

# Appendix J



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## Bit Record



# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 318-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

SF  
216

OPERATOR <b>Bechtel NAT. INC.</b>		CONTRACTOR <b>Cleveland Drilling Co.</b>		RIG NO. <b>6</b>	LEASE <b>KENNECOTT</b>	WELL NO. <b>STATE 2-14</b>	BLOCK
COUNTRY <b>U.S.</b>	STATE <b>CALIFORNIA</b>	COUNTY <b>IMPERIAL</b>	TOWNSHIP <b>11-S</b>	RANGE <b>13-E</b>	SECTION <b>14</b>	Q-SEC	OO-SEC
LATITUDE		LONGITUDE		DRILL PIPE	FIELD <b>SAITON SEA</b>		DO NOT WRITE IN THIS SPACE
<input checked="" type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY TURNKEY NAME		RIGSITE ELEVATION <b>-225.2</b>	OFFSHORE WATER DEPTH	TOOL MAKE <b>4 1/2 IF</b>	SIZE <b>5"</b>	TYPE <b>E-G</b>	TYPE POWER <b>ELECTRIC HP 1700</b>
<input checked="" type="checkbox"/> EXPLORATION <input type="checkbox"/> DEVELOPMENT		WATER SOURCE <b>CANAL</b>	MUD TYPE <b>PRO-TEMP</b>	DRILL COLLAR NO. O.D. <b>6 1/4 XH</b>	I.D. <b>2 1/4</b>	LENGTH <b>360</b>	PUMP NO. 1 MAKE MODEL STROKE <b>NATIONAL N-1300 16"</b>
<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD		DRILL COLLAR NO. O.D.	I.D.	LENGTH	PUMP NO. 2 MAKE MODEL STROKE <b>NATIONAL N-1300 16"</b>	SPUD DATE <b>10-24-85</b> UNDER SURF <b>10-30-85</b> INT DATE T.D. DATE	

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV.	PUMP PRESS	PUMPS		MUD		DULL CODE							REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE									
																No.	Line	WL	Vs.	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	G													
26	8 1/2	Sec	M-44N	BB8513	N	3-13	6166																															
27	8 1/2	Varel	V-617	16926	N	OUT	6227	61	4 1/2	407 3/4	135	5	T.D	3 3/8	1700	2	7	40	8.7	34	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	Turbo		
26 <sup>RE</sup>	8 1/2	Sec	M-44N	BB8513	RR	3-13	6227																													Flow Test well		
28	8 1/2	Sec	M-44N	BB8516	N	3-13	6227	122																														
29	8 1/2	Reed	FP-51	890215	N	OUT	6316	89	5 1/2	407 3/4	161	10	T.D.	3 3/8	1600	1	6 1/2	45	8.7	40	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
30	8 1/2	Htc	J-22	BB8777	N	3-13	6506	190	7	414 1/4	271	25	60	5 1/2	700	1	6 1/2	40	8.6	34	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Pulled F/core	
3A	8 1/2	Varel	V-527	20859	N	3-13	6758	241	10 1/2	424 1/4	229	25	80	-	600	1	6 1/2	40	1120	-	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	Lost Circ	
3A <sup>CH</sup>	8 1/2	Varel	V-627	17697	N	3-13	6880	108	3	428 1/4	36	25	5 1/2	-	600	2	7	40	8.9	27	3	3	4	4	4	5	5	5	5	5	5	5	5	5	5	Pulled T/core		
5 <sup>RR</sup>	8 1/2	N.C.	RC476	011403	RR	TFA .60	6772	14	1/2	425 1/4	7	25	80	-	600	1	6 1/2	40	1120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Cure 50% Rec.		
5 <sup>RR</sup>	8 1/2	N.C.	RC476	011403	RR	TFA .60	6889	9	1	426 3/4	9	10 1/5	40	-	600	1	6 1/2	40	1120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Cure 44% Rec.		
33	8 1/2	Varel	V-527	1861	N	OUT	7100	211	10	436 1/4	211	2 1/2	60	-	500	2	7	40	8.8	26																Pull-d T/core		
5 <sup>RR</sup>	8 1/2	N.C.	RC476	011403	RR	TFA .60	7109	9	1	437 1/4	9	20	40	-	600	1	6 1/2	40	8.8	26																Cure 66% Rec		
33 <sup>RE</sup>	8 1/2	Varel	V-527	4861	RR	OUT	7300	191	10	447 1/4	191	20	90	-	1800	2	7	50	5.7	30	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5			
6 <sup>CH</sup>	8 1/2	N.C.	SC226	011878	N	-	7313	13	2	449 1/4	65	20	50	-	600	1	6 1/2	40	5.7	30																Cure 55% Rec.		
34	8 1/2	N.C.	R-119	011458	N	TFA .04	7349	36	4 1/2	453 3/4	8	2 1/3	90	-	1800	2	7	50	5.7	30	1	1														Cure 55% Rec.		

<p><b>MUD TYPE</b></p> <p>AIR = AIR/GAS DIS = DISPERSED FOA = FOAM GEL = GEL MUD HZO = WATER MIS = MIST NAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWN = SALTWATER MUD</p>	<p><b>DULL CODE</b></p> <p><b>SEALED BEARINGS</b> B1 = BEARING - NO. 1 CORE B2 = BEARING - NO. 2 CORE B3 = BEARING - NO. 3 CORE</p> <p><b>OPEN BEARING</b> 1 TO 8 (8 = FAILED)</p> <p><b>RATE 1 THROUGH 8 - AVERAGE OF ALL CONES</b> 8 = 100% OF ALL TEETH WORN FLAT OR BROKEN</p> <p><b>INGAGE</b> 0 = OUT OF GAGE (AMOUNT NOT MEASURED) 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)</p> <p>NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.</p>	<p><b>REASON PULLED</b></p> <p>BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = CORING CP = CASING POINT CPF = COST PER FOOT DEV = DEVIATION DST = DRILL STEW TEST FC = FORMATION CHANGE HR = HOURS ON BIT</p> <p>L = LOGGING LC = LOST CIRCULATION O = OTHER PJ = PLUGGED JET ROP = RATE OF PENETRATION RR = RIG REPAIR TD = TOTAL DEPTH TQ = TORQUE TW = TWISTED OFF WE = WEATHER WO = WASHOUT</p>	<p><b>COMMENTS DULL CONDITION</b></p> <p>BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORED LC = LOST CORE LI = LOST INSERTS RE = REAMED TT = TRACKING WO = WASHOUT WT = WORN TEETH</p>	<p><b>FORMATION</b></p> <p>AN = ANHYDRITE CC = CONGLOMERATE CH = CHERT CK = CHALK CL = CLAY CO = COAL CT = CEMENT DD = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH</p> <p>GY = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REBED SA = SALT SD = SAND SH = SHALE SS = SANDSTONE ST = SILTSTONE</p>
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# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

BIT RECORD DATA BASE DOCUMENT NUMBER

25  
2/6

TOOL PUSHER \_\_\_\_\_ SMITH REPRESENTATIVE \_\_\_\_\_ EMP I.D. \_\_\_\_\_

OPERATOR Bechtel Nat. Inc. CONTRACTOR Michael Dwyer Co. RIG NO. 10 LEASE Kennecott WELL NO. STATE 2-14 BLOCK \_\_\_\_\_

COUNTRY US STATE California COUNTY Imperial TOWNSHIP 11.5 RANGE 13.5 E SECTION 14 Q-SEC \_\_\_\_\_ QO-SEC \_\_\_\_\_ FIELD Saltton 500

LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DRILL PIPE \_\_\_\_\_ DRAW WORKS National 110 HE SPUD DATE 10-24-85

DAYWORK  FOOTAGE  TURNKEY  TURNKEY NAME \_\_\_\_\_ RIGSITE ELEVATION -225.2 OFFSHORE WATER DEPTH \_\_\_\_\_ TOOL JOINT 1 1/2 TF MAKE 5 TYPE E.G. TYPE POWER Electric HP 1700 UNDER SURF 10-30-85

EXPLORATION  DEVELOPMENT  TIGHT HOLE  ESTIMATED BIT RECORD \_\_\_\_\_ DRILL COLLAR NO. \_\_\_\_\_ O.D. \_\_\_\_\_ I.D. \_\_\_\_\_ LENGTH \_\_\_\_\_ PUMP NO. 1 MAKE National MODEL N-1300 STROKE 16" INT DATE \_\_\_\_\_

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS			MUD					REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE				
																No.	Line	SPM	Wt.	Vis.	T <sub>1</sub>	T <sub>2</sub>	R <sub>1</sub>				R <sub>2</sub>	R <sub>3</sub>	G	
35	8 1/2	Varel	V-527	6948	N	3-16	7547	191	9	465 3/4	21.2	40	6070	5°	1500	2	7	52	8.7	40	3	3	3	3	3	I		Pulled 1/2 core		
6 <sup>RE</sup>	8 1/2	N.C.	SC-226	011878	RR	-	7577	30	3 1/2	469 1/4	8.5	20	40	-	900	2	7	40	8.7	40									Rec 92% Rec.	
35 <sup>RE</sup>	8 1/2	Varel	V-527	6948	RR	3-16	7704	127	6	475 1/4	21.1	40	60	6 1/2	1600	2	7	56	8.8	33	4	4	4	4	4	I		Pulled 1/2 core		
6 <sup>RE</sup>	8 1/2	N.C.	SC-226	011878	PR	-	7734	30	3	478 1/4	10	20	40	-	900	2	7	40	8.8	33									Rec 100% Rec.	
36	8 1/2	Varel	V-527	5038	N	OUT	7759	25	3	481 1/4	8.3	1500	-	-	2200	1 1/2	7 1/2	40	8.0	35	5	8	5	5	5	0 1/2		Turbo Drill		
37	8 1/2	Varel	V-627	17685	N	OUT	7794	35	3	484 1/4	11.6	1500	-	-	2200	1 1/2	7 1/2	40	8.0	35	4	4	7	7	7	0 1/2		Turbo Drill		
38	8 1/2	Varel	V-737	19014	N	OUT	7860	66	3 1/2	487 3/4	18.8	1500	-	4 1/2	2300	1 1/2	7 1/2	40	8.0	35	5	5	5	5	5	0 1/2		Turbo Drill		
39	8 1/2	Varel	V-627	15000	N	OUT	7908	48	3	490 1/4	16	1415	-	2 1/2	2300	1 1/2	7 1/2	40	8.0	35	6	6	7	7	7	0 1/2		Turbo Drill		
40	8 1/2	Varel	V-627	18601	N	OUT	7935	27	2	492 3/4	13.5	1415	-	3 1/2	2300	1 1/2	7 1/2	40	8.0	35	6	6	7	7	7	0 1/2		Turbo Drill		
41	8 1/2	Sec	M44N	BB8515	N	3-16	7972	37	3 1/2	496 1/4	10.5	25	50	4 1/2	1100	2	7	40	8.0	39	3	3	4	4	4	I		Reamed 100% Rec. & Drilled 30'		
42	8 1/2	Varel	V-527	5061	N	OUT	8017	45	3	499 1/4	15	1415	-	4 1/2	2200	1 1/2	7 1/2	40	8.9	40	7	7	8	8	8	0 1/2		Turbo Drill		
43	8 1/2	Varel	V-527	5060	N	OUT	8027	16	2	509 1/4	5	1415	-	-	2200	1 1/2	7 1/2	40	8.9	40	7	7	8	8	8	I		Turbo Drill		
34 <sup>RE</sup>	8 1/2	N.C.	R-419	011058	RR	TFA. 04	8070	43	10	519 1/4	4.3	20	60	4 1/2	1500	2	7	53	8.9	38	6	6	7	7	7	I		Reamed 100% Rec. & Drilled 50'		
41 <sup>RE</sup>	8 1/2	Sec	M44N	BB8515	RR	3-16	8126	56	7	526 1/4	8	2 1/2	50	5°	1500	2	7	40	8.9	38	7	7	5	5	5	I		Reamed 100% Rec. & Drilled 50'		
44	8 1/2	Sec	S-86-F	407986	N	OUT	8133	7	2 1/2	528 3/4	2.9	1500	-	-	1500	2	7	40	8.9	38	8	8	7	7	7	0 1/2		Turbo Drill		

<p><b>MUD TYPE</b></p> <p>AR = AIR/GAS DIS = DISPERSED FOA = FOAM GEL = GEL MUD H2O = WATER MIS = MIST NAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWM = SALTWATER MUD</p>	<p><b>DULL CODE</b></p> <p><b>BEARING</b></p> <p>B1 = BEARING - NO. 1 CONE B2 = BEARING - NO. 2 CONE B3 = BEARING - NO. 3 CONE</p> <p><b>SEAL</b></p> <p>S1 = BRC/SEAL EFFECTIVE S2 = BRC/SEAL QUESTIONABLE OR (B = FAILED) S3 = BRC/SEAL FAILURE</p> <p><b>OPEN BEARING</b></p> <p>O1 TO O8</p> <p><b>TEETH</b></p> <p>T1 = INNER ROWS T2 = GAGE ROWS</p> <p><b>INGAGE</b></p> <p>I = INGAGE G = AMOUNT UNDERGAGE</p> <p>NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.</p>	<p><b>REASON PULLED</b></p> <p>BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = DORING CP = CASING POINT CPT = COST PER FOOT DEV = DEVIATION DST = DRILL STEM TEST FC = FORMATION CHANGE HR = HOURS ON BIT</p> <p>L = LOGGING LC = LOST CIRCULATION O = OTHER P = PLUGGED JET ROP = RATE OF PENETRATION RR = RIG REPAIR TD = TOTAL DEPTH TO = TORQUE TW = TWISTED OFF WE = WEATHER WO = WASHOUT</p>	<p><b>COMMENTS DULL CONDITION FORMATION</b></p> <p>BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORROD LC = LOST CONE LI = LOST INSERTS RE = REAMED TT = TRACKING WO = WASHOUT WT = WORN TEETH</p> <p>AN = ANHYDRITE CG = CONGLOMERATE CH = CHERT CK = CHALK CL = CLAY CO = COAL ST = CEMENT DO = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH</p> <p>GY = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REBED SA = SALT SD = SAND SH = SHALE SS = SANDSTONE ST = SILTSTONE</p>
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# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

1.18.15-DO15  
P641

TOOL PUSHER: \_\_\_\_\_ SMITH REPRESENTATIVE: \_\_\_\_\_ EMP I.D.: \_\_\_\_\_

OPERATOR: Bechtel NAT. INC. CONTRACTOR: Cleveland Drilling Co. RIG NO.: 6 LEASE: Kennecott WELL NO.: STATE 2-14 BLOCK: \_\_\_\_\_

COUNTRY: U.S. STATE: California COUNTY: Imperial TOWNSHIP: 11-S RANGE: 13-E SECTION: 14 Q-SEC: \_\_\_\_\_ QQ-SEC: \_\_\_\_\_ FIELD: SALTON SEA

LATITUDE:  N  S LONGITUDE:  E  W

DRILL PIPE: \_\_\_\_\_ DRAW WORKS: NATIONAL 110 UE SPUD DATE: 10-24-85

DAYWORK  FOOTAGE  TURNKEY  TURNKEY NAME: \_\_\_\_\_ RIGSITE ELEVATION: -225.2 OFFSHORE WATER DEPTH: \_\_\_\_\_ TOOL JOINT: 4 1/2 IF MAKE: 5" SIZE: E-G TYPE: \_\_\_\_\_ TYPE POWER: Electric HP: 1700 UNDER SURF: 10-30-85

EXPLORATION  TIGHT HOLE  ESTIMATED BIT RECORD DRILL COLLAR NO. O.D. I.D. LENGTH PUMP NO. 1 MAKE MODEL STROKE INT DATE

DRILL COLLAR NO. O.D. I.D. LENGTH PUMP NO. 2 MAKE MODEL STROKE T.D. DATE

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS			MUD							REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE		
																No.	Line	SPM	Wt.	Vs.	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>				G	
4 <sup>RR</sup>	17 1/2	HTC	JAT	KH-078	RR	1/8 2-20	3000	Ream 30"	1 1/2	120 1/2	20	10/30	120	-	1200	1/2	7"	3/4	9.4	38	1	1	3	3	3	I	L	Casing Point (chg)		
4 <sup>RR</sup>	17 1/2	"	"	"	"	"	3078	78'	5 1/2	126	14.1	15/30	120	-	1200	1	7"	56	9.4	35	7	7	8	8	8	-		LC=2		
-	11 3/4	N.L.	Magnet	-	-	-	3078'	-	1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		Fish P/Cones		
-	17 1/2	N.L.	Mill	-	-	-	3080'	2	4	130	1/2	4/8	50	-	700	1/2	7"	40	9.3	38	Ringed out							Mill on Cones		
-	14 3/4	N.L.	Globe Basket	-	-	-	3087'	7	4	134	1 3/4	"	"	-	"	"	"	"	"	"	Recovered	1/20 of cone	1/40 of cone							
5	17 1/2	Sec	S-35J	435538	N	3-18	3107'	20'	1/2	134 1/2	40	15/30	120	3 <sup>RD</sup>	1300	1/2	7"	3/4	9.3	40	INC							Pull T/core		
1 <sup>RR</sup>	9 7/8	NORTHON CHAIS	R476		RR	TFA 1.0	3668'	60'	8 1/2	133	2 1/2	25	70	-	400	1	7"	23	9.3	36								Recovered 54.7 = 91%		
5 <sup>RR</sup>	17 1/2	Sec	S-35J	435538	RB	3-18	3431	264	13	150	20.3	25	120	3 <sup>RD</sup>	1300	1/2	7"	3/4	9.3	40	5	5	6	6	6	6	6	6	6	6
6	17 1/2	Sec	S4TJ	985668	RT	3-18	3470	39	2	152	19.5	25	120	3 <sup>RD</sup>	1300	"	"	"	"	"	INC								Pull T/core	
1 <sup>RR</sup>	9 7/8	N.C.	R476		RR	TFA 1.0	3506'	35	5 1/2	157 1/2	6.3	25	70	-	400	1	7"	23	9.3	40									Recovered 34' = 97%	
6 <sup>RR</sup>	17 1/2	Sec	S4TJ	985668	RT	3-18	3515'	10	1 1/2	159	6.6	25	120	3 <sup>RD</sup>	1300	1/2	7"	3/4	9.3	40	3	3	4	4	4	4	I		13 3/4" Casing PT.	
7	12 1/4	Sec	FDT	EK 2792	RT	2-12	3530	15	1/2	159 1/2	30	10	120	-	1100	1	7"	50	9.2	32	7	7	4	4	4	4	0 1/8		Pull F/CBL.	
8	12 1/4	Varel	L-114	6142	N	2-12	3790	260	14 1/2	174	12.9	20 1/2	120	3 <sup>RD</sup>	1500	1	7"	40	9.4	40	6	6	6	6	6	6	I			
2 <sup>CH</sup>	9 7/8	N.C.	RC-476	0112308	N	TFA 1.0	3850	60	5 1/2	179 1/2	10.9	19 1/5	60	-	325	1	7"	20	9.3	37								Recovered 56.6 = 94%		
9	12 1/4	Varel	L-114	6120	N	2-12	4007	157	7	186 1/2	22.4	20 1/5	120	3 <sup>RD</sup>	1250	1	7"	48	9.4	37	4	4	4	4	4	I		Pull T/core		

MUD TYPE

AIR = AIR/GAS  
DIS = DISPERSED  
FOA = FOAM  
GEL = GEL MUD  
H2O = WATER  
MIS = MIST  
NAT = NATIVE/SPUD  
OIL = OIL BASE  
POL = POLYMER MUD  
SWM = SALT WATER MUD

DULL CODE

SEAL BEARINGS 1 TO 8  
3 = BRG/SEAL EFFECTIVE  
4 = BRG/SEAL QUESTIONABLE OR (B = FAILED)  
5 = BRG/SEAL FAILURE  
8 = BRG/SEAL FAILURE

OPEN BEARING  
RATE 1 THROUGH 8 - AVERAGE OF ALL CONES  
8 = 100% OF ALL TEETH WORN FLAT OR BROKEN

1 = INGEST  
0 = OUT OF GAGE (AMOUNT NOT MEASURED)  
1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)

G = AMOUNT UNDERGAGE

NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.

REASON PULLED

BHA = CHANGE BHA  
BOP = TEST BOP  
CH = CONDITION HOLE  
CO = CORING  
CP = CASING POINT  
CPT = COST PER FOOT  
DEV = DEVIATION  
DST = DRILL STEM TEST  
FC = FORMATION CHANGE  
HR = HOURS ON BIT

L = LOGGING  
LC = LOST CIRCULATION  
O = OTHER  
PI = PLUGGED JET  
RDP = RATE OF PENETRATION  
RR = RIG REPAIR  
TD = TOTAL DEPTH  
TQ = TORQUE  
TW = TWISTED OFF  
WE = WEATHER  
WO = WASHOUT

COMMENTS DULL CONDITION FORMATION

BF = BEARING/SEAL FAILURE  
BT = BROKEN/CHIPPED TEETH  
BU = BIT BALLED UP  
CO = CORED  
LC = LOST CONE  
LI = LOST INSERTS  
RE = REAMED  
TT = TRACKING  
WO = WASHOUT  
WT = WORN TEETH

FORMATION

AN = ANHYDRITE  
CC = CONGLOMERATE  
CH = CHERT  
CK = CHALK  
CL = CLAY  
CO = COAL  
CG = CEMENT  
DO = DOLOMITE  
EV = EVAPORITES  
GR = GRANITE  
GU = GUMBO  
GW = GRANITE WASH

GY = GYPSUM  
LS = LIMESTONE  
MA = MARL  
MU = MUDDSTONE  
PY = PYRITE  
QT = QUARTZITE  
RB = REDBED  
SA = SALT  
SD = SAND  
SH = SHALE  
SS = SANDSTONE  
ST = SILTSTONE

1.18.15-DO15  
-P641

# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

TOOL PUSHER										SMITH REPRESENTATIVE										EMPT. D.												
OPERATOR Bechtel Nat. Inc.					CONTRACTOR Cleveland Drilling Co					RIG NO. 6		LEASE Kennebec			WELL NO. STATE 2-14			BLOCK														
COUNTRY US		STATE California		COUNTY Imperial			TOWNSHIP 11-S		RANGE 13-E		SECTION 14		Q-SEC		QO-SEC		FIELD SALTON SEA		DO NOT WRITE IN THIS SPACE													
LATITUDE <input type="checkbox"/> N <input type="checkbox"/> S		LONGITUDE <input type="checkbox"/> E <input type="checkbox"/> W		DRILL PIPE		DRAW WORKS NATION 11D UE		SPUD DATE 10-24-85		RIGSITE ELEVATION -225.2		OFFSHORE WATER DEPTH		TOOL JOINT 4 1/2 IF		MAKE 5"		TYPE E-G		HP 1700		UNDER SURF 10-30-85										
<input checked="" type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY		WATER SOURCE CANAL		MUD TYPE Sea-Temp		DRILL COLLAR NO. 7		O.D. 9"		I.D. 2 3/4"		LENGTH 211"		PUMP NO. 1		MAKE NATIONAL		MODEL N-1300		STROKE 16"		INT. DATE										
<input type="checkbox"/> EXPLORATION <input type="checkbox"/> DEVELOPMENT		<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD		DRILL COLLAR NO.		O.D.		I.D.		LENGTH		PUMP NO. 2		MAKE NATIONAL		MODEL N-1300		STROKE 16"		I.D. DATE												
BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS		MUD							DULL CODE	REASON PULLED	COMMENTS					
2 <sup>CH</sup>	9 7/8	NC	RC-476	0112308	RR	TFA 1.0	4067	60	5	19 1/2	12	10 1/5	60	3 1/2	375	17"	20	9.4	37													Recovered 60' = 100%
10	12 1/4	Reed	11J	146812	RT	1-11 1-12 1-16	4241	174	9	200 1/2	19.3	20 1/2	130	3 1/2	1250	17"	48	9.4	37	5	5	7	7	7	I					Pull F/CORE		
2 <sup>CH</sup>	9 7/8	NC	RC-476	0112308	RR	TFA 1.0	4334	93	7 1/2	208	12.4	19 1/5	60	-	375	17"	20	9.4	35												97% Recovery	
11	12 1/4	Varel	V-517	19898	N	3-12	4641	307	22	230	13.9	25 1/35	50	4 1/2	1400	17"	40	9.3	38	2	8	3	3	3	0 1/8					BROKEN GAGE INSERTS		
12	12 1/4	Varel	L-126	20576	N	3-12	4643	365 <sup>R</sup> 2-2	8	-	-	15 1/20	50	-	1400	17"	40	9.3	38	5	5	4	4	4	I					Reamed 365' Drill 2'		
3 <sup>CH</sup>	9 7/8	NC	MG201	0111961	N	TFA 1.55	4686	43	5 1/2	235 1/2	8.2	15 1/20	60	-	400	17"	20	9.2	38												100% Rec (33.3% Rec)	
13	12 1/4	Varel	L-126	20571	N	3-12	4710	24	1 1/2	237	16	10 1/5	120	-	1600	17"	49	9.2	34	5	5	1	1	1	0 1/16					Lost 4 Stab Blades in Hole		
12 <sup>CH</sup>	12 1/4	Varel	L-126	20576	RR	OUT	4710																								Ream	
	11 3/4	N.L.	Globe Basket		N	L	4710																									
1 <sup>3</sup>	12 1/4	N.L.	Mill	3-ends	N		4722	12	10 1/2	247 1/2	-	5	7 1/80	-	400	17"	40	9.1	42												Milled on Stab Blades	
14	12 1/4	Sec	S-44G	318488	N	3-12	4943	221	18 1/2	266	11.9	35	5 1/2	1500	17"	50	8.9	42	8	8	4	4	4	4	0 1/16							
15	12 1/4	Varel	V-517	20658	N	3-13	5188	245	22 1/2	288 1/2	10.8	35	5 1/2	1600	17"	50	9.0	44	2	2	2	2	2	2	I					Pull T/CORE		
3 <sup>CH</sup>	9 7/8	NC	MG201	0111961	RB	TFA 1.55	5218	30	9	297 1/2	3.3	10	80	-	1500	17"	40	9.0	44												(100% Rec)	
15 <sup>CH</sup>	12 1/4	Varel	V-517	20658	RR	3-13	5381	163	9 1/2	307	17.1	20	8.5	6 1/2	1500	17"	40	9.0	44	2	2	2	2	2	I							
17	12 1/4	SEC	S-33	323875	N	3-13	5422	41	6 1/2	313 1/2	6.3	20	8.5	7 3/8	1300	17"	50															

MUD TYPE  
 AIR = AIR/GAS  
 DIS = DISPENSED  
 FOA = FOAM  
 GEL = GEL MUD  
 H2O = WATER  
 M/S = MIST  
 NAT = NATIVE/SPUD  
 OIL = OIL BASE  
 POL = POLYMER MUD  
 SWM = SALTWATER MUD

DULL CODE  
 SEALED BEARINGS  
 B1 = BEARING - NO. 1 CONE  
 B2 = BEARING - NO. 2 CONE  
 B3 = BEARING - NO. 3 CONE  
 T1 = INNER ROWS  
 T2 = GAGE ROWS  
 G = AMOUNT UNDERGAGE  
 OPEN BEARING  
 1 TO 8  
 3 = BRG/SEAL EFFECTIVE  
 5 = BRG/SEAL QUESTIONABLE OR (8 = FAILED)  
 8 = BRG/SEAL FAILURE  
 RATE 1 THROUGH 8 - AVERAGE OF ALL CONES  
 8 = 100% OF ALL TEETH WORN FLAT OR BROKEN  
 1 = INGAGE  
 0 = OUT OF GAGE (AMOUNT NOT MEASURED)  
 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)

NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.

REASON PULLED  
 BHA = CHANGE BHA  
 BOP = TEST BOP  
 CH = CONDITION HOLE  
 CD = CORING  
 CP = CASING POINT  
 CPF = COST PER FOOT  
 DEV = DEVIATION  
 DST = DRILL STEM TEST  
 FC = FORMATION CHANGE  
 HR = HOURS ON BIT  
 L = LOGGING  
 LC = LOST CIRCULATION  
 O = OTHER  
 P = PLUGGED JET  
 RCP = RATE OF PENETRATION  
 RR = RIG REPAIR  
 TD = TOTAL DEPTH  
 TQ = TORQUE  
 TW = TWISTED OFF  
 WE = WEATHER  
 WO = WASHOUT

COMMENTS DULL CONDITION  
 BF = BEARING/SEAL FAILURE  
 BT = BROKEN/CHIPPED TEETH  
 BU = BIT BALLED UP  
 CO = CORED  
 LC = LOST CONE  
 LI = LOST INSERTS  
 RE = REAMED  
 TT = TRACKING  
 WO = WASHOUT  
 WT = WORN TEETH

FORMATION  
 AN = ANHYDRITE  
 CG = CONGLOMERATE  
 CH = CHERT  
 CL = CHALK  
 CR = CLAY  
 CT = CEMENT  
 DO = DOLOMITE  
 EV = EVAPORITES  
 GR = GRANITE  
 GU = GUMBO  
 GW = GRANITE WASH  
 GY = GYPSUM  
 LS = LIMESTONE  
 MA = MARL  
 MU = MUDSTONE  
 PY = PYRITE  
 QT = QUARTZITE  
 RB = REDBED  
 SA = SAND  
 SD = SAND  
 SH = SHALE  
 SS = SANDSTONE  
 ST = SILTSTONE



# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

DØ15-P641

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

OPERATOR <b>Bechtel NAT. Inc.</b>		CONTRACTOR <b>Cleveland Drilling Co.</b>		RIG NO. <b>6</b>	LEASE <b>KENNECOTT</b>	WELL NO. <b>STATE 2-14</b>	BLOCK
COUNTRY <b>U.S.</b>	STATE <b>CALIFORNIA</b>	COUNTY <b>Imperial</b>	TOWNSHIP <b>11-S</b>	RANGE <b>13-E</b>	SECTION <b>14</b>	Q-SEC	OO-SEC
LATITUDE <input type="checkbox"/> N <input type="checkbox"/> S		LONGITUDE <input type="checkbox"/> E <input type="checkbox"/> W		DRILL PIPE	FIELD <b>SALTAN SEA</b>	DO NOT WRITE IN THIS SPACE	
<input checked="" type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY TURNKEY NAME	RIGSITE ELEVATION <b>-225.2</b>	OFFSHORE WATER DEPTH		TOOL JOINT MAKE <b>4 1/2 IF</b>	SIZE <b>5"</b>	TYPE <b>E-G</b>	TYPE POWER <b>ELECTRIC HP 1700</b>
WATER SOURCE <b>CANAL</b>	MUD TYPE <b>PRO-TEMP</b>	DRILL COLLAR NO. <b>6 1/4 XH</b>	O.D. <b>2 1/4</b>	I.D. <b>360</b>	LENGTH	PUMP NO. 1 MAKE <b>NATIONAL N-1300</b>	MODEL <b>16"</b>
<input checked="" type="checkbox"/> EXPLORATION <input type="checkbox"/> DEVELOPMENT	<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD	DRILL COLLAR NO.	O.D.	I.D.	LENGTH	PUMP NO. 2 MAKE <b>NATIONAL N-1300</b>	MODEL <b>16"</b>

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS			MUD		DULL CODE							REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE				
																No.	Liner	SPM	Wt.	Via.	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	G								
26	8 1/2	Sec	M-41N	BB8513	N	3-13	6166																											
27	8 1/2	Varel	V-617	16926	N	OUT	6227	61	4 1/2	407 1/4	13.5	5	T.D.	3°	1700	1/2	7"	40	8.7	34	7	7	7	7	7	7	0 1/4						Turbo	
26 <sup>RR</sup>	8 1/2	Sec	M-41N	BB8513	RR	3-13	6227																											Flow Test well
28	8 1/2	Sec	M-41N	BB8516	N	3-13	6227	122																										
29	8 1/2	Reed	FP-51	890265	N	OUT	6316	89	5 1/2	407 1/4	16.1	10	T.D.	3°	1600	1	6 1/2"	45	8.7	40	7	7	7	7	7	7	I							
30	8 1/2	Htc	J-22	BB8777	N	3-13	6506	190	7	474 1/4	27.1	25	60	5°	700	1	1 1/2"	40	8.6	34	2	2	2	2	2	2	I							Pulled F/Coac.
31	8 1/2	Varel	V-627	20859	N	3-13	6758	241	10 1/2	424 1/4	22.9	25	80	-	600	1	6 1/2"	40	11.20	-	2	2	4	4	4	0 1/8								Lost Circ
32 <sup>RR</sup>	8 1/2	Varel	V-627	17697	N	3-13	6880	108	3	428 1/4	36	25	59/60	-	600	2	7"	40	8.9	27	3	3	4	4	5	0 1/8								Pulled T/Coac.
5 <sup>RR</sup>	8 1/2	N.C.	RC476	0111403	RR	TFA .60	6772	14	1/2	425 1/4	7	25	80	-	600	1	6 1/2"	40	11.20	-	-	-	-	-	-	-								Coac 50% Rec.
1 <sup>RR</sup>	8 1/2	N.C.	RC476	0111403	RR	TFA .60	6889	9	1	426 1/4	9	10 1/5	40	-	600	1	6 1/2"	40	11.20	-	-	-	-	-	-	-								Coac 44% Rec.
25	8 1/2	Varel	V-627	4861	N	OUT	7100	211	10	436 1/4	21.1	2 1/2	60	-	500	2	7"	40	8.8	26														Pulled T/Coac
5 <sup>RR</sup>	8 1/2	N.C.	RC476	0111403	RR	TFA .60	7109	9	1	437 1/4	9	20	40	-	600	1	6 1/2"	40	8.8	26	-	-	-	-	-	-								Coac 16 2/3 Rec.
33 <sup>RR</sup>	8 1/2	Varel	V-627	4861	RR	OUT	7300	191	10	447 1/4	19.1	20	90	-	1800	2	7"	50	8.7	30	2	2	5	5	5	I								
6 <sup>RR</sup>	8 1/2	N.C.	SC226	0111878	N	-	7313	13	2	449 1/4	6.5	20	50	-	600	1	6 1/2"	40	8.7	30														Coac 85% Rec.
34	8 1/2	N.C.	R-419	0111058	N	TFA .04	7349	36	4 1/2	453 1/4	8	2 1/2	90	-	1800	2	7"	50	8.7	30	1	1												W/Chap. by N.C. STANTA PAX

<b>MUD TYPE</b> AIR = AIR/GAS DIS = DISPENSED FOM = FOAM GEL = GEL MUD H2O = WATER MISO = MIST NAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWM = SALTWATER MUD	<b>DULL CODE</b> B1 = BEARING - NO. 1 CONE B2 = BEARING - NO. 2 CONE B3 = BEARING - NO. 3 CONE T1 = INNER ROWS T2 = GAGE ROWS C = AMOUNT UNDERGAGE NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.	<b>SEALING BEARINGS</b> 3 = BRG/SEAL EFFECTIVE 5 = BRG/SEAL QUESTIONABLE OR (B = FAILED) 8 = BRG/SEAL FAILURE <b>OPEN BEARINGS</b> RATE 1 THROUGH 8 - AVERAGE OF ALL CONES 9 = 100% OF ALL TEETH WORN FLAT OR BROKEN 1 = IRGAGE 0 = OUT OF GAGE (AMOUNT NOT MEASURED) 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)	<b>REASON PULLED</b> BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = CORING CP = CASING POINT CPF = COST PER FOOT DEV = DEVIATION DST = DRILL STEM TEST FC = FORMATION CHANGE HR = HOURS ON BIT L = LOGGING LC = LOST CIRCULATION O = OTHER PI = PLUGGED JET ROP = RATE OF PENETRATION RR = RIG REPAIR TD = TOTAL DEPTH TQ = TORQUE TW = TWISTED OFF FC = FORMATION CHANGE WE = WEATHER WO = WASHOUT	<b>COMMENTS - DULL CONDITION</b> BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORED LC = LOST CONE LI = LOST INSERTS RE = REAMED TT = TRACKING WD = WASHOUT WT = WORN TEETH	<b>FORMATION</b> AN = ANHYDRITE CC = CONGLOMERATE CH = CHERT CL = CLAY CO = COAL CT = CEMENT DD = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH GY = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REDBED SA = SALT SD = SAND SH = SHALE SS = SANDSTONE ST = SILTSTONE
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1018015-0015  
-P641

# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

OPERATOR		CONTRACTOR		TOOL PUSHER		SMITH REPRESENTATIVE		EMP. I.D.																					
Bechtel Nat. Inc		Cleveland Drilling Co.		RIG NO. 6		LEASE KENNACOTT		WELL NO. STATE 2-14																					
BLOCK		COUNTRY US		STATE California		COUNTY Imperial		TOWNSHIP 11-S																					
RANGE 13-E		SECTION 14		Q-SEC		QQ-SEC		FIELD SALTON SEA																					
LATITUDE		LONGITUDE		DRILL PIPE		DRAW WORKS		SPUD DATE																					
NATIONAL 110 UE		10-24-85																											
<input type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY <input type="checkbox"/> TURNKEY NAME		RIGSITE ELEVATION -225.2		OFFSHORE WATER DEPTH		TOOL JOINT MAKE 4 1/2" FF		SIZE 5"																					
TYPE E-G						PUMP NO. 1 MAKE NATIONAL N-1300		STROKE 16"																					
<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD		WATER SOURCE Canal		MUD TYPE ProTemp		DRILL COLLAR NO. 6 1/4 XH		I.D. 2 1/4																					
						PUMP NO. 2 MAKE NATIONAL N-1300		STROKE 16"																					
B. NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TRA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV.	PUMP PRESS	PUMPS		MUD		DULL CODE		REASON PULLED	COMMENTS	DULL CONDITION FORMATION					
																No.	Liner	SPM	Wt.	Vs.	T <sub>1</sub>				T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	G
35	8 1/2	Varel	V527	6948	N	3-16	7547	191	9	465 3/4	21.2	40	60 7/10	53	1500	2	7"	52	8.7	40	3	3	3	3	3	I		Pulled T/Corc	
6 <sup>th</sup>	8 1/2	N.C.	50226	0111878	RR	-	7577	30	3 1/2	469 1/4	8.5	20	40	-	900	2	7"	40	8.7	40	-	-	-	-	-	-		Core 92% Rec.	
35 <sup>th</sup>	8 1/2	Varel	V527	6948	RR	3-16	7704	127	6	475 1/4	21.1	40	60	6 1/2	1600	2	7"	56	8.8	33	4	4	4	4	4	I		Pulled T/Corc	
6 <sup>th</sup>	8 1/2	N.C.	50226	0111878	RR	-	7734	30	3	478 1/4	10	20	40	-	900	2	7"	40	8.8	33	-	-	-	-	-	-		Core 100% Rec.	
36	8 1/2	Varel	V527	5038	N	OUT	7259	25	3	481 1/4	8.3	15 1/20	-	2200	1/2	7/8"	1 1/2	8.8	35	8	8	5	5	5	0 1/8			Turbo Drill	
37	8 1/2	Varel	V627	17685	N	OUT	7794	35	3	484 1/4	11.6	15 1/20	-	2200	1/2	7/8"	1 1/2	9.0	35	4	4	7	7	7	0 1/8			Turbo Drill	
38	8 1/2	Varel	V737	19014	N	OUT	7860	66	3 1/2	487 3/4	18.8	15 1/20	-	4 20	2300	1/2	7/8"	1 1/2	9.0	40	8	8	8	8	8	0 1/2			Turbo Drill
39	8 1/2	Varel	V627	18000	N	OUT	7908	48	3	480 1/4	16	19 1/5	-	2 15	2300	1/2	7/8"	1 1/2	9.0	40	8	8	7	7	7	0 1/2			Turbo Drill
40	8 1/2	Varel	V627	18601	N	OUT	7935	27	2	482 3/4	13.5	19 1/5	-	3 45	2200	1/2	7/8"	1 1/2	9.0	39	6	6	7	7	7	0 3/8			Turbo Drill
42	8 1/2	Sec	M44N	BB8515	N	3-16	7972	37	3 1/2	496 1/4	12.5	25	80	4 45	1000	2	7"	40	9.0	39	3	3	4	4	4	I		Ream Turbo Hole & Drilled 32'	
42	8 1/2	Varel	V527	5061	N	OUT	8017	45	3	499 1/4	15	19 1/5	-	4 15	2200	1/2	7/8"	1 1/2	8.9	40	7	7	8	8	8	0 3/8			Turbo Drill
43	8 1/2	Varel	V527	5060	N	OUT	8027	10	2	509 1/4	5	19 1/5	-	-	2200	1/2	7/8"	1 1/2	8.9	40	7	7	8	8	8	I			Turbo Drill
34 <sup>th</sup>	8 1/2	N.C.	R419	0111058	RR	TEA.04	8070	43	10	519 1/4	4.3	20	60	4 15	1500	2	7"	53	8.9	38	Good shape						STRATA PAV on Turbo Drill Reamed Turbo Hole & Drilled 52'		
41 <sup>st</sup>	8 1/2	Sec	M44N	BB8515	RR	3-16	8126	56	7	526 1/4	8	20 1/5	80	5 15	1500	2	7"	40	8.9	38	7	7	5	5	5	I			Turbo Drill
44	8 1/2	Sec	S-86-F	407986	N	OUT	8133	7	2 1/2	528 3/4	2.8	15 1/20	-	-	1500	1/2	7/8"	1 1/2	8.9	38	8	8	7	7	7	0 1/4			Turbo Drill



# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

0015-8641

(609) 395-5222  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

TOOL PUSHER SMITH REPRESENTATIVE EMP. I.D.

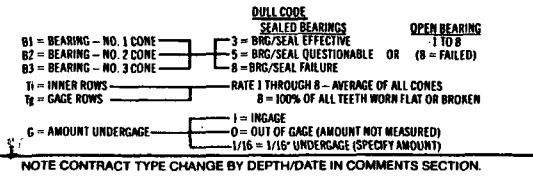
OPERATOR <i>Bechtel Nat. Inc.</i>		CONTRACTOR <i>Cleveland Drilling Co.</i>		RIG NO. <i>6</i>	LEASE <i>Kennelton</i>	WELL NO. <i>State 2-11</i>	BLOCK
COUNTRY <i>U.S.</i>	STATE <i>California</i>	COUNTY <i>Imperial</i>	TOWNSHIP <i>11-S</i>	RANGE <i>13-E</i>	SECTION <i>14</i>	Q-SEC	QQ-SEC
LATITUDE	LONGITUDE		DRILL PIPE	FIELD <i>SALTON SEA</i>		DRAW WORKS <i>NATIONAL 110 UE</i>	

DO NOT WRITE IN THIS SPACE

<input checked="" type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY TURNKEY NAME	RIGSITE ELEVATION <i>-225.2</i>	OFFSHORE WATER DEPTH	TOOL JOINT <i>4 1/2 TF</i>	MAKE <i>5"</i>	SIZE <i>E-G</i>	TYPE <i>E-G</i>	PUMP NO. 1 <i>NATIONAL N-1340</i>	MAKE <i>HP 1700</i>	MODEL <i>STROKE 16</i>	STROKE	SPUD DATE <i>10-24-85</i>	UNDER SURF <i>10-26-85</i>	INT. DATE	T.O. DATE
<input checked="" type="checkbox"/> EXPLORATION <input type="checkbox"/> DEVELOPMENT	<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD	DRILL COLLAR NO. O.D. I.D. LENGTH	DRILL COLLAR NO. O.D. I.D. LENGTH	PUMP NO. 2 <i>NATIONAL N-1340</i>		MAKE <i>HP 1700</i>	MODEL <i>STROKE 16</i>	STROKE						

BIT NO.	BIT SIZE	BIT MFOR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR IFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT. DEV.	PUMP PRESS.	PUMPS			MUD		DULL CODE							REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE		
																No.	Liner	SPM	WT.	VOL.	F <sub>1</sub>	F <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	G						
<i>6<sup>TH</sup></i>	<i>8 1/2</i>	<i>N.C.</i>	<i>SC226</i>	<i>011878</i>	<i>RR</i>	<i>-</i>	<i>8100</i>	<i>1978</i>	<i>5</i>	<i>535 3/4</i>	<i>5.6</i>	<i>1700</i>	<i>45</i>	<i>-</i>	<i>1000</i>	<i>2</i>	<i>76</i>	<i>41</i>	<i>8.3</i>	<i>H<sub>2</sub>O</i>											<i>Core 100% Rec</i>	
<i>45</i>	<i>8 1/2</i>	<i>Src.</i>	<i>M41N</i>	<i>BB8511</i>	<i>N</i>	<i>CUT</i>	<i>8161</i>	<i>Rnm</i>																						<i>Permitted 100% Rec</i>		
<i>46</i>	<i>8 1/2</i>	<i>Varel</i>	<i>V-627</i>	<i>16977</i>	<i>N</i>	<i>3-13</i>	<i>8335</i>	<i>234</i>	<i>14</i>	<i>547 3/4</i>	<i>16.7</i>	<i>3535</i>	<i>30</i>	<i>4 1/2</i>	<i>1000</i>	<i>2</i>	<i>7"</i>	<i>40</i>	<i>8.7</i>	<i>30</i>	<i>1</i>	<i>1</i>	<i>7</i>	<i>7</i>	<i>7</i>	<i>I</i>			<i>Pulled 7/cure</i>			
<i>6<sup>TH</sup></i>	<i>8 1/2</i>	<i>N.C.</i>	<i>SC226</i>	<i>011878</i>	<i>RR</i>	<i>-</i>	<i>8102</i>	<i>7</i>	<i>2</i>	<i>549 3/4</i>	<i>3.5</i>	<i>25</i>	<i>40</i>	<i>-</i>	<i>1000</i>	<i>1</i>	<i>6"</i>	<i>40</i>	<i>8.7</i>	<i>30</i>										<i>Core 90% Rec</i>		
<i>47</i>	<i>8 1/2</i>	<i>Varel</i>	<i>V-627</i>	<i>22152</i>	<i>N</i>	<i>3-13</i>	<i>8555</i>	<i>153</i>	<i>7</i>	<i>552 3/4</i>	<i>2.1</i>	<i>35</i>	<i>80</i>	<i>4 1/2</i>	<i>1300</i>	<i>2</i>	<i>7"</i>	<i>47</i>	<i>8.6</i>	<i>26</i>	<i>1</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>1/8</i>			<i>Pulled 7/cure</i>			
<i>6<sup>TH</sup></i>	<i>8 1/2</i>	<i>N.C.</i>	<i>SC226</i>	<i>011878</i>	<i>RR</i>	<i>-</i>	<i>8604</i>	<i>19</i>	<i>2 1/2</i>	<i>559 1/4</i>	<i>2.6</i>	<i>25</i>	<i>40</i>	<i>-</i>	<i>1000</i>	<i>1</i>	<i>6"</i>	<i>40</i>	<i>8.6</i>	<i>H<sub>2</sub>O</i>										<i>Core 76% Rec</i>		
<i>48</i>	<i>8 1/2</i>	<i>ITC</i>	<i>J-44</i>	<i>BB9214</i>	<i>N</i>	<i>12-13-14</i>	<i>8800</i>	<i>196</i>	<i>9</i>	<i>568 1/4</i>	<i>21.7</i>	<i>35</i>	<i>80</i>	<i>3 3/4</i>	<i>1000</i>	<i>1</i>	<i>6"</i>	<i>38</i>	<i>8.1</i>	<i>26</i>	<i>7</i>	<i>7</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>I</i>			<i>Pulled 7/cure</i>			
<i>6<sup>TH</sup></i>	<i>5 1/2</i>	<i>N.C.</i>	<i>SC2-6</i>	<i>011878</i>	<i>RR</i>	<i>-</i>	<i>5507</i>	<i>7</i>	<i>2</i>	<i>570 1/4</i>	<i>3.5</i>	<i>25</i>	<i>40</i>	<i>-</i>	<i>1000</i>	<i>1</i>	<i>6"</i>	<i>38</i>	<i>8.7</i>	<i>29</i>										<i>Core 64% Rec</i>		
<i>49</i>	<i>8 1/2</i>	<i>Varel</i>	<i>V-527</i>	<i>22275</i>	<i>N</i>	<i>3-15</i>	<i>9004</i>	<i>197</i>	<i>7</i>	<i>577 1/4</i>	<i>23.1</i>	<i>35</i>	<i>80</i>	<i>3 1/2</i>	<i>1100</i>	<i>2</i>	<i>7"</i>	<i>40</i>	<i>8.7</i>	<i>29</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>I</i>			<i>Pulled 7/cure</i>			
<i>6<sup>TH</sup></i>	<i>8 1/2</i>	<i>N.C.</i>	<i>SC226</i>	<i>011878</i>	<i>RR</i>	<i>-</i>	<i>9027</i>	<i>23</i>	<i>4 1/2</i>	<i>589 3/4</i>	<i>5.1</i>	<i>25</i>	<i>40</i>	<i>-</i>	<i>1000</i>	<i>2</i>	<i>7"</i>	<i>40</i>	<i>8.4</i>	<i>26</i>										<i>Core 26% Rec</i>		
<i>50</i>	<i>8 1/2</i>	<i>Smith</i>	<i>F-4</i>		<i>N</i>	<i>3-16</i>	<i>9095</i>	<i>68</i>	<i>4 1/2</i>	<i>586 1/4</i>	<i>15</i>	<i>25</i>	<i>80</i>	<i>-</i>	<i>1000</i>	<i>2</i>	<i>7"</i>	<i>40</i>	<i>8.7</i>	<i>31</i>	<i>INC.</i>									<i>Pulled 7/cure</i>		
<i>6<sup>TH</sup></i>	<i>8 1/2</i>	<i>N.C.</i>	<i>SC226</i>		<i>RR</i>	<i>-</i>	<i>9098</i>	<i>3</i>	<i>2 1/2</i>	<i>589 1/4</i>	<i>1</i>	<i>25</i>	<i>40</i>	<i>-</i>	<i>1000</i>	<i>2</i>	<i>7"</i>	<i>40</i>	<i>8.7</i>	<i>31</i>										<i>Core 30-100% Rec</i>		
<i>50</i>	<i>8 1/2</i>	<i>Smith</i>	<i>F-4</i>		<i>RR</i>	<i>3-16</i>	<i>9248</i>	<i>150</i>	<i>9 1/2</i>	<i>598 3/4</i>	<i>15.7</i>	<i>30/35</i>	<i>70</i>	<i>4</i>	<i>900</i>	<i>2</i>	<i>7"</i>	<i>40</i>	<i>8.7</i>	<i>36</i>	<i>8</i>		<i>7</i>	<i>1/8</i>								
<i>6<sup>TH</sup></i>	<i>8 1/2</i>	<i>N.C.</i>			<i>RR</i>	<i>-</i>	<i>9254</i>	<i>6</i>	<i>4</i>	<i>604 1/4</i>	<i>1.5</i>	<i>25</i>	<i>40</i>	<i>-</i>	<i>1100</i>	<i>2</i>	<i>7"</i>	<i>38</i>	<i>8.7</i>	<i>31</i>										<i>Core 31-58% Rec</i>		
<i>61</i>	<i>8 1/2</i>	<i>Varel</i>	<i>V527</i>	<i>22239</i>		<i>3-15</i>	<i>9450</i>	<i>196</i>	<i>11</i>	<i>620 1/4</i>	<i>11</i>	<i>30/35</i>	<i>50/60</i>	<i>4 1/2</i>	<i>800</i>	<i>1</i>	<i>6"</i>	<i>53</i>	<i>8.6</i>	<i>27</i>	<i>8</i>		<i>6</i>	<i>1/8</i>								

- MUD TYPE
- AIR = AIR/GAS
  - DIS = DISPENSED
  - FOA = FOAM
  - GEL = GEL MUD
  - H<sub>2</sub>O = WATER
  - MIS = MIST
  - NAT = NATIVE/SPUD
  - OIL = OIL BASE
  - POL = POLYMER MUD
  - SWM = SALT WATER MUD



- REASON PULLED
- BHA = CHANGE BHA
  - BOP = TEST BOP
  - CR = CONDITION HOLE
  - CO = CORING
  - CP = CASING POINT
  - CPF = COST PER FOOT
  - DEV = DEVIATION
  - OST = DRILL STEM TEST
  - FC = FORMATION CHANGE
  - HR = HOURS ON BIT
  - L = LOGGING
  - LC = LOST CIRCULATION
  - O = OTHER
  - P = PLUGGED JET
  - POP = RATE OF PENETRATION
  - RR = RIG REPAIR
  - TQ = TORQUE
  - TD = TOTAL DEPTH
  - TW = TWISTED OFF
  - WE = WEATHER
  - WO = WASHOUT

- COMMENTS DULL CONDITION
- BF = BEARING/SEAL FAILURE
  - BT = BROKEN/CHIPPED TEETH
  - BU = BIT BALLED UP
  - CO = CORED
  - LC = LOST CONE
  - LI = LOST INSERTS
  - RE = REAMED
  - TT = TRACKING
  - WD = WASHOUT
  - WT = WORN TEETH

- FORMATION
- AN = ANHYDRITE
  - CC = CONGLOMERATE
  - CH = CHERT
  - CL = CHALK
  - CO = COAL
  - CT = CEMENT
  - DO = DOLOMITE
  - EV = EVAPORITES
  - GR = GRANITE
  - GU = GUMBO
  - GW = GRANITE WASH
  - GY = GYPSUM
  - LS = LIMESTONE
  - MA = MARL
  - MU = MUDSTONE
  - PT = PYRITE
  - QT = QUARTZITE
  - RB = REDBED
  - SA = SALT
  - SD = SAND
  - SH = SHALE
  - SS = SANDSTONE
  - ST = SILTSTONE

118-15-1015-8641

# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

BIT RECORD DATA BASE DOCUMENT NUMBER

PHONE

TOOL PUSHER

SMITH REPRESENTATIVE

EMP I.D.

OPERATOR *Bechtel Oil, Inc.* CONTRACTOR *C. Newlands* RIG NO. *6* LEASE *Jennical* WELL NO. *State 2-14* BLOCK

COUNTRY *U.S.A.* STATE *Calif.* COUNTY *Imperial* TOWNSHIP *11 S* RANGE *13 E* SECTION *14* Q-SEC QO-SEC FIELD *Salton Sea*

LATITUDE  N  S LONGITUDE  E  W DRILL PIPE DRAW WORKS *National 118 2 1/2* SPUD DATE *10-24-85*

DO NOT WRITE IN THIS SPACE

DAYWORK  FOOTAGE  TURNKEY  TURNKEY NAME RIGSITE ELEVATION *-225.2* OFFSHORE WATER DEPTH TOOL JOINT MAKE *4 1/2" LF* SIZE *5* TYPE *2 1/2 S* TYPE POWER *Electric* HP *1700* UNDER SURF *10-30-85*

WATER SOURCE *Canals* MUD TYPE *Pro Temp.* DRILL COLLAR NO. O.D. I.D. LENGTH PUMP NO. 1 MAKE MODEL STROKE INT DATE

EXPLORATION  DEVELOPMENT  TIGHT HOLE  ESTIMATED BIT RECORD DRILL COLLAR NO. O.D. I.D. LENGTH PUMP NO. 2 MAKE MODEL STROKE T.D. DATE *3-18-86*

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV.	PUMP PRESS	PUMPS			MUD							REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE
																No.	Line	SPM	WL	Vs	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>			
59	8 1/2	Sec	884E	420146	N	-	10350	138	17	240	8.1	25	3560	600	2	2	40	8.7	38	6	8	3/8			3/7/86			
60	8 1/2	Novil	Y627	22450	N	-	10875	125	17 3/4	238	7.0	25	3560	600	2	7	40	8.9	36	6	6	0 1/4		Real Pic.	3/8/86			
61	6 1/8	Sec	584-F	339675	N	OUT	10564	89	9 1/2	768	9.3	10	4750	1600	1	6	48	8.4	120					J.D.	3/18/86			

<p><b>MUD TYPE</b></p> <p>AIR = AIR/GAS DIS = DISPERSED FOA = FOAM GEL = GEL MUD H2O = WATER MIS = MIST NAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWM = SALTWATER MUD</p>	<p><b>DULL CODE</b></p> <p>SEAL BEARINGS 1 TO 8 3 = BRG/SEAL EFFECTIVE 5 = BRG/SEAL QUESTIONABLE OR (8 = FAILED) 8 = BRG/SEAL FAILURE</p> <p>OPEN BEARING 1 TO 8 1 TO 8</p> <p>RATE 1 THROUGH 8 - AVERAGE OF ALL CONES 8 = 100% OF ALL TEETH WORN FLAT OR BROKEN</p> <p>1 = INCAGE 0 = OUT OF GAGE (AMOUNT NOT MEASURED) 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)</p> <p>NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.</p>	<p><b>REASON PULLED</b></p> <p>BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = CORING CP = CASING POINT CPT = COST PER FOOT DEV = DEVIATION DST = DRILL STEM TEST FC = FORMATION CHANGE HR = HOURS ON BIT</p> <p>L = LOGGING LC = LOST CIRCULATION O = OTHER PJ = PLUGGED JET ROP = RATE OF PENETRATION RR = RIG REPAIR TD = TOTAL DEPTH TQ = TORQUE TW = TWISTED OFF WE = WEATHER WO = WASHOUT</p>	<p><b>COMMENTS DULL CONDITION</b></p> <p>BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORED LC = LOST CONE LI = LOST INSERTS RE = REAMED TT = TRACKING WO = WASHOUT WT = WORN TEETH</p>	<p><b>FORMATION</b></p> <p>AN = ANHYDRITE CG = CONGLOMERATE CH = CHERT CK = CHALK CL = CLAY CO = COAL CT = CEMENT DO = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH</p> <p>GY = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REDBED SA = SALT SD = SAND SH = SHALE SS = SANDSTONE ST = SILTSTONE</p>
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11-815-0015 - 9661

# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

OPERATOR <b>Bechtel NAT. INC</b>		CONTRACTOR <b>Cleveland Drilling Co.</b>		TOOL PUSHER RIG NO. <b>6</b>	SMITH REPRESENTATIVE LEASE <b>KENNECOTT</b>		WELL NO. <b>STATE 2-14</b>	EMP. I.D. <b>S5SDP 16867</b>
COUNTRY <b>U.S.</b>	STATE <b>California</b>	COUNTY <b>Imperial</b>	TOWNSHIP <b>11-S</b>	RANGE <b>13-E</b>	SECTION <b>14</b>	Q-SEC	OO-SEC	FIELD <b>SALTON SEA</b>
LATITUDE □ N □ S	LONGITUDE □ E □ W	DRILL PIPE	DRILL JOINT MAKE <b>4 1/2 IF</b> SIZE <b>5"</b> TYPE <b>F-G</b>		DRAW WORKS <b>NATIONAL</b>		Carrier <b>Smith Tool</b>	
<input checked="" type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY TURNKEY NAME _____	RIGSITE ELEVATION <b>- 225.2</b>	OFFSHORE WATER DEPTH —	TOOL JOINT NO. <b>7</b> O.D. <b>9"</b> I.D. <b>2 3/4</b> LENGTH <b>211</b>	PUMP NO. 1 MAKE <b>NATIONAL</b> MODEL <b>N-1300</b> STROKE <b>16"</b>		PUMP NO. 2 MAKE <b>NATIONAL</b> MODEL <b>N-1300</b> STROKE <b>16"</b>		DO NOT WRITE IN THIS SPACE Received By <b>DT/...</b> SPUD DATE <b>7-24-85</b> Date <b>11/25/85</b> UNDER SURF <b>10-30-85</b>
<input type="checkbox"/> EXPLORATION <input type="checkbox"/> DEVELOPMENT	<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD	DRILL COLLAR NO. O.D. I.D. LENGTH	DRILL COLLAR NO. O.D. I.D. LENGTH	PUMP NO. 1 MAKE MODEL STROKE		PUMP NO. 2 MAKE MODEL STROKE		T.D. DATE

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TRA	DEPTH OUT	FIGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS			MUD		DULL CODE					REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE				
																No.	Lines	SPM	WT.	VS.	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>				G			
1	17 1/2	Smith		AT8278	RT	3-16	150	150	6	6	25	5/10	120	-	100	1	7	56	8.8	51	1	1	1	1	1	I	C.P.	4 1/2" Hole Opener				
1	26"	SPS	Hole opener	—	—	20-20-20	150	150	6	6	25	5/10	120	-	100	1	7	56	8.8	51	1	1	1	1	1	I	C.P.	Pilot Hole				
1 <sup>RR</sup>	17 1/2	Smith		AT8278	RT	3-16	150	150	7	12	21.4	5/10	120	-	100	1	7	56	8.8	51	1	1	1	1	1	I	C.P.	Pilot Bit				
2	42"	SPS	Hole opener	—	—	—	150	150	7	13	21.4	5/10	120	-	100	1	7	56	8.8	51	1	1	1	1	1	I	C.P.	Casing Point 30"				
2	17 1/2	Reed	Y-11	E85508	R.T.	3-16	1000	850	16 1/2	29.5	57.5	5/10	120	0 <sup>15</sup>	200	1/2	7	33	9.7	54	1	1	1	1	1	I	C.P.	Casing Point 30"				
1 <sup>RR</sup>	17 1/2	Smith		AT8278	RT	3-16	1032	882	19 3/4	49 1/4	44.6	19/15	120	-	200	1/2	7	33	9.7	48	1	1	1	1	1	I		Pilot Bit				
1 <sup>RR</sup>	26"	SPS	Hole opener	—	RR	3-20	1032	882	19 3/4	49 1/4	44.6	19/15	120	0 <sup>15</sup>	200	1/2	7	33	9.7	48	1	1	1	1	1	I		open to casing 30"				
2 <sup>RR</sup>	17 1/2	Reed	Y-11	E85508	R.T.	3-16	1553	521	9 1/2	59 1/4	54.8	19/15	120	0 <sup>15</sup>	850	1	7	52	9.7	45	2	2	4	4	4	I		C.O.				
1	9 7/8	Nor-Ton Christ	RC476	0112309	Core	TFA 1.0	1577	24	3	62 1/4	8	19/15	70/80	-	100	1	7	20	9.9	48										C.O. Cored. 100% Rec.		
3	17 1/2	Reed	Y-11	E85927	RT	2-14-18	1983	406	13	75 1/4	31.2	19/30	120	-	1000	1	7	50	9.6	44	1	1	1	1	1	I						
1 <sup>RR</sup>	9 7/8	Nor-Ton Christ	RC476	0112309	Core	TFA 1.0	2013	30	4	79 1/4	7.5	15/30	70/80	-	100	1	7	20	9.6	44											C.O. Cored 100% Rec.	
3 <sup>RR</sup>	17 1/2	Reed	Y-11	E85927	R.T.	2-14-18	2447	434	16	95 1/4	27.1	19/30	120	1 <sup>45</sup>	1000	1	7	50	9.6	44	2	2	2	3	4	I	C.O.	C.O.				
1 <sup>RR</sup>	9 7/8	Nor-Ton Christ	RC476	0112309	Core	TFA 1.0	2477	30	3 1/2	98 1/2	8.5	10	70	-	350	1	7	25	9.6	42											Cored 100% Rec.	
4	17 1/2	HTC	3AS	KH078	RT	H8 2-20	2970	493	17 1/2	116	28.1	19/30	120	2 <sup>15</sup>	1200	1/2	7	34	9.4	37	1	1	1	1	1	I					C.O.	
1 <sup>RR</sup>	9 7/8	Nor-Ton Christ	RC476	0112309	Core	TFA 1.0	3030	60	3	119	20	10	50	-	400	1	7	25	9.4	38											Cored 95% Rec.	

<b>MUD TYPE</b> AIR = AIR/GAS DIS = DISPERSED FOA = FOAM GEL = GEL MUD H2O = WATER M3S = MIST NAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWN = SALTWATER MUD	<b>DULL CODE</b> BEARING BEARINGS B1 = BEARING - NO. 1 CONE B2 = BEARING - NO. 2 CONE B3 = BEARING - NO. 3 CONE T1 = INNER ROWS T2 = GAGE ROWS G = AMOUNT UNDERGAGE NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.	<b>REASON PULLED</b> BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = CORING CP = CASING POINT CPF = COST PER FOOT DEV = DEVIATION DST = DRILL STEM TEST FC = FORMATION CHANGE HR = HOURS ON BIT L = LOGGING LC = LOST CIRCULATION O = OTHER PJ = PLUGGED JET ROP = RATE OF PENETRATION RS = RIS REPAIR TD = TOTAL DEPTH TO = TORQUE TW = TWISTED OFF WT = WEATHER WO = WASHOUT	<b>COMMENTS DULL CONDITION</b> BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORED LC = LOST CONE LI = LOST INSERTS RE = REAMED TT = TRACKING WO = WASHOUT WT = WORN TEETH	<b>FORMATION</b> AN = ANHYDRITE CC = CONGLOMERATE CH = CHERT CN = CHALK CL = CLAY CO = COAL CT = CEMENT DO = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH GT = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REBED SA = SALT SD = SAND SH = SHALE SS = SANDSTONE ST = SILTSTOP
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# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

OPERATOR <b>Bechtel NAT. INC.</b>		CONTRACTOR <b>Cleveland Drilling Co.</b>		TOOL PUSHER	SMITH REPRESENTATIVE		EMP. I.D.		
COUNTRY <b>U.S.</b>	STATE <b>CALIFORNIA</b>	COUNTY <b>Imperial</b>	TOWNSHIP <b>11-S</b>	RANGE <b>13-E</b>	SECTION <b>14</b>	Q-SEC	QQ-SEC	FIELD <b>SALTON SCA</b>	
WELL NO. <b>STATE 2-14</b>		BLOCK		RIG NO. <b>6</b>		LEASE <b>Kennecott</b>		WELL NO.	
LATITUDE <input type="checkbox"/> N <input type="checkbox"/> S		LONGITUDE <input type="checkbox"/> E <input type="checkbox"/> W		DRILL PIPE		DRAW WORKS <b>NATIONAL 110 UE</b>		SPUD DATE <b>10-24-85</b>	
<input checked="" type="checkbox"/> DAYWORK <input type="checkbox"/> FOOTAGE <input type="checkbox"/> TURNKEY		RIGSITE ELEVATION <b>-225.2</b>	OFFSHORE WATER DEPTH		TOOL JOINT <b>4 1/2 IF</b>	MAKE <b>5"</b>	TYPE <b>E-G</b>	TYPE POWER <b>Electric</b>	HP <b>1700</b>
WATER SOURCE <b>CANAL</b>		MUD TYPE <b>Pro-Temp</b>		DRILL COLLAR NO. <b>7</b>	O.D. <b>9"</b>	I.D. <b>2 3/4</b>	LENGTH <b>211</b>	PUMP NO. 1 <b>NATIONAL N-1300</b>	STROKE <b>16"</b>
<input type="checkbox"/> EXPLORATION <input type="checkbox"/> DEVELOPMENT		<input type="checkbox"/> TIGHT HOLE <input type="checkbox"/> ESTIMATED BIT RECORD		DRILL COLLAR NO.	O.D.	I.D.	LENGTH	PUMP NO. 2 <b>NATIONAL N-1300</b>	STROKE <b>16"</b>

DO NOT WRITE IN THIS SPACE

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FV/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV.	PUMP PRESS	PUMPS			MUD		DULL CODE							REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE
																No.	Line	SPM	Wt.	Vis.	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>	B <sub>5</sub>			
4 <sup>RR</sup>	17 1/2	HTC	3AT	KH-028	RR RT	118 2-20	3000	Rem 30'	1 1/2	120 1/2	20	10/20	120	-	1200	1/2	7"	34/34	9.4	38	1	1	3	3	3	I	L	Casing Point (Chg)		
4 <sup>RR</sup>	17 1/2	"	"	"	"	"	3078	78'	5 1/2	126	14.1	15/20	120	-	1200	1	7"	56	9.4	35	7	7	8	8	-		L C = 2			
-	11 3/4	N.L.	Magnet	-	-	-	3078	-	1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Fish F/Cones		
-	17 1/2	N.L.	Mill	-	-	-	3080	2	4	130	1/2	4/8	50	-	700	1/2	7"	40/40	9.3	38	Ringed out								million cones	
-	14 3/4	N.L.	Globe Basket	-	-	-	3087	7	4	134	1 3/4	"	"	-	"	"	"	"	"	"	Recovered 1/2 of cone / 1/4 of cone									
5	17 1/2	Sec	S-35J	435538	N	3-18	3107	20'	1/2	134 1/2	40	15/20	120	3°	1300	1/2	7"	34/34	9.3	40	i NC								Pull T/CoRe	
1 <sup>RR</sup>	9 7/8	WATKIN CHRIS	R476		RR	TFA 1.0	3668	60'	8 1/2	132	24	25	70	-	400	1	7"	23	9.3	36									Recovered 54.7 = 91%	
5 <sup>RR</sup>	17 1/2	Sec	S-35J	435538	RR	3-18	3431	264	13	150	203	25	120	3°	1300	1/2	7"	34/34	9.3	40	5	5	6	6	6	I				
6	17 1/2	Sec	S4TJ	985668	RT	3-18	3470	39	2	152	19.5	25	120	3°	1300	"	"	"	"	"	i NC								Pull T/CoRe	
1 <sup>RR</sup>	9 7/8	N.C.	R476		RR	TFA 1.0	3506	35	5 1/2	157 1/2	6.3	25	70	-	400	1	7"	23	9.3	40									Recovered 34' = 92%	
6 <sup>RR</sup>	17 1/2	Sec	S4TJ	985668	RR RT	3-18	3515	10	1 1/2	159	6.6	25	120	3 1/2°	1300	1/2	7"	34/34	9.3	40	3	3	4	4	4	I			13 3/8" Csg PT.	
7	12 1/4	Sec	FDT	EK 2792	RT	2-12 1-12	3530	15	1/2	159 1/2	30	10	120	-	1100	1	7"	50	9.2	32	7	7	4	4	4	O/I			Pull F/CBL.	
8	12 1/4	Varel	L-114	6142	N	1-11	3790	260	1 1/2	174	17.9	20/25	120	3°	1500	1	7"	40	9.4	40	6	6	6	6	6	I				
2 <sup>CH</sup>	9 7/8	N.C.	RC-476	0112308	N	TFA 1.0	3850	60	5 1/2	179 1/2	10.9	19/15	60	-	375	1	7"	20	9.3	37									Recovered 56.6 = 94%	
9	12 1/4	Varel	L-114	6120	N	1-11	4007	157	7	184 1/2	22.4	20/25	120	3 1/2°	1250	1	7"	48	9.4	37	4	4	4	4	4	I			Pull T/CoRe	

<p><b>MUD TYPE</b></p> <p>AIR = AIR/GAS DIS = DISPERSED FOA = FOAM GEL = GEL MUD H2O = WATER MIS = MIST WAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWM = SALTWATER MUD</p>	<p><b>DULL CODE</b></p> <p>SEAL BEARINGS 1 = INCAGE 2 = BEARING - NO. 1 CONE 3 = BEARING - NO. 2 CONE 4 = BEARING - NO. 3 CONE 5 = BRG/SEAL QUESTIONABLE OR (B - FAILED) 6 = BRG/SEAL FAILURE</p> <p>OPEN BEARING 7 = BEARING - NO. 1 CONE 8 = BEARING - NO. 2 CONE 9 = BEARING - NO. 3 CONE</p> <p>T<sub>1</sub> = INNER ROWS T<sub>2</sub> = GAGE ROWS</p> <p>RATE 1 THROUGH 8 - AVERAGE OF ALL CONES 8 = 100% OF ALL TEETH WORN FLAT OR BROKEN</p> <p>G = AMOUNT UNDERGAGE 1 = INCAGE 0 = OUT OF GAGE (AMOUNT NOT MEASURED) 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)</p> <p>NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.</p>	<p><b>REASON PULLED</b></p> <p>BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = CORING CP = CASING POINT CPF = COST PER FOOT DEV = DEVIATION DST = DRILL STEM TEST FC = FORMATION CHANGE HR = HOURS ON BIT</p> <p>L = LOGGING LC = LOST CIRCULATION O = OTHER PI = PLUGGED JET ROP = RATE OF PENETRATION RR = RIG REPAIR TD = TOTAL DEPTH TQ = TORQUE TW = TWISTED OFF WE = WEATHER WO = WASHOUT</p>	<p><b>COMMENTS DULL CONDITION</b></p> <p>BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORED LC = LOST CONE LI = LOST INSERTS RE = REAMED TT = TRACKING WO = WASHOUT WY = WORN TEETH</p>	<p><b>FORMATION</b></p> <p>AN = ANHYDRITE CE = CONGLOMERATE CH = CHERT CK = CHALK CL = CLAY CO = COAL CT = CEMENT DO = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH</p> <p>GY = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REDBED SA = SAND SD = SHALE SS = SANDSTONE ST = SILTSTONE</p>
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# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

TOOL PUSHER

SMITH REPRESENTATIVE

EMPL. ID.

OPERATOR: Bechtel NAT. INC. CONTRACTOR: Cleveland Drilling Co. RIG NO.: 6 LEASE: KENNECOTT WELL NO.: STATE 2-14 BLOCK: \_\_\_\_\_

COUNTRY: U.S. STATE: CALIFORNIA COUNTY: IMPERIAL TOWNSHIP: 11-S RANGE: 13-E SECTION: 14 Q-SEC: \_\_\_\_\_ QO-SEC: \_\_\_\_\_ FIELD: SAITON SEA

LATITUDE: \_\_\_\_\_ LONGITUDE: \_\_\_\_\_ DRILL PIPE: \_\_\_\_\_ DRILL WORKS: NATION 110 UE

RIGSITE ELEVATION: -225.2 OFFSHORE WATER DEPTH: \_\_\_\_\_ TOOL MAKE: 4 1/2 IF SIZE: 5" TYPE: E-G TYPE POWER: ELECTRIC HP: 1700

WATER SOURCE: CANAL MUD TYPE: Red-Temp DRILL NO.: 7 O.D.: 9" I.D.: 2 3/4" LENGTH: \_\_\_\_\_ PUMP NO. 1: NATIONAL N-1300 STROKE: 16"

DRILL NO.: \_\_\_\_\_ O.D.: \_\_\_\_\_ I.D.: \_\_\_\_\_ LENGTH: \_\_\_\_\_ PUMP NO. 2: NATIONAL N-1300 STROKE: 16"

EXPLORATION: \_\_\_\_\_ DEVELOPMENT: \_\_\_\_\_ TIGHT HOLE: \_\_\_\_\_ ESTIMATED BIT RECORD: \_\_\_\_\_

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR RT	JET SIZE OR TFA	DEPTH OUT	FTGE	HOURS RUN	ACC HOURS	FT/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEV	PUMP PRESS	PUMPS		MUD							REASON PULLED	COMMENTS DULL CONDITION FORMATION	NOTE						
																No.	SPM	Wt.	Via.	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>				G					
2 <sup>CH</sup>	9 7/8	NC.	RC-476	0112308	RR	TFA 1.0	4067	60	5	19 1/2	12	10 1/5	60	3 1/2	375	1	7"	20	9.4	37											Recovered 60" = 100%		
10	12 1/4	Reed	11J	146812	RT	1-11 1-12	4241	174	9	200 1/2	19.3	29 1/2	120	3 1/2	1250	1	7"	48	9.4	37	5	5	7	7	I					Pull F/CORE			
2 <sup>CH</sup>	9 7/8	NC.	RC-476	0112308	RR	TFA 1.0	4334	93	7 1/2	208	12.4	19 1/5	60	-	375	1	7"	20	9.4	35											97% Recovery		
11	12 1/4	Varel	V-517	19898	N	3-12	4641	307	2.2	230	13.9	25 3/5	50	48	1400	1	7"	40	9.3	38	2	8	3	3	3	0 1/8					BROKEN GAGE INSERTS		
12	12 1/4	Varel	L-126	20576	N	3-12	4643	365 <sup>R</sup> R-2	8	-	15 1/2	50	60	-	1400	1	7"	40	9.3	38	5	5	4	4	4	I					Reamed 365" Drill 2'		
3 <sup>CH</sup>	9 7/8	NC.	MC201	0111961	N	TFA 1.55	4686	43	5 1/2	235 1/2	8.2	15 1/2	60	-	400	1	7"	20	9.2	38											100% Rec (33.3% Rec)		
13	12 1/4	Varel	L-126	20571	N	3-12	4710	24	1 1/2	237	16	19 1/5	120	-	1600	1	7"	49	9.2	34	5	5	1	1	1	0 1/16					Lost 4 Stab Blades in hole		
12 <sup>AB</sup>	12 1/4	Varel	L-126	20576	RR	OUT	4710																								Ream		
	11 3/4	N.L.	Globe DRACKET		N	L	4710																										
1-3	12 1/4	N.L.	mill	3-Rods	N		4722	12	10 1/2	247 1/2	-	5	70	60	-	400	1	7"	40	9.1	42											Milled on Stab Blades	
14	12 1/4	Sec	S-44G	318488	N	3-12	4943	221	18 1/2	266	11.9	35	50	4 1/2	1500	1	7"	50	8.9	42	8	8	4	4	4	0 1/16							
15	12 1/4	Varel	V-517	20658	N	3-13	5188	245	22 1/2	288 1/2	10.8	35	50	3 1/2	1600	1	7"	50	9.0	44	2	2	2	2	2	I					Pull T/CORE		
3 <sup>CH</sup>	9 7/8	NC.	MC201	0111961	RR	TFA 1.55	5218	30	9	297 1/2	3.3	10	80	-	1500	1	7"	40	9.0	44											(100% Rec)		
15 <sup>RR</sup>	12 1/4	Varel	V-517	20658	RR	3-13	5381	163	9 1/2	307	17.1	20	85	6 1/2	1500	1	7"	40	9.0	44	2	2	2	2	2	I							
17	12 1/4	Sec	S-33	323875	N	3-13	5422	41	6 1/2	313 1/2	6.3	20	85	7 1/2	1300	1	7"	50			4	4	4	4	4	I							

MUD TYPE  
AIR = AIR/GAS  
DIS = DISPERSED  
FOA = FOAM  
GEL = GEL MUD  
H2O = WATER  
MIS = MIST  
NAT = NATIVE SPUD  
OIL = OIL BASE  
POL = POLYMER MUD  
SWM = SALTWATER MUD

DULL CODE  
SEAL BEARINGS  
OPEN BEARING  
1 TO 8  
B1 = BEARING - NO. 1 CONE  
B2 = BEARING - NO. 2 CONE  
B3 = BEARING - NO. 3 CONE  
3 = BRG/SEAL EFFECTIVE  
5 = BRG/SEAL QUESTIONABLE OR (B = FAILED)  
6 = BRG/SEAL FAILURE  
RATE 1 THROUGH 8 - AVERAGE OF ALL CONES  
8 = 100% OF ALL TEETH WORN FLAT OR BROKEN  
G = AMOUNT UNDERGAGE  
1 = INGAGE  
0 = OUT OF GAGE (AMOUNT NOT MEASURED)  
1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)  
NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.

REASON PULLED  
BHA = CHANGE BHA  
BOP = TEST BOP  
CH = CONDITION HOLE  
CD = CORING  
CP = CASING POINT  
CFF = COST PER FOOT  
DEV = DEVIATION  
DST = DRILL STEM TEST  
FC = FORMATION CHANGE  
HR = HOURS ON BIT  
L = LOGGING  
LC = LOST CIRCULATION  
O = OTHER  
PJ = PLUGGED JET  
ROP = RATE OF PENETRATION  
RR = RIG REPAIR  
TD = TOTAL DEPTH  
TQ = TORQUE  
TW = TWISTED OFF  
WE = WEATHER  
WO = WASHOUT

COMMENTS DULL CONDITION  
BF = BEARING/SEAL FAILURE  
BT = BROKEN/CHIPPED TEETH  
BU = BIT BALLED UP  
CO = CORED  
LI = LOST INSERTS  
RE = REAMED  
TR = TRACKING  
WO = WASHOUT  
WT = WORN TEETH

FORMATION  
AN = ANHYDRITE  
CG = CONGLOMERATE  
CH = CHERT  
CR = CHALK  
CL = CLAY  
CO = COAL  
CT = CEMENT  
DO = DOLOMITE  
EV = EVAPORITES  
GR = GRANITE  
GU = GUMBO  
GW = GRANITE WASH  
GY = GYPSUM  
LS = LIMESTONE  
MA = MARL  
MU = MUDSTONE  
PY = PYRITE  
QT = QUARTZITE  
RB = REDBED  
SA = SALT  
SD = SAND  
SH = SHALE  
SS = SANDSTONE  
ST = SILTSTONE



# SMITH TOOL BIT RECORD

Division of Smith International, Inc.

(619) 348-5232  
PHONE

BIT RECORD DATA BASE  
DOCUMENT NUMBER

OPERATOR <b>Beechell Nat. Inc.</b>		CONTRACTOR <b>Cleveland Drilling Co</b>		RIG NO. <b>6</b>	LEASE <b>Kennecott</b>		WELL NO. <b>STATE 2-14</b>	BLOCK
COUNTRY <b>U.S.</b>	STATE <b>California</b>	COUNTY <b>Imperial</b>	TOWNSHIP <b>11-S</b>	RANGE <b>13-E</b>	SECTION <b>14</b>	Q-SEC	QQ-SEC	FIELD <b>SALTON SEA</b>

LATITUDE <input type="checkbox"/> N <input type="checkbox"/> S	LONGITUDE <input type="checkbox"/> E <input type="checkbox"/> W	DRILL PIPE	DRAW WORKS <b>NATIONAL 110 HE</b>	SPUD DATE <b>10-24-85</b>
<input checked="" type="checkbox"/> DAYWORK	RIGSITE ELEVATION <b>-225.2</b>	OFFSHORE WATER DEPTH	TYPE POWER <b>ELECTRIC</b>	HP <b>1700</b>
<input type="checkbox"/> FOOTAGE	WATER SOURCE <b>Canal</b>	MUD TYPE <b>Pre Temp</b>	DRILL COLLAR NO. O.D. I.D. LENGTH <b>6 1/4 XH 2 1/4 390</b>	PUMP NO. 1 MAKE MODEL STROKE <b>NATIONAL N-1300 16"</b>
<input type="checkbox"/> TURNKEY	<input type="checkbox"/> TIGHT HOLE	<input type="checkbox"/> ESTIMATED BIT RECORD	DRILL COLLAR NO. O.D. I.D. LENGTH	PUMP NO. 2 MAKE MODEL STROKE <b>NATIONAL N-1300 16"</b>
<input type="checkbox"/> TURNKEY NAME				

BIT NO.	BIT SIZE	BIT MFR	BIT TYPE	SERIAL NO. OF BIT	RR	JET SIZE OR TFA	DEPTH CUT	FTEE	HOURS RHR	ACC HOURS	FTZ/HR	WEIGHT 1000 LB.	ROTARY RPM	VERT DEVI	PUMP PRESS	PUMPS			MUD						REASON PULLED	COMMENTS DULL CONDITION FORMATION	DATE					
																No.	Liner	SPM	WL	WS	T <sub>1</sub>	T <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>				B <sub>3</sub>	G			
6 <sup>CH</sup>	8 1/2	N.C.	SC-226	0111878	RR	-	8161	1928	5	533 3/4	5.6	1520	45	-	1000	2	76	41	8.3	N <sub>2</sub> O										Core 100% Rec		
45	8 1/2	Sec	M44N	BB8514	N	OUT	8161	Ram																						Planned Turnbo Core Hole		
46	8 1/2	Varec	V-627	16977	N	3-13	8395	234	14	547 3/4	16.7	2535	80	4 1/2	1000	2	7	40	8.7	30	4	4	7	7	I				Pulled T/core			
6 <sup>CH</sup>	8 1/2	N.C.	SC-226	0111878	RR	-	8402	7	2	549 3/4	3.5	25	40	-	1000	1	6	40	8.7	30											Core 90% Rec	
47	8 1/2	Varec	V-627	22152	N	3-13	8585	183	7	552 3/4	26.1	35	80	4 1/2	1300	2	7	47	8.6	26	4	4	4	4	4	0 1/8				Pulled T/core		
6 <sup>CH</sup>	8 1/2	N.C.	SC-226	0111878	RR	-	8604	19	2 1/2	551 3/4	7.6	25	40	-	1000	1	6	40	8.6	N <sub>2</sub> O											Core 76% Rec	
48	8 1/2	NTC	J-44	BB8219	N	12-13-14	8800	196	9	568 3/4	21.7	35	80	3 3/4	1000	1	6	38	8.4	26	7	7	5	5	5	I				Pulled T/core		
6 <sup>CH</sup>	8 1/2	N.C.	SC-226	0111878	RR	-	8807	7	2	570 1/4	3.5	25	40	-	1000	1	6	38	8.7	29											Core 64% Rec	
49	8 1/2	Varec	V-627	22225	N	3-15	9004	197	7	571 3/4	28.1	35	80	3 1/2	1000	2	7	40	8.7	29	5	5	6	6	6	I				Pulled T/core		
6 <sup>CH</sup>	8 1/2	N.C.	SC-226	0111878	RR	-	9027	23	4 1/2	581 3/4	5.1	25	40	-	1000	2	7	40	8.4	26											Core 26% Rec	
50	8 1/2	Smith	F-4	FF	N	3-16	9095	68	4 1/2	586 3/4	15	20	80	-	1000	2	7	40	8.7	31											Pulled T/core	
6 <sup>CH</sup>	8 1/2	N.C.	SC-226	-	RR	-	9098	2	2 1/2	589 3/4	1	25	40	-	1000	2	7	40	8.7	31											Core 30-100% Rec	
50	8 1/2	Smith	F-4	-	RR	3-16	9248	150	9 1/2	598 3/4	15.7	35/35	70	4	900	2	7	40	8.7	36			8		7	1/8						
6 <sup>CH</sup>	8 1/2	N.C.	-	-	RR	-	9264	6	4	602 3/4	1.5	25	40	-	1100	2	7	38	8.7	31											Core 31-67% Rec	
61	8 1/2	Varec	V-627	22339		3-15	9450	196	11	620 1/4	11.30	30/40	80	2 1/2	800	1	6	53	8.6	27			8		6	3/8						

<b>MUD TYPE</b> AIR = AIR/GAS DIS = DISPERSED FOM = FOAM GEL = GEL MUD H2O = WATER MIS = MIST NAT = NATIVE/SPUD OIL = OIL BASE POL = POLYMER MUD SWW = SALTWATER MUD	<b>DULL CODE</b> B1 = BEARING - NO. 1 CONE B2 = BEARING - NO. 2 CONE B3 = BEARING - NO. 3 CONE T1 = INNER ROWS T2 = GAGE ROWS G = AMOUNT UNDERGAGE 3 = BRG/SEAL EFFECTIVE 4 = BRG/SEAL QUESTIONABLE OR (B = FAILED) 8 = BRG/SEAL FAILURE RATE 1 THROUGH 8 - AVERAGE OF ALL CONES 8 = 100% OF ALL TEETH WORN FLAT OR BROKEN 1 = INGAGE 0 = OUT OF GAGE (AMOUNT NOT MEASURED) 1/16 = 1/16" UNDERGAGE (SPECIFY AMOUNT)	<b>REASON PULLED</b> BHA = CHANGE BHA BOP = TEST BOP CH = CONDITION HOLE CO = COLLING CP = CASING POINT CPF = COST PER FOOT DEV = DEVIATION DST = DRILL STEM TEST FC = FORMATION CHANGE HR = HOURS ON BIT L = LOGGING LG = LOST CIRCULATION O = OTHER P = PLUGGED JET ROP = RATE OF PENETRATION RR = RIG REPAIR TD = TOTAL DEPTH TQ = TORQUE TW = TWISTED OFF WE = WEATHER WO = WASHOUT	<b>COMMENTS - DULL CONDITION</b> BF = BEARING/SEAL FAILURE BT = BROKEN/CHIPPED TEETH BU = BIT BALLED UP CO = CORED LC = LOST CONE LI = LOST INSERTS RE = REAMED TT = TRACKING WO = WASHOUT WT = WORN TEETH	<b>FORMATION</b> AN = ANHYDRITE CG = CONGLOMERATE CH = CHERT CK = CHALK CL = CLAY CO = COAL CT = CEMENT DO = DOLOMITE EV = EVAPORITES GR = GRANITE GU = GUMBO GW = GRANITE WASH CY = GYPSUM LS = LIMESTONE MA = MARL MU = MUDSTONE PY = PYRITE QT = QUARTZITE RB = REDBED SA = SALT SD = SAND SH = SHALE SS = SANDSTONE ST = SILTSTONE
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NOTE CONTRACT TYPE CHANGE BY DEPTH/DATE IN COMMENTS SECTION.

