

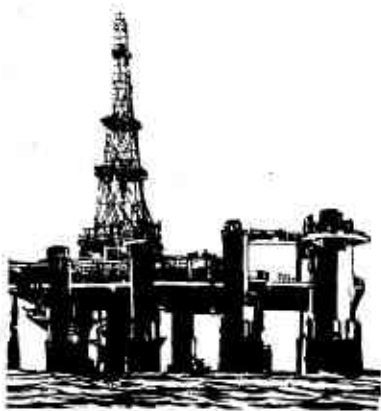
Published by
Publicity Department,
Ruston Paxman Diesels Limited,
Vulcan Works,
Newton-le-Willows

Editor: Ray Williamson

Issue No. 3 April 1974

VULCAN NEWS

Diesel Power for Drilling Rigs



Much space in this third issue of *Vulcan News* is devoted to the search for new sources of energy beneath the seas and far below the soil of Britain.

Diesel power has a big role to play in the finding of new resources, in their transportation and in their final use.

GEC Diesels Ltd is playing its part and the Boiler Division, too, has taken early steps to ensure its share of an exciting new chapter in our history.



Diesel power for drilling rigs. *This page.*



The race for energy, *page 2.*



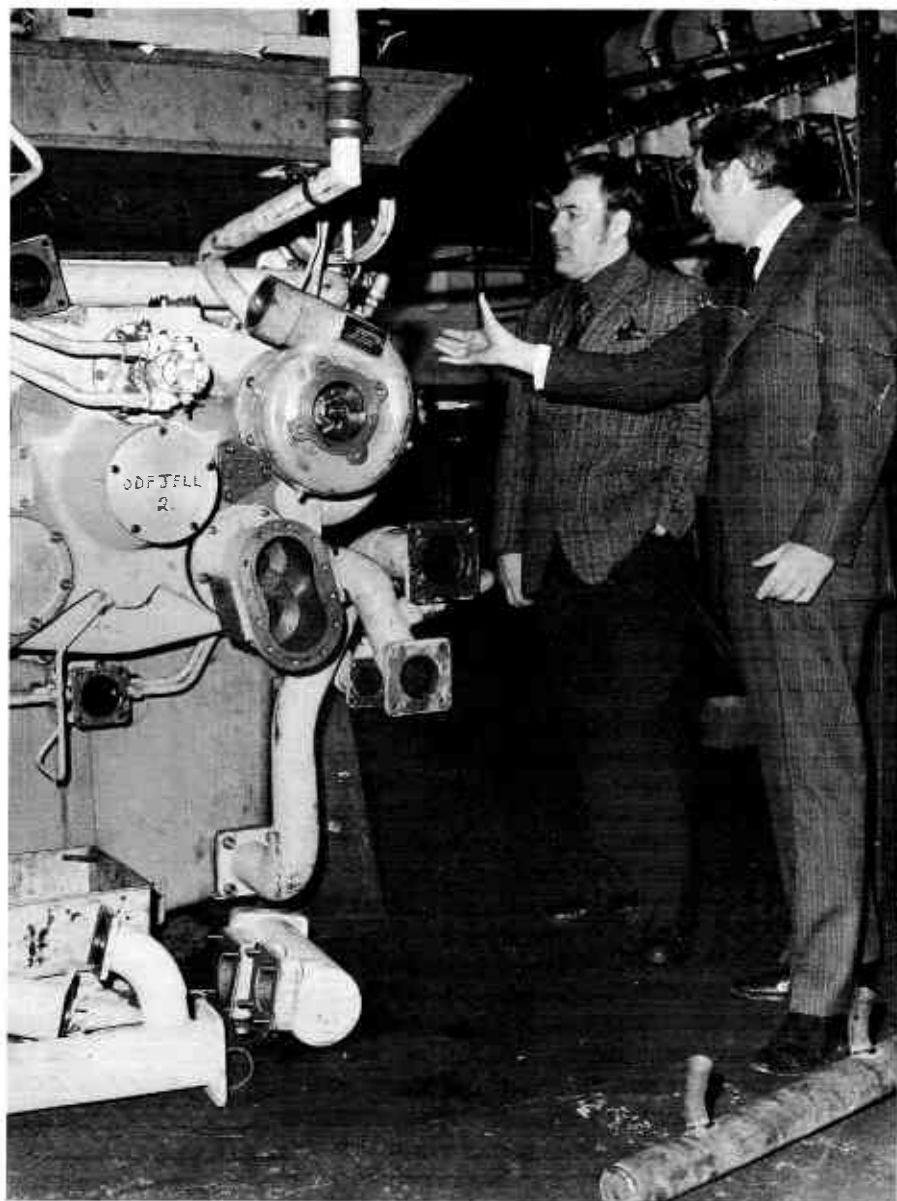
New Clayton steam package for offshore operation, *page 4*



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Our diesels for supertanker handling, *page 7.*

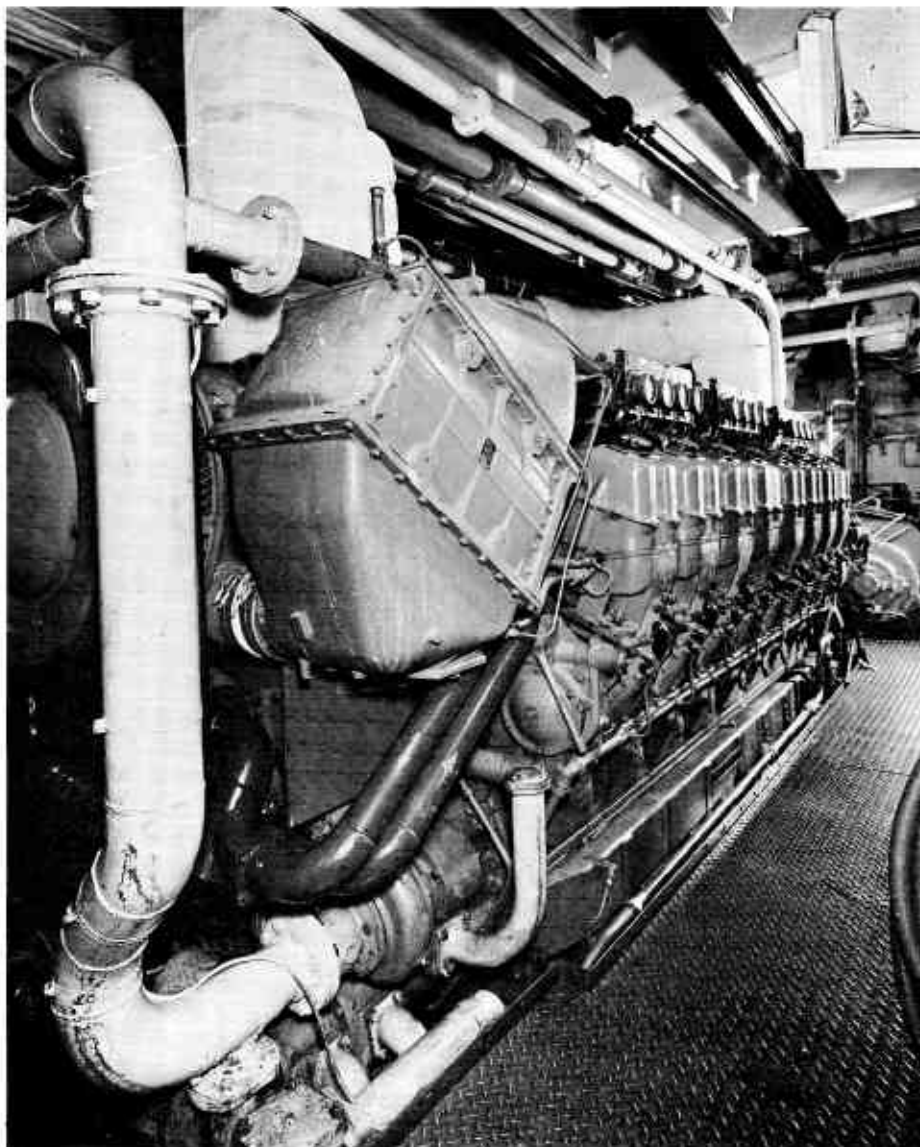


Visiting Vulcan Works to familiarise himself with GEC Diesels products Tiasto, Augustin (on left) was photographed in the works with John Keefe, Assistant Marine Sales Manager. Tiasto is a sales engineer from Dieselkeskus Oy of Helsinki, Finnish selling agents for Ruston Paxman Marine engines. They are seen looking at one of the eight 12 cylinder RK engines for the semi-submersible drilling rigs which will be built at the Rauma Repola shipyard in Finland for the Odjell Drilling and Consulting Company A/S of Bergen. The engines are for propulsion and power generation.

THE RACE FOR ENERGY



The sea was kind when this picture was taken of two English Electric engined service vessels 'Monarch Service' and 'Majestic Service' in close attendance to a drilling rig. For many months of the year waves can reach 100 feet and the water temperature gives a man just eight minutes for survival.



News of big 'strikes' in the North Sea oil and natural gas field, exploitation of undersea resources off the west coast and the activities of the oil boom town, Aberdeen continue to make newspaper headlines to cheer energy-starved Great Britain—and to provide new opportunities for GEC Diesels.

The company has been closely associated with the hydrocarbon industry worldwide for many years and has made a significant but so far largely unsung contribution to many projects.

Offshore exploration calls for power for many purposes—propulsion for drilling rigs and supply vessels and auxiliary power for a wide range of services.

Backed by extensive experience in the development and manufacture of diesel engines of all types and 25 years' practical background of supplying diesels to major oil companies, the company was in a good position to share in the offshore bonanza—and it is not letting the chance pass.

Veterans of North Sea exploration, the rigs *Sea Quest* and *Sea Shell*, were fitted with our diesels as original equipment and they are being used again in a modernisation project. Changing techniques and extra drilling capacities have overtaken the rigs' original power potential, but weight restrictions—critical on platforms operating in winter weather—prevent the installation of bigger and heavier diesels.

So *Sea Quest* is to get two additional Paxman 12YHCs, running at 900 revs.

One of the two 16 RKM diesels which power 'Majestic Service' operated by Zapata Sea Services, working out of Aberdeen.

These diesels are being installed alongside the existing generators to give the additional power required.

Latest design

But in addition to updating the veterans, the company is contributing to the latest family of rigs, the self-propelled semi-submersibles called the *Akers H3* design, being built at the Rauma Repola shipyard, Finland, for Odfjell Drilling and Consulting Company A/S, of Bergen, Norway, to the order of Sir William Reardon Smith and Sons, of Cardiff, who are managers and largest shareholders of the Celtic and Atlantic drilling companies.

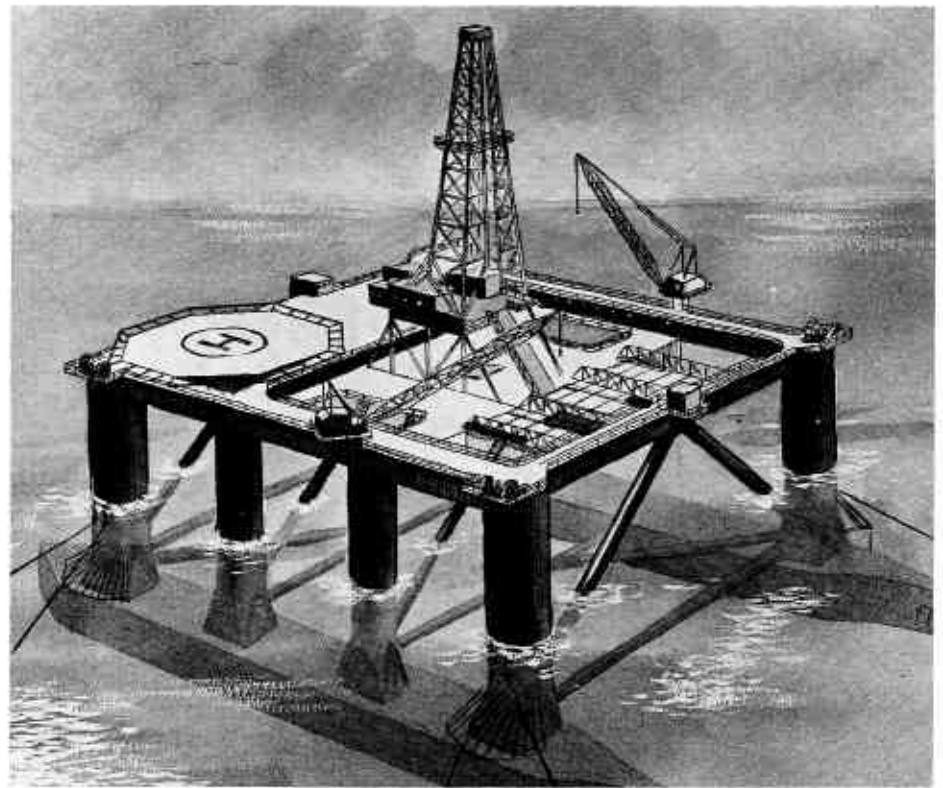
The order, worth about £1.8m for electrical equipment and main diesel engines for GEC-Elliott Electrical Projects Ltd, has given Newton-le-Willows the job of producing eight 2640 hp English Electric 12 cylinder RK diesels, four for each rig.

Paxman 12YHCZ diesels are also to drive 600 kW a.c. generators on each of two production platforms for Brown and Root Ltd, due for service in the BP sector of the Forties Field in the North Sea.

Supply vessels galore

The company already makes a vital contribution to worldwide offshore exploration by providing propulsion units for at least a dozen supply vessels serving rigs in the North Sea, Canada, Australia and Nigeria.

These maids of all work must be tough, combining the qualities of tugs to tow, to position and maintain drilling rigs and anchors, and the speed and



Artist's impression of Akers H3 drilling rig.

reliability necessary to carry personnel, drilling equipment and stores for continual operation in all weathers.

One of the supply vessels has the additional distinction of being the first built to ice-breaker class specifications.

Diesels are well up to the task because of their high reliability, ability to provide a high bollard pull, and ready manoeuvrability.

Supply vessels currently in service include: *Imperial Service*, *Majestic Service*, *Monarch Service* and *Paramount Service* for Zapata Sea Services, USA (2 16RKCMs each), *Polar Shore* and *Bay Shore* for Offshore Services (2 12 RKCMs each), *Lady Delia* for International Offshore (2 8RKCMs each). Further vessels include two for Ocean Inchcape (2 16RKCMs each), two Canadian vessels, one for Nordic Offshore Sea Services, Vancouver, and the other for Federal Commerce and Navigation, Montreal, each equipped with two 12RKCMs.

Business for boilers

Another Newton-le-Willows activity, GEC Boilers, is currently investigating the offshore market for its Clayton steam generators.

Clayton of America already supply 80 per cent of the steam requirements on oil rigs all over the world and GEC Boilers, licensees of Clayton in this country, are determined to have a similar proportion of the market for British-built oil rigs.



Typical of the tugs which handle supertankers. This is 'Point Gilbert' a fire fighting tug which has a 12 RKCM engine at 900 revs/min.





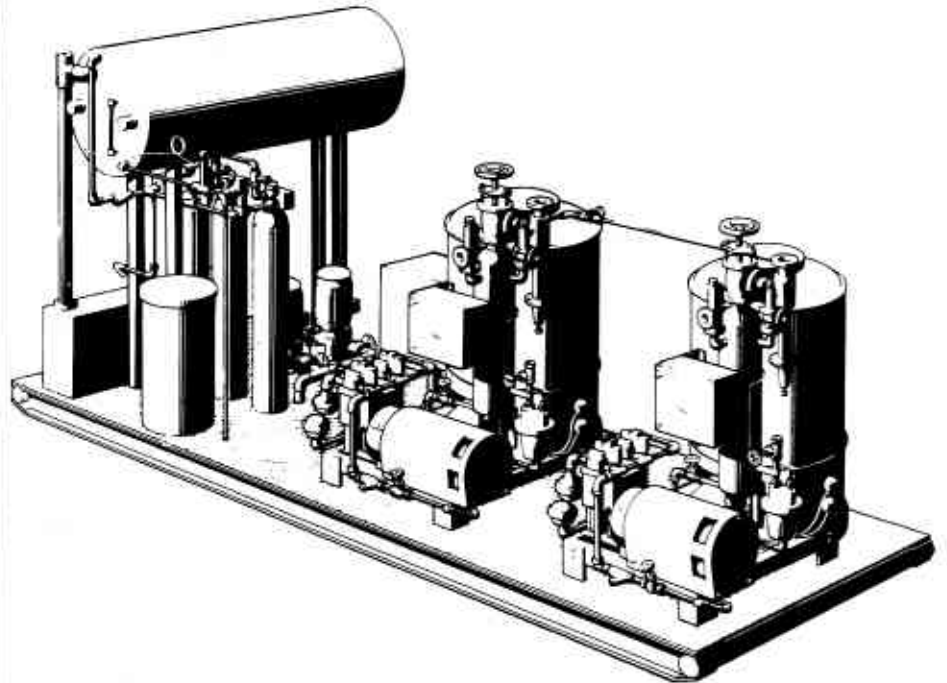
From literally hundreds of entries, Pauline Davies a tracer in the industrial locomotive department has been chosen as one of the six finalists for the BBC 'Miss It's a Knock-out' competition.

Pauline will be featured as a score girl in the 'It's a Knock-out' programme to be filmed at Southport on Sunday April 14.

Later in the year all six girls will go forward to the London finals, and TV viewers will be asked to vote for the girl they think should be 'Miss It's a Knock-out'. As the winner will go to France to take part in the International programme, Pauline is hoping that Vulcan viewers will support her.

Pauline, who was a finalist in the 'Miss England '74' competition, holds the titles of; 'Miss Blighty's', 'Miss Leigh', Miss Bailey's and 'Miss Bolton'. She is also a contestant in the 'Miss Beautiful Eyes' competition.

New Clayton steam package for offshore operation



As the search for new sources of energy spreads on land and sea, engineers are demanding compact, easily-moved, easily-installed equipment while continuing to require maximum power and output.

The Boiler Division, based at Vulcan Works, is already in a position to make its contribution to GEC Diesels' overall effort, thanks to careful planning and imaginative re-designing undertaken in good time.

The Clayton steam package is the answer to many problems. It is a complete steam-raising plant, fully assembled on a one-piece skid incorporating all its ancillary equipment so that it can be producing dry steam three minutes after it has been put down on a site and connected to prepared services.

The underbase is 19 feet long and 8 feet wide, weighing only nine tons—the sort of load capable of being handled by vessels serving the drilling platforms—and easily installed on site.

The Clayton package produces up to 13,800 lb/steam. Ancillary equipment is duplicated, the softeners regenerate automatically, standby auto-change booster pumps prevent failure and users can be assured that no single item failure will cause shutdown.

It produces more steam per pound of capital spent, plus more steam per unit of fuel burnt. Sequential control on twin units allows complete shut-down of one boiler at low demand.

Units are available to supply from 1,000 lb. to 13,800 lb. steam on one skid, but multiples of skids can be put into service as necessary.

There are over 50,000 Claytons in use all over the world and in forty years' experience, there hasn't been a single steam explosion.

Social Club winning streak

Vulcan Institute Social Club has made excellent progress, says Ronnie Brown, a committee man for 18 years and chairman for the last three years.

The social side of the Club thrives, with full houses on Saturdays and Sundays for the concert evenings.

This is proving the club's best season at games. The snooker section are already 'A' Division champions and runners up in the 'B' Division of Earlestown and District Snooker League, and a club team won the Pinfold Three-a-side Competition.

From the Darts Section J. Asprey and J. Surtees have won the Stanneylands Wilderspool Pair's Trophy and at the time of writing this report, the team are joint top of the local Darts League.

The search for gas in Cheshire

Five English Electric engines, produced about 14 years ago, have just helped the largest land rig available in Britain to drill nearly two miles beneath the Cheshire countryside in search of gas.

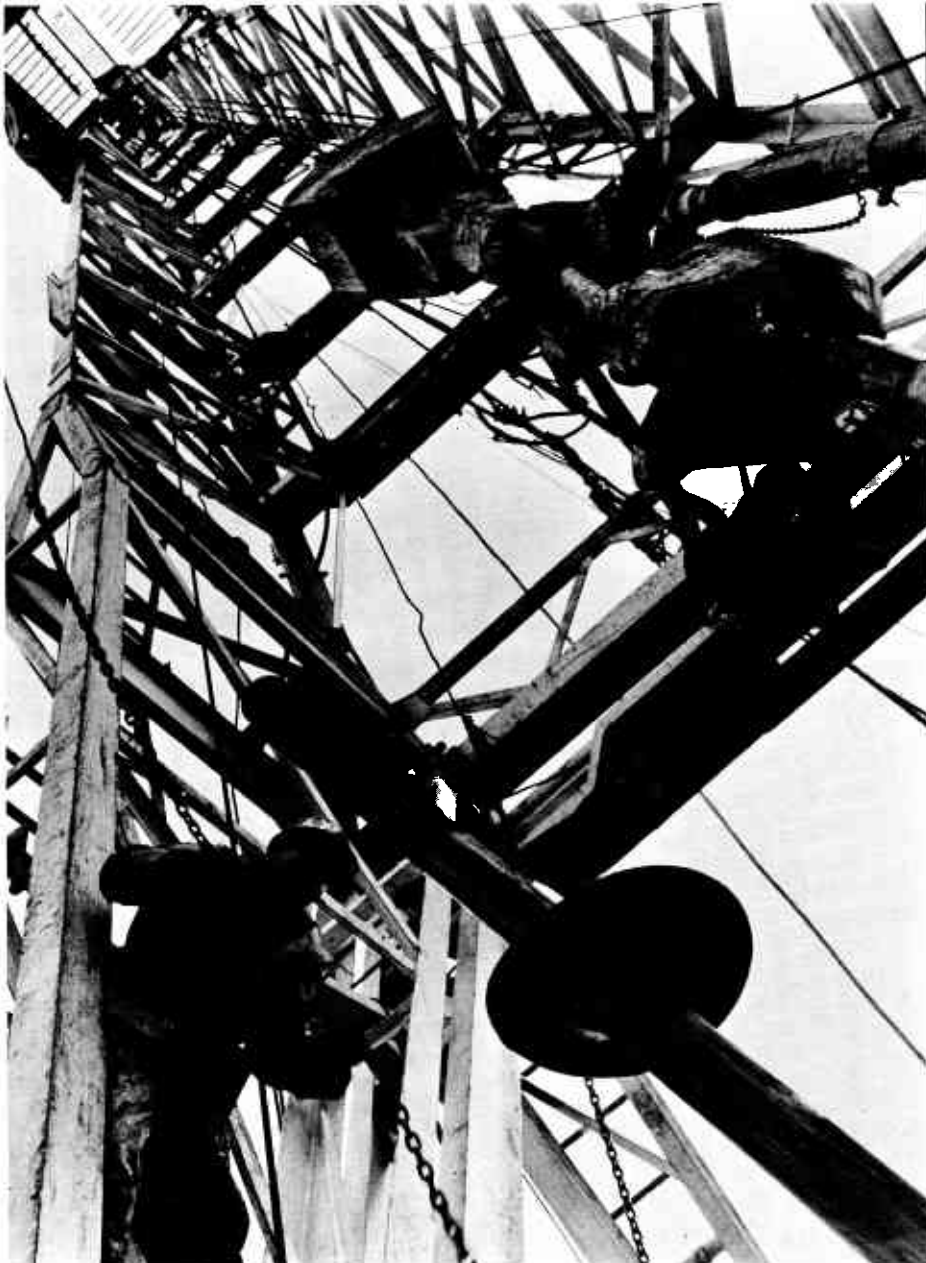
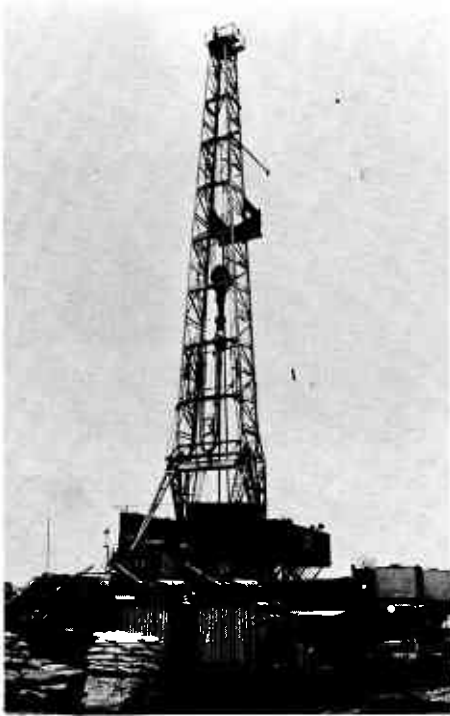
In fact, the search proved abortive and the well has been sealed off, but this in no way detracts from the engines' performance, which won praise from the tough American drilling crew who undertook the exploration for Gas Council (Exploration) Limited.

The company is a subsidiary of the Gas Council, and the project was the first drilling operation in search of oil and natural gas to be engineered by the nationalised undertaking.

A programme of geological and seismic surveys at Pickmere began in

1971 and as a result it was decided to put down an exploratory well. The Council called in K.C.A. Drilling Group Limited, and operations began last October and finished a few weeks ago.

The English Electric RK engines working on the job were 8V (naturally aspirated); giving a total of 1800 bhp at 850 rev/min for drilling power and running the slush pumps. Conditions on the site can only be described as atrocious, but the engines put up the sort of performance that the builders expect, and which impresses users all over the world.



New Steward for Sports Club



Ron Carr, recently-appointed steward at Vulcan Sports Club, is a former Sheffield Wednesday player and Telford United player-manager. But he hasn't quite hung up his boots—he is willing to devote part of the Easter holidays to coaching school age sons of Vulcan employees.

So anyone with a keen lad who wants to benefit by Ron's experience of the game should contact him at the club and sessions will be arranged.

Ron is a Yorkshireman but his wife Elaine hails from Newton-le-Willows. They are settling happily at Vulcan and look forward to some good 'gates' at the Club.

Long Service

3,554 years, to be exact

This has been a time of long service awards and the retirement of many well-known faces from Vulcan Works service. The News is proud to pay tribute, in words and pictures, to the contribution they have made to the company.

PICTURE 1

Top picture shows Mr. Harry Harwood (centre, right) receiving a retirement gift from the hands of Mr. D. Powell (managing director, GEC Diesels Limited), watched by a group of specially-invited old friends.

Mr. Harwood, who joined English Electric as a fitter in 1939 and retired as managing director of GEC Diesels Australia Ltd, has just retired for the second time from company service. Since returning from Australia last June, he had worked on special projects for Mr. Powell.

A Lancastrian, he served an apprenticeship with a textile machinery manufacturer and then, joining English Electric, Preston, as a fitter in 1939, he became section leader, ratefixer.

In 1956—a date subsequently referred to by the then managing director as 'the October revolution'—Mr. Harwood came to Newton-le-Willows as chief ratefixer.

Three years later he was in Australia as manager of the Rocklea Works and in 1961 he was promoted to general manager of Rocklea and the Regents Park Works, Sydney.

Two years after that he was appointed to the board of English Electric, Australia. In 1969 he was on the board of GEC Australia, and later the same year he became managing director of GEC Diesels (Australia) Limited.

A keen athlete in his youth, Mr. Harwood was a member of Preston Harriers and held the Lancashire walking championship. At the opening ceremony of Preston Guild—held only every 20 years—he carried the emblem at the 1952 ceremony.

In retirement, he is returning to Australia, bent on lowering his golf handicap and enjoying the good Australian way of life he has come to love.

Many friends at GEC Diesels and in the business generally, wish him well.

PICTURE 2

Centre of this group, receiving the handshake of Mr. J. D. Sword, General Manager, is Tom Freeman, a fitter with 38 years' service.

The whole group comprises: retirement watch and cheque: R. B. Stableford, deputy chief draughtsman (39 years);

Long service awards: R. Croston, driller, (46); J. W. Stevens, acceptance engineer, (45); J. H. Hayward, applications engineer, (40); L. Bond, foreman, (39); T. Freeman, fitter, (38); C. Blane, shipping and export manager, (39); J. S. Griffiths, driller, (38); G. Aspinall, driller (37); G. Chadwick, production manager industrial locomotives, (39); R. Holliday, service manager, boiler division, (37); A. Slater, technical clerk, (37); F. V. Lambert, turner, (37); R. T. Theodore, field service department, (37); W. L. Thomas, applications engineer, (37); J. Woods, welder (37); J. N. G. Molsker, field service department, (37); F. Greenwood, foreman, (37); N. Christie, machine grinder, (38); F. Blundell, machine grinder, (37).

PICTURE 3

Long service: P. Aldred, chief ratefixer, (39); H. Berry, inspector, (39); J. E. Blackburn, metal treatment, (39); W. R. Earlam, foreman, (39); R. Gardner, painter, (39); R. Jones, fitter, (39); R. B. Kay, inspector, (39); N. March, fitter, (39); F. Mellor, foreman, (39); H. Laybourne, fitter, (38); N. Paget, chief storekeeper, (38); R. Payne, manager-spares, progress and data control, (38); C. Dixon, fitter, (37); T. H. Talbot, chief planning engineer, (37); J. F. Waring, traction, (37).

PICTURE 4

Retirements: T. Lake, technical publications draughtsman, (27); E. T. Shipley contracts engineer, (27).

Long service: J. E. Addison, test superintendent, (34); J. Bradley, ratefixer, (34); H. Baldry, ratefixer, (36); C. Homos, crane driver, (34); P. Woods, miller, (35); J. Welch, service engineer, (36); S. Southern, group purchasing manager (36); F. T. R. Proctor, contracts manager, (36); T. Lawrence, maintenance fitter, (39); J. Simmons, maintenance crane fitter, (40); E. J. Roberts, chief draughtsman (boiler division), (36); R. Hawkey, chief identification DSD, (34); K. Eaton, sec. ldr stock control, (36); A. Darwell tool room miller, (36); H. Parkes, tool room fitter, (39); J. E. Smith, service engineer (35).

PICTURE 5

J. S. Arnold, tool stores controller, (35); G. Ball, inspector, (35); W. G. Barratt, miller, (36); A. Beard, labourer, (36); T. Coates, progress supervisor, (37); J. P. Coffey, tool room turner, (34); F. Dennett, coppersmith, (36); J. Greenall, crane driver, (35); R. Haseldine, tool room grinder, (35); J. Haverty, tool room grinder, (36); T. C. Hood, senior applications engineer, (36); H. Horrocks, yard department, (35); E. L. Kennerly, tool room grinder, (37); S. Lynch, s/l planner boiler division, (35); F. McLoughlin, machine shop supt., (35); W. M. Norrie, office area controller, (34); T. G. Pennington, plater, (36); E. C. Robinson, borer, (36); J. Roughtley, driller, (35); P. W. Woods, fitter, (36).

PICTURE 6

The ladies line-up for long service awards: Miss M. Barton, drawing stores assistant, (32); Miss A. Hodnett, comps. supervisor, (35); Mrs. M. Orford, senior shorthand typist, (28); Mrs. M. B. Taylor, records clerk, (32); Miss F. Arnold, radiographer, (32).

Mrs. J. A. Blane, secretary, (26); Mrs. M. Forret, pensions officer, (33); Messrs A. Forret, s/l industrial loco., (38); W. Urwin, engineer i/c industrial loc., (35); E. Broome, issuing clerk, (34); G. R. Goodacre, service engineer, (34); S. Hatton, foreman, toolroom, (35); F. G. Parcell, stores assistant, (36); A. Sturges, tool room jig borer, (36); J. Forshaw, c/h driller, (34); A. Stretch, chief methods engineer, (35); D. S. E. Gudgein, manager, site services, (35); E. Hindley, tool room miller, (39); E. Lloyd, c/h inspector, (37); J. Pomfret, technical clerk, (35); A. Powell, c/h storekeeper, (35); J. Roberts, plater, (37); J. K. Robinson, controller, heat treatment, (33).



Rifle & Pistol



Club members John Wood and Nancy Gibbs, Lancashire ladies team captain, on target on the Vulcan range.

Vulcan Institute Rifle and Pistol Club outshot no lesser opponents than Manchester and Salford Police to win the Preston Cup at the end of January. This victory—their score of 1,190 out of 1,200 was nine points ahead of the police—was their second successive success in the competition.

The Vulcan Club has earned national respect for its skill during its quarter century of life. It all started in 1949, when a number of employees, having acquired a few .22 rifles, got permission to use the 25 yard Territorial Army range in Crow Lane, Newton-le-Willows.

Two years later a similar range was built at the works near the bowls pavilion, which gave members more opportunities to shoot and infused greater enthusiasm and strength to the club.

A pistol section was added, teams were entered in county and national leagues and in national industrial leagues. The club took part in many postal shoots, nationwide, match cards being sent away for marking by independent judges, and notched many victories.

Lady members joined representative teams as well as having their own team and they, too, have won their league on a number of occasions.

The club welcomes new members—and newcomers are in for a few surprises. A 17/32 inch diameter bull 25 yards away is a test of vision itself, and handling a 14 lb. rifle to shoot accurately demands fitness and concentration.

'Big shots are little shots who kept on trying' a club official told the *News*. 'Anyone interested in target shooting can be sure of a warm welcome and all the help and advice we can give them. There is no need to buy equipment to start with.

'One of the attractions of the Club is that it is an all-the-year-round sport, so you can come in at any time.'

The club meets every Tuesday, Wednesday and Thursday evening at 8.15 p.m. at the club range and interested readers may contact John Wood in the Diesel Planning Department on extension 295.

Solution to Crossword

Here is the solution to the Crossword which appeared in issue No. 2.

ACROSS

(1) Pinafores, (7) Rail, (10) Save, (11) Entertain, (13) Diet, (14) Ell, (15) One, (17) Unite, (18) Need, (19) Down, (21) Trial, (23) RAC, (24) Say, (25) Taste, (26) Inn, (27) Sedate.

DOWN

(1) Pretends, (2) Ale, (3) Fortunate, (4) Ostend (5) Evil, (6) Sentence, (8) Arid, (9) Itinery (misspelt), (12) Alto, (16) Edits, (20) Watt, (21) Tan, (22) Lad, (23) RSA.



Our diesels for super tankers

Thirteen new tugs, now building in British yards to handle super-tankers, will be powered by English Electric diesel engines built at Newton-le-Willows.

Four vessels, owned by Grange-mouth and Forth Towing Co. Ltd, will handle tankers at the BP Houndspoint refinery. Two are being built by the Leith division of Robb Caledon Shipbuilders Ltd and two at Richards (Shipbuilders) Ltd, Lowestoft.

Each tug has a single screw, driven by an English Electric 12 RKCM engine, rating 2640 bhp continuously at 900 rev/min., to a controllable-pitch propeller.

Two twin-screw tugs for the Tees Towing Co. Ltd, Middlesbrough, are building in the yard of Scott and Sons (Bowling) Ltd, a member of the Scott Lithgow Group. Each tug has two English Electric 6 RKCM engines, rated 1100 bhp continuously at 900 rev/min, driving Schottel rudder propeller units.

We are also supplying English Electric engines for seven more single-screw tugs. Six are to the order of Cory Ship Towing Ltd, of London, two building at Richards (Shipbuilders) Ltd, Lowestoft, two ordered for the Beverley yard of the Drypool Group Ltd, of Hull, and two building at Ailsa Shipbuilding Co. Ltd, Troon, Ayrshire.

Each tug will be fitted with a 16 RKCM, rating 3520 bhp continuously at 900 rev/min, driving a controllable-pitch propeller.

A single-screw tug for Clyde Shipping Co. Ltd, Glasgow, will operate in the Clyde estuary. The builders, Robb Caledon Shipbuilders Ltd, Leith division, will fit an English Electric 12 RKCM engine, rated at 2640 bhp continuously at 900 rev/min, driving a controllable-pitch propeller.

The Next News

All contributions—news, pictures, ideas—for the next issue should be sent by May 1 to the editor, Ray Williamson, Publicity Department.

Football

So far Vulcan AFC is having one of the best seasons since its reformation in 1967 says secretary D. Naughton. The first team, playing in the Premier Section in Warrington & District League, have played 27 games, drawn 5, lost 1, won 21, in league and fixtures, scoring 78 goals against 20. The league record is: played 11, drawn 4, won 7; goals for 33 against 8.

They reached the semi-finals of the Jubilee Trophy, being beaten 2-1, and they have reached the semi-finals of the Guardian Cup, the main competition in Warrington League, beating Newton Boys Club early in March at Vista Park, Newton-le-Willows. They have met the Boys Club twice this season at this ground, drawing one and winning one. They hope to reach the final, the goals tally so far in the competition being 15 for, 3 against.

They have also reached the semi-finals of the Lancashire Shield for the first time. It is some years since a club from the Warrington district won this trophy, and they have a good chance, for other teams have not a goals tally of 18 for, 4 against.

Notices will be put up in the Works when the fixture is arranged and if there is enough interest a supporters' coach will be laid on.

In the league Vulcan is 10 games behind programme and there will be plenty of work towards the end of the season to catch up. The club is lying sixth in the table, six points behind the leaders, but with five games in hand. The winning streak is 20 league games without defeat—unbeaten since March, 1973.

The second team are doing quite well in Central Cheshire and have an interest in two trophies. They started the season off well, getting to the last 16 in Liverpool Shield, but first team claims upset the rhythm and things went wrong. However, they are again on the upwards trail, and they are in the running for a couple of trophies. In the league they have won 5, lost 5; goals 22 for, 26 against. They have played 11 cup games, won 6, drawn 3, lost 2; goals 24 for, 11 against.

Since the club was refounded in 1967 they have always been amongst the honours. In 1968 they won promotion from 2nd Division and in the next season won 1st Division Championship. The first team was then admitted into the premier section and won the championship in 1971, the second team winning the second Division championship.

In season 1971-72 the team won the Central Cheshire League and were runners up in the Northwich F.A. Cup.

In season 1972-73 Vulcan returned to Warrington Premier League and finished runners-up, having won the Jubilee Trophy earlier in the season.

Archery



Armed with new practice equipment for the club from the nearest specialist in Preston, Vulcan Archers held their first active meeting of the year early in January. A good turn-out braved the cold weather and all who tried their hand at Vulcan's newest sport have since joined the club.

Several ladies who came to watch, decided to 'have a go' and were surprised to find that they could outshoot their husbands, displaying promising form and style very quickly.

Archers experimented with different methods of aiming to determine the most comfortable, then tried various bow weights and shooting glove or tab designs, again to decide which gave the greatest personal comfort.

This knowledge, coupled with the gradual discovery of correct arrow

length and bow length will be invaluable when as established members they decide to buy their own equipment from a vast range of different designs, shapes and sizes.

Shooting proficiency improved at later sessions, allowing the archers gradually to tackle longer distances with confidence. This led to the first competition, held after four weeks. A competition will be held at the last meeting of each month, so that members can assess progress against each other and by seeing an improvement in their scores.

Beginners are welcome, especially on the first Saturday of each month, on the sports field at 1.30. Anyone interested should contact one of the members, or the secretary, Eddie Mulvanny, Boiler Division (phone 416).

Look out for the New Horizon

Pop fans should keep an eye open for the 'New Horizon', a harmony comedy trio who are beginning to make headway in the tough world of show business.

Two of the group—bass guitarist Stan Hardman and drummer John Forshaw—are Ruston Paxman employees, both working in the maintenance department.

The third instrumentalist is Phil Bradley, a local draughtsman, who plays the organ.

The 'New Horizon' recently won a talent contest at the Gaiety Bar in Blackpool, in which more than a hundred acts took part. They have been auditioned for the show, New Faces, and have been booked to top the bill at the Norbreck Castle Hydro, Blackpool, for a week in July, and for another seven day engagement in South Wales.



Left to right: Bass guitarist Stan Hardman, Organist Phil Bradley, Drummer and Vocalist John Forshaw.