



# **Appendix K**

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## **Profco / Product Usage Recap**



May 30, 1986

Mr. Charles Harper 50-20  
BECHTEL NATIONAL, INC.  
P.O. Box 3965  
San Francisco, CA 94119

RE: 16937-SC-D013

Dear Mr. Harper:

Enclosed is the Drilling Fluids Properties and Product Usage Recaps for The Kennecott Corp State #2-14 well drilled in Imperial County, California.

The well was drilled to 10,564 feet in 148 days by Cleveland Drilling Rig #6.

The total invoiced cost for drilling fluids was \$425,470.48. Well cost increased significantly after losing circulation at 6,200', which continued to be a problem throughout well.

PROFCO appreciates the opportunity to work for Bechtel National, Inc. and we hope you will consider PROFCO on future wells. If you have any questions regarding the drilling fluid recaps, please give me a call.

Sincerely,

O. Wayne Patterson  
President

OWP:dkb/LETRS5  
enclosures

cc: J. Harbour

**PROFCO**

"The Professionals in  
Drilling Fluids"

POST OFFICE BOX 3850  
VENTURA, CA 93006-3850

CORPORATE OFFICES  
1865 KNOLL DRIVE  
VENTURA, CA 93003  
805/656-1920

005041



P.O. BOX 3850  
 VENTURA, CA 93008-3850  
 805/656-1920  
 FORMERLY PROFESSIONAL DRILLING FLUID SERVICES, INC.

PRODUCTS USED

OPERATOR: BECHTEL NATIONAL, INC.  
 CONTRACTOR: Cleveland #6  
 ENGINEER: Jerry Bewick

LOCATION: Salton Sea  
 WELL NAME: STATE #2-14  
 COUNTY: Imperial

DATE	TICKET #	ANTI-FOAM	BARIUM CL	BICARB	CTN PELLETS	DML #3	E-PAL	GEL-HTS	H-2 LESS	HEXAPHOS	HIB-A	MICA	NIO	OMNIPLEX
		5 gal	110#	50#	50#	5 gal	55 gal	100#	5 gal	50#	5 gal	50#	5 gal	5 gal
<b>1985</b>														
11/15	13203,04			6				35						2
11/30	13879,80			13										
12/15	13884,85	1		1					1					
12/31	13888,89	9	1	12					8					
<b>1986</b>														
01/21	13897,98,99	8		32	47				25			24		
02/06	13909,10,11	13			32				14					
02/15	13922,23,24	9			66						2	29	11	
02/03	17834,35,36	18		1		20	1			1	3		17	
03/19	17848,49,51,54	9		20	60	28				1	2		11	
04/01	17858										5			
<b>TOTAL SACKS USED</b>		67	1	85	205	48	1	35	48	2	12	53	39	2
<b>COST/SACK</b>		88.00	121.00	23.00	48.00	75.00	500.00	12.00	120.00	90.00	90.00	19.50	124.00	90.00
<b>TOTAL</b>		5896.00	121.00	1955.00	9840.00	3600.00	500.00	420.00	5760.00	180.00	1080.00	1033.50	4836.00	180.00

\$122,337.00 Product Subtotal  
 ( 39,147.84) Less 32% Discount  
 \$ 83,189.16 Discounted Product  
 259,799.00 Bid Product  
 \$342,988.16 PRODUCT TOTAL  
 550.00 Corrosion Rings  
 20,612.29 Sales Tax 6%  
 43,293.04 Diesel Charges  
 14,652.00 Trucking  
 3,375.00 Lab Trailer Rental  
 \$425,470.49 TOTAL COST

TOTAL COST: \$425,470.49 = \$40.28  
 TOTAL DEPTH: 10,564' COST PER FOOT



P.O. BOX 3850  
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 805/856-1820  
 FORMERLY PROFESSIONAL DRILLING FLUID SERVICES, INC.

PRODUCTS USED

OPERATOR: BECHTEL NATIONAL, INC.

WELL NAME: STATE #2-14

Page 2 of 5

DATE	TICKET #	PEP 5 gal	POTASH 100#	PROTEMP 5 gal	TBP DEFOAMER 5 GAL	THERMLUBE 5 gal	THERMVIS 20#	XC POLYMER 50#
								(Biozan)
<u>1985</u>								
11/15	13203,04	12	55	38				
11/30	13879,80		29	7				
12/15	13884,85		111					
12/31	13888,89		21	8		3		7
<u>1986</u>								
01/21	13897,98,99			3				33
02/06	13909,10,11			25		3		
02/15	13922,23,24					11	11	
03/04	17834,35,36		1	14	19	12		15
03/19	17848,49,51,54		56	36	5		16	31
04/01	17858							(2)
<u>TOTAL SACKS USED</u>		12	273	131	24	27	27	86
<u>COST/SACK</u>		155.00	28.50	150.00	120.00	85.00	80.00	585.00
<u>TOTAL</u>		1860.00	7780.50	19650.00	2880.00	2295.00	2160.00	50310.00



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PRODUCTS USED

OPERATOR: BECHTEL NATIONAL, .INC.

WELL NAME: STATE #2-14

Page 3 of 5

-----BID PRODUCTS-----

DATE	TICKET #	A.STEARATE 25#	BARITE 100#	CAUS SODA 50#	CTNSD HULLS 50#	CYPAN 50# (SPA)	FIBER SEAL 50# (Pro-Fiber)	GEL 100#	KWIK SEAL 40#	LIME 50#	LO-SOL 2#	NUT PLUG 50#	PROTEMP 50#	SAWDUST 2 cu ft
<u>1985</u>														
11/15	13203,04	1	8	28				497		13	22			18
11/30	13879,80	1		35				70		17	2		11	28
12/15	13884,85	2	10	9				73		9	7		4	4
12/31	13888,89	1	3	11				6		8			11	22
<u>1986</u>														
01/21	13897,98,99	2	31	40	158		60	684	189	9	15	40	7	266
02/06	13909,10,11	3	98	61	111		335	517	119	8		22	17	206
02/15	13922,23,24	2	214	40	66			270	131	9		38	3	121
02/15	3212CM						(87)							
03/04	17834,35,36	3	666	81	26	2	23	342	59	4			28	71
03/19	17848,49,51,54	2	2170	89	39	22	142	236	124	5			26	127
<b>TOTAL SACKS USED</b>		17	3200	394	400	24	473	2695	622	82	46	100	107	863
<b>COST/SACK</b>		40.00	6.50	20.00	10.00	90.00	7.00	7.00	12.00	6.00	10.00	12.00	240.00	4.00
<b>TOTAL</b>		680.00	20800.00	7880.00	4000.00	2160.00	3311.00	18865.00	7464.00	492.00	460.00	1200.00	25680.00	3452.00



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 FORMERLY PROFESSIONAL DRILLING FLUID SERVICES, INC.

PRODUCTS USED

OPERATOR: BECHTEL NATIONAL, INC.

WELL NAME: STATE #2-14

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-----BID PRODUCTS-----

DATE	TICKET #	SEAL EASE 50#	SODA ASH 100#	THERNLIC 50#	THERMOGEL 50#	THERMPLEX 5 gal	THERMTROL III 50#	WELPAC 50#
<u>1985</u>								
11/15	13203,04		7	75		70	5	46
11/30	13879,80			20	390	19	30	30
12/15	13884,85				235	24	23	7
12/31	13888,89			11	92	5	12	
<u>1986</u>								
01/21	13897,98,99		46		1314	19	25	41
02/06	13909,10,11		4		2474	19	30	79
02/15	13922,23,24	1	14		1407		16	32
03/04	17834,35,36	9	22		1593	43	29	77
03/19	17848,49,51,54	78	32	29	1315	24		43
<b>TOTAL SACKS USED</b>		<b>88</b>	<b>125</b>	<b>135</b>	<b>8820</b>	<b>223</b>	<b>170</b>	<b>355</b>
<b>COST/SACK</b>		<b>50.00</b>	<b>14.00</b>	<b>9.00</b>	<b>5.00</b>	<b>80.00</b>	<b>240.00</b>	<b>150.00</b>
<b>TOTAL</b>		<b>4400.00</b>	<b>1750.00</b>	<b>1215.00</b>	<b>44100.00</b>	<b>17840.00</b>	<b>40800.00</b>	<b>53250.00</b>



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PRODUCTS USED

OPERATOR: BECHTEL NATIONAL, INC.

WELL NAME: STATE #2-14

Page 5 of 5

DATE	TICKET #	CORROSION RINGS	TRUCKING	PER DIEM	LAB TRLR
		ea.	Hour	Day	Day
<u>1985</u>					
10/31	14324			8	5
11/15	13203,04		32		
11/30	13878			30	30
11/30	13879,80		8		
12/15	13884,85		12		
12/31	13886	6			
12/31	13890			22	22
<u>1986</u>					
01/27	3835CM			(60)	
01/21	13897,98,99	4	32		
02/04	13907				31
02/06	13909,10,11		40		
02/08	13912	10			
02/15	13922,23,24		40		
03/04	17834,35,36		28		
02/28	17839				28
02/24	17829		12		
03/19	17853		20		19
03/19	17848,49,51,54		64		
04/01	17858		8		
TOTAL SACKS USED		20	296	-0-	135
COST/SACK		27.50	49.50	60.00	25.00
TOTAL		550.00	14652.00	-0-	3375.00

BECHTEL NATIONAL, INC.  
SUBCONTRACT NO. 16937-SC-D013

DATE	TICKET #	INVOICE #	BID PRODUCT AMOUNT	LIST PRICE PROD AMT	32% DISCOUNT	DISCOUNTED PRODUCT	ACTUAL PROD. BILLED	SALES TAX 6%	CORROSION RINGS	TRUCKING	LAB TRLR	PER DIEM	DIESEL REBILL	INVOICE TOTAL
										(27.50)	(49.50)	(25.00)	(60.00)	
											(taxable)			
1985														
10/31	14324	1068									125.00	480.00		605.00
11/15	13203,13204	1132	18,974.00	9,865.50	(3,156.96)	6,708.54	25,682.54	1,540.95		1,584.00				28,807.49
11/30	13878	1198									750.00	1,800.00		2,550.00
11/30	13879,80	1199	19,454.00	2,175.50	( 696.16)	1,479.34	20,933.34	1,256.00		396.00				22,585.34
12/15	13884,85	1338	11,601.00	3,394.50	(1,086.24)	2,308.26	13,909.26	834.56		594.00				15,337.82
12/18	13886	1408						9.90	165.00					174.90
12/31	13888,89	1410	6,936.50	8,297.50	(2,655.20)	5,642.30	12,578.80	754.73						13,333.53
12/31	13890	1411									550.00	1,320.00		1,870.00
12/31	13887	1419											10,969.86	10,969.86
1986														
01/27	3835CM	1477										(3,600.00)		(3,600.00)
01/21	13897,98,99	1489	34,449.50	26,919.00	(8,614.08)	18,304.92	52,754.42	3,171.87	110.00	1,584.00				57,620.29
02/04	13907	1555									775.00			775.00
02/06	13909,10,11	1556	48,691.00	8,365.00	(2,676.80)	5,688.20	54,379.20	3,262.75		1,980.00				59,621.95
02/08	13912	1573						16.50	275.00					291.50
02/9,13	13916,19	1609											12,390.40	12,390.40
02/15	13922,23,24	1610	24,028.00	7,884.50	(2,523.04)	5,361.46	29,389.46	1,763.37		1,980.00				33,132.83
02/15	3212CM	1611	(609.00)				(609.00)	(36.54)						(645.54)
03/04	17834,35,36	1677	47,473.00	20,278.50	(6,489.12)	13,789.38	61,262.38	3,675.74		1,386.00				66,324.12
02/28	17839	1678									700.00			700.00
02/24	17829	1679								594.00				594.00
03/28	17826-28	1727											13,798.08	13,798.08
03/06	17838	1728											6,134.70	6,134.70
03/19	17848,49,51,54	1752	48,801.00	34,877.00	(11,160.64)	23,716.36	72,517.36	4,351.04		3,168.00				80,036.40
03/19	17853	1753								990.00	475.00			1,465.00
04/01	17858	1778		280.00	(89.60)	190.40	190.40	11.42		396.00				597.82
TOTAL			259,799.00	122,337.00	(39,147.84)	83,189.16	342,988.16	20,612.29	550.00	14,652.00	3,375.00	-0-	43,293.04	425,470.49





P.O. BOX 3850  
 VENTURA, CA 93008-3850  
 805/656-1920  
 FORMERLY PROFESSIONAL DRILLING FLUID SERVICES, INC.

WELL DATA SHEET

OPERATOR		WELL		CONTRACTOR		ENGINEER		SURVEY SEC.		FIELD		COUNTY		STATE		CASING SIZE		DEPTH		BIT SIZE		
BECHTEL NATIONAL, INC.		Kennecott Corp, "State" #2-14		Cleveland Drilling #6		Jerry Bewick		14		T 11S		R		13E		SURFACE 30'		150'		H.O.		
										SALTON-SEA		Imperial		California		INTERMEDIATE 13-3/8"		3515'		12-1/4"		
																PRODUCTION 7"		10,136'		5"		
DATE	DEPTH	WT	VIS	PV	YP	GELS	pH	W/L	PF	CL PPM	CAPP	SOL%	OIL%	H.T.H.P.	TOTAL MUD COST	TOTAL DEPTH	REMARKS					
																\$625,470.69	10,564'					
																DAILY COST	ACCUMULATED COST					
1985	10/23	S P U D																				
10/24	78	8.8	48	8	24	12/12	9.0	18.5	.NIL	660	120	4	0	0	\$ 3,036.00	\$ 3,036.00	Drig conductor hole					
10/25	141	9.5	40	6	20	12/14	8.4	37.5	.NIL	2100	520	8.5	0	0	687.00	3,723.00	Run 30" csg (1/2 wall) cmt. in place 0430					
10/26	150	9.5	38	8	14	12/14	8.4	30.0	.NIL	2260	648	9	0	0	60.00	3,783.00	Nipple up to 30" w/bag					
10/27	1000	9.7	54	10	24	18/42	8.12	18.0	.NIL	1450	180	10	0	0	1,652.00	5,435.00	Drill 17 1/2 hole - Cond. for 26" H.O. Drig mud making clay and sandstone-time drig 15min/kelly					
10/28	1012	9.7	50	10	22	16/40	8.34	16.0	.NIL	1150	124	10	0	0	1,963.00	7,398.00	Drill to 1000'-17 1/2" open hole to 26"@1032'					
10/29	1032	9.9	48	14	18	18/44	8.5	12.6	.NIL	1180	112	10.5	0	0	1,485.00	8,883.00	TD 20" csg - cmt @ RPT time					
10/30	1032	9.6	46	12	16	12/38	8.5	12.2	.NIL	1200	120	11	0	0	-0-	8,883.00	Nipple DN 30", Nipple UP OH 20"					
10/30	1180	9.8	40	10	14	8/28	9.8	14.0	.02	1100	156	11	0	0								
10/31	1563	9.9	50	8	22	14/40	8.8	18.3	.TR	2700	144	11	0	0	1,789.00	10,672.00	Coring with 9-7/8" 30'Bb1 8" collars. Pump @4.28 Adding Kcl to inhibit clays-potassium & chloride both help in coring.					
11/1	1983	9.6	36	7	20	14/38	9.6	20.2	.03	2900	264	9.5	0	0	2,702.00	13,374.00	Trip after drig to 1983, for another core. Wipe 1454-1864 no drag converting to Hi-temp coring fl.					
11/2	2380	9.6	45	10	26	18/40	10.0	20.8	.03	3700	312	9.5	0	0	3,089.00	16,463.00	Treating mud for hi temp & core runs.					
11/3	2524	9.4	40	10	16	8/24	9.8	17.2	.02	4000	320	8	0	0	3,937.00	20,400.00	Core OK. Daily Maintenance.					
11/4	2982	9.4	42	12	18	6/28	10.2	14.2	.03	3600	340	8	0	0	5,569.72	25,969.72	Coring.					
DATE SPUD		DATE T D		B H T		COMPLETION FLUID TYPE		PACKER MUD TYPE		COST		COST										
10/23/85		3/20/86				Water																



P.O. BOX 3850  
 VENTURA, CA 93006-3850  
 805/856-1920  
 FORMERLY PROFESSIONAL DRILLING FLUID SERVICES, INC.

WELL DATA SHEET

BECHTEL - State #2-14

Page 2 of 10 Pages

DATE	DEPTH	WT	VIS	PV	YP	GELS	pH	W/L	PF	CL PPM	CAPP	SOL%	OIL%	H.T.H.P.	TOTAL MUD COST		REMARKS
															DAILY COST	ACCUMULATED COST	
11/5	3000	9.4	38	12	16	8/28	8.9	12.8	.NIL	4100	400	8	0	0	\$ 1,703.02	\$ 27,672.74	Cored 2970-3030-100%. Opened hole to 17-½ to 3000 running logs. Lost 200 bbls mud.
11/6	3000	9.4	40	10	16	6/30	8.4	16.0	.NIL	4100	400	8	0	0	169.80	27,842.54	Ran conventional logs & temp log-250+ RIH circ. more logs.
11/7	L O G C I N G																
11/8	3078	9.3	34	8	10	6/28	9.2	17.6	.03	3400	324	7	0	0	328.80	28,171.34	Fishing
11/9	3078	9.2	34	6	9	4/16	9.5	17.0	.02	2600	208	6.5	0	0	302.30	28,473.64	Ran temp log. RIH with 17-½ mill at present.
11/10	3080	9.3	38	9	10	6/32	10.6	14.8	.05	2600	160	7	0	0	1,082.00	29,555.64	No junk back. Run junk basket at rpt time.
11/11	3107	9.3	36	6	8	4/22	9.8	15.4	.02	3200	208	7	0	0	1,851.73	31,407.37	RIH with bit#5 S-3, S-J. Make 27'-No prob.
11/12	3167	9.3	38	7	9	2/22	10.3	13.2	.03	2900	196	6.5	0	0	2,788.39	34,195.76	Drig ahead. Build volume treat for coring.
11/13	3511	9.3	40	9	10	6/36	10.6	12.6	.04	3100	200	6.5	0	0	1,858.55	36,054.36	Trip for bit to drill to 3515. Log'd run 13-3/8.
11/14	3515	9.3	38	10	10	2/0	9.9	11.8	.02	3100	208	6.5	0	0	918.16	36,972.47	Wiplr after logs.
11/15	R U N C E M E N T																
11/16	R A N C A S I N G N P L E U P																
11/17	3530	9.2	32	9	7	4/8	9.6	16.8	.10	2600	120	6	0	0	932.66	37,905.13	Drill float & shoe & 15ft new hole. Circ
11/18	3630	9.1	34	7	8	2/24	10.2	15.2	.09	2600	96	6	0	0	8,500.00	37,990.13	Drilling ahead 17 ft/hr. Treating mud for temp and condition prior to cores.
11/19	3790	9.4	40	12	10	6/38	9.8	14.0	.04	2800	224	6.5	0	0	2,320.29	40,310.42	Running temp survey prior to cor.

COST:



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 VENTURA, CA 93006-3850  
 805/656-1920  
 FORMERLY PROFESSIONAL DRILLING FLUID SERVICES, INC.

WELL DATA SHEET

BECHTEL - STATE #2-14

DATE	DEPTH	WT	VIS	PV	YP	GELS	pH	W/L	PF	CL PPM	CAPPM	SOL%	OIL%	H.T.H.P.	TOTAL MUD COST		TOTAL DEPTH	REMARKS
															DAILY COST	ACCUMULATED COST		
11/20	4007	9.2	38	12	14	6/24	10.3	16.8	.06	3300	292	6.5	0	0	\$ 2,525.42	\$42,835.84		Daily Maintenance
11/21	4182	9.3	38	13	10	2/32	9.8	16.8	.05	3400	300	7	0	0	2,168.71	45,004.55		Daily Maintenance
11/22	4182	9.4	37	13	12	4/34	9.5	19.2	.05	3400	296	7.5	0	0	3,020.29	48,024.84		Coring sandstone siltstone, daily maintenance
11/23	4334	9.4	35	10	10	2/14	10.6	12.0	.11	3200	232	7.5	0	0	3,022.56	51,047.40		Drig ahead. Daily maintenance
11/24	4641	9.3	38	11	11	4/18	10.6	11.2	.08	4200	180	7	0	0	1,689.46	52,736.85		Daily maintenance. Rig to core
11/25	4676	9.2	38	8	9	2/12	10.9	10.0	.09	3100	120	6.5	0	0	1,612.61	54,349.47		Run temp log. Daily maintenance
11/26	4697	9.2	34	10	10	4/18	10.4	10.8	.06	4100	168	6	0	0	314.80	54,664.27		Run temp logs. Ran core bbl RIH with 12-1/4 13 drill to 4695. Lost stab blades. POOH
11/27	4710	9.2	43	12	16	4/24	9.8	13.2	.04	4500	188	6	0	0	611.69	55,275.96		Increasing vis to help millings operation
11/28	4718	9.1	42	10	14	6/28	10.4	10.8	.04	4000	152	5.5	0	0	1,805.13	57,081.09		Fishing & milling on junk & daily maint.
11/29	4850	9.1	46	12	16	6/28	10.8	11.4	.13	4300	112	5.5	0	0	334.61	57,415.70		Drig. ahead with jars & junk. Daily maint
11/30	5005	8.9	39	10	12	2/24	11.2	9.8	.19	4400	112	6	0	0	7,477.27	64,892.97		Daily maint. Added 6% diesel to inhance mud properties.
12/1	5188	9.0	44	12	12	2/28	10.5	9.4	.12	4400	140	8	0	0	3,001.21	67,894.18		Daily maint. Rig for core run.
12/2	5218	9.0	40	12	10	4/24	10.1	9.6	.09	4200	144	6	0	0	1,324.97	69,219.15		Daily maint. cored 30' 100% core.
12/3	5412	9.0	48	14	11	6/30	10.2	14.8	.06	3800	220	4	0	0	781.17	70,000.32		Daily maint. drill rate 67pph
12/4	5425	DISPLACED MUD WITH 2% KCl WATER FOR INJECTION TEST													3,054.63	73,054.95		Daily Maint.
12/5	5422	8.9	37	7	10	4/26	10.0	18.0	.06	5300	320	6	0	0	283.00	73,337.95		Ran inj. Test. Displaced KCl brine with mud. Lost 200bbls mud during process.



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															DAILY COST	ACCUMULATED COST	
12/6	5424	8.9	40	8	12	6/24	9.1	17.6	.03	5000	284	5	0	0	\$ 1,213.00	\$74,551.28	Twist off and fist. Daily Maint & cond. req'd.
12/7	5591	8.9	32	6	6	2/12	10.6	12.4	.08	5000	204	6	0	0	3,196.10	77,747.38	Daily maint. Coring.
12/8	5748	9.0	35	6	6	2/16	9.9	14.4	.02	4600	200	6	0	0	2,094.76	79,842.14	Daily maint. mud loss -nil.
12/9	6000	9.1	34	6	8	2/14	9.9	12.4	.04	4700	200	6	0	0	3,390.00	83,232.14	Daily maint.
12/10	L O G G I N G														1,338.30	84,570.44	Logging.
12/11	L O G G I N G														85.00	84,655.44	Logging.
12/12	L O G G I N G														85.00	84,740.44	Logging.
12/13	6000	8.8	40	13	9	6/18	8.4	24.2	.02	3800	288	5	0	0	785.44	85,525.88	Log & make cond. run prior to multshot.
12/14	6000	8.9	32	4	8	2/8	9.2	23.4	.04	3000	216	5	0	0	85.00	85,610.88	Ran 9-5/8" csg. Cmt 1st stage @RPT Time.
12/15	6000	8.9	32	4	8	2/8	9.2	23.4	.04	3000	216	4.5	0	0	85.00	85,695.88	Run 9-5/8" 47# csg. 2-stage cmt.
12/16	6000	8.9	38	10	5	2/18	10.8	26.0	.13	3000	200	4.5	0	0	85.00	85780.88	Nipple Up.
12/17	6000	8.9	32	4	4	2/6	10.0	-	.11	2800	144	4	0	0	1,377.86	87,158.74	Drill out cmt etc.
12/18	6044	8.7	34	8	4	2/6	9.5	14.0	.10	2900	140	4	0	0	8,884.27	96,043.01	Daily maintenance & added diesel.
12/19	6044	8.7	34	6	8	2/8	9.3	12.4	.08	2900	212	4	0	0	1,628.21	97,671.22	Fishing, logging, chk collars.
12/20	6077	8.7	32	5	6	2/6	9.8	15.0	.06	3100	160	4	0	0	1,311.64	98,982.86	Daily maint. Dyna drlg.
12/21	6112	8.7	32	5	6	2/6	10.0	14.4	.14	3400	180	4	0	0	1,051.56	100,034.42	Fish for junk after dyna drill run. Wash and ream B+M at rpt time. Daily maint.
12/22	6166	8.7	34	5	5	2/8	10.2	12.0	.05	3400	200	4	0	0	2,665.81	102,700.23	Logging mud 45bph. Daily maint.



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															DAILY COST	ACCUMULATED COST	
12/23	6228	8.75	34	6	4	2/12	10.0	14.4	.10	4900	264	4	0	0	\$ 1,263.72	\$ 103,963.95	Dyna Drill. RIH with Drlg assy to wash & ream Dyna drill run then change over to H <sub>2</sub> O & flow test. Mud losses 0-20 BPH (Daily maint on mud)
12/24	FLOW TEST														0.0	103,963.95	Flow test.
1/3	6228	8.7	31	5	4	2/6	10.6	18.3	.11	5100	240	5	0	0	1,391.94	105,355.89	Losing mud @50-100. Daily maint.
1/4	6516	8.6	34	6	6	2/6	8.8	20.6	.02	5800	420	4	0	0	5,762.02	111,117.91	Reduced mud loss from 100bb1/hr to 20.
1/5	6661	8.6	33	5	7	4/8	10.4	22.2	.06	1400	56	2.5	0	0	2,632.82	113,750.73	Lost returns. Mixing LCM pills @rpt time.
1/6	WATER														5,111.98	118,862.71	Drilled ahead with water. Ran core BBI with water. Placed cent. plug on B+M then LCM plug
1/7	W.O.C.																
1/8	W.O.C.																
1/9	W.O.C.																
1/10	W.O.C.																
1/11	6410	8.6	27	3	2	2/2	6.8	N.C	.0	16,000	NIL	2	0	0	1,272.20	120,134.91	Pit Check Only . Allowed cmt to set.
1/12	6850	8.8	30	3	3	0/0	8.7	6.8	.13	13,800	3,000	3	0	0	13,133.24	133,268.15	Lost circ. losing 100-230 bb1/hr.
1/13	6850	8.7	28	3	2	0/0	7.4	N.C	.0	13,800	2,800	2	0	0	1,885.88	135,154.03	Set 3 cement, plugs top of cmt at 5749
1/14	6530	8.9	27	3	3	0/2	7.5	N.C	.02	25,300	3,904	3	0	0	1,370.15	136,524.18	Drlg cmt plug at 6520 with brine.
1/14	6889	8.4	26	NIL	NIL	0/0	10.8	N.C	.38	8,200	1,348	-	0	0	3,066.91	139,591.09	Lost returns 6640
1/15	7100	8.8	26	3	2	0/0	8.7	N.C	.11	15,600	3112	2.5	0	0	8,153.25	147,744.34	Mud loss up to 90bb1/hr. add lcm-string in with H2O at RPT time trip for core bbl drlg at 26ft/hr
1/16	7252	8.5	28	4	4	2/8	8.2	N.C	.04	11,000	1444	2	0	0	4,552.99	152,297.33	COST: Drlg 23ft/hr in claystone & anhydrite.

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															DAILY COST	ACCUMULATED COST	
1/17	7347	8.7	43	8	13	6/28	7.8	N.C.	.TR	7,200	1312	2.5	0	0	\$3,545.74	155,843.03	Drig. Claystone at 5ft/hr with Christ. Strata pac
1/18	7518	8.7	39	8	12	6/36	9.0	37.2	.04	6,700	420	2.5	0	0	4,562.31	160,405.38	Drig 35ft/hr in Claystone losing 20-30 bbl/hr mud
1/18	7518	8.7	40	6	10	8/22	8.7	59.0	.06	7,000	328	3	0	0			Taken from flowline.
1/20	7666	8.8	45	10	10	4/28	9.2	28.8	.06	6,200	148	3	0	0	4,015.27	164,420.65	From suction. Drig ahead in claystone
1/20	7666	8.8	40	11	9	2/20	8.8	30.0	.05	6,200	152	3	0	0			From flowline.
1/21	7734	8.7	42	7	5	2/28	8.8	38.4	.04	6,000	240	3	0	0	4,478.70	168,899.35	From Suction. Turbo drig. Losing 5bbl/hr Nil.
1/21	7734	8.8	33	8	4	2/12	8.4	40.0	.TR	6,100	260	3	0	0			From Flowline.
1/21	7794	9.0	35	7	8	2/18	9.6	17.8	.10	6000	160	5	0	0	2,512.93	171,412.28	Drig ahead w/turbo drill. Treating mud for HI Temp
1/22	7908	9.0	41	10	11	2/32	10.0	17.6	.13	5600	152	5	0	0	3,522.36	174,934.64	Turbo drig. RPT time just back on BTM with new bit.Last run. Drilled 20ft/hr in claystone
1/23	7972	9.0	39	9	8	2/22	9.7	16.5	.08	5200	160	5	0	0	3,428.24	178,362.88	Trip for turbo & bit #42.
1/24	8040	8.9	40	12	11	4/36	10.0	19.6	.25	5000	176	5	0	0	2,590.62	180,953.50	Just back on BTM with bit 34RR drig last 5ft/hr in clay
1/25	8092	8.8	38	8	14	2/36	10.5	19.0	.40	4600	124	4	0	0	2,981.98	183,935.48	Drig ahead 7FPH in claystone. No mud loss.
1/26	8125	8.4	26	0	0	0	8.6	0	0	240	152	1	0	0	4,903.76	188,839.24	Lost returns at 8,091, drig with H2O.
1/26	W A T E R T R I P																
1/27	W A T E R														2,474.00	191,313.24	
1/28	8161	8.7	30	3	3	2/2	11.2	35.7	.72	6100	620	3	0	0	4,993.22	196,306.45	Set 2 cmt plugs. 2nd plug just set at RPT time POOH
1/29	8238	8.5	27	3	2	0/0	9.8	N.C	.03	3400	504	1.5	0	0	4,249.10	200,555.56	Drig claystone & siltstone at 20ft/hr. Losing mud at 30/40 bbl/hr.
1/30	8402	8.7	30	6	4	6/18	9.2	N.C	.02	3000	536	3	0	0	4,823.18	205,378.72	Core claystone, anhydrite stringers & siltstone
1/31	8585	8.6	26	0	0	0/0	9.0	N.C	.03	120	160	1	0	0	3,788.84	209,167.56	Drig at 35/40FPH. Losing 20 BPH in sandstone.



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															DAILY COST	ACCUMULATED COST	
2/4	9027	8.4	26	0	0	0/0	8.6	N.C	.04	410	180	0	0	0	5,231.94	214,399.50	Lost 100% returns at 8948 cored 9004-9027 w/water w/o returns.
2/5	9071	8.7	31	3	6	4/8	10.0	N.C.	.07	3800	532	3	0	0	1,828.06	216,227.56	Drig claystone at 25-30 ft./hr. Losing mud 50bbl/hr.
2/6	9098	8.7	31	3	5	4/16	9.8	123.0	.03	2500	268	3	0	0	10,606.96	221,834.32	when drilling-losing 70BPH mud \$ drlg at 20ft/hr.
2/7	9127	8.4	26+	0	0	0/0	10.2	N.C.	.04	380	72	NIL	0	0	5,215.60	232,049.92	Lost returns, set LCM plug N.G.-Set cmt plug.
2/8	9248	8.7	36	3	8	6/8	10.5	144.	.08	400	96	3	0	0	4,161.32	236,211.24	Stuck ran in hole with core bbl-stuck before making any hole. Losing 50bbl/hr mud.
2/10	9340	8.7	31	3	12	6/8	9.2	106.	.13	12800	2160	3	0	0	9,884.58	246,095.82	Drig ahead at 17FPH losing mud at 40bbl/hr.Hole sticky.
2/11	9453	8.6	27	2	2	0/0	9.0	N.C.	.04	2000	212	1	0	0	6,042.31	252,138.13	Lost junk in hole. RIH with bit & junk sub, No circ. Spotted LCM pill POOH for core bbl.
2/12	9453	8.6	30	4	5	2/6	11.0	113.2	.25	6500	720	4	0	0	3,819.58	255,957.71	Set LCM & CMT Plug W.O.C. RIH to clean CMT at RPT time.
2/13	9458	8.5	32	6	4	4/8	9.4	133.0	.09	9000	1200	2	0	0	4,580.00	260,538.59	Core drlg at 1ft/hr. Losing 30-50 bbls/hr mud to hole. Trying to maint. circ. & keep torque & drag to min.
2/14	9473	8.5	29	3	3	2/4	10.1	68.0	.06	5000	608	3	0	0	7,165.68	267,704.27	Water in hole mud in pits. Lost circ & cored with water
2/15	9473	8.5	30	3	4	2/4	10.0	64.0	.05	5000	600	3	0	0	1,287.28	268,991.55	Well started to flow RIH to PTM & wash prior to logs.
2/16	9473	8.7	29	3	3	2/4	8.8	N.C	.02	2000	680	3	0	0	(2,248.92)	266,742.63	Inspected D.P. & run logs.
2/17	9473	8.7	33	5	7	4/4	11.3	N.C	.46	2600	184	3	0	0	2,848.84	269,591.17	Set 2 cmt plugs 9200 & 7400 stage in W/O collars.
2/18	9473	8.7	36	7	6	6/6	8.7	N.C	.24	32800	5480	2	0	0	4,338.14	275,929.61	Well either flowing or taking fluid.
2/19	9473	8.7	35	8	13	4/6	10.0	125.0	.10	18000	2708	8	0	0	2,827.64	276,757.25	No returns during stage out with core HO #8-Tried to circ at 8495, 7560,6619 POOH lay tools & rig for logs



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															DAILY COST	ACCUMULATED COST		
2/20	9473	8.7	40	7	19	10/12	9.6	140.0	.07	7100	800	8	0	0	1,302.30	278,059.55		Cementing off loss zones.
2/21	9473	8.9+	37	6	23	8/12	11.1	175.0	.23	3800	340	6	0	0	1,105.14	279,164.69		RIH to 6292 circ & cmet. Pull to 5500 WOC. RIH w/drfg a tag cmt at 6170 pres. ream 6170 - 6485. No returns. RIH to 6500 cmt. Pull to 5900 circ. Full returns. POOH at RPT time for drfg assy.
2/22	8303	8.65	32	4	6	4/6	11.4	blew.dry	.50	2700	240	3	0	0	4,389.02	283,553.71		Drill out cmt plugs 6165-6332,6525-6711,7245-7339,7401-7490, & 7857-8021,8303. RIH (Stands) at RPT time.
2/23	9484	8.6	40	9	7	2/4	11.2	29.0	.26	1320	144	6	0	0	17,322.66	300,876.37		Stuck at 8424-spotted diesel & NIO-loose & coring.
2/24	9517	8.7	34	6	6	4/12	10.0	155.0	.04	6000	920	3.5	0	0	6,279.00	307,155.37		Drfg at 12 ft/hr in claystone then slowed in "Diabase". Losing 60bb1/hr mud.
2/26	9517	8.4	40	8	18	8/10	9.8	87.0	.02	4000	640	3	0	0	7,966.80	315,122.17		Stuck with core bbl-free with diesel & NIO-cored trip for bit at RPT time.
2/27	9613	8.8	36	6	6	4/28	10.0	31.0	.06	1860	112	4	0	0	5,778.86	320,901.03		Drfg 9 ft/hr in claystone (70%) & Standstone.
2/28	9694	8.7	39	7	6	2/12	10.4	20.0	.12	1620	116	4	0	0	(337.75)	320,563.28		Drilled to 9694-Pulled bit out of base,RIH with new bit to wash & ream to gage at RPT time wiper trip prior to core run.
2/29	9699	8.75	34	6	5	2/14	9.2	26.0	.05	4000	368	3.5	0	0	7,470.51	328,803.79		Wash & ream 9605-9694, core 9694-9699 trip at rpt time.
3/3	9912	9.0	36	6	7	4/22	9.2	40.0	.08	6200	148	5	0	0	2,771.08	330,804.87		Cored at 1/2ft/hr-mud loss nil. Prop of mud altered due to nec of adding cool water.
3/4	10,044	9.0	35	9	6	2/18	10.5	33.0	.24	5200	92	4	0	0	4,046.20	334,851.07		Drfg. 10FPH in claystone losing mud at 10-15 bbl/hr.
3/6	10,212	8.9	32	6	4	2/8	9.8	20.0	.34	3700	100	5	0	0	3,844.14	338,695.21		Trip for new bit(hole taking 15bbl /hr) stuck at 10,170 spotted diesel & NIO chase with 1bbl/30min. wait on pil COST:





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															DAILY COST	ACCUMULATED COST		
3/7	10,347	8.7	32	5	10	3/18	10.7	36.0	.49	6700	104	4	0	0	11,752.79	350,448.00		Well started to flow while stuck. Pipe came loose had intrusion of formation fluid. High salinity. Contaminated mud badly. Flowline 230°F.
3/8	10,412	9.0	34	7	14	5/18	9.5	35.0	.19	8000	184	4	0	0	6,824.90	357,272.90		Treating mud for brine contamination & fluid loss. Drig claysand at 8ft/hr. Losing 15-20 bbl/hr.
3/9	10,475	8.75	36	8	8	2/6	10.9	16.0	.21	3000	60	3	0	0	7,803.06	365,075.96		Lost total returns at 10,475', run temp & cal. logs RIH open ended.
3/10	10,475	8.75	44	10	12	4/8	11.7	16.0	.68	2100	20	5	0	0	3,534.66	368,610.62		Well flowing & also lost circulation.
3/11	10,475	8.75	32	6	4	4/12	8.5	114.0	.05	16900	2112	3	0	0	9,459.62	378,070.24		Mud badly contaminated by high salinity brine.
3/12	10,414	8.9	36	9	5	2/0	11.4	22.0	.20	9300	1200	4	0	0	6,835.06	384,905.30		Set cmt plug #1 RIH & tag at 10,414. 2nd cmt plug D.P. POOH at RPT time.
3/13	10,475	8.8	34	8	4	2/6	9.9	48.0	.03	5200	244	4	0	0	6,869.95	394,775.25		Set LCM plug on. BTM held 20 weight & 600 ps. Set 2nd pill. No returns. Pill to 8400 (loss zone) & set pill at RPT time.
3/14	10,475	8.65	29	2	2.5	0/2	9.8	41.5	.03	1500	120	3.5	0	0	3,246.12	395,021.37		Ran logs, well flowed killed well 2x-RIH to cond. for liner at RPT time.
3/15	10,475	8.7	37	5	10	4/4	10.2	106.6	.06	21700	3100	5	0	0	12,854.89	407,876.26		Circ & cond mud. Lost returns circ with returns hole flashes-setting LCM plugs.
3/16	10,475	8.5	29	2	3	0/0	8.0	N.C	.00	3200	640	1	0	0	4,268.40	412,144.66		Ref Ran 7" liner & hung at 5735 BTM of liner at 10.135 RPT time POOH to pick up 6" Bit & 3-1/2 D.P.
3/17	10,245	8.8	28	2	1	0/0	7.7	200.0	.00	2400	576	1	0	0	4,336.55	416,484.24		Picked up 3-1/2 D.P. & BHA drilled out of shoe & lost total returns. Cleaning hole with water at RPT time mixing LCM pill.



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															DAILY COST	ACCUMULATED COST		
3/18	10,564	8.4	26	1	0	0	0	8.2	0.0	1100	252	0	0	0	3,505.51	419,986.72		T.D. Lay down D.P.
3/20	FLOW TEST																	Well flowed w/o nordgen.

COST:

Thermogel & Brine/Water