

ALBERTA ENERGY AND UTILITIES BOARD

Calgary Alberta

**BEARSPAW PETROLEUM LTD.
APPLICATION FOR A SWEET OIL WELL LICENCE
WEST DRUMHELLER FIELD**

**Decision 2002-030
Application No. 1094603**

DECISION

The Alberta Energy and Utilities Board has considered the findings and recommendation set out in the following examiner report, adopts the recommendation, and directs that Application No. 1094603 be approved.

DATED at Calgary, Alberta, on March 25, 2002.

ALBERTA ENERGY AND UTILITIES BOARD

(Original signed by)

N. McCrank, Q.C.
Board Chairman

**EXAMINER REPORT RESPECTING
BEARSPAW PETROLEUM LTD.
APPLICATION FOR A SWEET OIL WELL LICENCE
WEST DRUMHELLER FIELD**

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1 RECOMMENDATION

Having carefully considered all of the evidence, the examiners recommend that Application No. 1094603 for the applied-for sweet oil well and access road be approved.

2 INTRODUCTION

2.1 Application

Bearspaw Petroleum Ltd. (Bearspaw) applied on May 28, 2001, to the Alberta Energy and Utilities Board (EUB/Board), pursuant to Section 2.020 of the Oil and Gas Conservation Regulations, for a licence to drill a sweet oil well at a surface location in Legal Subdivision 6 of Section 35, Township 29, Range 21, West of the 4th Meridian (LSD 6-35-29-21W4M) (the 6-35 well). The purpose of the proposed well would be to obtain sweet oil production from the Banff Formation (Banff). The location of the proposed well site, as well as the proposed and alternative access routes to the well, are approximated on the attached figure.

2.2 Background

A well was previously drilled at the proposed surface location in 1955 and subsequently abandoned in 1987 after several years of production from the Nisku Formation (Nisku). The access road to the well followed a route due south from an existing lease at 11-35-29-21W4M (11-35). The original well site and access road have recently been reclaimed and a cultivated field now exists at the proposed location of the well and access road.

Mr. Laslo owns the southwest quarter of Section 35-29-21W4M, on which the applied-for well would be located if approved. Mr. Merkel owns the adjacent northwest quarter of Section 35-29-21W4M and has leased the land on a crop-share basis to Mr. Stanger. A barbed wire fence separates the northwest and southwest quarters of Section 35-29-21W4M.

Mr. Laslo's land has been described as landlocked. The cultivated field sits on a plateau, with sharp elevation drops all around it except to the north. Access to the proposed well site from the north would cross Mr. Merkel's land. Access from the south would be wholly on Mr. Laslo's land. Mr. Laslo uses an existing trail that follows a southerly direction from the edge of the plateau down to the Red Deer River valley. The trail has a vertical descent of approximately 70 metres (m), with grades of over 30° and follows the same basic route as that described later in this report as Route C.

2.3 Intervention

After Bears paw filed Application No. 1094603, the EUB received an objection from Mr. Merkel on June 4, 2001. Mr. Merkel objected to the proposed access route to the well site based on impacts to his property, such as trespassing, vandalism, increased traffic, noise, fire hazards, garbage, dust, and neighbour relations, as well as prolonged use of an existing access road to 11-35 on his land if the applied-for well were successful. Accordingly, the Board directed, pursuant to Section 26 of the Energy Resources Conservation Act, that a public hearing be held to consider the application.

2.4 Hearing

The application and intervention were considered at a public hearing on January 9 and 10, 2002, in Calgary before an examiner panel consisting of F. Rahnama, Ph.D. (Chair), D. Boyler, P.Eng., and C. Hill. The panel and EUB staff viewed the proposed well site and alternative access routes on November 2, 2001. Those who appeared at the hearing and abbreviations used in this report are listed in the following table.

THOSE WHO APPEARED AT THE HEARING

Principals and Representatives (Abbreviations Used in Report)

Witnesses

Bears paw Petroleum Ltd.
J. Gruber

D. Osterman
O. Platt
D. Tian
N. McNally,
of McNally Land Services Ltd.
R. McGregor, of
EBA Engineering Consultants Ltd.

L. Merkel
K. Luft

L. Merkel
B. Dunn and S. O'Brien, of
MWK Engineering Ltd.

Alberta Energy and Utilities Board staff
J. P. Mousseau, Board Counsel
G. McLean, C.E.T.
S. Brown

3 ISSUES

The examiners consider the issues respecting this application to be

- need for the well
- well location
- access road location and related surface impacts
- public consultation

4 NEED FOR THE WELL

4.1 Views of the Applicant

Bearspaw indicated that it had obtained the mineral rights for the applied-for location. It stated that it had used the log information from the original wells in the immediate area to define its prospect. Based on well log evidence from the original 6-35 well, Bearspaw interpreted potential hydrocarbons at that location within the Banff. It argued that the well was needed to test its interpretation and, if successful, allow sweet oil production from the Banff. In addition, it stated that the proposed well would also evaluate the Basal Quartz and Viking Formations (Basal Quartz and Viking) as potential secondary targets. Bearspaw estimated the proposed well would produce 53 000 barrels (8426 m³) of recoverable reserves from the Banff.

4.2 Views of the Intervener

Mr. Merkel did not dispute the need for the well; however, he did object to the location of the access road as proposed.

4.3 Views of the Examiners

The examiners accept that there is a need for the proposed well to allow Bearspaw an opportunity to exploit the mineral rights it holds. In addition, the examiners note that no evidence was presented disputing the need for the well.

5 WELL LOCATION

5.1 Views of the Applicant

Bearspaw stated that it had selected the bottomhole location after evaluating well log information from several previously drilled wells in the area. Bearspaw described the Banff as a reservoir with a distinct linear trend. It submitted that the logs from the existing 6-35 wellbore indicated good porosity in the Banff, whereas well logs from other surrounding wells showed little or no porosity. It explained that moving the bottomhole location any significant distance from the original location could put it at risk of missing the reservoir.

Bearspaw explained that it chose to drill the proposed well vertically in order to allow it the flexibility to evaluate the Basal Quartz and Viking as potential secondary targets. Both of these formations are above the Banff. Bearspaw stated that the Basal Quartz and Viking exhibit

channel type character and that if the proposed well were drilled directionally from a different surface location, the risk of missing these secondary target zones was high. This would reduce its ability to optimize the potential for a successful gas or oil well from the Banff, Basal Quartz, or Viking. Further, Bears paw stated that directionally drilling the proposed well would be exceptionally complicated and would cause excessive wear on wellbore production equipment. Bears paw did not undertake a formal investigation on the cost of a directional well.

5.2 Views of the Intervener

Mr. Merkel did not provide any comment regarding the bottomhole location or surface-hole location of the proposed well.

5.3 Views of the Examiners

The examiners note that Bears paw's interpretation of hydrocarbon potential within the Banff is based on minimal data. The lack of test information, the age, and consequently the quality of the available well logs all add risk to the potential of a successful well. As such, the examiners understand Bears paw's reluctance to move the bottomhole location of the well away from a known data point, the original 6-35 well. The examiners therefore accept the location of the well as proposed by Bears paw. In addition, the examiners note that Mr. Merkel did not object to the location of the proposed well.

6 ACCESS ROAD LOCATION AND RELATED SURFACE IMPACTS

6.1 Views of the Applicant

Bears paw explained that it had originally proposed access to the 6-35 location by a direct route running south from an existing well site at 11-35 (Route A). The applicant stated that this would be the preferred location of the access road, as it would be the shortest route and would be an extension of an existing road. Bears paw explained that following consultations with Mr. Merkel and Mr. Stanger, it decided against this route. Mr. Merkel and Mr. Stanger had suggested a route that would extend from 11-35 and follow the perimeter of the plateau along its northwest edge to the fence line subdividing Mr. Merkel's and Mr. Laslo's quarters. The road would then run straight southeast to the well site (Route B). This route would avoid bisecting Mr. Merkel's field. Bears paw indicated that it had accepted this route, even though it was not its preferred route.

Bears paw stated that due to its flat grade and short distance, Route B would have fewer design concerns, require minimal construction, and would have an estimated construction cost of about \$18 000. Bears paw stated that it would commit to installing locking gates, posting signs, and implementing proper dust control. It acknowledged Mr. Merkel's desire for a 6 m gravel road but felt that a low-impact road would be a better alternative for purposes of reclamation, visibility, and limiting access. Bears paw indicated that it had notified Mr. Merkel, through a letter dated November 5, 2001, that it was open to discuss further mitigative measures that could be taken. Bears paw stated that it had not received any additional suggestions from Mr. Merkel. Bears paw acknowledged Mr. Merkel's request for a hydrology study, slope stability study, and wildlife study, as brought forward at the hearing, but rejected these proposed undertakings as unnecessary.

Bears paw acknowledged that Mr. Merkel and Mr. Laslo preferred an alternative route (Route C) that would access the proposed well site from the south. This route would extend south from the proposed well location to an existing trail built by Mr. Laslo. The route would extend southwest dropping off the plateau and eventually intersecting highway 838. This route would avoid Mr. Merkel's land and be exclusively on Mr. Laslo's property. The applicant examined Route C with the assistance of a professional engineering consultant and concluded that its construction was not viable. It concluded this on the basis of conceptual design, budget, ease and time frame of construction, safety, and reclamation. It stated that to reduce the grades of the existing trail and make them passable by heavy vehicles, it would have to do extensive cuts and fills to create a flatter grade. The consultant recommended that the road should be 5 to 6 m wide, with grades of 10.5 per cent, and estimated that construction costs, including engineering, would be approximately \$500 000.

Bears paw argued that Route B would be much cheaper, easier, and quicker to construct than Route C. It also maintained that detailed geotechnical engineering and slope stability studies would be required for Route C.

Bears paw also stated that Route B would be much safer than Route C, as it would not have such steep grades. Bears paw expressed concern that during winter the road could become difficult to drive due to the steep grades and wet or snowy conditions and that it was imperative that the well be accessible at all times in case of emergency situations. It argued that a complete reclamation of Route B would be possible, whereas the reclamation of Route C would be difficult due to the extent of the area that would be disturbed and the nature and the volumes of the material that would be removed.

Bears paw acknowledged that its engineering consultant did not evaluate other potentially more cost-effective routes to the south. Bears paw stated that the route proposed by the intervener (Route D) would significantly alter the physical environment of the coulee, which would affect proper reclamation, would be expensive, and would require regular maintenance to ensure safety. This route also approached the proposed well site from the south off of highway 838, but differed from Route C in that it followed the contours of the slope, making it a less direct route. Bears paw stated that this access route was not a viable option and that the project would not go ahead if either Route D or Route C was a requirement in obtaining the licence.

Bears paw noted that Route D was designed by the intervener's consultant with the assumption that Mr. Laslo would continue using the road and that it would not be reclaimed. The applicant explained that avoiding the reclamation obligations with respect to this road may not receive Alberta Environment favour. The applicant also stated that it was not industry practice to have operators engage in constructing roads in perpetuity for the use of farming operations.

6.2 Views of the Intervener

Mr. Merkel expressed concern over the potential for increased trespassing on his land through the proposed access road and resulting vandalism. In particular, he raised concerns about discarded cigarette butts potentially causing fires, garbage, increased noise, and increased dust and traffic. Mr. Merkel explained that Route A was not his preferred route because it would bisect a seeded field, making it difficult to farm and therefore creating crop loss. He also stated

that if the access road were constructed on his property, he would rather it follow the edge of the coulee, as described by Route B, and thereby avoid splitting the field.

Mr. Merkel asserted that if a road through his property were constructed, it could lead to his neighbours expecting to have use of this road. Mr. Merkel stated that he wanted access to the road to be restricted to Bearspaw and no other users. Mr. Merkel also noted that allowing this access road on his property would increase the amount of time by several years that he would be forced to deal with activity on his property.

Mr. Merkel stated that if this access road were approved, he would like conditions attached, including the following: black dirt to be stripped and a 6 m gravel road constructed with proper ditching, maintenance, dust control, signs indicating private road, and locked gates at the 11-35 lease and at the property line between his land and Mr. Laslo's land. He would want confirmed notification of any other drilling, completion, testing, reworking, or stimulating of any well on his land or any construction of access roads or surveying. He suggested that slope stability and hydrology studies be completed prior to building the road, considering the heavy loads travelling along the edge of this coulee. He also suggested that a wildlife study be conducted to ensure that the access road would not affect the trails that wildlife use to get up and down the coulee.

Mr. Merkel argued that Bearspaw did not try to design the alternative Route C access route in the most efficient and effective way but rather intended to disprove that there was any possibility of a viable alternate access from the south. The intervener noted that the applicant's road building expert was asked only to look at the one route. Mr. Merkel expressed disappointment over Bearspaw's lack of consideration of the viability of Route D. The intervener's road building consultant said that its proposed road followed the contours of the hill and also utilized portions of the existing trail built by Mr. Laslo. It explained that about 20 000 cubic metres of common material would have to be moved, road gravel added, and a culvert built. The consultant estimated the cost for this construction to be between \$50 000 and \$70 000. The consultant acknowledged that if this route were used in the winter, heavy trucks hauling heavy equipment might require assistance and that a four-wheel drive vehicle, such as a maintenance truck, would have to have access every day of the year for maintenance of the well.

6.3 Views of the Examiners

In order for the examiners to conclude which route is the most acceptable, it is necessary to weigh the impact of each of the alternative routes on Mr. Merkel against the impacts of the actual road construction. With respect to the two possible northern routes that cross Mr. Merkel's land, it is clear that Route B minimizes the impact on Mr. Merkel, because it avoids fragmenting his cultivated land. Bearspaw has also indicated that the marginal increased cost to building this road is acceptable.

In assessing the option of a north access against a south access route, the examiners are not convinced that access from the south would completely eliminate Mr. Merkel's concerns. A road constructed from the south would effectively open up an additional access route to Mr. Merkel's land, since only a short distance of flat ground exists between the proposed well site and Mr. Merkel's property. The existing access road to the 11-35 well site already provides access to most of Mr. Merkel's quarter. Consequently, the potential for trespass, vandalism, garbage, and fire hazards would likely not be changed significantly under either access scenario unless mitigative measures, such as installing locked gates, were undertaken.

Although there was disagreement on the costs of road construction up the plateau from the south, the examiners believe any route from the south would be significantly more costly than from the north. In addition, it is clear that road construction would require considerably more land disturbance, would be more susceptible to erosion, and would be more costly and difficult to reclaim. Under poor weather conditions, the south access would also present greater safety concerns than the relatively flat north access.

In balance, the examiners believe that the incremental impact on Mr. Merkel of a north access does not outweigh the negative impacts of road construction from the south. In addition, the installation of appropriately placed gates on the north access could improve the situation over what currently exists. In this regard, the examiners expect Bearspaw to follow through on its commitments to install locking gates and signage and to implement proper dust control to Mr. Merkel's satisfaction. It is the examiners' view that when companies make commitments of this nature, they have satisfied themselves that the activities will benefit both the project and the public, and the examiners take these commitments into account when arriving at their decision. The EUB expects the applicant, having made the commitments, to fully carry out the undertaking or advise the EUB if, for whatever reasons, it cannot fulfill a commitment. It is at that time that the EUB will assess whether the circumstances of the failed commitment may be sufficient to trigger a review of the original approval. The affected party also has the right to ask the Board to review an approval if commitments made by an applicant remain unfulfilled.

The examiners acknowledge the request for hydrology, slope stability, and wildlife studies, as brought forward by Mr. Merkel at the hearing. However, no evidence was presented that would suggest that these studies should be required. Nevertheless, the examiners expect Bearspaw to remain sensitive to potential impacts regarding road stability near the edge of the coulee and any impacts on wildlife in the area. If specific concerns are recognized or brought forward regarding these potential impacts, the examiners expect Bearspaw to undertake any necessary measures to avoid negative impacts.

Based on the above, the examiners conclude that Route B is the most acceptable route to the proposed well site.

7 PUBLIC CONSULTATION

7.1 Views of the Applicant

Bears paw stated that it notified and consulted with affected parties in accordance with the requirements and spirit of *Guide 56: Energy Development Application Guide*. Bears paw stated that its initial contact with Mr. Merkel was by telephone in late February 2001 to get his comments and input on an access road to the proposed well and get his permission to survey the access road through his property. Bears paw became aware shortly thereafter that Mr. Merkel had concerns with regard to the proposed access road location, as well as the rental fees of other Bears paw leases on his lands.

Bears paw argued that once it had become aware of Mr. Merkel's concerns regarding access, it had evaluated different options. It had considered the southern route and had surveyed it, determined that it was not viable, and communicated this to Mr. Merkel. It had also evaluated multiple alternatives from the north, ultimately selecting the one preferred by Mr. Merkel and Mr. Stanger. In this respect, Bears paw submitted that it had met the industry standard for negotiation and consultation and that it had remained open to further discussion. Further, Bears paw stated that it was open to mitigatory steps, such as installing gates and signs, and had communicated this to Mr. Merkel. Bears paw suggested that Mr. Merkel's approval or objection to access across his land was tied to the issue of rent reviews of other Bears paw leases on his land.

7.2 Views of the Intervener

Mr. Merkel stated that he simply did not want the access road to be constructed at the proposed location and had made it clear to Bears paw from the beginning of his conversations with Bears paw that he would prefer if the access road were to come from the south and stay entirely on Mr. Laslo's property. Mr. Merkel argued that for this reason, nobody could suggest that he made that decision hoping to get more compensation.

Mr. Merkel stated that Bears paw did not provide sufficient information or consultation with regard to why it could not construct the access road from the south. Mr. Merkel further stated that until he saw Bears paw's engineering consultant's report only days before the hearing, he was simply told that it could not be done. He argued that Bears paw should have provided him with more reasonable information regarding alternative access routes and provide for an opportunity to exchange information.

Mr. Merkel referenced a letter from Mr. Laslo, which he forwarded to the EUB, that expressed Mr. Laslo's desire to have the access road follow the existing trail on his property. Mr. Merkel expressed concern that Bears paw's efforts to engage in meaningful consultation and exchange information with Mr. Laslo regarding Mr. Laslo's request to have the access road follow Route C was inadequate. The intervener acknowledged that Mr. Laslo signed a lease with Bears paw for the proposed well and access road; however, he argued that Bears paw knew that Mr. Laslo would have preferred it if his existing trail were upgraded and used as the access road but made little, if any, attempts to discuss the matter with Mr. Laslo.

7.3 Views of the Examiners

The examiners believe that public disclosure and consultation with stakeholders is a critical feature of the EUB's application process. The examiners accept that Bearspaw identified and notified all potentially affected parties of its proposal. However, the examiners believe that Bearspaw could have provided more details much earlier in the consultation process regarding the proposed access road and alternative routes to the proposed location. The examiners believe that Bearspaw underestimated the degree of concern that Mr. Merkel had concerning the routing of the access road. Mr. Merkel's concerns led to his hiring a consultant to explore the feasibility of a southern access. Bearspaw appears to have responded by having a similar study conducted. The examiners believe that sincere attempts at resolving the issue could have resulted in one mutually agreed-upon study being done, possibly negating the need for a hearing. Further, other options could have been more fully discussed, such as mitigative measures on the north access, which may also have led to an early resolution. To conclude, the examiners believe that Bearspaw should review its consultation procedures to ensure that it proactively seeks to discuss, share information, and attempt to resolve objections or concerns in a timely manner.

DATED at Calgary, Alberta, on March 14, 2002.

ALBERTA ENERGY AND UTILITIES BOARD

(Original signed by)

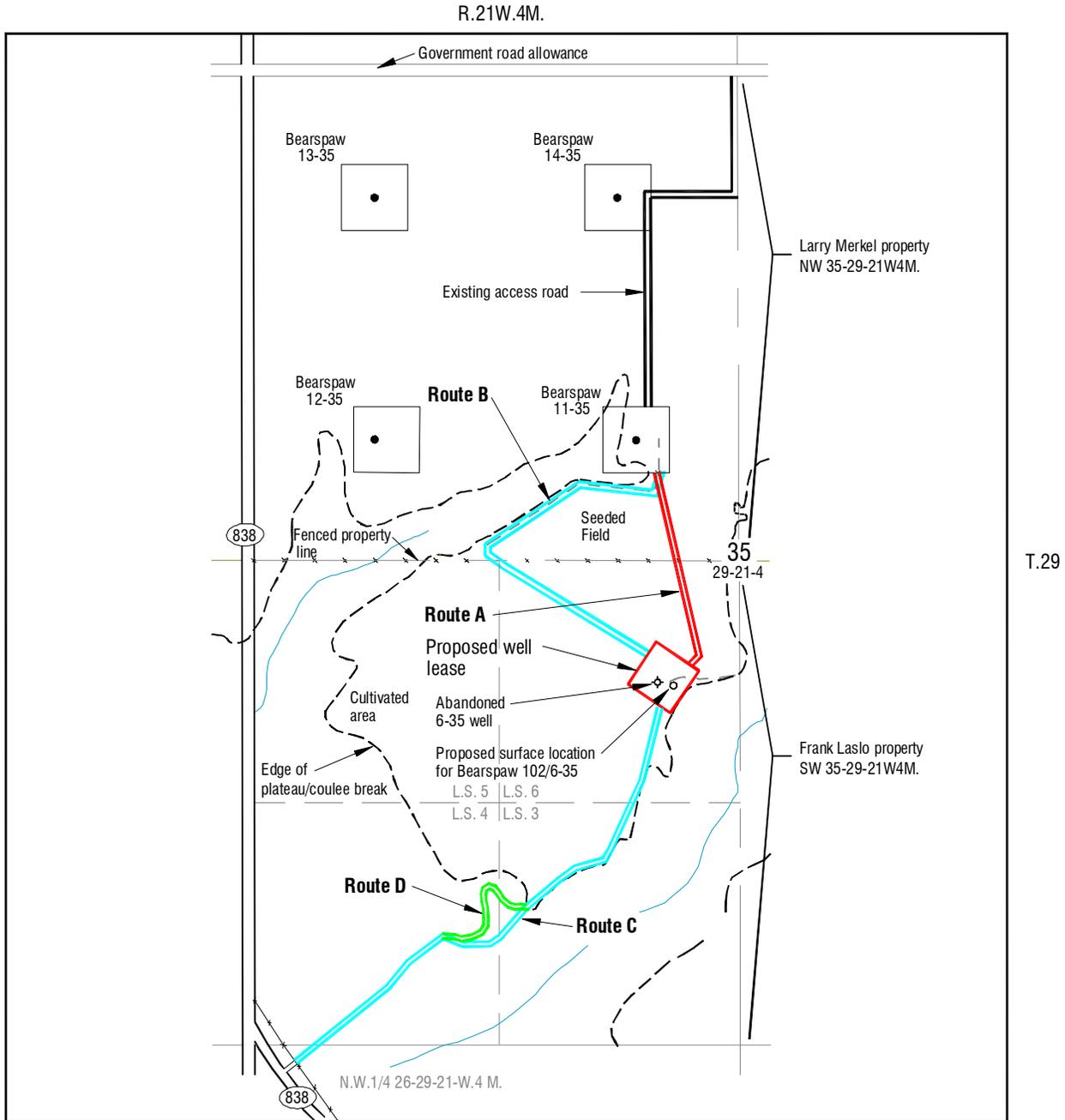
F. Rahnama, Ph.D.

(Original signed by)

D. Boyler, P.Eng.

(Original signed by)

C. Hill



Proposed Well Site and Possible Access Roads
 Application No. 1094603
 Bears paw Petroleum Ltd.

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