

COMPANY PACIFIC OIL & GAS
 RIG ROCKORIL RIG 20
 WELL HACKING 1
 FIELD WILD CAT
 COUNTRY NORTHERN TERRITORY, AUSTRALIA
 CO-ORDINATES 22° 49' 33" S 137° 0' 0" E

DEPTH LOGGED FROM 82.5m
 TO 1233.95m
 DATE LOGGED FROM 15/8/88
 TO 15/9/88
 ELEVATION G.L. 26.4m (PRELIM)
 R.T. 26.6m

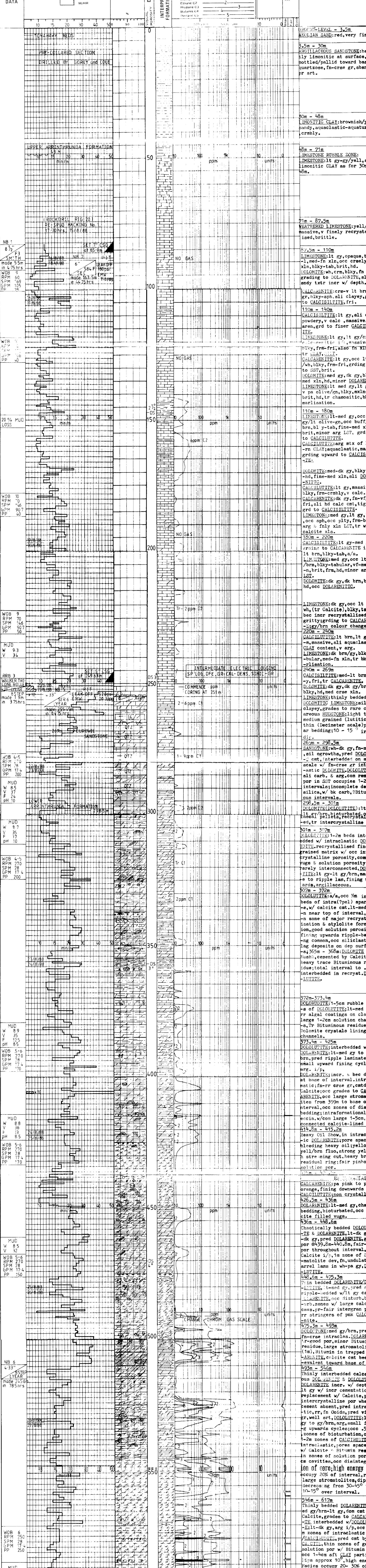
GEARHART PTY. LTD.
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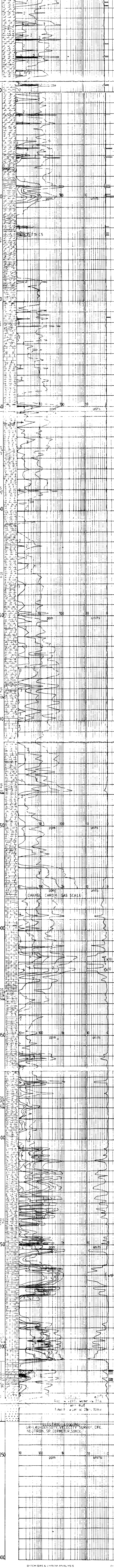
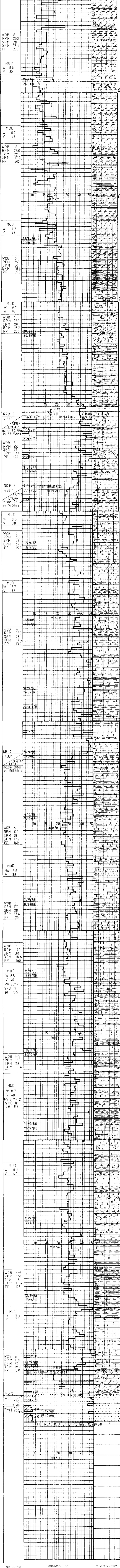
	SANDSTONE		LIMESTONE		LALCARENITE		CALCSILTITE
	SILTSTONE		DOLOMITE		DOLARENITE		DOLOSILTITE
	CLAYSTONE		DOLOMITIC		CALCLITIC		DOLOLITE
	BRECCIATED		FLAT PEBBLE CONGLOMERATE		GRANITE		CALCLUTITE

LOGGING ENGINEERS
S WILLIAMSON
 CHROMATOGRAPHY SHIMADZU F10
 TOTAL GAS RECORDER GENERAL MONITORS 2170
 H₂S RECORDER
 A LGAL STS STROMATOLITE Hy HYALITHID
 INSTRUMENTS CHECKED DAILY
 24 HRS LOGGING SERVICE
 OOI:DS/PELOI:DAL
 GRAINSTONE
 SCALE 1:500
 CASING AND HOLE DATA

ABBREVIATIONS		MUD TYPE		POROSITY		MUD DATA	
NB	New bit	SPM	Strokes per minute	POH	Pull out of hole	W	Weight (lb/gal)
NCB	New core bit	CR	Circulated returns	RIM	Run in hole	W	Mud gradient (lb/1000 ft)
CS	Casing shoe	PR	Pump returns	WOW	Wait on weather	VI	Fluid viscosity (sec/st)
SWC	Sidewall cores	NR	No returns	LAT	Logged after	PPV	Plastic viscosity (cP)
EL	Electric log	TG	Trip gas	LCM	Lost circulation material	YV	Yield point (lb/100 ft)
RRB	Return bit	CG	Connection gas	D	Depth	GEL	Gel strength (lb/100 ft)
WOB	Weight on bit	DSE	Directional survey	DST	Drill stem test	PI	PItrate
RPM	Revolutions per minute	WT	Wiper trip			PP	PP

MUD DATA	MATRIX POROSITY	GRAINSTONE POROSITY	BIT SIZE	WELL DEPTH	CASING SIZE	CASING SHOE
W 8.5	slightly porous < 10%	isolated vugs 20%	8 1/2"	87.5m	7"	85.9m
V 35	porous 10-30%	isolated vugs 10%	6"	251m	5"	249.63m
F 125	Mixed porosity > 10%	visibly interconnected vugs > 10%	4 3/8"	1233.95m	T.D.	





10-15' over interval.

Thinly bedded **DOLARENITE**; med gy/brn-lt gy, dom cnt by Calcite, grades to **CALCARENITE** - **TE** interbedded w/ **DOLOLUTITE** - **LT**-dk gy, arg 1/p, occ 1-2 m zones of intraclastic **DOL** / **CALCARENITE**, pred cnt by **CALCARENITE**, thin zones of good solution por w/ Bituminous, occ 1-4cm sft. **CLAY** partings. **CLAY** approx 10', high energy. **Facies** occupy 20-30% of section, coarsening upwards in 1-2m cycles, por not grain-size related.

Multiple Oil Shows: 5.5m - 6.0m, variable traces of bleeding oil/yell/brn oil fr.

intergranular por. in crse gr. intraclastic **CALCARENITE**, also largely pinhole por. in crse gr. intraclastic **DOLARENITE**; intraclastic por. Calcite-filled, poor-fair shows.

617m - 682m
Thinly interbedded calcareous **DOLARENITE**: lt gy-yell/brn, **DOLOLUTITE**: lt-dk gy, wavy irreg. bedding; fining upwards over 1-10cm intervals interbedded lith. alternate -s w/ intraclast grainstones (**CALCARENITE-CALCIRUDITE**), occurring in 1-2m intervals, occas. coarsening upwards. por. pred filled w/ Calcite. fr. intergranular pore spaces -s preserved and reveal bleeding oil. large solution cavities occur sporad. thru high-energy **Facies** & rarely show oil traces. High-energy **Facies** 30% of section; rr la -rge Domal Stromatolites w/ Bitumin residues. Dips 5-10°.

Multiple Oil Shows: 611.2m - 668.6m: dull yell fluo/brn bleeding oil, from v. argill. sli. sandy fr. **LST**, trace intergranular solution por in intraclast **DOLARENITE**, **CALCARENITE** & **CALCIRUDITE**; fine grained residue, poor-fair shows. Pred poor.

682m - 699m
DOLOLUTITE & fine **DOLARENITE** - **SS**; thinly interbedded, lt-m gy. 5-2m intervals of intraclast **GRAINSTONE**: lt gy mot -tled w/ tr Bitumin stain. por. Calcite filled, rr 1-2 cm soln vugs. **S**, dips sub-h -horizontal to 5°.

699m - 707.8m
Intraclastic **CALCARENITE** for -se gr. lt gy, **pinhole** por at top of interval w/ bleeding oil, incr recryst. w/ depth, grades to dense stylonitic Cryst. **LST**.

707.8m - 698m
Fault zone; disturbed & brecciated, thinly lam low-energy **Facies**, v low ang. 5-10° (strike-slip).

698m - 707.8m
Thinly lam **CALCARENITE/CALCIRUDITE**, thin-1m intraclast **GRAINSTONE**, coarsening upwards. **OIL SHOW** at 707.7-707.8m; bleeding oil, dull yell fluo w/ tr ring residue. Disturbed / Boudinaged algal laminae in fr lime mud @ 705m.

707.8m - 721.2m
Intraclastic **GRAINSTONE** bec med -r textured w/ depth. Pred thin, tr soln cavities, some pores filled w/ rhodochrosite, bec qtz sdy 1/p.

721.2m - 728m
Massive recryst. **LIMESTONE**; sandy, v lt gy, cycles com. w/ minor disturbed slumped **CALCARENITE**, grading downward to mass stylonitic **LST**, w/ incr all med. qtz grain-size gr indrtd to calc **SST** 1/p, tr Rhodochrosite pore-filling. Dip 10-15°.

728m - 752.8m
Sandy **CALCARENITE**; wh-v lt gy, m-crse qtz sdy in 1-2m cycles upward cycles, heav. recryst. **LST**.

752.8m - 759m
CALCARENITE: lt-med gy, peloidal 1/p, incr bioclastic/bioturbated w/ depth, tr foss? Hyalithid.

759m - 766.2m
Intraclastic & Peloidal **CALCARENITE**; med gy/brn, v-f-m gr, bioturb. tr shelly foss frag -s, com. stylonites, occ coarsening upward sequences.

766.2m - 771.9m
CALCARENITE; a/a, thinly interbedded w/ **CALCIRUDITE**: dk gy, gy/brn, disturbed & Boudinaged bedding, sharp upper contact showing ali. movt. along bedding plane. Dips 5°.

771.9m - 778m
Fault zone; numerous slick surfaces oriented parallel to bedding movt. from down dir to updir; highly fract. **CALCARENITE**; soln. por in fracts. Fault gouge & Breccia.

778m - 785m
Thinly interbedded **CALCARENITE/CALCIRUDITE**; Fault zone between 780.2m - 782m. Dips 5°, 30-40° within fault rotated section.

785m - 797.6m
Peloidal / Intraclastic **CALCARENITE**; med gy/brn, fr-med gr; irreg lam w/ dk gy Dolomitic **CALCIRUDITE**, com Boudinaged. Thrust Fault: 789.4-796.2m.

797.6m - 807.2m
a/a; **CALCARENITE**; 90% section intensely Boudinaged, minor bioturbation & soln cavities.

807.2m - 827m
a/a; darker **CALCIRUDITE** bec less distinct; lt gy, from **CALCARENITE**; Boudinaged, bioturb. on variable; grain-sized **CALCARENITE** @ 809.4m, rounded intraclast & peloids.

827m - 859m
CALCARENITE: med gy/brn, thinly interbedded w/ dk gy dolomitic **CALCIRUDITE**; Boudinaged, irreg. minor bioturb. Dips 0-5°.

859m - 862m
Sandy **LIMESTONE**: lt gy, v f w -lery laminated, bioturb. v f -tz grns, grd to Calc. **SST**.

862m - 892m
CALCARENITE interbedded w/ **DOL/CALCIRUDITE**; pronoun. colour-banded, ripple bedded, Boudinaged & load casts. Dip sub-horizontal.

892m - 899m
Sandy bedded, v f **CALCARENITE** & **DOL/CALCIRUDITE**; pron. lt-dk colour-banding; lt-dk gy, occ sed. Boudinaged & feeding trails.

899m - 905.9m
CALCARENITE; med gy-gy/brn, fr-med, bioturb. fault zone. Bioturb. grades to v f g Calc. **SST**, minor Fault brecciated zone @ 903.7m.

905.9m - 915.65m
Thinly ripple-bedded **CALCARENITE** & dk **CALCIRUDITE**; occ pyrite in base of coarsening upward cycles, minor Boudinaged.

915.65m - 956m
lt-dk banded, ripple-bedded **CALCARENITE**; light bands grade occ to v f g **CALCARENITE**, lith. bec incr. fully lam (mm scale), sed. Boudinaged less com, occ zones of massive stylonitic recryst. **CALCARENITE**, 927.0m-937.6m, 952.6m-957.8m, lower interval Bituminous stained w/ petrolif. same -ll when fract. Bitumen zone 927.2m - 934m.

956m - 992m
Wispy laminated **LIMESTONE**; med-dk gy/brn, v f g, planar to wavy bedding; on mm scale, rr pyrite nodes, mild petrolif. small when fractured.

992m - 999m
Wavy laminated, a/c, mm scale bands, petrolif. nodules, fault zone -ll when fract. 996m.

999m-1009m Peloid **GRAINSTONE**, crse com. **CALCARENITE**.

1009m - 1029m
Interbedded and wispy, planar **LIMESTONE**, com lams on mm scale; 70% light **CALCIRUDITE**, 30% dk (organic rich) **LST**. Dip sub-horiz, vert stylonitic, nil vis por.

1029m - 1040.88m
Thickly laminated to thinly bedded **CALCARENITE**; 70% lt ex 30% dk gy, com planar lams but w/ minor sed. Boudinaged, pyritic along carb. rich l yers, grds to v f **CALCARENITE**.

1040.88m - 1049.5cm
wispy, lamin. (mm scale) **CALCARENITE**, ripple lams, nil vis intrxn por, rr pyrite blebs, bec w/ g **CALCARENITE**.

1049.5cm - 1051.5cm
Wispy lam **CALCARENITE**; irregular lenses (1-2cm thick) of v lt gy **CALCIRUDITE**, v rr pyr. in sb vertical stylonites.

1051.5cm - 1055.6cm
Caly lar. to thinly bedded **CALCIRUDITE**; mm scale banding of light (60%) & dk (40%) **LST**, rr sed. Boudinaged, lams planar-sli wavy, occ stylonitic grades to v f g **CALCARENITE**.

1055.6cm - 1058.0m
Wispy lam **CALCARENITE**; lt **CALCIRUDITE** lenses/lams, occ vert stylonites.

1058.0m - 1068m
CALCARENITE: lt gy, w/ 20% dk **CALCIRUDITE**, com in lams & com calcite-filled fracts. minor Boudinaged & stylonites.

1068m - 1105m
Wispy lam **CALCARENITE**; med dk gy, dk gy, grading to g **CALCARENITE**, rich calcite below 108.6-6cm wavy ripple lams, faint hydrocarb odour, loc bec pyritic; finel disse. rr sed Boudinaged, Calcite-filled fracts, occ grades to lt **CALCARENITE**; bec thinly interbedded (on scale), rr Calcite. **CALCARENITE**: #1104.03m-1104.6m, erosional top/bottom contact 3-5mm **PELOIDS/GRAINSTONE**, beds dipping below 5°.

1105m - 1146m
Wispy lam med dk gy **CALCARENITE**, planar-undulat. bedding on mm scale, occ Botryoid -dal pyr, mod petrolif. odour no vis por, lt-dk gy banded -sed Boudinaged **Facies**, minor Calcite weighing down by updir movt, on minor bedding -line Fault s @ 1128.4m.

1146m - 1182m
LIMESTONE; med-dk gy, carbonaceous, abund v-f-micro. carb flakes, v f lam, wispy, planar bedding, organic matter content varies on meter scale, prod. colour variation w/ -sed non-erosional boundary, near base of interval, bedding distorted around lg -e intraformational clasts 5-10cm, clasts are matrix-supported.

1182m - 1209.8m
LIMESTONE; med-v dk gy, massive to v f lam, planar, occ pyrite blebs, mod Bituminous odour.

1209.8m - 1216m
DOLARENITE: fr-med intraclastic **GRAINSTONE**; lt gy, pervasively fract. por highly variable, from gd, intergranular por to poor, occ. soln. pinhole -s, minor bri-dull yell. fluid & bleeding v. nr, heavy, sticky oil from occ pore spaces. Majority of good por. is without oil shows, upper boundary of interval is faulted -e parallel to bedding, approx 2cm of carb. fault gouge.

1216m - 1220.6m
LIMESTONE; med gy to gy/brn, planar fr. intraclast **GRAINSTONE**, calc. gy algal lams, occ thin zones of trapped stromatolites, pred tight. Tr -v fenestrate por. tr pyr.

1220.6m - 1221.9m
PROT. ROZIOIT; **ALGOL/BASE** - **MET** **GRAINSTONE**; abund v. ang, fr. very coarse & rr Feldspar -gr supported by silty Dolomitic mtx. v lt gy - off wh.

1221.9m - 1233.95m
GRANITE: feldspar, quartz, biotite, coarsely xln, subtle irreg high ang fabric, occ feldspar megacrysts; feldspars are off-wh to v pa yell / gm. biotite is v dk gy/brn. Upper contact is brecciated / Boudinaged, minor high ang fracts. & shear zones.