FREQUENTLY

ENGINEER JERRY BENWICK HOME ADDRESS 24 HR. ANS. SERV. 1-353-1692 PHONE HOME 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAWLEY PHONE 344-5100

Table with columns: Products, Units Delivered, Units on location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage. Includes items like GEL, PROFCO, BAW, THERMOGEL, T-TROL III, T-PLEX, T-LUBE, P-TEMP SX, KCB, NaOH, SODA ASH, PELLETS CM, SANDUST, LO.SOL, BACL, WC-POLY, H2-LESS, AL-STEAR, DML#3, T-LIG, BICARB, CSH, K-SEM-C, DIMS, P-TEMP 'L', PHOSPHATE, CaOH, WELPAC, HIB-A, HIB-100, ANTI-FOAM, FIBER-C, NUT HULLS, NI0, MICA-C, CUBES.

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT NO. 85

REPORT FOR THURS. MORN.

DATE: 05 JAN 1986 DEPTH: 7100  
STATE: CA COUNTY: IMPERIAL WELL: S/D/D/P

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRUG CO. RIG NO.: G

ADDRESS: RIG ADDRESS: SPUD DATE: 24 OCT '85

REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE: 14-11S-13E

WELL NAME AND NO: KENNECOTT STATE #2-14 FIELD OR BLOCK NO: SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO STATE OR PROVINCE: CALIF.

# 33 DRILLING ASSEMBLY			CASING		MUD VOLUME (BBL)		CIRCULATION DATA		
BIT SIZE: 8 1/2	TYPE: VARIA	JET SIZE: - OUT -	13 3/8	Surface 3515	Hole 471	446	Pump Size: #1-6X16	n. Annular Vol. (FL/MIN):	
DRILL PIPE SIZE: 5 1/2	TYPE: 4 1/2 IF	LENGTH: -	9 5/8	Intermediate 6000	Total Circulating Volume: 917		Pump Make: NATIONAL	Opposite DP = 179	
DRILL PIPE SIZE: 5 1/2	TYPE: 4 1/2 IF	LENGTH: 632.01	Production or Liner		In Storage: 0	Model: N-1300	Stroke/Min: 40	Opposite Collar = 247	
DRILL COLLAR SIZE: 6 1/4 x 2 1/4	BHA: 446.56	Mud Type: DIRTY BRINE WATER			8.24	346	Bottoms up (Min.): 42	JET VEL = -	
Temp of Flowline: 118°F		Temp of Mud: 141°F						Circulating Pressure (psi) = 500	
								System Total (Min.) = 111	
								ANN = 345	

\* BRANDT EQUIP EQUIPMENT (2) \* \* KERN COOLERS

Flowline Temperature	FROM SUCTION	40% FLOWLINE	SIZE	NRS./TOUR	SIZE	180X NRS./TOUR
Time Sample Taken	0530		Camruga #	24	Case #	(1) 24 (2) OFF
Depth (ft.)	7100		Bagmaster (2) ** (1) 24 (2) -		Shank (2) RIG	30 X 20 X
Weight (lb/100 sq. ft.)	8.8 (6.5 B)		Desander RIG	8 X 4 1/2	Other	EX-LOG SMITH
Mud Gradient (pcf.)	.458		DAILY COST	\$ 8,153.25	CUMULATIVE COST	\$ 142,842.71
Funnel Viscosity (sec./100 API at 110°F)	26+		WEIGHT	< 9.0	VISCOSITY	30-36
Plastic Viscosity cps at 100°F	3		FILTRATE	< 20cc		
Yield Point (lb/100 sq. ft.)	2		MUD CONTAINS		SUGGESTED TREATMENT	
Gel Strength (lb/100 sq. ft.) 10 sec./10 min	8 1/2		K GEL THERM 30 SX		(1) ADD TOGETHER TO	
pH	8.7		K PROFCO GEL 5 SX		(2) INCREASE VLS -	
Filtrate API (m/30 min.)	NO CONTROL		K WELPAC 1 SX		(3)	
API HP-HT Filtrate (m/30 min.) 500psi @ 300°F	NO CONTROL				SUGGESTED TREATMENT	
Case Thickness 32nd in. API HP-HT C	5/16+					
Alkalinity, Mud (Ppm)	11,130					
Alkalinity, Filtrate (Ppm)						
Salt: ppm Chloride	15,600					
Calcium ppm	3,112					
Sand Content (% by Vol.)	1/2+					
Solids Content (% by Vol.)	UNDISSOLVED					
Oil Content (% by Vol.)						
Water Content (% by Vol.)	97 1/2					
Methylene Blue Capacity (ml/ml mud)	4-6					
A-36 ALL SOLIDS	2.6					
APPROX 90% DRILL SOLIDS	2					

REMARKS - Give operation, depth and nature of any problems encountered

Drilling @ CORROSION RING #2 (61684)

Salt Water flow @ IN @ 6227 OUT 6707 = 1,309 gal/ft<sup>2</sup>/YR

Gas kick @ CORROSION RING #3 (61689)

Shut pipe @ IN @ 6772 OUT 6850 = 1,371 gal/ft<sup>2</sup>/YR

Tight hole @ (RATES BELOW 2 ARE VERY GOOD)

Sloughing Shore @ RATE BELOW 5 ACCEPTABLE ABOVE

Lost Returns @ 5 ARE N.G.!!!

① PARTIAL RETURNS: ADD 1 SX SANDUST EVERY 20 MIN. AFTER NOTE WITH KWIKSEAL & CUTTONSEAL PELLETS

② LOSS FULL RETURNS - CHK WITH CO, MAN

③ LOSS LESS THAN 20 BBL PER HOUR - ADD MIX ABOVE & BRING VLS UP TO 38-42 SEC/100. THEN TOUPLY 3 SX THERM TROL III OVER 2 SHRS 2 SX CAUSTIC 6 SX SODA ASH

④ MAINTAIN PH @ 10+ USING CAUSTIC ADD 1 CAN HZ LESS EVERY 200 BBL OF WATER ADDED OR WITH EVERY 2 SX CAUSTIC 1 HOME

ENGINEER: JERRY BEWICK HOME ADDRESS: 24 HR ANS. SERV. 1-353-1692 PHONE: 1-353-3030

MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BRANCH - BRAWLEY PHONE: 344-5100

NOTE: MUD IS SANDY -

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BM No. - Type	RPM	WT.	Hours	Footage
GEL PROFCO	292	209	83	7 =	51 =					
BAR	473	469	4	6.50 =	26 =					
THERMAGEL	916	188	728	5 =	3640 =					
X-C-POLY	19	18	1	395.76 =	395.76 =					
WELPAC	38	31	7	150 =	1050 =					
P-TEMP SX	56	56	-	240 =	13440 =					
P-TEMP L	39	39	-	102 =	3978 =					
NaOH	39	28	11	20 =	220 =					
CaOH	44	43	1	6 =	24 =					
H2LESS	7	8	1	81.60 =	81.60 =					
HIB-A	8	8	-	61.20 =	489.60 =					
HIB-100	11	11	-	55.78 =	613.58 =					
ANTI-FOAM	3	2	1	40 =	120 =					
ANTI-FOAM	23	20	3	59.82 =	1376.26 =					
PHOSPHATE	10	10	-	61.20 =	612 =					
T-LIG	60	60	-	9 =	540 =					
Ball	5	5	-	82.28 =	411.40 =					

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

MUD LOSS UP TO 90 BBL/HR. - ADDING LCM. STRINGING IN WITH WATER. @ RPT TIME TRIP FOR CORE BBL DRUG @ 26 FT/HR IN CLAYSTONE

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NOTE: DELIVERED CAUSTIC, GEL, SODA ASH, WELPAC, HZ LESS

TRKS. 192 = DIVISION 110 BRIDGE 1 A.C.M. & some SEE TOMORROW'S RPT FOR AMT



PLEASE INSTALL CORROSION RINGS!  
 (1) BETWEEN ⊗ FOR COLLARS & (4 1/2) F  
 (1) KELLY TO SAVEK SUB (4 1/2) F  
 "THE PROFESSIONALS IN DRILLING FLUIDS"

**DRILLING MUD REPORT**

REPORT NO. 86  
 DATE 16 JAN 1986 DEPTH 7252  
 STATE CALIF COUNTY IMP G S S D D P  
 WELL NO. 17

OPERATOR: BECHTEL CORP. / D.O.E. CONTRACTOR: CLEVELAND DRUG CO. RIG NO. 6  
 ADDRESS: RIG ADDRESS: RIG SPUD DATE: 24 OCT 85  
 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE: 14-11S-13E  
 WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

#33RR DRILLING ASSEMBLY			CASING	MUD VOLUME (BBL)	CIRCULATION DATA	
BIT SIZE: 8 1/2	TYPE: VAREL	JET SIZE: 13 1/8, 13	13 3/8 SURFACE 3515	482 456	Pump Size: 2-7x16	Annular Vol. (Fl./Min.): 179
DRILL PIPE SIZE: 5-19.5	TYPE: 4 1/2 IF	LENGTH: -	9 5/8 INTERMEDIATE 6000	938	Pump Make: NATIONAL	Opposite Vp: 247
DRILL PIPE SIZE: 5-46	TYPE: 4 1/2 IF	LENGTH: 632.01	PRODUCTION OF LNER -	8	Model: N-1300	JET VEL = ?
DRILL COLLAR SIZE: 6 1/4 x 2 1/4	BHA = 446.68	LENGTH: -	Mud Type: GEL + WATER + WELPAC		Flow Rate: 150	Circulating Pressure (Pa) = 500psi?
Temp of 111°F	MUD PROPERTIES: 136°F				Bottoms Up (Min.): 43	System Total (Min.): 114
					ANN = 353 BBL	

Flowline Temperature	FROM	SUCTION	FLOWLINE	SIZE	WRS/TOUR	SIZE	180X WRS/TOUR
Time Sample Taken		0515		24		24	
Depth (ft.)		7252		24		24	
Weight (kg) (lb) (cu. ft.)		8.5 (63.5)		24		24	
Mud Gradient (psi/ft.)		4.42		24		24	
Funnel Viscosity (sec./30 sec. API) at 111°F		28		24		24	
Plastic Viscosity (cp) at 100°F		4		24		24	
Yield Point (lb/100 sq. ft.)		4		24		24	
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.		2.8		24		24	
pH		8.2 ***		24		24	
Filtrate API (m/30 min.)		122 CC NO CONTROL		24		24	
API HP-FT Filtrate (m/30 min.) 500 psi @ 300°F		NO CONTROL		24		24	
Cake Thickness 30rd in. API HP-FT		3/8"		24		24	
Alkalinity, Mud (pH)		-		24		24	
Alkalinity, Filtrate (pH)		10.10		24		24	
Salt: Ca ppm Cl ppm		11,000		24		24	
Calcium Chloride (ppm)		1,444		24		24	
Sand Content (% by Vol.)		1/4 SAND 1/4 LCM		24		24	
Solids Content (% by Vol.) UNDISSOLVED		2		24		24	
Oil Content (% by Vol.)		-		24		24	
Water Content (% by Vol.)		98		24		24	
Methylene Blue Capacity - ml/ml mud (equiv. # vol. bent.)		~8		24		24	
ASG ALL SOLIDS		2.6		24		24	
APPROX 2/3 DRILL SOLIDS		~1		24		24	

MUD CONTAINS	SUGGESTED TREATMENT
GEL, THERM	30 SK (1) ADD TOGETHER
PROFCD GEL	5 SK (2) TO INCREASE VIS-
WELPAC	1 SK (3) REPEAT AS NEC
	5 SK FOR 40+ VIS
	SUGGESTED TREATMENT
	SEE PREVIOUS REPORT FOR LOST RETURNS
WELPAC	3SK } ADD ALL CHEMICALS
CAUSTIC	2SK } OVER 2 OR 4 HRS
H2LESS	3SK
SODA ASH	2CAS
SODA ASH	10SK DAYLITE ONLY
SODA ASH	3SK EVENING & MORN

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ CORED 7100-7109 #22

Bar Water flow @ DRUG CLAYSTONE & ANHYDRITE (1) INCREASE VIS TO 40-42 MUD LOSSES SHOULD DECREASE - THEN ADD TREATMENT

Gas lock @

Stack pipe @ (2) MAINTAIN PH @ 10+ WITH CAUSTIC - PH PAPER WAS FURNISHED

Tight hole @ (3) WRITE ON BOOK WHETHER "PROFCD GEL" OR "THERMOGEL" WAS USED

Sloughing shale @

Lost Returns @ (4) CHK VIS IN & OUT

ENGINEER: JERRY BEWICK HOME ADDRESS: 24 HR ANS. SERV. 1-353-1692 PHONE: 1-353-3030  
 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH - BRAWLEY PHONE: 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Ordered	Units on Location	Units Used	Unit Cost	Total Cost	Kit No. - Type	RPM	Wt.	Hours	Footage
GEL, PROFCD	209	245	56	24	24					
BAR	469	469	-	14	14					
THERMOGEL	887	770	117	14	14					
T-THERMOGEL	23	20	3	*16	45					
X-C POLY	18	15	3	-	-					
WELPAC	31	45	20	24	24					
P-TEMP SK	56	55	1	104	94					
P-TEMP L	39	39	-	129	129					
NaOH	28	68	40	97	97					
CaOH	43	43	-	189	179					
H2LESS	8	21	24	60	60					
HIB-A	8	8	-	47	40					
HIB-100	11	11	-	29	29					
AL STARR	2	2	-	5	5					
ANTI-FIRM	20	20	-	33	33					
PHOSPHATE	10	10	-	11	11					
T-LIG	60	60	-	124	124					

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

DRUG 23 FT/HR IN CLAYSTONE & ANHYDRITE - LOSING 10-15 BBL/HR.



"THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 87

E 13 JAN 1986 DEPTH 7347

REPORT FOR SAT. MORN

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRLG. CO. RIG NO. 6 ADDRESS RIG SPUD DATE 24 OCT 85 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E WILLARD NICKEL FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF. KENNECOTT STATE #2-14

Table with columns: BIT SIZE, TYPE, JET SIZE, CASING, SURFACE, MUD VOLUME (BBL), CIRCULATION DATA, DRILL PIPE SIZE, LENGTH, INTERMEDIATE, TOTAL CIRCULATING VOLUME, PUMP MAKE, DRILL PIPE SIZE, LENGTH, PRODUCTION OF LINER, IN STORAGE, MODEL, BOTTOMS UP (MIN.), DRILL COLLAR SIZE, LENGTH, MUD TYPE, THERMOGEL + WELPAC, BOB/MIN., ANN. VOLUME (FL/MIN.), OPPOSITE DP, OPPOSITE COLLAR, JET V, CIRCULATING PRESSURE, SYSTEM TOTAL, BOTTOMS UP (MIN.), ANN.

Table with columns: FLOWLINE TEMPERATURE, TIME SAMPLE TAKEN, DEPTH (FT.), WEIGHT (PPG), MUD GRADIENT (PPR), FUNNEL VISCOSITY (SEC. 10), PLASTIC VISCOSITY (CP), YIELD POINT (LB/100 SQ. FT.), GEL STRENGTH (LB/100 SQ. FT.), PH, FILTRATE API (ML/30 MIN.), API HP-HT FILTRATE (ML/30 MIN.), CELLO THICKNESS (32ND IN. API), ALKALINITY (MUD PPM), ALKALINITY (FILTRATE PPM), SALT (PPM), CALCIUM (PPM), SAND CONTENT (% BY VOL.), SOLIDS CONTENT (% BY VOL.), OIL CONTENT (% BY VOL.), WATER CONTENT (% BY VOL.), METHYLENE BLUE CAPACITY (ML/MUD @ 0.5% SOLIDS), ASG ALL SOLIDS, APPROX SOLID DRILL SOLIDS

Table with columns: REMARKS, DRAINING, SUMP ANALYSIS, SALT WATER FLOW, GAS LOCK, STUCK PIPE, TIGHT HOLE, SLOUGHING SHALES, LOSS RETURNS, X-C POLYMER, CAUSTIC, PROD TEMP, SAWDUST OR PELLETS OR NUTS HULLS

REMARKS - Give operation, depth and nature of any problems encountered. EVENING & MORN. TOUR. ENGINEER JERRY BEWICK HOME ADDRESS 24 HE. AHS. SQ. 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAWLEY PHONE 344-5700

MTL table with columns: PRODUCTS, UNITS DELIVERED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST, BR. NO. - TYPE, RPM, WT., HOURS, FOOTAGE. Includes items like GEL, BAR, THERMOGEL, T-TRAIL, X-C-POLY, WELPAC, T-DLEX, P-TMPX, P-TMPL, NaOH, CaOH, H2LESS, HIB-A, HIB-100, AL-STEP, ANTI-FINN, PHOSPHATE, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRLG CLAYSTONE @ 5 FT/HR WITH CHRIST. STRATA PAC (DIA. DRAG) LOSING 60-70 BBL/HR. INCREASING VIS & ADDING LCM

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 89

REPORT FOR MON. MORN;

Table with columns: DATE (29 JAN 1986), DEPTH (7670), STATE (CA), COUNTY (IMP), WELL (PSS), BIT (DDP)

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRG. CO. RIG NO: 6

ADDRESS: RIG REPORT FOR MR. GERALD REICH

REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE: 14-11S-13E

WELL NAME AND NO.: KENNECOTT STATE # 2-14 FIELD OR BLOCK NO.: SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

Table with columns: BIT SIZE, TYPE, JET SIZE, SURFACE, MUD VOLUME, CIRCULATION DATA, DRILL PIPE SIZE, LENGTH, INTERMEDIATE, TOTAL CIRCULATING VOLUME, PUMP MAKE, MODEL, DRILL COLLAR SIZE, LENGTH, MUD TYPE, THERMOGEL-WELPAC

Temp of 134 MUD PROPERTIES 180 \* BRANDT EQUIP EQUIPMENT (2) \*\* KERN COOLERS

Table with columns: Flowline Temperature, Time Sample Taken, Depth, Weight, Mud Gradient, Funnal Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Salt, Calcium, Sand Content, Solids Content, Oil Content, Water Content, Methylene Blue Capacity, ASG ALL SOLIDS, APPROX. DRILL SOLIDS

REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VIS @ FLOWLINE @ 40+ 2) MAINTAIN PH @ FLOWLINE @ 10+ 3) DISCONTINUE LOST CIRC. UNTIL IF LOSS BELOW 5 BBL/HR 4) USE AL STEAR + DIESEL TO REDUCE AIR

ENGINEER: JERRY BEWICK HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692 PHONE: 1-353-3030 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH, BRAWLEY PHONE: 344-5100

REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW. Cost - Time Summary / 24 Hours ending

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRUG AHEAD IN CLAYSTONE @ 18 FT/HR LOSING 5-10 BBL/HR. TREATING MUD TO CONTROL PROPERTIES.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR TUES. YMKIN.

REPORT NO. 90 DATE 20 JAN 1986 DEPTH 7734

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6 ADDRESS RIG RIG SPUD DATE 24 OCT 85

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

Table with columns for Flowline Temperature, Suction, Flowline, and various mud properties like Viscosity, Yield Point, and Gel Strength.

REMARKS - Give operation, depth and nature of any problems encountered. 1) CORE # 24 7704-7734 2) MAINTAIN PH @ FLOWLINE @ 10-12 USING CAUSTIC

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. ANSW. SERV 1-353-1692 PHONE 1-353-3030

MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH-BRAWLEY PHONE 344-51CC

Table with columns for Products, Units Delivered, Units on Location, Units Used, and Total Cost. Includes items like OIL, BAR, THERMOGEL, T-TROL OIL, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE TURBO DRUG - 2 CORR. - LOSING 5 BBL/HR - "NIL" TREATING MUD TO BRING TO SPEC.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT NO. 30

REPORT FOR WEDS. MORN.

DATE	21 JAN 1986	DEPTH	7794
API WELL NO.	CA 1115 S 10 D 1	STATE	CA
COUNTY	IMPERIAL	WELL	S 10 D 1
REPORT FOR MR.	JERRY GARDNER	SECTION, TOWNSHIP, RANGE	14-11S-13E

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRUG CO. RIG NO: C

ADDRESS: RIG REPORT FOR MR. GERALD REICH JERRY GARDNER

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFF-SHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF

#38 DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE VAREL JET SIZE OUT CASING 13 3/8 SURFACE 3515 MUD VOLUME (BBL) 520 585 PUMP MAKE NATIONAL CIRCULATION DATA #2-7X16

DRILL PIPE SIZE 5-19.5 TYPE 42IF LENGTH 95 INTERMEDIATE 6000 TOTAL CIRCULATING VOLUME 1,104 PUMP MAKE NATIONAL OPPOSITE DP = 326 OPPOSITE COLLAR = 449 JET VEL = -

DRILL PIPE SIZE 5-46 TYPE 42IF LENGTH 632.01 PRODUCTION OR LINER IN STORAGE BAY/STROKE 150 206 STROKE 42 42 CIRCULATING PRESSURE @ 2500 GPM 14,952 628 BOTTOMS UP (MIN.) = 25 SYSTEM SIZE (MIN.) = 74 ANN = 381

DRILL COLLAR SIZE 6 1/4 X 2 1/4 BHA# 455,07 MUD TYPE PRO-TEMP/THERMO THERMO GEL-WELPAC 14,952 628

EQUIPMENT: 2 X BRANDT EQUIP EQUIPMENT: 2 X KERN COOLERS

Flowline Temperature: 195 F FROM SUCTION FLOWLINE

Time Sample Taken 0530 NO Centrifuge OFF Desalt (2) \* (1) OFF (2) OFF

Depth (ft.) 7794 NO Discharge \* (1) ON (2) ON SINK (2) RIG 30X 20X

Weight (lb/cu. ft.) 9.0 (673) Desander OTHER EX-LG SMOOTH

Mud Gradient (pcf/ft.) 4.68 DAILY COST \$2,512.93 CUMULATIVE COST \$166,510.65

Funnel Viscosity (sec. cSt.) API at 138 F 35 WEIGHT < 9.0 VISCOSITY 35-45 FILTRATE API < 2000 PH 10+

Plastic Viscosity cps at 120 F 7 MUD CONTAINS SUGGESTED TREATMENT

Yield Point (lb/100 sq. ft.) 8 XGEL THERMO 30 SX 7 ADD TOGETHER TO INCREASE VIS

Gel Strength (lb/100 sq. ft.) 10 sec/10 min 2 1/8 FROGUE WELPAC 1 SX REPORT AS NEC.

pH 9.6 X SANDUST 4/R SX 1 SX EVERY 20 MIN TO REDUCE MUD LOSS

Filtrate API (m/30 min.) 17.8 cc X CAUSTIC 4 SX SUGGESTED TREATMENT

API HP-HT Filtrate (m/30 min.) 500 psi @ 300 F NO CHK X THERMO III 2 SX

Cake Thickness 32nd in. API HP-HT 2 SLIK FIRM X PRO TEMPL 4 CAN (5 GAL) ADD OVER 3 HOURS

Alkalinity, Mud (pH) - X THERMO PLUS 1 CAN (5 GAL)

Alkalinity, Filtrate (pH) 10.155 X H2 LESS 1 CAN (5 GAL)

Salt: ppm Chloride 6000 ASG ALL SOLIDS APPROX 90 DRILL SOLIDS

Calcium ppm 160

Sand Content (% by Vol.) 1/4

Solids Content (% by Vol.) UNDISSOLVED 5

Oil Content (% by Vol.) -

Water Content (% by Vol.) 95

Methylene Blue Capacity m/ml mud 2.60

REMARKS: Give operation, depth and nature of any problems encountered. (5) NOTE WITH 2 PUMPS ON PH 10+ (2) PH 10+ (3) DISCONTINUE USE OF LOST CIRC. (4) RUN ALL SOLIDS CONTROL EQUIP.

ENGINEER: JERRY BENICK PHONE: 1-353-3030

MOBILE UNIT: 1-353-5158 WAREHOUSE LOCATION: BEACH-BRAWLEY PHONE: 344-5100

INVENTORY: 21 JAN START FINISH USED # MTL START FINISH USED # INVENTORY CORRECTIONS

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BN No. - Type	APM	WT.	Hours	Footage
CEL PROFCO	147	135	12	24	24	37-VAREL	TURBO-DRILL		3	35
BAH	442	442	29	14	14					
THERMO GEL	359	268	91	24	24					
T-TROL III	18	7	5	101	101					
XC-POLY	-	-	-	237	237					
WELPAC	25	25	10	109	109					
T-PLEX	18	3	7	188	188					
P-TEMP SX	53	49	2	60	60					
P-TEMP L	37	37	-	129	119					
NaOH	58	49	1	29	29					
CaOH	44	44	<+>	5	5					
H2LESS	17	8	9	11	11					
HIB-A	8	8	-	124	124					
HIB-100	11	11	-	5	5					
ALL STONE	1	1	1	-	-					
ANTI-FORM	18	16	2	-	-					
PHOS	10	10	-	-	-					
T-LIG	60	60	-	-	-					

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRUG AHEAD W/TURBO DRILL @ ~10 FT/HR & LOSING ~10 BBL/HR TREATING MUD FOR HI TEMP (FLOWLINE @ 195°F)





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR THURS. MORN

REPORT # 92
DATE 22 JAN 19 50 DEPTH 788
STATE CALIF COUNTY IMP. CO. WELL S151011 BIT

OPERATOR BECHTEL CORP./D.O.E. (Tom Turner Riser) CONTRACTOR CLEVELAND DRUG CO.
ADDRESS RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL
WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMP. CO. STATE OR PROVINCE CALIF.

# 39 DRILLING ASSEMBLY CASING MUD VOLUME (BBL) CIRCULATION DATA
BIT SIZE 8 1/2 TYPE V-27 JET SIZE OUT 13 3/8 Surface 3515 528 548
DRILL PIPE SIZE 5-19.5 TYPE 421F LENGTH 9 5/8 Intermediate 6000 1076
DRILL PIPE SIZE 5-46 TYPE 421F LENGTH 632.01 Production or Liner in Storage

TEMP 144 MUD PROPERTIES 181 \* BRANDT EQUIP. EQUIPMENT 2\*\* KERN COOLERS

Table with columns: FLOWLINE TEMPERATURE, SUCTION, FLOWLINE, WEIGHT, VISCOSITY, FILTRATE, MUD CONTAINS, SUGGESTED TREATMENT. Includes data for temperature, weight, viscosity, and various mud properties.

REMARKS--Give operation, depth and nature of any problems encountered.
(1) RUN ALL SOLIDS CONTROL EQUIP - DIVERT UNDERFLOW
(2) MAINTAIN PH @ FLOWLINE @ 10 - USING CAUSTIC
(3) ADD 15% SAND OR PELLETS EVERY 20 MIN IF MUD LOSS 10 BBL OR ABOVE PRIOR HOUR - CONTINUE UNTIL LOSS IS BELOW 5 BBL -

ENGINEER JERRY BEWICK HOWE ADDRESS 24 WEANS SERV. 1-353-1692 PHONE 1-353-3030
MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH - BRAWLEY PHONE 344-5180

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.
Cost - Time Summary / 24 Hours Ending

Table with columns: Products, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, WL, Hours, Footage. Lists various products like OIL, BAR, THERMOCEL, T-TROL III, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE
TURBO DRUG - G RPT TIME JUST BACK ON BIT WITH NEW BIT - LAST RUN - DRILLED ~20 FT/HR IN CLAYSTONE & SANDSTONE - LOSING 10 BBL/HOUR



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR

DRILLING MUD REPORT

REPORT NO. 93

Table with columns: DATE (23 JAN 1986), DEPTH (7972), STATE (CA), COUNTY (IMP), WELL (SIS), SPT (SIDDK)

OPERATOR: BECHTEL CORP./ D.O.E. (TOM TURNER RUP) CONTRACTOR: CLEVELAND RIG RIG NO: C6

ADDRESS: RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE: 14-11S-13E

WELL NAME AND NO.: KENNECOTT STATE # 2-14 FIELD OR BLOCK NO.: SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

DRILLING ASSEMBLY TURBO: # 42 BIT SIZE: 8 1/2 TYPE: VARIEL JET SIZE: OUT CASING: 13 3/8 Surface 3515 MUD VOLUME (BBL): 532 551 CIRCULATION DATA: Pump Size: 1-6x16 Annular Vel. (Ft./Min.): Opposite OP = 179

DRILL PIPE SIZE: 5-9.5 TYPE: 4ZIF LENGTH: - CASING: 9 5/8 Intermediate 6000 MUD VOLUME: 1083 Pump Make: NATIONAL Opposite Coter = 247 NET VEL = 186 1/11

DRILL PIPE SIZE: 5-4 1/2 TYPE: 4ZIF LENGTH: 632.01 Production or Liner: - In Storage: 2 Bore Size: 1.150 Stroke/Min.: 40 Circulating Pressure @: 1000

DRILL COLLAR SIZE: 6 1/2 x 2 1/4 BHA: 455.17 Mud Type: PRO-TEMP/THERMOTROL III Bore/Min.: 8.24 346 Bottoms up (Min.): 47 System Flow (Min.): 132 ANN = 390

Sample from: Flowline FROM TEMP OF: 142 MUD PROPERTIES: 174 \* BRANDT EQUIP EQUIPMENT: 2 \* KERN COOLERS

Flowline Temperature: FROM SUCTION FLOWLINE SIZE: NRS/TOUR SIZE: 100X NRS/TOUR

Time Sample Taken: 0530 Depth (ft.): 7972 Cartridge: \* OFF Desant: (2) \* U ON (2) ON

Weight Xpp (lb/cu. ft.): 9.0 Mud Gradient (psi/ft.): 468 (673) R Desander RIG: 8x4 1/2 Other: EX-LOG SMOOTH

Funnel Viscosity (sec./qt.) API at: 127 F 39 DAILY COST: \$ 3,428.24 CUMULATIVE COST: \$ 173,461.25

Plastic Viscosity (cp) at: 105 F 9 WEIGHT: < 9.0 VISCOSITY: 35-45 FILTRATE: API < 20cc PH: 10+

Yield Point (lb/100 sq. ft.): 8 GEL STRENGTH (lb/100 sq. ft.) 10 sec./10 min.: 2.22 FRAGILE MUD CONTAINS: X GEL, THERMO 30 SX 7 TOGETHER TO IN+

pH: Stop X Meter 9.7 SUGGESTED TOGETHER TREATMENT: X PROFCO GEL 5 SX (RELEASE VISC.) X WELPAC 1 SX (USE AS NEC.)

Filtrate API (M30 min.): 16.5cc SUGGESTED TOGETHER TREATMENT: X CAUSTIC 4 SX ADD

API HP-MT Filtrate (ml/30 min.): 50.0cc X THERMOTROL III 2 SX ADD

Cake Thickness 32nd in. API HP-MT: 2 ARM, SUK X THERMOPLEX 2 CANS (5GAL) 3 HRS

Alkalinity, Mud (Ppm): 08170 SUGGESTED TOGETHER TREATMENT: (1) MAINTAIN VISC @ FLOWLINE @ 40+ SEC

Alkalinity, Filtrate (Ppm): 5200 SUGGESTED TOGETHER TREATMENT: (2) MAINTAIN PH @ FLOWLINE @ 11+

Self: ppm Chloride: ppm Calcium: ppm Gyp (ppt) T.H.: 160 X CAUSTIC 4 SX ADD

Sand Content (% by Vol.): 1/8 X THERMOTROL III 2 SX ADD

Solids Content (% by Vol.): UNDISSOLVED X PRO-TEMP "L" 4 CANS (5GAL) 3 HRS

Oil Content (% by Vol.): - X THERMOPLEX 2 CANS (5GAL) 3 HRS

Water Content (% by Vol.): 95 (1) MAINTAIN VISC @ FLOWLINE @ 40+ SEC

Methylene Blue Capacity: ml/ml mud ASG ALL SOLIDS APPROX 2/3 DRILL SOLIDS < 3 (2) MAINTAIN PH @ FLOWLINE @ 11+ USING CAUSTIC

REMARKS: Give operation, depth and nature of any problems encountered

Drilling @ (4) RUN ALL SOLIDS CONTROL EQUIP DO NOT TURN ANYTHING OFF UNLESS IT NEEDS REPAIR! (3) ADD LCM (ALTERNATE SANDUST WITH COTTONSEED) PELLETS @ 1 SX EVERY 20 MIN. IF MUD LOSS ABOVE 10 BBL/HR. - DISCONTINUE IF LOSS GETS BELOW 5 BBL/HR

Loss Returns @

ENGINEER: JERRY BEWICK HOME ADDRESS: 24 HR ANSWERY, 1-353-1692 PHONE HOME: 1-353-3030

MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH-BRAWLEY PHONE: 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: PRODUCTS, Units Delivered, Units on location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN OUT-GT 3/8 TRIP FOR TURBO & BIT # 42



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR SAT. INDRN.

REPORT 94  
1 JAN 1986 DEPTH 8040

OPERATOR BECHTEL CORP./D.O.E. (TOM TURNER REP) CONTRACTOR CLEVELAND DRIG CO. RIG NO. G  
ADDRESS RIG SPUD DATE 24 OCT 85  
REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S-13E  
WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTRY, PARISH, OR OFF-SHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

#34RR DRILLING ASSEMBLY R-419 CASING SURFACE 13 3/8 3515 MUD VOLUME (BBL) 537 480 CIRCULATION DATA  
BIT SIZE 8 1/2 TYPE STRAIN CRIST OUT JET SIZE 1 3/8 Surface 537 480 Pump Size 6 x 16 in. Annular Vel. (Ft./Min.) #2-7x16  
DRILL PIPE SIZE 5 1/2 TYPE 4 1/2 IF LENGTH 9 5/8 Intermediate 6000 Total Circulating Volume 1017 Pump Make NATIONAL Opposite DP = 297  
DRILL PIPE SIZE 5 1/2 TYPE 4 1/2 IF LENGTH 632.01 Production or Liner In Storage 8 Model N-1300 Opposite Collar = 409  
DRILL COLLAR SIZE 6 1/4 x 2 1/4 BHA = 45538 PRO TEMP / THERMTRON 13.622 572 Mud Type GPM Bottoms up (Min.) = 2300  
ANN = 394

Sample from Flowline  MUD PROPERTIES 193 \* BRANDT EQUIP EQUIPMENT (2) \*\* KERN COOLERS

Table with columns: Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (ppg), Mud Gradient (ppm/ft.), Funnel Viscosity (sec/30), Plastic Viscosity (cp), Yield Point (lb/100 sq. ft.), Gel Strength (lb/100 sq. ft.), pH, Filtrate API (m/30 min.), API HP-HT Filtrate (m/30 min.), Cake Thickness (32nd in. API), Alkalinity (pH), Salt (ppm), Calcium (ppm), Sand Content (% by Vol.), Solids Content (% by Vol.), Oil Content (% by Vol.), Water Content (% by Vol.), Methylene Blue Capacity (ml/mud), ASG ALL SOLIDS, APPROX DRILL SOLIDS.

REMARKS - Give operation, depth and nature of any problems encountered  
① ADDING NaOH  
② MAINTAIN PH @ FLOWLINE @ 11+ USING CAUSTIC.  
③ IF MUD LOSS GETS ABOVE 5 BBL/HR. ALTERNATE 1SX SAWDUST \$ 1SX COTTONSWED PELLETS - 1SX EVERY 20 MIN - UNTIL LOSS BELOW 5 BBL/HR - DO NOT ADD WHEN TURBO DRILLING!

ENGINEER JERRY BENICK PHONE ADDRESS 24 HR. ANS. SERV. 1-353-1692 PHONE 1-353-3030  
MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAVLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage. Includes rows for GEL, BAR, THERMOCEL, T-TROL III, XC-POLY, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, H2LESS, H2AL STONE, H2BAR STONE, AL STONE, ANTI-FORM, PHOS, T-LUG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
JUST BACK ON BTM WITH BIT 34RR - DRIG (LAST) 5 FT/HR IN CLAYSTONE - LOSING 5BPH



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR SUN MORN

Table with fields: DATE (5 JAN 1986), DEPTH (8092), STATE (CALIF), COUNTY (IMPERIAL), WELL (S1D1P), RIG NO (6)

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRUG CO. Rig No: 6. Address: RIG. Spud Date: 24 Oct 85. Report for Mr: GERALD REICH. Willard Nickel. Section: 14-115-13E. Well Name and No: KENNECOTT STATE #2-14. Field or Block No: SALTON SEA. County, Parish or Offshore Area: IMPERIAL CO. State or Province: CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes fields for BIT SIZE (8 1/2), TYPE SEC. (M-44-7), JET SIZE (16, 16, 16), SURFACE (133), INTERMEDIATE (5), PRODUCTION OR LINER (9 5/8), MUD VOLUME (540, 618), PUMP MAKE (NATIONAL), PUMP SIZE (1-6x16, 2-7x16), ANNULAR VEL (238), DRILL PIPE SIZE (5-19.5, 5-46), TYPE (4 1/2 IF), LENGTH (632.01), MUD TYPE (PRO TEMP/THERMOTROL III), BOB/MIN (150, 206), STROKE/MIN (53), GPM (459), ANN BBL (396).

Table with columns: TEMPERATURE, FLOWLINE, SUCTION, FLOWLINE. Includes fields for FLOWLINE TEMPERATURE (140), FROM (8), SUCTION (120), FLOWLINE (16), DEPTH (8092), WEIGHT (8.8, 8.9), MUD GRADIENT (452, 463), FURNAL VISCOSITY (38, 175, 39), PLASTIC VISCOSITY (8, 120, 16), YIELD POINT (14, 12), GEL STRENGTH (2.36, 4.38), pH (10.5, 10.2), FILTRATE API (12.0, 12.6), CASE THICKNESS (2.5, 2.5), ALKALINITY (40.2, 37.2), SOLIDS (2.40, 2.51), APPROX 90% DRILL SOLIDS (<2, <3).

REMARKS - Give operation, depth and nature of any problems encountered. (4) RIG ALL SOLIDS CONTROL EQUIP - ALL THE TIME. (3) IF MUD LOSSES EXCEED 5 BBL/HR (NOT TURBO DRUG) - ALTERNATE 1 SX SANDUST & 1 SX COTTONSEED PELLETS UNTIL LOSS IS REDUCED TO BELOW 5 BBL/HR.

ENGINEER: JERRY BEWICK. HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692. PHONE HOME: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BLANCH BRAWLEY. PHONE: 344-5100.

Table with columns: MTL, START, FINISH, DEPLETED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST, BIT NO., TYPE, RPM, WL, HOURS, FOOTAGE. Lists products like OIL, BAR, THERMAGEL, T-TRULITE, WILPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, H2O LESS, HB-A, HB-100, ALST, ANTI-FOAM, PHOS, T-LUG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRUG AHEAD 7 FPH IN CLAYSTONE - NO MUD LOSS



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR MON. MORN.

**DRILLING MUD REPORT**

REPORT NO. 96  
DATE 16 JAN 1986 DEPTH 8,125  
STATE CALIF COUNTY IMPERIAL WELL S15D1P

OPERATOR <b>BECHTEL CORP./D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRLG. CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>KENNECOTT STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL CO.</b>
		STATE OR PROVINCE <b>CALIF.</b>

# 45 DRILLING ASSEMBLY			CASING		MUD VOLUME (BSL)		CIRCULATION DATA	
BIT SIZE	TYPE SEC	JET SIZE	Surface	Intermediate	Mud	Flts	Pump Size	Annular Vol. (FL/MIN.)
8 1/2	5867	OPEN	13 3/8 3515	9 5/8 6000	543	1216	#2-7X16	Opposite DP = 179
DRILL PIPE #	TYPE	LENGTH	Production or Liner		Total Circulating Volume		Pump Make	Opposite Color = 247
5-19.5	4 1/2 F	-	-		1759		NATIONAL	JET V = 196 1/4
DRILL PIPE #	TYPE	LENGTH	Mud Type		In Storage		Model	Circulating Pressure @ = 1000
5-46	4 1/2 F	-	WATER		Q		N-1300	Bottom up (Min.) = 48
DRILL COLLAR SIZE	TYPE	LENGTH					By Stroke	System Total (Min.) = 213
6 1/4 X 2 1/4	DYNA DRILL	R1H.					206	ANN. BSL = 398
							8.24	
							346	

Flowline Temperature	TEMP °F	FROM	SUCTION	FLOWLINE	BRAND/EQUIP	EQUIPMENT	TEMP °F
Time Sample Taken			0500				
Depth (ft.)			8125				
Weight (lb/gal) (b.c.u. ft.)			8.4				
Mud Gradients (ppm)			437	W			
Funnel Viscosity (sec./100 cc) API at			26	A			
Plastic Viscosity cps at				T			
Yield Point (lb/100 sq. ft.)				R			
Gel Strength (lb/100 sq. ft.) 10 sec/10 min.				E			
pH			8.6	R			

Filterate API (m/30 min.)	API MP-10T Filterate (m/30 min.)	Cake Thickness 32nd in. API (MP-10T)	Alkalinity, Mud (Ppm)	Alkalinity, Filterate (Ppm)	Salt (ppm) Gyp (ppm) Chloride (ppm)	Calcium (ppm) Gyp (ppm)	Sand Content (% by Vol.)	Solids Content (% by Vol.) UNDISSOLVED	Oil Content (% by Vol.)	Water Content (% by Vol.)	Methylene Blue Capacity (ml/ml mud equiv. #Mbl. bent.)
	500 PPM @ 300 F							< 1		2.99	
<p>REMARKS - Give operation, depth and nature of any problems encountered</p> <p><input type="checkbox"/> Drilling @</p> <p><input type="checkbox"/> Salt Water flow @</p> <p><input type="checkbox"/> Gas kick @</p> <p><input type="checkbox"/> Stuck pipe @</p> <p><input type="checkbox"/> Tight hole @</p> <p><input type="checkbox"/> Sloughing/Spill @</p> <p><input checked="" type="checkbox"/> Lost Returns @ 8,091 - SPOTTED LCM PILL - N.G. - DRILL WITH WATER</p>											

REMARKS - Give operation, depth and nature of any problems encountered

BEING SUCKED FROM FOR CLEANERS SHOULD BE GUNNED EVERY 2-4 HRS - (KICKS UP SAND SO CLEANERS CAN GET IT OUT) NORMAL OPERATION IS GUNS OFF!

② MAINTAIN PH IN SUCTION @ 10+

ENGINEER <b>JERRY BEWICK</b>	PHONE <b>1-353-3030</b>
MOBILE UNIT <b>1-355-5158</b>	PHONE <b>344-5100</b>

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bl. No. - Type	RPM	Wt.	Hours	Footage
CEL	223	163	60			41 RR SEC - 3X16S			7	56
BAR	442	442				OUT - 7.5-I				
THIRD OIL	73	0	73							
T-TRU III	52	50	2		55					
WELPAC	21	15	6		25					
T-PLUX	14	12	2							
P-TEMP SX	45	43	2							
P-TEMP L	14	14								
NaOH	60	56	4		30					
CaOH	44	44								
H2LESS	4	3	1							
HIB-A	8	8								
HIB-100	11	11								
AL STEAR	3	3								
ANTI-FOAM	16	16								
PHOS	10	10								
T-LIG	60	60								

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

LOST RETURNS @ 8091 - (WELL WANTS TO FLOW) DRLG WITH H<sub>2</sub>O

MUD --- 4546.00  
TAX --- 272.76  
PD+LAB --- 85.00  
**4903.76**



"THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT 97

REPORT FOR TUES. MORN

Table with columns: DATE (28 JAN 1986), DEPTH (2144), STATE (CALIF), COUNTY (IMPERIAL), WELL (SSDDDP), BT (SSDDDP)

Operator: BECHTEL CORP./D.O.E., Contractor: CLEVELAND DRLG CO., RIG: RIG, REPORT FOR MR.: GERALD REICH, WILLARD NICKEL, WELL NAME AND NO.: KENNECOTT STATE #2-14, FIELD OR BLOCK NO.: SALTON SEA, COUNTY: IMPERIAL CO., STATE: CALIF

BIT SIZE: 8 1/2, TYPE: SC 226, JET SIZE: 13/32, CASING: 3515, MUD VOLUME: 544 390, PUMP MAKE: NATIONAL, PUMP SIZE: #2-7X16, DRILL PIPE SIZE: 5-19.5, TYPE: 4 1/2 IF, LENGTH: 572.25, MUD TYPE: GEL+ WATER, DRILL COLLAR SIZE: 6 1/4 X 2 1/4, BHA: 455.13

Table with columns: FLOWING TEMPERATURE, SUCTION, # BRAND EQUIP, MUD PROPERTIES, VISCOSITY, FILTRATE, etc. Includes handwritten notes like 'WATER', 'THERMO', 'LIME', 'SUGGESTED TREATMENT'.

REMARKS - Give operation, depth and nature of any problems encountered. NOTE: LOST ALL RETURNS - SPOTTED LEM PILLS REF: FOR SLUGS - FILL PILL PIT TO 2 FT DOWN THEN ADD 145X PROFCO GEL SHOULD YIELD ABOUT 9.5#

ENGINEER: JERRY BEWICK, HOME: 1-353-1692, PHONE: 1-353-3030, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH, BRAWLEY, PHONE: 344-5100

Table with columns: PRODUCTS, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage. Lists items like GEL, T-LUBE, SODA ASH, CSH, PELLETS, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRLG WITH NO RETURNS - ADDING SMALL AMT OF GEL TO TRY TO KEEP CORE BBL FROM JAMMING -



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT FOR WEDS. MORN.

REPORT NO.	28
DATE	28 JAN 1986
DEPTH	816
STATE	CA
COUNTY	IMP
WELL	SSDDDP
BIT	

OPERATOR	BECHTEL CORP./D.O.E.	CONTRACTOR	CLEVELAND DRUG CO.	RIG NO.	G
ADDRESS	RIG	ADDRESS	RIG	SPUD DATE	24 OCT 85
REPORT FOR MR.	GERALD REICH	REPORT FOR MR.	JERRY GARDNER	SECTION, TOWNSHIP, RANGE	14-11S-13E
WELL NAME AND NO.	KENNECOTT STATE # 2-14	FIELD OR BLOCK NO.	SALTON SEA	COUNTY, PARISH, OR OFFSHORE AREA	IMPERIAL CO. CALIF.

# 45	DRILLING ASSEMBLY	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE	TYPE SEC	JET SIZE	Surface	Pump Size
8 1/2	M44N	OUT	13 3/8" 3515 Ft.	6x16
DRILL PIPE SIZE	TYPE	LENGTH	Intermediate	Annual Vol. (F./Min.)
5-19.5"	4 1/2 IF	-	9 5/8" 6000 Ft.	2-7x16
DRILL PIPE SIZE	TYPE	LENGTH	Production or Linear	Pump Make
5-46"	4 1/2 IF	512.25	-	NATIONAL
DRILL COLLAR SIZE	LENGTH	Mud Type	In Storage	Model
6 1/4 x 2 1/4	8 HA	GEL WATER WELPAC	2	N-1300
Sample from	Flowline	Temp °F	80	Stroke/Min.
		FROM		150
		SUCTION		206
		TRIP		41
				6PM
				8.45
				355
				ANN. VOL = 400

Flowline Temperature	Temp °F	80	MUD PROPERTIES	* BRANDT EQUIP. EQUIPMENT (2) * * KERN COOLERS
Time Sample Taken	05:30		SUCTION	
Depth (ft.)	816		TRIP	
Weight (ppg) (lb/cu. ft.)	8.7 (65)		SIZE	HRS./TOUR
Mud Gradient (psi/ft.)	452		Centrifuge	* OFF
Funnel Viscosity (sec./qt.) API at	30		Desander	* (1) OFF (2) OFF
Plastic Viscosity cps at	3		Other	EX LOG-SMITH
Yield Point (lb/100 sq. ft.)	3		DAILY COST	\$ 4,993.22
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.	2.2		CUMULATIVE COST	\$ 185,784.83
pH	10.2		WEIGHT	< 9.0
Filtrate API (ml/30 min.)	35.7		VISCOSITY	35-45
API HP-HT Filtrate (ml/30 min.)	500 psi @ 300 °F		FILTRATE	< 20 cc API
Cake Thickness 32nd in. API (HP-HT)	3 MUSHY		> 10 PH	
Alkalinity, Mud (Pm)	-		MUD CONTAINS	
Alkalinity, Filtrate (Pm)	72.1, 34		SUGGESTED TREATMENT	
Salt: ppm gpg Chloride: ppm gpg	6100		X GEL THERMO 30 SX	
Calcium ppm Gyp (ppb)	620		X GEL PROFCO GEL 5 SX	
Sand Content (% by Vol.)	TR		X WELPAC 1 SX	
Solids Content (% by Vol.)	3		X CAUSTIC 1 SX	
Oil Content (% by Vol.)	-			
Water Content (% by Vol.) Retort Calculated	97			
Methylene Blue Capacity ml/ml mud @ equiv. #/bbl. bent.	-			
ASC ALL SOLIDS	2.47			
APPROX 90 DRILL SOLIDS	< 3			

REMARKS - Give operation, depth and nature of any problems encountered

Drilling @ SET CMT PLUG - WAD - R.H.N.G. - H2 LESS 3 CHS

Salt Water flow @ SET 2nd CMT PLUG (WITH RIG BATH OR HIB-A OR HIB-100

Gas kick @ TIME @ 7:49

Stuck pipe @ 1st PLUG 35% CMT + 3% GEL + 65% RETARDER @ MAINTAIN VIS @ 38-42 @ FLOWLINE

Tight hole @ + 15 K-SALT + 10 CSH PELLETS - 2nd PLUG @ MAINTAIN PH @ 10+ @ FLOWLINE

Sloughing Shale @ 30% CMT + 10 CEDAR + 10 K-SALT + 6 GEL @ MAINTAIN PH @ 10+ @ FLOWLINE

Lost Returns @ CRPT TIME POOH & WOC.

ENGINEER JERRY BEWICK 24 HR. ANS. SERV. 1-353-1692 PHONE HOME 1-353-3030

MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAVLET PHONE 344-5100

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No. - Type	RPM	Wt.	Hours	Footage
GEL	358	295	63	DML# 3	24					
BAR	854	854		T-LUBE	26					
THERMUL	925	548	377	SODA ASH	24					
T-TROLITE	50	50		CSH	46					
WELPAC	62	55	7	PELLETS	203					
T-PLEX	12	12		K-SALT	109					
P-TEMP SX	43	43		CEDAR	176					
P-TEMP L	14	14		NUT HULLS	60					
NaOH	54	44	10	SAWDUST	170					
CaOH	43	43		MICA-C	29					
H2 LESS	2	2		CUBES	5					
HIB-A	8	8		NLO	11					
HIB-100	11	11		KCL	24					
AL-STAR	3	3		Ball	5					
ANTI-FORM	16	16		CLAMBIT	-					
P.A.S.	10	10								
T-LIG	60	60								

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

SET 2 CMT PLUGS. (MIXED WITH LCM) 2nd PLUG JUST SET @ RPT TIME - POOH,

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



"THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR THURS. MORN

REPORT NO. 99 DATE 29 JAN 1986 DEPTH 2238 STATE CA COUNTY IMPERIAL WELL SIDDIP

OPERATOR BECHTEL CORP. / D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6 ADDRESS RIG RIG SPUD DATE 24 OCT 85 REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CA.

#46 DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE VAREL JET SIZE 13,13,13 CASING 13 3/8 Surface 3515 Ft. Hole 550 465 MUD VOLUME (BBL) 1015 PUMP MAKE NATIONAL PUMP SIZE 7-6 X 16 CIRCULATION DATA Opposite DP = 197 Opposite Color = 272 JET VEL = 1200 Bottoms up (Min.) = 45 System Size (Min.) = 112 ANN VOL = 403

Flowline Temperature 132 F FROM SUCTION NO RETURNS MUD PROPERTIES BY \* BRAND EQUIP EQUIPMENT 2\*\* KERN COOLERS

Time Sample Taken 0515 Centrifuge \* OFF Desalter \* (2) OFF (2) OFF Depth (ft.) 8238 Disperser (2)\*\* (1) OFF (2) ON Shaker (2) RIG 30X & 20X Weight (ppg) (lb/cu. ft.) 8.5 Desalter EX-LOG-SMITH Mud Gradient (psi/ft.) 4.42 DAILY COST \$4249.10 CUMULATIVE COST \$190,033.93

Yield Point (lb/100 sq. ft.) 2 VISCOSITY 35-45 FILTRATE < 20cc API pH > 10.0 GEL STRENGTH (lb/100 sq. ft.) 10 sec/10 min. 8.8 MUD CONTAINS X GEL, THERMO 30 SX TOGETHER TO INCREASE VISC. X PROFO GEL 5 SX REPEAT AS NEC X WELPAC 1 SX X CAUSTIC 1 SX SUGGESTED TREATMENT

REMARKS - Give operation, depth and nature of any problems encountered. (3) FOR AIR IN MUD - ADD ALUM. SULFATE & DIESEL - IT WILL BE A PROBLEM UNTIL YOU EITHER GET VISC ABOVE 36 OR TURN OFF ALL AGITATORS & GUNN IN PITS & DRILL WITH JUST WATER. (2) IF LESS THAN 10 BBL/HR ADD 3 SX THERMO III 1 SX CAUSTIC + 1 SX LIME OVER 2 SX PRO TEMP - 50# SX 3 HRS 3 CHS HIB-100

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. ANS. SERVICE 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAVLEI PHONE 344-5100

Table with columns: MTL, START, DEL, FINISH, USED, MTL, START, DEL, FINISH, LLS, Depth, Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blk No., Type, RPM, Wt., Hours, Footage. Includes rows for GEL, BAR, THERMO GEL, T-TRAIL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, H2 LESS, HIB A, HIB-100, ALSTEAR, ANTI-FORM, PHOS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRUG CLAYSTONE + SILTSTONE @ 20 FT/HR. - LOSING MUD @ 30/40 BBL/HR (PUMPING 5AAPH) BTMS UP CO2 @ 10,000 ppm

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Proco, Inc. or any employee of Proco, Inc.





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR FRI. MORN

REPORT NO. 100, DATE 30 JAN 1986, DEPTH 8402, WELL STATE COUNTY CAL IMP S S D D P

OPERATOR BECHTEL CORP./D.O.E., CONTRACTOR CLEVELAND DRUG CO., RIG 6, ADDRESS RIG, REPORT FOR MR. GERALD REICH, JERRY GARDNER, SECTION 14-11 S BE, WELLS KENNECOTT STATE #2-14, FIELD OR BLOCK NO. SALTON SEA, COUNTY IMPERIAL CO, STATE CALIF

DRILLING ASSEMBLY CORE#24, BIT SIZE 8 1/2, TYPE 226 CHRST., JET SIZE, SURFACE 13 3/8, 3515 FT, MUD VOLUME (BBL) 562 550, PUMP MAKE NATIONAL, PUMP SIZE 1-6X16, ANNUAL VOL (FL/MIN) 179, DRILL PIPE SIZE 5-19.5, TYPE 4 1/2 IF, LENGTH, INTERMEDIATE 9 5/8, 6000 FT, TOTAL CIRCULATING VOLUME 1112, PUMP MAKE NATIONAL, PUMP SIZE N-1300, MODEL N-1300, CIRCULATING PRESSURE @ 150, STROKE/MIN. 40, CIRCULATING PRESSURE @ 206, STROKE/MIN. 40, BOTTOMS UP (MIN.) 50, DRILL COLLAR SIZE 6 1/4 X 2 1/4, BHA= 442.24, MUD TYPE GEL+ WATER, EQUIPMENT 2-K-K REBN COOLING

TEMP 136 F, MUD PROPERTIES 170 F, \*BRANDT, EQUIPMENT 2-K-K REBN COOLING

Flowline Temperature FROM SUCTION FLOWLINE, Time Sample Taken 0530, Depth (ft.) 8402, Weight (ppg) 8.7 (65T), Mud Gradient (ppm/ft) 452, Funnel Viscosity (sec/30) API at 170 F 30, Plastic Viscosity cpe at 100 F 6, Yield Point (lb/100 sq. ft.) 4, Gel Strength (lb/100 sq. ft.) 10 sec/10 min. 6.18 FRAGILE, pH 9.2, Filtrate API (m/30 min.) 120 cc = NO CONTROL, MUD CONTAINS GEL, PROFCO, WELDAC, CAUSTIC, PROTOMPL, SUGGESTED TREATMENT TOGETHER TO INCREASE VIS REPORT AS NUC

APL HP-RT Filtrate (m/30 min.) 500 ps, @ 300 F, Cake Thickness 32nd in. API HP-RT 3/8" SLIK, Alkalinity, Mud (Pm) 02.88, Salt: ppm g/gg Chloride: ppm g/gg 3000, Calcium ppm Gyp (ppb) 536, Sand Content (% by Vol.) < 1/4, Solids Content (% by Vol.) 3, Oil Content (% by Vol.) -, Water Content (% by Vol.) Reston Calculated ~ 97, Methylene Blue Capacity m/ml mud equiv. #bbl. bent. ~ 1.4, ASG ALL SOLIDS 2.5, APPROX 90 DRILL SOLIDS < 2

REMARKS—Give operation, depth and nature of any problems encountered, 3 SX THIOCENTRAL III, 1 SX CAUSTIC, 1 SX LIME, 1 SX PROTOMPL (50# SX), 2 CAS THIOCOMPLEX, OVER 3 HRS.

ENGINEER JERRY BEWICK, HOME PHONE 24 HR. ANS. SERVICE 1-353-1692, PHONE HOME 1-353-3030, MOBILE UNIT 1-355-5158, WAREHOUSE LOCATION BEACH BRAKLEY, PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units, Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blt No., Type, RPM, Wt., Hours, Footage. Includes items like GEL, BAR, T-TRON III, WELDAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, H-LESS, HIB A, HIB-100, AL-STEP, ANTI-FOAM, PAPS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: CORE CLAYSTONE, ANHYDRITE STRINGERS & SILTSTONE - CORE RATE @ 3 FT/HR & LOSING MUD @ 25/30 BPH



PLEASE INSTALL 4 1/2 XH TOP  
OF SAVER SUB. THANKS

DRILLING MUD  
REPORT

REPORT NO. 101  
DATE 31 JAN 1986 DEPTH 8565  
STATE CALIF COUNTY IMPERIAL WELL SAT. WORK

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6

ADDRESS ADDRESS SPUD DATE  
RIG RIG 24 OCT 85

REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S-13E

WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

# 47 DRILLING ASSEMBLY CASING MUD VOLUME (BBL) CIRCULATION DATA

BIT SIZE 8 1/2 TYPE V-627 JET SIZE 13, 13, 13 SURFACE 3515 FT. MUD VOLUME (BBL) 575 870 PUMP SIZE #1-6X16 #2-7X16

DRILL PIPE SIZE 5-19.5 TYPE 4 1/2 IF LENGTH 95 6000 FT. INTERMEDIATE 6000 FT. TOTAL CIRCULATING VOLUME 1445 PUMP MAKE NATIONAL

DRILL PIPE SIZE 5-46 TYPE 4 1/2 IF LENGTH 57225 FT. PRODUCTION OF LINER - - - IN STORAGE 150 206 47 2682 407

DRILL COLLAR SIZE 6 1/4 X 2 1/4 BHA= 447.39 MUD TYPE WATER

TEMP F 134 F MUD PROPERTIES 157 F \* BRANDT EQUIP EQUIPMENT 2 \*\* KERN COOLERS

Flowline Temperature	FROM	SUCTION	FLOWLINE	SIZE ON BIT HRS./TOUR	SIZE 180 X HRS./TOUR
Time Sample Taken		0515		Centrifuge * NOT WORKING	Desiccant (2) ON (2) ON
Depth (ft.)		8585		Shank (2) RIG 30K # 20X	
Weight (ppg) (lb/cu. ft.)		8.6		Deaerator RIG 8x4" φ	Other EX-LOG-SMITH
Mud Gradient (psi/ft.)		.447		DAILY COST \$3,788.84	CUMULATIVE COST \$198,645.95
Funnel Viscosity (sec/30) API at		26		WEIGHT < 9.0	VISCOSITY 35-45
Plastic Viscosity cps at		-		FILTRATE API < 20 cc	PH @ 10+
Yield Point (lb/100 sq. ft.)		-		MUD CONTAINS SUGGESTED TREATMENT	
Gel Strength (lb/100 sq. ft.) 10 sec/10 min.		9.0		X GEL THERMO 30 SX	TO INCREASE VIS
pH Strip		9.0		X KBA PROFCO GEL 5 SX	REDUCE MUD AS
Filtrate API (m/30 min.)		NO CONTROL		X WELDAC 1 SX	READ.
API HP-HT Filtrate (m/30 min.)		NO CONTROL		X CAUSTIC 1 SX	
Cake Thickness 32nd in. API HP-HT					
Alkalinity, Mud (Ppm)		03,42			
Alkalinity, Filtrate (Ppm)					
Salt: ppm Chloride: ppm		120			
Calcium ppm Gyp (ppb)		160			
Sand Content (% by Vol.)		TR			
Solids Content (% by Vol.) UNDISSOLVED		< 1			
Oil Content (% by Vol.)		-			
Water Content (% by Vol.) Retort Calculated		99+			
Methylene Blue Capacity ml/ml mud equiv. #tbl. bent.		-			

REMARKS—Give operation, depth and nature of any problems encountered  
 @ RPT TIME RIT WITH CORE  
 @ SALT WATER FLOW @ BBL-  
 @ GEL KICK @  
 @ SUCK PIPE @ NOTE IF HOLE IS TITE - ADD 4 CANS OF THERM LUBE  
 @ TIGHT HOLE @ RAPIDLY @ SUCTION THAN LCM THERM LUBE OR DMI #3 EVERY 2 HRS TIL TORQUE REDUCES!  
 @ SLOUGHING SHALE @  
 @ LOST RETURNS @

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. ANS. SERV. 1-353-1692 PHONE HOME 1-353-3030  
 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	SN No.—Type	RPM	Wt.	Hours	Footage
GEL PREP	382	327	24	24						
BAR	824	854	26	24						
THERMO GEL	66	265	24	24						
T-TROL III	48	45	16	12	4					
WELD PAC	42	39	171	151	20					
T-PLEX	12	12	110	82	28					
P-TEMP SX	41	40	146	146						
P-TEMPL	14	14	60	60						
NaOH	69	63	168	141	27					
CaOH	42	42	29	29						
H2 LESS	-	-	5	5						
HIB-A	20	20	11	11						
HIB-100	10	10	124	124						
AL-SHAR	3	3	5	5						
ANTI-FORM	8	8								
TSP-DEFAM	24	24								
PHOS	10	10								
T-LIG	60	60								

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
 DRUG @ 35/40 FPH - LOSING 20 BPH  
 @ 8563 STARTED LOSING 280 BPH  
 IN SANDSTONE -

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.

TRUCKING 198.00



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 102

REPORT FOR SUN, MORN.

Table with columns: DATE (FEB 19 86), DEPTH (8660), STATE (CA), COUNTY (IMP), WELL (SIS), SPT (SD), D/P (DP)

Operator: BECHTEL CORP. / D.O.E.
Address: RIG
Report for MR: GERALD REICH
WELL NAME AND NO: KENNECOTT STATE #2-14
CONTRACTOR: CLEVELAND DRLG. CO.
Address: RIG
Report for MR: JERRY GARDNER
FIELD OR BLOCK NO: SALTON SEA
COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO.
STATE OR PROVINCE: CALIF.

Table with columns: BIT SIZE (8 1/2), TYPE (HTC), JET SIZE (12, 13, 14), CASING (Surface, Intermediate, Production or Liner), MUD VOLUME (580, 1080, 1660), CIRCULATION DATA (Pump Size, Model, etc.)

Table with columns: TEMPERATURE (76), MUD PROPERTIES (Flowing, etc.), \* BRANDT EQUIP., EQUIPMENT (KERN COOLERS), SIZE (190X), DAILY COST (\$2,749.20), CUMULATIVE COST (\$201,395.15)

REMARKS - Give operation, depth and nature of any problems encountered.
LOST CIRC - SET LCM PILL
IF LOSS GETS BELOW 10 BBL/HR - ADD MIX ABOVE TO INCREASE VIS TO 36-40
FOR THE HOLE ADD 4 CANS THERM LUBE RAPIDLY - THEN 1 CAN DML #3 OR THERM LUBE EVERY 2 HRS.

ENGINEER: JERRY BENICK
MOBILE UNIT: 1-355-5158
HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692
WAREHOUSE LOCATION: BEACH BRAWLEY
PHONE: 344-5100

Table with columns: PRODUCTS, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blt No., Type, RPM, Wt., Hours, Footage. Includes items like DML #3, T-LUBE, SODA ASH, CSH, PELLETS, K-SHALL, CEDAR, DIRT BALLS, SANDUST, MICA-C, CUBES, H2O, KCL, BALL.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE
LOST CIRC - 100% - SET PILL (LCM) ON BTM W/O PILL

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

**DRILLING MUD REPORT**

REPORT FOR MON. MORN.

REPORT NO. 103  
 DATE 2 FEB 1986 DEPTH 8796  
 STATE CALIF COUNTY IMPERIAL WELL SSSDDP

OPERATOR BECHTEL CORP./D.O.E. ADDRESS RIG REPORT FOR MR. GERALD REICH WELL NAME AND NO. KENNECOTT STATE #2-14 #48  
 CONTRACTOR CLEVELAND DRLG CO. ADDRESS RIG REPORT FOR MR. JERRY GARDNER  
 RIG NO. 6 SPUD DATE 24 OCT. 85 SECTION, TOWNSHIP, RANGE 14-11S-13E STATE OR PROVINCE CALIF.

DRILLING ASSEMBLY		CASING		MUD VOLUME (BBL)		CIRCULATION DATA	
BIT SIZE 8 1/2	TYPE HTC	JET SIZE 12, 13, 14	Surface 13 3/8	Surface 3515	590	1010	Pump Suck 1-6x16
DRILL PIPE SIZE 5-19.5	TYPE 4 1/2 IF	LENGTH -	Intermediate 9 5/8	6000	Total Circulating Volume 1600		Pump Make NATIONAL
DRILL PIPE SIZE 5-46	TYPE 4 1/2 IF	LENGTH 572.25	Production or Liner -	-	In Storage -		Model N-1300
DRILL COLLAR SIZE 6 1/4 x 2 1/4	BHA=	LENGTH 447.39	Mud Type WATER	-	-		Bit Size 150
Temp of 59	MUD PROPERTIES		* BRANDT EQUIP EQUIPMENT 2 * * KERN COOLERS		-		Strokes 206

Filtrate Temperature		MUD PROPERTIES		* BRANDT EQUIP EQUIPMENT 2 * * KERN COOLERS	
Time Sample Taken	FROM SUCTION	NO RETURNS		SIZE HRS./TOUR	
Depth (ft.)	8796			Centrifuge # OFF	Deslate (2) * (1) OFF (2) OFF
Weight (lb/gal. @ 100 sq. ft.)	8.4 (63)			Dispersant * (1) OFF (2) OFF	Skatol (2) RIG 30x4x20x
Mud Gradient (ppm)	437			Dispersant RIG 8x4" #	Other EX-LOG-SMITH
Funnel Viscosity (sec./100 cc) API at 60 F	26			DAILY COST \$7,026.30	CUMULATIVE COST \$208,421.45
Plastic Viscosity cps at 60 F				WEIGHT < 9.0	VISCOSITY 35-45 SEC
Yield Point (lb/100 sq. ft.)				FILTRATE API < 20cc	PH @ 10+
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.				MUD CONTAINS	
pH @ Strip Meter	11.3			X GEL THERMO 30 SX	TOGETHER TO INCREASE VIS REPEAT AS REQD
Filtrate API (m/30 min.)	NO CONTROL			X PROF GEL 5 SX	
API MP-10 Filtrate (m/30 min.)	NO CONTROL			X WILD PAC 1 SX	
Cells Thickness 32nd in. API MP-10	NIL			X CAUSTIC 1 SX	
Alkalinity, Mud (Pm)				X LCM 1 SX	EVERY 20 MIN WHILE DRILLING - NOT WHILE CORING - USE MICA PELLETS, SAWDUST, NUTSHELLS
Alkalinity, Filtrate (P/M)				X THERMO GEL 1 SX	EVERY 10 MIN (H&LP CLEAN HOLE)
Salt: ppm Gyp Chloride 210				X CAUSTIC 1 SX	AS REQD TO MAINTAIN PH IN SUCTION @ 10+
Calcium ppm 52				X LIME 1 SX	
Sand Content (% by Vol.) 0					
Solids Content (% by Vol.) UNDISSOLVED 8					
Oil Content (% by Vol.) -					
Water Content (% by Vol.) 100					
Methylene Blue Capacity ml/ml mud					

REMARKS - Give operation, depth and nature of any problems encountered

Drilling @ SHT LCM PLUG - N/G -  
 Salt Water flow @ SHT CMT + LCM PLUG (50 SX CMT)  
 Gas kick @ LST RETURNS - DRIG  
 Stuck pipe @ WITH NO RETURNS!  
 Tight hole @  
 Sloughing Shale @  
 Lost Returns @

① IF LOSS GETS BELOW 10 BBL/HR ADD MIX ABOVE & INCREASE VIS TO 36-40 - OMIT CAUSTIC IF PH IS 10+

② FOR TITE HOLE USE THERM LUBE - 4 CANS RAPIDLY AS SLOG THEN LCM THERM LUBE OR DML#3 EVERY 2 HRS.

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. ANS. SERV. - 1-353-1692 PHONE 1-353-3030  
 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRANLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	START		DEL		FINISH		USED		Mtl #	Mtl	DEL	FINISH	USED	#	Fl.
	Units	Delivered	Units	on Location	Units	Used	Unit Cost	Total Cost							
DR. PROFCO	297	242	55												
BA	854	854													
THERMO GEL	778	524	254												
T-TROL III	45	44	1												
WELPAC	33	26	7												
T-PLEX	12	12													
P-TMP SX	40	40													
P-TMP L	14	14													
NaOH	59	52	7												
CaOH	42	42													
H2LESS	-	-													
HB-A	20	20													
HB-100	10	10													
AL-STAR	3	3													
ANTI-FOAM	8	8													
TBP-DEFORM	24	24													
PHOS	10	10													
T-LIG	60	60													

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
 NO RETURNS - AFTER 2 LCM PILLS - DRIG AHEAD @ 25 FT/HR



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT 104

REPORT FOR TUES, MORN

3 FEB 1986 DEPTH 8903

STATE CALIF COUNTY IMPERIAL WELL S/D/D/P

OPERATOR BECHTEL CORP./P.O.E. CONTRACTOR CLEVELAND DRLG CO. RIG NO 6

ADDRESS RIG RIG REPORT FOR MR GERALD REICH JERRY GARDNER SPUD DATE 24 OCT 85 SECTION, TOWNSHIP, RANGE 14-11S-13E

WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

# 49 DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE VAREL JET SIZE 15,15,15 CASING 13 3/8 Surface 3515 MUD VOLUME (BBL) 597 590 PUMP SIZE #1-6 X16 Annular Vol. (Fl./Min.) \*2-7 X16 Opposite DP = 179

DRILL PIPE SIZE 5-19.5 TYPE 4 1/2 IF LENGTH 95 Intermediate 6000 Total Circulating Volume 1,187 PUMP MAKE NATIONAL Opposite Collar = 247

DRILL PIPE SIZE 5-46 TYPE 4 1/2 IF LENGTH 572.25 Production or Liner - - - - - Model N-1300 JET VEL = LOW

DRILL COLLAR SIZE 6 1/4 X 2 1/4 BHA = 447,39 T-GEL + BRINE Mud Type - - - - - Model N-1300 Circulating Pressure Psi = 1000 Bottoms up (Min.) = 53

Sample from Flowline or Pit TEMP OF 96 MUD PROPERTIES 106 F \* BRANDT EQUIP EQUIPMENT (2) \*\* KERN COOLERS

Flowline Temperature FROM SUCTION 39% RETURNS SIZE HRS./TOUR SIZE 180 X HRS./TOUR

Time Sample Taken 0530 Centrifuge \* NO FLUID ON: Depth (ft.) 8903 Separator \* (1) ON (2) OFF: Weight (ppg) 8.7 Desander RIG 8 X 4" Other EX-10 SMITH

Mud Gradient (pcf.) 452 DAILY COST \$ 2,813.20 CUMULATIVE COST \$ 211,234.65

Funnel Viscosity (sec/10) API at 90 F 29 VISCOSITY 35-45 SEC FILTRATE API < 20 cc PH @ 10+

Plastic Viscosity cpe at 85 F 2 YIELD POINT (lb/100 sq. ft.) 3

Yield Point (lb/100 sq. ft.) 3 GEL STRENGTH (lb/100 sq. ft.) 10 sec/10 min. 9.4

pH Strip Meter 9.4 SUGGESTED TREATMENT

Filtrate API (m/30 min.) NO CONTROL (~200cc) X GEL, THERMO 30 SX TOGETHER TO INCREASE VIS

API HP-HT Filtrate (m/30 min.) NO CONTROL X PROFCO GEL 5 SX REPEAT AS NEC.

Cake Thickness 32nd in. API HP-HT 3/8 30FT, SLK. X WELPAC 1 SX

Alkalinity, Mud (Ppm) 16.68 X CAUSTIC 1 SX SUGGESTED SX TOURLY TREATMENT

Alkalinity, Filtrate (Ppm) 12.600 X THERMO GEL 1 SX EVERY 10 MIN UNIL VIS @ 96+

Salt: ppm Chloride X ppm Gyp (ppt) TiH 38 SAND 2 1/2 LCM X PROFCO GEL 1 SX EVERY 30 MIN

Sand Content (% by Vol.) 3+ X WELPAC 1 SX EVERY 30 MIN

Solids Content (% by Vol.) UNDISSOLVED 3+ X CAUSTIC 1 SX EVERY 30 MIN

Oil Content (% by Vol.) 97 X THERM LUBE 1 CAN EVERY 60 MIN

Water Content (% by Vol.) - - - - -

Methylene Blue Capacity (ml/ml mud) - - - - -

ASG ALL SOLIDS APPROX 90 DRILL SOLIDS

REMARKS - Give operation, depth and nature of any problems encountered

1 CORROSION RING - PULLED 2 MAINTAIN PH @ 10+ AT FLOWLINE - IF RETURNS - @ SUCTION IF NO RETURNS

3 DAYLITE - ADD 1 Q SX SODA ASH 4 TURN OF CENTRIFUGE SOWL IF UNABLE TO SUPPLY MUD TO UNIT!

ENGINEER JERRY BEWICK HOME ADDRESS 24 HRANS. SERV. 1-353-1692 PHONE 1-353-3030

MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage. Includes items like DML #3, T-LUBE, SODA ASH, CSH, PILLATS, K-SERIAL, CEDAR, NUT HULLS, SAWDUST, MICA-C, CUBES, NIO, KEO, BULL, SEALSEAL.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRG AHEAD @ 30 FT/HR IN CLAYSTONE + SILTSTONE - LOSS DOWN TO 100 BBL/HR. - 39% RETURNS - DRG ANHYDRITE -

TRK - 198.00 + 198.00 + 198.00 = 594 = MTL TO BE ADDED TO MURROWS RPT



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR WEDS, MORN

DRILLING MUD REPORT

REPORT NO. 105, DATE 4 FEB 1986, DEPTH 9027, STATE CALIF, COUNTY IMPERIAL, WELL S1S1D1D1P1

OPERATOR: BECHTEL CORP./P.O.E., CONTRACTOR: CLEVELAND DRG CO., RIG NO: 6, ADDRESS: RIG, SPUD DATE: 24 OCT 85, REPORT FOR MR: GERALD REICH, REPORT FOR MR: JERRY GARDNER, SECTION: TOWNSHIP, RANGE: 14-11S-13E, WELLS NAME AND NO: KENNECOTT STATE #2-14, FIELD OR BLOCK NO: SALTON SEA, COUNTY, PARISH, OR OFF-SHORE AREA: IMPERIAL CO., STATE OR PROVINCE: CALIF

DRILLING ASSEMBLY: TYPE SC-226, JET SIZE: 13 3/8, SURFACE: 3515, MUD VOLUME (BSL): 606, 212, PUMP MAKE: NATIONAL, PUMP SIZE: #2-7X16, CIRCULATION DATA: Opposite OP = 184, Opposite COL = 254, JLT VB = -

MUD TYPE: WATER, TEMP OF (90) MUD PROPERTIES (102°F) \* BRANDT EQUIP EQUIPMENT (2) \* KERN COOLERS

Table with columns: Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (lb/gal), Mud Gradient (psi/ft.), Funnel Viscosity (sec/cp), Plastic Viscosity (cp), Yield Point (lb/100 sq. ft.), Gel Strength (lb/100 sq. ft.), pH, Filtrate API (ml/30 min), API HP-MT Filtrate (ml/30 min), Cake Thickness (32nd in. API), Alkalinity (Mud (Ppm), Filtrate (Ppm)), Salt, Calcium, Sand Content, Solids Content, Water Content, Methylene Blue Capacity.

REMARKS: Give operation, depth and nature of any problems encountered. IF VIS INCREASES TO 36T MAINTAIN VIS ONLY & AMITT TREATMENT-

Drilling @ RPT TIME TRAP FOR COPE #25? NOTE: FOR LCM PILL @ MAINTAIN PH IN PIT - EVEN IF THERE ARE NO RETURNS @ 10T USING EQUAL AMTS OF CAUSTIC & LIME! (- 1SX/100 BOLLS) LIME OR CAUSTIC

ENGINEER: JERRY BEWICK, PHONE: 1-353-3030, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BIRCH, BRAWLEY, PHONE: 344-5100

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, SN No., Type, RPM, WL, Hours, Footage. Includes items like GEL PROFCO BAR, THERMOGEL, TROLIT, WELPAC, T-PLEX, P-TEMP SX, T-TEMP L, NaOH, CaOH, H2LESS, HIB-A, HIB-100, AL-STURK, ANTI-FORM, TBP, PAOS, T-LIG.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR THURS. MORN.

DRILLING MUD REPORT

REPORT NO. 106 DATE 5 FEB 1986 DEPTH 9071 STATE CALIF COUNTY IMPERIAL WELL 9071

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6

ADDRESS RIG 24 OCT 85

REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S-#3E

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

# 50 DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPES WITH F-4 JET SIZE 16, 16, 16 CASING Surface 13 3/8 3515 Ft. Hole 609 535 MUD VOLUME (BBL) 1144 CIRCULATION DATA Pump Size #2-7x16 Annular Vel. (Ft./Min.) Opposite DP = 179

Mud Type THERMOGEL + WATER \* BRAHOT EQUIP EQUIPMENT (2) \* KERN COOLERS

Flowline Temperature FROM SUCTION FLOWLINE SIZE HRS/TOUR SIZE 180X HRS/TOUR

Depth (ft.) 9071 Degasser \*\* (1) OFF (2) OFF SHAVER (2) RIG 30X # 20X

Mud Gradient (psi/R.) .452 50 N G DAILY COST \$1,828.06 CUMULATIVE COST \$218,294.65

Yield Point (lb/100 sq. ft.) 6 GEL THERMO 30 SX VIS TOGETHER TO INCREASE

pH 10.0 FLU MUD CONTAINS SUGGESTED TREATMENT

API MP-10T Filtrate (ml/30 min.) 500 PSI @ 300 F NO CONTROL @ 3/4

Cake Thickness 32nd in. API MP-10T 3/8 SLK, SOFT 3/4

Alkalinity, Mud (pH) .07, 35

Salt ppm 3,800 SUGGESTED TREATMENT

Calcium ppm 532

Sand Content (% by Vol.) 1/2 + 1/8 LCM 1 SX EVERY 20 MIN - MICA

Solids Content (% by Vol.) UNDISSOLVED 3 NUT SHELLS, SANDUST PELLETS -

Oil Content (% by Vol.) - ALTERNATE WHAT EVERY 20 MIN.

Water Content (% by Vol.) 97

Methylene Blue Capacity (ml/ml mud @ 200 psi) 12

ASG ALL SOLIDS 2.47 X THERMOGEL 1 SX EVERY 10 MIN

APPROX 90 DRILLSOLIDS < 3 X PROFCO GEL 1 SX EVERY 30 MIN

REMARKS - Give operation, depth and nature of any problems encountered X CAUSTIC 1 SX EVERY 30 MIN

Drilling @ SET 50 BBL CMT + LCM PLUG ON X THERM LUBE 1 CAN EVERY 60 MIN

Salt Water flow @ BIT - TRIP FOR PLUGGED NET - STOP TREATMENT WHEN VIS IS AT 30T

Gas kick @ WELL TRIED TO FLOW - (9027)

Stuck pipe @ @ RPT TIME LOSING (1) MAINTAIN PH IN SUCTION PIT @ 10+

Tight hole @ 50 BBL/HR EVEN IF THERE ARE NO RETURNS

Sloughing Shale @

Lost Returns @

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. A.S. SERVICE 1-353-1692 PHONE HOME 1-353-3030

MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRANLEY PHONE 344-5100

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., RPM, Wt., Hours, Footage. Includes items like OIL, PROFCO, BAR, THERMOGEL, T-TRILLI, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, HIB-A, HIB-100, ALSTEAR, ANTI-FRAM, TBP DEFRAM, PHOS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRUG CLAYSTONE @ 25-30 FT/HR, LOSING MUD @ 50 BBL/HR,

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR FRI. MORN

Table with columns: DATE (6 FEB 1986), DEPTH (9098), STATE (CA), COUNTY (IMPERIAL), WELL (SSDDP), BIT (D)

Table with columns: OPERATOR (BECHTEL CORP/ D.O.E.), CONTRACTOR (CLEVELAND DRUG CO.), RIG NO (6), ADDRESS (RIG), SPUD DATE (24 OCT 85), REPORT FOR MR. (GERALD REICH, WILLARD NICKEL), SECTION, TOWNSHIP, RANGE (14-11S-13E), WELL NAME AND NO. (KENNECOTT STATE #2-14), FIELD OR BLOCK NO. (SALTON SEA), COUNTY, PARISH, OR OFFSHORE AREA (IMPERIAL CO.), STATE OR PROVINCE (CALIF.)

Table with columns: #50RR DRILLING ASSEMBLY (BIT SIZE 8 1/2, TYPE F4 SMITH, JET SIZE 16, 16, 16), CASING (13 3/8 Surface 3515, 9 5/8 Intermediate 6000), MUD VOLUME (611, 445, 1056), CIRCULATION DATA (Pump Size 6x16, #2-7x16, NATIONAL, Model N-1300, Stroke/Min 150, 40, 206, 40, 8.24, 346)

Table with columns: TEMPERATURE (Flowline, Suction, Flowline), MUD PROPERTIES (117°F), \* BRANDT EQUIP, \*\* KERL COOLERS, DAILY COST (\$10,606.76), CUMULATIVE COST (\$228,901.41)

Table with columns: Filtrate API (123.0 cc), API HP-HT Filtrate (500 psi @ 300°F), Cake Thickness (1/4 SLIK, MID FIRM), Alkalinity (0.355), Salt (2500), Calcium (268), Solids Content (3 UNDISSOLVED), Oil Content (CONTAINS), Water Content (97), Methylene Blue Capacity (10 OF LCM), ASG ALL SOLIDS (2.47), APPROX 300 DRILL SOLIDS (<3)

REMARKS - Give operation, depth and nature of any problems encountered. CORED 9095-9098 @ 2 1/2 FPH. HARD SANDSTONE & CLAYSTONE. LOSING 70 BPH. CO. INSTRUCTIONS TO MAINTAIN RETURNS. FOR TEST THERM VIS. CAUSTIC. THERM LUBE CAN EVERY 60 MIN. MAINTAIN VIS @ 36+ STOP ABOVE TREATMENT IF VIS IS 36+. MAINTAIN PH @ 10+ IN PILTS USING EQUAL PARTS CAUSTIC LIME. FOR PILLS ADD THERM VIS (6SX)

Table with columns: ENGINEER (JERRY BEWICK), HOME ADDRESS (24 HOURS SERV. 1-353-1622), PHONE (1-353-3030), MOBILE UNIT (1-355-5158), WAREHOUSE LOCATION (BEACH, BRAWLEY), PHONE (344-5100)

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW. INVENTORY CORRECTION + = CREDIT COST ADJUST - = DEBIT = +6,157 =

Table with columns: Products, Units Used, Unit Cost, Total Cost, Btl No., Type, RPM, Wt., Hours, Footage. Includes items like GEL, PROFCO, BAR, THERMOGEL, T-TRD LUB, WELPAC, T-PLEX, P-TEMPSX, P-TEMP L, NaOH, CaOH, HIB-A, HIB-VO, AL-STAR, ANTI-FOAM, TBP-DEFORM, PHOS, T-LIG

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. WHEN DRILLING - LOSING 70 BPH MUD & DRUG @ 20 FT/HR. NO CO2 NO CH4

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc. NOTE: USED MTL INDICATED ARE QTY'S USED FROM 8AM THRU MIDNITE! (16 HR) MIDNITE TO 8AM MARKED @ TRUCKING 198 = MTL USED MVT





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR SAT. MORN.

DRILLING MUD REPORT

REPORT NO. 108  
DATE 8 FEB 1986 DEPTH 9127  
STATE COUNTY WELL ST  
CA IMP SIS SDDP

OPERATOR BECHTEL CORP. / D.O.E. CONTRACTOR CLEVELAND DRUG CO RIG NO 6  
ADDRESS RIG ADDRESS RIG SPUD DATE 24 OCT 86  
REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S-13E  
WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFF-SHORE AREA IMPERIAL CO, STATE OR PROVINCE CALIF

WORK DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE F4 JET SIZE 16.16.16 CASING 13 3/8 SURFACE 3515 MUD VOLUME (BBL) 613 850 CIRCULATION DATA Pump Size #2-7x16 Annular Vel. (F./Min.) Opposite DP = 157  
DRILL PIPE # 5-19.5 TYPE 4 1/2 IF LENGTH - 9 5/8 INTERMEDIATE 6000 Total Circulating Volume 1463 Pump Make NATIONAL Opposite Collar = 216  
DRILL PIPE # 5-46 TYPE 4 1/2 IF LENGTH 57225 - - Production or Liner In Storage Model N-1300 JETVEL = 164  
DRILL COLLAR SIZE 6 1/4 x 2 1/4 BHA = 447.29 MUD TYPE DIRTY WATER Bbl/Stroke 1.50 Stroke/Min. 35 Circulating Pressure @ = 1100  
Bottoms up (Min.) = 62  
System Total (Min.) = 203  
ANN VOL = 450

TEMP OF 55 MUD PROPERTIES 70 BRANDT EQUIP EQUIPMENT (2) KERN COOLING  
Flowline Temperature FROM SUCTION FLOWLINE SIZE HRS./TOUR SIZE 180X HRS./TOUR  
Time Sample Taken 0530 Centrifuge \* OFF (1) OFF (2) OFF Desalt (2) \* (1) OFF (2) OFF  
Depth (ft.) 9127 Degasser \*\* (1) OFF (2) OFF Shake (2) RIG 30X #20X  
Weight (ppg) (lb./cu. ft.) 8.4 R Desander RIG 8x4 1/2 Other EX-LOG SMITH  
Mud Gradient (ppm) 437 DAILY COST CUMULATIVE COST  
Funnel Viscosity (sec./qt.) API at 55 F 26+ \$ 5,215.60 \$ 234,117.01  
Plastic Viscosity cps at F VISCOSITY 35-45 FILTRATE API < 20 cc  
Yield Point (lb./100 sq. ft.) C H PH < 10.0  
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. C H SUGGESTED TREATMENT  
pH Strip Meter 10.2 E

Filtrate API (m/30 min.) (350) NO CONTROL A X GEL THERMO 6 SX COMBINATION TO  
API HP-HT Filtrate (m/30 min.) 500 psi @ 300 F NO CONTROL G N X PROFCO GEL 1 SX INCREASE VIS  
Cake Thickness 32nd in. API HP-HT 1/8" 4 T X THERM VIS 1 SX REPEAT AS NEC.  
Alkalinity, Mud (Pm) CAUSTIC A/R SX AS NEC FOR PROCO  
Alkalinity, Filtrate (Pm/H) 04.23 C H  
Salt: ppm Chloride: ppm Gyp (ppb) T, H 380 C H  
Calcium (ppm) 72 C H  
Sand Content (% by Vol.) NIL P T X L.C.M. 1 SX EVERY 20 MIN WHILE  
Solids Content (% by Vol.) UNDISSOLVED NIL L G X LOSING 10 BBL/HR+ - MICA, NIT  
Oil Content (% by Vol.) - L G X HULLS, PELLETS, CEDAR - ALTERNATE  
Water Content (% by Vol.) 100 Rati X Calculated  
Methylene Blue Capacity (m/ml mud) (ppm) #/bbl. bent. NIL X THERMO GEL 1 SX EVERY 10 MIN  
X PROFCO GEL 1 SX " 30 MIN  
X THERM VIS 1 SX " 30 MIN  
X CAUSTIC 1 SX " 60 MIN  
X THERM LUBE 1 CAN " 60 MIN

REMARKS - Give operation, depth and nature of any problems encountered  
Drilling @ PILL-LCM -  
Salt Water flow @ 1/2 PIT H2O  
Gas kick @ 6 SX PROFCO GEL (1) IF LOSS REDUCES TO BELOW 10 BBL/HR #1 OR  
Stuck pipe @ 6 SX THERM VIS VIS IN PITS @ 3GT REDUCE TREATMENT  
Tight hole @ 10 SX MICA (2) MAINTAIN PH IN PITS @ 10+  
Sloughing Shale @ 10 SX PELLETS USING EQUAL SACKS CAUSTIC & LIME!  
Lost Returns @ 10 SX NUT SHELLS

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. ANS. SERV. 1-353-1692 PHONE 1-353-3030  
MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BENCH BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

MTL	START	DEL	FINISH	USED	MTL	START	DEL	FINISH	USED	Cost - Time Summary / 24 Hours Ending @ Depth	Fl.
DEL PROFCO	203	56	190	69	DML#3	24	24				
BAR	848	-	848	-	T-LUBE	21	21				
THERMO GEL	538	260	1173	325	SODA ASH	20	20				
TATOL III	45	-	45	-	CSH	49	31	16			
WELPAC	-	-	-	-	PELLETS	405	195	10			
T-PLEX	12	12			K-SEAL	195	170	25			
P-TEMP SX	36	36			CEDAR	38	36				
P-TEMP L	12	12			NUT HULLS	38	38				
NaOH	31	28	3		SANDUST	55	30	25			
CaOH	36	36			MICA-C	29	29				
HB-A	20	20			CUBES	5	5				
HB-100	10	10			NIO	11	11				
AL STARR	-	-	-	-	KCC	130	130				
ANTI-FOAM	3	3			BaCl	5	5				
TBP-DEFAM	24	24			SEAL EASE	-	-				
PHOS	10	10			THERM VIS	-	120	90	30	54.40	
T-LIG	60	60									

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
LOST RETURNS - SET LCM  
PLUG N.G - SET CMT PLUG -  
CLEANING OUT CMT PLUG,  
@ RPT TIME.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.

TRUCKING, 198.00



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR SUN. MORN.

DRILLING MUD

REPORT "STUCK" REPORT NO. 109

98 FEB 18 86 DEPTH 9248

Table with columns: STATE, COUNTY, WELL, BIT. Values: CA, IMP, S, S, D, D, P.

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO. 6

ADDRESS RIG ADDRESS RIG SPUD DATE 24 Oct 86

REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE 14-11S-13E

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size, drill pipe size, length, mud type (THERMOGEL+WATER), and circulation data.

TEMP OF 125 MUD PROPERTIES 152 \* BRANDT EQUIP EQUIPMENT (2) \*\* KERN COOLING

Table with columns: FLOWLINE TEMPERATURE, TIME SAMPLE TAKEN, DEPTH (ft.), WEIGHT (lb/cu. ft.), MUD GRADIENT (psf/ft.), FUNNEL VISCOSITY (sec/100 API), PLASTIC VISCOSITY (cps at 100 RPM), YIELD POINT (lb/100 sq. ft.), GEL STRENGTH (lb/100 sq. ft.), pH, FILTER API (m/30 min.), API HP-HT FILTER (m/30 min.), CAKE THICKNESS (32nd in. API HP-HT), ALKALINITY (Mud Ppm), ALKALINITY (Filter PPM), SALT (ppm), CALCIUM (Kppm), SAND CONTENT (% by Vol.), SOLIDS CONTENT (% by Vol.), OIL CONTENT (% by Vol.), WATER CONTENT (% by Vol.), METHYLENE BLUE CAPACITY (m/100 ml mud @ 200 psi, #hbl. dem.), ASG ALL SOLIDS, APPROX DRILL SOLIDS.

Table with columns: WEIGHT, VISCOSITY, FILTRATE, MUD CONTAINS, SUGGESTED TREATMENT. Includes suggested treatments like X GEL THERMO, X WELPAC, X CAUSTIC, X LIME, X WELPAC.

REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VISO FLOWLINE @ 36+ 2) MAINTAIN PH @ FLOWLINE @ 10+ 3) IF LOSING OVER 10 BBL PER HOUR ADD 1SX OF LCM EVERY 20 MIN - ALTERNATE SACKS - (THERM VISTAWUST) (PELLETS) (COTTON SWED HILLS) (K-SH)

ENGINEER JERRY BEWICK HOME ADDRESS 24 HRANS. SERV. 1-353-1692 PHONE HOME 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAWLEY PHONE 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units, MTL, START, DEL, FINISH, USED, MTL, FINISH, USED. Includes products like GEL DRAPD, BAR, THERMOGEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, HIB-A, HIB-100, AL-STEAR, ANTI-FRAM, TBRDEFAM, PHOS, FLIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE 1) STUCK RAN IN HOLE WITH CORE BBL - STUCK BEFORE MAKING ANY HOLE - LOSING 50 BBL/HR MUD.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.

2 LOADS MTL - (2X198) = 396 = TKG.



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR MON. MORN.

Table with fields: DATE (10 FEB 1986), DEPTH (9340), STATE (CA), COUNTY (IMP), WELL (SS), BIT (DDP)

Operator: BECHTEL CORP./D.O.E., Contractor: CLEVELAND DRUG CO., Rig No: 6, Address: RIG, Report for Mr: GERALD REICH, WILLARD NICKEL, Well Name: KENNECOTT STATE #2-14, Field: SALTON SEA, County: IMPERIAL, State: CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size (8 1/2), pump size (#1-6x16), and mud properties (126°F).

Table with columns: FLOWLINE TEMPERATURE, SUCTION, FLOWLINE. Includes depth (9340), weight (8.7), and viscosity (31, 160).

Table with columns: MUD CONTAINS, SUGGESTED TREATMENT. Lists additives like WELPAC, CAUSTIC, and THERMO GEL.

REMARKS: GIVE OPERATION, DEPTH AND NATURE OF ANY PROBLEMS ENCOUNTERED. DURING TRIP FOR BITS, WELL TRIED TO FLOW - (APPROX 400 BBL).

ENGINEER: JERRY BEWICK, HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692, PHONE: 1-353-3030

Table with columns: MTL, START, DEL, FINISH, USED, #. Lists products like OEL, PROFOG, BAR, THERMO GEL, T-TRILITE, WELPAC, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRUG AHEAD @ 17 FPH - LOSING MUD @ 40 BBL/HR - HOLE "STICKY"

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TRKG 198 = DIESEL 500 GAL @ 1.20/GAL + (6x55) = 330 = VAC. TRUCK.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR TUES. MORN.

Table with columns: DATE (11 FEB 1986), DEPTH (9453), STATE (CALIF), COUNTY (IMPERIAL), WELL (SISIDP)

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRUG CO. RIG: RAY FERGUSON REPORT FOR MR. GERALD REICH WILLARD NICKEL

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size 8 1/2, jet size 13 3/8, casing 3 1/2, mud volume 638, circulation data including pump size and flow rate.

Table with columns: TEMPERATURE, MUD PROPERTIES, EQUIPMENT. Includes flowline temperature 120, mud properties 160, equipment like centrifuge and desander.

Table with columns: FILTRATE, MUD CONTAINING, SUGGESTED TREATMENT. Includes filtrate API, mud containing gel and solids, and suggested treatments like LCM and sealers.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes on corrosion rings, gas lock, and lost returns.

ENGINEER: JERRY BEWICK. HOME ADDRESS: 24 HR ANS. SERVICE 1-353-1692. PHONE: 1-353-3030

Table with columns: PRODUCTS, UNITS DELIVERED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST. Lists various products like GEL, THERMO GEL, WELPAC, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. LOST JUNK IN HOLE R.I.H. WITH BIT & JUNK SUB - NO CIRC. - SPOTTED LCM PILL POOH FAR CORE BBL.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 112

REPORT FOR WEDS. MORN

12 FEB 1986 DEPTH 9453

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRILG. CO. Rig No: 6. Address: RIG. Report for Mr: RAY FERGUSON - WILLARD NICKEL. Well Name and No: KENNECOTT STATE #2-14. Field or Block No: SALTON SEA. County, Parish, or Off-shore Area: IMPERIAL CO., CALIF.

#52 DRILLING ASSEMBLY BIT SIZE: 8 1/2 VAREL. Casing: 13 3/8 Surface 3515 Ft. Mud Volume (BBL): 638 562. Circulation Data: Pump Size #1 - 6x16. Annual Vol (FLM in): #2-7x16. Opposite DP = 173.

Temp of Flowline: 104. Mud Properties: 128. \* BRAND EQUIP EQUIPMENT (2) \* KERN COOLING

Table with columns for Time Sample Taken, Depth (ft.), Weight (lb/cu. ft.), Mud Gradient (ppm/ft.), Furnal Viscosity (sec/qt) API st, Plastic Viscosity cps at 100 F, Yield Point (lb/100 sq. ft.), Gel Strength (lb/100 sq. ft.) 10 sec/10 min, pH @ Strip, Filtrate API (m/30 min.), API HP-HT Filtrate (m/30 min.) @ 500 psi @ 300 F, Case Thickness 32nd in. API HP-HT, Alkalinity Mud (Ppm), Alkalinity Filtrate (Ppm), Salt (ppm) Ca, Mg, Chloride, Sulfate, Calcium (ppm), Sand Content (% by Vol.), Solids Content (% by Vol.) UNDISSOLVED, Oil Content (% by Vol.), Water Content (% by Vol.), Methylene Blue Capacity (ml/ml mud @ 200 psi, 40 ml. bent).

REMARKS - Give operation, depth and nature of any problems encountered. HAVING LOST ALL RETURNS - SET CMT / LCM PLUG OR BENE WOC. @ RPT TIME CIRC. 53 ppm @ 500 psi. WITH "40" RETURNS = ~100% DAYLITE TOUR - ADD 125x SODA ASH OVER 3 HRS + 6 SX WELPAC + 6 SX THERMOGEL.

ENGINEER: JERRY BEWICK. PHONE: 353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH TRKG. PHONE: 344-5100.

Table with columns: Products, Units Delivered, Units on Location, MTL, STAB, DEL, FINISH, USED, MTL, STAB, DEL, FINISH, USED. Products include DML, BAR, THERMOGEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, HB-A, HB 100, AL SEPARATE, ANTI-FIHM, TBP-DEFAMER, PHOSPHATE, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: SET LCM+CMT PLUG - W.O.C. - R.I.H. TO CLEAN CMT @ RPT TIME

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.

TRKG 198 =



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT NO. 113

REPORT FOR THURS. MORN

DATE	13 FEB 1986	DEPTH	9458
API WELL NO.	CIA 1MP	WELL	SISDIP
STATE	CA	COUNTY	SIERRA
RIG NO.	6	SPUD DATE	24 OCT 85
CONTRACTOR	CLEVELAND DRUG CO.	REPORT FOR MR.	JERRY GARDNER
OPERATOR	BECHTEL CORP. / D.O.E.	WELL NAME AND NO.	KENNECOTT STATE #2-14
ADDRESS		FIELD OR BLOCK NO.	SALTON SEA
RIG	RIG	COUNTY, PARISH, OR OFFSHORE AREA	IMPERIAL CO., CALIF.
REPORT FOR MR.	JERRY GARDNER	STATE OR PROVINCE	CALIF.

OPERATOR	BECHTEL CORP. / D.O.E.	CONTRACTOR	CLEVELAND DRUG CO.	RIG NO.	6
ADDRESS		ADDRESS		SPUD DATE	24 OCT 85
RIG	RIG	REPORT FOR MR.	JERRY GARDNER	SECTION, TOWNSHIP, RANGE	14-11S-13E
WELL NAME AND NO.	KENNECOTT STATE #2-14	FIELD OR BLOCK NO.	SALTON SEA	COUNTY, PARISH, OR OFFSHORE AREA	IMPERIAL CO., CALIF.

# DRILLING ASSEMBLY			CASING		MUD VOLUME (BBL)		CIRCULATION DATA	
BIT SIZE	TYPE	JET SIZE	Surface	Loss	Plus	Pump Size #1	n. Annual Vol. (FL/Min.)	
CORE 8 1/2	CHEST	TFA .45	13 3/8" 3515 ft	636	480	#2-7x16	Opposite DP = 157	
DRILL PIPE SIZE	TYPE	LENGTH	Intermediate	Total Circulating Volume		Pump Make	Opposite Collar = 216	
5-195	4 1/2 IF	-	9 5/8" 6000 ft	1116		NATIONAL	JETVEL =	
DRILL PIPE SIZE	TYPE	LENGTH	Production or Liner	In Storage		Moor	Circulating Pressure Pa	
5-46	4 1/2 IF	812.66	-	2		N-1300	Bottoms up (Min.) = 65	
DRILL COLLAR SIZE	TYPE	LENGTH	Mud Type	Mud Type		Blow/Stroke	System Total (Min.) = 153	
6 1/4 X 2 1/4	BHA =	447.29	THERMOGEL WATER	THERMOGEL WATER		7.21 303	ANN VOL = 468	

TEMP 120° FROM SUCTION FLOWLINE 150° \* BRANDT EQUIP EQUIPMENT \* \* KERN COOLERS

Flowline Temperature	TEMP	120°	MUD PROPERTIES	150°	* BRANDT EQUIP EQUIPMENT	* * KERN COOLERS			
Time Sample Taken	0500	Depth (ft.)	9458	Weight	< 9.0	Viscosity	35-45	Filterate	API < 20cc
Weight (log of lb./cu. ft.)	8.5	Mud Gradient (psi/ft.)	4.42	pH	9.4	MUD CONTAINS	SUGGESTED TREATMENT:		
Mud Gradient (psi/ft.)	4.42	Funnel Viscosity (sec./qt.) API at 100° F	32	API HP-HT Filtrate (ml/30 min.)	500psi @ 300° F	X GEL THERMO	15 SX	TOGETHER TO INCREASE VIS	
Funnel Viscosity (sec./qt.) API at 100° F	32	Plastic Viscosity cps at 6" F	6	Calcium Chloride (ppm)	9000	X WELPAC	1 SX	REPEAT AS NEC.	
Plastic Viscosity cps at 6" F	6	Yield Point (lb./100 sq. ft.)	4	Calcium Sulfate (ppm)	1200	X CAUSTIC	1 SX	SUGGESTED TREATMENT	
Yield Point (lb./100 sq. ft.)	4	Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	4.8	Sand Content (No by Vol.)	1/4	X SEAL LEASE	1 SX	EVERY HOUR	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	4.8	pH	9.4	Solids Content (No by Vol.)	2	X KWIK SEAL	1 SX	EVERY HOUR	
pH	9.4	Filtrate API (ml/30 min.)	1330cc	Oil Content (No by Vol.)	TR	X PELLETS	1 SX	EVERY HOUR	
Filtrate API (ml/30 min.)	1330cc	API HP-HT Filtrate (ml/30 min.)	500psi @ 300° F	Water Content (No by Vol.)	98	X THERMOGEL	1 SX	EVERY 10 MIN	
API HP-HT Filtrate (ml/30 min.)	500psi @ 300° F	Calcium Chloride (ppm)	9000	Methylene Blue Capacity (ml/ml mud)	10	X PROFCO GEL	1 SX	EVERY HOUR	
Calcium Chloride (ppm)	9000	Calcium Sulfate (ppm)	1200	ASG ALL SOLIDS	-	X WELPAC	1 SX	EVERY 2 HOURS	
Calcium Sulfate (ppm)	1200	Sand Content (No by Vol.)	1/4	APPROX DRILL SOLIDS	-	X CAUSTIC	1 SX	EVERY 2 HOURS	
Sand Content (No by Vol.)	1/4	Solids Content (No by Vol.)	2	REMARKS - Give operation, depth and nature of any problems encountered					
Solids Content (No by Vol.)	2	Oil Content (No by Vol.)	TR	DO NOT ADD IF COREING					
Oil Content (No by Vol.)	TR	Water Content (No by Vol.)	98	ADD WHILE DRILLING					
Water Content (No by Vol.)	98	Methylene Blue Capacity (ml/ml mud)	10	WHEN VIS @ 38-40 AT FLOWLINE					
Methylene Blue Capacity (ml/ml mud)	10	ASG ALL SOLIDS	-	ADD 6 SX SODA ASH					
ASG ALL SOLIDS	-	APPROX DRILL SOLIDS	-	3 SX THERMOGEL III					

REMARKS - Give operation, depth and nature of any problems encountered

- Drilling @ LCM PILL
- Seal Water flow @
- Gas loss @
- Stuck pipe @
- Tight hole @
- Sloughing shale @
- Lost returns @

ENGINEER JERRY BENICK  
MOBILE UNIT 1-355-5158  
WAREHOUSE LOCATION BRACH, BRAWLEY  
PHONE 1-353-1692  
PHONE 1-353-3030  
PHONE 344-5100

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BR No. - Type	RPM	Wt.	Hours	Footage
GEL PROFCO	299	266	33							
BAR	793	793	-							
THERMOGEL	1569	1394	175							
T-TRD III	36	30	6							
WELPAC	32	27	7							
F-PLEX	57	57	-							
P-TENDSX	33	33	-							
P-TEND L	15	15	-							
NaOH	49	38	11							
CaOH	34	31	3							
HIB-A	18	18	-							
HIB-100	34	34	-							
AL STAPARE	3	3	-							
ANTI-FORM	23	23	-							
TBP-DETRON	24	24	-							
PHOSPHATE	10	10	-							
T-LIG	60	60	-							

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
CORE DRUG @ 1 FT/HR - LOSING 30-50 BBL/HR MUD TO HOLE  
TRYING TO MAINTAIN CIRCULATION & KEEP TORQUE & DRAG TO MIN. NO MUD PROPERTIES MAY BE MAINTAINED WITHOUT VERY HIGH COST! - CURRENT FLUID SEEMS TO DO THE JOB



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT FOR FRI. MORN.

REPORT NO. 114 DATE 14 FEB 1986 DEPTH 9473 STATE COUNTY WELL BIT

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. ADDRESS RIG RIG REPORT FOR MR. RAY FERGUSON

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY PARISH OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA, TEMPERATURE, FLOWLINE, MUD PROPERTIES, BRANOT EQUIPMENT, etc.

REMARKS - Give operation, depth and nature of any problems encountered. WHILE CORING - LOST RETURNS - 100% ADD ANTI-FOAM AL SEPARATE + DIESEL

ENGINEER JERRY BEWICK HOME ADDRESS 2419 ANK SERV - 1-353-1692 PHONE 1-353-3030

Table with columns: PRODUCTS, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, Wt., Hours, Footage

This report and any oral statements made in connection with it are statements of opinion only. THE AMT TO BE ADJUSTED TO ACTUAL COST AT BILLING DATE - IT WILL BE 198.00



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 115

REPORT FOR SAT. MORN

Table with columns: DATE (15 FEB 1986), DEPTH, STATE (CA), COUNTY (IMP), WELL (SIS), BIT (D)

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRG CO. Address: RIG. Report for MR. RAY FERGLSON. Well Name and No. KENNECOTT STATE #2-14. Field or Block No. SALTON SEA. County, Parish, or Off-shore Area: IMPERIAL CO., CALIF.

Table with columns: BIT SIZE (8 1/2), TYPE (SEC), JET SIZE (OUT), CASING (13 3/8 Surface, 3515 ft), MUD VOLUME (637, 680), CIRCULATION DATA (Pump Size, Annular Vol., Opposite DP, etc.)

Table with columns: FLOWLINE PROPERTIES (TEMP, RESERVE, SUCTION, FLOWLINE), MUD CONTAINS (GEL, BAR, etc.), SUGGESTED TREATMENT (BUILD VOLUME, DISPLACE WATER, etc.)

REMARKS - Give operation, depth and nature of any problems encountered. WEL STARTED TO FLOW WHILE CHKG PIPE - RHT. CLEAN OUT RUN WITH WATER PRIOR TO LOG (SPINNER?).

ENGINEER: JERRY BEWICK. PHONE: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH BRAWLEY. PHONE: 344-5100.

Inventory table with columns: PRODUCTS, UNITS DELIVERED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST, BIT NO., TYPE, RPM, WT., HOURS, FOOTAGE. Includes items like GEL, BAR, THERMOGEL, WELPAC, T-TRAL III, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: WEL STARTED TO FLOW - RHT TO BTM & WASH PRIOR TO LOGS - MUD

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TO BE RECHECKED





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR SUN. MORN

REPORT NO. 116, 16 FEB 1986, DEPTH 9473, STATE CALIF, COUNTY IMPERIAL, WELL S15D10P

OPERATOR: BECHTEL CORP./D.O.E., TOM TURNER; CONTRACTOR: CLEVELAND DRLG CO.; RIG: RAY FERGUSON; REPORT FOR MR: JERRY GARDNER; WELL NAME AND NO: KENNECOTT STATE #2-14; FIELD OR BLOCK NO: SALTON SEA; OFFSHORE AREA: IMPERIAL; STATE OR PROVINCE: CALIF

#53 DRILLING ASSEMBLY: BIT SIZE 8 1/2, TYPE SEC 86-F, JET SIZE OUT, CASING 13 3/8 Surface 3515, MUD VOLUME (BBL) 637 580, CIRCULATION DATA: Pump Size #1-6x16, #2-7x16, Annular Vol. (FLMin.) Opposite DP = 179, Opposite Coker = 247, Model N-1300, Jet VR = -

Table with columns: FLOWLINE, SUCTION, FLOWLINE, EQUIPMENT, SUGGESTED TREATMENT. Includes data for Temperature, Mud Properties, and Suggested Treatment (e.g., BUILD VOLUME, ADD SODA ASH, ADD MIX).

REMARKS: Give operation, depth and nature of any problems encountered. WEL TRIED TO PUMP WHILE RUNNING LOGS - LOGS TOOL PLUGGED WITH LCM. BHT ~ 516°F. VIS @ 40-45 WT 8.8-9.0 PH @ 10+

ENGINEER: JERRY BEWICK; HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692; PHONE: 1-353-3030; MOBILE UNIT: 1-355-5158; WAREHOUSE LOCATION: BEACH

Table with columns: MTL, START, DEL, FINISH, USED, PRODUCTS, UNITS OBTAINED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST, BR NO., TYPE, RPH, WT, HOURS, FOOTAGE. Lists various products like GEL, BAR, THERMO GEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, CaOH, HIB-A, HIB-100, AL-STEAR, ANTI-FOAM, TBP-DEFORM, PHOSPHATE, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: INSPECT D.P. & RUN LOGS



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR MON. MARN.

REPORT NO. 117 DATE 17 FEB 1986 DEPTH 9473

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRLG CO. RIG NO. 6

REPORT FOR MR. RAY FERGUSON REPORT FOR MR. JERRY GARDNER SECTION 14-11S 13E STATE OR PROVINCE CALIF.

Table with columns for Flowline Temperature, Suction, Flowline, and MUD PROPERTIES. Includes data for viscosity, gel strength, and solids content.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes on mud properties and equipment.

ENGINEER JERRY BEWICK HOME ADDRESS 24 HO. ANS. SERV. 1-353-1692 PHONE HOME 1-353-3030

Table with columns for Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, and Hours. Lists various drilling mud components and their usage.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE SET 2 CNT PLUGS 9200 & 7400 STAGE IN W/O COLLARS - TRY TO GAIN CIRC. -

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 118

REPORT FOR TUES. MORN

DATE 18 FEB 1986 DEPTH 9473 STATE CALIF COUNTY IMPERIAL WELL C5S5D0P

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRIG CO. RIG NO. 6 ADDRESS RIG SPUD DATE 24 OCT. 85 REPORT FOR MR. GERALD REICH RAY FERGUSON JERRY GARDNER SECTION TOWNSHIP, RANGE 14-11S-13E WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

#53RR DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE SEC S-86-F JET SIZE OUT CASING SURFACE 13 3/8 3515 Ft. MUD VOLUME (BBL) 637 340 CIRCULATION DATA Pump Size 1-6x16 Annular Vel. (Ft./Min.) #2-7x16 Opposite DP = 157 DRILL PIPE # 5-19.5 TYPE 4 1/2 F LENGTH 9 5/8 6000 Ft. Total Circulating Volume 977 Pump Make NATIONAL Opposite Collar = 216 DRILL PIPE # 5-46 TYPE 4 1/2 F LENGTH 812.60 Production or Liner In Storage 2 PIPES Model N-1300 JETVEL = DRILL COLLAR SIZE 6 1/4 x 2 1/4 BHA = 135.91 Mud Type THERMOGEL + BRINE - Bit/Min 7.21 303 ANN VOL = 468

TEMP F 90 MUD PROPERTIES \* BRANDT EQUIP EQUIPMENT (2) \*\* ICBN COOLING FROM PITCHK FLOWLINE SIZE NRS/TOUR SIZE 180X NRS/TOUR Time Sample Taken 0500 Centrifuge \* OFF Deaer (2) \* (1) OFF (2) OFF Depth (ft.) 9473 Not Gas (2) \*\* (1) OFF (2) OFF Shake (2) RIG 30X & 20X Weight (ppg) (lb./cu. ft.) 8.7 Mud Gradient (ppg/ft.) 452 Demand RIG 8x4' Other EX LOG-SITH DAILY COST #4,338.14 CUMULATIVE COST #275,996.70

Yield Point (lb./100 sq. ft.) 6 GEL STRENGTH (lb./100 sq. ft.) 10 sec./10 min. 6 pH 8.7 Filtrate API (ml/30 min.) NO CONTROL -179cc API HP-HT Filtrate (ml/30 min.) 509psi @ 300 F NO CONTROL Cake Thickness 32nd in. API 5-HP-HT 18/32 Alkalinity, Mud (PH) 24.16 Alkalinity, Filtrate (PH) 12.64 Salt: ppm Chlorides 32,800 Calcium ppm 5480 Sand Content (% by Vol.) 3 + 2% l/cm Solids Content (% by Vol.) UNDISSOLVED 12 Oil Content (% by Vol.) 4 Water Content (% by Vol.) 88 Methylene Blue Capacity - ml/ml mud @ 1000 #/bbl bent. ASG ALL SOLIDS APPROX 90 DRILL SOLIDS

REMARKS - Give operation, depth and nature of any problems encountered. STAGED IN AFTER ALLOWING CMT PLUG TO SET - WELL FLOWED @ 7100 - KILLED WELL (TOOK 300GAL) FORMATION FLUID - REAM 2360 - T.D. (1) MAINTAIN VIS @ 36-42 SEC, USE TBP DEFOAMER OR ANTI-FORM TO REDUCE AIR (2) MAINTAIN PH @ 10+ WITH CAUSTIC

ENGINEER JERRY BEWICK HOME ADDRESS 24HR ANS. SERV. 1-353-1692 PHONE HOME 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRANLEY PHONE 344-5100

Table with columns: MTL, START, DEL, FINISH, USED, MTL, START, DEL, FINISH, USED, Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No. - Type, RPM, Wt., Hours, Footage. Includes rows for GEL, BAR, THERMOGEL, T-TRAL II, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HB-A, HB-100, AL-STEER, ANTI-FORM, TBP-DEFORM, PHOS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE WELL EITHER FLOWING OR TAKING FLUID.

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 1109

REPORT FOR TUES. MORN.

DATE 19 FEB 1986 DEPTH 9473

Operator: BECHTEL CORP./D.B.E. Contractor: CLEVELAND DRG CO. Rig No: 6. Address: RIG. SPUD DATE: 24 OCT 85. Report for Mr: GERALD REICH / RAY FERGUSON. Report for Mr: JERRY GARDNER. Section: TOWNSHIP RANGE 14-11S-13E. Well Name and No: KENNECOTT STATE #2-14. Field or Block No: SALTON SEA. County, Parish, or Offshore Area: IMPERIAL CO. State or Province: CALIF.

Core ID: 8 1/2. Bit Size: 5 1/4. Drill Pipe Size: 5 1/4. Drill Collar Size: 6 1/4 x 2 1/4. Jet Size: .50. Casing: 13 3/8. Mud Volume: 637.570. Circulation Data: Pump Size: 1-6 x 16. Pump Make: NATIONAL. Model: N-1300. Stroke/Min: 150. Flow/Min: 206. GPM: 40. ANN VOL: 468.

Table with columns: FLOWLINE, SUCTION, FLOWLINE, MUD PROPERTIES, \* BRAND EQUIP, EQUIPMENT, \*\* KERN COOLERS. Rows include: Filtrate Temperature, Time Sample Taken, Depth (ft.), Weight (ppg), Mud Gradient (ppm/L), Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API MP-10T Filtrate, Cake Thickness, Alkalinity, Solids Content, Water Content, Methylene Blue Capacity, ASG ALL SOLIDS, APPROX 30 DRILL SOLIDS.

REMARKS - Give operation, depth and nature of any problems encountered. Drilling @ DAYLITE TOUR - OR NEXT AMAN. Salt Water flow @ EVEN IF NOT CIRCULATING - ADD. Gas kick @ 125x SODA ASH TO PITS. Stack pipe @. Tight hole @. Sloughing Shale @. Lost Returns @.

ENGINEER: JERRY BEWICK. PHONE: 1-353-1692. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH, BRAWLEY. PHONE: 1-353-3030, 344-5100.

Table with columns: MTL, START, DEL, FINISH, WBS, MTL, START, DEL, FINISH, WBS. Rows list products like OIL, BAR, THERMOGEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HIB-A, HIB-100, AL-STEAR, ANTI-FORM, TBP-DEFORM, PHOS, T-LIG with units delivered, used, and cost.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: NO RETURNS DURING STAGE OUT WITH CORE HO# 8. TRIED TO CIRC @ 8495, 7560, 6619 - POOH LAY DU TOOLS & RIG FOR LOGS - TOOL STOPPED @ 6124 (SHOW 6000')



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 120

REPORT FOR T. J. MARN

20 FEB 1986 DEPTH 2473

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRUG CO. RIG NO: 6. Address: RIG. Spud Date: 24 OCT 85. Report for MR: GERALD REICH. Report for MR: WILLARD NICKEL. Well Name and No: KENNECOTT STATE #2-14. Field or Block No: SALTON SEA. County Parish or Offshore Area: IMPERIAL CO. State or Province: CALIF.

Table with columns: DRILLING ASSEMBLY (BIT SIZE, TYPE SEC, JET SIZE), CASING (Surface, Intermediate, Production or Liner), MUD VOLUME (BBL, Total Circulating Volume, In Storage), CIRCULATION DATA (Pump Size, Annular Vel, Opposite Dip, Opposite Color, JET VEL, Model, Stroke/Min, Bottoms up, System Total, ANN. VOL).

Table with columns: TEMPOF (FROM, SUCTION, FLOWLINE), MUD PROPERTIES (Flowline Temperature, Time Sample Taken, Depth, Weight, Mud Gradient, Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Salt, Calcium, Sand Content, Solids Content, Oil Content, Water Content, Methylene Blue Capacity), \* BRANDT EQUIP (SIZE, HRS/TOUR, Densit, Shear, Desander, DAILY COST, WEIGHT, VISCOSITY, FILTRATE, MUD CONTAINS, SUGGESTED TREATMENT).

REMARKS--Give operation, depth and nature of any problems encountered. 1st 2nd 3rd 4th. 1) MAINTAIN VISC @ 36-42. 2) MAINTAIN PH @ 10+. 3) IF MUD THICKENS WHILE DRUG CEMENT USE THERMOPLEX (50SX) AND PRO TEMP (50SX) TO REDUCE VIS!

ENGINEER: JERRY BEWICK. HOME ADDRESS: 24 HR. ANS. SERV. 1-355-1692. PHONE: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BECHT, BRAWLEY. PHONE: 344-5100.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, SN No., Type, RPM, Wt., Hours, Footage. Includes rows for OIL, BAR, THERMOPLEX, T-TROL III, WELPAC, P-FLEX, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HIB-A, HIB-100, ALSTER, ANTI-FORM, TBP-DEFEND, PHOS, T-LUG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: CMT'S OFF LOSS ZONES

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR: FRI. MORN.

REPORT NO. 121 DATE 21 FEB 1986 DEPTH 9473

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRG. CO. RIG NO. 6 ADDRESS: RIG SPUD DATE: 24 OCT 85 REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION, TOWNSHIP, RANGE: 14-11S-13E WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. DALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO, STATE OR PROVINCE: CALIF.

DRILLING ASSEMBLY: BIT SIZE 8 1/2 TYPE SEC S-86-F JET SIZE - CASING 13 3/8 SURFACE 3515 MUD VOLUME (BBL) 637 690 CIRCULATION DATA: Pump Size #1-8x16 #2-7x16 Opposite DP = 157 Opposite Collar = 216 NET VEL = - Pump Make NATIONAL Model N-1300 Circulating Pressure ps = 300 Bottoms up (Min.) = 65 System Flow (Min.) = 184 ANN. VOL = 468

Table with columns for Temperature, Mud Properties, and Mud Contains. Includes data for Temperature (122°F), Mud Properties (Gel Strength 8.12, Viscosity 35-45), and Mud Contains (Gel Thermo, K-Welpac, K-Caustic).

REMARKS - Give operation, depth and nature of any problems encountered. (1) MAINTAIN VIS @ 32-38 WHILE DRG CEMENT-WATER TO BE ADDED IF ADDITIONAL VOLUME REQUIRED. (2) RUN ALL SOLIDS CONTROL EQUIP. - WHEN BACK TO DRG NEW HOLE - TOURLY TREATMENT ABOVE SHOULD BE ADDED!

ENGINEER: JERRY BEWICK MOBILE UNIT: 1-355-5158 HOME ADDRESS: 24 HR TRANS. SERV. 1-353-1692 WAREHOUSE LOCATION: BEACH, BRAWLEY PHONE: 1-353-3030 344-5100

Product Usage Summary Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, etc. Includes items like GEL, BAR, THERMOGEL, T-TRAL III, K-PELAC, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: R.I.H to 6292 circ + cmt pull to 5500 (in case) wcc. - R.I.H w/ DRG ASSY TAG CMT @ 6170 PRES - REFORM 6170-6485 - HO RETURNS. - R.I.H to 6500 CMT. - PULL to 5900 CIRC. FULL RETURNS - POOH @ RPT TIME FOR DRG ASSY.

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 122

REPORT FOR SAT. MORN.

Table with columns: DATE (22 FEB 1986), DEPTH, STATE (CA), COUNTY (IMPERIAL), WELL (SISD), BIT (DPI)

Operator: BECHTEL CORP./D.O.E., Address: RIG, Report for MR: GERALD REICH, Well Name: KENNECOTT STATE# 2-14, Field: SALTON SEA, County: IMPERIAL CO., State: CALIF.

Drilling Assembly: 8 1/2" VAREL OUT, Casing: 13 3/8" 3515', Mud Volume: 637 640, Circulation Data: Pump Size 1-6X16, 2-7X16, Annular Vel. 224, Opposite OP = 309, Opposite Collar = 309, JET VEL = -

Mud Properties: TEMPF 140, MUD PROPERTIES 160, \*BRANDT ESQUIP EQUIPMENT (2) \*KERN COOLERS

Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (ppg), Mud Gradient (psi/ft.), Funnel Viscosity (sec./qt.) API at 124, Plastic Viscosity cps at 120, Yield Point (lb/100 sq. ft.) 6, Gel Strength (lb/100 sq. ft.) 4.6

Filtrate API (ml/30 min.) BLEND DRY, API HP-MT Filtrate (ml/30 min.) 500 psi @ 300, Cake Thickness (32nd in. API) BLEND DRY, Alkalinity (Mud Ppm) 16.0, Alkalinity (Filtrate PPM) 50.142, Solids Content (% by Vol.) UNDISSOLVED < 3, Water Content (% by Vol.) 9.7

REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VISC @ 32-38 SEC/QT, 2) MAINTAIN PH @ 10+, 3) RUN ALL SOLIDS CONTROL EQUIP, 4) ADD 1 SK SEAL BASE EVERY 20 MIN IF MUD LOSS OCCURS @ 10 BBL/HR OR ABOVE

ENGINEER: JERRY BEWICK, ADDRESS: 24 HR ANS. SERV. 1-353-1692, PHONE: 1-353-3030, MOBILE UNIT: 1-353-5158, WAREHOUSE LOCATION: BEACH, BRAWLEY, PHONE: 344-5100

Table with columns: PRODUCTS, UNITS DELIVERED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST, BIT NO., RPM, WL, HOURS, FOOTAGE. Includes items like GEL, PROFCO, BAR, THERMOGEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HB-A, HB-100, AL-SEAL, ANTI-FRAM, TBP-DEFAMER, PHAS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRILL OUT CMT PLUGS @ 1/2 1332 6525-6711, 7245-7339-7401-7490 & 7857-8021-8303 RI# (STAB) AT RPT TIME



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR SUN. MORN

DRILLING MUD REPORT

REPORT NO. 123

DATE 23 FEB 1966 DEPTH 2484

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRLG CO. RIG: 6. ADDRESS: RIG. REPORT FOR MR. GERALD REICH. REPORT FOR MR. WILLARD NICKEL. WELL NAME AND NO: KENNECOTT STATE #2-14. FIELD OR BLOCK NO: SALTON SEA. COUNTY, PARISH OR OFFSHORE AREA: IMPERIAL CO., CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and MUD TYPE (PRO-TEMP/THERM TROL III THERMOGEL+WATER).

TEMP OF 125 MUD PROPERTIES 155 # BRANDOT EQUIP EQUIPMENT (2) \*\* KERN COOLERS

Flowline Temperature table with columns: FROM, SUCTION, FLOWLINE, SIZE, HRS./TOUR. Includes rows for Time Sample Taken, Depth (ft.), Weight (Kpp), Mud Gradient (psi/ft.), Funnel Viscosity, Plastic Viscosity, Yield Point, Gel Strength, pH @ 100, Filtrate API, API HPMT Filtrate, Cake Thickness, Alkalinity, Solids, Oil, Water, and Methylene Blue Capacity.

MUD CONTAINS table with columns: MUD CONTAINS, SUGGESTED TREATMENT. Includes rows for GEL THERMO, K BARR PROFCO GEL, K WELPAC, K CAUSTIC, K THERMPLEX, K THERM TROL III, K (RED PAINT), K PRO TEMP, K (BLUE PAINT), K WELPAC, K PROFCO GEL, and K THERM LUBE.

REMARKS—Give operation, depth and nature of any problems encountered. 1) STUCK WITH CORE BBL - STOTTLED N10+DIESEL 2,920 GAL. 2) MAINTAIN VISC @ 36-42 SEC/QT. 3) MAINTAIN PH @ 10+ USING CAUSTIC OR CAUSTIC POTASH. 4) IF LOSING MORE THAN 10 BBL/HR - ADD 1 SX SEALER + 1 SX THERM VIS EVERY 30 MIN.

ENGINEER: JERRY BEWICK. PHONE: 1-353-3030. MOBILE UNIT: 1-355-25158. WAREHOUSE LOCATION: BEACH - BRAWLEY. PHONE: 344-5100.

Table with columns: PRODUCTS, UNITS DELIVERED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST. Includes rows for GEL, PROFCO BAR, THERMOGEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HB-A, HB-100, AL-STAR, ANTI-FORM, TBP-DEFORM, PHOS, T-LUB.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: 'STUCK' @ 9424 - SPOTTED DIESEL T-N10 - LOGGE & COREING -

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR MON. MOEN

DRILLING MUD REPORT

REPORT NO. 124  
 DATE 24 FEB 1986 DEPTH 9517  
 STATE COUNTY WELL BIT  
 CA IMP S S S D D P

OPERATOR: BECHTEL CORP/D.O.E. CONTRACTOR: CLEVELAND DRILLING  
 ADDRESS: RIG SPUD DATE: 24 OCT 85  
 REPORT FOR MR. GERALD REICH REPORT FOR MR. WILLARD NICKEL SECTION: TOWNSHIP: RANGE: 14-11S-13E  
 WELL NAME AND NO: KENNECOTT STATE #2-14 FIELD OR BLOCK NO: SALTON SEA COUNTY PARISH OR OFFSHORE AREA: IMPERIAL CO STATE OR PROVINCE: CALIF

DRILLING ASSEMBLY			CASING		MUD VOLUME (BBL)		CIRCULATION DATA	
BIT SIZE: 8 1/2	TYPE: VAREL	JET SIZE: OUT	13 3/8	3515	640	433	Pump Size: 6x16	Annular vol (Fl./Min.):
DRILL PIPE SIZE: 5-19.5	TYPE: 4 1/2 IF	LENGTH: -	9 5/8	6000	1073		Pump Make: NATIONAL	Opposite DP = 188
DRILL PIPE SIZE: 5-46	TYPE: 4 1/2 IF	LENGTH: 812.66	-	-	Q		Model: N-1300	Opposite Color = 260
DRILL COLLAR SIZE: 6 1/4 x 2 1/4	BHA	LENGTH: 135.87	Mud Type: THERMOGEL + WATER		Q		Stroke/Min: 42	JUST VFL = -
Samples from: Flowline			TEMP OF: 134	MUD PROPERTIES: 167	*BRANDT EQUIP.		EQUIPMENT: **KERN COOLERS	

Flowline Temperature	FROM	SUCTION	FLOWLINE	SIZE	HRS./TOUR	SIZE	HRS./TOUR
Time Sample Taken	0530			Centrifuge	OFF	Desanta	ON (2) OFF
Depth (ft.)	9517			Densimeter	2**K(1) ON (2) ON	Shake	2 RIG 30K & 20X
Weight (K/100 cc)	8.7			Disassembler	RIG 8x4"	Other	EX LOG SMITH
Mud Gradient (psi/ft.)	452			DAILY COST	\$ 6,279.00	CUMULATIVE COST	\$ 309,222.46
Funnel Viscosity (sec/30") API at	100	34	TR	WEIGHT	< 9.0	VISCOSITY	35-45
Plastic Viscosity (cp) at	6			FLTLATE	API < 20 cc		PH @ 10+
Yield Point (lb/100 sq. ft.)	6			MUD CONTAINS:		SUGGESTED TREATMENT:	
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.	4 1/2	FRAGILE	F	X GEL	THERMO	30 SX	7 ADD TOGETHER TO
pH	10.0			X PROFCO GR.	5 SX		INCREASE VIS -
Filtrate API (ml/30 min.)	155 cc			X WELPAC	1 SX		REPEAT AS NEC.
API HP-HT Filtrate (ml/30 min.) 500 psi @ 300 F	NO CONTROL			X CAUSTIC	1 SX		
Cake Thickness 32nd in. API HP-HT	16/32			(OR CAUSTIC POTASH)	1 SX		
Alkalinity, Mud (pH)	3.4						
Alkalinity, Filtrate (pH)	10.6						
Salt (ppm) Chloride	6000						
Calcium (ppm) Gyp (ppb) T.H.	920						
Sand Content (% by Vol.)	1/4						
Solids Content (% by Vol.) UNDISSOLVED	3 1/2						
Oil Content (% by Vol.)	2						
Water Content (% by Vol.)	96 1/2						
Methylene Blue Capacity (mL/mud @ equiv. #/100 bbl)	-						
ASG ALL SOLIDS	-						
APPROX 90 DRILL SOLIDS	-						

REMARKS - Give operation, depth and nature of any problems encountered

RECOMMEND ADDITION OF  
 DIESEL TO 1.5%  
 (WERE LOSING 100 BPH PROP ON 12-4 HOURS)  
 TO SPOTTING DIESEL - THIS  
 APPENDED TO LOWER WT  
 ENOUGH TO REDUCE  
 LOSS TO ± "0"

4 CANS THERMO  
 2 SX THERMO III (RED PANT)  
 1 SX PROTEMP (BLUE PANT)  
 3 SX WELPAC  
 16 SX PROFCO GEL  
 3 CANS THERMO LUBE OR DML #3  
 4 SX SODA ASH

ENGINEER: JERRY BEWICK PHONE: 24 HR ANS. SERV. - 1-353-1692 PHONE: 1-353-3030  
 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH - BRAKLEY PHONE: 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	Bit No. - Type	RPM	Wt.	Hours	Footage
GEL, PROFCO	249	159	90	7=	DML #3 24	24	51=			
BAR	364	294	70	6.50	T-LUBE 10	10	61=			
THERMOGEL	840	516	324	5=	SODA ASH 35	35	14=			
T-ROL III	8	8	240=		CSH 91	71	20=			
WELPAC	37	19	18	150=	PELLETS 349	349	33=			
T-PLEX	47	47	80=		K-SIAL 80	80	12=			
P-TEMP SX	26	26	240=		FIBER 230	205	25=			
P-TEMP L	17	17	102=		SAWDUST 192	192	4=			
NaOH	10	4	6	20=	CLUBS 5	5	13=			
KOH	72	72	85=		NLO 9	9	85=			
CaOH	26	26	6=		KCC 130	130	20=			
ALSTAR	2	2	40=		BACK 5	5	93=			
ANTI-FORM	8	-	60=		SEALER 62	62	50=			
TBP-FFAM	14	14	61=		T-VIS 109	109	55=			
PHOS	10	10	61=							
T-LIG	60	60	9=							
HIB-A	15	15	61=							
HIB-100	34	34	56=							

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
 DRUG @ 12 FT/HR IN CLAYSTONE THEN SLOWED IN DIABASE  
 LOSING 60 BBL/HR MUD

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THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 126

REPORT FOR TUES. MORN.

DATE 26 FEB 1986 DEPTH 9517

OPERATOR: BECHTEL CORP./D.O.E., CONTRACTOR: CLEVELAND DRUG CO., RIG: RIG, ADDRESS: RIG, REPORT FOR MR.: GERALD REICH, WILLARD NICKEL, WELL NAME AND NO.: KENNECOTT STATE #2-14, FIELD OR BLOCK NO.: SALTON SEA, COUNTY, PARISH OR OFF-SHORE AREA: IMPERIAL CO., STATE OR PROVINCE: CALIF.

#54RR DRILLING ASSEMBLY: BIT SIZE 8 1/2, TYPE VAREL, JET SIZE OUT, CASING 13 3/8 Surface, 3515 Ft., MUD VOLUME (BBL) 640, PITS 500, CIRCULATION DATA Pump Size #1 - 6x16, Annular Vol. (Ft./Min.) #2-7x16, Opposite DP = 179, Opposite Colar = 247, JET VEL = -

TEMPERATURE: 124, MUD PROPERTIES: 160, \* BRANDT EQUIP, EQUIPMENT (2) \*\* KERN COOLERS, Flowline Temperature FROM SUCTION FLOWLINE, Depth (ft.) 9517, Weight 8.4, Mud Gradient 4.37, Funnel Viscosity 106, Plastic Viscosity 8, Yield Point 18, Gel Strength 8.10, pH 9.8, Filtrate API 87.0cc, API HP-HT Filtrate 500psi @ 300F, Cake Thickness 8/32, Alkalinity Mud 1.20, Alkalinity Filtrate 22.45, Solids Content 3, Oil Content 10, Water Content 8.7, ASG ALL SOLIDS, APPROX 90 DRILL SOLIDS

REMARKS: Give operation, depth and nature of any problems encountered. EVENING & MORN. TOURS. Drilling @ RITH W/ CORE BBL (LOSING 60 BPH MUD) WELPAC 2SX, Salt Water flow @ STUCK BBL @ 40' FROM RATM - WORK THERMO LUBE 2SX, Gas kick @ PIPE, SPOT DIESEL + NIO - PIPE FREE (RED PAINT) 2SX, Stuck pipe @ CORED - @ RPT TIME TRIP IN HOPE PROTEMP 2SX, Tight hole @ WITH BIT # 54RR (BLUE PAINT) CORE, Sloughing Shale @ CAUSTIC 1SX, Lost Returns @ THERMO LUBE 30AH

ENGINEER: JERRY BEWICK, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH BRAWLEY, PHONE: 1-353-3030, 344-5100

Table with columns: MTL, START, DEL, FINISH, USED, Cost - Time Summary / 24 Hours Ending, MTL, START, DEL, FINISH, USED, @ Depth, Ft., Products, Units on Location, Units Used, Unit Cost, Total Cost, Bit No. - Type, RPM, Wt., Hours, Footage. Includes items like GEL PROFCO, BAR 294, THERMO LUBE, FIBER, DIESEL, TRK4.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: \* STUCK WITH CORE BBL - FREE WITH DIESEL + NIO - CORED - TRIP FOR BIT @ RPT TIME

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR WEDS. MORN.

REPORT NO. 127 DATE 27 FEB 1986 DEPTH 9613 STATE CALIF COUNTY IMPERIAL WELL SIDDIP

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO RIG NO. C

RIG REPORT FOR MR. GERALD REICH RIG REPORT FOR MR. WILLARD NICKEL SPUD DATE 24 OCT 85 SECTION, TOWNSHIP, RANGE 14-11S-13E

WELL NAME AND NO. KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO., CALIF. STATE OR PROVINCE CALIF.

#55 DRILLING ASSEMBLY CASING MUD VOLUME (BBL) CIRCULATION DATA

Flowline Temperature FROM SUCTION FLOWLINE

Time Sample Taken 0515 0515 Centrifuge ON Desant 2 (1) ON (2) ON

Funnel Viscosity (sec./100 ml) API at 150 F 36 33 (180) #5,778.86 #322,968.12

Alkalinity, Filtrate (P/M) 06.60 05.51

Solids Content (% by Vol.) UNDISSOLVED 4 4

Water Content (% by Vol.) 88 88

REMARKS - Give operation, depth and nature of any problems encountered

1 MAINTAIN VIS @ 32-36 AT FLOWLINE USING ABOVE MIX 2 MAINTAIN PH @ 10+ USING CAUSTIC 3 RUN ALL SOLIDS CONTROL EQUIP. 4 RUN BOTH COOLERS - MUD IS VERY HOT!

ENGINEER JERRY BEWICK HOME ADDRESS 24 HR. ANS. SERV. 1-353-1692 PHONE HOME 1-353-3030

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., RPM, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRUG 9 FT/HR IN CLAYSTONE (70%) SANDSTONE - LOSING 15 BBL/HR MUD.

This report and any oral statements made in connection with it are statements of opinion only. DELIVERED 4 LOADS @ 4 HRS EA @ 49.50 = 792 =



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT 128

REPORT FOR THURS. MORN

DATE 2 FEB 1986 DEPTH 9694

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. RIG NO 6 ADDRESS RIG SPUD DATE 24 OCT 85 REPORT FOR MR. GERALD REICH/D.O.E. REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-115-13E WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size 8 1/2, jet size OUT, casing 13 3/8, hole 6 5/8, pump size #1-6x16, #2-7x16, total circulating volume 1143, pump make NATIONAL, model N-1300, circulating pressure 500, bottoms up 60, system total 144, BHA 480.

Table with columns: Flowline Temperature, Mud Properties, Mud Contains, Suggested Mud Treatment. Includes flowline temp 127°F, mud properties 166°F, mud contains X GEL THICKEN, X PROFCO GEL, X WELPAC, X BIO ZAN, X THSEMPLX, X CAUSTIC, X LIME, X DMIL #3. Suggested treatments include ADD TO GEL THER, TO INCREASE VIS, REPEAT AS NEE, SUGGESTED TOUGH TREATMENT, ADD 4 CANNS (5 GAL) OVER 3 HRS, WHILE DRUG 4 HRS IF CORRECT.

REMARKS - Give operation, depth and nature of any problems encountered. (1) MAINTAIN VIS @ 32-36 @ FLOWLINE (2) MAINTAIN PH @ 10+ @ FLOWLINE (3) RUN ALL SOLIDS CONTROL EQUIP. (4) RUN BOTH COOLERS

ENGINEER JERRY BEWICK NAME ADDRESS 24 HR ANSWERY, 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH BEAULIEY PHONE 344-5100

Table with columns: Products, Units on Location, Units Used, Unit Cost, Total Cost, Blk No., Type, RPM, Wt., Hours, Footage. Lists products like OIL PROFCO, BAR, THERMOGEL, T-TROL III, WELPAC, T-PLEX, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HIB-A, HIB-WO, ALSTAR, TBP-DEFAM, PHOS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE DRILLED TO 9694 - PULLED BIT OUT OF GAGE. RTH WITH NEW BIT TO WASH & REAM TO GAGE - @ RPT TIME W/PIST TRIP PRIOR TO CORE RUN -

PRO 303/1-2 This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Procco, Inc. or any employee of Procco, Inc. MTL DELIVERY TRK 198 - CORRECTION FOR DIESEL COST - ADJUSTED DIESEL IN STORAGE YET TO BE CHARGED. < 3714.47 > ON DAILY



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR FRI. MORN.

DRILLING MUD REPORT

REPORT NO. 122  
DATE 28 MAR FEB 1986  
DEPTH 9699

OPERATOR: BECHTEL CORP. / D.O.E. CONTRACTOR: CLEVELAND DRUG CO. RIG NO: 6  
ADDRESS: RIG ADDRESS: RIG SPUD DATE: 24 OCT 85  
REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE: 14-11S-13E  
WELL NAME AND NO.: KENNECOTT STATE #2-14 FIELD OR BLOCK NO.: SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

DRILLING ASSEMBLY: 8 1/2" BIT SIZE, MC-201, .5 TFA, 13 3/8" SURFACE CASING, 653 556 MUD VOLUME (BBL), CIRCULATION DATA: Pump #1-6 X 16, #2-7 X 16, Annular Vel. (Ft./Min.) = 179  
DRILL PIPE SIZE: 5-19.5" TYPE 1, 4 1/2" IF, LENGTH - 95' INTERMEDIATE, 6000' TOTAL CIRCULATING VOLUME, 1208  
DRILL PIPE SIZE: 5-46" TYPE 1, 4 1/2" IF, LENGTH 169.45' PROTEMP-THERMOTROL, DIESEL 125 BBL  
DRILL COLLAR SIZE: 6 1/4 X 2 1/4 BHA= 169.45' MUD TYPE: PROTEMP-THERMOTROL, 8,24 346

TEMP OF FLOWLINE 130°F MUD PROPERTIES 170°F \* BRAHOT EQUIP (2) \*\* KERN COOLERS  
Flowline Temperature: FROM SUCTION FLOWLINE  
Time Sample Taken: 0500 0500  
Depth (ft.): 9699 9699  
Weight (ppg @ 100 sq. ft.): 8.75 8.75  
Mud Gradient (ppm): 455 455  
Furnal Viscosity (sec/100 ml) API at 120°F: 34 160  
Plastic Viscosity (cp) at 120°F: 6 120  
Yield Point (lb/100 sq. ft.): 5 4  
Gel Strength (lb/100 sq. ft.) 10 sec/10 min.: 2 1/4 FRAGILE 2 1/2  
pH: 9.2 9.0  
Filtrate API (m/30 min.): 26.0 32.0  
API HP-HT Filtrate (m/30 min.): 500 psi @ 300°F BLEW DET  
Cake Thickness 32nd in. API HP-HT: 3/32 SUK 1/32  
Alkalinity, Mud (Ppm): - -  
Alkalinity, Filtrate (Ppm): 05.70 04.72  
Salt: 4000 4300  
Calcium: 368 400  
Sand Content (% by Vol.): TR 1/8  
Solids Content (% by Vol.): UNDISSOLVED 3 1/2  
Oil Content (% by Vol.): 2  
Water Content (% by Vol.): 94 1/2  
Methylene Blue Capacity (m/100 ml mud): ~14 ~14  
ASG ALL SOLIDS  
APPROX 90 DRILL SOLIDS < 3

REMARKS - Give operation, depth and nature of any problems encountered  
NOTE - WHILE DRILLING OR CIRCULATING - IF PREVIOUS  
TOUR DID NOT GET ALL OF HIS TREATMENT IN - ADD THE TREATMENT  
MUD LEFT TO NEXT TOUR  
TREATMENT  
1) MAINTAIN VIS @ 34-38 @ FLOWLINE  
2) MAINTAIN PH @ 10+ (WITH CAUSTIC) @ FLOWLINE  
3) RUN ALL SOLIDS CONTROL EQUIP.  
4) RUN BOTH COOLERS!

ENGINEER: JERRY BENICK ADDRESS: 24 HR ANS SERV. 1-353-1692 PHONE HOME: 1-353-3430  
MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BEACH BRAWLEY PHONE: 344-5100

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.  
Products: OEL PRFCO 318, BAR 518, THATCHER 1016, TRENTHAM 8, WELPAC 7, EPLEX 37, P-TMP SX 22, P-TMP L 17, NaOH 31, KOH 72, CaOH 25, HIB-A 15, HIB-100 34, AL-SILVAR 2, TBP-DIAM 14, PADS 10, I-LG 60  
Units Used: DME#3 24, T-LUBE -, SODA ASH 29, CS4 7, PELLETS 349, K-SEAL 80, T-RIDE 205, SANDRUST 192, CUBES 5, MLO -, K CL 130, BULL 5, SEALER 62, T-VIS 109, BICARB 54, BIOZAN -, DIESEL 510, TKG 23  
Total Cost: 17, 53, 167, 249, 230, 205, 192, 5, 24, 130, 5, 62, 109, 54, 100, 510, 23

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
WASH & RUM 9605-9694 - TITE @ 9605 - CARE 9694-9699 TRIP @ RPT TIME  
DIESEL + TKG = 5,101.23  
TKG 396.00  
PRO 303/1-2  
This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Proco, Inc. or any employee of Proco, Inc.  
MTL TKG = 198 X 2 = 396



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT NO. 129

REPORT FOR SAT. MORN.

DATE 1 MAR 1986 DEPTH 9774

STATE CALIF COUNTY IMPERIAL WELL SSSDIP

OPERATOR <b>BECHTEL CORP. / D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRILG. CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT. 85</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>JERRY GARDNER</b>	SECTION TOWNSHIP RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>KENNECOTT STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFF-SHORE AREA <b>IMPERIAL CO.</b>
		STATE OR PROVINCE <b>CALIF</b>

#56RR DRILLING ASSEMBLY			CASING	MUD VOLUME (BBL)	CIRCULATION DATA	
BIT SIZE <b>8 1/2</b>	TYPE <b>V-527</b>	JET SIZE <b>OUT</b>	Surface <b>13 3/8 in. 3515 ft</b>	Hole <b>658 555</b>	Pump Size <b>#2-7X16</b>	Annular Vol. (Ft./Min.) <b>#2-7X16</b>
DRILL PIPE SIZE <b>5-19.5</b>	TYPE <b>4 1/2 IF</b>	LENGTH <b>-</b>	Intermediate <b>9 5/8 in. 6000 ft</b>	Total Circulating Volume <b>1213</b>	Pump Make <b>NATIONAL</b>	Opposite DP <b>= 247</b>
DRILL PIPE SIZE <b>5-46</b>	TYPE <b>4 1/2 IF</b>	LENGTH <b>812.66</b>	Production or Liner <b>-</b>	In Storage <b>DIESEL 125 BBL</b>	Model <b>N-1300</b>	JETVEL <b>= -</b>
DRILL COLLAR SIZE <b>6 1/4 x 2 1/4</b>	BHA <b>= 140.51</b>	Mud Type <b>THERMOGEL-PRO TEMP- BRINE</b>		BW/Stroke <b>150</b>	Stroke/Min. <b>40</b>	Circulating Pressure (psi) <b>= 500</b>
				Bottom/Min. <b>8.24</b>	GPM <b>346</b>	Bottoms up (Min.) <b>= 59</b>
						System Total (Min.) <b>= 147</b>
						ANN. VOL. = 484

Flowline Temperature	TEMP OF FLOWLINE	MUD PROPERTIES	TEMP OF FLOWLINE	* BRANDT EQUIP	EQUIPMENT (2)	* KERN COOLERS
Time Sample Taken	0530	0530	0530	Centrifuge	ON	Desander
Depth (ft.)	9774	9774	9774	Disintegrator	ON	Shaker
Weight (lb/cu ft)	8.8	8.9	8.9	Desander	ON	Other
Mud Gradient (psi/ft)	4.58	4.63	4.63	DAILY COST	\$ 5,400.26	CUMULATIVE COST
Funnel Viscosity (sec/qt.) API at 130 °F	36	32	32	WEIGHT	< 9.0	VISCOSITY
Plastic Viscosity cps at 120 °F	6	6	6	FILTRATE	35-45	API < 20 cc
Yield Point (lb/100 sq. ft.)	6	5	5	MUD CONTAINS		SUGGESTED TREATMENT
Gel Strength (lb/100 sq. ft.) 10 sec/10 min.	6.10	4.16	4.16	X GEL THERMOGEL	10 SX	IN COMBINATION
pH	10.0	8.8	8.8	X GEL PROFCO GEL	2 SX	TO INCREASE VIS
Filtrate API (m/30 min.)	39.8 cc	56.0	56.0	X K WELPAC	1 SX	REPEAT AS NEEDED
API HP-HT Filtrate (m/30 min.) @ 300 °F	89.0 cc	9.32	9.32	X CAUSTIC	1 SX	
Cake Thickness 32nd in. API X-HP-HT	0.73	0.33	0.33			
Alkalinity Mud (Ppm)	16,150	10,000	10,000	= SUGGESTED TO TRY TREATMENT		
Alkalinity Filtrate (Ppm)	704	752	752	X PRO TEMP	2 SX	(50°SX)
Salt: ppm Gyp Chloride ppm Gyp	9400	10,000	10,000	X BIO ZAN	1 SX	(50°SX)
Calcium (ppm) Gyp (ppm) T.H.	704	752	752	X THERMOGEL III	2 SX	(50°SX)
Sand Content (% by Vol.)	1/4	1/2	1/2	X K WELPAC	4 SX	(50°SX)
Solids Content (% by Vol.) UNDISSOLVED	4	5	5	X CAUSTIC	3 SX	(50°SX)
Oil Content (% by Vol.)	1+	1+	1+	X SODA ASH	6 SX	(100°SX)
Water Content (% by Vol.)	95	95	95	X BIOZAN	1 SX	(50°SX)
Methylene Blue Capacity (m/ml mud)	12	12	12	X SODA ASH	6 SX	(100°SX)
ASG ALL SOLIDS	2.5	2.5	2.5	X CAUSTIC	3 SX	(50°SX)
APPROX 20 DRILL SOLIDS	< 3	< 3	< 3	X SODA ASH	6 SX	(100°SX)

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ CORE 5' RECOVERED 3 1/2'

Salt Water flow @ DIAMOND BIT WORK -

Gas lock @ WELL FLOWED WHILE

Stuck pipe @ TRIPPING FOR CORE

Tight hole @ NOTE: THIS IS VERY HARD ON DRILG FLUID TO HAVE ADDITIONAL OF FORMATION

Sloughing Shale @

Lost Returns @

① USE TBP DEFAMER OR AL START DIESEL TO REDUCE FOAM & AIR

② MAINTAIN VIS @ FLOWLINE @ 34-38

③ PH " " @ 10+

ADD OVER 3 HOURS

DISCONTINUE IF VIS @ 40+

ENGINEER <b>JERRY BEWICK</b>	PHONE <b>1-353-3030</b>
MOBILE UNIT <b>1-355-5158</b>	PHONE <b>344-5100</b>

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	Units Delivered	Units on Location	Units Used	Unit Cost	Total Cost	BR No.—Type	RPM	Wt.	Hours	Footage
GEL PROFCO	318	313	5	17	13	4				
BAR	558	498	60	53	53					
THERMOGEL	1946	1901	45	167	167					
WELPAC	104	100	4	349	349					
T-PLEX	33	27	6	230	230					
P-TEMP SX	22	22		205	205					
P-TEMP L	13	7	6	192	192					
NaOH	109	106	3	5	5					
KOH	72	72		24	24					
CaOH	24	24		130	130					
HIB-A	15	15		5	5					
HIB-100	34	34		62	62					
AL-STAR	2	2		109	109					
TBP-DEFAM	14	14		108	108					
PHAS	10	10		100	95	5				
T-LIG	60	60								
T-ROLIT	8	7	1							

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

DRILG. HEAD @ 15 FT/HR

LOSING MUD @ 20 BBL/HR.

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR SUN. MORN.

DATE 2 MAR 1986 DEPTH 9907 STATE COUNTY WELL BIT

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRLG CO. ADDRESS RIG RIG SPUD DATE 24 OCT. 85

REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION. TOWNSHIP. RANGE 14-11S-13E

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA CIRCULATION DATA

Table with columns: TEMPF, SUCTION, FLOWLINE, WEIGHT, VISCOSITY, FILTRATE. Includes data for flowline temperature, mud gradient, and viscosity.

REMARKS—Give operation, depth and nature of any problems encountered. NOTE NEW CORE HAD SMALLER THAN PREVIOUS MODELS 7 5/8

ENGINEER JERRY BEWICK PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH BRAWLEY PHONE 344-5100

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage. Includes items like GEL DRIFCO, THERMOGEL, WELPAC, BIOZAN, etc.

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR MON. MORN.

Table with columns: DATE (3 MAR 86), DEPTH (9912), STATE (CA), COUNTY (IMP), WELL (SS), BIT (SD), P (DP)

Operator: BECHTEL CORP./D.O.E., Contractor: CLEVELAND DRUG CO., RIG NO: 6, ADDRESS: RIG, SPUD DATE: 24 Oct. 85, REPORT FOR MR. GERALD REICH/RAY FERGUSON, JERRY GARDNER, SECTION, TOWNSHIP, RANGE: 14-11S-13E, WELL NAME AND NO: KENNECOTT STATE #2-14, FIELD OR BLOCK NO: SALTON SEA, COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO., STATE OR PROVINCE: CALIF.

Table with columns: #10 DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size 7 5/8", jet size 2-20 1/4", TFA.5, 13 3/8" surface, 668 783 mud volume, pump size #2-7X16, annular vel. 179.

Table with columns: TEMPOF, SUCTION, FLOWLINE. Includes flowline temperature 140°F, suction 180°F, weight 9.0+, yield point 7, gel strength 4.22 FRAGILE.

Table with columns: MUD CONTAINS, SUGGESTED TREATMENT. Includes gel thermo, profco gel, kwelpac, caustic, biozan, and suggested treatments like 'ADD TOGETHER TO INCREASE VISC' and 'ADD OVER 3 HRS'.

REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VISC @ FLOWLINE @ 34-38 SEC (CHK 3X PER HOUR & RECORD ON REPORT) 2) MAINTAIN PH @ 10+ AT FLOWLINE USE CAUSTIC 3) RUN ALL SOLIDS CONTROL - ALL THE TIME 4) RUN BOTH COOLERS ALL THE TIME

ENGINEER: JERRY BEWICK, PHONE: 1-353-3030, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH, BRAWLEY, PHONE: 344-5100

Inventory table with columns: PRODUCTS, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, SH No., Type, RPM, Wt., Hours, Footage. Lists items like OIL PRIMO, BAR, THERMOGEL, KWELPAC, BIOZAN, T-FRAL III, T-PLEX, P-TEMP SA, P-TEMP L, NaOH, KOH, CaOH, HB-A, HB-100, CAL STAB, T&P DEF, PHOS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: CORED @ 1/2 FT/HR - MUD LOSS HIL! PROPERTIES OF MUD ALTERED DUE TO NEC. OF ADDING COOL H2O

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 132

REPORT FOR TUES. MORN.

Table with columns: DATE (4 MAR 1986), DEPTH (10,044), STATE (CA), COUNTY (IMP), WELL (SS), BIT (DDP)

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRUG CO. Rig No: 6. Address: RIG. Spud Date: 24 OCT. 85. Report for MR. GERALD REICH/RAY FERGUSON. Report for MR. JERRY GARDNER. Section: TOWNSHIP, RANGE 14-11S-13E. Well Name and No: KENNECOTT STATE #2-14. Field or Block No: SALTON SEA. County/Parish/Offshore Area: IMPERIAL CO., CALIF.

Table with columns: BIT SIZE (8 1/2), DRILLING ASSEMBLY (TYPE VAREL V-627, JET SIZE OUT), CASING (13 3/8 Surface, 9 5/8 Intermediate, 8 1/2 Production or Liner), MUD VOLUME (677 580), CIRCULATION DATA (Pump Size #1-6x16, #2-7x16, Opposite DP = 179, Opposite Collar = 247, JET VEL = -)

Mud Type: THERMOGEL-PROTEMP. \* BRANDT EQUIP EQUIPMENT (2) \* KERN COOLERS

Flowline Temperature table with columns: FROM (144), SUCTION (179), FLOWLINE (179). Includes sections for Mud Properties, Filtrate, and Mud Contains.

- REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VLS @ FLOWLINE @ 34-38 SEC. 2) MAINTAIN PH @ FLOWLINE @ 10+ USING CAUSTIC. 3) RUN ALL SOLIDS CONTROL EQUIP ALL THE TIME - DURING TRIPS IF PAS. 4) FOR FARM OIL AIR - ADD A VIS CUP OR SHAVEL OF EPAL (5 GAL DRUM) AT OR NEAR SHAKE.

ENGINEER: JERRY BEWICK. HOME ADDRESS: 24 HR. ANS. SERV. 1-353-1692. PHONE HOME: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH BRAWLEY. PHONE: 344-5100.

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Table with columns: Product, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, Wt., Hours, Footage. Includes rows for GEL DRUG, BAR, T-GEL, T-VIS, T-TRU, T-PLEX, BIOZAN, P-TEMP, P-TEMP, N-GH, KQH, CaOH, HB-A, HB-100, AL STAR, TBP DEF, PHAS, T-LIG.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRUG @ 10 FPH IN CLAYSTONE LOSING MUD @ 10-15 BBL/HR.

2 LOADS @ 4 HR @ 8 X 4" J = 396 =



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 133

REPORT FOR WEDS. MORN

Table with well details: DATE 5 MAR 1986, DEPTH 10,137, STATE CA, COUNTY IMP, etc.

Operator: BECHTEL CORP./D.O.E., Contractor: CLEVELAND DRUG CO., RIG: RIG, REPORT FOR MR. GERALD REICH/RAY FERGUSON, JERRY GARDNER, WELL NAME AND NO: KENNECOTT STATE #2-14, FIELD OR BLOCK NO. SALTON SEA, COUNTY, PARISH, OR OFF-SHORE AREA: IMPERIAL CO., CALIF.

Table with drilling assembly details: BIT SIZE 8 1/2, TYPE VAREL, JET SIZE OUT, CASING 133 3515, MUD VOLUME 684 610, CIRCULATION DATA, etc.

Table with mud properties: TEMPERATURE 148 F, SUCTION 180 F, FLOWLINE 180 F, MUD PROPERTIES, etc.

- REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VIS @ FLOWLINE @ 34-38. 2) MAINTAIN PH @ FLOWLINE @ 10+ USING EQUAL PARTS LIME & CAUSTIC. 3) RUN ALL SOLIDS CONTROL EQUIP. 4) FOR FOAM OR AIR USE EPAL (5600 DRUM) 1 CUP @ SHAKER.

ENGINEER: JERRY BEWICK, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH, BRAWLEY, PHONE HOME: 1-353-3030, PHONE: 344-5700

Table with material usage summary: MTL, START, DEL, FINISH, USED, etc. Columns for Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: DRUG @ 10-12 FT/HR IN CLAYSTONE & SILTSTONE - LOSING 15BPH MUD - SOME CO2 CONTAMINATION -

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc.



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT 134

JATE 6 MAR 19 86 DEPTH 10,212

REPORT FOR THURS. MORN

Table with columns: STATE, COUNTY, WELL, BIT

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND ORLG CO. RIG: RAY FERGUSON WILLARD NICKEL

WELL NAME AND NO: KENNEDOTT STATE #2-14 FIELD OR BLOCK NO: SALTONSEA COUNTY: IMPERIAL CO. CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA

Table with columns: Flowline Temperature, Suction, Flowline, MUD PROPERTIES, \* BRANDT EQUIP

REMARKS - Give operation, depth and nature of any problems encountered. 1) MAINTAIN VIS @ FLOWLINE @ 34-38

ENGINEER: JERRY BEWICK WAREHOUSE LOCATION: BLACK BRANLEY

Table with columns: MTL, START, DEL, FINISH, USED, PRODUCTS, UNITS DELIVERED, UNITS ON LOCATION, UNITS USED, UNIT COST, TOTAL COST

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE TRIP FOR NEW BIT - (HOLE TAKING 15 BBL PER HOUR) - STUCK @ 10,170 - SPOTTED DIESEL + NIO CHASE WITH 1 BBL / 30 MIN. - WAIT ON PILL -

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent...



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT NO. 135

DATE 7 MAR 1986 DEPTH 10347

REPORT FOR FRI. MORN

AP. WELL NO. STATE COUNTY WELL BIT  
CA IMP S S D D P

OPERATOR <b>BECHTEL CORP./D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRILG CO.</b>	RIG NO. <b>6</b>
ADDRESS <b>RIG</b>	ADDRESS <b>RIG</b>	SPUD DATE <b>24 OCT 85</b>
REPORT FOR MR. <b>RAY FERGUSON</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION, TOWNSHIP, RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>KENNECOTT STATE# 2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL CO., CALIF.</b>

#59 DRILLING ASSEMBLY	CASING	MUD VOLUME (BBL)	CIRCULATION DATA
BIT SIZE: 8 1/2 TYPE SEC: S-84-F JET SIZE: OUT	Surface: 13 3/8 3515 Ft. Intermediate: 9 5/8 in. 6000 Ft.	698 1035	Pump Size: #1-6x16 #2-7x16
DRILL PIPE SIZE: 5-19.5 TYPE: 4 1/2 F LENGTH: -	Production or Liner: -	Total Circulating Volume: 1733	Pump Make: NATIONAL Model: N-1300
DRILL PIPE SIZE: 5-46 TYPE: 4 1/2 F LENGTH: 812.66		In Storage: 119 BBL	Stroke/Min: 150 206 40
DRILL COLLAR SIZE: 6 1/4 x 2 1/4 BSHA: 172.98	Mud Type: THERMOGEL - PROTEMP		ANN. VOL = 513

Flowline Temperature	TEMP FROM SUCTION FLOWLINE	149	136	* BRANDT EQUIP.	EQUIPMENT 2** KERN COOLING
Time Sample Taken	0500	03:00	0500	Centrifuge * - DOWN -	Desalt (2) * (1) ON (2) ON
Depth (ft.)	10347	10212	10347	Desander	Other EX LOG-SMOOTH
Weight (ppg) (lb/cu. ft.)	8.7	8.6	8.7	DAILY COST	CUMULATIVE COST
Mud Gradient (psf/ft.)	452	447	452	\$ 11,752.79	\$ 363,463.96
Funnel Viscosity (sec./dl.) API at	32	56	32		
Plastic Viscosity cps at	110	5	5	WEIGHT	VISCOSITY
Yield Point (lb/100 sq. ft.)	10	12	12	< 9.0	35-45
Gel Strength (lb/100 sq. ft.) 10 sec./10 min.	3 1/8	4 1/8	4 1/8	FILTRATE	API < 20 cc
pH	10.7	8.6	10.1	MUD CONTAINS	SUGGESTED TREATMENT
Filtrate API (m/30 min.)	110°F 36.0	52.0	39.5	X GEL THERMO	30 SX
API HP-HT Filtrate (m/30 min.)	500 psi @ 300°F 70.0	-	-	X PROFCO GEL	5 SX
Cake Thickness 32nd in. API HP-HT	3/32	THICK 3+/32	X WELPAC	1 SX	
Alkalinity, Mud (pH)	1.50	1.28	X CAUSTIC	1 SX	
Alkalinity, Filtrate (pH/M)	49' 2.00	52.135			
Sol: ppm gpg Chloride: ppm gpg	6700	8200	6500	SUGGESTED TREATMENT	24 HR TREATMENT
Calcium Chloride: ppm gpg T.H.	104	800	1000		
Sand Content (% by Vol.)	1/8	1/4	X WELPAC	4 SX	
Solids Content (% by Vol.)	UNDISSOLVED	4	4+	X PROTEMP	6 SX
Oil Content (% by Vol.)	6	6	X BLUE PAINT		
Water Content (% by Vol.)	90	90	X CYPAN OR	4 SX	
Methylene Blue Capacity (ml/ml mud equiv. @ 100 psi)	14	14	X "SPA"		
ABG ALL SOLIDS	2.4	2.4	X CAUSTIC	4 SX	
APDRX 90 DRILLSOLIDS	< 3	< 3	X THERM LG	4 SX	
			X BIO ZAN	2 SX	

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @ CORROSION RING - OUT @ 9696 (1) MAINTAIN VISC FLOWLINE @ 32+ (TURN OFF WATER PRIOR TO CHK)

Salt Water flow @ 270 HRS. RATE = .5936 #/FT<sup>2</sup>/YR.

Gas lock @ TOP OF HELL SAVING SUIS. (2) MAINTAIN PH @ FLOWLINE @ 10+

Stuck pipe @ (3) RUN ALL SOLIDS CONTROL EQUIP.

Tight hole @ WHEN CIRCULATING - ADD 80 BBL (4) USE EPAL (55 GAL DRUM) FOR DEFRAMER - ADD HEAT SHAKER - (NEEDS HEAT TO MELT)

Sloughing Shale @ OF DIESEL OVER 3 HRS

Lost Returns @

ENGINEER <b>JERRY BEWICK</b>	PHONE <b>24 HR. ANS. SERV. 1-353-1692</b>	PHONE <b>1-353-3030</b>
MOBILE UNIT <b>1-355-5158</b>	WAREHOUSE LOCATION <b>BEACH, BRAWLEY</b>	PHONE <b>344-5100</b>

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

MTL	START	DEL	FINISH	USED	MTL	START	DEL	FINISH	USED	FL
QEL PROFCO	362	56	4/8		PHOS	9	9			
400-BAN	418	363	80	25	DML #3	3	-	3		
T-GEL	1560	240	1320		SODA ASH	22	10	12		
T-LIG	60	40	20		BICARB	107	107			
T-VIS	111	111			CSH	213	213			
T-TROL III	1	1			PALLETS	370	370			
T-PLEX	14	24	34	4	K-SHAL	250	250			
BIOZAN	82	30	52		FIBER	217	217			
WELPAC	85	85			SAWDUST	159	159			
R-TMPSX	5	40	40	5	CUBES	5	5			
P-TMPL	17	12	10	19	NIO	25	14	11		
NaOH	65	54	11		KOL	129	60	69		
KOH	32				BuCl	5	5			
CaOH	22				SCALEP	78	78			
H2A	15				EPAL	-	-			
H13-100	35				CYPAN	4	4			
AL STAR	6				SPA	40	40			
TBP	5									

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE  
WELL STARTED TO FLOW WHILE "STUCK" - PIPE CAME LOOSE - HAD INTRUSION OF FORMATION FLUID. - HIGH SALINITY - CONTAMINATED MUD BADLY! FLOWLINE 230°F -

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TRUCKING - MUD DELIVER - 198 = K2 = 396 =  
DIESEL @ 1.154/GAL - 5000 GAL + 6 HR TRKG = 6,101.20



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR SAT MORN

REPORT NO. 136 DATE 8 MAR 1966 DEPTH 10412 STATE CALIF COUNTY IMPERIAL WELL SGGD DP

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRILL CO. RIG BECHTEL RIG REPORT FOR MR. RAY FERGUSON REPORT FOR MR. WILLARD NICKEL WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFF-SHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF

BIT SIZE 8 1/2 TYPE AREL JET SIZE OUT CASING 13 3/8 SURFACE 3515 FL. MUD VOLUME (BBL) 703 952 PUMP SIZE 1-6 X 16 IN. ANNUAL VOL. (FL/HR.) #2-7 X 16 Opposite DP = 179 DRILL PIPE # 5-19.5 TYPE 4 1/2 IF LENGTH - 9 5/8 IN. INTERMEDIATE 6000 FL. Total Circulating Volume 1655 Pump Make NATIONAL Opposite Coker = 247 DRILL PIPE # 5-46 TYPE 4 1/2 IF LENGTH 812.66 - - - - - Model N-1300 NETVEL = - DRILL COLLAR SIZE 6 3/4 X 2 7/8 BHA = 172.98 MUD TYPE THERMOGEL-PROTEMP In Storage 119 DESEL Stroke/Min. 150 Circulating Pressure Psi = 600 Bottoms up (Min.) = 63 System Total (Min.) = 200 ANN VOL = 518

Table with columns: TEMPOF, SUCTION, FLOWLINE, MUD PROPERTIES, \*BRANDT EQUIP, EQUIPMENT. Rows include: Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (lb/ft.), Mud Gradient (psi/ft.), Funnel Viscosity (sec/100 API), Plastic Viscosity (cps), Yield Point (lb/100 sq. ft.), Gel Strength (lb/100 sq. ft.), pH, Filtrate API, API HP-HT Filtrate, Cake Thickness, Alkalinity, Solids, Sand Content, Bolts Content, Oil Content, Water Content, Methylene Blue Capacity.

REMARKS - Give operation, depth and nature of any problems encountered. 1 MAINTAIN 32-36 VIS @ FLOWLINE. 2 MAINTAIN @ FLOWLINE PH @ 10.0+. 3 RUN MUD CLEANERS - DO NOT RUN CENTRIFUGE UNLESS WT IN SUCTION ABOVE 2.1 #/GAL. 9.1 IS O.K., 9.2 IS TOO HEAVY! NOTE: BRINE SHOULD BE DISCARDED ALL TIMES! - CHK WITH LOGGERS!

ENGINEER JERRY BEWICK HOME ADDRESS 24HR ANS. SERVICE 1-353-1692 PHONE 1-353-3030 MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BRAWLEY PHONE

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blt No., Type, RPM, Wt., Hours, Footage. Includes rows for OIL, SAND, THERMOGEL, I-LIG, I-VIS, I-TRAIL, I-PLEX, BIOZAN, WELPAC, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HB-A, HB-ICC, ALSTAR, TBP.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: TREATING MUD FOR BRINE CONTAMINATION & FLUID LOSS DRUG CLAY, SAND @ 8 FT/HR LOSING 15-20 BBL/HR.



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 137

REPORT FOR SUN MORN.

Table with columns: DATE (9 MAR 1986), DEPTH (10475), STATE (CA), COUNTY (IMP), WELL (S), BIT (D), D.P.I.

Operator: BEHNER CORP./D.O.E. Contractor: CLEVELAND DRUG CO. RIG: RIG. REPORT FOR MR: RAY FERGUSON / GERALD REICH. WELL NAME AND NO.: KENNECOTT STATE\* 2-14. FIELD OR BLOCK NO.: SALTON SEA. COUNTY, PARISH OR OFFSHORE AREA: IMPERIAL CO., CALIF.

Table with columns: #60 DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size, jet size, pump speed, and mud properties.

Table with columns: TEMPERATURE, MUD PROPERTIES, \*BRAND EQUIP. Includes flowline temperature, mud gradient, funnel viscosity, and equipment list.

REMARKS - Give operation, depth and nature of any problems encountered. 1 VERY IMPORTANT - DISCARD ALL ANY DRILLING @ DRUG WITH 5%/GAL MUD - MUD LOSS. 2 MAINTAIN VISC @ 34-36 & PH @ 10+.

ENGINEER: JERRY BENICK. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH BRAWLEY.

Table with columns: PRODUCTS, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost. Lists various drilling fluids and their usage.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. LAST TOTAL RETURNS @ 10,475 FT. - RUN TEMP & CAL LOGS - R/H OPEN ENDED -



THE PROFESSIONALS IN DRILLING FLUIDS

REPORT FOR MON. MORN.

DRILLING MUD REPORT

REPORT NO. 136, 10 MAR 1966, DEPTH 10,475, STATE CALIF, COUNTY IMPERIAL, WELL CA 11P515SDDP

OPERATOR: BECHTEL CORP./D.O.E., CONTRACTOR: CLEVELAND DRUG CO., RIG NO: C, ADDRESS: RIG, SPUD DATE: 24 OCT 66, REPORT FOR MR: RAY FERGUSON/GERALD REICH, REPORT FOR MR: WILLARD NICKEL, SECTION/TOWNSHIP/RANGE: 14-113-13E, WELL NAME AND NO: KENNECOTT STATE #2-14, FIELD OR BLOCK NO: SALTON SEA, COUNTY/PARISH/OFFSHORE AREA: IMPERIAL CO., STATE OR PROVINCE: CALIF.

DRILLING ASSEMBLY: BIT SIZE OPEN ENDED, DRILL PIPE SIZE 5-19.5, DRILL PIPE SIZE 5-46, DRILL COLLAR SIZE 6x2 1/2, CASING: 13 3/8 Surface, 9 5/8 Intermediate, 6000 Production or Liner, MUD VOLUME (BBL): 707, 1327, 119, CIRCULATION DATA: Pump Shaft 1-6x16, 2-7x16, Pump Make NATIONAL, Model N-1300, Stroke/Min. 150, 220, Bbl/Min. 2.2, 2.2, ANN. VOL. =

Table with columns for TEMPERATURE, MUD PROPERTIES, and EQUIPMENT. Includes rows for Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (lb./cu. ft.), Mud Gradient (psi/ft.), Funnel Viscosity (sec./qt.) API #1, Plastic Viscosity (cps) at 120 F, Yield Point (lb./100 sq. ft.), Gel Strength (lb./100 sq. ft.) 10 sec./10 min, pH @ 25 C, Filtrate API (ml/30 min), API MP-10T Filtrate (ml/30 min) @ 300 F, Cake Thickness (32nd in. API MP-10T), Alkalinity Mud (pH), Alkalinity Filtrate (PPHM), Salt (ppm) Chloride, Calcium (ppm), Sand Content (% by Vol.), Solids Content (% by Vol.), Oil Content (% by Vol.), Water Content (% by Vol.), Methylene Blue Capacity (ml/ml mud @ equiv. # vol. bent).

REMARKS—Give operation, depth and nature of any problems encountered. (BRINE WILL BE CLEAR + WEIGHT APPROX 9.3# + PH WILL NOT BE ABOVE 8)
- Drilling @ R/H @ 5800 - WELL FLOWING - CIRC @
- Seal Water flow @ 6850, R/H WELL FLOWING - CIRC
- Gas lock @ @ 9190 TAG BTM/FLL @ 10,382
- Stuck pipe @ (PILL WAS LEFT ON BTM) PULL TO
- Tight hole @ 10,319 PUMP SAND SLURRY -
- Stoughing Shale @ PULL 3 STDS. CIRC - 4V, 1 SAND
- Lost Returns @ LAST CIRC @ 9885 - MIX LCM ALL
SPOT ON BTM - R/H @ RPT TIME TO SPOT ANOTHER PILL!

ENGINEER: JERRY BEWICK, PHONE HOME: 1-353-3030, MOBILE UNIT: 1-355-5158, WAREHOUSE LOCATION: BEACH, BRAWLEY, PHONE: 344-5100

Table with columns: PRODUCTS, UNITS, DATES, UNITS ON LOCATION, UNITS USED, INT. COST, TOTAL COST, BR. NO., TYPE, RPM, WL, HOURS, FOOTAGE. Lists items like GEL PROFO, BAR, T-GEL, T-LIG, T-VIS, T-TRAL, T-PLEX, BIOZAN, WELPAC, P-TEMP SX, P-TEMP L, NaOH, KOH, CaOH, HIB-A, HIB-100, ALSTAR, TBP.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: WELL FLOWING & ALSO LOST CIRCULATION -

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 133

11 MAR 1986 DEPTH 10475

REPORT FOR TUES. MORN.

Table with columns: STATE, COUNTY, WELL, BIT

Operator: BECHTEL CORP. / P.O.E. Contractor: CLEVELAND DRILL CO. RIG: RAY FERGUSON / GERALD REICH

Field or Block No.: SALTON SEA County: IMPERIAL CO. State: KENNECOTT STATE #2-14

Main data table with columns: BIT SIZE, DRILLING ASSEMBLY, CASING, MUD VOLUME, CIRCULATION DATA, TEMPERATURE, MUD PROPERTIES, BRAND EQUIP.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes on mud flow, gas lock, stuck pipe, etc.

ENGINEER: JERRY BEWICK. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH, BRAVLEY

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Blk No., Type, RPM, Wt., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: MUD BADLY CONTAMINATED BY HIGH SALINITY BRINE





THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 140

REPORT FOR WEDS MORN

Table with columns: DATE (E 12 MAR 1986), DEPTH, STATE, COUNTY, WELL, BIT

Operator: BECHTEL CORP. / D.O.E. Contractor: CLEVELAND DRUG CO. RIG NO: 6. Address: RIG. Spud Date: 24 OCT 85. Report for Mr: GERALD REICH. Report for Mr: WILLARD NICKEL. Well Name and No: KENNECOTT STATE #2-14. Field or Block No: SALTON SEA. County, Parish, or Off-Shore Area: IMPERIAL CO. State or Province: CALIF.

Table with columns: #, DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and MUD TYPE (THERMO GEL PROTEMP).

MUD PROPERTIES table with columns: TEMPERATURE, SUCTION, FLOWLINE, WEIGHT, VISCOSITY, FILTRATE, etc. Includes data for flowline temperature, depth, mud gradient, yield point, gel strength, pH, filtrate, and cake thickness.

REMARKS - Give operation, depth and nature of any problems encountered. Includes notes like 'MAINTAIN VIS @ 34-36 SEC', 'MAINTAIN PH @ 10+ USING CAUSTIC OR CAUSTIC POTASH', and 'ADD ALLUM SULFATE (1 CUP DISOLVED IN 5 GAL DIESEL) FOR DEFAMER OR ADD EPAL (SHAVEL FULL NEAR SHAKER)'. Also includes 'M7L START DEL FINISH USED' and 'M7L START DEL FINISH USED'.

ENGINEER: JERRY BEWICK. HOME ADDRESS: 2444 ANS. SERVICE 1-353-1692. PHONE HOME: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BRANLEY. PHONE: 344-5100.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, WL, Hours, Footage. Lists various products like GEL, BAR, I-GEL, FLG, I-VIS, I-TROL, I-PLX, BIOZAN, WELPAC, P-TENDSX, P-TENDL, NaOH, KOH, CaOH, HIB-A, HIB-10, AL STARK, TBP.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE. SLEW CMT PLUG #1 R/H & TAG @ 10.44 - SLEW 2ND CMT PLUG - TAG @ 10.44 - PLUG D.P. POOH @ RPT TIME -

2 LOADS BARITE @ 198 LB = 396. QTY DELIVERED LAST 2 LOADS TO BE ON NEXT RDT!



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR THURS. MORN

DRILLING MUD REPORT

REPORT NO. 41

E 13 MAR 19 86 DEPTH 10,475

STATE COUNTY WELL ST

Operator: BECHTEL CORP./D.O.E, Contractor: CLEVELAND DRIG CO., Rig No: 6, Address: RIG, Report for Mr: GERALD REICH, JERRY GARDNER, Well Name and No: KENNECOTT STATE # 2-14, Field or Block No: SALTON SEA, County: IMPERIAL CO., State: CALIF

Table with columns: BIT SIZE, DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes data for 8 1/2" bit size, M-44-N assembly, 13 3/4" casing, 707 520 mud volume, and 550 psi circulation pressure.

Table with columns: FLOWLINE TEMPERATURE, MUD PROPERTIES, BRANDT EQUIP, KEEN COOLERS. Includes data for 90°F flowline temp, 9.9 mud viscosity, and equipment like WELPAC and BIOZAN.

REMARKS - Give operation, depth and nature of any problems encountered. Includes handwritten notes: 'ASG ALL SOLIDS APPROX 200 DRILL SOLIDS', 'MAINTAIN PH @ 10.0 T WITH CAUSTIC POTASH', 'MAINTAIN WT PIR CO. MAN', 'ADD ALUM STEARATE (1 CUP IN 5 GAL DIESEL) TO KNOCK OUT AIR & FOAM'.

ENGINEER: J. BENICK, MOBILE UNIT: 1-355-5158, HOME ADDRESS: 24 HR ANS. SERV. - 1-353-1692, PHONE HOME: 1-353-3030

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, WT., Hours, Footage. Lists various materials like PARSINATE, SODA ASH, BICARB, CSH, PELLETS, K-SERL, FIBER, SAWDUST, CUBES, H2O, KOL, NaOH, BaCl, SETL WASE, CYPAN, SPA, HB-A, HB-100, ALSTAR, TBO.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: SET LCM PLUG ON BTM - HELD 20 WEIGHT & 600 PS. SET 2nd PILL - NO RETURNS - PULL TO 8400 (LOSS ZONE) & SET ANOTHER PILL @ RAT TIME -



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 142

REPORT FOR FRI. MORN.

DATE 14 MAR 1986 DEPTH 10475 STATE CALIF COUNTY IMPERIAL WELL SSSDDP

OPERATOR: BECHTEL CORP./D.O.E. CONTRACTOR: CLEVELAND DRLG. CO. ADDRESS: RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER WELL NAME AND NO: KENNECOTT STATE # 2-14 FIELD OR BLOCK NO: SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA: IMPERIAL CO. STATE OR PROVINCE: CALIF.

Table with columns: BIT SIZE, TYPE SEC, JET SIZE, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes data for 8 1/2 inch bit size, 42 IF type, 13 3/8 inch casing, 707 900 BBL mud volume, and 6 x 16 inch pump size.

TEMPERATURE: 90°F MUD PROPERTIES: \* BRANDT EQUIP EQUIPMENT (2) \* KERN COOLERS

Table with columns: Flowline Temperature, Time Sample Taken, Depth (ft.), Weight (ppg), Mud Gradient (ppm), Funnel Viscosity (sec/qt) API at 110°F, Plastic Viscosity (cp) at 110°F, Yield Point (lb/100 sq. ft.), Gel Strength (lb/100 sq. ft.) 10 sec/10 min, pH of Strip.

Table with columns: Filtrate API (ml/30 min), API MP-10T Filtrate (ml/30 min), Cake Thickness (32nd in. API MP-10T), Alkalinity, Mud (Ppm), Alkalinity, Filtrate (Ppm), Salt (ppm) Chloride, Calcium (ppm), Sand Content (% by Vol.), Solids Content (% by Vol.), Oil Content (% by Vol.), Water Content (% by Vol.), Methylene Blue Capacity (ml/ml mud equiv. #hbl. bent).

REMARKS - Give operation, depth and issues of any problems encountered. Includes notes like 'SUGGESTION - TO KEEP WELL DEAD WHILE RUNNING CSS - SPOT 60 BBL PILL (11.5% GAL) AT ABOUT 5000 FT -' and 'MAINTAIN VIS @ 30-36 SEC/QT, MAINTAIN WT PER CO. MAN, ADD ANTI FOAM TO REDUCE AIR STRAG IN DIESEL OVER 4 HRS'.

ENGINEER: JERRY BEWICK PHONE: 1-353-3030 MOBILE UNIT: 1-355-5158 WAREHOUSE LOCATION: BRAWLEY PHONE: 344-5100

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No.-Type, RPM, WT., Hours, Footage. Lists products like GEL, BAR, T-GEL, T-LIG, T-VIS, T-TROL, T-PLEX, BIOZAN, WELPAC, P-TEMP SX, P-TEMP L, NaOH, K OH, Ca OH, HIB-A, HB-100, AL-SILAR, TBP.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: RAN LOGS - WELL FLOWED - KILLED WELL 2K - R/H TO CONDITION FOR LINER @ RPT TIME



THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 143

REPORT FOR SAT. MORNING

DATE 15 MAR 1966 DEPTH 10,475

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO. ADDRESS RIG REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER

WELL NAME AND NO. KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY PARISH OR OFFSHORE AREA IMPERIAL CO. CALIF. STATE OR PROVINCE CALIF.

#45RR DRILLING ASSEMBLY BIT SIZE 8 1/2 TYPE SEC M-44-N JET SIZE OUT SURFACE 13 3/8 3515 MOLE 707 PITS 625

DRILL PIPE # 549.5 TYPE 4 1/2 F LENGTH 9 5/8 6000 CIRCULATING VOLUME 1332 PUMP MAKE NATIONAL MODE N-1300

DRILL PIPE # 546 TYPE 4 1/2 F LENGTH 812.66 PRODUCTION OF LINER DIESEL IN STORAGE 2 BBL'S BBL/MIN 7.05

DRILL COLLAR SIZE 6 1/2 X 2 1/2 BHA LENGTH 3949 MUD TYPE THERMO GEL + BRINE! EQUIPMENT #2 KERN COOLERS

TEMP OF FROM SUCTION FLOWLINE SIZE NRS./TOUR SIZE FOX NRS./TOUR

Time Sample Taken 0515 Depth (ft.) 10,475

Weight (ppm) 8.7 Mud Gradient (ppm/ft.) .452

Funnel Viscosity (sec/100 ml) API at 90 F 37 Plastic Viscosity cps at 10 F 5

Yield Point (lb/100 sq. ft.) 10 Gel Strength (lb/100 sq. ft.) 10 sec/10 min 4.14

pH 10.2 Filtrate API (ml/30 min.) 106 cc

API HP-HT Filtrate (ml/30 min.) 500 psi @ 300 F NO CONTROL Cake Thickness 32nd in. API (KMP-HT) 6/32

Alkalinity, Mud (Ppm) 206.62 Alkalinity, Filtrate (P/100 ml) 21,700

Sand Content (% by Vol.) SAND + LCM 1 1/2 Solids Content (% by Vol.) UNDISSOLVED 5

Oil Content (% by Vol.) ~ 2 Water Content (% by Vol.) 93

Methylene Blue Capacity (mL/mud @ 100 ml. disp.) 12 ASG ALL SOLIDS 1.96

APPROX 90 DRILL SOLIDS 2

REMARKS-Gave operation, depth and nature of any problems encountered

ENGINEER JERRY BEWICK MOBILE UNIT 1-355-5158

WAREHOUSE LOCATION BEACH, BRAWLEY

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, BR No., Type, RPM, WT., Hours, Footage

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE CIRC & COND MUD - LOST RETURNS CIRC WITH RETURNS HOLE FLASHES - SETTING LCM PLUGS!

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent...

4 LOADS OF BARITE @ 198#/LOAD TREG = 792 =



7" CASING WENT!

THE PROFESSIONALS IN DRILLING FLUIDS

DRILLING MUD REPORT

REPORT NO. 144

REPORT FOR SUN. MORN

DATE 16 MAR 86 DEPTH 10,475 STATE CALIF COUNTY IMPERIAL WELL SSSDDP

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRUG CO. Rig: RIG. Report for Mr. GERALD REICH. Well Name: KENNECOTT STATE #2-14. Field: SALTON SEA. County: IMPERIAL CO. State: CALIF.

Table with columns: #, DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size, pipe sizes, lengths, and mud properties.

MUD PROPERTIES table with columns: FLOWLINE, SUCTION, FLOWLINE. Includes viscosity, gel strength, pH, and various chemical treatments.

REMARKS: Give operation, depth and nature of any problems encountered. Includes notes on maintaining viscosity and pH, and a corrosion ring reference.

ENGINEER: JERRY BEWICK. MOBILE UNIT: 1-355-5158. PHONE HOME: 1-353-3030. PHONE: 344-5100.

Summary table with columns: Product, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost. Lists various chemicals like phosphate, bicarb, and fiber.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: REF - RAN 7" LINER & HUNG @ 5735 BTM OF LINER @ 10,135 - @ RPT TIME POOH TO PICK UP 6" BIT & 3/2 D.P.

OVERCHARGE TRKG LAST RPT < 396 > (433 BAR). DELIVERY 15th TRG 198 (90 emr - 110 T-42).



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT NO. 145

REPORT FOR MON. MORN

Table with columns: DATE (17 MAR 1986), STATE (CA), COUNTY (IMP), DEPTH (10475), WELL (SISD), BT (D)

Operator: BECHTEL CORP./D.O.E. Contractor: CLEVELAND DRLG CO. Rig No: 6. Address: RIG. Report for Mr. GERALD REICH. Field or Block No. SALTON SEA. County: IMPERIAL CO. State: CALIF.

Table with columns: BIT SIZE (6 1/8), TYPE (S-84-F), JET SIZE (OUT), CASING SURFACE (13 3/8), MUD VOLUME (523), PUMP (1-6 X 16), ANNUAL VOL (83). Includes circulation data and pump details.

Table with columns: TEMPERATURE (70), FLOWLINE (2), SUCTION (2), FLOWLINE (2). Includes mud properties, viscosity, and equipment details.

REMARKS - Give operation, depth and nature of any problems encountered. 1) WATER - MAINTAIN PH @ 10+. 2) MAINTAIN PH @ 10+ USING CAUSTIC. 3) RUN CLEANERS ETC. IF RETURNS - TURN OFF GUNS ETC IF NO RETURNS & DRLG WITH WATER.

ENGINEER: JERRY BEWICK. PHONE: 1-353-3030. MOBILE UNIT: 1-355-5158. WAREHOUSE LOCATION: BEACH, BRANLEY. PHONE: 344-5100.

Inventory table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost. Lists items like GEL, BAR, T-GEL, T-LIG, etc.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE: PICKED UP 3 1/2 D.P & BHA - DRILLED OUT OF SHOE & LOST TOTAL RETURNS - CLEANING HOLE WITH WATER - @ RPT TIME MIXING LCM PILL

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Ⓢ 5AM INVENTORY - ONLY T-GEL, P-GEL + BAR



PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

REPORT FOR TUES. MORN.

DRILLING MUD REPORT

DATE 18 MAR 86 DEPTH 10,564
STATE CALIF COUNTY IMPERIAL WELL S15EDDPI

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRUG CO RIG NO 6
ADDRESS RIG ADDRESS RIG SPUD DATE 24 OCT 86
REPORT FOR MR. GERALD REICH REPORT FOR MR. JERRY GARDNER SECTION, TOWNSHIP, RANGE 14-11S 13E
WELL NAME AND NO KENNECOTT STATE # 2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO., CALIF. STATE OR PROVINCE CALIF.

Table with columns: #61 DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes bit size 6 1/8, jet size OUT, casing 13 3/8, mud volume 538 500, pump size 1-6x16.

MUD PROPERTIES table with columns: FLOWLINE TEMPERATURE, TIME SAMPLE TAKEN, DEPTH (ft.), WEIGHT, MUD GRADIENT, FUNNEL VISCOSITY, PLASTIC VISCOSITY, YIELD POINT, GEL STRENGTH, pH, FILTRATE API, API HP-HT FILTRATE, CAKE THICKNESS, ALKALINITY, SOLIDS, OIL, WATER, METHYLENE BLUE CAPACITY. Includes handwritten notes like 'WATER' and '\$3505.51'.

REMARKS - Give operation, depth and nature of any problems encountered. T.D. - LAYING DOWN D.P. FOR SALT WATER PILL - FILL PIT TO 2 FT FROM TOP WITH WATER (72BBL) ADD: 265x SODIUM CHLORIDE 80#

ENGINEER JERRY BEWICK PHONE 344-5700
MOBILE UNIT 1-355-5158 WAREHOUSE LOCATION BEACH, BRAVLEY PHONE 344-5700

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Cost - Time Summary / 24 Hours Ending MIDNITE @ Depth 10,564 Ft.

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No. - Type, RPM, Wt., Hours, Footage. Lists products like GEL, BAR, FGL, FLIG, T-VIS, T-PLUS, BIOZAN, WILPAC, P-TAMP, NaOH, CaOH, HIB-A, HIB-100, AL-STEP, ANTI-FORM, PHOSPHATE, BICARB.

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE T.D. LAY DOWN D.P.

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PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

DRILLING MUD REPORT

REPORT FOR WEDS. MORN

DATE 19 MAR 1986 DEPTH 1477

OPERATOR BECHTEL CORP./D.O.E. CONTRACTOR CLEVELAND DRLG. CO. RIG NO 6 ADDRESS RIG REPORT FOR MR. GERALD REICH JERRY GARDNER WELL NAME AND NO KENNECOTT STATE #2-14 FIELD OR BLOCK NO. SALTON SEA COUNTY, PARISH, OR OFFSHORE AREA IMPERIAL CO. STATE OR PROVINCE CALIF.

Table with columns: DRILLING ASSEMBLY, CASING, MUD VOLUME (BBL), CIRCULATION DATA. Includes rows for BIT SIZE, DRILL PIPE SIZE, DRILL COLLAR SIZE, and MUD TYPE (WATER).

MUD PROPERTIES table with columns: FLOWLINE TEMPERATURE, TIME SAMPLE TAKEN, DEPTH, WEIGHT, MUD GRADIENT, FUNNEL VISCOSITY, PLASTIC VISCOSITY, YIELD POINT, GEL STRENGTH, pH, FILTRATE API, API HP-HT FILTRATE, CAKE THICKNESS, ALKALINITY, SALT, CALCIUM, SAND, SOLIDS, OIL, WATER, METHYLENE BLUE CAPACITY. Includes handwritten notes: 'PK DOWN', 'EVAL FOR TEST'.

REMARKS—Give operation, depth and nature of any problems encountered. Includes checkboxes for Drilling @, Salt Water flow @, Gas lock @, Stuck pipe @, Tight hole @, Sloughing Shale @, Lost Returns @.

ENGINEER JERRY BEWICK MOBILE UNIT 1-355-5158 PHONE 1-353-3030 WAREHOUSE LOCATION BRAWLEY PHONE 344-5100

Table with columns: Products, Units Delivered, Units on Location, Units Used, Unit Cost, Total Cost, Bit No., Type, RPM, WT., Hours, Footage. Includes handwritten notes: 'MIL', 'START', 'DEL', 'FINISH', 'USED', 'MIL', 'START', 'DEL', 'FINISH', 'USED'.

This report and any oral statements made in connection with it are statements of opinion only. The recommendations shall not be construed as authorizing the infringement of any valid patent, and are made without assumption of any liability by Profco, Inc. or any employee of Profco, Inc. (2) LOADS SALT - INVENTORY W/ BECHTEL REP





PROFCO "THE PROFESSIONALS IN DRILLING FLUIDS"

# DRILLING MUD REPORT

REPORT NO. 148

REPORT FOR THURS, MORN

DATE	20 MAR 1986	DEPTH	10,564
STATE	CALIF	COUNTY	IMPERIAL
WELL	CLAIM	SECT	DIDP

OPERATOR <b>BECHTEL CORP./D.O.E.</b>	CONTRACTOR <b>CLEVELAND DRILG CO.</b>	RIG NO. <b>6</b>
ADDRESS	ADDRESS	SPUD DATE <b>24 OCT 86</b>
RIG	RIG	REPORT FOR MR. <b>GERALD REICH</b>
REPORT FOR MR. <b>GERALD REICH</b>	REPORT FOR MR. <b>WILLARD NICKEL</b>	SECTION TOWNSHIP RANGE <b>14-11S-13E</b>
WELL NAME AND NO. <b>KENNECOTT STATE #2-14</b>	FIELD OR BLOCK NO. <b>SALTON SEA</b>	COUNTY, PARISH, OR OFFSHORE AREA <b>IMPERIAL</b>
		STATE OR PROVINCE <b>CALIF.</b>

DRILLING ASSEMBLY			CASING		MUD VOLUME (BBL)		CIRCULATION DATA	
BIT SIZE	TYPE	JET SIZE	13 3/8	Surface 3515	Moist	Pica	Pump Size #1-6x16	Annular Vel. (ft./min.)
DRILL PIPE SIZE	TYPE	LENGTH	9 5/8	Intermediate 5735	Total Circulating Volume		Pump Make NATIONAL	Opposite DP
DRILL PIPE SIZE	TYPE	LENGTH	7 1/2	Production or Liner 10,136	In Storage		Model N-1300	Opposite Collar
DRILL COLLAR SIZE	LENGTH	Mud Type	WATER		Screw/Stroke		Stroke/Min.	Circulating Pressure (psi)
4 3/4 x 2 1/4					Screw/Min.		2 PM	Bottoms up (Min.)
					Screw/Min.			System Total (Min.)

MUD PROPERTIES		* BRANDT EQUIP EQUIPMENT ** KERN COOLERS	
Flowline Temperature	°F	SIZE	SIZE 180X
Time Sample Taken		Cartridge *	Deester (2) *
Depth (ft.)		Displacer (2) **	Shaker (2) RIG 30X R20X
Weight	ppg / lb./cu. ft.	DAILY COST	Other EX-LOG SMITH
Mud Gradient (psi/ft.)		< 519.86 >	CUMULATIVE COST
Funnel Viscosity (sec./100 ml) API at	°F		\$ 441,047.27
Plastic Viscosity cps at	°F	WEIGHT	VISCOSITY
Yield Point (lb./100 sq. ft.)		INCLUDES COST OF PALLETS + RETURN TRUCKING MINUS INVENTORY	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min		LUBRICANT OIL FROM OILS DAT	
pH	Strip / Meter	MUD CONTAINS	
Filtrate API (m/30 min.)		SUGGESTED TREATMENT	
API MP-10T Filtrate (m/30 min.)	°F	GEL	SX
Cake Thickness 32nd in. API	MP-10T	BAR	SX
Alkalinity Mud (Ppm)			SX
Alkalinity Filtrate (PVM)			SX
Salt	ppm / gpg Chloride / ppm / gpg		SX
Calcium	ppm / Gyp (ppb)		SX
Sand Content (% by Vol.)			SX
Solids Content (% by Vol.)			
Oil Content (% by Vol.)			
Water Content (% by Vol.)	Report / Calculated		
Methylene Blue Capacity	ml/ml mud / equiv. #/bbl bent.		

REMARKS—Give operation, depth and nature of any problems encountered

Drilling @

Salt Water flow @

Gas kick @

Stuck pipe @

Tight hole @

Sloughing shale @

Lost Returns @

ENGINEER	HOME ADDRESS	PHONE
MOBILE UNIT	WAREHOUSE LOCATION	PHONE

\* LEFT ON LOCATION

THIS REPORT IS SUBJECT TO THE TERMS AND CONDITIONS AS SET FORTH BELOW.

Products	UNITS PICKED UP		* Cost - Time Summary / 24 Hours Ending		* Depth	Bl. No.—Type	RPM	Wt.	Hours	Footage
	Mtbs-Gallons	Units on Location	Units Used	PICKED UP						
* GEL PROFCO	—	182.5X	* SALT	—	0					
BAR	13		* POTASH	—	360SX					
T-GEL	160		BICARB	87						
T-LIG	31		CSH	174						
T-VIS	93		PELLETS	299						
T-PLX	14		K-SEAL	126						
BIOZAN	24		FIBER	75						
WELPAC	48		SAWDUST	42						
R-TEMP SX	29		CUBES	2						
R-TEMP L	1		NIO	14						
CAUSTIC	26		BOCC	5						
LIME	18		SPA	27						
* HIB-A	—	13 CHS	PALLETS	92	136					
HIB-100	35									
AL STEAR	2									
PHOSPHATE	8									
ANTI FOAM	3									

COMMENTS/REMARKS TO EXPLAIN PRODUCT DAILY USAGE

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TRUCKING - 5 LOADS @ 4 HRS - 20 HRS @ 49.50 = \$ 990.00