

Morning Report

RHSU 82-33

File 82-33

11-5-84

Cut back plant output to reduce flow into 82-33. MI&RU wireline truck. Shut in well. Master valve is extremely hard to close. GIH with hollow jet carrier and CCL tool. Run correlation log from 1700' to 1500'. Perforate 1650' to 1670' with 80 - 1/2 inch holes, 4 holes/foot. POOH. Replace top Flange and begin injecting. Total time of shut-in 3 hours ~~45~~ 45 minutes. RD+MD wireline truck. Maximum injection was improved 150,000 ~~lbm~~ lbm/hr.

MORNING REPORT

RHSU 82-33

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5/11/84 At 0730 hrs MI Gearhart Service Company.

Hold safety meeting and obtain radio silence.

RU gun and lubricator. Correlate depth and perforate 9 5/8" casing from 1650' to 1670' RKB at 4 holes/ft for a total of 80 1/2" holes.

RD & MD at 1030 hrs.

Total cost of job is \$6,313.60.

PHILLIPS GEOTHERMAL  
DAILY DRILLING REPORT

06/16/83 WELL RBSU 82-33 RIG \_\_\_\_\_ DAYS FROM SPUD \_\_\_\_\_  
 OPR'N DIRECTIONAL SURVEY TD 5028 FTG 5475' BIT SIZE \_\_\_\_\_ FM: \_\_\_\_\_  
 MW: IN \_\_\_\_\_ #/GAL OUT \_\_\_\_\_ #/GAL VIS \_\_\_\_\_ PV \_\_\_\_\_ YP \_\_\_\_\_ GELS 0/10 \_\_\_\_\_  
 WL \_\_\_\_\_ HT-HPWL \_\_\_\_\_ FC/32" \_\_\_\_\_ PH \_\_\_\_\_ CA+ \_\_\_\_\_ CL- \_\_\_\_\_ OIL \_\_\_\_\_  
 SOLIDS \_\_\_\_\_ SAND \_\_\_\_\_ LCM \_\_\_\_\_ DLY MUD COST \_\_\_\_\_ TOT MUD COST \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 WELLHEAD PRESS: 0 \_\_\_\_\_ PSIG GPM \_\_\_\_\_ SPM \_\_\_\_\_ WUB \_\_\_\_\_ RPM \_\_\_\_\_  
 PUMP2: PRESS \_\_\_\_\_ PSIG GPM \_\_\_\_\_ SPM \_\_\_\_\_ WUB \_\_\_\_\_ RPM \_\_\_\_\_  
 DC'S: NO \_\_\_\_\_ OD \_\_\_\_\_ " ID \_\_\_\_\_ " NO \_\_\_\_\_ OD \_\_\_\_\_ " ID \_\_\_\_\_ " HWDP: NO \_\_\_\_\_ OD \_\_\_\_\_  
 DP: OD \_\_\_\_\_ " WT \_\_\_\_\_ #/FI CONN'S \_\_\_\_\_ BHA: LENGTH \_\_\_\_\_  
 DESC: \_\_\_\_\_  
 LAST CSG: OD \_\_\_\_\_ " WT \_\_\_\_\_ #/FI DEPTH \_\_\_\_\_  
 ACC. PRESS \_\_\_\_\_ PSI MANI. PRESS \_\_\_\_\_ PSI  
 KILL RATE: PUMP1 PRESS \_\_\_\_\_ SPM \_\_\_\_\_ GPM \_\_\_\_\_ PUMP2 PRESS \_\_\_\_\_ SPM \_\_\_\_\_ GPM \_\_\_\_\_  
 SURVEYS: \_\_\_\_\_  
 TANG \_\_\_\_\_ INTANG \_\_\_\_\_ DAILY \_\_\_\_\_ TOTAL \_\_\_\_\_ AUTH \_\_\_\_\_  
 SUPERVISOR: \_\_\_\_\_

OPERATION SUMMARY

HRS OPERATION

RAN DIRECTIONAL SURVEY (GYRO) ON THE 16TH. LOST MULTI-SHOT TOOL IN HOLE AS WE WERE JUST GOING IN THE WELLHEAD. KINK IN SLICK WIRE LINE AT THE CONNECTION TO THE TOOL CAUSED LOSS OF TOOL. FISHED TOOL FROM HOLE WITH OVERSHOT AND BRADED LINE ON THE 17TH AT A DEPTH OF 5503 FT. FINISHED SURVEY ON THE 18TH TO A DEPTH OF 5475 FT. NO WHP. DID NOT SEE LOST PRESSURE CHAMBER AND 3000 FEET OF CAPILARY TUBING, ASSUMED AT BOTTOM OF HOLE.

FIELD COPY SHOWS BOTTOM OF HOLE (LAST SHOT) AT 5475 FT. AT 343.66 FT. N32.46W; MAXIMUM DEVIATION 11 DEGREES 45'

DEPTH	TEMP (F)		COOLER		H2S	CO2
	IN	OUT	ON	OFF		

MORNING REPORT

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RD & MD at 1030 hrs.

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 OPR'N DIRECTIONAL SURVEY TD 5028 FIG 5475' BIT SIZE \_\_\_\_\_ FM: \_\_\_\_\_  
 MW: IN \_\_\_\_\_ #/GAL OUT \_\_\_\_\_ #/GAL VIS \_\_\_\_\_ PV \_\_\_\_\_ YP \_\_\_\_\_ GELS 0/10 \_\_\_\_\_  
 WL \_\_\_\_\_ HT-HPWL \_\_\_\_\_ FC/32" \_\_\_\_\_ PH \_\_\_\_\_ CA+ \_\_\_\_\_ CL- \_\_\_\_\_ OIL \_\_\_\_\_  
 SOLIDS \_\_\_\_\_ SAND \_\_\_\_\_ LCM \_\_\_\_\_ DLY MUD COST \_\_\_\_\_ TOT MUD COST \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 WELLHEAD PRESS: 0 \_\_\_\_\_ PSIG GPM \_\_\_\_\_ SPM \_\_\_\_\_ WUB \_\_\_\_\_ RPM \_\_\_\_\_  
 PUMP2: PRESS \_\_\_\_\_ PSIG GPM \_\_\_\_\_ SPM \_\_\_\_\_ WUB \_\_\_\_\_ RPM \_\_\_\_\_  
 DC'S: NO \_\_\_\_\_ OD \_\_\_\_\_ " ID \_\_\_\_\_ " NO \_\_\_\_\_ OD \_\_\_\_\_ " ID \_\_\_\_\_ " HWDP: NO \_\_\_\_\_ OD \_\_\_\_\_  
 DP: OD \_\_\_\_\_ " WT \_\_\_\_\_ #/EI CONN'S \_\_\_\_\_ BHA: LENGTH \_\_\_\_\_  
 DESC: \_\_\_\_\_  
 LAST CSG: OD \_\_\_\_\_ " WT \_\_\_\_\_ #/EI DEPTH \_\_\_\_\_ '  
 ACC. PRESS \_\_\_\_\_ PSI MANI. PRESS \_\_\_\_\_ PSI  
 KILL RATE: PUMP1 PRESS \_\_\_\_\_ SPM \_\_\_\_\_ GPM \_\_\_\_\_ PUMP2 PRESS \_\_\_\_\_ SPM \_\_\_\_\_ GPM \_\_\_\_\_  
 SURVEYS: \_\_\_\_\_  
 TANG \_\_\_\_\_ INTANG \_\_\_\_\_ DAILY \_\_\_\_\_ TOTAL \_\_\_\_\_ AUTH \_\_\_\_\_  
 SUPERVISOR: \_\_\_\_\_

OPERATION SUMMARY

HRS OPERATION

RAN DIRECTIONAL SURVEY (GYRO) ON THE 16TH. LOST MULTI-SHOT TOOL IN HOLE AS WE WERE JUST GOING IN THE WELLHEAD. KINK IN SLICK WIRE LINE AT THE CONNECTION TO THE TOOL CAUSED LOSS OF TOOL. FISHED TOOL FROM HOLE WITH OVERSHOT AND BRADED LINE ON THE 17TH AT A DEPTH OF 5503 FT. FINISHED SURVEY ON THE 18TH TO A DEPTH OF 5475 FT. NO WHP. DID NOT SEE LOST PRESSURE CHAMBER AND 3000 FEET OF CAPILARY TUBING, ASSUMED AT BOTTOM OF HOLE.

FIELD COPY SHOWS BOTTOM OF HOLE (LAST SHOT) AT 5475 FT. AT 343.66 FT. N32.46W; MAXIMUM DEVIATION 11 DEGREES 45'

DEPTH	TEMP (F)		COOLER		H2S	CO2
	IN	OUT	ON	OFF		

# DAILY REPORT DETAILED

LEASE Spinner and Temp Surveys WELL NO. RHSU 12-35, 82-33, 14-2, OH-8, 25-15 SHEET NO. 1

DATE  
NATURE OF WORK

TOTAL  
DEPTH  
PERFORMED

3/05/85 Prepared to run spinner survey on RHSU 12-35. 3" ANSI 300# valve had a reduced throat so the 2 1/4" spinner tool would not fit. RIH with an alternative 1 1/4" spinner tool which failed to work.

3/06/85 Installed a 3" ANSI 600# valve on RHSU 12-35. Rigged up lubricator and RIH with 1 1/4" sinker bar to 7300'. No obstructions or problems at the parted casing. RIH with 2 1/4" spinner tool and ran in tandem temperature and spinner surveys. Spinner tool was set up to make one mark per 400 revolutions. Surveys were good, but would have been better with one mark for 100 revolutions for the estimated 500,000 lbs/hr flowrate.

Moved to RHSU 82-33. SI master valve to bleed off 52 psig WHP. Installed 3" ANSI 600# valve. RU lubricator and RIH with sinker bar to 4500'; no obstructions. Ran spinner at one mark per 100 revolutions at an estimated 400,000 lbs/hr. Temperature and spinner surveys were good.

3/07/85 RU on RHSU 14-2 with lubricator. Ran sinker bar and hit obstruction at 5446' (TD 6100'). RIH with spinner at one mark per 400 revolutions at an estimated flowrate of 1,000,000 lbs/hr. Temperature and spinner surveys were good.

Moved to OH-8 and ran a temperature survey. Maximum temperature is 290° F.

3/08/85 RU on RHSU 25-15 with lubricator and RIH with a 6" impression block. Hit obstruction in open hole at 2536' RKB. POOH and impression block had a ding on the edge. RIH again with 6" gauge ring. Hit the ledge at 2536' RKB. Backed off ledge and WIH to 2715' RKB. Bounced gauge ring off obstruction about 10 times and obstruction would not move. Gauge ring had white to light tan rock powder on it when POOH. WIH with impression block. Hit ledge at 2536' RKB. Backed off ledge and went downhole to 2712' RKB. Made one hit on impression block and POOH. Impression block had dings on the edge and in the center of the impression block, indicating a totally occluded hole.

Released Pruett.

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11-5-84

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## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 1

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
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11-04-75		Moving in rotary. Location: 1284' So & 77' West of NE Corner Sec 33-26S Beaver Co., Utah. 6000' Geothermal exploratory test. AFE PE-5508. PFCo 100%. Loffland Bros. Co. - Contr. Elev: GL 5842, RK13 5864.
11-05-75		MI & RUR - 75% Complete.
11-06-75	168	Running 20" conductor. Finished RUR, spudded 26" hole at 3:00 p.m., 11-5-75. Drilled to 168'. Started running conductor pipe.
11-07-75	180	Drilling granite wash. Ran 4 jts & 1 pc., 164.31', 20" PE 91#, conductor pipe, set at 164' RKB. Circ & cond hole $\frac{1}{2}$ hour. Cemented w/400 sx Class B cement, 3% CaCl <sub>2</sub> . Displ plug to 124', good cement returns to cellar, circ est 100 sx. Plug down at 12:30 p.m., 11-6-75. WOC 6 hrs. Cut-off 20" casing, welded on flange, nipped up & tested 20" hydril to 200#, held 30 mins, OK. Drld cement & cond mud. Started 17 $\frac{1}{2}$ " hole at 168'.
11-08-75	433	Drilling granite wash. Totco $\frac{1}{2}$ degree at 284', 3/4 degree at 431'.
11-09-75	517	Drilling quartz Monzonite. Flow line temperature at 517', 93°F in, 98°F out.
11-10-75	614	Drilling quartz Diorite. Flow line temp. at 614', 91° in, 100° out.
11-11-75	616	Fishing. Drilled to 616' @ 6:30 a.m. POH. Trip for new bit. WIH w/new bit and reamed 386-616' in four hours. Lost pump pressure at TD-POH. Drill string parted at top of double-pin sub. FISH IN HOLE. 17 $\frac{1}{2}$ " bit 1.25', 9 5/8" bit sub 3.20', 7 3/8" double pin sub 1.02'. Three pieces overall 5.47'. WO fishing tools 4 $\frac{1}{2}$ hours. Made three runs with over- shot various skirts and grapple dressing. Maximum pull 55,000 over string weight—no recovery. $\frac{1}{2}$ hour drlg, $\frac{1}{2}$ hour trip for bit, 4 hours reaming, 4 $\frac{1}{2}$ hours WO tools, 1 $\frac{1}{2}$ hours fishing.



## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 2

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
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11-12-75	616	<p>WOC.</p> <p>Recovered all of fish. Circ &amp; cond hole. Ran 14 jts, 575', 13 3/8" OD, 54.5#, K-55 R3, BT&amp;C casing, set at 575'. (Unable to get casing below 575' Cemented w/500 sx class B cement, 1:1 perlite, 40% silica flour, 2% gel, 2/10% CFR, 4/10% HR-4, 13.8#/gal Pumped plug to 537' at 10:00 a.m., 11-12-75, good returns. Circ est 100 sx good cement.</p>
11-13-75	616	<p>Nippling up.</p> <p>WOC 21 hrs, 3 hrs cut-off 20" &amp; 13 3/8" casing. Cement around 13 3/8" casing settled to 21' below bottom of cellar. Will fill to surface w/pea gravel.</p>
11-14-75	616	<p>Testing BOP's.</p> <p>Cut off casing, installed BOP stack. Tested casing to 1000#, blind rams to 1200#, pipe rams to 1100# and hydril to 600#, 30 mins each, held OK.</p>
11-15-75	745	<p>Drilling quartz diorite.</p> <p>Finished nippling up. Drilled cement and reamed 25 feet to bottom. Started 12 1/4" hole at 616'.</p>
11-16-75	1094	<p>Drilling diorite.</p> <p>Flow line temperature at 1085', 110°F in, 118°F out.</p>
11-17-75	1410	<p>Drilling quartz diorite.</p> <p>Totco 1 1/4 Deg at 1101'. Flow line temperature at 1390', 120°F in, 128°F out.</p>
11-18-75	1623	<p>Drilling granodiorite.</p> <p>Trip for bit at 1562'. Totco 2 deg at 1562'. Flow line temp at 1595', 114°F in, 124°F out.</p>
11-19-75	1678	<p>Mixing mud.</p> <p>Drilled to 1655', lost complete returns. Mixed and pumped in 3 LCM pills, no returns. Mixed pit of mud, 20% LCM. Pumped in and drilled to 1662', no returns (Appears to be 2' fracture 1655'-57'.) Drilled to 1669', no returns. Mixed pit of mud w/30% LCM, pumped in and drilled to 1678', no returns, apparently through fractures. Lost approximately 1,400 bbls mud.</p>

## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 3

DATE	TOTAL DEPTH PERFORMED	NATURE OF WORK
11-20-75	1678	Mixing mud. Mixed 300 bbls mud, 35% LCM, 8.6 #/gal., Vis 70, FC 2/32, filled hole to 50' from top. Mixed pit of mud, 35% LCM, pumped in hole, filled to 110' from top. Mixed pit of mud, pumped in with no returns. Pumped 100 Bbls in DP and 25 Bbls in annulus, no returns. Mix High Wtr Loss pill, flushed to btm, no returns. COOH, WIH w/open ended DP to Td. Mixing mud.
11-21-75	PTD 1647 OTD 1678	Lost circulation. Mixed pit of mud and LCM. Spotted 50 sx Class B cement, 4% CaCl <sub>2</sub> , WOC 4 hrs. Tag top of cement at 1656'. Sptd 50 sx Class B cement, 4% CaCl <sub>2</sub> and COOH w/DP. Ran wooden float on WL, left float and 300' WL in hole, no fluid in hole. Rec Fish. WIH open ended, tagged top of cement at 1647'. Spotted 50 sx Class B cement, 4% CaCl <sub>2</sub> . WOC 4 3/4 hrs. Tagged top of cement at 1647', no fill.
11-22-75	OTD 1678 PTD 1647	Lost circulation. Dropped 2 tons alfalfa cubes and 300 BW in hole. Went in hole w/bit, no fill up. Dropped 1 1/2 tons alfalfa cubes in hole. Went in hole w/bit, no fill up. Dropped 200 gel-soaked burlap sacks in hole, followed w/1 1/2 tons alfalfa cubes, followed w/200 bbls. mud, 30-35% LCM. Mixed pit of mud and LCM. Went in hole w/bit, no fill up.
11-23-75	OTD 1678 PTD 1650	Lost circulation. Came out of hole. Dumped 200 gelled Burlap sacks, 3 tons 6" to 9" lump coal and 2 tons alfalfa cubes in hole, hole filled up. Went in hole, drilled intermitte bridges and LCM to 1650' and lost complete returns. Came out of hole, Shut in 2 1/2 hours for gas sample. Analysis showed 10,000 ppm CO <sub>2</sub> and trace of H <sub>2</sub> S. Started dropping burlap sacks in hole.
11-24-75	1678	Lost circulation. Dropped 180 gelled burlap sacks, 1 ton 6" to 9" lump coal, 2 1/2 tons alfalfa cubes and 2 tons coal in hole. Went in w/bit, drld bridges 300 to 700'. Down 2 hrs. mixing mud and raising viscosity. Came out of hole, picked up 10 DC's and went in hole. Drilled bridges to 750', lost complete returns, went to 1670', hole clear. Came out of hole. Dropped 7 (10" OD x 15' long) plastic rolls filled w/mud, followed w/gel mud. Went in hole w/bit, hole clear to 1678'. Started loading hole with coal.

## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 4

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
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11-25-75	1678	<p>Lost circulation.</p> <p>Dropped 2 tons lump coal in hole. Mixed pit of mud and LCM. WIH w/bit, drld small bridges 750' to 1575' and plugged bit. WIH, drld bridges to 1650' and lost complete returns, COOH. WIH w/open-ended DP to 1509'. Mixed and sptd. 150 sx Barite plug on btm, Waited <math>\frac{1}{2}</math> hr., tagged btm., no fill. Mixed and sptd 150 sx Barite plug on btm., no fill. COOH, mixed pit of mud and LCM.</p>
11-26-75	1728	<p>Drilling granodiorite.</p> <p>Dropped in 400 plastic bags filled w/wood chips and Barite, flushed w/400 bbls mud, no fill. Cleaned and filled pit, mixed mud. WIH w/open ended DP to 1256'. Flushed w/420 gals Diesel oil, followed w/840 gals diesel oil mixed w/6 gals DOC No. 12 and 200 sx Class B cement, 4% CaCl<sub>2</sub>, flushed w/210 gals diesel oil and 14 Bbls wtr. COOH, WIH w/drlg assy, no fill. Drilled 1678-1728 in <math>\frac{1}{2}</math> hrs, no returns.</p>
11-27-75	1853	<p>Drilling granodiorite.</p> <p>Drilling 12 hrs. without returns, WO water 12 hrs.</p>
11-28-75	1960	<p>Drilling granodiorite.</p> <p>9 hrs., drilling without returns, 15 hrs., WO water.</p>
11-29-75	2004	<p>Logging.</p> <p>Drilled to 2004' without returns. 2 hrs WO water. Ran Schl sonic log, mis-run. Ran Density-Caliper log. Reran Sonic log, mis-run. Max BHT 210°. Ran direction and deviation survey. 2 deg 30 min, North 78° 28'W at 1992'. Horiz displacement 29.7.</p>
11-30-75	2004	<p>Logging.</p> <p>Ran Schlumberger Sonic log, Induction log failed. WIH w/DP, COOH, LDDC &amp; <math>\frac{1}{2}</math>" DP. PU 7" DC's. Ran Agnew and Sweet temperature survey. Max BHT 254° at 1500', 229.2° at 1990'.</p>
12-01-75	2004	<p>Coming out of hole with magnet.</p> <p>Completed Schlumberger Induction log. PU 7" DC's, <math>\frac{1}{2}</math>" DP and bit, washed and conditioned hole to btm, no returns. Made short trip, no fill, COOH. Ran 11<math>\frac{1}{2}</math>" magnet to btm, no recovery, reran magnet to bottom, started out of hole.</p>

## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 5

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
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12-02-75

2004

WOC.

COOH W/magnet, no recovery. Ran 46 jts, 2010', 9 5/8" OD, 40#, K-55, R-3, BT&C casing w/float shoe, 2', float collar 1.58', DV Tool 4', 2 9 5/8 x-over nipples 2.45'. Set casing at 2001' RKB, float collar at 1955.52', metal petal baskets at 1695' and 1600', DV tool at 1556'. Pumped in 260 BW, no returns. Cemented bottom stage w/200 sacks Class B cement, 1:1 Perlite, 40% Silica Flour 2% gel, 4/10% HR4, 5/10% CFR-2, 13.8#/gal. Dropped "latch-in plug," displaced with 148 BW, latched into float collar at 1955', no returns. Dropped DV tool bomb, opened ports and set packer. Filled hole w/105 BW, circulated w/full returns. (Cement contaminated water). Circ 4 hrs to allow first stage to take initial set. Cemented second stage w/600 sx Class B cement, 1:1 Perlite, 40% Silica Flour, 2% gel, 4/10% HR4, 5/10% DFR-2. Had intermittent returns while mixing first 50 sx, then full returns. Dropped DV closing tool and wiper plug. After displacing 60 Bbls had 900# pump pressure, lost complete returns. Slowed pump rate and completed displacing. Closed DV packer ports at 12:00 midnite, 12-1-75. WOC. No cement returns.

12-03-75

2004

Nippling up BOP's.

WOC 18½ hrs. Cut off casing and started nipping up BOP's.

12-04-75

2004

Preparing to run cement bond log.

Finished nipping up BOP's. Tested blind rams and casing to 1050#, 30 mins, OK. Tstd Btm, middle and top pipe rams to 1275#, 30 mins each, OK. Tested Hydril to 550#, 30 mins, OK. WIH w/bit, to DV tool to 1556', drld DV tool and went to float collar at 1954'. Circ btms up, tested DV tool w/800#, 30 mins, OK. Drld float collar and firm cement to top of shoe. Circ btms up. Tested casing and float collar w/800#, 30 mins, OK, press incr to 950# due to heat. Came out of hole to run Schlumberger. Bond log.

## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 6

DATE NATURE OF WORK	TOTAL DEPTH PERFORMED	
12-05-75	2120	<p>Drilling Granodiorite</p> <p>Rigged up &amp; run Schl cement bond log to 1974'. Fairbond 1974-1788', no cement to DV tool at 1556'. Good to fair from 1556 to 1424'; good to excellent 1424-1050'; fair to 924', very good to 850'; good to fair to 664', top of cement 664'. WIH w/bit, drld shoe &amp; drld 8½" hole 2004- w/full returns. COOH for new bit &amp; bottom hole assy. W lost est 500 BW at 2042' w/800# pump pressure, reduced press to 700#, drilling w/full returns.</p>
12-06-75	2240	<p>Drilling Quartz Diorite.</p> <p>Drilled to 2160', lost returns. Mixed mud &amp; LCM pills &amp; displaced with water, unable to seal loss zone. Mudde up w/coarse Mica Flakes, Fibertex, Plug-it, Cottonscrd Hulls &amp; Hi-seal paper. Drilled to 2240' w/full returns. Mud 8.5#, Vis 43, LCM 12%. Flow line temp. at 2240', 115°F in, 138°F out.</p>
12-07-75	2455	<p>Quartz Diorite, tripping for bit.</p> <p>Drilled to 2455' with full returns. Mud 8.6, Vis 38, WL 12.8, FC 3/32, LCM 5%. Flow line temp. at 2450', 147°F in, 158°F out.</p>
12-08-75	2654	<p>Drilling Quartz Diorite.</p> <p>Finished trip, installed rotating head. Drilled 2455-2654' w/full returns. Mud 8.7#, Vis 38, WL 10.4, FC 2/3 LCM trace. Totco, 4 Deg. at 2455'. Flow line temp. at 2645', 136°F in, 146°F out.</p>
12-09-75	2914	<p>Quartz Diorite, trip for bit.</p> <p>Drilled 24 hours, full returns. Mud 8.8, Vis 39. WL 9.2, FC 2/32, LCM-Trace. Flow line temp at 2895', 138°F in, 168°F out. Temperature increase at 2770'.</p>
12-10-75	3116	<p>Four and ½ hours dropped Totco. Made trip for new bit. Dressed Floats. Broke circulation at 1900'. 19½ hours drilling from 2914' to 3116' w/full returns. Flow line temperature at 3100', 144°F in, 162°F out.</p>
12-11-75	3330	<p>Drilling quartz diorite.</p> <p>Drilled 24 hrs., full returns, Mud 9.0, V 38, WL 10.8, LCM 4-5%. Flow line temp at 3330', 168°F out.</p>

## DAILY REPORT DETAILED

LEASE ROOSEVELT KGRAWELL NO. 82-33SHEET NO. 7

DATE	TOTAL DEPTH	NATURE OF WORK PERFORMED
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12-12-75	3536	Drilling granodiorite. Trip for bit at 3342'. Totco 4 $\frac{1}{2}$ Deg at 3342. Lost estimated 30 Bbls mud 3410-18', added 3 sx fiber to mud, full returns. Flow line temp at 3530', 148° F in, 174° F out. 1650 ppm CO <sub>2</sub> at 3530'.
12-13-75	3772	Drilling granodiorite. Flow line temperature at 3750', 150° F in, 168° F out, CO <sub>2</sub> 2196 ppm.
12-14-75	4035	Drilling granodiorite. Trip for bit at 3835', Totco 4 3/4 deg at 3835'. Flow line temp at 4010', 148° F in, 166° F out. CO <sub>2</sub> 1540 ppm.
12-15-75	4393	Drilling granodiorite. Mud 8.8, Vis 27, WL 24.2. Flow line temp at 4340', 150° F in, 162° F out. CO <sub>2</sub> 868 ppm.
12-16-75	4598	Drilling quartz diorite. Trip for bit at 4455'. Totco 4 $\frac{1}{2}$ Deg at 4455'. Flow line temp at 4585', 134° F in, 170° F out, CO <sub>2</sub> 1900 ppm.
12-17-75	4830	Drilling quartz diorite. Mud 8.6#, Vis 26. Flow line temp at 4810', 138° F in, 160° F out, CO <sub>2</sub> 1008 ppm.
12-18-75	5020	Drilling quartz monzonite. Trip for bit at 4877'. Flow line temp at 5000', 137° F in, 153° F out, CO <sub>2</sub> 924 ppm.
12-19-75	5270	Drilling quartz diorite. Flow line temp at 5250', 133° F in, 153° F out, CO <sub>2</sub> 1036 ppm.
12-20-75	5460	Drilling Quartz Diorite. Trip for bit at 5339, Totco 6 $\frac{1}{4}$ Deg at 5339'. Flow line temp at 5435', 132° F in, 142° F out, CO <sub>2</sub> 896 ppm.
12-21-75	5740	Drilling Quartz Diorite. Drilled some small fractures. Flow line temp at 5720', 148° F in, 160° F out, CO <sub>2</sub> 1204 ppm.
12-22-75	5935	Drilling Quartz Diorite. Trip for bit at 5767'. Totco 7 Deg at 5767'. Flow line temp at 5930', 148° F in, 160° F out.

# DAILY REPORT DETAILED

LEASE ROOSEVELT KGRA

WELL NO. 82-33

SHEET NO. 8

DATE  
NATURE OF WORK  
TOTAL  
DEPTH  
PERFORMED

12-23-75	6028	<p>LDDC's.            Drilled 8½" hole to 6028' SIM. Circ and cleaned hole 1 hr. came out of hole. Totco at 6028', 11 3/4 Deg. Flow line temp at 6028', 162°F in, 174°F out. RU and ran Schlumberger IES-GR 5778-2012', hit bridge at 5780'. Ran CNL-GR temp questionable. Ran BHC-GR, Max temp 284°F. RD Schlumberger. RU to LDDC's.</p>
12-24-75	6028	<p>Prep to nipple down BOP.            Finished LDDC's. Ran Agnew and Sweet BHP &amp; Temp survey. First Temp survey misrun. Reran temp survey, max temp 310.1°F at 5768'. LDDP</p>
12-25-75	6028	<p>Tearing down rotary.            Nippled down BOP, cleaned cellar and pit. Released rig at 2:00 p.m., 12-24-75. Well being held as temperature observation hole. Final report.</p>

# DAILY REPORT DETAILED

LEASE ROOSEVELT KGRA

WELL NO. 82-33

SHEET NO. 9

DATE 1-14-77 TOTAL  
NATURE OF WORK DEPTH  
PERFORMED

1-14-77

Agnew and Sweet fluid level 700' G. L.

Pump in test (A.M.)

Gravity test: 53 bbls water to fill hole through 4" hose.  
7 mins to fill hole and work out air.

Under gravity hole took 380 bbls in two hours. 380 bbls  
in 2 hrs., 380 bbls - 53 bbls fill up = 327 bbls. Taking  
fluid at 2.7 BPM

P.M.- (Dowell), two trucks - can average 20 BPM @ 1000#

## Results:

TIME	PUMP IN RATE BPM	WELLHEAD PRESSURE	PUMP PRESSURE
1:25 p.m.	23	- -	20#
1:30 p.m.	23	235	500#
1:35 p.m.	23	235	600#
1:40 p.m.	23	230	550#
1:45 p.m.	20	210	500#
1:50 p.m.	20	210	500#
1:55 p.m.	20	205	500#
2:00 p.m.	20	205	500#
2:05 p.m.	20	200	500#
2:10 p.m.	20	195	500#
2:12 p.m.	10	145	400# (1 trk)
		S.D.O#	less than 1 min.
TOTAL:	47 mins	940 bbls	

Gravity: hole took 500 bbls in 70 mins.



PHILLIPS GEOTHERMAL  
DAILY DRILLING REPORT

06/16/83 WELL RHSU 82-33 RIG \_\_\_\_\_ DAYS FROM SPUD \_\_\_\_\_  
 OPR'N DIRECTIONAL SURVEY TD 5028 FIG 5475' BIT SIZE \_\_\_\_\_ FM: \_\_\_\_\_  
 MW: IN \_\_\_\_\_ #/GAL OUT \_\_\_\_\_ #/GAL VIS \_\_\_\_\_ PV \_\_\_\_\_ YP \_\_\_\_\_ GELS 0/10 \_\_\_\_\_  
 WL \_\_\_\_\_ HT-HPWL \_\_\_\_\_ FC/32" \_\_\_\_\_ PH \_\_\_\_\_ CA+ \_\_\_\_\_ CL- \_\_\_\_\_ OIL \_\_\_\_\_  
 SOLIDS \_\_\_\_\_ SAND \_\_\_\_\_ LCM \_\_\_\_\_ DLY MUD COST \_\_\_\_\_ TOT MUD COST \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 BIT NO \_\_\_\_\_ MAKE \_\_\_\_\_ TYPE \_\_\_\_\_ SN \_\_\_\_\_ JETS \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 HRS \_\_\_\_\_ FT \_\_\_\_\_ OUT \_\_\_\_\_ COND: T \_\_\_\_\_ B \_\_\_\_\_ G \_\_\_\_\_ ACC HRS \_\_\_\_\_  
 WELLHEAD PRESS: 0 \_\_\_\_\_ PSIG GPM \_\_\_\_\_ SPM \_\_\_\_\_ WUB \_\_\_\_\_ RPM \_\_\_\_\_  
 PUMP2: PRESS \_\_\_\_\_ PSIG GPM \_\_\_\_\_ SPM \_\_\_\_\_ WUB \_\_\_\_\_ RPM \_\_\_\_\_  
 OC'S: NO \_\_\_\_\_ UD \_\_\_\_\_ " ID \_\_\_\_\_ " NO \_\_\_\_\_ OD \_\_\_\_\_ " ID \_\_\_\_\_ " HWDP: NO \_\_\_\_\_ OD \_\_\_\_\_  
 DP: OD \_\_\_\_\_ " WT \_\_\_\_\_ #/EI CONN'S \_\_\_\_\_ BHA: LENGTH \_\_\_\_\_  
 DESC: \_\_\_\_\_  
 LAST CSG: OD \_\_\_\_\_ " WT \_\_\_\_\_ #/EI DEPTH \_\_\_\_\_  
 ACC. PRESS \_\_\_\_\_ PSI MANI. PRESS \_\_\_\_\_ PSI  
 KILL RATE: PUMP1 PRESS \_\_\_\_\_ SPM \_\_\_\_\_ GPM \_\_\_\_\_ PUMP2 PRESS \_\_\_\_\_ SPM \_\_\_\_\_ GPM \_\_\_\_\_  
 SURVEYS: \_\_\_\_\_  
 TANG \_\_\_\_\_ INTANG \_\_\_\_\_ DAILY \_\_\_\_\_ TOTAL \_\_\_\_\_ AUTH \_\_\_\_\_  
 SUPERVISOR: \_\_\_\_\_

OPERATION SUMMARY

HRS OPERATION

RAN DIRECTIONAL SURVEY (GYRO) ON THE 16TH. LOST MULTI-SHOT TOOL IN HOLE AS WE WERE JUST GOING IN THE WELLHEAD. KINK IN SLICK WIRE LINE AT THE CONNECTION TO THE TOOL CAUSED LOSS OF TOOL. FISHED TOOL FROM HOLE WITH OVERSHOT AND BRADED LINE ON THE 17TH AT A DEPTH OF 5503 FT. FINISHED SURVEY ON THE 18TH TO A DEPTH OF 5475 FT. NO WHP. DID NOT SEE LOST PRESSURE CHAMBER AND 3000 FEET OF CAPILARY TUBING, ASSUMED AT BOTTOM OF HOLE.

FIELD COPY SHOWS BOTTOM OF HOLE (LAST SHOT) AT 5475 FT. AT 343.66 FT. N32.46W; MAXIMUM DEVIATION 11 DEGREES 45'

DEPTH	TEMP (F)		COOLER		H2S	CO2
	IN	OUT	ON	OFF		