GL 04348_2

EXLOG SMITH GEOTHERMAL DIVISION R.F. SMITH CORP.
GEOTHERMAL DATA LOG

COMPANY GEO OPERATOR CORP.
WELL PRATI #4, SIDETRACK #1
FIELD GEYSERS
COUNTY SONOMA STATE CALIFORNIA
LOCATION 1258'N,129'E of SW corner Sec 36,T12N,R9W
ELEVATION 2554' + 27' KB ☒ DF ☐ GL ☐
CONTRACTOR/RIG Loffland Brothers #50
SPUD DATE 10/20/85 TD DATE 12/21/85
TD 7985' TRUE VERT DEPTH 7877.05'
BOTTOM HOLE LOCATION 505.28'S,342.38E@7248'
WELL STATUS Capable of production
COMPANY REPRESENTATIVE M. Crumb, D. Johnson

LOG INTERVAL
DATE LOGGED 10/20/85 to 12/21/85
DEPTH LOGGED 68' to 7985'
MUD DRILLING 68'-4660'
AIR DRILLING 4600'-7985'
TEMPERATURE INSTRUMENT TYPE T-Thermocouple
PRESSURE INSTRUMENT TYPE Silicon Chip
GAS TRAP-AGITATOR ELEC ☐ AIR ☒
LOG SCALE 1:600 UNIT NO. 321
LOG PREPARED BY J. Fenton, M. Egbert, D. Drimmel, D. Welch

HOLE SIZE		CASING RECORD	
26"	to 281'	30"	at 68'
20"	to 2383'	22"	at 281'
14 3/4"	to 4650'	16"	at 2373'
10 5/8"	to 7985'	11 3/4"	at 4645'

ENTRIES-WATER/STEAM
4708' 18-28bbls/hr
7193' 2#
7226' 6#
7267' 150#
7418' 20#

✱ = TESTED ZONES

LOST CIRCULATION ZONES
1680'-1778'
4699'-4752'
4807'

MISC. REMARKS
Unable to run electric logs due to bridging in hole.

LITHOLOGY SYMBOLS
Breccia; Tuff and tuff-breccia; Conglom.; Graywacke; Sandstone; Siltstone; Claystone Argillite; Limestone Dolomite; Chert; Solution Deposit; Mineralized Zone; Granitic Rock; Intermed. Igneous; Basic Igneous; Peridotite; Acidic Volcanic; Intermed. Volcanic; Basic Volcanic; Porphyry; Serpentine; Schist Gneiss

SECONDARY MINERALS
Q = QUARTZ
C = CALCITE
P = PYRITE
E = EPIDOTE
x = Chlorite
s = Sulfides

NB NEW BIT
RRB RE-RUN BIT
CB CORE BIT
WOB WEIGHT ON BIT
RPM REVS PER MINUTE
SPM STROKES PER MINUTE
CFM CUBIC FT PER MINUTE
NR NO RETURNS
C CARBIDE TEST
LAT LOGGED AFTER TRIP
BHT BOTTOM HOLE TEMPERATURE
TC TIME SINCE CIRCULATION
CASING SHOE
CORED INTERVAL
NO RECOVERY
W MUD DENSITY ppg
V FUNNEL VISCOSITY
PV PLASTIC VISCOSITY
YP YIELD POINT
F FILTRATE API
FC FILTER CAKE
SOL SOLIDS-%
SD SAND CONTENT-%
S SALINITY-PPM Cl
CA CALCIUM-PPM Ca
RM MUD RESISTIVITY
WIRELINE LOG RUN
WATER/STEAM ENTRY
ORIFICE/FLOW TEST

DRILL RATE ft./hr ☒ min/ft ☐ m/hr ☐ min/m ☐
ROCK DENSITY (g/cc)
DEPTH
LITHOLOGY
SECONDARY MINERALIZATION
TEMPERATURE °C ☐ °F ☒ IN OUT
PRESSURE KSC ☐ PSI ☒ IN OUT
LOSS/GAIN M³ ☐ BBLS ☐
H₂S ppm
CO₂ ppm
METHANE ppm
ETHANE ppm
SURVEYS RESISTIVITY Ω-M
LITHOLOGY DESCRIPTION AND REMARKS

Note:Run 30" conductor to 68',RIH w/17½"bit and drill ahead.

Note:Center punch hole f/68-78' w/26" hole opener. Begin logging @68' on 10/20/85.

Graywacke:med dark-med light gray(N4-N6), very fine-fine grain, mod hd-hd,becoming greenish black(5GY2/1) @170',genly massive, loc calc vng,tr detrital epidote,tr chlor, tr qtz vng,tr-60% Argillite:very dk gray(N3), genly silty,loc sl phyllitic.

Note:Drill to 282'with 17½" bit,open hole to 26" to 281',run 22" casing with shoe @281', drill ahead on mud w/ 17½" bit f/282'.

Graywacke:loc abd detr brnz biotite f/190',tr unalt biotite.

W 67 V 64 PV 5 YP 25 pH 11.0 F 52.0 FC 2/32 S 200 Sol 4.6 Sd ⅛%.

Graywacke:med-med lt gray(N5-N6),slight grn tint(10G6/2) f/470', mod hd-hd,med-fine grained,becmng v fine grained w/depth,mod well sorted,loc detrital chlorite & epidote,tr diss pyrite,w/Argillite:dk gray(N3),genly silty,tr calc vng,tr-10%Greenstone:lt green (5G7/4),v silic,com chlorite books,w/Siltstone:med dk gray(N4), grading f/argill to graywacke.

Graywacke:genly a.a., cont'd well srtd,mod hd,v f-f gr,grs of fspr,qtz,arg w/lt green chrt,detrital epid,bio, & transl lt or min,loc calc vng.

Graywacke:med lt-med dk gray(N4-N6),loc grn tint f/660-680',mod hd, mod-well srtd,subang-subrnd clasts,vfg-mg, genly fg,detr gr of qtz,feld,chert,arg, chlor,biot & epid,tr diss pyr,tr vn epid, tr-com calc vn,Siltstone:brnish gray(5YR-4/1),mod hd,w/Argillite:gryish blk(N2)-brnish blk(5YR2/1), silty-phyll,Chert:grnish gry(5GY6/1),w/pyr.

W 70.0 V 56 PV 10 YP 18 pH 10.5 F 32.0 FC 2/32 S 300 Sol 7.6 Sd ¼%.

Graywacke:m dk-dk gry (N4-N3),gnsh gry (5G6/1) f/930',pred fg,loc mg-vfg,gr bndrs gd-fr, mass,pred wl srt,loc mod srt,grs of fspr, qtz & arg w/detr epid, chlor & loc gn cht clas,biot decr @930', args mtrx f/850'-920', loc com calc vng,grad to Siltstone:a.a., Argillite:blk-grysh blk(N1-N2),sft,mass, loc wxy lstr,loc com dissem pyr,@920' Chert: pred grysh gn(10G4/2), mod hd-v hd,loc w/pyr cub,com calc vng.

Graywacke:m-dk gry(N5-N3),loc lt gnsh gry (5G8/1)-gnsh gry(5G-6/1) cont f/980-1080', bcming dk gry(N3) & occ brnish gry(5YR4/1) f/1080',m-vfg,pred fg, loc cg @1150' w/graded bdg,mod hd-hd,wl srtd, pred qtz,cht & arg clast,com fspr & mafic mnrl clast,tr euhd pyr, com calc vng,r tr bio, Siltstone:dk gry(N3), occ brnish blk(5YR2/1), Greenstone:gryish gn (10G4/2)-dusky gn(5G-3/2),com vugs of chlor, loc alt fspr & pyr vng w/euh xls,Chert:a/a.

W 68 V 45 PV 6 YP 28 pH 11.0 F 60 FC 2/32 S 300 Sol 5.6 Sd ⅛%.

Graywacke:m dk gry(N4), m gry-m lt gry(N5-N6) @1290',loc brn cast @ 1310',cont fg,loc vfg, gr bndrs gd-fr,mass,wl srt,loc v wl srt,grs of fspr(loc alt),qtz & arg w/detr chlor,biot, lost epid @1250',loc args & calc mtrx,cont calc vng,Siltstone:grysh blk(N2),loc brnsh blk(5YR2/1),mod-pr srt, arg mtrx,tr biot,qtz & chlor grs,sft,loc x-bd,

Graywacke:genly a/a, m-lt gry(N5N7),mod-soft,occ brit,incr dns wh qtz f/1350-1380' & calc f/1300-1380',biot f/1390',tr pyrrho f/1400',Siltstone:a/a, w/tr-5% Chert:dns,wh-brn,Argillite:a/a.

Graywacke:m dk-m lt gry(N4-N6),loc tr gn cast(5GY6/1),loc brn gry(5YR4/1),mg-vfg,com fg,wl srtd,sub-rndd grs,tr biot,tr musc, loc chlor books,loc qtz vng up to 40% f/1540-1550',dns & wh, Siltstone:lt brn(5YR-6/4),loc m dk gry (N3).

W 69 V 42 PV 6 YP 20 pH 10.5 F 30 FC 2/32 S 200 Sol 6.6 Sd tr.

Siltstone:olive blk-dk gry(5Y2/1-N3),sft,vfg, com detr sericite,loc com calc vng & frac fil,arg mtrx.

Note:Losing approximately 20 bbls of mud per hour f/1680'. Pump LCM pill @1778' and regain circulation.

Graywacke:md gry(N5), loc tr brn cast,fg,loc vfg,gr bndrs gd,mass, mtrx gen calc,loc slily sil,sft w/calc mtrx,mod hd when more sil,loc brit,grs of fspr,qtz & arg w/detr musc,chlor,gn & or cht,com calc vng,tr vn pyrr,loc euhd pyrr & calc,decr bio w/depth, abs epid.

Graywacke:m dk-m gry (N4-N5),loc dk yel brn(10YR4/2),loc tr gnish cast,m-fg-vfg, gen fg,gd-fr gr bndrs, calc mtrx,detr grs of qtz,cht,arg,sltst,fspr, tr chlor,up to 2%biot @1880',5-8% pyrr @1850', Siltstone:a/a,x-lam.

Graywacke:gen dk-md dk gry(N3-N4),loc md gry (N5),loc brnsh gry(5YR 4/1),loc gnsh blk(5G2/1),con a.a.,fg,loc vfg, wl-vwl srt,gd gr bndr, mass,mtrx loc v calc @2010',gen mod hd,loc sft,brit,grs of fspr, qtz,arg & calc w/detr biot,musc,cht(lt gn), loc v calc,com calc vng thru-out,loc tr pyrr,tr qtz vng.

W 68.5 V 50 PV 7 YP 22 pH 11.0 F 46 FC 2/32 S 200 Sol 6.0 Sd tr.

Graywacke:m dk-m lt gry(N4-N6),loc @2170' mod brn(5YR4/4),tr gn tint,fg-vfg,wl srt,pr-ly srt @2170 w/cg ang clast in arg mtrx-poss deb flow,incr diss pyr @2080' & @2130',tr-com pyrr,tr biot & musc, incr dns wn qtz vn f/ 2080-2100',Siltstone: brn gry(5YR4/1),loc grysh blk(N2),sft,loc calc vng&frac fil,clay mtrx,loc v prly srt,tr gry cht clasts,loc com detr sericite,Argillite:grysh blk(N2),v sft & friable.

Note:Drill rate decr f/2220',arg & sltst sluff contaminating samples f/2260',POH, bit v worn,mag DC's.

Note:Drill 17½" hole to 2383'. Run electric logs. Open hole to 20½" to 2383', and run 16" casing with shoe @2373'. Drill ahead with 14 3/4" bit.

W 69 V 80 PV 7 YP 38 pH 12.5 F 48 FC 2/32 S 200 Sol 6.6 Sd 1%.

Graywacke:m dk-m gry (N4-N5),occ mod brn (5YR4/4),v hd-hd,mg-vfg,com fg,wl srtd, slily silic,com calc vng,loc qtz vng,tr bio, tr sericite,tr diss pyr,tr blk min @2480' possly tourmaline.

Graywacke:dk-m dk gry (N3-N4),hd,V wl srt, vfg-fg,mass,loc detr epid,chlor,biot,loc calc mtrx,loc dissem pyr & chalpyr,Siltstone:blk-grysh blk(N1-N2),sft,mass,loc com detr ser,loc dissem pyr,loc tr calc vn, Argillite:blk-grysh blk(N1-N2),sft,mass, loc wxy lstr,loc dissem pyr,loc calc vn.

Graywacke:cont a/a,m-m dk gry(N4-N5),loc dk brn(5YR4/4),fg-vfg,wl srtd,mass,gd gr bndries,loc detr epid,loc vn pyr w/blk glasy min @2700',cont calc vng, Siltstone:a/a,Argillite:cont a/a.

Graywacke:m gry(N5) bcm dk-m dk gry(N3-N4) w/args mtrx f/2790-2800,mg-vfg,pred fg,gr bndrs gd-fr,mass,loc calc cmt or mtrx,mod hd-hd,sft @ 2800',detr qtz,fspr,biot,epid & musc,tr dissem pyr,loc calc & qtz vn,loc Siltstone:a.a.,loc Argillite:a.a.

W 68 V 45 PV 8 YP 16 pH 11.0 F 18 FC 2/32 S 200 Sol 5.6 Sd tr.

Graywacke:m gry(N5), loc dk-m dk gry(N3-N4), occ mod brn(5YR3/4) w/args mtrx,fg-vfg,wl srtd,v hd-hd,occ grad lam,gd gr bndrs,genly silic mtrx,incr pyr vning @2920',tr-com biot & musc,epid & chlor genly abs.

Graywacke:gen a.a.,gr bndrs fr,loc gd,mass, mod-v wl srt,loc calc-arg mtrx,bcm slily silic w/depth,hd-v hd, loc brit,loc detr epid & gry cht,cont'd tr detr biot & musc,loc com calc vn,tr poss pyrrh.

W 68 V 47 PV 6 YP 14 pH 11.5 F 18 FC 2/- S 150 Sol. 5 Sd 0

Graywacke:dk-m dk gry (N3-N4),loc mod brn(5YR3/4),pred fg,loc v fg,gr bndrs gd-fr,v wl srt,mass,loc wk fol, slily silic mtrx,loc calc & arg mtrx,hd-v hd,loc brit,grs of qtz, fspar,arg,w/loc tr of biot,musc,chlor,pyr, pyrrh & epid,loc calc vn,loc tr qtz vn,grad to Siltstone:grysh blk (N2),loc brnsh blk(5YR2/1),vfg,sft,mod-wl srt,com detr ser,loc dissem pyr,tr biot.

Graywacke:genly a/a, m lt-m dk gry(N6-N4), loc dk brn when args, v hd-hd,mass,genly silic mtrx,up to 80% arg mtrx @3400',tr biot, loc tr sericite,tr-20% calc frac fill f/3480-3490',euh pyrrh xtls up to ¼mm f/3480-3490',tr-80% Siltstone: genly a/a,mass,mod hd, com ser,pyrrh @3430'.

W 67.5 V 58 PV 7 YP 18 pH 11.0 F 18 FC 2/- S 200 Sol. 5.1 Sd tr.

Graywacke:a.a.,gd-fr gr bndrs,loc indst, slily-mod silic mtrx, v wl srt,loc tr qtz vn, detr epid ap @3530',tr clr or min,tr blk blky mnrl @3620'.

Graywacke:m-dk gry(N3-N5),bcming dkr w/incr args,loc dusky brn(5Y-R2/2),mg-vfg,gen fg, gd gr bndrs,mod-wl srt, com mass,tr-1% gd euhd psnex pyrrh xls @3670', tr biot,tr pyr,thn laminations vis in Siltstone: gen a.a.,com ser,mod hd,w/Argillite:gryish blk(N2),loc dusky brn (5YR2/2) & mod hd.

Graywacke:m-dk gry(N3-N5),tr loc dusky brn (5Y-R2/2),mg-vfg,fr-gd gr bndrs,loc wk fol, mod hd-hd,decr micas & pyr,r epid,loc tr calc vn.

Graywacke:m-dk gry(N5-N3),bcming gryish brn (5YR3/2) w/incr args, loc v pale gn(10G8/2) w/chloric mtrx @3940-3950',vfg-cg,gen fg, cg subang-ang in arg mtrx @3920',silic.

W 68 V 55 PV 8 YP 20 pH 10.5 F 16 FC 2/- S 200 Sol 5.6 Sd tr.

Graywacke:m-dk gry(N3-N5),bcming gryish brn (5YR3/2) w/incr args mtrx,loc v pale gn (10G8/2) w/ chloric mtrx, pred hd,fg w/ crs-vfg, loc p srt,loc subang-ang g @4070',gen silic mtrx w/ tr chloric,incr arg mtrx @ 4060',tr pyr, tr epid,tr musc,loc calc vn.

Graywacke:a.a.,m-dk gry (N3-N5),loc gn tint w/ chloric mtrx,loc brn tint w/args mtrx,gen silic mtrx,cg-vfg,gen fg,subrndd-subang grs, gd gr bndrs,bcming arg w/depth,tr biot,tr musc books,tr chlor books, tr-1% pyrrh w/gd euh xls @4120'.

W 67 V 45 PV 9 YP 22 pH 11 F 18.4 FC 2/- S 200 Sol 4.6 Sd tr.

Note:POH @4255',lay down 4½" DP,change bit,strap in hole w/ 5" DP,POH again,RIH w/Dyna-Drill & begin directional work w/ Teleco Seeing eye tool.

Note:Bottoms up temp after trip @4369' for sample 4370' was 200°F.

Graywacke:dk-m gry(N3-N5),loc v pale gn(10G-8/2),vfg-mg,gen fg,gd-fr gr bndrs,gen gd gr bndrs,silic mtrx,loc chloric mtrx,loc gd euh xls of pyrrh & calc @4350',tr-com biot & musc books,tr loc pyr.

Note:Losing mud @10bbls/hr f/4464'.Begin losing 60-100bbls/hr, pump gel pill @4487', regain circulation & POOH @4498'.RIH & drill to 4505',POOH, Teleco tool not working.RIH & drill ahead w/new Teleco tool.

Note:Change in secondary mineral column, S= Sulfides. Dyna drilling without Teleco tool.

Graywacke:a.a.,m-dk gry (N3-N5),pred hd,vfg-fg, gen gd gr bndrs,gen mod srt,sub rndd,silic mtrx w/incr args mtrx,loc chloric mtrx @4500',bcm args w/depth,tr biot,tr gn cht,loc calc vn.

Note:Lose circ @4725' & drl w/NR to 4730', POH & get gas kick, CO2=66,000ppm,CH4=4250 ppm,H2S=120+ppm w/hand held sensor,set 5 cmnt plugs,lose compl circ @4750',drl to 4753', run E-logs.

Note:11/25-12/1, Set sand plugs @4697' & two cement plugs @4359'. C/o cement to 4650' & run 11 3/4" casing w/shoe @4645'. C/o cement & sand on air, w/10 5/8" bit, to 4753'. Hole making water @18-28 bbls/hr, possible water entry @approx. 4708'. Set cement plug & squeeze w/EZSV. 12/2-5, c/o cement to 4753' & drill ahead to 4834'. Hole making 2 bbls/hr, set cement plug & squeeze w/EZSV. C/o cement w/bit #12, up to 30% formation @4700'. Begin losing mud @4708'. Cement & squeeze @4704'. C/o cement using Dyna Drill & Teleco Tool for directional control. See sidetrack #1.

Note:Sidetrack #1,c/o cement & drill ahead w/Dyna Drill, using Teleco Tool for directional control. Drill to 4745' while losing mud. Set & squeeze cement plug @4745'. C/o cement w/ bit#13,using Dyna Drill & Teleco Tool. Losing mud @4738', POOH. Set & Squeeze cement plug @4738'. C/o cement w/Dyna Drill & Teleco Tool t/4745' & lose complete circulation, drill t/ 4752' w/no returns. Set & squeeze cement plug @4752'. C/o cement using Dyna Drill & Teleco Tool t/4752', lose complete circ. while circulating on bottom. POOH lay down Dyna Drill & Teleco Tool. RIH & ream Dyna Drill run f/4645'-4752', rotary drill ahead f/4752', adding sump water to maintain volume. Rotary drilling t/4807', losing mud during survey. Set cement plug @4807' C/o cement & drill t/ 4857'.

Note:Drill ahead on air f/4857'. Hole packing off, 8-18' of fill on connections. Slug hole causing gas & pressure fluctuations.

Graywacke:grish blk-med gry(N2-N5),loc lt grn(5G7/4) w/chl mtrx, vfg-cg,pred fg,gd-fr fr bndries,loc sl rexln,gen sil mtrx,incr arg mtrx f/5080',pred hd,loc mod hd where mtrx arg,tr dissem pyr, loc pyr vng,loc tr pyrrh,loc tr biot,loc tr musc,loc flt gouge w/ arg clast f/5100',tr-20% Siltstone:sl phyll w/dissem pyr,grad w/ Argillite:occ med-cg clast f/5080-5100'.

Note:Decrease WOB f/ 30,000# to 13,000# causing a decrease in ROP @ 5110'.

Note:After connection @5210' CO2=12,820ppm & temp out=182°F w/no water on blooie line.

Note:Trip @5247',CO2= 41,240ppm,temp out= 204°F,RIH w/lock up DA,increase WOB to 35,000#.

Graywacke:genly a/a, med dk-gry(N4) to grnsh blk(5G2/1),vfg-fg,hd, com sub angular arg clasts less than 2mm, tr dis pyr,tr chl.

Graywacke:grnish-blk (5G2/1),w/chl mtrx,becm dk-gry(N3)w/depth,vfg-fg,mod srtd,hd,fair to ind gr bndrs,loc sl rexln,arg clasts less than 2mm decrng w/depth tr pyr,trepid,tr chl, tr-20% Siltstone:gryish blk(N2),mod hd,sl phyll w/dissem pyr,Argillite: gryish-blk(N2),soft, sl laminated,com calc microvng.

Note:Venturi effect periodically causing sample gases & temperature out values to drop well below previous values.When this happens previous data are carried to subsequent intervals.

Graywacke:genly a/a, loc chloric mtrx f/ 5470'-5510',loc rexln ,cont arg clast a/a, Siltstone:brnish-blk (5YR2/1),mod hd,com pyr microvng.

Greenstone:gryish grn (5GY6/1) to dk gryish grn(5G4/1),silic,v hd, loc relic volc tex,loc alt euh clast,com chlor vning,w/Chert:v lt gry(N8) to lt brn(5YR-6/4),v hd.

Graywacke:genly a/a, med dk gry-gryish blk (N4-N2),incr arg mtrx w/depth,mod hd-hd,gd-fr gr bndrs,sl rexln, loc silic,w/Argillite: brnish blk-gryish blk (5YR2/1-N2),v sooty appr,loc silty.

Note:Trip @5881',magnaglow DC's & profile stands.

Siltstone:dk-m dk gry (N3-N4),dissem pyrrh & pyr,tr fn lam w/Graywacke:dk gry(N3),arg mtrx,vfg,w/Argillite: gryish blk(N2),sooty, blocky.

Graywacke:(30-75%),m dk gry-gnish gry(N4-5GY6/1),vfg,fr-indst gr bndrs,wk-mod fol, loc gd fol,genly arg mtrx,chlor mtrx f/6160-70',hd,loc ab frac fill,tr bio,tr pyrrh,

Argillite:gryish blk (N2),genly blky,mass, loc platy,Siltstone: a.a.,tr-10% Serpentine mod yel grn(10GY6/4), sft-mod hd,waxy appr, Chert:tr-5% f/6140', wht-lt brn(N9-5YR6/1), tr Blueschist:f/6140'-6150'.

Melange:extending from approximately 5730' to approximately 6290'.

Graywacke:a.a.,pred fg,loc args mtrx but pred mod sil,tr pk min @6450',loc tr epid vn,blchd ap @6400',loc tr pyrroh.

Graywacke:a.a.,bcm silic mtrx,loc arg mtrx, tr chloric mtrx,loc flt gouge micbrec,loc gd fol.

Graywacke:a.a.,incr fol,incr silic f/6560', tr axinite f/6540'-6590'(clr,yel & lt pk).

Note:Tight hole @5250' while running in, ream f/5244' to 5599' & f/6504' to 6607'. Encounter other tight spots & occasionally slug hole while reaming.

Graywacke:a.a.,w/lt bluish gry(5B7/1)cast f/6640'-6680',loc tr epid vn,pyrrh & axinite,cont'd tr biotite,tr Serpentine: a.a.

Argillite:gryish blk-blk(N2-N1)f/6780',pred plty,occ blky,loc lam, frm-mod hd,abd sil frac fill,tr epid, pyrrh, & axinite agg in vn qtz,loc mylonitic f/6890',grad to Siltstone:m dk gry - gryish blk(N3-N2),dull, mod hd-hd,pred blky, mass,loc lam,abd frac fill w/vn qtz,tr pyrrh, epid & axinite.

Graywacke:m dk gry-dk gry(N4-N3),genly silic mtrx,loc chloritic mtrx (5G4/1)@6890',becmg arg w/depth,pred fg,fr-ind gr bndrs,hd,com mlky qtz frac fill,tr epid, tr pyr.

Graywacke:a.a,pred sil mtrx,gr bndrs pr-indst,loc fr,loc wk fol,loc rexln ap,loc qtz & epid & axinite vn,tr actinolite,tr pyrrhotite.

Argillite:a.a,gryish-blk(N2-N1),frm-mod hd, loc laminated,sl phyll scheen w/Siltstone:a.a, dk gry(N3),mod hd,dull, earthy,com silic vng.

Note:Steam entries, 2# @7193', 8°F temp increase;6# @7226', 2°F temp increase; 150# @7267', 41°F temp increase; Total gas increases from before first entry to after third entry were, CO2 28,890 ppm, CH4 1,577 ppm, H2S 460 ppm, H2S value taken from the abaters.

Note:Adjusting and fixing mist pump f/ 7310'-7350' causing fluxuation in pressure

Note:Flow test with 6½" orifice for 4 hrs, stable @212,500#/hr & 380°F.

Note:Steam entry @7418', 20# increase & 4°F temp increase, slight increase in gas levels.

Graywacke:m lt gry-dk gry(N6-N3),hd,vfg-fg, pred vfg,ind gr bndrs, loc fr,tr prehnite,tr epid,tr axinite,tr pyrrh,loc slough contam, ctgs bcmng vfg w/depth.

Note:H2S values on trips are taken from abaters.

Graywacke:genly a.a., m lt-dk gry(N6-N3),occ lt brn(5YR6/4),gr bndrs indst-rex,silic mtrx,tr biot,tr pyrrh, tr axinite,tr actin, poss tr blk tour,w/ Argillite:a.a.,v silic, com phyll sheen,tr dissem pyrrh.

Note:Fill, 5'-25' at connections, slug hole to remove cuttings.

Greenstone:grayish green(10GY5/2),hd, blchd appr,7940'-7970'.

Note:TD well @ 7985', RIH several times to C/O bridges @ 6111'-6157',6111'-6135',6169, 6076'-6082',RIH to bottom,no fill,POH,attempt to run E-logs,bridge @ 6108',cancel logging, RIH,C/O bridge f/6126'-6135',flow test w/6½" orifice for 8hrs,stable flow rate @ 205,300#/hr put air blanket on well & shut well in.

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