GL01055

THERMAL POWER COMPANY /SOUTHLAND ROYALTY COMPANY

DIXIE FEDERAL 66-21 — Daily Drilling History
Dixie Valley, Churchill County, Nevada

DATE	DEPTH	
		Installed 70.62 cm (30") conductor pipe at 12.5m (41')KB prior to drill rig moving in.
7/15/79	39.6m(130')	Moved in and rigged up Peter Bawden Rig #23. Spudded well at 0800 Hrs. Picked up Kelley, 44.45cm (17½") bit and bottom hole assembly, drilled to 39.6m (130') w/bit #1. P.O.H.: laid down bit and picked up 67.31cm (26½") hole opener. R.I.H. and opened 44.45cm (17½") hole to 67.31cm (26½") from 12.5 m (41') to 39.6m (130'). Circulated; prep. to run 50.80cm (20") casing. P.O.H.
7/16/79	39.6m(130')	Ran 50.80cm (20') casing; stopped at 18.3m (60') P.O.H. R.I.H. with 44.45 cm (17½") bit and 67.31cm (26½") hole opener and reamed to 39.6m (130'). P.O.H. Ran 3 joints 50.80cm (20") casing, 139.87 Kg/m (94#/ft) H-40 buttress casing, total length 38.3m(125.71'). Landed shoe at 37.8 (124')K.B. Halliburton cement service pumped 0.84m^3 (30ft^3) ahead of 362 sacks class G cement with 3% CaC13, 11.78m^3 (416ft^3) of slurry at 15.4 ppg density. C.I.P. 1730 Hours. Good returns during job; (50ft^3) excess cement to sump. W.O.C. 6 hours.
7/17/79	85.3M(280')	Nippled up 50.80cm (20") BOP. Laid down 67.31cm (26½") hole opener. Picked up drilling assembly and R.I.H. tagged cement at 30.5m (100'). Tested 50.80cm Hydril with 49.2 Kg/m^2 (700psi) for 15 minutes. Held OK. Drilled out cement from 30.5m (100') to 37.8m (124'). Drilled 47.6m (156') of 44.45cm (17½") hole to 85.3m (280') with mud.
7/18/79	228.m(749')	Drilled 142.9m (469') of 44.45cm (17½") hole to 228.3m (749') with mud.
7/19/79	320.4m(1051')	Drilled 70.7m (232') of 44.45cm (17½") hole to 299m (981') with water. P.O.H. R.I.H. with Bit #2 and B.H.A. Drilled 21.34m (70') of 44.45cm (17½") hole to 320.4m (1051') with mud.

7/20/79	453.2m(1487')	Drilled 132.9m (436') of 44.45cm (17½") hole to 453.2m (1487') with mud.
7/21/79	566m(1857')	Drilled 49.7m (163') of 44.45cm (17½") hole to 503m (1650') P.O.H. R.I.H. with bit #3 drilled 63.1m (207') of 44.45cm (17½") hole to 566m (1857') with mud.
7/22/79	661.4m(2170')	Drilled 95.4m (313') of 44.45cm (17½") hole to 661.4m (2170') with water. P.O.H.
7/23/79	661.4m(2170')	Rigged up to run 33.97cm (13 3/8") casing. Ran 54 joints 33.97cm (13 3/8"), 90.89 Kg/m (54.5 lb/ft.) H-40 Buttress casing. Total length 657.3m (2156.7'). Casing set at 655.9m(2152')K.B. Ran Guide shoe on bottom circulating and waiting on Halliburton for 5 hours, pumped in 1750 sacks of Class "G" cement mixed with 1:1 perlite, 40% Silica Flour, 3% gel, 0.5% CFR_2; Followed by 150 sacks Class "G" mixed with 40% Silica Flour, 3% gel, 0.5% CFR_2. Total slurry volume 111.9m^3 (3952ft^3). Displaced with 52.98m^3 (1871ft^3), bumped plug with 1300 psi; float held ok. Good returns, circulated 1.7m^3 (60ft^3) to sump. C.I.P. 2130 hours, W.O.C.
7/24/79	661.4m(2170')	Nippled up B.O.P. Cut of 44.45cm (13 3/8") weld on bradenhead. Nippled up 30.5cm(12") x 900 series B.O.P. Tested blind rams at 70.3 Kg/m^2(1000psi) for 15 min. Held ok.
7/25/79	709.9m(2329')	Drilled cement plug, float & shoe at 655.9m (2152') to 661.5m (2170'). Drilled 26.2m (86') of 31.12cm (12¼") hole to 687.6m (2256') with bit #4. P.O.H. R.I.H. with bit #5 drilled 22.8m(75') of 31.12cm (12¼") hole to 709.9m (2329') with mud.
7/26/79	863.8m(2834')	Drilled 153.9m (505') of 31.12cm (12¼") hole to 863.8m (2834') with mud.
7/27/79	1005.8m(3300')	Drilled 73.5m (241') of 31.12cm (12¼") hole to 937.3m (3075') with mud P.O.H. R.I.H. with bit #6 drilled 68.9m (225') of 31.12 cm (12¼") hole to 1005.8m (3300') with mud.
7/28/79	1162.5m(3814')	Drilled 156.7m (514') of 31.12cm (12¼") hole to 116.5m (3814') with mud.
7/29/79	1243.9m(4081')	Drilled 81.4m (267') of 31.12cm (12¼") hole to 1243.9m (4081') with mud.
7/30/79	136.3m(4476')	Drilled 120.1m (395') of 31.12 cm (12¼") hole to 1364.3m (4476') with mud.

7/31/79	1459.7m(4789')	Drilled 95.4m (313') of 31.12cm (12¼") hole to 1459.7m (4789') with mud. Encountered Fluid entry at 1459.7m (4789'). Well shut in at 2135 hours with 250 psi.
8/1/79	1459.7m(4789')	Pumped in 250 BBls gel around DC's until well was killed at 12:15. P.O.H. to shoe of 33.97cm (13 3/8") casing. Conditioned mud and changed out flowline. Installed blooieline. Shut in well. Weighting up mud.
8/2/79	1459.7m(4789')	Staged in to 1417.3m (4650') and conditioned mud. P.O.H. Made up 33.97cm (13 3/8") E.Z.S.V. plug. R.I.H. with plug and set at 1417.3m (4650') P.O.H.
8/3/79	1459.7m(4789')	R.I.H. to 1412.8m (4635') with OEDP. Pumped 3.5m^3 (123ft^3) Class "G" cement premixed with 15% SiO_2 and 15% sand. 0.75% CFR_2 and 0.03% HR60 Displaced with 12.2m^3 (431 ft^3) mud. CIP 0330 Hr. P.O.H. Mod ified D.A. Ran 33.12cm (12¼") bit to 640m (2100'). Circulated and conditioned mud. Ran to top of cement of 1377.7m (4520'); drilled cement from 1377.7m (4520') to 1396m(4580'). Circulated for Schlumberger logging service.
8/4/79	1459.7m(4789')	Ran Schlumberger logs FDC. CNL, GR & Caliper DIL-S.L. and D.M. R.I.H. with 33.12cm (12¼") bit to 1396m (4580'). Drilled from 1396m (4580') to 1397.6m (4585'). P.O.H. Prepare to run casing made up liner hanger for 24.45cm (9 5/8") casing.
8/5/79	1459.7m(4789')	Ran 63 joints of 24.45cm (9 5/8"), 59.60 Kg/m (40 lb/ft), K-55 & N-80 buttress casing under Midway liner langer. Total length 802m (2632'). Casing shoe set at 1396m (4580') B & W float collar set at 1382.3m (4535'). Liner hanger 593.7 (1948'). Bottom 16 joints of 206.4m (677') is N-80. Cemented with 71.4m^3 (2520 ft^3) class "G" cement premixed 1:1 perlite and 40% SiO_2, 3% gel, 0.75% CFR_2 and 0.03 HR7 displaced with 33.9m^3 (1200ft^3) mud; 45.3m^3 1600ft^3 of cement returns. CIP 1400 hours. Ran OEDP to 593.7m (1948') circulated wellbore clean. Ran 33.12cm (12¼") bit and C.O. to 593.7m (1948').
8/6/79	1459.7m(4789')	P.O.H. Laid down 20.32cm (8") D.C., Installed new mud valves and kill line. Tested Blind rams & B.O.P. with 63.3 Kg/cm^2 (900 psi). R.I.H. with bit #9 to 593.7m (1948').

8/7/79	1459.7m(4789')	Drilled cement from 593.7m (1948') to 619.7m (2034') R.I.H. to 1313m (4308') top of cement. Tested pipe rams & Hydril with 49 Kg/cm^2 (700psi) for 15 minutes. Held o.k. Drilled cement from 1313m (4308') to 1414.7m (4640'). Changed R.H. rubber. Drilled EZSV plug pushed to bottom at 1459.7m (4789'). Well flowing water. Brief wellhead pressure peaks to 409 psig. Displaced water with 9.8ppg mud.
8/8/79	1468.8m(4819')	Drilled 9.1m (30') of 21.59cm (8½") hole from 1459.7m (4789') to 1468.8m (4819') with mud. Displaced mud with water. Flowed well with Drill pipe in hole and bit at 1377.4m (4519'). Ran McInally temperature survey to 1404.8m (4609') Displaced wellbore fluids with heavy mud.
8/9/79	1468.8m(4819')	Killed well with 10.2 ppg mud. Nippled down flowline wellhead pressure 33.39 Kg/cm^2 (475 psig). Changed rotating head rubbers. RIH to 1404.8m (4609') with well Flowing.
8/10/79	1468.8m(4819')	Mixing mud, Killing well and pulling out of hole with plugged bit. Pipe rams and Hydril washed out Tear out rotating head and hydril.
8/11/79	1468.8m(4819')	Installed Hydril, Nippled up Hydril and new rotating head, made up RTTS tool R.I.H. with R.T.T.S. to 1335m (4380'). Rigged up HOWCO, tested pipe rams and Hydril to 33.4Kg/cm^2 (700psig) for 5 minutes. Flowed well to sump through drill pipe to clean out mud. S.I. pressure at end 468 psi Pumped 11.4m^3 (400ft^3) water into well at 105.4 Kg/cm^2 (1500psi) initial pressure.
8/12/79	1468.8m	Cement squeeze below 1396m(4580'). Pumped 550 sacks class G cement mixed with 40% $S.0_2$ 0.75% CFR_2 and 0.35% HR 7. Total slurry volume (1226 ft^3). Average density 6.8Kg (15 pounds). Pump pressure started at 400psi dropped to 0 and built to final of 155.7 Kg/cm^2 (2200psi) Bled down to 84.4 Kg/cm_2 (1200psi) in 30 minutes. Pumped 0.2m^3 (5ft^3), pressure built to (1800psi). W.O.C. 1 hr_2 Pumped additional 5ft^3 standing with 42.2 Kg/cm^2 (600psi) ended with 112 Kg/cm^2 1600psi. Pressure bled to 52.7 Kg/cm^2 (750psi). Pressure test formation to 49.2Kg/cm^2 (700psi). Pressure bled back to 500 psi in 15 minutes. Released pressure, well dead CIP at 0600 hours. Rigged down HOWCO POH with RTTS packer. WOC 17 hours RIH with bit #10 and B.H.A. tagged cement at 1393.8m (4573'). Drilled cement from 1393.8m (4573') to 1402.9m (4603')

8/13/79	1528.6m(5015')	Drilled cement from 1402.9m (4603') to 1429.5m(4690') C.O. fill from 1429.5m (4690') to 1468.8m(4819'). Drilled 6.4m (21') of 21.59cm (8½") hole from 1468.8m (4819') to 1475.3m (4840') with mud. P.O.H. to 1423.1m (4669'); displaced 9.9 ppg mud with 300 barrels of water and well flowed; squeeze cement job failed. Displaced water with mud to control well and drilled ahead. Drilled 21.6m (71') of 21.59cm (8½") hole from 1475.3m (4840') to 1496.9m (4911') with mud. P.O.H. to 1395.9m (4580') Displaced mud with fresh water and drilled to 1528.6m (5015') with well flowing.
8/14/79	1532.2m(5027')	Drilled 3.7m (12') of 21.59cm (8½") hole to 1532.2m (5027') with water. Mixed new mud.
8/15/79	1572.5m(5159')	Drilled 40.2m (132') of 21.59cm (8½") hole to 1572.5m (5159') with 10.3 ppg mud.
8/16/79	1664.5m(5461')	Drilled 92.0m (302') of 21.59cm (8½") hole to 1664.5m (5461') with mud.
8/17/79	1689.8m(5544')	Drilled 3.01m (10') of 21.59cm (8½") hole to 1667.6m (5471') with mud. P.O.H. R.I.H. with Bit #10. Drilled 22.2 (73') of 21.59cm (8½") hole to 1689.8m (5544') with mud.
8/18/79	1779.1m(5837')	Drilled 89.3m(293') of 21.59cm (8½") hole to 1779.1m(5837') with mud.
8/19/79	1847.4m(6061')	Drilled 68.2m (224') of 21.59cm (8½") hole to 1847.4m (6061') with mud. P.O.H.
8/20/79	1894m(6214')	R.I.H. with Bit #11 Drilled 46.6m (153') of 21.59cm (8½") hole to 1894m(6214') with mud.
8/21/79	1974.5m(6478')	Drilled 80.5m (264') of 21.59cm (8½") hole to 1974.5m (6478') with mud.
8/22/79	2026.0m(6647')	Drilled 13.7 (45') of 21.59cm (8½") hole to 1988.2m (6523') with mud P.O.H. R.I.H. with Bit #12 and B.H.A. drilled 37.8m (124') of 21.59cm (8½") hole to 2026.0m (6647') with mud.
8/23/79	2122.3m(6963')	Drilled 96.3m (316') of 21.59cm (8½") hole to 2122.3m (6963') with mud.
8/24/79	2163.2m(7097')	Drilled 28.0m (92') of 21.59cm (8½") hole to 2150.4m (7055') with mud. P.O.H. R.I.H. with Bit #13 drilled 12.8 (42') of 21.59 cm (8½") hole to 2163.2m (7097') with mud.

8/25/79	2208.6m(7246')	Drilled 45.5m (149') of 21.59cm (8½") hole to 2208.6m (7246') with mud.
8/26/79	2259.8m(7414')	Drilled 51.2m (168') of 21.59cm (8½") hole to 2259.8m (7414') with mud.
8/27/79	2285.1(7497')	Drilled 6.7m (22') of 21.59cm (8½") hole to 2266.5m (7436') with mud P.O.H. Magnaglowed 2 DC's, laid down 1 stabilizer & near bit reamer. R.I.H. with bit #14 and drilled 18.6m (61') of 21.59cm (8½") hole to 2285.1m (7497') with mud.
8/28/79	2326.3m(7632')	Drilled 41.2m (135') of 21.59cm (8½") hole to 2326.3m (7632').
8/29/79	2364.1m(7756)	Drilled 37.8m (124') of 21.59cm (8½") hole to 2364.1m (7756') with mud P.O.H.
8/30/79	2420.4m(7941')	R.I.H. with bit #15 and drilled 56.4m (185') of 21.59cm (8½") hole to 2420.4m (7941') with mud.
8/31/79	2510.9m(8238')	Drilled 90.5m (297') of 21.59cm (8½") hole to 2510.9m (8238') with mud.
9/1/79	2578.9m(8461')	Drilled 41.5m(136') of 21.59cm (8½") hole to 2552.4m (8374') with mud. P.O.H. R.I.H. with Bit #16 and drilled 26.5m (87') of 21.59cm (8½") hole to 2578.9m (8461') with mud.
9/2/79	2662.7m(8736')	Drilled 83.8m (275') of 21.59cm (8½") hole to 2662.7m (8736') with mud.
9/3/79	2714.5m(8906')	Drilled 51.8m (170') of 21.59cm (8½") hole to 2714.5m (8906') with mud.
9/4/79	2727.1m(8947')	Drilled 12.5m (41') of 21.59cm (8½") hole to 2727.1m (8947') with mud. P.O.H. and ran Schlumberger logs FDC-CNL, Ind. Log.
9/5/79	2740.5m(8991')	Completed Schlumberger logs, R.I.H. with bit #17. Drilled 13.4m (44') of 21.59cm (8½") hole to 2740.5m (8991') with mud.
9/6/79	2805.9m(9206')	Drilled 65.5m (215') of 21.59cm (8½") hole to 2805.9m (9206') with mud.
9/7/79	2867.9m(9409')	Drilled 44.8m (147') of 21.59cm (8½") hole to 2867.9m (9409') with mud.
9/8/79	2890.1m(9482')	Drilled 22.2m(73') of 21.59cm (8½") hole to 2890.1m (9482') with mud. P.O.H. R.I.H. with Bit #18.

9/9/79	2949.9m(9678')	Drilled 59.7m (196') of 21.59cm (8½") hole to 2949.9m (9678') with mud.
9/10/79	2980.9m(9780')	Drilled 31.1m (102') of 21.59cm (8½") hole to 2980.9m (9780') with mud. P.O.H. Cleaned cellar and prepared to nipple down BOP. R.I.H. with Baker Model C Retrievable bridge plug and set it at 645.3m (2117'). P.O.H. Nippled down BOP.
9/11/79	2980.9m(9780')	Completed installation of 10" WKM production gate, and tested to 42.2 Kg/cm^2 (600psi) Held O.K. R.I.H. and recovered Baker Model C Bridge Plug. Rigged up and ran Agnew & Sweet Temperature Survey.
9/12/79	2980.9m(9780')	A & S Temperature Survey stopped at 1868.4m (6130') Displaced mud from 2980.9m (9780') with 8.5 ppg water gel mix. Pulled up to 2255.5m (7400') and displaced with water. Pulledup and positioned bit just above shoe 24.45cm (9 5/8") casing at 1395.9m (4580'). Flowed well for 4 hours.
9/13/79	2980.9m(9780')	Flowing well: max 31,752Kg/hr (70,000 lbs/hr) rate 261.5^{o}F, 33.2 psig wellhead $\pm$ 7psig lip pressure. Tested well for 12 hours. P.O.H. with well flowing. Ran A & S temperature to 1999.5m (6560').
9/14/79	2980.9m(9780')	Continue to flow well. 261^{o}F, 33psig well head pressure.
9/15/79	2980.9m(9780')	Flowed well 24 hours.
9/16/79	2980.9m(9780')	R.I.H. to 1420.9m (4662'), killed well will 10.3ppg mud. Continued to bottom at 2980.9m (9780') for 4 hours. Dropped multishot.
9/17/79	2980.9m(9780')	Attempted to retrieve multishot-not successful P.O.H. Rigged up Schlumberger logs. HRT reached 2781.7m (9126') and registered 338^{o}F. Ran Ripmeter to 2133.6m (7000') before temperature increase threatened soude.
9/18/79	2980.9m(9780')	Continue to run Schlumberger logs.
9/19/79	2980.9m (9780')	Completed logging. R.I.H. to T.D. to condition and cool hole for additional logs.

9/20/79	2980.9m (9780')	Circulated 7 hours P.O.H. Ran Schlumberger Induction & Caliper.
9/21/79	2980.9m (9780')	Ran DM log, Made up EZSV packer and setting tool, RIH set packer at 2224.4m (7298'). P.O.H. and laid down setting tool. RIH open ended to drop cement plug on top of packer.
9/22/79	2980.9m (9780')	RIH and tagged EZSV bridge plug at 2224.4m (7298'). Circulated at bottom. Halliburton Services mixed 50 sacks Class "G" cement with 40% SiO_2, 0.5% CFR_2 and 0.15% CHR_7 CIP 0300. WOC POH Picked up 21.59-cm (8½") bit. RIH to top cement at 2154.9m (7070'). Drilled cement plug to 2194.6m (7200'). Circulated. POH picked up 17.78cm (7") liner hanger.
9/23/79	2980.9m (9780')	Changed BOP rams to 17.78cm (7") casing size ran 22 joints 17.78cm (7") 11.8 kg (26#) N-80 LT &C with shoe and float collar on first joint. Total length 259.7m (851.93') and 56 joints of 10.4kg (23lb) N-80 LT&C. Total length 669.7m (2197.07'). Hung liner at 2193.1m (7195'), shoe depth and top at 1265.5m (4152'). Pumped (100ft^3) H_2O ahead; mixed 610 sacks Class "G" cement with 40% SiO_2 flour, 0.75% CFR_2, 0.17o HR_7 Total Slurry Volume 27.9m^3 (988ft^3) slurry density 15.5 ppg. Pumped plug with 175.5m^3 (2500psi) float collar held ok. Good returns. CIP 1730 WOC POH and laid down hanger setting tool 2 hours WOC RIH with 21.59 (8½") bit to top cement at 1193.9m (3917'). CO to 1265.5m (4152') and circulated hole clean.
9/24/79	2890.9m (9780')	POH laid down 12.7cm (5") D.P. and 15.88cm (6¼") D.C. Picked up 12 10.8cm (4¼") D.C. and 8.89cm (3½") D.P. and ran Bit #18 15.65cm (6 1/8") bit to 2022.3m (6635'). Circulated tested 17.78cm (7") lap with 49.2Kg/cm^2 (700psi) held ok.
9/25/79	2980.9m (9780')	Drilled cement from 2022.4m (6635') to 2180.6m (7154'). Float collar at 2180.6m (7154'), shoe at 2193.1m (7195'). Cement at 2193.1m (7195') 2225.1m (7300'); EZSV at 2225.1m(7300'). Pushed EZSV to bottom. Circulate on bottom with fresh water. Mixed 80 sacks caustic with 200 bbls fresh water to pH 12.5 + 8.8ppg mud and pumped 160 barrels caustic flush into well bore at T.D. P.O.H. to 2193m (7195'). Well flowed 1.9cm (3/4") stream water. Closed rams, squeezed caustic flush at 1200-1400 psi broke to 600psi at 215gpm pumped 160 barrels. Open rams - well flowed briefly; Closed rams pumped 5 minutes at 1000psi. Opened rams well flowed 3" stream for 3 minutes and died.

9/26/79	2980.9m (9780')	Well shut in 10 hours. Waiting on Agnew and Sweet.
9/27/79	2980.9m	Mixed 100 barrel caustic flush pH 13 + 8.3ppg Displaced 100 barrel caustic flush at 2809.1m (9216') POH to 2168.9m (7116'). Closed rams and pumped flush to formation. P.O.H. Laid down 12.7cm (5") D.P., 8.89 (3½") D.P. and 10.7cm (4⅛")D.C.
9/28/79	2980.9m (9780')	Ran Agnew and Sweet Wellbore temperature Survey. Removed BOP and cleaned pits. Released rig 1700 hours 9-28-79.

THERMAL POWER COMPANY/SOUTHLAND ROYALTY COMPANY

WELL DATA SHEET

Field: Dixie Valley, Churchill Nevada
Well: Dixie Federal 66-21
Date: December 20, 1979

Casing String	Hole Size (in)	Casing Specifications Size (in)	Wt. (#/ft)	Gr.	Jt.	Setting Depth (ft) From	To	Total Length	Total Wt. (lbs)	Cementing Slurry Volume (ft)	% Excess	Sks. of Cement w/o add.	Mud wt. at Csg. Pt. (lbm/gal)	Minimum Calculated Safety Factor Tension	Collapse	Burst (psi basis)
Conductor	26	20	94	H-40	Butt	0	125	125	11,817	416	20	362	8.5	88.09	9.43	1.50 (1019)
Surface	17½	13 3/8	54.5	K-55	Butt	0	2157	2157	117,557	3952	100	1900	9.1	8.83	1.11	2.68 (1019)
Production liner																
	12¼	9 5/8	40	K-55	Butt	1948	3903	1955	78,200	--	--	--	10.1	5.98	1.26	1.64
	12¼	9 5/8	40	N-80	Butt	3903	4580	677	27,080	--	--	--	10.1	33.83	1.29	2.39
Total Liner	12¼	9 5/8	--	--	Butt	1948	4580	2632	105,280	2520	200	1189	10.1	5.98	1.26	1.64 (2402)
7" Liner	8½	7"	23	N-80	LT&C	4152	6349	2197	50,531	--	--	--	10.3	7.34	1.13	1.65
	8½	7"	26	N-80	LT&C	6349	7195	846	21,996				10.3	27.46	1.41	1.88
Total Liner	8½	7"	--	---	LT&C	4152	7195	3043	72,527	988	100	610	10.3	7.34	1.13	1.65 (3848)

JMR:pw
12/19/79

THERMAL POWER COMPANY/SOUTHLAND ROYALTY COMPANY

DIXIE FEDERAL 66-21

Bit Record

Bit #	Size	Make/Type	In	Out	Total Drilled
1	44.45cm (17½)	Security S3SJ	12.5m (41')	299m (981')	259.4m (851')
H.O.	67.31 (26½")	Smith	12.5m (41')	39.6m (130')	27.1m (89')
2	44.45cm (17½")	Smith S4S	299m (981')	503m (1650')	206.9m (679')
3	44.45cm (17½")	Smith BSJ	503m (1650')	661.4m (2170')	158.5m (520')
4	31.12cm (12¼")	H.T.C. x 1	661.4m (2170')	687.6m (2256')	26.3m (86')
5	31.12cm (12¼")	Smith F-3	687.6m (2256')	937.3m (3075')	249.6m (819')
6	31.12cm (12¼")	HTC J-33	937.3m (3075')	1243.9m (4081')	306.6m (1006')
7	31.12cm (12¼")	Smith S88F	1243.9m (4081')	1459.7m (4789')	215.8m (708')
8	21.59cm (8½")	Smith DGJ	1459.7m (4789')	1468.8m (4819')	9.1m (30')
9	21.59cm (8½")	Smith F-3	1468.8m (4819')	1667.6m (5471')	199.0m (652')
10	21.59cm (8½")	HTC J-33	1667.6m (5471')	1847.4m (6061')	179.8m (590')
11	21.59cm (8½")	Smith F-4	1847.4m (6061')	1988.2m (6532')	140.8m (462')
12	21.59cm (8½")	Smith F-4	1988.2m (6532')	2150.4m (7055')	162.2m (532')
13	21.59cm (8½")	Hughes J-44	2150.4m (7055')	2266.5m (7436')	116.2m (381')
14	21.59cm (8½")	Smith F-44	2266.5m (7436')	2364.1m (7756')	97.6m (320')
15	21.59cm (8½")	Smith F-4	2364.1m (7756')	2552.4m (8374')	188.4m (618')
16	21.59cm (8½")	HTC J-44	2552.4m (8374')	2727.1m (8947')	173.7m (570')
17	21.59cm (8½")	HTC J-44	2727.1m (8947')	2890.1m (9482')	163.1m (535')
18	21.59cm (8½")	Hughes J-44	2890.1m (9482')	2980.9m (9780')	90.8m (298')
19	15.65cm (6 1/8")	Smith FB7	Drilling cement		

Eastman Whipstock
A PETROLANE COMPANY

REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

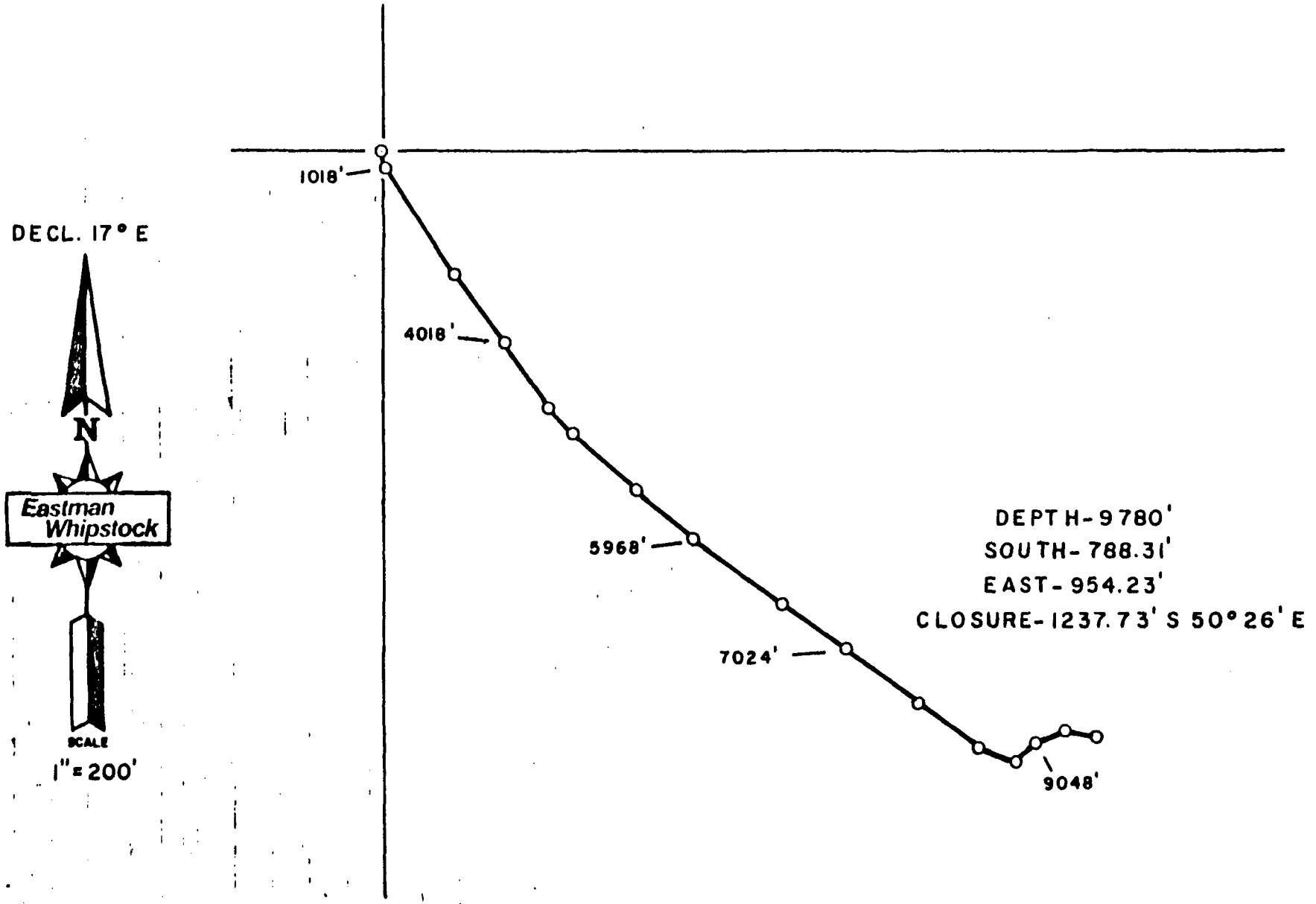
THERMAL POWER
COMPANY

WELL No. 66-21
WELL NAME

DIXIE VALLEY, NEVADA
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
P-0979-S0042		17 SEPTEMBER 1979

SURVEY BY LONG BEACH OFFICE



WELL No. 66-21

JOB No. P-0979-S0042

THERMAL POWER
WELL NO: 66-21
DIXIE VALLEY, NEVADA

DECL: 17 E
JOB NO: P-0979-S0042

FILE: F1-17
DATE: 9/17/79

RECORD OF SURVEY

ANGLE AVERAGING METHOD

THERMAL POWER DECL: 17 E FILE: F1-17 COMPUTATION PAGE NO.
WELL NO: 66-21 JOB NO: P-0979-S0042 DATE: 9/17/79 TIME DATE
DIXIE VALLEY, NEVADA 01:07:03 00--00

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
1018.	2 30	S 13 0 E	0.	1017.76	21.64 S	5.00 E	0.00
1589.	4 30	S 23 0 E	571.	1587.70	54.79 S	15.77 E	0.36
2170.	6 0	S 43 0 E	581.	2166.26	99.38 S	44.73 E	0.40
2450.	5 0	S 40 0 E	280.	2444.97	119.48 S	62.51 E	0.37
2647.	5 0	S 35 0 E	197.	2641.22	133.10 S	72.96 E	0.22
2896.	6 0	S 37 0 E	249.	2889.07	152.41 S	86.99 E	0.41
3061.	6 0	S 35 0 E	165.	3053.17	166.36 S	97.13 E	0.13
3271.	6 0	S 35 0 E	210.	3262.02	184.34 S	109.72 E	0.00
3619.	7 0	S 38 0 E	348.	3607.78	216.01 S	133.15 E	0.30
4018.	7 45	S 34 0 E	399.	4003.48	257.44 S	163.25 E	0.23
4366.	7 45	S 30 0 E	348.	4348.30	297.24 S	188.12 E	0.15
4560.	9 15	S 32 0 E	194.	4540.17	321.82 S	202.89 E	0.79
4648.	9 30	S 41 0 E	88.	4627.00	333.34 S	211.42 E	1.69
4736.	10 0	S 41 0 E	88.	4713.73	344.59 S	221.20 E	0.57
4824.	10 30	S 42 0 E	88.	4800.32	356.32 S	231.57 E	0.60
4912.	11 0	S 46 0 E	88.	4886.78	368.13 S	242.97 E	1.02
5000.	12 0	S 45 0 E	88.	4973.01	380.42 S	255.49 E	1.16
5088.	12 0	S 47 0 E	88.	5059.09	393.13 S	268.65 E	0.47
5176.	12 15	S 48 0 E	88.	5145.12	405.62 S	282.28 E	0.37
5264.	12 30	S 50 0 E	88.	5231.08	417.99 S	296.51 E	0.56
5352.	13 0	S 47 0 E	88.	5316.91	430.86 S	311.05 E	0.94
5440.	13 0	S 49 0 E	88.	5402.65	444.11 S	325.77 E	0.51

5528D12 30

5528.	12 30	S 50 0 E	88.	5488.48	456.72 S	340.53 E	0.62
5616.	12 45	S 49 0 E	88.	5574.36	469.21 S	355.16 E	0.38
5704.	13 0	S 49 0 E	88.	5660.14	482.08 S	369.96 E	0.28
5792.	13 0	S 47 0 E	88.	5745.89	495.32 S	384.67 E	0.51
5880.	12 45	S 51 0 E	88.	5831.68	508.19 S	399.47 E	1.05
5968.	13 0	S 51 0 E	88.	5917.46	520.53 S	414.71 E	0.28

WELL NO: 66-21 JOB NO: P-0979-S0042 DATE: 9/17/79 TIME 01:07:03 DATE 00--00
IXIE VALLEY, NEVADA

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
6056.	13 15	S 51 0 E	88.	6003.17	533.10 S	430.24 E	0.28
6144.	13 30	S 50 0 E	88.	6088.78	546.05 S	445.94 E	0.39
6232.	13 45	S 50 0 E	88.	6174.30	559.38 S	461.82 E	0.28
6320.	14 15	S 54 0 E	88.	6259.69	572.48 S	478.60 E	1.24
6408.	14 15	S 57 0 E	88.	6344.98	584.75 S	496.45 E	0.84
6496.	14 15	S 56 0 E	88.	6430.27	596.71 S	514.52 E	0.28
6584.	13 45	S 55 0 E	88.	6515.66	608.77 S	532.06 E	0.63
6672.	14 0	S 57 0 E	88.	6601.09	620.57 S	549.56 E	0.61
6760.	14 0	S 55 0 E	88.	6686.48	632.47 S	567.20 E	0.55
6848.	14 0	S 54 0 E	88.	6771.86	644.84 S	584.54 E	0.27
6936.	12 45	S 55 0 E	88.	6857.48	656.66 S	601.11 E	1.44
7024.	13 15	S 52 0 E	88.	6943.22	668.43 S	617.02 E	0.95
7112.	13 15	S 52 0 E	88.	7028.88	680.85 S	632.92 E	0.00
7200.	13 30	S 52 0 E	88.	7114.49	693.38 S	648.96 E	0.28
7288.	13 30	S 53 0 E	88.	7200.06	705.89 S	665.25 E	0.27
7376.	13 0	S 56 0 E	88.	7285.72	717.60 S	681.68 E	0.97
7464.	13 0	S 53 0 E	88.	7371.46	729.10 S	697.79 E	0.77
7552.	13 0	S 53 0 E	88.	7457.21	741.01 S	713.60 E	0.00
7640.	12 30	S 52 0 E	88.	7543.04	752.83 S	729.01 E	0.62
7728.	11 30	S 55 0 E	88.	7629.11	763.71 S	743.72 E	1.34
7816.	11 15	S 55 0 E	88.	7715.39	773.67 S	757.93 E	0.28
7904.	10 30	S 50 0 E	88.	7801.81	783.78 S	771.11 E	1.37
7992.	10 0	S 51 0 E	88.	7888.40	793.74 S	783.19 E	0.60
8080.	9 30	S 53 0 E	88.	7975.13	802.91 S	794.93 E	0.69
8168.	8 30	S 57 0 E	88.	8062.05	810.81 S	806.21 E	1.34
8256.	6 45	S 59 0 E	88.	8149.27	817.00 S	816.11 E	2.01
8344.	5 45	S 62 0 E	88.	8236.75	821.71 S	824.45 E	1.20
8432.	5 0	S 82 0 E	88.	8324.36	824.26 S	832.29 E	2.28
8520.	4 45	N 81 0 E	88.	8412.04	824.20 S	839.77 E	1.66
8608.	4 15	N 65 0 E	88.	8499.77	822.18 S	846.37 E	1.53

KMAL POWER DECL: 17 E

L NO: 66-21 JOB NO: P-0979-S0042 DATE: 9/17/79 TIME DATE

IE VALLEY, NEVADA 01:07:03 00--00

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
8696.	4 30	N 56 0 E	88.	8587.51	818.87 S	852.21 E	0.83
8784.	5 0	N 39 0 E	88.	8675.21	813.95 S	857.59 E	1.69
8872.	5 0	N 48 0 E	88.	8762.88	808.38 S	862.86 E	0.89
8960.	4 45	N 30 0 E	88.	8850.56	802.57 S	867.57 E	1.75
9048.	4 45	N 39 0 E	88.	8938.25	796.57 S	871.70 E	0.85
9136.	4 15	N 49 0 E	88.	9025.98	791.60 S	876.49 E	1.06
9224.	5 15	N 64 0 E	88.	9113.68	787.58 S	882.57 E	1.80
9312.	6 0	N 63 0 E	88.	9201.26	783.73 S	890.29 E	0.86
9400.	7 30	N 80 0 E	88.	9288.65	780.45 S	900.10 E	2.82
9488.	7 45	N 89 0 E	88.	9375.87	779.33 S	911.72 E	1.38
9576.	7 30	S 77 0 E	88.	9463.09	780.55 S	923.33 E	2.12
9664.	8 30	S 79 0 E	88.	9550.23	783.10 S	935.31 E	1.18
9752.	10 30	S 72 0 E	88.	9637.03	786.73 S	949.38 E	2.62
9780.	10 30	S 72 0 E	28.	9664.56	788.31 S	954.23 E	0.00

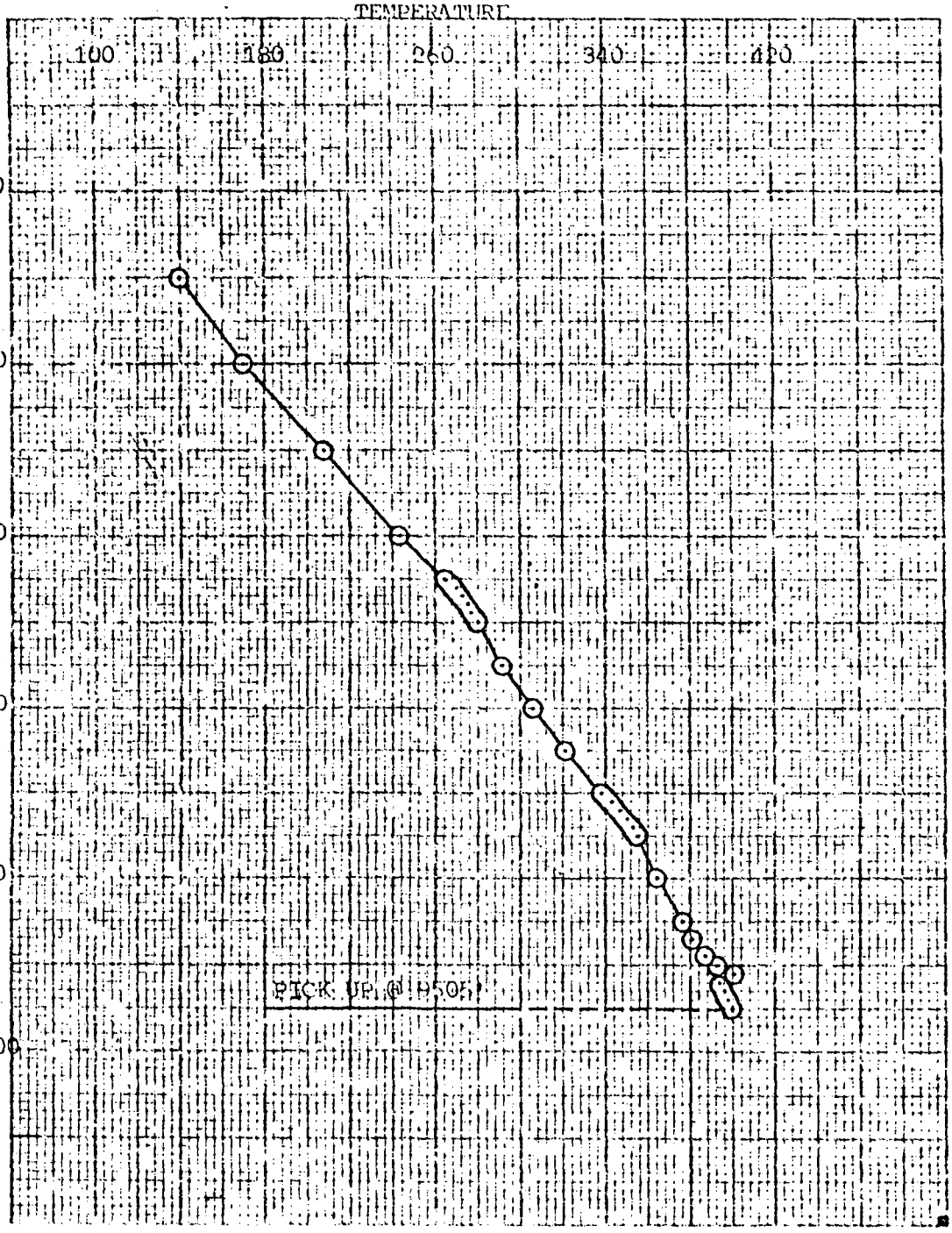
FINAL CLOSURE - DIRECTION: S 50 DEGS 26 MINS E
DISTANCE: 1237.73 FEET

AGNEW AND SWEET WIRELINE SERVICE

SUBSURFACE SURVEY

AGNEW AND SWEET
24 HOUR PHONE 805-327-2267
4205 ATLAS COURT
BAKERSFIELD, CALIFORNIA
93308

OWNER	SOUTHLAND ROYALTIES COMPANY	FIELD	DIXIE VALLEY
WELL NAME	DIXIE FEDERAL 66-21		
CASING	13-3/8" - 1948'	ELEV.	
DATE	Sept. 27, 28, 1979		
LINER DESCRIPTION:	9-5/8" - 4580', 7" 4580' - 7300'	ZERO POINT	Mat +20'
PERFORATIONS:		MPP	
TUBING DETAIL: /	None	DEPTH	9780' ZONE
		PUMP SHOE	
WELL STATUS	Static	SHUT IN	ON PRODUCTION
SURVEYED	TUB. ☐ ANN. ☐ open casing(X)	ENGAGE STYLUS	12:05pm 9/27 DISENGAGE STYLUS 5:56 am 9/28
PICK UP @	9505'	TIME ON BOTTOM	4:45 am TIME OFF BOTTOM 5:00 am
ELEMENT RANGE	99-517	SERIAL NO.	1028 CLOCK 12 hr. TURN 7½
PURPOSE	STATIC TEMPERATURE GRADIENT SURVEY	MAX °F	401.0 @ 9100'
REMARKS		STABILIZATION PERIOD	



PRESSURES:	START	FINISH
DATE		
CASING PSI OBS		
CASING PSI COR		
TUBING PSI OBS		
TUBING PSI COR		
PRESS. STATUS		

INSTRUMENT HUNG @

DEPTH	TEMP.
0	-
1000	140.7
2000	170.4
3000	208.1
4000	243.4
4500	266.1
4600	270.0
4700	273.0
4800	275.8
4900	277.9
5000	280.6
5500	291.8
6000	306.7
6500	321.3
7000	338.4
7100	343.5
7200	347.7
7300	350.7
7400	353.0
7500	355.2
8000	365.8
8500	377.6
8700	381.8
8900	387.1
9000	393.6
9100	401.0
9200	394.1
9300	396.6
9400	398.4
9500	400.3
9505	400.3

BY: SUNDBERG & CRAWFORD

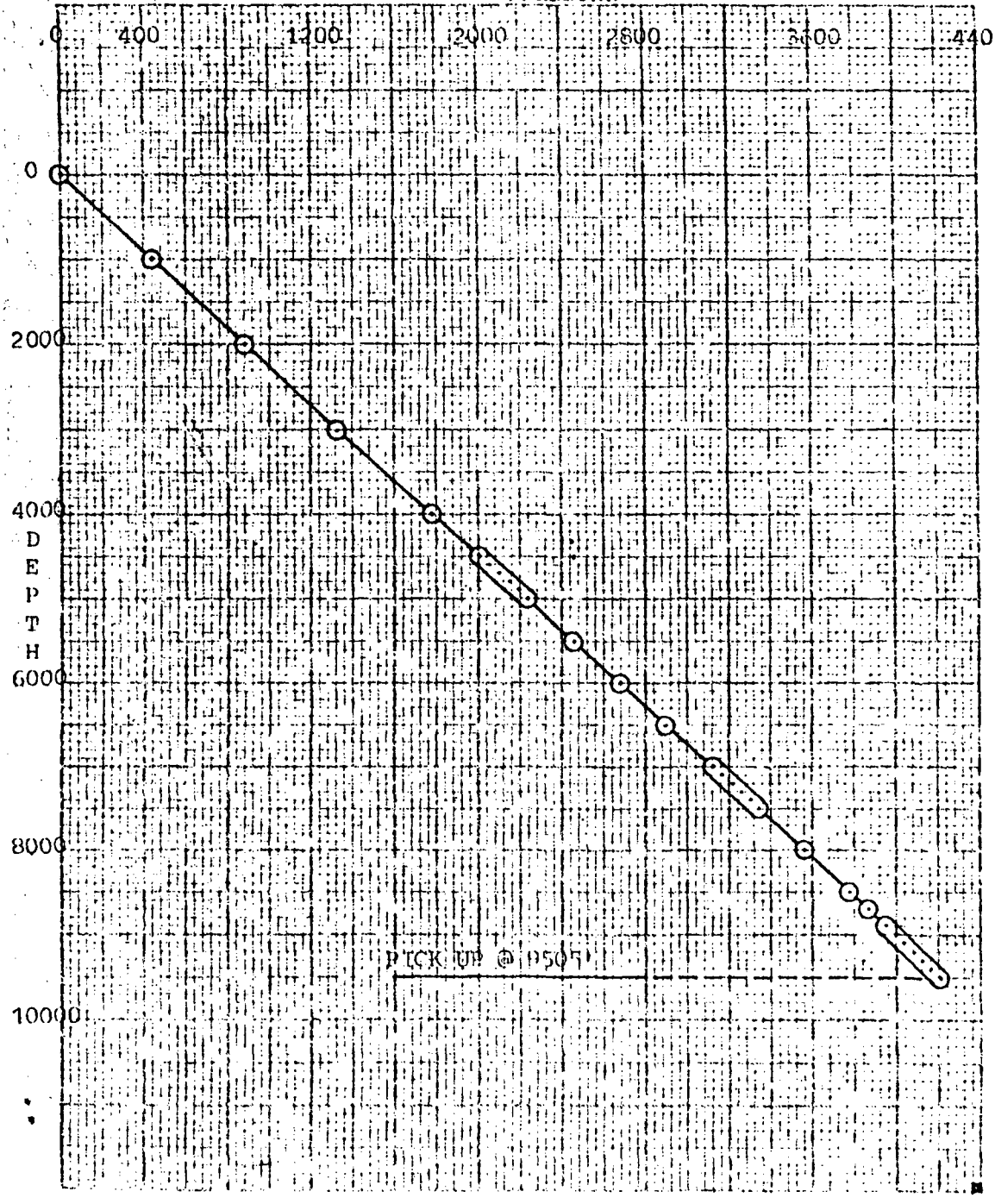
/kh

AGNEW AND SWEET WIRELINE SERVICE

SUBSURFACE SURVEY

AGNEW AND SWEET
24 HOUR PHONE 805-327-2267
4205 ATLAS COURT
BAKERSFIELD, CALIFORNIA
93308

OWNER	SOUTHLAND ROYALTIES COMPANY	FIELD	DIXIE VALLEY
WELL NAME	DIXIE FEDERAL 66-21		
CASING	13-3/8" - 1948'	ELEV.	
DATE	Sept. 27, 28, 1979		
LINER DESCRIPTION	9-5/8" - 4580', 7" 4580'-7300'		
ZERO POINT	Mat +20'		
PERFORATIONS			
MPP			
TUBING DETAIL	none		
DEPTH	9780'	ZONE	
PUMP SHOE			
WELL STATUS	Static	SHUT IN	
ON PRODUCTION			
SURVEYED	TUB. ☐ ANN. ☐ open casing(X)	ENGAGE STYLUS	1:05pm 9/27
DISENGAGE STYLUS	5:56 am 9/28		
PICK UP @	9505'	TIME ON BOTTOM	4:45 am
TIME OFF BOTTOM	5:00 am		
ELEMENT RANGE	6050#	SERIAL NO	2885
CLOCK	12 hr.	TURN	15
PURPOSE	STATIC PRESSURE GRADIENT SURVEY	MAX. °F	401.0 @ 9100'
REMARKS		STABILIZATION PERIOD	



PRESSURES:	START	FINISH
DATE		
CASING PSI OBS		
CASING PSI COR		
TUBING PSI OBS		
TUBING PSI COR		
PRESS. STATUS		

INSTRUMENT HUNG @

DEPTH	PRESS.	GRAD.
0	0	
1000	440	.440
2000	888	.448
3000	1336	.448
4000	1784	.448
4500	2009	.450
4600	2057	.480
4700	2102	.450
4800	2148	.460
4900	2192	.440
5000	2237	.450
5500	2460	.446
6000	2685	.450
6500	2905	.440
7000	3127	.444
7100	3170	.430
7200	3214	.440
7300	3256	.420
7400	3299	.430
7500	3342	.430
8000	3563	.442
8500	3781	.436
8700	3868	.435
8900	3952	.420
9000	3995	.430
9100	4037	.420
9200	4081	.440
9300	4122	.410
9400	4165	.430
9500	4209	.440
9505	4211	.400

BY: SUNDBERG & CRAWFORD

/kh

PRESSURE SERVICE

P.O. BOX 624

ELK GROVE, CALIFORNIA, 95624

A Line of Service

SUB-SURFACE SURVEY

OWNER Thermal Power Company FIELD Dixie Valley WELL NAME Dixie Federal 66-21

CASING ELEV. DATE 8-8-79

LINER DESCRIPTION ZERO POINT Ground + 22'

Depth

TUBING DETAIL Drill Pipe 4½ Reed I.F. box @ 4609' ZONE

PUMP SHOE GAS ANCHOR INTAKE

PURPOSE Run temperature surveys to determine maximum bottom hole temperature and look for
REMARKS reversals. Instrument range to high on first survey and clock quit on second survey leaving only two stops. Clock ran intermittent.

ELEMENT 125-350° F SERIAL No. 36394 CLOCK 3 15 TURN screw

ENGAGE STYLUS DISENGAGE STYLUS

OBS TBG PRESS. OBS CSG. PRESS

COR TBG PRESS. COR CSG. PRESS

PICKUP @ TIME ON BOTTOM TIME OFF BOTTOM

DEPTH	TEMPERATURE
4000	292.0
4609'	293.0

R. K. McAnally

THERMAL POWER CO.
DIXIE FEDERAL # 66-21

24 hour flow test, Sept., 14,1979

Time	Temp Out	Flow Press	Lip Press
Begin Initial Flow and Run In Hole:			
12:45	185°F	443	0
13:00	210.9	14.2	0
13:30	225.1	18.6	1.5
14:00	228.0	25.0	2.7
14:30	241.0	32.1	3.2
Stop RIH, Begin Pulling Out of Hole:			
15:00	250.0	23.0	1.8
15:30	257.3	31.0	7.9
16:00	258.0	26.5	4.6
Pit Out of Hole:			
16:30	261.4	35.0	7.9
17:00	263.1	36.1	8.4
17:30	264.2	36.8	8.7
18:00	267.1	37.6	9.2
18:30	268.2	38.0	8.9
19:00	268.0	38.2	10.0
19:30	268.2	38.0	10.1
20:00	267.9	38.0	10.2
20:30	268.1	38.0	9.8
21:00	268.4	38.1	10.3
21:30	268.8	38.2	10.4
22:00	269.0	38.2	10.6
22:30	269.3	38.3	10.6
23:00	269.5	38.5	10.8
23:30	269.9	38.6	11.0
24:00	270.2	38.6	11.5
24:30	270.3	38.5	11.0
1:00	270.6	38.5	11.2
1:30	270.7	38.6	11.1
2:00	270.7	38.6	11.2
2:30	271.0	38.9	11.2
3:00	271.2	38.9	11.4
3:30	271.3	38.8	11.6
4:00	271.6	38.9	12.2
4:30	271.6	39.0	11.4
5:00	271.8	39.0	10.6
5:30	272.0	39.3	10.6
6:00	272.0	39.0	10.0

Time	Temp Out	Flow Press	Lip Press
6:30	271.9	39.0	9.9
7:00	272.1	38.9	9.3
7:30	272.3	39.0	9.0
8:00	272.5	38.8	8.8
8:30	272.8	38.7	9.0
9:00	272.6	38.9	8.8
9:30	272.4	39.0	8.2
10:00	272.5	39.1	8.3
10:30	272.9	39.0	8.5
11:00	272.9	38.9	8.8
11:30	272.8	39.1	8.9
NOON	273.0	39.2	9.3
Filtered water sample pH=8.5;Steam w/ Oppm H_2S			
12:30	273.1	39.1	9.6
13:00	272.8	39.2	10.4
13:30	272.7	39.7	10.4
14:00	272.8	40.0	10.1
Filtered water sample pH=8.5,Chloride 3,400 ppm.			
Rig water pH approx 7.0-7.3,Chloride 400 ppm.			
14:30	272.4	40.0	11.1
15:00	272.3	40.4	11.0
Well Shut In			
Max Shut in press after 55 minutes 443 psig			

Note: Elbow on 3" flow line for lip pressure readings solidly packed off.

Lip Press READING NOT VALID.

GEOTHERMAL POWER
[illegible] GEOTHERMAL 66-21

Oct. 15, 1979

SHUT IN PRESSURE

Well Shut In @ 15:00

Time	Press
15:[illegible]	40.4
15:01	52.5
15:02	85.5
15:03	202.6
15:04	359.7
15:05	402.6
15:06	415.1
15:07	420.9
15:08	423.4
15:09	426.7
15:10	427.6
15:11	429.7
15:12	431.2
15:13	432.5
15:14	433.2
15:15	434.2
15:16	434.9
15:17	435.2
15:18	435.9
15:19	436.2
15:20	436.9

Begin Flowing Well @ 16:05

Time	Temp Out	Flow Press	Lip Press
16:05	250.2	30.0	Packed Off
16:10	265.[illegible]	34.0	" "

Shut Well In to Clear Lip Press Fittings, approx 3/16" accumulated scale inside 3" pipe

Begin Flowing Well @ 16:35

Time	Temp Out	Flow Press	Lip Press
16:35	265.6	43.6	21.7
16:40	265.3	36.1	16.7
16:45	266.[illegible]	35.7	16.6
16:50	267.2	36.0	16.7
16:55	269.2	36.4	17.2
17:00	270.1	37.2	17.4
17:05	271.[illegible]	37.3	16.9
17:10	272.[illegible]	34.7	15.[illegible]
17:15	273.[illegible]	33.[illegible]	13.9
17:20	274.[illegible]	38.5	19.2
17:25	274.[illegible]	39.0	19.0
17:30	274.1	38.4	19.3
17:35	274.7	38.3	19.5
17:40	274.4	38.3	19.7

Continued Flow Test

Time	Temp Out	Flow Press	Lip Press
17:30	274.2	38.2	19.6
18:00	274.3	38.2	19.9
18:30	274.3	38.1	20.1
19:00	274.1	38.2	20.2
19:30	274.0	38.1	20.2
1:00	274.4	38.2	20.3
1:30	274.5	38.2	20.3
2:00	274.5	38.0	20.4
2:30	274.4	38.0	20.7
3:00	274.4	37.9	20.8
3:30	274.3	37.9	21.0
4:00	274.3	38.0	21.1
4:30	274.2	38.1	21.2
5:00	274.2	38.1	21.6

Begin running in hole @ 5:20 causing sudden decreases in Temp Out, Flow & Lip Press.

5:20	250.7	24.1	12.8
5;30	270.3	34.2	20.1
6:00	268.3	33.6	20.5
6:30	268.9	37.[illegible]	21.3
7:00	271.7	34.6	21.9
7:30	271.5	36.6	21.9
8:00	209.9	43.4	16.1

Shut In Well @ 8:00

SHUT IN PRESSURE

Time	Press	Time	Press
8:03	297.2	8:21	461.9
8:04	322.7	8:22	462.8
8:05	366.[illegible]	8:23	466.1
8:06	399.7	8:24	469.8
8:07	387.4	8:25	462.7
8:08	373.5	8:26	475.2
8:09	360.5	8:27	450.4
8:10	406.2	8:28	448.9
8:11	426.9	8:30	459.9
8:12	442.[illegible]	8:35	460.2
8:13	448.7	8:40	438.[illegible]
8:14	456.2	8:45	392.7
8:15	457.[illegible]	8:50	356.7
8:16	462.2	8:55	339.[illegible]
8:17	460.4	9:00	338.4
8:18	463.5	9:05	327.1
8:19	448.9	9:10	311.7
8:20	452.1	9:15	332.6
		9:20	342.2

Kill Well

THERMAL POWER COMPANY
DIXIE FEDERAL # 66-21

Sept. 25,1979

Circulation & Caustic Wash, Sheet NO. 1

Time	Temp Out	Temp In	Comments
1400			Tagged Bott-no fill-begin circ 5' off bott.
1430	119.6	114.3	
1445	133.0	113.0	
1450	121	110	No gases yet.
1500	117	103.5	
1510	115.7	102.7	
1515	119	104	
1521	124.5	106	
1524	150	106.5	Bottoms Up.
1525	133	106.7	
1530	127	108.8	
1535	122.6	110	500 ppm CO_2
1545	117.6	112.6	Decreasing CO_2
1550	119	113.4	" "
1605	121	116.7	" "
1615	122	118	100 ppm CO_2
1630	124	120	Trace CO_2, Trace C_1 =5 ppm Background.
1645	126	121	0 ppm CO_2, Trace C_1.
1700	127.5	123	Trace C_1
1715	129.0	124.0	0 ppm C_1, 0 ppm CO_2
1730	131.9	126.0	
1745	133.3	127.5	Con't 0 gases
1800	134.1	129.1	
1815	134.6	129.7	
1830	133.8	130.0	
1845	117.0	129.4	Pumping in cold water from baker tank.
1900	114.0	127.7	
1915	113.0	122.4	
1930	113.4	122.5	
1945	124.3	121.2	Pumping in Caustic from pill tank, Dump Sod trap.
2000	131.0	121.2	
2015	131.0	120.9	
2025			Caustic on Bottom, Break Circ, Pull up to Shoe.

THERMAL POWER COMPANY
DIXIE FEDERAL # 66-21

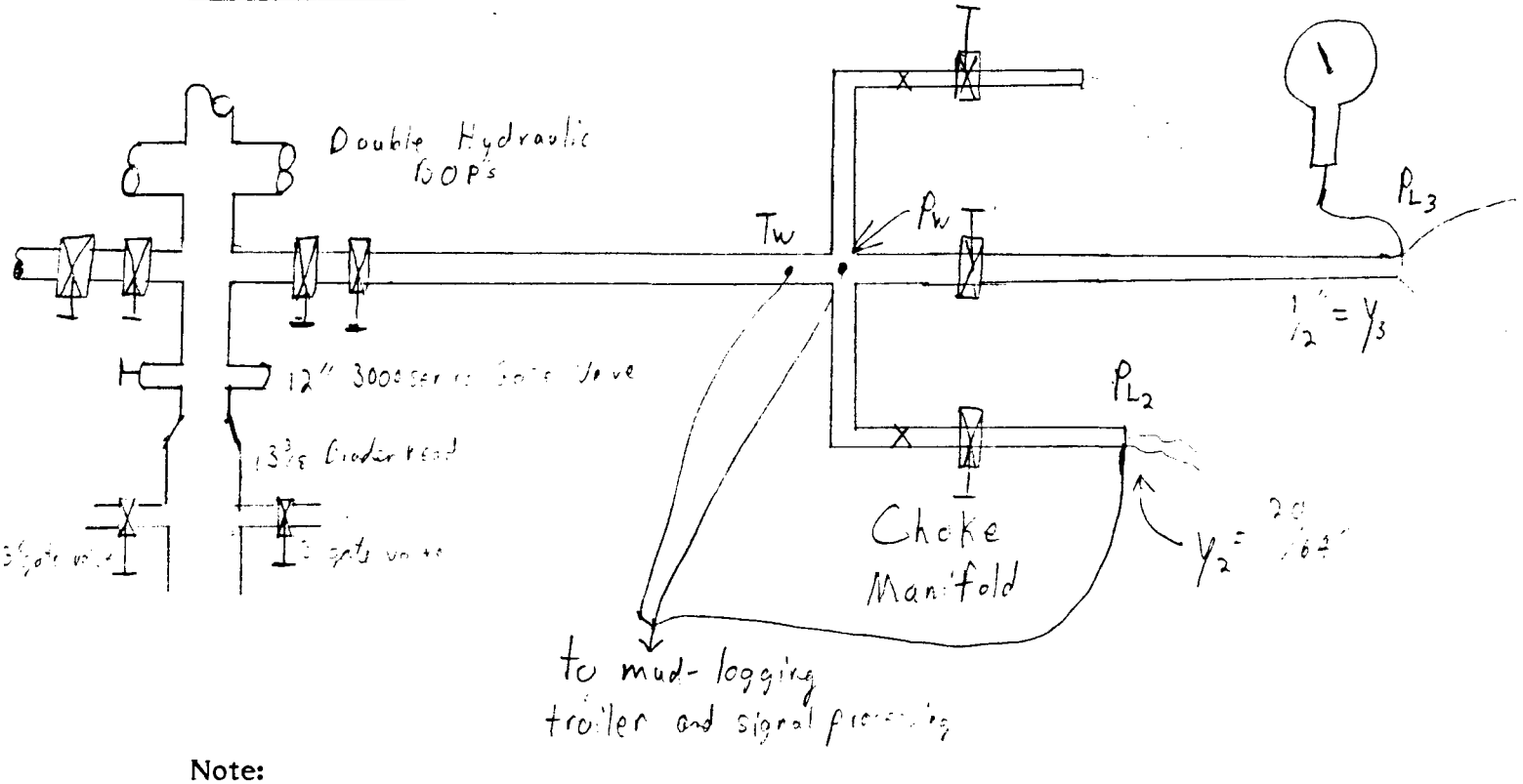
Sept. 25, 1979

Circulation & Caustic Wash, Sheet NO. 2.

Time	Pump Pressure	Comments
2122		30 stands out, Wait On Caustic.
2155		Filled Hole, No Flow.
2200		Slight Flow=1-2 gpm, Decided to Push away.
2207	800psig	Begin Pumping with 800 psig
2208	1200-1400psig	Pumped up to 1200psig, Quit Pumping, dropped back sharply, Pumped to 1400 psig- Breakdown press.
2210		started @ 28 SPM, 917 Strokes needed or 33.5 min.
2213	650	28 SPM
2214	625	
2216	575	
2219	550	
2221	600	
2222	625	
2223	600	
2224	575	
2228	550	
2229	525	
2230	575	
2231	600	
2233	625	
2235	575	
2238	550	
2239	525	
2241	525	Stopped Pumping @ 920 Stks, 162.3 bbls.
2243	0	Well flowing thru flow line 35-40 gpm.
2245		Flow cut to 4-5 gpm.
2246		flow died.
2248	750 psig	started pumping again.
2249.5	1000	
2253	1000	39 SPM
2254.5		Shut off pump, Total water pumped 34.4 bbls.
2300		Bleeding off thru 3" line.
2308		Well died.
2325		Shut in well.
		Well sat 8 hrs, RIH to Bott, small bridge 5 stds off Bott, broke thru with 50k lbs wt on second try, 2' fill on Bott.
		Water level in hole was 25' down after sitting for the eight hours. Water sample of displaced water had pH 11.0, Chlor 2500ppm.
		POH to Shoe, Loggers released @ Noon, Sept 26.

Rig Test Report
Well Dixie Federal 66-21
8/7/79 - 8/8/79

Physical Set-Up



Note:

The 3" line top was a ¼" pipe tap placed ½" centerline from the lip of the pipe. The pressure was measured with a ¼ of 1% accurate 0-150 psig Royln gage.

A ¼" pipe tap was placed 20/64" back from the lip of the 2" pipe on 818179. A 1000 psig transducer was used for its measurement.

A 0-500 psig transducer was used to measure wellhead pressure. Wellhead temperature, pressure, and 2" pipe lip pressure were all measured in the logging trailer electronically. All gages and transducers were calibrated on site.

All non-brass-to-brass joints or non-flanged unions were teflon taped.

Test Results

August 7, 1979

Time	Wellhead Pressure	Comments
1705	-	Started displacing mud with w/H_2O.
1805	-	Closed pipe rams - dumping mud to pits through 3" line - choke manifold.
1832	-	Cut off mud pumps. Let well flow by itself.
1836	-	Well Stopped flowing. Re-started pump.
1843	-	Stopped pump. Well flowing.
1950	370	Shut-in well. Fast buildup. Started opening and closing 3".
2025	380-400	After several cycles of opening and closing, shut well in. High shut-in pressure puzzling due to low flow rate. Standpipe also reading pressure due to kill line being open.
2035	390	Shut in well after flowing and replacing wellhead gauge. All gauges read 390 shut-in, 0 when flowing.
2050	404	Flowed and shut-in to new high.
2105	409.8	" " " " " ". Buildup occurs in less than 5 minutes.
2245	-	Displaced water with mud -max. return temp. = 188°.

Well Dixie Federal 66-21
Rig Test
August 8, 1979

Time	Time from start	Wellhead Pressure P_1	Flowline Temperature T_1	P_3 psig	P_2	m_3	Comments
930			130				Opened well thru 3" line after having displaced mud out of well w/bit @ 4550'. Displaced all mud out of hole by spotting water @ bottom before Pu to 4554'. Well flowing about 250 bbls/hour.
1040			131.9				Well flowing 250 bbls/hr.
1106			140.5				" " " " "
1128			148.6				Flow picking up.
1200			166				Flow spurting.
1220			180				" "
1245			196				" "
1345		20	217	--			Shut in well.
1350		468					Last night kill line must have been open. Maximum buildup. Standpipe pressure = 0
1402		18					Opened well thru 3" line.
1410		18.4	216	--		--	Flowing thru 3" & both 2" lines.
1450		22	228	--			All lines spurting.
1515		24	232	3		60,340	lip pressure 3 psi
1545		26	236	3.5		62,120	lip pressure 3.5 psi

Time	Time from start	Wellhead Pressure P_1	Flowline Temperature T_1	P_3 P_2 psig	m_3	Comments
1555		26	237	4.0	63,900	
1615		30	220	2.5	58,500	Killing drillpipe to run 1 standin. Made temp go down, P go up.
1625		--	-	-	-	Lowered 1 stand of D.P. some rig H_20 returned - Knocked pressure down.
1630		21.5	227	2.0	56,760	
1645		26	238	3.5	62,120	Rigging up Temp. instruments & R.I.H.
1700		27	241	4.6	66,050	7:07 shut in 2" line.
1715		34.5	245	5.7	69,960	Temp tool @ 4609': waiting 10 minutes
1725		35.5	246.3	5.9	70,700 lbm/hr	
1730		34	240	5.4	68,890	Well shut in, most press increase in first min.
1745		468	--	--	--	Maximum S.I. Pressure (last 5 min)
1817						Out of hole w/temp tool - breaking it down
1900						Start in hole with 2nd temperature instrument. 325^{o}-525^{o} instrument had no reading.
2020		Chloride 1300, Ph 7.0				150-350^{o}F instrument read @ 4609' Temp = 293^{o}F
						4000' = 292^{o}F Clocked stop - no more reading

JMR:pw

Rig Test of Well Dixie Federal 66-21

Formulas $\frac{Gh^{1.102}}{p^{0.96}} = \frac{10,450}{y^{0.063}}$ (James 1966 p. 440) (1)

$m = G \cdot A \cdot 3600$ (2) $\qquad P = P_{Lip} + P_{atm}$ (3)

where:

A = pipe crossectional area (ft^2) = $\frac{\pi}{4}(\frac{di}{12})^2$

d_i = inside diameter of pipe (in)

G = mass velocity (lbm/ft^2 sec.)

h = specific stagnation enthalpy (Btu/lbm)

m = mass flow rate (lbm/hr)

P = critical lip pressure (psia)

P_{Lip} = lip pressure (psig)

P_{Atm} = atmospheric pressure (psia)

y = centerline distance from pipe discharge face (in) ($y \leq 0.3$)

Data Reduction

$A_4 = \frac{\pi}{4}(\frac{3}{12})^2 = 4.909 \times 10^{-2}$ft; $A_2 = \frac{\pi}{4}(\frac{2}{12})^2 = 2.182 \times 10^{-2}$ft.

y_3 = ½", y_2 = 5/16"

Combining (1), (2), and (3)

$$m = \frac{10,450}{(y)^{0.063}} \quad \frac{(P_{Lip} \& P_{atm})}{h^{1.102}} \quad A \cdot 3600$$

$$m = 3.762 \times 10^7 \quad (A/Y^{0.063}) \quad \frac{P^{0.96}}{h^{1.102}}$$

$$m\ 3" = 1.929 \times 10^6 \quad \frac{P^{0.96}}{h^{1.102}}$$

$$m_2 = 8.831 \times 10^5 \quad \frac{P^{0.96}}{H^{1.102}}$$

Sample Calculation: @ 1725 hrs 8/8/79, $P_{L3"}$ = 5.9 psig, P 19.10 psia, P_2 = 0

$T_{max} = 293^oF \Rightarrow ho \approx 262.5$ Btu/lbm, $\qquad m_3 \approx 1.929 \times 10^6 \quad (19.1)^{0.96} \div (262.5)^{1.102}$

$\dot{m}_3 \approx 70,700$ lbm/hr. = 219 bbl/hr.

JMR:pw
August 8, 1979

****
* SCHLUMBERGER *
****

HIGH RESOLUTION

DIPMETER

****

CLUSTER LISTING
****

THERMAL POWER COMPANY

DIXIE FEDERAL

CHURCHILL , NEVADA

DIXIE FEDERAL 66-21

RUN NO. ONE JOB NO. 3542

CLUSTER RESULTS ONLY

4 FT. CORR. - 2 FT. STEP

30 DEG. X2 SEARCH ANGLE

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4596			9.9	150	10.1	12.1	
4598			10.0	149	10.0	12.2	
4600			10.1	149	10.3	12.5	
4602			10.1	150	10.3	12.5	
4604	70.2	313	10.0	148	9.9	12.4	D
4606			10.0	147	9.8	12.5	
4608			10.0	147	9.9	12.6	
4610			10.0	146	9.6	12.4	
4612			10.0	147	9.3	12.4	
4614			10.0	148	9.1	12.7	
4616			10.1	149	9.2	12.8	
4618			10.2	146	9.3	12.9	
4620			10.1	145	9.1	13.0	
4622			10.0	146	8.8	13.1	
4624			10.0	145	8.3	13.1	
4626			10.1	146	7.8	13.1	
4628			10.2	146	7.5	13.2	
4630			10.3	146	7.4	13.1	
4632			10.3	146	7.5	12.9	
4634			10.4	145	7.8	12.4	
4636			10.5	143	8.3	11.9	
4638			10.6	143	8.6	11.7	
4640			10.6	145	8.6	12.0	
4642			10.6	144	8.5	12.3	
4644			10.6	143	8.6	12.2	
4646			10.6	144	8.6	11.8	
4648			10.6	145	8.5	11.6	
4650			10.7	143	8.2	11.6	
4652			10.7	143	8.2	11.6	
4654			10.6	144	8.2	11.6	
4656			10.5	144	8.4	11.5	
4658			10.5	144	8.6	11.5	
4660			10.5	143	8.6	11.5	
4662			10.4	143	8.6	11.5	
4664			10.5	144	8.6	11.5	
4666			10.6	145	8.7	11.1	
4668			10.5	143	8.7	10.9	
4670			10.5	140	8.7	10.9	
4672			10.7	139	8.9	10.4	
4674			10.7	141	9.0	10.0	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6940			13.6	126	8.1	8.7	
6942			13.5	129	8.2	8.6	
6944			13.4	133	8.1	8.6	
6946			13.4	134	7.8	8.5	
6948			13.4	133	7.5	8.5	
6950			13.5	132	7.4	8.5	
6952			13.5	132	7.3	8.5	
6954			13.4	132	7.0	8.4	
6956			13.4	133	6.6	8.4	
6958			13.5	132	6.5	8.3	
6960			13.4	130	6.4	8.1	
6962	52.4	307	13.3	129	6.4	8.1	D
6964	50.2	305	13.4	129	6.3	8.1	D
6966			13.5	130	6.3	8.1	
6968	49.4	305	13.4	131	6.4	8.1	B
6970			13.5	132	6.4	8.2	
6972			13.5	133	6.4	8.2	
6974			13.6	133	6.3	8.3	
6976			13.6	133	6.3	8.4	
6978			13.5	134	6.3	8.4	
6980			13.6	133	6.3	8.4	
6982			13.5	134	6.3	8.4	
6984			13.5	136	6.3	8.4	
6986			13.6	138	6.3	8.4	
6988			13.7	138	6.3	8.4	
6990			13.6	136	6.2	8.4	
6992			13.6	137	6.0	8.1	
6994			13.6	135	5.9	7.8	
6996			13.5	134	5.8	7.6	

THERMAL POWER COMPANY DIXIE FEDERAL 66-21 SUMMARY

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	QUAL
TOP							
4596.0	42.3	57.	9.9	150.	10.1	12.1	*
BOTTOM							
6994.0	40.5	298.	13.6	135.	5.9	7.8	*

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4676			10.5	141	9.1	9.7	
4678			10.6	142	9.0	9.4	
4680			10.7	144	9.1	9.3	
4682			10.8	142	9.2	9.3	
4684			10.9	146	9.4	9.5	
4686			10.8	145	9.6	9.6	
4688			10.7	140	9.6	9.6	
4690			10.8	139	9.7	9.8	
4692			10.9	141	9.7	9.8	
4694			11.0	144	9.7	9.6	
4696			10.9	143	9.6	9.4	
4698			10.9	142	9.6	9.3	
4700			10.9	143	9.8	9.4	
4702			10.9	145	9.9	9.5	
4704			10.9	145	9.8	9.6	
4706			11.0	144	9.9	9.6	
4708			10.9	146	10.0	9.6	
4710			10.9	146	10.1	9.6	
4712			11.0	143	10.3	9.7	
4714			10.9	141	10.4	9.9	
4716			10.9	142	10.0	9.8	
4718			11.0	143	9.7	9.7	
4720			10.9	144	9.7	9.7	
4722			11.0	143	9.7	9.7	
4724			11.0	142	9.7	9.6	
4726			10.9	138	9.8	9.6	
4728			10.9	135	9.6	9.7	
4730			10.9	140	9.5	10.0	
4732			10.9	145	9.9	11.8	
4734			10.8	146	10.5	13.7	
4736			10.8	148	10.9	14.1	
4738			10.8	149	11.0	14.2	
4740			10.8	149	10.7	14.4	
4742			10.8	147	11.2	14.3	
4744	31.6	155	10.7	147	10.4	13.2	D
4746			10.8	148	8.7	12.0	
4748			10.9	147	8.1	11.4	
4750			10.8	146	8.4	11.3	
4752			10.8	146	8.9	11.3	
4754			10.9	147	9.0	11.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4756			10.9	146	8.8	11.4	
4758			10.9	146	8.7	11.5	
4760			11.0	147	8.6	11.6	
4762			10.9	148	8.5	11.6	
4764			10.9	148	8.4	11.4	
4766			10.9	146	8.2	11.0	
4768			10.8	145	8.2	10.9	
4770			10.9	144	8.2	10.9	
4772			10.9	143	8.2	10.8	
4774	41.9	117	10.9	142	7.9	10.7	D
4776			10.9	142	7.7	10.7	
4778			11.0	141	7.5	10.4	
4780	35.8	118	11.0	143	7.6	9.8	D
4782			11.1	145	7.9	9.9	
4784			11.0	143	8.3	10.3	
4786			11.2	145	8.9	10.3	
4788			11.4	146	9.1	10.2	
4790			11.5	144	8.7	10.0	
4792			11.5	145	8.2	9.7	
4794			11.5	147	8.3	10.1	
4796			11.5	146	8.3	10.6	
4798	21.5	356	11.5	146	7.9	10.7	D
4800	15.7	354	11.5	145	7.9	10.9	D
4802	24.0	4	11.4	146	8.3	11.0	D
4804			11.5	145	8.6	10.9	
4806			11.5	143	8.7	10.9	
4808			11.5	142	8.5	10.9	
4810			11.4	144	8.5	10.9	
4812			11.4	144	8.6	11.0	
4814			11.4	144	8.6	11.2	
4816			11.4	143	8.6	11.4	
4818	27.9	356	11.4	144	8.6	11.4	D
4820	29.4	2	11.4	145	8.3	11.1	D
4822			11.4	143	8.1	10.7	
4824			11.3	142	8.1	10.6	
4826			11.3	143	8.2	10.6	
4828			11.3	146	8.2	10.7	
4830	32.0	359	11.3	146	8.1	10.8	D
4832			11.4	145	8.1	11.0	
4834			11.3	146	8.3	11.0	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4836			11.4	146	8.2	10.9	
4838			11.5	144	8.2	10.8	
4840			11.5	143	8.3	10.7	
4842			11.4	144	8.5	10.7	
4844			11.5	144	8.4	10.5	
4846			11.5	144	8.4	10.5	
4848			11.4	143	8.5	10.7	
4850			11.5	143	8.7	10.7	
4852			11.6	144	8.7	10.7	
4854			11.5	144	8.6	10.6	
4856			11.5	143	8.5	10.5	
4858			11.5	142	8.5	10.4	
4860			11.6	142	8.4	10.3	
4862			11.7	142	8.3	10.1	
4864			11.6	141	8.1	10.0	
4866			11.6	139	8.0	9.8	
4868			11.7	140	8.0	9.8	
4870			11.7	141	7.9	9.6	
4872			11.6	142	7.5	9.4	
4874			11.5	140	7.2	9.2	
4876			11.5	139	7.1	9.0	
4878			11.6	141	7.0	8.8	
4880			11.7	141	7.3	8.8	
4882			11.7	142	7.4	9.0	
4884			11.6	142	7.4	9.0	
4886			11.6	141	7.5	9.0	
4888			11.7	141	7.6	9.0	
4890			11.8	141	8.0	9.3	
4892			11.9	141	8.6	9.7	
4894	32.6	309	11.7	140	8.9	9.9	D
4896			11.7	140	9.1	9.8	
4898			11.8	140	9.4	9.9	
4900			12.0	141	9.4	9.9	
4902			11.9	143	9.0	9.7	
4904			11.8	143	8.7	9.2	
4906			11.9	142	8.7	9.0	
4908			11.9	143	8.7	9.2	
4910			11.8	144	9.1	9.5	
4912	35.3	301	11.7	145	9.9	10.7	D
4914			11.7	144	12.2	13.1	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4916			11.9	140	13.0	13.3	
4918			11.9	138	10.9	11.0	
4920			11.9	140	9.3	9.2	
4922			12.0	141	8.9	8.9	
4924			12.1	139	9.0	8.8	
4926			12.1	141	9.3	9.0	
4928			12.2	142	9.4	9.1	
4930			12.3	142	9.5	9.0	
4932			12.5	141	10.2	9.2	
4934			12.5	139	10.8	9.4	
4936	23.8	305	12.4	140	10.9	10.1	D
4938	32.6	305	12.4	139	12.8	12.5	B
4940			12.5	139	13.0	11.8	
4942			12.5	142	11.0	9.4	
4944			12.5	141	10.5	9.0	
4946			12.5	137	11.1	9.0	
4948			12.5	137	11.5	9.0	
4950			12.6	142	11.0	9.1	
4952			12.6	144	10.3	9.1	
4954			12.5	138	10.3	9.3	
4956			12.4	135	10.5	9.5	
4958			12.4	136	10.5	9.4	
4960			12.5	137	10.6	9.5	
4962			12.6	137	10.7	9.4	
4964			12.6	135	10.6	9.1	
4966			12.7	137	10.4	9.1	
4968			12.6	138	10.4	9.1	
4970			12.6	138	10.4	8.8	
4972			12.6	135	10.3	8.9	
4974			12.6	133	10.0	9.0	
4976			12.7	135	9.7	8.9	
4978	6.6	102	12.7	136	9.8	9.1	D
4980			12.7	135	9.8	9.2	
4982			12.6	136	9.7	9.2	
4984			12.7	137	9.7	9.1	
4986	10.0	96	12.8	138	9.7	9.0	D
4988			12.8	137	9.5	8.9	
4990	13.4	94	12.8	135	9.6	9.1	D
4992	17.8	67	12.8	135	9.8	9.2	D
4994			12.8	136	9.9	9.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4996			12.8	135	10.0	9.3	
4998			12.9	134	9.8	9.3	
5000			12.8	136	9.7	9.3	
5002			12.7	139	10.0	9.2	
5004			12.7	139	10.3	9.1	
5006			12.7	138	10.5	9.3	
5008			12.7	137	10.9	9.6	
5010			12.7	137	11.3	10.2	
5012			12.8	136	11.5	10.4	
5014			12.8	133	11.4	10.0	
5016			12.8	135	11.0	9.6	
5018			12.8	138	10.8	9.4	
5020			12.6	137	10.7	9.4	
5022			12.6	137	10.7	9.4	
5024			12.6	138	10.7	9.4	
5026			12.6	138	10.9	9.7	
5028			12.7	138	11.5	10.7	
5030			12.7	136	11.8	11.7	
5032			12.7	135	11.6	11.4	
5034			12.7	135	11.3	10.4	
5036	13.5	330	12.8	137	11.3	10.2	D
5038			12.8	139	11.5	9.8	
5040	12.4	324	12.9	137	11.7	9.5	D
5042	12.4	286	12.9	137	11.6	9.2	D
5044			13.0	133	11.2	9.0	
5046			13.0	133	11.1	8.9	
5048			13.0	139	11.2	9.0	
5050	15.0	323	12.9	138	11.3	9.0	B
5052	18.4	331	12.8	139	11.3	9.0	D
5054			12.7	139	11.1	9.1	
5056			12.8	138	10.8	9.0	
5058			12.8	136	10.5	8.9	
5060			12.7	135	10.5	8.9	
5062			12.7	135	10.5	8.8	
5064			12.8	134	10.4	8.7	
5066	6.2	4	12.8	131	9.8	8.5	B
5068	4.6	12	12.8	132	9.0	8.2	B
5070			12.8	135	8.7	8.1	
5072			12.9	134	8.8	8.2	
5074			13.0	134	9.2	8.4	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5076			13.0	133	9.5	8.5	
5078	22.9	304	12.9	134	9.9	8.6	D
5080	29.9	307	12.9	136	10.2	8.8	B
5082			13.0	133	10.3	9.1	
5084			12.9	130	10.3	9.3	
5086			12.9	128	9.8	9.1	
5088			12.7	130	9.5	8.8	
5090	31.4	295	12.7	132	9.4	8.6	D
5092			12.9	132	9.5	8.7	
5094			12.9	132	9.7	8.7	
5096			13.0	133	9.7	8.6	
5098			13.1	134	9.8	8.5	
5100			13.1	132	9.8	8.6	
5102			13.1	130	9.7	8.7	
5104			13.0	131	9.8	8.8	
5106			13.1	133	9.9	8.9	
5108			13.1	132	9.8	8.7	
5110			13.1	129	9.6	8.6	
5112			13.1	128	9.4	8.5	
5114			13.0	128	9.3	8.5	
5116			12.9	129	9.1	8.5	
5118			12.9	129	9.0	8.5	
5120			13.0	127	9.0	8.4	
5122			13.0	128	9.1	8.3	
5124			13.0	130	9.1	8.2	
5126			12.9	127	9.0	8.1	
5128			13.0	126	9.1	8.1	
5130			13.0	128	9.3	8.3	
5132			13.1	129	9.4	8.4	
5134			13.0	130	9.3	8.4	
5136	46.1	140	13.0	131	9.0	8.3	B
5138			13.0	128	8.6	8.2	
5140	53.2	272	12.9	126	8.3	8.1	D
5142			12.7	128	7.9	7.9	
5144			12.6	128	7.6	7.9	
5146			12.6	126	7.6	8.1	
5148			12.7	123	7.6	8.2	
5150			12.7	123	7.6	8.3	
5152			12.7	124	7.6	8.4	
5154			12.7	127	7.7	8.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5156			12.8	127	7.9	8.6	
5158			12.9	123	8.1	8.6	
5160			12.8	123	8.2	8.7	
5162			12.8	123	8.2	8.8	
5164			12.9	123	8.2	8.9	
5166			12.9	124	8.2	8.9	
5168			12.9	124	8.1	8.8	
5170			12.9	124	8.1	8.8	
5172			13.0	125	8.0	8.6	
5174	43.6	186	12.9	123	7.7	8.3	D
5176			12.9	123	7.5	8.3	
5178			13.0	124	7.6	8.4	
5180			13.1	125	7.7	8.4	
5182	37.8	190	13.2	125	8.0	8.6	D
5184	40.4	191	13.1	125	8.3	8.8	D
5186			13.2	124	8.4	8.9	
5188			13.3	125	8.7	8.9	
5190			13.2	126	8.8	8.9	
5192			13.2	125	8.9	8.8	
5194			13.3	126	8.9	8.8	
5196	55.1	320	13.2	129	8.9	8.8	B
5198			13.3	129	8.9	8.7	
5200			13.3	129	8.9	8.7	
5202			13.3	130	8.9	8.6	
5204			13.3	127	8.8	8.5	
5206			13.3	127	8.8	8.6	
5208			13.3	128	8.9	8.7	
5210			13.3	126	9.0	8.8	
5212			13.4	127	9.1	8.7	
5214			13.4	128	9.1	8.7	
5216			13.4	128	9.1	8.5	
5218			13.4	127	9.0	8.4	
5220			13.4	126	9.1	8.4	
5222			13.3	125	9.2	8.5	
5224			13.3	126	9.1	8.6	
5226			13.3	129	9.1	8.6	
5228			13.3	128	9.1	8.4	
5230			13.3	126	9.1	8.3	
5232			13.3	128	9.2	8.4	
5234	45.4	119	13.3	128	9.2	8.4	D

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5236			13.3	128	9.2	8.3	
5238			13.3	127	9.0	8.2	
5240			13.3	126	8.8	8.0	
5242			13.3	128	8.8	8.0	
5244			13.3	128	9.0	8.0	
5246			13.3	126	9.1	8.1	
5248			13.3	125	9.0	8.1	
5250			13.3	126	8.5	7.9	
5252			13.3	128	8.4	7.8	
5254			13.4	127	8.6	7.8	
5256	21.6	296	13.4	126	8.6	7.9	D
5258			13.3	126	8.5	8.0	
5260	47.3	139	13.3	125	8.4	8.0	D
5262			13.3	125	8.3	7.8	
5264			13.3	126	8.4	7.6	
5266			13.2	127	8.4	7.6	
5268			13.2	127	8.2	7.5	
5270			13.3	128	7.6	7.4	
5272			13.3	130	7.4	7.3	
5274			13.2	129	7.6	7.4	
5276			13.2	126	7.7	7.5	
5278			13.1	125	7.6	7.5	
5280			13.3	126	7.4	7.5	
5282			13.3	126	7.3	7.3	
5284			13.3	125	7.2	7.1	
5286			13.3	127	7.4	7.0	
5288			13.3	129	7.6	7.2	
5290			13.4	130	7.7	7.2	
5292			13.4	130	7.7	7.3	
5294			13.5	130	7.6	7.2	
5296			13.5	131	7.4	7.1	
5298			13.5	132	7.2	6.9	
5300			13.5	131	7.3	6.9	
5302			13.4	130	7.7	7.0	
5304	33.2	214	13.3	132	8.5	7.3	D
5306	35.3	213	13.3	131	10.7	10.0	B
5308			13.4	130	12.0	12.5	
5310			13.4	132	11.7	12.7	
5312			13.4	134	11.2	12.3	
5314			13.3	136	10.9	11.2	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A	
5316			13.3	132	12.4	11.4		
5318			13.3	129	12.1	11.0		
5320			13.4	128	9.1	9.1		
5322			13.5	126	9.0	8.6		
5324			13.6	127	9.6	8.7		
5326			13.8	129	9.3	9.5		
5328			14.0	132	9.0	10.2		
5330			13.9	135	8.7	10.1		
5332			13.8	134	8.7	10.2		
5334			13.8	135	8.6	10.1		
5336			13.8	137	8.5	9.8		
5338			13.8	137	8.6	9.8		
5340			13.9	136	8.7	9.8		
5342			14.0	135	8.6	9.8		
5344			13.9	133	8.7	9.5		
5346			13.8	133	8.7	9.4		
5348			13.8	134	8.6	9.0		
5350			13.7	136	8.4	8.7		
5352			13.6	134	8.3	8.6		
5354			13.7	132	8.2	8.4		
5356			13.8	135	8.0	8.2		
5358			13.8	137	7.9	8.2		
5360			13.7	138	7.9	8.2		
5362			13.7	136	7.8	8.1		
5364			13.7	134	7.7	8.1		
5366			13.7	133	7.7	8.2		
5368			13.7	134	7.6	8.2		
5370			13.6	135	7.6	8.3		
5372			13.5	135	7.6	8.3		
5374			13.7	132	7.5	8.4		
5376			13.8	132	7.5	8.4		
5378			13.7	134	7.7	8.2		
5380			13.6	135	7.6	7.9		
5382			13.7	134	7.4	7.7		
5384			13.6	135	7.3	7.6		
5386			13.5	135	7.3	7.5		
5388	51.4	118	13.6	133	7.3	7.4	D	
5390	46.3	109	13.6	134	7.2	7.2	D	
5392			13.6	136	7.2	7.2		
5394			13.6	137	7.2	7.3		

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5396			13.6	138	7.3	7.4	
5398			13.7	137	7.4	7.4	
5400			13.6	136	7.4	7.3	
5402			13.5	134	7.3	7.2	
5404	57.2	235	13.4	134	7.3	7.2	D
5406			13.4	134	7.3	7.2	
5408			13.4	135	7.3	7.2	
5410			13.5	136	7.3	7.2	
5412			13.6	137	7.3	7.3	
5414			13.5	137	7.2	7.2	
5416			13.5	137	7.2	7.2	
5418			13.6	138	7.2	7.2	
5420			13.6	135	7.2	7.2	
5422			13.6	134	7.2	7.2	
5424			13.5	136	7.2	7.2	
5426			13.5	136	7.2	7.2	
5428			13.6	136	7.2	7.1	
5430			13.5	135	7.2	7.1	
5432			13.5	136	7.2	7.1	
5434			13.5	138	7.2	7.1	
5436			13.5	141	7.2	7.1	
5438			13.5	142	7.2	7.3	
5440			13.4	137	7.3	7.4	
5442			13.3	135	7.4	7.3	
5444			13.4	138	7.3	7.1	
5446			13.3	139	7.3	7.1	
5448			13.3	138	7.3	7.1	
5450			13.3	136	7.2	7.0	
5452			13.4	136	7.2	7.0	
5454			13.4	139	7.3	7.0	
5456			13.4	141	7.3	7.1	
5458			13.3	140	7.3	7.1	
5460			13.3	139	7.4	7.2	
5462			13.4	141	7.4	7.2	
5464			13.3	141	7.4	7.2	
5466			13.3	139	7.5	7.2	
5468			13.3	139	7.9	7.3	
5470			13.3	140	8.3	7.5	
5472			13.3	138	8.6	7.8	
5474			13.3	137	8.9	8.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5476			13.2	141	9.0	8.9	
5478			13.2	143	8.7	9.1	
5480			13.2	144	8.1	8.8	
5482			13.1	145	7.6	8.5	
5484			13.1	143	7.2	8.2	
5486			13.0	141	6.9	8.0	
5488			13.1	138	6.5	7.7	
5490			13.1	139	6.2	7.4	
5492			13.0	142	5.9	6.9	
5494			13.1	144	5.7	6.5	
5506			13.6	140	8.4	9.8	
5508			13.5	139	8.4	9.8	
5510			13.5	138	8.6	9.7	
5512			13.5	138	8.6	9.8	
5514			13.5	137	8.5	9.8	
5516			13.4	139	8.4	9.8	
5518			13.4	139	8.5	9.9	
5520			13.3	139	8.8	10.0	
5522			13.3	136	8.7	9.9	
5524			13.3	136	8.5	9.6	
5526			13.3	138	8.5	9.4	
5528			13.3	135	8.5	9.3	
5530			13.2	133	8.4	9.1	
5532	22.9	190	13.2	131	8.4	9.0	D
5534	23.6	189	13.3	133	8.3	9.0	D
5536			13.3	136	8.3	9.0	
5538			13.4	137	8.3	9.0	
5540			13.4	136	8.3	9.1	
5542			13.4	135	8.3	9.1	
5544			13.3	135	8.3	9.0	
5546	5.2	199	13.4	134	8.4	9.0	B
5548	5.6	166	13.4	134	8.4	9.1	D
5550	11.8	233	13.3	133	8.5	9.1	D
5552			13.3	135	8.4	9.2	
5554			13.4	136	8.5	9.1	
5556			13.4	135	8.5	9.1	
5558			13.4	135	8.5	9.1	
5560			13.4	135	8.6	9.3	
5562			13.4	134	8.5	9.4	
5564			13.3	134	8.4	9.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5566			13.3	135	8.5	9.2	
5568	68.9	5	13.4	137	8.6	9.3	B
5570			13.5	136	8.6	9.3	
5572			13.4	135	8.6	9.3	
5574			13.4	136	8.6	9.3	
5576	36.9	119	13.3	136	8.6	9.3	D
5578	40.1	122	13.4	138	8.6	9.3	B
5580	37.0	120	13.5	137	8.6	9.3	B
5582			13.4	136	8.6	9.4	
5584			13.4	134	8.6	9.4	
5586			13.4	135	8.5	9.2	
5588			13.4	136	8.5	9.2	
5590			13.4	134	8.4	9.2	
5592			13.4	134	8.3	9.1	
5594			13.3	133	8.1	8.7	
5596			13.3	134	7.9	8.3	
5598			13.4	136	7.8	8.1	
5600			13.3	139	7.7	7.9	
5602			13.3	140	7.7	7.8	
5604			13.4	140	7.9	7.7	
5606	32.9	70	13.4	138	7.9	7.6	D
5608			13.3	138	7.6	7.4	
5610			13.3	138	7.5	7.4	
5612			13.3	137	7.5	7.4	
5614			13.3	136	7.5	7.4	
5616			13.3	135	7.4	7.3	
5618			13.3	136	7.3	7.3	
5620			13.3	138	7.3	7.2	
5622			13.2	136	7.3	7.3	
5624			13.2	134	7.2	7.3	
5626	47.5	152	13.3	136	7.3	7.3	B
5628	46.7	151	13.3	137	7.4	7.4	B
5630	54.7	155	13.3	137	7.4	7.5	D
5632			13.2	139	7.6	7.5	
5634			13.2	138	7.8	7.4	
5636	42.9	153	13.2	134	7.7	7.4	D
5638			13.3	137	7.5	7.4	
5640			13.4	137	7.4	7.3	
5642			13.4	132	7.3	7.2	
5644			13.3	132	7.2	7.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5646			13.3	133	7.2	7.7	
5648			13.4	136	7.5	8.4	
5650			13.5	136	7.8	9.2	
5652			13.6	137	8.1	9.7	
5654			13.6	137	8.2	9.7	
5656			13.4	137	8.2	9.7	
5658			13.5	138	8.2	9.6	
5660			13.5	139	8.0	9.5	
5662			13.5	139	7.9	9.7	
5664			13.6	137	8.2	10.0	
5666			13.6	137	8.3	10.2	
5668			13.6	137	8.3	10.3	
5670			13.5	138	8.2	10.3	
5672			13.4	137	8.2	10.0	
5674			13.5	137	8.2	10.2	
5676			13.5	139	8.2	10.4	
5678			13.5	138	8.0	10.0	
5680			13.6	135	7.9	10.0	
5682			13.6	134	8.1	10.4	
5684			13.6	135	8.3	10.7	
5686			13.6	136	8.3	10.6	
5688			13.7	137	8.1	10.5	
5690			13.7	136	8.0	10.3	
5692	73.0	323	13.5	135	7.8	9.6	D
5694			13.6	133	7.7	9.4	
5696			13.6	134	7.8	9.6	
5698			13.5	137	7.8	9.6	
5700			13.5	137	7.6	9.2	
5702	71.1	323	13.5	138	7.7	9.4	B
5704			13.4	139	8.1	10.1	
5706			13.4	137	8.1	10.3	
5708	50.5	89	13.3	138	7.8	9.6	D
5710			13.3	140	7.9	9.0	
5712			13.3	138	8.0	8.6	
5714			13.3	138	7.8	8.6	
5716			13.3	138	7.6	8.5	
5718	49.7	78	13.4	141	7.7	8.7	B
5720	48.1	79	13.4	139	8.0	9.0	B
5722			13.4	134	8.2	9.3	
5724			13.5	134	8.1	9.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5726	21.2	89	13.6	136	8.0	9.7	D
5728	20.2	82	13.6	137	7.9	9.8	D
5730	18.2	117	13.6	137	8.1	10.0	D
5732			13.7	136	8.4	10.3	
5734	20.7	57	13.7	138	8.3	10.2	B
5736	21.1	61	13.7	140	8.2	10.2	B
5738			13.7	139	8.3	10.1	
5740			13.7	139	8.4	10.0	
5742	19.8	57	13.7	138	8.5	10.0	D
5744			13.6	138	8.2	9.8	
5746			13.4	139	7.9	9.6	
5748			13.3	141	8.2	9.6	
5750			13.4	142	8.7	9.9	
5752			13.5	139	8.8	10.3	
5754			13.5	137	8.9	10.5	
5756			13.5	140	8.7	10.5	
5758			13.4	139	8.3	10.2	
5760			13.4	136	8.1	9.7	
5762			13.4	135	8.2	9.2	
5764			13.4	135	8.4	9.2	
5766			13.4	137	8.5	9.7	
5768			13.5	139	8.4	10.1	
5770			13.5	139	8.4	10.2	
5772			13.5	137	8.8	10.0	
5774			13.5	136	8.7	9.7	
5776			13.6	136	8.4	9.7	
5778			13.7	136	8.6	10.1	
5780			13.6	138	8.3	10.1	
5782			13.6	138	7.9	9.5	
5784			13.7	136	7.8	9.2	
5786			13.7	136	8.0	9.6	
5788			13.6	135	8.3	9.8	
5790			13.7	129	8.2	9.6	
5792			13.7	131	8.1	9.3	
5794			13.5	136	7.9	9.3	
5796			13.5	136	7.4	9.4	
5798			13.6	136	7.3	9.7	
5800			13.5	134	7.9	9.9	
5802			13.5	132	8.6	10.0	
5804			13.4	134	8.5	9.8	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5806			13.4	133	8.3	9.6	
5808			13.5	133	8.2	9.3	
5810	37.8	15	13.5	133	8.2	9.3	D
5812	43.7	24	13.5	132	8.4	9.7	D
5814	42.0	14	13.6	132	8.6	10.0	D
5816	39.1	15	13.7	132	8.6	10.1	D
5818			13.7	133	8.5	10.0	
5820			13.6	131	8.4	9.9	
5822	47.9	153	13.7	131	8.4	10.0	B
5824	22.2	168	13.7	131	8.5	9.9	D
5826	24.7	165	13.7	130	8.5	9.6	D
5828	25.4	165	13.8	132	8.5	9.6	D
5830			13.8	134	8.5	9.5	
5832			13.7	133	8.5	9.4	
5834			13.7	133	8.4	9.5	
5836	18.3	210	13.7	135	8.4	9.7	D
5838	18.7	212	13.7	133	8.3	9.7	B
5840			13.5	131	8.3	9.5	
5842			13.5	134	8.1	9.2	
5844			13.5	135	8.0	9.1	
5846			13.5	133	8.0	9.2	
5848			13.5	133	8.1	9.4	
5850			13.5	133	8.2	9.4	
5852			13.4	133	8.2	9.3	
5854			13.4	134	8.2	9.2	
5856			13.4	134	8.1	9.0	
5858			13.5	133	7.9	8.7	
5860			13.5	132	7.8	8.5	
5862			13.4	133	7.9	8.5	
5864			13.5	133	7.8	8.3	
5866			13.6	132	7.6	8.1	
5868			13.6	130	7.6	8.3	
5870	5.6	216	13.8	131	7.9	8.7	D
5872	6.9	232	13.9	132	8.1	9.0	D
5874			13.8	131	8.0	8.9	
5876			13.7	130	8.2	8.9	
5878			13.7	132	8.2	8.8	
5880			13.7	134	8.2	8.8	
5882			13.7	133	8.1	8.8	
5884			13.7	133	8.1	8.8	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5886	12.0	177	13.7	133	8.1	8.8	D
5888	9.2	193	13.8	131	8.0	8.8	D
5890	5.4	189	13.8	132	8.0	8.7	D
5892	43.4	276	13.7	132	8.1	8.7	D
5894	43.3	276	13.6	132	8.0	8.7	D
5896	44.0	272	13.6	132	8.0	8.8	D
5898			13.7	132	7.9	8.8	
5900			13.6	132	7.9	8.9	
5902			13.6	130	8.2	9.1	
5904			13.6	130	8.4	9.4	
5906			13.6	132	8.3	9.4	
5908			13.6	131	8.3	9.3	
5910			13.6	130	8.2	9.1	
5912	17.2	3	13.5	129	8.2	8.8	B
5914	17.0	2	13.5	129	8.1	8.6	B
5916			13.6	129	8.0	8.6	
5918			13.7	128	8.0	8.7	
5920	38.7	157	13.8	130	7.9	8.6	B
5922			13.8	132	8.0	8.6	
5924	13.2	200	13.7	132	8.2	8.6	B
5926	13.1	205	13.7	131	8.3	8.8	B
5928	21.3	99	13.7	131	8.3	9.0	B
5930	55.7	172	13.7	133	8.3	9.0	B
5932			13.7	134	8.4	9.1	
5934			13.7	132	8.4	9.2	
5936			13.7	130	8.4	9.1	
5938			13.7	130	8.5	9.1	
5940	18.9	205	13.7	131	8.5	9.2	D
5942			13.7	132	8.4	9.2	
5944			13.7	132	8.3	9.2	
5946			13.7	132	8.3	9.3	
5948			13.7	129	8.3	9.2	
5950			13.7	131	8.3	9.1	
5952			13.7	132	8.2	8.8	
5954			13.7	131	8.1	8.7	
5956			13.7	131	8.0	8.6	
5958			13.7	131	7.9	8.6	
5960			13.7	132	7.9	8.6	
5962			13.7	132	7.9	8.5	
5964	19.4	116	13.7	129	7.9	8.5	D

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5966	18.4	118	13.8	131	7.9	8.5	D
5968			13.9	132	8.0	8.5	
5970			13.9	131	8.0	8.5	
5972			13.8	132	8.0	8.5	
5974			13.8	133	8.1	8.5	
5976			13.8	131	8.1	8.5	
5978	16.8	219	13.7	130	8.1	8.5	B
5980			13.7	132	8.1	8.6	
5982	22.5	206	13.7	131	8.1	8.6	D
5984			13.7	131	8.2	8.6	
5986			13.6	131	8.1	8.7	
5988	76.3	353	13.6	131	8.2	8.8	D
5990			13.7	131	8.3	8.8	
5992			13.6	128	8.3	8.5	
5994			13.5	126	8.2	8.3	
5996			13.5	128	8.3	8.1	
5998			13.5	124	8.2	8.0	
6000			13.5	121	8.2	7.9	
6002			13.5	122	8.2	7.8	
6004			13.5	123	8.2	7.6	
6006			13.6	123	8.2	7.5	
6008	46.1	159	13.6	123	8.1	7.6	D
6010	52.7	156	13.7	123	8.0	7.5	D
6012			13.7	121	7.9	7.4	
6014			13.8	122	7.9	7.4	
6016			13.9	122	8.0	7.3	
6018			13.8	123	8.0	7.4	
6020			13.7	125	8.0	7.6	
6022			13.7	126	7.9	7.7	
6024			13.7	125	8.1	7.9	
6026			13.7	124	8.3	7.9	
6028			13.7	125	8.1	7.6	
6030			13.7	125	7.9	7.5	
6032			13.6	122	7.9	7.5	
6034			13.7	121	7.8	7.5	
6036			13.8	122	7.8	7.4	
6038			13.8	123	7.6	7.2	
6040			13.7	122	7.5	7.2	
6042			13.9	121	7.6	7.4	
6044			13.9	123	7.8	7.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6046			14.0	123	7.9	7.8	
6048			14.1	125	8.0	8.0	
6050			14.0	128	8.0	8.2	
6052			13.9	127	8.0	8.4	
6054	68.6	3	13.9	126	8.1	8.3	B
6056			14.0	129	8.0	8.2	
6058			13.9	130	8.0	8.2	
6060	18.6	135	13.9	127	8.2	8.4	D
6062	15.7	132	13.9	126	8.3	8.4	B
6064			14.0	125	8.2	8.4	
6066			14.0	124	8.2	8.4	
6068			14.0	127	8.2	8.5	
6070			14.0	126	8.3	8.5	
6072			13.9	124	8.3	8.3	
6074			13.9	124	8.2	8.2	
6076			13.9	123	8.3	8.3	
6078			14.0	123	8.3	8.4	
6080			14.0	124	8.3	8.5	
6082			14.1	124	8.2	8.4	
6084	50.0	224	14.1	125	8.3	8.4	D
6086	49.7	224	14.0	125	8.3	8.6	D
6088	50.4	219	14.0	123	8.4	8.8	D
6090	49.4	220	14.0	124	8.5	8.9	D
6092			14.1	132	8.6	9.0	
6094			14.1	132	8.5	8.9	
6096	51.7	221	14.1	127	8.3	8.6	D
6098			14.1	125	8.2	8.1	
6100			14.0	120	8.1	8.0	
6102			14.0	123	8.0	7.9	
6104			14.1	125	7.8	7.9	
6106			14.2	123	7.9	8.1	
6108			14.1	126	8.4	9.0	
6110			14.1	130	8.6	9.5	
6112			14.1	129	8.7	9.2	
6114			14.1	128	8.4	8.5	
6116			14.1	126	8.2	8.1	
6118			14.0	125	8.0	7.9	
6120			14.1	125	7.9	7.8	
6122			14.1	124	7.9	7.7	
6124			14.1	126	7.8	7.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6126			14.1	126	7.9	7.7	
6128			14.1	125	8.0	7.9	
6130			14.2	124	8.1	8.1	
6132			14.3	127	8.1	8.1	
6134			14.2	126	8.2	8.2	
6136			14.1	123	8.1	8.1	
6138			14.1	128	8.0	8.0	
6140			14.1	132	8.1	7.9	
6142			14.1	131	8.2	7.9	
6144			14.2	130	8.2	7.8	
6146			14.2	128	8.2	7.8	
6148			14.1	128	8.2	7.8	
6150			14.1	128	8.3	7.8	
6152			14.1	128	8.3	8.0	
6154			14.1	132	8.3	8.4	
6156	24.2	60	14.2	132	8.3	8.4	D
6158	25.0	57	14.1	129	8.3	8.2	D
6160			14.1	129	8.3	8.1	
6162			14.3	128	8.3	8.0	
6164			14.3	127	8.4	8.0	
6166			14.1	130	8.4	8.0	
6168			14.1	131	8.5	8.1	
6170			14.2	131	8.5	8.1	
6172			14.1	133	8.6	8.2	
6174			14.1	133	8.6	8.2	
6176			14.3	131	8.4	8.1	
6178			14.3	131	8.4	8.0	
6180			14.2	132	8.5	7.9	
6182			14.3	134	8.4	7.8	
6184			14.2	132	8.3	7.7	
6186			14.2	132	8.3	7.7	
6188			14.2	134	8.3	7.8	
6190			14.3	130	8.4	7.8	
6192			14.2	131	8.5	7.8	
6194			14.2	136	8.6	7.8	
6196			14.3	135	8.6	7.9	
6198			14.3	136	8.5	7.8	
6200			14.3	135	8.4	7.7	
6202	35.6	136	14.2	133	8.5	7.7	D
6204			14.2	134	8.4	7.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6206			14.3	132	8.4	7.5	
6208			14.4	132	8.4	7.5	
6210			14.3	136	8.4	7.5	
6212			14.3	139	8.4	7.6	
6214			14.3	136	8.4	7.6	
6216			14.3	133	8.3	7.5	
6218			14.3	136	8.4	7.4	
6220			14.3	138	8.5	7.5	
6222	60.3	287	14.4	134	8.6	7.4	B
6224			14.4	130	8.6	7.4	
6226	45.9	50	14.4	132	8.6	7.4	D
6228			14.4	133	8.6	7.5	
6230			14.4	132	8.6	7.5	
6232	46.0	79	14.5	134	8.6	7.5	D
6234	45.6	79	14.5	135	8.6	7.5	D
6236			14.5	135	8.5	7.5	
6238			14.6	136	8.5	7.4	
6240			14.7	137	8.4	7.4	
6242			14.6	136	8.4	7.5	
6244			14.7	136	8.5	7.6	
6246			14.7	138	8.5	7.6	
6248			14.7	136	8.4	7.5	
6250			14.7	134	8.3	7.5	
6252			14.7	134	8.4	7.5	
6254			14.8	133	8.4	7.6	
6256			14.8	135	8.3	7.7	
6258			14.8	136	8.2	7.7	
6260			14.9	137	8.2	7.6	
6262			14.9	135	8.1	7.3	
6264			14.8	133	8.0	7.2	
6266			14.8	135	7.9	7.3	
6268	39.0	296	14.8	137	7.9	7.4	D
6270			14.8	138	8.0	7.7	
6272			14.8	137	8.1	8.1	
6274			14.9	132	8.1	8.1	
6276	41.8	302	14.8	131	8.0	8.0	D
6278			14.8	132	7.8	7.6	
6280			14.8	129	7.6	7.2	
6282			14.7	129	7.6	7.2	
6284			14.7	130	7.7	7.2	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6286	49.1	83	14.8	128	7.8	7.2	D
6288	56.6	85	14.7	127	7.8	7.3	D
6290	48.1	81	14.7	130	7.8	7.2	D
6292			14.6	129	7.7	7.2	
6294			14.7	128	7.7	7.1	
6296			14.7	129	7.6	7.1	
6298			14.7	128	7.6	7.0	
6300			14.7	130	7.6	7.0	
6302			14.8	128	7.7	7.1	
6304	33.4	106	14.8	125	7.7	7.0	D
6306			14.7	125	7.6	6.9	
6308			14.8	125	7.5	6.7	
6310			14.8	124	7.5	6.7	
6312			14.6	125	7.4	6.6	
6314			14.6	127	7.3	6.6	
6316	32.8	109	14.6	126	7.4	6.6	D
6318	27.3	108	14.5	126	7.4	6.6	D
6320	22.1	104	14.5	125	7.5	6.7	D
6322	34.1	111	14.5	124	7.6	6.7	D
6324	14.0	96	14.5	125	7.5	6.6	D
6326	19.2	75	14.5	127	7.5	6.7	D
6328			14.6	128	7.6	6.8	
6330			14.6	127	7.6	6.8	
6332			14.6	127	7.6	6.9	
6334			14.6	127	7.7	7.1	
6336			14.6	126	7.7	7.1	
6338	17.2	61	14.6	128	7.7	7.0	D
6340			14.5	128	7.6	6.9	
6342	13.0	55	14.4	127	7.6	6.9	D
6344	10.0	54	14.5	126	7.6	6.9	D
6346			14.5	124	7.6	6.8	
6348			14.5	126	7.6	6.9	
6350			14.5	127	7.7	7.0	
6352			14.6	126	7.8	6.8	
6354			14.5	125	7.8	6.9	
6356			14.6	127	7.7	6.9	
6358			14.6	130	7.6	6.9	
6360			14.6	127	7.5	7.0	
6362			14.5	122	7.6	7.0	
6364			14.5	122	7.6	7.1	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6366			14.5	126	7.7	7.1	
6368			14.4	130	7.6	7.2	
6370			14.4	133	7.6	7.3	
6372			14.5	131	7.6	7.5	
6374			14.5	127	7.5	7.4	
6376			14.5	124	7.4	7.4	
6378			14.5	124	7.5	7.4	
6380			14.4	127	7.5	7.4	
6382			14.4	128	7.6	7.4	
6384			14.5	129	7.7	7.6	
6386			14.5	131	7.7	7.7	
6388			14.4	130	7.6	7.7	
6390			14.4	129	7.5	7.7	
6392			14.4	129	7.5	7.7	
6394			14.4	126	7.6	7.6	
6396			14.4	132	7.6	7.5	
6398			14.4	134	7.5	7.6	
6400			14.4	129	7.5	7.6	
6402			14.4	131	7.4	7.4	
6404			14.5	129	7.5	7.6	
6406	21.3	145	14.4	126	7.7	7.6	D
6408	22.2	139	14.3	128	7.6	7.3	D
6410			14.3	127	7.5	7.2	
6412			14.4	127	7.4	7.2	
6414			14.3	132	7.5	7.3	
6416			14.3	129	7.5	7.5	
6418			14.3	123	7.5	7.6	
6420			14.2	118	7.4	7.7	
6422			14.1	117	7.3	7.0	
6424			14.2	121	7.2	6.3	
6426			14.2	121	7.3	6.4	
6428			14.3	121	7.3	6.6	
6430			14.3	121	7.3	6.6	
6432			14.4	122	7.3	6.6	
6434			14.5	123	7.3	6.6	
6436	50.9	27	14.5	124	7.3	6.5	D
6438			14.5	127	7.3	6.5	
6440			14.6	128	7.3	6.6	
6442	55.2	35	14.6	131	7.3	6.6	D
6444			14.6	130	7.3	6.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6446			14.7	128	7.3	6.7	
6448			14.8	127	7.4	7.0	
6450			14.8	127	7.4	7.4	
6452			14.8	128	7.5	8.1	
6454			14.8	128	7.8	8.6	
6456			14.8	129	8.2	8.9	
6458			14.8	130	8.2	9.1	
6460			14.7	128	8.4	9.5	
6462			14.7	129	8.6	9.9	
6464			14.7	129	8.7	9.8	
6466	35.4	160	14.6	128	8.5	9.7	D
6468	35.9	164	14.7	128	8.2	9.2	D
6470			14.7	127	7.9	8.4	
6472	49.0	204	14.6	128	7.4	7.7	D
6474	51.9	201	14.6	128	7.2	7.4	D
6476			14.6	126	7.1	7.4	
6478			14.6	127	7.1	7.4	
6480			14.7	127	7.2	7.5	
6482	35.4	162	14.7	127	7.2	7.6	D
6484			14.8	127	7.2	7.7	
6486			14.8	127	7.1	7.8	
6502			14.8	127	8.1	7.6	
6504			14.8	128	8.2	7.6	
6506			14.8	130	8.3	7.6	
6508			14.8	131	8.3	7.6	
6510			14.8	131	8.3	7.7	
6512			14.8	132	8.2	7.7	
6514			14.8	130	8.1	7.6	
6516			14.8	129	8.5	7.6	
6518			14.9	132	8.8	7.8	
6520			14.9	133	8.8	7.7	
6522	45.3	222	14.8	131	9.0	7.4	D
6524			14.9	132	9.2	7.5	
6526			15.0	130	9.2	7.7	
6528			14.9	125	8.8	7.9	
6530			14.8	124	8.7	7.8	
6532			14.8	128	9.4	7.8	
6534			14.8	131	10.2	7.7	
6536			14.8	124	10.2	7.5	
6538	14.8	295	14.8	117	9.3	7.6	D

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6540			14.7	120	8.0	7.7	
6542			14.6	124	7.3	7.7	
6544			14.6	125	7.2	7.8	
6546			14.7	127	7.6	8.3	
6548			14.6	126	8.5	8.5	
6550			14.5	127	9.0	8.5	
6552			14.5	127	9.1	8.7	
6554			14.6	125	8.8	8.6	
6556	11.9	300	14.5	126	8.2	8.1	D
6558			14.5	127	8.0	7.7	
6560			14.5	128	8.2	7.8	
6562			14.5	128	8.1	7.8	
6564			14.5	126	7.9	8.4	
6566			14.6	126	8.4	9.5	
6568			14.6	126	8.5	9.7	
6570			14.5	127	8.2	9.4	
6572			14.5	128	8.0	8.9	
6574			14.3	129	7.8	8.1	
6576			14.2	128	7.7	7.4	
6578			14.1	128	8.1	7.5	
6580			14.0	131	8.3	7.7	
6582			13.9	131	8.5	7.6	
6584			13.9	130	8.5	7.5	
6586			13.9	131	8.4	7.7	
6588	40.9	300	13.8	132	8.5	8.0	D
6590			13.7	132	8.3	7.8	
6592			13.6	132	8.1	7.5	
6594			13.7	132	8.4	7.6	
6596			13.7	130	8.6	7.8	
6598			13.6	130	8.1	7.5	
6600			13.7	130	7.5	7.4	
6602	12.1	306	13.8	130	6.9	7.4	D
6604			13.9	130	6.9	7.2	
6606	14.1	310	14.1	132	7.0	7.1	B
6608	13.8	311	14.1	132	7.0	7.1	D
6610	15.5	299	14.2	129	6.9	7.1	D
6612			14.2	126	6.9	7.1	
6614			14.2	126	7.1	7.2	
6616	16.0	301	14.2	129	7.3	7.3	D
6618			14.2	131	7.4	7.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6620			14.3	130	7.2	7.4	
6622			14.3	129	7.0	7.3	
6624			14.3	128	6.9	7.2	
6626			14.2	128	6.9	7.2	
6628			14.3	128	7.0	7.2	
6630	26.3	75	14.3	128	6.9	7.2	D
6632			14.3	127	6.9	7.1	
6634			14.2	120	6.9	7.1	
6636			14.1	118	6.9	7.3	
6638			14.2	124	6.9	7.4	
6640			14.3	122	6.9	7.3	
6642			14.5	123	6.9	7.3	
6644			14.4	126	6.8	7.4	
6646	13.1	310	14.4	127	6.9	7.4	D
6648			14.5	125	6.9	7.4	
6650			14.6	122	6.9	7.5	
6652			14.6	120	6.9	7.6	
6654			14.6	120	7.0	7.5	
6656	16.1	307	14.7	120	7.0	7.4	D
6658			14.8	120	7.1	7.4	
6660			14.7	119	7.0	7.3	
6662			14.7	119	6.8	7.1	
6664			14.7	121	6.6	7.0	
6666			14.6	122	6.7	7.0	
6668			14.5	122	6.9	7.1	
6670			14.6	123	7.4	7.6	
6672			14.5	123	8.1	8.2	
6674			14.6	124	8.3	8.3	
6676			14.6	122	8.3	8.3	
6678			14.5	121	8.2	8.3	
6680			14.5	121	7.9	8.2	
6682			14.6	119	7.5	7.8	
6684			14.6	119	7.3	7.6	
6686			14.7	120	7.4	7.7	
6688			14.7	121	7.7	7.8	
6690			14.8	120	7.9	7.9	
6692			14.8	119	8.6	8.3	
6694			14.8	120	9.5	9.0	
6696			14.9	119	10.1	9.1	
6698	13.7	199	14.8	120	10.3	8.9	B

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6700	12.3	200	14.8	118	10.0	8.7	B
6702	15.1	93	14.8	116	9.5	8.6	D
6704			14.8	116	9.3	8.6	
6706			14.8	114	9.6	8.8	
6708	40.6	307	14.7	112	9.7	8.7	D
6710	41.7	311	14.6	111	9.8	8.3	D
6712	13.6	98	14.6	111	9.6	7.8	D
6714			14.5	114	9.1	7.2	
6716			14.4	120	8.4	6.7	
6718			14.4	124	8.1	6.6	
6720			14.5	126	7.9	6.7	
6722			14.5	124	7.7	6.8	
6724			14.5	123	7.9	6.9	
6726			14.6	123	8.1	6.9	
6728			14.5	122	8.3	7.0	
6730			14.5	121	8.2	7.1	
6732			14.6	123	8.0	7.0	
6734			14.5	125	7.9	6.9	
6736			14.6	125	7.7	6.8	
6738			14.6	123	7.7	6.8	
6740			14.6	123	7.6	6.9	
6742			14.6	125	7.8	7.0	
6744			14.6	124	7.9	7.1	
6746			14.6	123	8.0	7.0	
6748			14.6	123	7.8	6.9	
6750			14.5	125	7.7	6.8	
6752			14.4	126	7.9	6.8	
6754			14.5	125	7.9	6.7	
6756			14.6	123	7.6	6.6	
6758			14.4	124	7.5	6.5	
6760			14.4	125	7.4	6.5	
6762			14.4	125	7.4	6.5	
6764	21.7	303	14.3	125	7.5	6.5	D
6766			14.4	124	7.4	6.5	
6768	14.6	309	14.3	124	7.3	6.3	B
6770	12.4	297	14.3	124	7.2	6.3	D
6772			14.3	127	7.4	6.5	
6774	11.7	306	14.4	126	7.3	6.5	B
6776	13.6	307	14.3	123	7.1	6.3	D
6778			14.1	123	7.0	6.2	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6780			14.2	124	7.0	6.3	
6782			14.2	124	7.1	6.3	
6784			14.3	121	7.1	6.5	
6786			14.4	119	7.4	6.8	
6788			14.3	119	7.7	7.1	
6790			14.2	119	7.6	7.2	
6792			14.1	118	7.5	7.1	
6794			14.2	117	7.5	6.9	
6796			14.3	119	7.6	6.8	
6798			14.3	119	7.7	6.9	
6800			14.3	119	8.0	7.1	
6802			14.3	119	8.1	7.2	
6804	20.4	244	14.3	118	8.0	7.2	D
6806			14.3	119	7.8	7.0	
6808			14.3	120	7.7	6.9	
6810	21.9	227	14.3	120	7.6	6.8	D
6812	17.0	222	14.4	119	7.5	6.7	D
6814	17.7	234	14.3	119	7.5	6.8	D
6816			14.3	118	7.6	7.1	
6818			14.4	120	7.6	7.6	
6820			14.4	121	7.7	7.9	
6822			14.3	122	7.8	8.1	
6824			14.4	121	7.9	8.2	
6826			14.4	121	7.8	8.2	
6828			14.3	122	7.8	8.0	
6830			14.3	123	7.8	7.7	
6832			14.3	124	7.9	7.5	
6834			14.3	123	7.9	7.6	
6836			14.2	123	7.9	7.5	
6838			14.2	123	7.7	7.4	
6840			14.2	123	7.7	7.4	
6842			14.1	122	7.8	7.4	
6844	83.8	331	14.0	122	7.7	7.2	D
6846			14.1	121	7.5	7.0	
6848			14.0	121	7.5	7.0	
6850			14.0	122	7.6	7.2	
6852	49.9	328	14.0	122	7.8	7.6	D
6854			14.1	123	8.0	7.9	
6856			14.1	124	8.2	8.2	
6858			14.0	124	8.3	8.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6860			14.0	124	8.1	8.7	
6862			14.0	123	7.9	8.9	
6864			14.0	123	7.9	9.1	
6866			14.0	123	7.9	9.0	
6868			14.1	123	7.8	8.6	
6870			14.0	124	7.8	8.2	
6872			14.0	124	7.8	8.1	
6874			14.1	123	7.8	8.1	
6876			14.0	122	7.9	8.0	
6878			13.9	122	7.9	8.1	
6880			14.0	122	8.0	8.3	
6882			13.9	122	8.1	8.3	
6884			13.9	124	8.1	8.3	
6886			14.0	126	8.1	8.3	
6888			13.9	124	8.2	8.3	
6890	32.2	157	13.8	125	8.2	8.3	D
6892	32.5	156	13.8	125	8.2	8.3	D
6894			13.7	125	8.2	8.2	
6896			13.7	125	8.3	8.3	
6898	3.5	50	13.7	124	8.4	8.5	D
6900	3.5	337	13.7	125	8.5	8.7	D
6902			13.7	127	8.5	8.8	
6904			13.8	126	8.4	8.6	
6906	8.7	343	13.7	126	8.4	8.4	D
6908	10.4	73	13.7	127	8.3	8.2	D
6910			13.7	128	8.3	8.1	
6912	3.2	48	13.6	127	8.3	8.2	D
6914	1.9	35	13.6	125	8.4	8.2	D
6916			13.6	126	8.4	8.2	
6918			13.6	127	8.3	8.0	
6920			13.5	130	7.9	7.5	
6922			13.4	130	7.7	7.3	
6924			13.5	130	7.8	7.4	
6926	36.0	298	13.6	131	8.0	7.6	B
6928	35.9	299	13.6	132	8.1	7.9	D
6930			13.5	130	8.2	8.2	
6932			13.5	129	8.2	8.6	
6934			13.5	130	8.2	8.7	
6936			13.4	131	8.1	8.8	
6938	54.6	278	13.5	128	8.0	8.7	B

****
* SCHLUMBERGER *
****

HIGH RESOLUTION

DIPMETER

****

CLUSTER LISTING
****

THERMAL POWER COMPANY

DIXIE FEDERAL

CHURCHILL , NEVADA

DIXIE FEDERAL 66-21

RUN NO. ONE JOB NO. 3542

CLUSTER RESULTS ONLY

4 FT. CORR. - 2 FT. STEP

30 DEG. X2 SEARCH ANGLE

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4596			9.9	150	10.1	12.1	
4598			10.0	149	10.0	12.2	
4600			10.1	149	10.3	12.5	
4602			10.1	150	10.3	12.5	
4604	70.2	313	10.0	148	9.9	12.4	D
4606			10.0	147	9.8	12.5	
4608			10.0	147	9.9	12.6	
4610			10.0	146	9.6	12.4	
4612			10.0	147	9.3	12.4	
4614			10.0	148	9.1	12.7	
4616			10.1	149	9.2	12.8	
4618			10.2	146	9.3	12.9	
4620			10.1	145	9.1	13.0	
4622			10.0	146	8.8	13.1	
4624			10.0	145	8.3	13.1	
4626			10.1	146	7.8	13.1	
4628			10.2	146	7.5	13.2	
4630			10.3	146	7.4	13.1	
4632			10.3	146	7.5	12.9	
4634			10.4	145	7.8	12.4	
4636			10.5	143	8.3	11.9	
4638			10.6	143	8.6	11.7	
4640			10.6	145	8.6	12.0	
4642			10.6	144	8.5	12.3	
4644			10.6	143	8.6	12.2	
4646			10.6	144	8.6	11.8	
4648			10.6	145	8.5	11.6	
4650			10.7	143	8.2	11.6	
4652			10.7	143	8.2	11.6	
4654			10.6	144	8.2	11.6	
4656			10.5	144	8.4	11.5	
4658			10.5	144	8.6	11.5	
4660			10.5	143	8.6	11.5	
4662			10.4	143	8.6	11.5	
4664			10.5	144	8.6	11.5	
4666			10.6	145	8.7	11.1	
4668			10.5	143	8.7	10.9	
4670			10.5	140	8.7	10.9	
4672			10.7	139	8.9	10.4	
4674			10.7	141	9.0	10.0	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6940			13.6	126	8.1	8.7	
6942			13.5	129	8.2	8.6	
6944			13.4	133	8.1	8.6	
6946			13.4	134	7.8	8.5	
6948			13.4	133	7.5	8.5	
6950			13.5	132	7.4	8.5	
6952			13.5	132	7.3	8.5	
6954			13.4	132	7.0	8.4	
6956			13.4	133	6.6	8.4	
6958			13.5	132	6.5	8.3	
6960			13.4	130	6.4	8.1	
6962	52.4	307	13.3	129	6.4	8.1	D
6964	50.2	305	13.4	129	6.3	8.1	D
6966			13.5	130	6.3	8.1	
6968	49.4	305	13.4	131	6.4	8.1	B
6970			13.5	132	6.4	8.2	
6972			13.5	133	6.4	8.2	
6974			13.6	133	6.3	8.3	
6976			13.6	133	6.3	8.4	
6978			13.5	134	6.3	8.4	
6980			13.6	133	6.3	8.4	
6982			13.5	134	6.3	8.4	
6984			13.5	136	6.3	8.4	
6986			13.6	138	6.3	8.4	
6988			13.7	138	6.3	8.4	
6990			13.6	136	6.2	8.4	
6992			13.6	137	6.0	8.1	
6994			13.6	135	5.9	7.8	
6996			13.5	134	5.8	7.6	

THERMAL POWER COMPANY DIXIE FEDERAL 66-21 SUMMARY

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	QUAL
TOP							
4596.0	42.3	57.	9.9	150.	10.1	12.1	
BOTTOM							
6994.0	40.5	298.	13.6	135.	5.9	7.8	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4676			10.5	141	9.1	9.7	
4678			10.6	142	9.0	9.4	
4680			10.7	144	9.1	9.3	
4682			10.8	142	9.2	9.3	
4684			10.9	146	9.4	9.5	
4686			10.8	145	9.6	9.6	
4688			10.7	140	9.6	9.6	
4690			10.8	139	9.7	9.8	
4692			10.9	141	9.7	9.8	
4694			11.0	144	9.7	9.6	
4696			10.9	143	9.6	9.4	
4698			10.9	142	9.6	9.3	
4700			10.9	143	9.8	9.4	
4702			10.9	145	9.9	9.5	
4704			10.9	145	9.8	9.6	
4706			11.0	144	9.9	9.6	
4708			10.9	146	10.0	9.6	
4710			10.9	146	10.1	9.6	
4712			11.0	143	10.3	9.7	
4714			10.9	141	10.4	9.9	
4716			10.9	142	10.0	9.8	
4718			11.0	143	9.7	9.7	
4720			10.9	144	9.7	9.7	
4722			11.0	143	9.7	9.7	
4724			11.0	142	9.7	9.6	
4726			10.9	138	9.8	9.6	
4728			10.9	135	9.6	9.7	
4730			10.9	140	9.5	10.0	
4732			10.9	145	9.9	11.8	
4734			10.8	146	10.5	13.7	
4736			10.8	148	10.9	14.1	
4738			10.8	149	11.0	14.2	
4740			10.8	149	10.7	14.4	
4742			10.8	147	11.2	14.3	
4744	31.6	155	10.7	147	10.4	13.2	D
4746			10.8	148	8.7	12.0	
4748			10.9	147	8.1	11.4	
4750			10.8	146	8.4	11.3	
4752			10.8	146	8.9	11.3	
4754			10.9	147	9.0	11.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4756			10.9	146	8.8	11.4	
4758			10.9	146	8.7	11.5	
4760			11.0	147	8.6	11.6	
4762			10.9	148	8.5	11.6	
4764			10.9	148	8.4	11.4	
4766			10.9	146	8.2	11.0	
4768			10.8	145	8.2	10.9	
4770			10.9	144	8.2	10.9	
4772			10.9	143	8.2	10.8	
4774	41.9	117	10.9	142	7.9	10.7	D
4776			10.9	142	7.7	10.7	
4778			11.0	141	7.5	10.4	
4780	35.8	118	11.0	143	7.6	9.8	D
4782			11.1	145	7.9	9.9	
4784			11.0	143	8.3	10.3	
4786			11.2	145	8.9	10.3	
4788			11.4	146	9.1	10.2	
4790			11.5	144	8.7	10.0	
4792			11.5	145	8.2	9.7	
4794			11.5	147	8.3	10.1	
4796			11.5	146	8.3	10.6	
4798	21.5	356	11.5	146	7.9	10.7	D
4800	15.7	354	11.5	145	7.9	10.9	D
4802	24.0	4	11.4	146	8.3	11.0	D
4804			11.5	145	8.6	10.9	
4806			11.5	143	8.7	10.9	
4808			11.5	142	8.5	10.9	
4810			11.4	144	8.5	10.9	
4812			11.4	144	8.6	11.0	
4814			11.4	144	8.6	11.2	
4816			11.4	143	8.6	11.4	
4818	27.9	356	11.4	144	8.6	11.4	D
4820	29.4	2	11.4	145	8.3	11.1	D
4822			11.4	143	8.1	10.7	
4824			11.3	142	8.1	10.6	
4826			11.3	143	8.2	10.6	
4828			11.3	146	8.2	10.7	
4830	32.0	359	11.3	146	8.1	10.8	D
4832			11.4	145	8.1	11.0	
4834			11.3	146	8.3	11.0	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4836			11.4	146	8.2	10.9	
4838			11.5	144	8.2	10.8	
4840			11.5	143	8.3	10.7	
4842			11.4	144	8.5	10.7	
4844			11.5	144	8.4	10.5	
4846			11.5	144	8.4	10.5	
4848			11.4	143	8.5	10.7	
4850			11.5	143	8.7	10.7	
4852			11.6	144	8.7	10.7	
4854			11.5	144	8.6	10.6	
4856			11.5	143	8.5	10.5	
4858			11.5	142	8.5	10.4	
4860			11.6	142	8.4	10.3	
4862			11.7	142	8.3	10.1	
4864			11.6	141	8.1	10.0	
4866			11.6	139	8.0	9.8	
4868			11.7	140	8.0	9.8	
4870			11.7	141	7.9	9.6	
4872			11.6	142	7.5	9.4	
4874			11.5	140	7.2	9.2	
4876			11.5	139	7.1	9.0	
4878			11.6	141	7.0	8.8	
4880			11.7	141	7.3	8.8	
4882			11.7	142	7.4	9.0	
4884			11.6	142	7.4	9.0	
4886			11.6	141	7.5	9.0	
4888			11.7	141	7.6	9.0	
4890			11.8	141	8.0	9.3	
4892			11.9	141	8.6	9.7	
4894	32.6	309	11.7	140	8.9	9.9	D
4896			11.7	140	9.1	9.8	
4898			11.8	140	9.4	9.9	
4900			12.0	141	9.4	9.9	
4902			11.9	143	9.0	9.7	
4904			11.8	143	8.7	9.2	
4906			11.9	142	8.7	9.0	
4908			11.9	143	8.7	9.2	
4910			11.8	144	9.1	9.5	
4912	35.3	301	11.7	145	9.9	10.7	D
4914			11.7	144	12.2	13.1	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4916			11.9	140	13.0	13.3	
4918			11.9	138	10.9	11.0	
4920			11.9	140	9.3	9.2	
4922			12.0	141	8.9	8.9	
4924			12.1	139	9.0	8.8	
4926			12.1	141	9.3	9.0	
4928			12.2	142	9.4	9.1	
4930			12.3	142	9.5	9.0	
4932			12.5	141	10.2	9.2	
4934			12.5	139	10.8	9.4	
4936	23.8	305	12.4	140	10.9	10.1	D
4938	32.6	305	12.4	139	12.8	12.5	B
4940			12.5	139	13.0	11.8	
4942			12.5	142	11.0	9.4	
4944			12.5	141	10.5	9.0	
4946			12.5	137	11.1	9.0	
4948			12.5	137	11.5	9.0	
4950			12.6	142	11.0	9.1	
4952			12.6	144	10.3	9.1	
4954			12.5	138	10.3	9.3	
4956			12.4	135	10.5	9.5	
4958			12.4	136	10.5	9.4	
4960			12.5	137	10.6	9.5	
4962			12.6	137	10.7	9.4	
4964			12.6	135	10.6	9.1	
4966			12.7	137	10.4	9.1	
4968			12.6	138	10.4	9.1	
4970			12.6	138	10.4	8.8	
4972			12.6	135	10.3	8.9	
4974			12.6	133	10.0	9.0	
4976			12.7	135	9.7	8.9	
4978	6.6	102	12.7	136	9.8	9.1	D
4980			12.7	135	9.8	9.2	
4982			12.6	136	9.7	9.2	
4984			12.7	137	9.7	9.1	
4986	10.0	96	12.8	138	9.7	9.0	D
4988			12.8	137	9.5	8.9	
4990	13.4	94	12.8	135	9.6	9.1	D
4992	17.8	67	12.8	135	9.8	9.2	D
4994			12.8	136	9.9	9.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
4996			12.8	135	10.0	9.3	
4998			12.9	134	9.8	9.3	
5000			12.8	136	9.7	9.3	
5002			12.7	139	10.0	9.2	
5004			12.7	139	10.3	9.1	
5006			12.7	138	10.5	9.3	
5008			12.7	137	10.9	9.6	
5010			12.7	137	11.3	10.2	
5012			12.8	136	11.5	10.4	
5014			12.8	133	11.4	10.0	
5016			12.8	135	11.0	9.6	
5018			12.8	138	10.8	9.4	
5020			12.6	137	10.7	9.4	
5022			12.6	137	10.7	9.4	
5024			12.6	138	10.7	9.4	
5026			12.6	138	10.9	9.7	
5028			12.7	138	11.5	10.7	
5030			12.7	136	11.8	11.7	
5032			12.7	135	11.6	11.4	
5034			12.7	135	11.3	10.4	
5036	13.5	330	12.8	137	11.3	10.2	D
5038			12.8	139	11.5	9.8	
5040	12.4	324	12.9	137	11.7	9.5	D
5042	12.4	286	12.9	137	11.6	9.2	D
5044			13.0	133	11.2	9.0	
5046			13.0	133	11.1	8.9	
5048			13.0	139	11.2	9.0	
5050	15.0	323	12.9	138	11.3	9.0	B
5052	18.4	331	12.8	139	11.3	9.0	D
5054			12.7	139	11.1	9.1	
5056			12.8	138	10.8	9.0	
5058			12.8	136	10.5	8.9	
5060			12.7	135	10.5	8.9	
5062			12.7	135	10.5	8.8	
5064			12.8	134	10.4	8.7	
5066	6.2	4	12.8	131	9.8	8.5	B
5068	4.6	12	12.8	132	9.0	8.2	B
5070			12.8	135	8.7	8.1	
5072			12.9	134	8.8	8.2	
5074			13.0	134	9.2	8.4	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5076			13.0	133	9.5	8.5	
5078	22.9	304	12.9	134	9.9	8.6	D
5080	29.9	307	12.9	136	10.2	8.8	B
5082			13.0	133	10.3	9.1	
5084			12.9	130	10.3	9.3	
5086			12.9	128	9.8	9.1	
5088			12.7	130	9.5	8.8	
5090	31.4	295	12.7	132	9.4	8.6	D
5092			12.9	132	9.5	8.7	
5094			12.9	132	9.7	8.7	
5096			13.0	133	9.7	8.6	
5098			13.1	134	9.8	8.5	
5100			13.1	132	9.8	8.6	
5102			13.1	130	9.7	8.7	
5104			13.0	131	9.8	8.8	
5106			13.1	133	9.9	8.9	
5108			13.1	132	9.8	8.7	
5110			13.1	129	9.6	8.6	
5112			13.1	128	9.4	8.5	
5114			13.0	128	9.3	8.5	
5116			12.9	129	9.1	8.5	
5118			12.9	129	9.0	8.5	
5120			13.0	127	9.0	8.4	
5122			13.0	128	9.1	8.3	
5124			13.0	130	9.1	8.2	
5126			12.9	127	9.0	8.1	
5128			13.0	126	9.1	8.1	
5130			13.0	128	9.3	8.3	
5132			13.1	129	9.4	8.4	
5134			13.0	130	9.3	8.4	
5136	46.1	140	13.0	131	9.0	8.3	B
5138			13.0	128	8.6	8.2	
5140	53.2	272	12.9	126	8.3	8.1	D
5142			12.7	128	7.9	7.9	
5144			12.6	128	7.6	7.9	
5146			12.6	126	7.6	8.1	
5148			12.7	123	7.6	8.2	
5150			12.7	123	7.6	8.3	
5152			12.7	124	7.6	8.4	
5154			12.7	127	7.7	8.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5156			12.8	127	7.9	8.6	
5158			12.9	123	8.1	8.6	
5160			12.8	123	8.2	8.7	
5162			12.8	123	8.2	8.8	
5164			12.9	123	8.2	8.9	
5166			12.9	124	8.2	8.9	
5168			12.9	124	8.1	8.8	
5170			12.9	124	8.1	8.8	
5172			13.0	125	8.0	8.6	
5174	43.6	186	12.9	123	7.7	8.3	D
5176			12.9	123	7.5	8.3	
5178			13.0	124	7.6	8.4	
5180			13.1	125	7.7	8.4	
5182	37.8	190	13.2	125	8.0	8.6	D
5184	40.4	191	13.1	125	8.3	8.8	D
5186			13.2	124	8.4	8.9	
5188			13.3	125	8.7	8.9	
5190			13.2	126	8.8	8.9	
5192			13.2	125	8.9	8.8	
5194			13.3	126	8.9	8.8	
5196	55.1	320	13.2	129	8.9	8.8	B
5198			13.3	129	8.9	8.7	
5200			13.3	129	8.9	8.7	
5202			13.3	130	8.9	8.6	
5204			13.3	127	8.8	8.5	
5206			13.3	127	8.8	8.6	
5208			13.3	128	8.9	8.7	
5210			13.3	126	9.0	8.8	
5212			13.4	127	9.1	8.7	
5214			13.4	128	9.1	8.7	
5216			13.4	128	9.1	8.5	
5218			13.4	127	9.0	8.4	
5220			13.4	126	9.1	8.4	
5222			13.3	125	9.2	8.5	
5224			13.3	126	9.1	8.6	
5226			13.3	129	9.1	8.6	
5228			13.3	128	9.1	8.4	
5230			13.3	126	9.1	8.3	
5232			13.3	128	9.2	8.4	
5234	45.4	119	13.3	128	9.2	8.4	D

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5236			13.3	128	9.2	8.3	
5238			13.3	127	9.0	8.2	
5240			13.3	126	8.8	8.0	
5242			13.3	128	8.8	8.0	
5244			13.3	128	9.0	8.0	
5246			13.3	126	9.1	8.1	
5248			13.3	125	9.0	8.1	
5250			13.3	126	8.5	7.9	
5252			13.3	128	8.4	7.8	
5254			13.4	127	8.6	7.8	
5256	21.6	296	13.4	126	8.6	7.9	D
5258			13.3	126	8.5	8.0	
5260	47.3	139	13.3	125	8.4	8.0	D
5262			13.3	125	8.3	7.8	
5264			13.3	126	8.4	7.6	
5266			13.2	127	8.4	7.6	
5268			13.2	127	8.2	7.5	
5270			13.3	128	7.6	7.4	
5272			13.3	130	7.4	7.3	
5274			13.2	129	7.6	7.4	
5276			13.2	126	7.7	7.5	
5278			13.1	125	7.6	7.5	
5280			13.3	126	7.4	7.5	
5282			13.3	126	7.3	7.3	
5284			13.3	125	7.2	7.1	
5286			13.3	127	7.4	7.0	
5288			13.3	129	7.6	7.2	
5290			13.4	130	7.7	7.2	
5292			13.4	130	7.7	7.3	
5294			13.5	130	7.6	7.2	
5296			13.5	131	7.4	7.1	
5298			13.5	132	7.2	6.9	
5300			13.5	131	7.3	6.9	
5302			13.4	130	7.7	7.0	
5304	33.2	214	13.3	132	8.5	7.3	D
5306	35.3	213	13.3	131	10.7	10.0	B
5308			13.4	130	12.0	12.5	
5310			13.4	132	11.7	12.7	
5312			13.4	134	11.2	12.3	
5314			13.3	136	10.9	11.2	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5316			13.3	132	12.4	11.4	
5318			13.3	129	12.1	11.0	
5320			13.4	128	9.1	9.1	
5322			13.5	126	9.0	8.6	
5324			13.6	127	9.6	8.7	
5326			13.8	129	9.3	9.5	
5328			14.0	132	9.0	10.2	
5330			13.9	135	8.7	10.1	
5332			13.8	134	8.7	10.2	
5334			13.8	135	8.6	10.1	
5336			13.8	137	8.5	9.8	
5338			13.8	137	8.6	9.8	
5340			13.9	136	8.7	9.8	
5342			14.0	135	8.6	9.8	
5344			13.9	133	8.7	9.5	
5346			13.8	133	8.7	9.4	
5348			13.8	134	8.6	9.0	
5350			13.7	136	8.4	8.7	
5352			13.6	134	8.3	8.6	
5354			13.7	132	8.2	8.4	
5356			13.8	135	8.0	8.2	
5358			13.8	137	7.9	8.2	
5360			13.7	138	7.9	8.2	
5362			13.7	136	7.8	8.1	
5364			13.7	134	7.7	8.1	
5366			13.7	133	7.7	8.2	
5368			13.7	134	7.6	8.2	
5370			13.6	135	7.6	8.3	
5372			13.5	135	7.6	8.3	
5374			13.7	132	7.5	8.4	
5376			13.8	132	7.5	8.4	
5378			13.7	134	7.7	8.2	
5380			13.6	135	7.6	7.9	
5382			13.7	134	7.4	7.7	
5384			13.6	135	7.3	7.6	
5386			13.5	135	7.3	7.5	
5388	51.4	118	13.6	133	7.3	7.4	D
5390	46.3	109	13.6	134	7.2	7.2	D
5392			13.6	136	7.2	7.2	
5394			13.6	137	7.2	7.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5396			13.6	138	7.3	7.4	
5398			13.7	137	7.4	7.4	
5400			13.6	136	7.4	7.3	
5402			13.5	134	7.3	7.2	
5404	57.2	235	13.4	134	7.3	7.2	D
5406			13.4	134	7.3	7.2	
5408			13.4	135	7.3	7.2	
5410			13.5	136	7.3	7.2	
5412			13.6	137	7.3	7.3	
5414			13.5	137	7.2	7.2	
5416			13.5	137	7.2	7.2	
5418			13.6	138	7.2	7.2	
5420			13.6	135	7.2	7.2	
5422			13.6	134	7.2	7.2	
5424			13.5	136	7.2	7.2	
5426			13.5	136	7.2	7.2	
5428			13.6	136	7.2	7.1	
5430			13.5	135	7.2	7.1	
5432			13.5	136	7.2	7.1	
5434			13.5	138	7.2	7.1	
5436			13.5	141	7.2	7.1	
5438			13.5	142	7.2	7.3	
5440			13.4	137	7.3	7.4	
5442			13.3	135	7.4	7.3	
5444			13.4	138	7.3	7.1	
5446			13.3	139	7.3	7.1	
5448			13.3	138	7.3	7.1	
5450			13.3	136	7.2	7.0	
5452			13.4	136	7.2	7.0	
5454			13.4	139	7.3	7.0	
5456			13.4	141	7.3	7.1	
5458			13.3	140	7.3	7.1	
5460			13.3	139	7.4	7.2	
5462			13.4	141	7.4	7.2	
5464			13.3	141	7.4	7.2	
5466			13.3	139	7.5	7.2	
5468			13.3	139	7.9	7.3	
5470			13.3	140	8.3	7.5	
5472			13.3	138	8.6	7.8	
5474			13.3	137	8.9	8.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5476			13.2	141	9.0	8.9	
5478			13.2	143	8.7	9.1	
5480			13.2	144	8.1	8.8	
5482			13.1	145	7.6	8.5	
5484			13.1	143	7.2	8.2	
5486			13.0	141	6.9	8.0	
5488			13.1	138	6.5	7.7	
5490			13.1	139	6.2	7.4	
5492			13.0	142	5.9	6.9	
5494			13.1	144	5.7	6.5	
5506			13.6	140	8.4	9.8	
5508			13.5	139	8.4	9.8	
5510			13.5	138	8.6	9.7	
5512			13.5	138	8.6	9.8	
5514			13.5	137	8.5	9.8	
5516			13.4	139	8.4	9.8	
5518			13.4	139	8.5	9.9	
5520			13.3	139	8.8	10.0	
5522			13.3	136	8.7	9.9	
5524			13.3	136	8.5	9.6	
5526			13.3	138	8.5	9.4	
5528			13.3	135	8.5	9.3	
5530			13.2	133	8.4	9.1	
5532	22.9	190	13.2	131	8.4	9.0	D
5534	23.6	189	13.3	133	8.3	9.0	D
5536			13.3	136	8.3	9.0	
5538			13.4	137	8.3	9.0	
5540			13.4	136	8.3	9.1	
5542			13.4	135	8.3	9.1	
5544			13.3	135	8.3	9.0	
5546	5.2	199	13.4	134	8.4	9.0	B
5548	5.6	166	13.4	134	8.4	9.1	D
5550	11.8	233	13.3	133	8.5	9.1	D
5552			13.3	135	8.4	9.2	
5554			13.4	136	8.5	9.1	
5556			13.4	135	8.5	9.1	
5558			13.4	135	8.5	9.1	
5560			13.4	135	8.6	9.3	
5562			13.4	134	8.5	9.4	
5564			13.3	134	8.4	9.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5566			13.3	135	8.5	9.2	
5568	68.9	5	13.4	137	8.6	9.3	B
5570			13.5	136	8.6	9.3	
5572			13.4	135	8.6	9.3	
5574			13.4	136	8.6	9.3	
5576	36.9	119	13.3	136	8.6	9.3	D
5578	40.1	122	13.4	138	8.6	9.3	B
5580	37.0	120	13.5	137	8.6	9.3	B
5582			13.4	136	8.6	9.4	
5584			13.4	134	8.6	9.4	
5586			13.4	135	8.5	9.2	
5588			13.4	136	8.5	9.2	
5590			13.4	134	8.4	9.2	
5592			13.4	134	8.3	9.1	
5594			13.3	133	8.1	8.7	
5596			13.3	134	7.9	8.3	
5598			13.4	136	7.8	8.1	
5600			13.3	139	7.7	7.9	
5602			13.3	140	7.7	7.8	
5604			13.4	140	7.9	7.7	
5606	32.9	70	13.4	138	7.9	7.6	D
5608			13.3	138	7.6	7.4	
5610			13.3	138	7.5	7.4	
5612			13.3	137	7.5	7.4	
5614			13.3	136	7.5	7.4	
5616			13.3	135	7.4	7.3	
5618			13.3	136	7.3	7.3	
5620			13.3	138	7.3	7.2	
5622			13.2	136	7.3	7.3	
5624			13.2	134	7.2	7.3	
5626	47.5	152	13.3	136	7.3	7.3	B
5628	46.7	151	13.3	137	7.4	7.4	B
5630	54.7	155	13.3	137	7.4	7.5	D
5632			13.2	139	7.6	7.5	
5634			13.2	138	7.8	7.4	
5636	42.9	153	13.2	134	7.7	7.4	D
5638			13.3	137	7.5	7.4	
5640			13.4	137	7.4	7.3	
5642			13.4	132	7.3	7.2	
5644			13.3	132	7.2	7.3	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5646			13.3	133	7.2	7.7	
5648			13.4	136	7.5	8.4	
5650			13.5	136	7.8	9.2	
5652			13.6	137	8.1	9.7	
5654			13.6	137	8.2	9.7	
5656			13.4	137	8.2	9.7	
5658			13.5	138	8.2	9.6	
5660			13.5	139	8.0	9.5	
5662			13.5	139	7.9	9.7	
5664			13.6	137	8.2	10.0	
5666			13.6	137	8.3	10.2	
5668			13.6	137	8.3	10.3	
5670			13.5	138	8.2	10.3	
5672			13.4	137	8.2	10.0	
5674			13.5	137	8.2	10.2	
5676			13.5	139	8.2	10.4	
5678			13.5	138	8.0	10.0	
5680			13.6	135	7.9	10.0	
5682			13.6	134	8.1	10.4	
5684			13.6	135	8.3	10.7	
5686			13.6	136	8.3	10.6	
5688			13.7	137	8.1	10.5	
5690			13.7	136	8.0	10.3	
5692	73.0	323	13.5	135	7.8	9.6	D
5694			13.6	133	7.7	9.4	
5696			13.6	134	7.8	9.6	
5698			13.5	137	7.8	9.6	
5700			13.5	137	7.6	9.2	
5702	71.1	323	13.5	138	7.7	9.4	B
5704			13.4	139	8.1	10.1	
5706			13.4	137	8.1	10.3	
5708	50.5	89	13.3	138	7.8	9.6	D
5710			13.3	140	7.9	9.0	
5712			13.3	138	8.0	8.6	
5714			13.3	138	7.8	8.6	
5716			13.3	138	7.6	8.5	
5718	49.7	78	13.4	141	7.7	8.7	B
5720	48.1	79	13.4	139	8.0	9.0	B
5722			13.4	134	8.2	9.3	
5724			13.5	134	8.1	9.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5726	21.2	89	13.6	136	8.0	9.7	D
5728	20.2	82	13.6	137	7.9	9.8	D
5730	18.2	117	13.6	137	8.1	10.0	D
5732			13.7	136	8.4	10.3	
5734	20.7	57	13.7	138	8.3	10.2	B
5736	21.1	61	13.7	140	8.2	10.2	B
5738			13.7	139	8.3	10.1	
5740			13.7	139	8.4	10.0	
5742	19.8	57	13.7	138	8.5	10.0	D
5744			13.6	138	8.2	9.8	
5746			13.4	139	7.9	9.6	
5748			13.3	141	8.2	9.6	
5750			13.4	142	8.7	9.9	
5752			13.5	139	8.8	10.3	
5754			13.5	137	8.9	10.5	
5756			13.5	140	8.7	10.5	
5758			13.4	139	8.3	10.2	
5760			13.4	136	8.1	9.7	
5762			13.4	135	8.2	9.2	
5764			13.4	135	8.4	9.2	
5766			13.4	137	8.5	9.7	
5768			13.5	139	8.4	10.1	
5770			13.5	139	8.4	10.2	
5772			13.5	137	8.8	10.0	
5774			13.5	136	8.7	9.7	
5776			13.6	136	8.4	9.7	
5778			13.7	136	8.6	10.1	
5780			13.6	138	8.3	10.1	
5782			13.6	138	7.9	9.5	
5784			13.7	136	7.8	9.2	
5786			13.7	136	8.0	9.6	
5788			13.6	135	8.3	9.8	
5790			13.7	129	8.2	9.6	
5792			13.7	131	8.1	9.3	
5794			13.5	136	7.9	9.3	
5796			13.5	136	7.4	9.4	
5798			13.6	136	7.3	9.7	
5800			13.5	134	7.9	9.9	
5802			13.5	132	8.6	10.0	
5804			13.4	134	8.5	9.8	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5806			13.4	133	8.3	9.6	
5808			13.5	133	8.2	9.3	
5810	37.8	15	13.5	133	8.2	9.3	D
5812	43.7	24	13.5	132	8.4	9.7	D
5814	42.0	14	13.6	132	8.6	10.0	D
5816	39.1	15	13.7	132	8.6	10.1	D
5818			13.7	133	8.5	10.0	
5820			13.6	131	8.4	9.9	
5822	47.9	153	13.7	131	8.4	10.0	B
5824	22.2	168	13.7	131	8.5	9.9	D
5826	24.7	165	13.7	130	8.5	9.6	D
5828	25.4	165	13.8	132	8.5	9.6	D
5830			13.8	134	8.5	9.5	
5832			13.7	133	8.5	9.4	
5834			13.7	133	8.4	9.5	
5836	18.3	210	13.7	135	8.4	9.7	D
5838	18.7	212	13.7	133	8.3	9.7	B
5840			13.5	131	8.3	9.5	
5842			13.5	134	8.1	9.2	
5844			13.5	135	8.0	9.1	
5846			13.5	133	8.0	9.2	
5848			13.5	133	8.1	9.4	
5850			13.5	133	8.2	9.4	
5852			13.4	133	8.2	9.3	
5854			13.4	134	8.2	9.2	
5856			13.4	134	8.1	9.0	
5858			13.5	133	7.9	8.7	
5860			13.5	132	7.8	8.5	
5862			13.4	133	7.9	8.5	
5864			13.5	133	7.8	8.3	
5866			13.6	132	7.6	8.1	
5868			13.6	130	7.6	8.3	
5870	5.6	216	13.8	131	7.9	8.7	D
5872	6.9	232	13.9	132	8.1	9.0	D
5874			13.8	131	8.0	8.9	
5876			13.7	130	8.2	8.9	
5878			13.7	132	8.2	8.8	
5880			13.7	134	8.2	8.8	
5882			13.7	133	8.1	8.8	
5884			13.7	133	8.1	8.8	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5886	12.0	177	13.7	133	8.1	8.8	D
5888	9.2	193	13.8	131	8.0	8.8	D
5890	5.4	189	13.8	132	8.0	8.7	D
5892	43.4	276	13.7	132	8.1	8.7	D
5894	43.3	276	13.6	132	8.0	8.7	D
5896	44.0	272	13.6	132	8.0	8.8	D
5898			13.7	132	7.9	8.8	
5900			13.6	132	7.9	8.9	
5902			13.6	130	8.2	9.1	
5904			13.6	130	8.4	9.4	
5906			13.6	132	8.3	9.4	
5908			13.6	131	8.3	9.3	
5910			13.6	130	8.2	9.1	
5912	17.2	3	13.5	129	8.2	8.8	B
5914	17.0	2	13.5	129	8.1	8.6	B
5916			13.6	129	8.0	8.6	
5918			13.7	128	8.0	8.7	
5920	38.7	157	13.8	130	7.9	8.6	B
5922			13.8	132	8.0	8.6	
5924	13.2	200	13.7	132	8.2	8.6	B
5926	13.1	205	13.7	131	8.3	8.8	B
5928	21.3	99	13.7	131	8.3	9.0	B
5930	55.7	172	13.7	133	8.3	9.0	B
5932			13.7	134	8.4	9.1	
5934			13.7	132	8.4	9.2	
5936			13.7	130	8.4	9.1	
5938			13.7	130	8.5	9.1	
5940	18.9	205	13.7	131	8.5	9.2	D
5942			13.7	132	8.4	9.2	
5944			13.7	132	8.3	9.2	
5946			13.7	132	8.3	9.3	
5948			13.7	129	8.3	9.2	
5950			13.7	131	8.3	9.1	
5952			13.7	132	8.2	8.8	
5954			13.7	131	8.1	8.7	
5956			13.7	131	8.0	8.6	
5958			13.7	131	7.9	8.6	
5960			13.7	132	7.9	8.6	
5962			13.7	132	7.9	8.5	
5964	19.4	116	13.7	129	7.9	8.5	D

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
5966	18.4	118	13.8	131	7.9	8.5	D
5968			13.9	132	8.0	8.5	
5970			13.9	131	8.0	8.5	
5972			13.8	132	8.0	8.5	
5974			13.8	133	8.1	8.5	
5976			13.8	131	8.1	8.5	
5978	16.8	219	13.7	130	8.1	8.5	B
5980			13.7	132	8.1	8.6	
5982	22.5	206	13.7	131	8.1	8.6	D
5984			13.7	131	8.2	8.6	
5986			13.6	131	8.1	8.7	
5988	76.3	353	13.6	131	8.2	8.8	D
5990			13.7	131	8.3	8.8	
5992			13.6	128	8.3	8.5	
5994			13.5	126	8.2	8.3	
5996			13.5	128	8.3	8.1	
5998			13.5	124	8.2	8.0	
6000			13.5	121	8.2	7.9	
6002			13.5	122	8.2	7.8	
6004			13.5	123	8.2	7.6	
6006			13.6	123	8.2	7.5	
6008	46.1	159	13.6	123	8.1	7.6	D
6010	52.7	156	13.7	123	8.0	7.5	D
6012			13.7	121	7.9	7.4	
6014			13.8	122	7.9	7.4	
6016			13.9	122	8.0	7.3	
6018			13.8	123	8.0	7.4	
6020			13.7	125	8.0	7.6	
6022			13.7	126	7.9	7.7	
6024			13.7	125	8.1	7.9	
6026			13.7	124	8.3	7.9	
6028			13.7	125	8.1	7.6	
6030			13.7	125	7.9	7.5	
6032			13.6	122	7.9	7.5	
6034			13.7	121	7.8	7.5	
6036			13.8	122	7.8	7.4	
6038			13.8	123	7.6	7.2	
6040			13.7	122	7.5	7.2	
6042			13.9	121	7.6	7.4	
6044			13.9	123	7.8	7.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6046			14.0	123	7.9	7.8	
6048			14.1	125	8.0	8.0	
6050			14.0	128	8.0	8.2	
6052			13.9	127	8.0	8.4	
6054	68.6	3	13.9	126	8.1	8.3	B
6056			14.0	129	8.0	8.2	
6058			13.9	130	8.0	8.2	
6060	18.6	135	13.9	127	8.2	8.4	D
6062	15.7	132	13.9	126	8.3	8.4	B
6064			14.0	125	8.2	8.4	
6066			14.0	124	8.2	8.4	
6068			14.0	127	8.2	8.5	
6070			14.0	126	8.3	8.5	
6072			13.9	124	8.3	8.3	
6074			13.9	124	8.2	8.2	
6076			13.9	123	8.3	8.3	
6078			14.0	123	8.3	8.4	
6080			14.0	124	8.3	8.5	
6082			14.1	124	8.2	8.4	
6084	50.0	224	14.1	125	8.3	8.4	D
6086	49.7	224	14.0	125	8.3	8.6	D
6088	50.4	219	14.0	123	8.4	8.8	D
6090	49.4	220	14.0	124	8.5	8.9	D
6092			14.1	132	8.6	9.0	
6094			14.1	132	8.5	8.9	
6096	51.7	221	14.1	127	8.3	8.6	D
6098			14.1	125	8.2	8.1	
6100			14.0	120	8.1	8.0	
6102			14.0	123	8.0	7.9	
6104			14.1	125	7.8	7.9	
6106			14.2	123	7.9	8.1	
6108			14.1	126	8.4	9.0	
6110			14.1	130	8.6	9.5	
6112			14.1	129	8.7	9.2	
6114			14.1	128	8.4	8.5	
6116			14.1	126	8.2	8.1	
6118			14.0	125	8.0	7.9	
6120			14.1	125	7.9	7.8	
6122			14.1	124	7.9	7.7	
6124			14.1	126	7.8	7.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6126			14.1	126	7.9	7.7	
6128			14.1	125	8.0	7.9	
6130			14.2	124	8.1	8.1	
6132			14.3	127	8.1	8.1	
6134			14.2	126	8.2	8.2	
6136			14.1	123	8.1	8.1	
6138			14.1	128	8.0	8.0	
6140			14.1	132	8.1	7.9	
6142			14.1	131	8.2	7.9	
6144			14.2	130	8.2	7.8	
6146			14.2	128	8.2	7.8	
6148			14.1	128	8.2	7.8	
6150			14.1	128	8.3	7.8	
6152			14.1	128	8.3	8.0	
6154			14.1	132	8.3	8.4	
6156	24.2	60	14.2	132	8.3	8.4	D
6158	25.0	57	14.1	129	8.3	8.2	D
6160			14.1	129	8.3	8.1	
6162			14.3	128	8.3	8.0	
6164			14.3	127	8.4	8.0	
6166			14.1	130	8.4	8.0	
6168			14.1	131	8.5	8.1	
6170			14.2	131	8.5	8.1	
6172			14.1	133	8.6	8.2	
6174			14.1	133	8.6	8.2	
6176			14.3	131	8.4	8.1	
6178			14.3	131	8.4	8.0	
6180			14.2	132	8.5	7.9	
6182			14.3	134	8.4	7.8	
6184			14.2	132	8.3	7.7	
6186			14.2	132	8.3	7.7	
6188			14.2	134	8.3	7.8	
6190			14.3	130	8.4	7.8	
6192			14.2	131	8.5	7.8	
6194			14.2	136	8.6	7.8	
6196			14.3	135	8.6	7.9	
6198			14.3	136	8.5	7.8	
6200			14.3	135	8.4	7.7	
6202	35.6	136	14.2	133	8.5	7.7	D
6204			14.2	134	8.4	7.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6206			14.3	132	8.4	7.5	
6208			14.4	132	8.4	7.5	
6210			14.3	136	8.4	7.5	
6212			14.3	139	8.4	7.6	
6214			14.3	136	8.4	7.6	
6216			14.3	133	8.3	7.5	
6218			14.3	136	8.4	7.4	
6220			14.3	138	8.5	7.5	
6222	60.3	287	14.4	134	8.6	7.4	B
6224			14.4	130	8.6	7.4	
6226	45.9	50	14.4	132	8.6	7.4	D
6228			14.4	133	8.6	7.5	
6230			14.4	132	8.6	7.5	
6232	46.0	79	14.5	134	8.6	7.5	D
6234	45.6	79	14.5	135	8.6	7.5	D
6236			14.5	135	8.5	7.5	
6238			14.6	136	8.5	7.4	
6240			14.7	137	8.4	7.4	
6242			14.6	136	8.4	7.5	
6244			14.7	136	8.5	7.6	
6246			14.7	138	8.5	7.6	
6248			14.7	136	8.4	7.5	
6250			14.7	134	8.3	7.5	
6252			14.7	134	8.4	7.5	
6254			14.8	133	8.4	7.6	
6256			14.8	135	8.3	7.7	
6258			14.8	136	8.2	7.7	
6260			14.9	137	8.2	7.6	
6262			14.9	135	8.1	7.3	
6264			14.8	133	8.0	7.2	
6266			14.8	135	7.9	7.3	
6268	39.0	296	14.8	137	7.9	7.4	D
6270			14.8	138	8.0	7.7	
6272			14.8	137	8.1	8.1	
6274			14.9	132	8.1	8.1	
6276	41.8	302	14.8	131	8.0	8.0	D
6278			14.8	132	7.8	7.6	
6280			14.8	129	7.6	7.2	
6282			14.7	129	7.6	7.2	
6284			14.7	130	7.7	7.2	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6286	49.1	83	14.8	128	7.8	7.2	D
6288	56.6	85	14.7	127	7.8	7.3	D
6290	48.1	81	14.7	130	7.8	7.2	D
6292			14.6	129	7.7	7.2	
6294			14.7	128	7.7	7.1	
6296			14.7	129	7.6	7.1	
6298			14.7	128	7.6	7.0	
6300			14.7	130	7.6	7.0	
6302			14.8	128	7.7	7.1	
6304	33.4	106	14.8	125	7.7	7.0	D
6306			14.7	125	7.6	6.9	
6308			14.8	125	7.5	6.7	
6310			14.8	124	7.5	6.7	
6312			14.6	125	7.4	6.6	
6314			14.6	127	7.3	6.6	
6316	32.8	109	14.6	126	7.4	6.6	D
6318	27.3	108	14.5	126	7.4	6.6	D
6320	22.1	104	14.5	125	7.5	6.7	D
6322	34.1	111	14.5	124	7.6	6.7	D
6324	14.0	96	14.5	125	7.5	6.6	D
6326	19.2	75	14.5	127	7.5	6.7	D
6328			14.6	128	7.6	6.8	
6330			14.6	127	7.6	6.8	
6332			14.6	127	7.6	6.9	
6334			14.6	127	7.7	7.1	
6336			14.6	126	7.7	7.1	
6338	17.2	61	14.6	128	7.7	7.0	D
6340			14.5	128	7.6	6.9	
6342	13.0	55	14.4	127	7.6	6.9	D
6344	10.0	54	14.5	126	7.6	6.9	D
6346			14.5	124	7.6	6.8	
6348			14.5	126	7.6	6.9	
6350			14.5	127	7.7	7.0	
6352			14.6	126	7.8	6.8	
6354			14.5	125	7.8	6.9	
6356			14.6	127	7.7	6.9	
6358			14.6	130	7.6	6.9	
6360			14.6	127	7.5	7.0	
6362			14.5	122	7.6	7.0	
6364			14.5	122	7.6	7.1	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6366			14.5	126	7.7	7.1	
6368			14.4	130	7.6	7.2	
6370			14.4	133	7.6	7.3	
6372			14.5	131	7.6	7.5	
6374			14.5	127	7.5	7.4	
6376			14.5	124	7.4	7.4	
6378			14.5	124	7.5	7.4	
6380			14.4	127	7.5	7.4	
6382			14.4	128	7.6	7.4	
6384			14.5	129	7.7	7.6	
6386			14.5	131	7.7	7.7	
6388			14.4	130	7.6	7.7	
6390			14.4	129	7.5	7.7	
6392			14.4	129	7.5	7.7	
6394			14.4	126	7.6	7.6	
6396			14.4	132	7.6	7.5	
6398			14.4	134	7.5	7.6	
6400			14.4	129	7.5	7.6	
6402			14.4	131	7.4	7.4	
6404			14.5	129	7.5	7.6	
6406	21.3	145	14.4	126	7.7	7.6	D
6408	22.2	139	14.3	128	7.6	7.3	D
6410			14.3	127	7.5	7.2	
6412			14.4	127	7.4	7.2	
6414			14.3	132	7.5	7.3	
6416			14.3	129	7.5	7.5	
6418			14.3	123	7.5	7.6	
6420			14.2	118	7.4	7.7	
6422			14.1	117	7.3	7.0	
6424			14.2	121	7.2	6.3	
6426			14.2	121	7.3	6.4	
6428			14.3	121	7.3	6.6	
6430			14.3	121	7.3	6.6	
6432			14.4	122	7.3	6.6	
6434			14.5	123	7.3	6.6	
6436	50.9	27	14.5	124	7.3	6.5	D
6438			14.5	127	7.3	6.5	
6440			14.6	128	7.3	6.6	
6442	55.2	35	14.6	131	7.3	6.6	D
6444			14.6	130	7.3	6.6	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6446			14.7	128	7.3	6.7	
6448			14.8	127	7.4	7.0	
6450			14.8	127	7.4	7.4	
6452			14.8	128	7.5	8.1	
6454			14.8	128	7.8	8.6	
6456			14.8	129	8.2	8.9	
6458			14.8	130	8.2	9.1	
6460			14.7	128	8.4	9.5	
6462			14.7	129	8.6	9.9	
6464			14.7	129	8.7	9.8	
6466	35.4	160	14.6	128	8.5	9.7	D
6468	35.9	164	14.7	128	8.2	9.2	D
6470			14.7	127	7.9	8.4	
6472	49.0	204	14.6	128	7.4	7.7	D
6474	51.9	201	14.6	128	7.2	7.4	D
6476			14.6	126	7.1	7.4	
6478			14.6	127	7.1	7.4	
6480			14.7	127	7.2	7.5	
6482	35.4	162	14.7	127	7.2	7.6	D
6484			14.8	127	7.2	7.7	
6486			14.8	127	7.1	7.8	
6502			14.8	127	8.1	7.6	
6504			14.8	128	8.2	7.6	
6506			14.8	130	8.3	7.6	
6508			14.8	131	8.3	7.6	
6510			14.8	131	8.3	7.7	
6512			14.8	132	8.2	7.7	
6514			14.8	130	8.1	7.6	
6516			14.8	129	8.5	7.6	
6518			14.9	132	8.8	7.8	
6520			14.9	133	8.8	7.7	
6522	45.3	222	14.8	131	9.0	7.4	D
6524			14.9	132	9.2	7.5	
6526			15.0	130	9.2	7.7	
6528			14.9	125	8.8	7.9	
6530			14.8	124	8.7	7.8	
6532			14.8	128	9.4	7.8	
6534			14.8	131	10.2	7.7	
6536			14.8	124	10.2	7.5	
6538	14.8	295	14.8	117	9.3	7.6	D

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6540			14.7	120	8.0	7.7	
6542			14.6	124	7.3	7.7	
6544			14.6	125	7.2	7.8	
6546			14.7	127	7.6	8.3	
6548			14.6	126	8.5	8.5	
6550			14.5	127	9.0	8.5	
6552			14.5	127	9.1	8.7	
6554			14.6	125	8.8	8.6	
6556	11.9	300	14.5	126	8.2	8.1	D
6558			14.5	127	8.0	7.7	
6560			14.5	128	8.2	7.8	
6562			14.5	128	8.1	7.8	
6564			14.5	126	7.9	8.4	
6566			14.6	126	8.4	9.5	
6568			14.6	126	8.5	9.7	
6570			14.5	127	8.2	9.4	
6572			14.5	128	8.0	8.9	
6574			14.3	129	7.8	8.1	
6576			14.2	128	7.7	7.4	
6578			14.1	128	8.1	7.5	
6580			14.0	131	8.3	7.7	
6582			13.9	131	8.5	7.6	
6584			13.9	130	8.5	7.5	
6586			13.9	131	8.4	7.7	
6588	40.9	300	13.8	132	8.5	8.0	D
6590			13.7	132	8.3	7.8	
6592			13.6	132	8.1	7.5	
6594			13.7	132	8.4	7.6	
6596			13.7	130	8.6	7.8	
6598			13.6	130	8.1	7.5	
6600			13.7	130	7.5	7.4	
6602	12.1	306	13.8	130	6.9	7.4	D
6604			13.9	130	6.9	7.2	
6606	14.1	310	14.1	132	7.0	7.1	B
6608	13.8	311	14.1	132	7.0	7.1	D
6610	15.5	299	14.2	129	6.9	7.1	D
6612			14.2	126	6.9	7.1	
6614			14.2	126	7.1	7.2	
6616	16.0	301	14.2	129	7.3	7.3	D
6618			14.2	131	7.4	7.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX REST =A
6620			14.3	130	7.2	7.4	
6622			14.3	129	7.0	7.3	
6624			14.3	128	6.9	7.2	
6626			14.2	128	6.9	7.2	
6628			14.3	128	7.0	7.2	
6630	26.3	75	14.3	128	6.9	7.2	D
6632			14.3	127	6.9	7.1	
6634			14.2	120	6.9	7.1	
6636			14.1	118	6.9	7.3	
6638			14.2	124	6.9	7.4	
6640			14.3	122	6.9	7.3	
6642			14.5	123	6.9	7.3	
6644			14.4	126	6.8	7.4	
6646	13.1	310	14.4	127	6.9	7.4	D
6648			14.5	125	6.9	7.4	
6650			14.6	122	6.9	7.5	
6652			14.6	120	6.9	7.6	
6654			14.6	120	7.0	7.5	
6656	16.1	307	14.7	120	7.0	7.4	D
6658			14.8	120	7.1	7.4	
6660			14.7	119	7.0	7.3	
6662			14.7	119	6.8	7.1	
6664			14.7	121	6.6	7.0	
6666			14.6	122	6.7	7.0	
6668			14.5	122	6.9	7.1	
6670			14.6	123	7.4	7.6	
6672			14.5	123	8.1	8.2	
6674			14.6	124	8.3	8.3	
6676			14.6	122	8.3	8.3	
6678			14.5	121	8.2	8.3	
6680			14.5	121	7.9	8.2	
6682			14.6	119	7.5	7.8	
6684			14.6	119	7.3	7.6	
6686			14.7	120	7.4	7.7	
6688			14.7	121	7.7	7.8	
6690			14.8	120	7.9	7.9	
6692			14.8	119	8.6	8.3	
6694			14.8	120	9.5	9.0	
6696			14.9	119	10.1	9.1	
6698	13.7	199	14.8	120	10.3	8.9	B

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6700	12.3	200	14.8	118	10.0	8.7	B
6702	15.1	93	14.8	116	9.5	8.6	D
6704			14.8	116	9.3	8.6	
6706			14.8	114	9.6	8.8	
6708	40.6	307	14.7	112	9.7	8.7	D
6710	41.7	311	14.6	111	9.8	8.3	D
6712	13.6	98	14.6	111	9.6	7.8	D
6714			14.5	114	9.1	7.2	
6716			14.4	120	8.4	6.7	
6718			14.4	124	8.1	6.6	
6720			14.5	126	7.9	6.7	
6722			14.5	124	7.7	6.8	
6724			14.5	123	7.9	6.9	
6726			14.6	123	8.1	6.9	
6728			14.5	122	8.3	7.0	
6730			14.5	121	8.2	7.1	
6732			14.6	123	8.0	7.0	
6734			14.5	125	7.9	6.9	
6736			14.6	125	7.7	6.8	
6738			14.6	123	7.7	6.8	
6740			14.6	123	7.6	6.9	
6742			14.6	125	7.8	7.0	
6744			14.6	124	7.9	7.1	
6746			14.6	123	8.0	7.0	
6748			14.6	123	7.8	6.9	
6750			14.5	125	7.7	6.8	
6752			14.4	126	7.9	6.8	
6754			14.5	125	7.9	6.7	
6756			14.6	123	7.6	6.6	
6758			14.4	124	7.5	6.5	
6760			14.4	125	7.4	6.5	
6762			14.4	125	7.4	6.5	
6764	21.7	303	14.3	125	7.5	6.5	D
6766			14.4	124	7.4	6.5	
6768	14.6	309	14.3	124	7.3	6.3	B
6770	12.4	297	14.3	124	7.2	6.3	D
6772			14.3	127	7.4	6.5	
6774	11.7	306	14.4	126	7.3	6.5	B
6776	13.6	307	14.3	123	7.1	6.3	D
6778			14.1	123	7.0	6.2	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6780			14.2	124	7.0	6.3	
6782			14.2	124	7.1	6.3	
6784			14.3	121	7.1	6.5	
6786			14.4	119	7.4	6.8	
6788			14.3	119	7.7	7.1	
6790			14.2	119	7.6	7.2	
6792			14.1	118	7.5	7.1	
6794			14.2	117	7.5	6.9	
6796			14.3	119	7.6	6.8	
6798			14.3	119	7.7	6.9	
6800			14.3	119	8.0	7.1	
6802			14.3	119	8.1	7.2	
6804	20.4	244	14.3	118	8.0	7.2	D
6806			14.3	119	7.8	7.0	
6808			14.3	120	7.7	6.9	
6810	21.9	227	14.3	120	7.6	6.8	D
6812	17.0	222	14.4	119	7.5	6.7	D
6814	17.7	234	14.3	119	7.5	6.8	D
6816			14.3	118	7.6	7.1	
6818			14.4	120	7.6	7.6	
6820			14.4	121	7.7	7.9	
6822			14.3	122	7.8	8.1	
6824			14.4	121	7.9	8.2	
6826			14.4	121	7.8	8.2	
6828			14.3	122	7.8	8.0	
6830			14.3	123	7.8	7.7	
6832			14.3	124	7.9	7.5	
6834			14.3	123	7.9	7.6	
6836			14.2	123	7.9	7.5	
6838			14.2	123	7.7	7.4	
6840			14.2	123	7.7	7.4	
6842			14.1	122	7.8	7.4	
6844	83.8	331	14.0	122	7.7	7.2	D
6846			14.1	121	7.5	7.0	
6848			14.0	121	7.5	7.0	
6850			14.0	122	7.6	7.2	
6852	49.9	328	14.0	122	7.8	7.6	D
6854			14.1	123	8.0	7.9	
6856			14.1	124	8.2	8.2	
6858			14.0	124	8.3	8.5	

DEPTH	FORMATION DIP	FORMATION DIP AZI.	BOREHOLE DEV.	BOREHOLE DEV. AZI.	BOREHOLE DIAM 1-3	BOREHOLE DIAM 2-4	QUAL. INDEX BEST =A
6860			14.0	124	8.1	8.7	
6862			14.0	123	7.9	8.9	
6864			14.0	123	7.9	9.1	
6866			14.0	123	7.9	9.0	
6868			14.1	123	7.8	8.6	
6870			14.0	124	7.8	8.2	
6872			14.0	124	7.8	8.1	
6874			14.1	123	7.8	8.1	
6876			14.0	122	7.9	8.0	
6878			13.9	122	7.9	8.1	
6880			14.0	122	8.0	8.3	
6882			13.9	122	8.1	8.3	
6884			13.9	124	8.1	8.3	
6886			14.0	126	8.1	8.3	
6888			13.9	124	8.2	8.3	
6890	32.2	157	13.8	125	8.2	8.3	D
6892	32.5	156	13.8	125	8.2	8.3	D
6894			13.7	125	8.2	8.2	
6896			13.7	125	8.3	8.3	
6898	3.5	50	13.7	124	8.4	8.5	D
6900	3.5	337	13.7	125	8.5	8.7	D
6902			13.7	127	8.5	8.8	
6904			13.8	126	8.4	8.6	
6906	8.7	343	13.7	126	8.4	8.4	D
6908	10.4	73	13.7	127	8.3	8.2	D
6910			13.7	128	8.3	8.1	
6912	3.2	48	13.6	127	8.3	8.2	D
6914	1.9	35	13.6	125	8.4	8.2	D
6916			13.6	126	8.4	8.2	
6918			13.6	127	8.3	8.0	
6920			13.5	130	7.9	7.5	
6922			13.4	130	7.7	7.3	
6924			13.5	130	7.8	7.4	
6926	36.0	298	13.6	131	8.0	7.6	B
6928	35.9	299	13.6	132	8.1	7.9	D
6930			13.5	130	8.2	8.2	
6932			13.5	129	8.2	8.6	
6934			13.5	130	8.2	8.7	
6936			13.4	131	8.1	8.8	
6938	54.6	278	13.5	128	8.0	8.7	B