

RULE 37 CASE NO. 0261459
District 06

**APPLICATION OF GOLDSTON OIL CORPORATION FOR A RULE 37 EXCEPTION
FOR THE GOLDSTON FEE UNIT, WELL NO. 1, HITT'S LAKE, NORTH (PALUXY)
FIELD, SMITH COUNTY, TEXAS**

APPEARANCES:

FOR APPLICANT:

John Soule
Rodney Henckel
Larry Brisendine
Kent Johnston

APPLICANT:

Goldston Oil Corporation

FOR PROTESTANT:

Dan Miller
Clark Jobe
Fred Marshall
Brian Gaudreau
Pat Canaday
W. R. Horigan

PROTESTANT:

Vess Oil Corporation

PROPOSAL FOR DECISION

PROCEDURAL HISTORY

DATE APPLICATION FILED:

March 27, 2009

DATE OF NOTICE OF HEARING:

April 1, 2009

DATE OF HEARING:

December 14, 2009

HEARD BY:

James M. Doherty, Hearings
Examiner

Andres J. Trevino, Technical Examiner

DATE TRANSCRIPT RECEIVED:

December 30, 2009

DATE CLOSING ARGUMENT FILED:

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DATE PFD CIRCULATED:

March 11, 2010

STATEMENT OF THE CASE

Goldston Oil Corporation (“Goldston”) seeks a Rule 37 exception to directionally drill Well No. 1 on the 44-acre Goldston Fee pooled unit, Hitts Lake, North (Paluxy) Field, Smith County, Texas. Well No. 1 is proposed to be drilled from a surface location which is 248 feet from the west line and 476 feet from the south line of the unit to a bottom hole location which is 229 feet from the west line and 185 feet from the south line of the unit. A copy of the plat associated with the Form W-1 (Application for Permit to Drill, Recomplete, or Re-Enter) is attached to this proposal for decision as Appendix 1. A Rule 37 lease line exception is needed because the applicable field rules provide for 467’/933’ spacing on 40-acre drilling and proration units. The application is protested by Vess Oil Corporation (“Vess”) which is an offset operator to the south of the Goldston Fee Unit.

POSITIONS OF THE PARTIES

Goldston first contends that approval of the requested Rule 37 exception is necessary to prevent waste. It asserts that the bottom hole location of the proposed well is on a structural high beneath Goldston’s unit in a field with water influx, and because of this, the proposed well will recover oil that will not be recovered by any existing well or any future well at a regular location. Goldston also contends that the requested Rule 37 exception is necessary to provide Goldston with a reasonable opportunity to recover its fair share of oil, measured by the currently recoverable reserves beneath the 44-acre Goldston Fee Unit, and thus to prevent confiscation. Goldston also advances the theory that the drillsite tract of the Goldston Fee Unit is a legal subdivision as to Goldston’s one-half mineral interest, and Goldston is thus entitled to a Rule 37 exception for the proposed location to enable Goldston to recover its fair share of oil from the drillsite tract.

Vess contends that Goldston did not prove the bottom hole location of the proposed well is structurally high to Vess’ Pruitt No. 1 to the south of the Goldston Fee Unit. Vess believes that the Pruitt No. 1 is capable of recovering all of the recoverable oil in the area of Goldston’s proposed bottom hole location, and asserts that Goldston did not prove that a Rule 37 exception is necessary to prevent waste. Vess also contends that Goldston did not reliably prove the amount of current recoverable reserves constituting Goldston’s “fair share” or that the proposed bottom hole location is reasonable. According to Vess, even if it is assumed that a Rule 37 well is necessary to prevent confiscation, the evidence shows that the surface location of the proposed well is the more reasonable location. Vess disputes Goldston’s theory that the drillsite tract of the Goldston Fee Unit has been shown to be a legal subdivision, contending that the statewide spacing rule attached to this acreage prior to subdivision in 1936.

DISCUSSION OF THE EVIDENCE

Goldston

Goldston's Exhibit No. 2 proration schedule shows that the discovery date for the Hitts Lake, North (Paluxy) Field was June 1, 1990. According to Goldston's geologist, this field was created by transfer of wells from the Hitts Lake (Paluxy) Field. The examiners have officially noticed from the oil proration schedule that the discovery date for the Hitts Lake (Paluxy) Field was January 10, 1953. Goldston is not currently an operator in the field.

The Goldston Fee Unit is a 44-acre pooled unit consisting of four separate tracts. Tract 1 is the drill site tract, shown on the Form P-12 (Certificate of Pooling Authority) and plat filed with the Form W-1 as the Goldston Oil Corp. et al. 13.64 acre tract. This tract formerly was called a 11.29 acre tract when segregated from adjoining tracts, but a later survey determined that the tract contains 13.64 acres. The southern boundary of this tract is a creek bed that creates surveying difficulties.¹ According to Goldston's Land Manager, the drillsite tract was created in its present size and shape by a deed conveyance of the surface estate and one-half of the mineral estate on July 27, 1936, covering what was then called 11.29 acres. Except for subsequent pooling, the one-half mineral interest in the drillsite tract, now owned by Goldston, has not been owned in common with adjoining acreage since July 27, 1936.

On August 15, 1962, Humble Oil & Refining Co. pooled the north 6.04 acres of the drillsite tract into the Hitts Lake Oil Unit No. 4. A test well drilled on this pooled unit was a dry hole. This well was plugged and abandoned in 1966, and there was never any production from the Hitts Lake Oil Unit No. 4 pooled unit. On June 11, 1981, Expando Oil Company pooled the north 7.05 acres of the drillsite tract into the 40-acre Lawrence Et Al. Unit. The Lawrence No. 1 and Lawrence No. 1A replacement well were drilled on the Lawrence Et Al. Unit, and production was had from the Unit. The Lawrence No. 1 produced 81,018 barrels of oil from the Paluxy "A" Sand in the subject field from August 1981 to May 1984 when the well was plugged and abandoned due to mechanical difficulty. The Lawrence No. 1A produced 255,615 barrels of oil from the Paluxy "A" Sand from October 1984 until August 2002. Vess is the current operator of the Lawrence No. 1A, and this well is shut in with a Statewide Rule 14(b)(2) extension.²

¹ There is some controversy about whether the southern boundary of the drillsite tract is a crooked line following the creek bed as shown on Goldston's surveyor's plat or a straight line as shown on a plat attached to the unit designation for the Key Production Co. J. J. Pruitt Unit No. 1 to the south of the drillsite tract. Vess asserts that this makes a difference because some small amount of acreage which Goldston credits to the drillsite tract and the Goldston Fee Unit could actually be in the J. J. Pruitt Unit.

² The Form W-1 filed by Goldston states that the Lawrence No. 1A will not be produced concurrently with the proposed Goldston Fee Unit No. 1.

Goldston's base map of the Hitts Lake, North (Paluxy) Field area shows that six wells have produced from the Paluxy "A" Sand: (1) the Lawrence No. 1 which produced from August 1981 to May 1984 and is now plugged and abandoned; (2) the Lawrence No. 1A which produced from October 1984 to August 2002 and is now shut in; (3) the Texas State Park No. C3 which produced from May 1985 to June 2001 and is now plugged and abandoned; (4) the Hackett No. 2 which produced from February 1986 to April 2002 and is now shut in; (5) the Pruitt No. 1 which began producing in September 2002 and is still active; and (6) the Texas State Park No. C4 which began producing in September 2002 and is still active. Cumulative production from the Paluxy "A" Sand in the subject field through September 2009 was 1,769,236 barrels of oil.

The base map also shows that seven wells have produced from the Paluxy "B" Sand in the subject field: (1) the Texas State Park No. B1 which produced from November 1963 to December 1966 and is now plugged and abandoned; (2) the Texas State Park No. C1 which produced from December 1963 to April 1985 and is now an injector; (3) the Texas State Park No. D1 which produced from February 1964 to December 1977 and is now plugged and abandoned; (4) the HLOU No. 1 which began producing in September 1964 and is still active; (5) the HLOU No. 2 which produced from January 1965 to April 1968 and is now plugged and abandoned; (6) the Texas State Park No. C2 which began producing in October 1978 and is still active; and (7) the Phillips No. 1 which produced from January 1987 to September 2001 and is now shut in. Cumulative production from the Paluxy "B" Sand in the subject field as of September 2009 was 1,399,936 barrels of oil.

Goldston's geologist presented type logs for the Tyler State Park No. C1, the HLOU No. 4, and the Tyler State Park No. C3 and two stratigraphic cross sections for wells drilled in the subject field area. All wells show shale between the Paluxy "A" and Paluxy "B" Sands. Wells in the field produce from one sand or the other, and thus far there has been no well that produced from both sands. The log for the Texas State Park No. C4, which was drilled in September 2002 and is an active producer from the Paluxy "A" Sand, shows an oil-water contact at 6,717' subsea, which Goldston's geologist used on subsequent exhibits. The Lawrence No. 1 is located on acreage now included in the Goldston Fee Unit and was the first well to produce from the Paluxy "A" Sand. The proposed location of the Goldston Fee Unit No. 1 is between the Lawrence No. 1 and the Pruitt No. 1, an active producer from the Paluxy "A" Sand.

Goldston's geologist mapped reservoir thickness and structure for both the Paluxy "A" and Paluxy "B" Sands in the subject field. A gross isopach map of the Paluxy "B" Sand with porosity greater than 15% showed that there is a very limited amount of "B" reservoir under the Goldston Fee Unit. A structure map on top of the "B" Sand was presented and used in preparation of a net isopach map for the "B" Sand which was also presented. While there is a minimal amount of "B" Sand beneath the Goldston Fee Unit, this sand did not play any role in selection of the proposed location of the Goldston Fee Unit No. 1.

Goldston's geologist also presented a gross isopach map for the Paluxy "A" Sand with porosity greater than 15%, a structure map on top of the Paluxy "A" Sand, and a net isopach map of the Paluxy "A" Sand. The gross isopach shows that the "A" reservoir is bounded by an oil-asphalt contact on the northeast and northwest sides and a bounding fault on the south and east sides. The structure map reflects the interpretation of Goldston's geologist that with respect to the "A" Sand the peak of the structure is at 6,620' subsea beneath the Goldston Fee Unit and the proposed bottom hole location of the Goldston Fee No. 1 is on the 6,620' contour. A copy of the Goldston structure map is attached to this proposal for decision as Appendix 2. The interpretation shown by Goldston's structure map places the proposed bottom hole location about 20' high to the Pruitt No. 1 to the south, which is the existing well in the field which is highest on structure at about 6,642' subsea.³ The net isopach map for the Paluxy "A" Sand shows that the thickest part of the "A" reservoir is 50' thick and the proposed bottom hole location of the Goldston Fee Unit No. 1 is within the 50' contour.

Goldston's geologist agreed that the highest known pick in the field is in the Pruitt No. 1 at 6,642' subsea. The 6,630' subsea and 6,620' subsea contours on the Goldston structure map on top of the "A" Sand are based on the amount of sand that Goldston's geologist could potentially increase from the Pruitt well, using the sand isopach to support the structure. Three wells surrounding the area encompassed by the 6,630' and 6,620' contours on the structure map have a "big pile of sand." The gross interval in the "A" Sand for these surrounding wells is 58' in the Lawrence No. 1 and Sand Flat No. 53 and 48' in the Texas State Park No. C4, as compared to about 48' in the Pruitt No. 1.

A fault which cuts across the southeast corner of the Goldston Fee Unit is the boundary of the Paluxy "A" reservoir to the east and southeast. The sand continues to the east of the fault where producers from the "A" and "B" Sands produce in the Sand Flat Field. Goldston's geologist believes that fluids could have leaked across this fault. The Sand Flat Field was discovered in 1949 and went on secondary recovery in 1977 at a time when pressure in that field was lower. Pressure should have increased in the Sand Flat Field after 1977 with water injection. Goldston believes that there could have been fluid migration toward the Sand Flat Field in the past and migration toward the Hitts Lake, North (Paluxy) Field under current conditions, based on pressure differentials. Goldston asserted that there is water encroachment into the subject reservoir as a result of injection in the Sand Flat Field, but it does not believe that the reservoir has a natural water drive.

³ Vess disputed placement of the Pruitt No. 1 on Goldston's structure map which placed the Pruitt well about 950' to the south of the proposed bottom hole location of the Goldston Fee Unit No. 1. Vess contended that based on calls to the survey line of the Pruitt No. 1 and the bottom hole of the proposed Goldston well, the Pruitt well is only about 725' to the south. Vess further asserted that if the Pruitt well is about 225' further north than represented on the Goldston structure map, this would change the location of the contours shown on the structure map. Goldston's geologist believed, however, that if, in fact, the Pruitt well is closer to the boundary of the Goldston Fee Unit than represented on the Goldston structure map, this would simply move the structure above that seen in the Pruitt well to the north and more fully on the Goldston Fee Unit. Goldston's geologist did not think that this adjustment to the contours on the structure map would change the fact that the proposed bottom hole location of the Goldston Fee Unit No. 1 is at the highest structural position in the Paluxy "A" reservoir.

Goldston's Exhibit No. 15 shows Goldston's interpretation of the current oil-water contact in the Paluxy "A" Sand. The log of the Texas State Park No. C4 drilled in September 2002 showed a water contact at 6,717' subsea. Goldston estimates that based on the volume of oil removed from the "A" reservoir from September 2002 to the present, the current oil-water contact in the Paluxy "A" reservoir is at 6,694' subsea.

Using data from the structure map and isopach maps prepared by Goldston's geologist and reservoir parameters from a reservoir data exhibit in the 1989 hearing that resulted in separation of the Hitts Lake, North (Paluxy) Field from the Hitts Lake (Paluxy) Field, a Goldston petroleum engineer presented calculations of original oil in place and current recoverable oil in the Paluxy "A" reservoir generally and in the "A" reservoir beneath the Goldston Fee Unit.

Using acre feet in the "A" reservoir provided by Goldston's geologist, Goldston's engineer calculated that original oil in place in the "A" Sand in the subject field was 4,436,126 barrels of oil. Six wells have produced from the "A" Sand, two of which are still active. Cumulative production from the "A" Sand through September 2009 was about 1,769,236 barrels of oil. The recovery factor for the "A" reservoir to date is 39.9%. Since there is basically no gas in the Hitts Lake, North (Paluxy) reservoir, and a volumetric recovery factor would be less than 39.9%, Goldston's engineer believes that this data supports the theory that there may be some continuing flow of fluids across the fault that separates the Sand Flat and Hitts Lake, North (Paluxy) Fields. He believes that there would have to be some water influx into the Hitts Lake, North (Paluxy) Field to yield the 39.9% recovery factor.

Goldston's engineer made a calculation of original recoverable oil in the "A" reservoir beneath the drillsite tract of the Goldston Fee Unit, using an oil-water contact that existed in 1981, the date of first production from the Paluxy "A" Sand and 476 acre feet of reservoir determined by planimetry. He calculated that original oil in place in the "A" Sand under the drillsite tract was 542,802 barrels. Based on the 39.9% recovery factor, he calculated that recoverable oil under the drillsite tract in 1981 was 216,483 barrels when production from the "A" Sand commenced on the Lawrence Unit. Of that amount, 108,241 barrels would be attributable to the one-half mineral interest now owned by Goldston. Cumulative production from the Lawrence No. 1 and Lawrence No. 1A from 1981 to 2002 was 336,633 barrels. The amount of this cumulative production attributable to the one-half mineral interest now owned by Goldston, based on the 7.05 acres of the drillsite tract included in the 40-acre Lawrence Unit, is 29,666 barrels. This amounts to 27% of the recoverable oil Goldston's one-half interest was entitled to recover at the time production from the Paluxy "A" reservoir commenced.

Goldston's engineer also calculated recoverable oil in the Paluxy "A" Sand beneath the entire Goldston Fee Unit above the estimated current oil-water contact of 6,694' subsea. Acre feet for the Unit above 6,694' subsea (769 acre feet) was determined by use of a net isopach above 6,694' subsea developed by Goldston's geologist. The original oil in place above 6,694' subsea beneath the Goldston Fee Unit was 878,002 barrels. Based on the 39.9% recovery factor, Goldston's engineer estimated that current recoverable oil in the "A" Sand beneath the Goldston Fee Unit is

350,169 barrels. Goldston's engineer believes that the proposed location of the Goldston Fee No. 1 is a reasonable location to recover the currently recoverable oil beneath the unit, and structurally the proposed well is at a position necessary to produce this oil. Goldston's engineer also believes that the Hitts Lake, North (Paluxy) Field would be very responsive to a waterflood for secondary recovery such as has been accomplished in surrounding fields, and the proposed location of the Goldston Fee No. 1 would be a favorable location in the event of a waterflood.

Goldston's engineer also made a calculation of recoverable oil in the Paluxy "A" Sand above 6,642' subsea, which is the top of the sand in the Pruitt No. 1, the existing well in the subject field that is highest on structure. The original oil in place above 6,642' subsea was 235,180 barrels. Based on the 39.9% recovery factor, recoverable oil in the "A" reservoir above 6,642' subsea is 93,767 barrels. According to Goldston's engineer, this amount of oil cannot be recovered by any existing well in the field or by any additional well that might be drilled at a regular location.

Vess

A consulting petroleum geologist for Vess also presented a structure map on top of the Paluxy "A" Sand based on the same data used by Goldston's geologist for his structure map. A copy of the Vess structure map is attached to this proposal for decision as Appendix 3. The picks of tops of 15% porosity in the "A" Sand in various wells shown on the structure map are in general agreement with the picks made by Goldston's geologist, except for picks for the Cox No. 1 and the HLOU No. 1. The major difference in contouring in the Vess structure map as compared to the structure map presented by Goldston is that there are no contours above 6,640' subsea. Whereas, Goldston's geologist drew 6,630' subsea and 6,620' subsea contours in the area of the proposed location of the Goldston Fee No. 1, Vess' geologist depicted this same area to be flat to the Pruitt No. 1 well to the south of the Goldston Fee Unit. According to Vess' geologist, although a few feet of structure might be gained in the area of the proposed location of the Goldston Fee No. 1, this area is shown to be flat everywhere within his 6,640' contour because he has seen no evidence to show that the structure is otherwise. The interpretation shown by the Vess structure map is that both the surface location and bottom hole location of the proposed Goldston Fee No. 1 would be flat to the Pruitt No. 1. Goldston's geologist believes that the Pruitt No. 1 can produce the reserves in the area of the proposed bottom hole location of the Goldston Fee No. 1.

A Vess petroleum engineer testified that a well anywhere within the 6,640' contour shown on the Vess structure map, including a well at the surface location of the proposed Goldston Fee No. 1 could recover the remaining reserves in the subject field beneath the Goldston Fee Unit. Vess' petroleum engineer does not believe that there is a water influx into the subject field across the fault that lies between the Sand Flat No. 53 well and the Pruitt No. 1. There has been water influx in the Pruitt No. 1 for the last several years, but Vess' engineer believes the water is coming from a natural water drive and injection to the northwest.

EXAMINERS' OPINION

An owner of oil and gas is entitled to an opportunity to recover the reserves underlying his tract, and any denial of that opportunity amounts to confiscation. *Atlantic Refining Co. v. Railroad Commission*, 346 S.W.2d 801 (Tex. 1961); *Imperial American Resources Fund, Inc. v. Railroad Commission*, 557 S.W.2d 280 (Tex. 1977). When the subject tract is capable of supporting a regular location, the applicant for a Rule 37 exception based on confiscation must prove that the proposed irregular location is necessary because of surface or subsurface conditions and that the proposed location is reasonable. To do this, the applicant must show that it is not feasible to recover its fair share of hydrocarbons from regular locations.

In addition, if a substantial amount of hydrocarbons will be produced by the proposed Rule 37 well that otherwise would ultimately be lost, a permit to drill the well may be justified to prevent waste. *Hawkins v. Texas Co.*, 209 S.W.2d 338, 343 (Tex. 1948). An applicant seeking an exception to Rule 37 based on waste must show that: (1) unusual conditions, different from conditions in adjacent parts of the field, exist under the tract for which the exception is sought; and (2) as a result of these unusual conditions, hydrocarbons will be recovered by the well for which the exception is sought that would not be recovered by any existing well or by an additional well drilled at a regular location; and (3) the amount of otherwise unrecoverable hydrocarbons is substantial.

The examiners are of the opinion that Goldston has proved that the requested exception is necessary to prevent confiscation from the Goldston Fee Unit and to prevent the waste of oil. The proposed well will be the only well on the Goldston Fee Unit producing from the subject field. The subject field has either a natural water drive, as contended by Vess, or water influx as contended by Goldston. In either case, wells that are highest on structure have the best chance to produce the greatest amount of oil from the reservoir. Goldston's structure map and net isopach map show that the bottom hole location of the proposed Goldston Fee Unit No. 1 is at or near the peak of the structure of the Paluxy "A" Sand and in the thickest part of the Paluxy "A" reservoir.

According to the interpretation of Goldston's geologist, the top of the Paluxy "A" Sand at the proposed bottom hole location is at 6,620' subsea, which is the peak of the structure in the Paluxy "A" reservoir. Vess characterizes this interpretation as purely speculative, because the Vess Pruitt No. 1 well is the existing well in the field which is highest on structure at 6,642' subsea, and there is insufficient well control to support the 6,630' and 6,620' contours on Goldston's structure map. Vess' geologist presented his own structure map with the interpretation that the peak of the Paluxy "A" structure is at 6,640' subsea, and both the surface and bottom hole locations of the proposed Goldston Fee Unit No. 1 are flat to the Pruitt well.

Although there may be some uncertainty as to the precise top of the Paluxy "A" structure at the proposed bottom hole location, the examiners believe that Goldston's interpretation of the structure is more persuasive than Vess' interpretation. Except for the dispute about the subsea elevation of the peak of the structure, the Goldston and Vess structure maps are in general agreement. Both structure maps show the structure of the Paluxy "A" Sand building from every

compass direction to some sort of peak in the area of the Goldston Fee Unit and that the proposed bottom hole of the Goldston Fee Unit No. 1 is located in the area of the Goldston Fee Unit that is at the peak of the structure. Both structure maps show that there is no regular location on the Goldston Fee Unit that is structurally equivalent to the structure at the proposed bottom hole location of the Goldston Fee Unit No. 1. A build up of reservoir thickness in the area of the proposed bottom hole location as shown by Goldston's net isopach is some support for the interpretation of Goldston's geologist that the proposed bottom hole location is at or near the peak of the structure in the Paluxy "A" reservoir and structurally high to the Vess Pruitt No. 1 to the south. In the opinion of the examiners, the gradient of the contours drawn on both the Goldston and Vess structure maps makes it more likely than not that the structure peaks at or near the proposed bottom hole location as shown on the Goldston structure map. The examiners think it less likely that the structure builds consistently from all compass directions and flattens out into a relatively large plateau at 6,640' subsea as shown on Vess' structure map.⁴

Calculated current recoverable oil beneath the Goldston Fee Unit in the Paluxy "A" Sand above the current oil-water contact of 6,694' subsea is 350,169 BO. Goldston is entitled to a well that will afford it a reasonable opportunity to recover its fair share of oil and any denial of this right would amount to confiscation. There is no regular location on the Goldston Fee Unit that is sufficiently high on structure to enable Goldston to recover its fair share. The proposed bottom hole location of the Goldston Fee Unit No. 1 is reasonable because more likely than not it is at the peak of the structure in the Paluxy "A" reservoir. The examiners do not agree with Vess' position that a bottom hole drilled directly beneath the proposed surface location of the proposed Goldston Fee Unit No. 1 would be a more reasonable location, because it is more likely than not that this alternative location proposed by Vess would be structurally low to the proposed bottom hole location. According to Goldston's interpretation of the structure, the surface location would be 30' low to the proposed bottom hole location, and even Vess' structure map has the surface location right at the edge of the 6,640' plateau interpreted by Vess' geologist. Requiring Goldston to drill to a bottom hole directly beneath the surface location of the proposed well would also be moving in the direction of an area of the reservoir already drained by the Lawrence No. 1, now plugged and abandoned, and the Lawrence No. 1A, now shut in.

The examiners also believe that if the Goldston Fee Unit No. 1 is drilled and produced at the proposed location, it is more likely than not that the will recover a substantial amount of oil that will not be recovered by any existing well or any future well that might be drilled at a regular location. Unusual reservoir conditions exist beneath the Goldston Fee Unit in the form of a structural high in the Paluxy "A" Sand in a field having water influx and a rising oil-water contact. Currently, there are only two wells producing from the Paluxy "A" reservoir, the Pruitt No. 1 to the south of the Goldston Fee Unit and the Texas State Park No. C4 to the southwest. The top of 15% or more porosity in the Paluxy "A" Sand in the Texas State Park No. C4 is at 6,683' subsea and the top in

⁴ Vess' geologist testified that he depicted this relatively large flat area at the top of the Paluxy "A" structure because he had seen no evidence to say otherwise. He conceded, however, that the proposed Goldston Fee Unit No. 1 might come in with a "little more elevation" than 6,640' subsea.

the Pruitt No. 1 is at 6,642' subsea. The evidence is sufficient to show that more likely than not, both of these existing wells are structurally low to the proposed bottom hole location of the Goldston Fee Unit No. 1. According to Goldston's structure map, the Texas State Park No. C4 is 63' low and the Pruitt No. 1 is 22' low. Goldston calculated the recoverable oil in the Paluxy "A" Sand above 6,642' subsea, which is the top of the sand in the Pruitt No. 1, to be 93,767 BO. The accuracy of this calculation is dependent on Goldston's interpretation that Paluxy "A" structure peaks at 6,620' subsea. Even if this estimate is overly optimistic, the examiners agree with Goldston's thesis that the proposed Goldston Fee Unit No. 1 will recover a substantial amount of oil that will not be recovered by the Pruitt well. There is no regular location where additional wells might be drilled which has structure in the Paluxy "A" reservoir equivalent to the proposed well according to either party's interpretation.

The Form W-1 filed by Goldston has a remark that a "unit diagonal exception [is] also requested." Requests for such exceptions are processed administratively by the Engineering Unit in the Technical Permitting Section, are not subject to notice and hearing, and need not be considered in this proposal for decision.

Based on the record in this case, the examiners recommend adoption of the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

1. At least ten (10) days notice of this hearing was provided to all affected persons as defined by Statewide Rule 37(a)(2) and 37(a)(3).
2. Goldston Oil Corporation ("Goldston") seeks an exception to Statewide Rule 37 to directionally drill Well No. 1 on the 44-acre Goldston Fee pooled unit, Hitts Lake, North (Paluxy) Field, Smith County, Texas.
3. The Goldston Fee Unit, Well No. 1 is proposed to be drilled from a surface location which is 248 feet from the west line and 476 feet from the south line of the unit to a bottom hole location which is 229 feet from the west line and 185 feet from the south line of the unit.
4. A Rule 37 exception is needed to drill the well as proposed because the applicable field rules provide for 467'/933' spacing on 40-acre proration units.
5. The Goldston application is opposed by Vess Oil Corporation ("Vess"), which is an offset operator to the south of the Goldston Fee Unit.

6. The Hitts Lake, North (Paluxy) Field was created in 1990 by transfer of wells from the Hitts Lake (Paluxy) Field. The field consists of the Paluxy “A” Sand and the Paluxy “B” Sand which are generally separated by shale. Wells in the field have produced from one sand or the other, and thus far there has been no well that produced from both sands.
7. Six wells have produced from the Paluxy “A” Sand. Cumulative production from this sand through September 2009 was 1,769,236 barrels of oil.
8. Four of the six wells that produced from the Paluxy “A” Sand are now either plugged and abandoned or shut in, including two wells located on acreage now included in the Goldston Fee Unit, the Lawrence No. 1 which produced from August 1981 to May 1984 and is now plugged and abandoned and the Lawrence No. 1A which produced from October 1984 to August 2002 and is now shut in. The Lawrence No. 1 produced 81,018 BO from the Paluxy “A” Sand before the well was plugged and abandoned. The Lawrence No. 1A produced 255,615 BO from the Paluxy “A” Sand before it was shut in. Vess is the designated operator of the Lawrence No. 1A which is shut in with a Statewide Rule 14(b)(2) extension.
9. Seven wells have produced from the Paluxy “B” Sand. Cumulative production from this sand through September 2009 was 1,399,936 BO.
10. There is very little productive Paluxy “B” Sand beneath the Goldston Fee Unit, and this sand played no role in selection of the proposed location of the Goldston Fee Unit No. 1.
11. There is water influx or water drive in the Paluxy “A” reservoir. The Texas State Park No. C4 drilled in September 2002 found the Paluxy “A” Sand and a water contact at 6,717' subsea. The oil-water contact likely has moved up since September 2002 based on production from the Paluxy “A” reservoir since that date. The current oil-water contact in the Paluxy “A” reservoir is estimated to be at 6,694' subsea.
12. In the Paluxy “A” reservoir under current conditions, wells that are high on structure in the Paluxy “A” reservoir are necessary to enable operators to recover their fair share of oil from the reservoir and prevent the waste of oil.
13. The Vess Pruitt No. 1 to the south of the Goldston Fee Unit is the existing well producing from the Paluxy “A” reservoir that is highest on structure. The top of 15% porosity in the Paluxy “A” Sand in this well is at 6,642' subsea.
14. It is more likely than not that the proposed bottom hole location of the Goldston Fee Unit No. 1 is structurally higher in the Paluxy “A” reservoir than all surrounding wells and locations.

- a. Structure builds from all compass directions toward the Goldston Fee Unit according to structure maps and geologic interpretations presented by Goldston and Vess.
 - b. Thickness of the Paluxy “A” Sand builds from the Pruitt No. 1 location toward the Goldston Fee Unit and the proposed bottom hole location of the Goldston Fee Unit No. 1.
 - c. Based on the gradient of surrounding contours on the Goldston and Vess structure maps and the build-up of sand thickness from the Pruitt well toward the Goldston Fee Unit, the interpretation of Goldston’s geologist that structure of the Paluxy “A” sand builds to 6,620’ subsea in the area of the proposed bottom hole location of the Goldston Fee Unit No. 1 is more likely correct and plausible than the interpretation of Vess’ geologist that there is a relatively large flat plateau at the top of the structure at 6,640’ subsea.
 - d. Vess’ geologist acknowledged the possibility that elevation in the Paluxy “A” sand higher than 6,640 subsea may be encountered at the proposed bottom hole location of the Goldston Fee Unit No. 1.
15. Current recoverable oil beneath the Goldston Fee Unit in the Paluxy “A” reservoir above the estimated oil-water contact at 6,694’ subsea is approximately 350,169 barrels of oil.
 16. Goldston has no existing well on the Goldston Fee Unit to recover the current recoverable oil beneath the unit in the Paluxy “A” reservoir.
 17. There is no regular location on the Goldston Fee Unit having sufficient structure above the oil-water contact to afford Goldston a reasonable opportunity to recover its fair share of oil from the Paluxy “A” reservoir.
 18. The proposed bottom hole location of the Goldston Fee Unit No. 1 is reasonable.
 - a. The proposed bottom hole location of the Goldston Fee Unit No. 1 is at the peak of the Paluxy “A” structure beneath the unit.
 - b. The proposed bottom hole location of the Goldston Fee Unit No. 1 is more likely than not structurally higher in the Paluxy “A” Sand than would be a bottom hole location directly beneath the proposed surface location of the Goldston Fee Unit No. 1.
 - c. Locating the bottom hole of the proposed Goldston Fee Unit No. 1 to the north at or near the proposed surface location would be moving the bottom hole nearer to an area of the Paluxy “A” reservoir drained by the Lawrence No. 1 and the Lawrence No. 1A.

- d. Fields around the Hitts Lake, North (Paluxy) Field have been water flooded for secondary recovery. The Hitts Lake, North (Paluxy) Field is a likely candidate for a similar water flood, and the proposed bottom hole location of the Goldston Fee Unit No. 1 would be advantageous in the event of a water flood.
19. The proposed Goldston Fee Unit No. 1 more likely than not will recover a substantial amount of oil from the Paluxy "A" reservoir that will not be recovered by any existing well or any additional well that might be drilled at a regular location.
 - a. Based on geologic interpretation of Goldston's geologist regarding the Paluxy "A" reservoir structure and thickness, current recoverable oil in the Paluxy "A" reservoir above 6,642' subsea is approximately 93,767 barrels of oil.
 - b. The existing well in the Paluxy "A" reservoir which is highest on structure is the Vess Pruitt No. 1, and the top of the structure in the Pruitt well is at 6,642' subsea. The Pruitt well is incapable of recovering oil above this elevation.
 - c. There are no regular locations on the Goldston Fee Unit or on any surrounding acreage that are structurally high enough in the Paluxy "A" reservoir to recover the oil above 6,642' subsea.

CONCLUSIONS OF LAW

1. Proper notice of hearing was timely issued by the Railroad Commission to appropriate persons legally entitled to notice.
2. All things necessary to the Commission attaining jurisdiction over the subject matter and the parties in this hearing have been performed.
3. Approval of a Rule 37 exception for the Goldston Fee Unit, Well No. 1 at the location proposed by Goldston Oil Corporation is necessary to prevent the waste of oil.
4. Approval of a Rule 37 exception for the Goldston Fee Unit, Well No. 1 at the location proposed by Goldston Oil Corporation is necessary to prevent confiscation from the Goldston Fee Unit and protect correlative rights of mineral owners.

RECOMMENDATION

The examiners recommend that the application of Goldston Oil Corporation for a Rule 37 exception to drill the Goldston Fee Unit, Well No. 1 in the Hitts Lake, North (Paluxy) Field, Smith County, Texas, be granted as necessary to prevent waste and protect correlative rights.

Respectfully submitted,

James M. Doherty
Hearings Examiner

Andres J. Trevino
Technical Examiner