Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-045-35908

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

16. No of acres in lease

17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth

20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

22. Approximate date work will start*

23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature

Name *(Printed/Typed)*

Date

Title

Approved by *(Signature)*

Name *(Printed/Typed)*

Date

Title

Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 12/06/2022

Confidential

Additional Operator Remarks

Location of Well

0. SHL: LOT 8 / 2481 FNL / 432 FEL / TWSP: 30N / RANGE: 10W / SECTION: 33 / LAT: 36.76915 / LONG: -107.882274 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 1993 FNL / 1320 FEL / TWSP: 30N / RANGE: 10W / SECTION: 32 / LAT: 36.770435 / LONG: -107.906269 (TVD: 6059 feet, MD: 6489 feet)

PPP: SENE / 2006 FNL / 0 FEL / TWSP: 30N / RANGE: 10W / SECTION: 32 / LAT: 36.770435 / LONG: -107.906269 (TVD: 6059 feet, MD: 6489 feet)

PPP: LOT 6 / 2019 FNL / 2630 FEL / TWSP: 30N / RANGE: 10W / SECTION: 33 / LAT: 36.770443 / LONG: -107.885264 (TVD: 6059 feet, MD: 6489 feet)

PPP: LOT 7 / 2019 FNL / 1310 FEL / TWSP: 30N / RANGE: 10W / SECTION: 33 / LAT: 36.770443 / LONG: -107.885264 (TVD: 6059 feet, MD: 6489 feet)

BHL: SWNE / 1990 FNL / 2338 FEL / TWSP: 30N / RANGE: 10W / SECTION: 32 / LAT: 36.770435 / LONG: -107.906511 (TVD: 6078 feet, MD: 12712 feet)

CONFIDENTIAL

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District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-35908	97232	BASIN MANCOS

[4] Property Code	[5] Property Name	[6] Well Number
325995	TRIEB FEDERAL 603 Com	1H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372171	HILCORP ENERGY COMPANY	6050'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	33	30N	10W	8	2481	NORTH	432	EAST	SAN JUAN

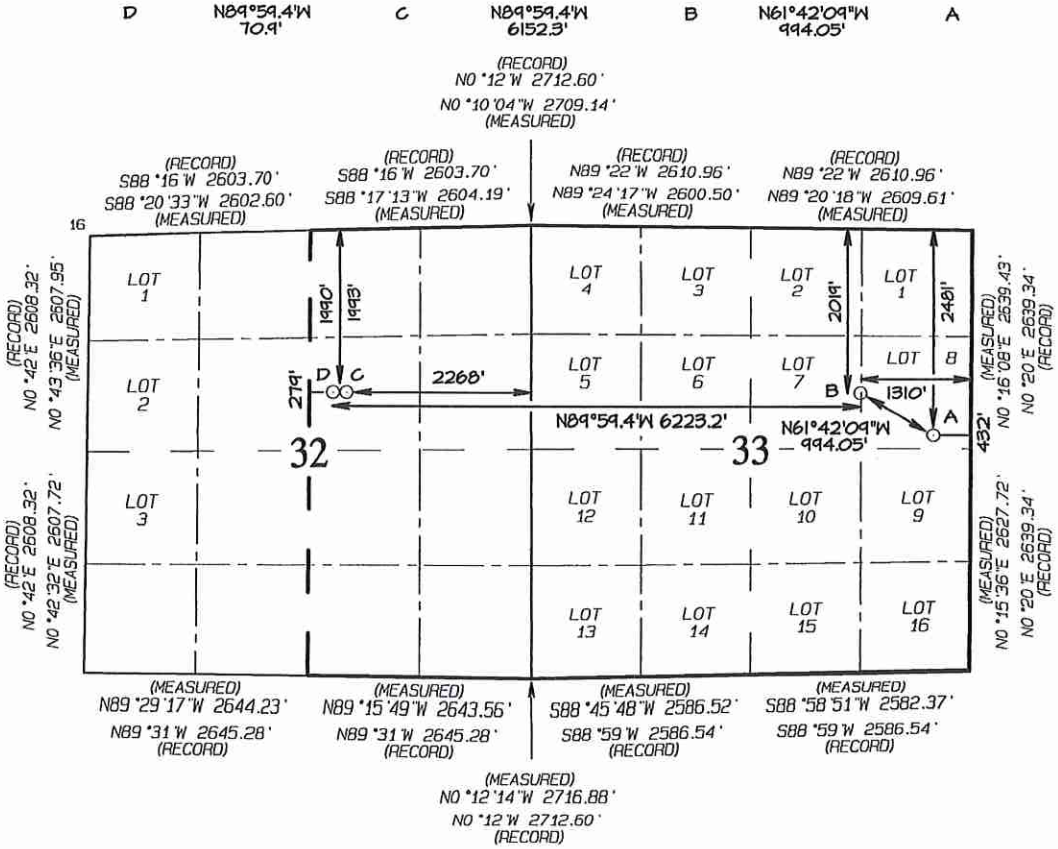
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	32	30N	10W		1990	NORTH	2338	EAST	SAN JUAN

[12] Dedicated Acres		[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
958.52	E/2 - Section 32 Entire Section 33			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

D	C	B	A
BOTTOM-HOLE (LATERAL) 1990' FNL 2338' FEL SEC 32, T30N, R10W LAT: 36.770430 °N LONG: 107.905891 °W DATUM: NAD1927 LAT: 36.770435 °N LONG: 107.906511 °W DATUM: NAD1983	LAST TAKE POINT 1993' FNL 2268' FEL SEC 32, T30N, R10W LAT: 36.770430 °N LONG: 107.905649 °W DATUM: NAD1927 LAT: 36.770435 °N LONG: 107.906269 °W DATUM: NAD1983	FIRST TAKE POINT 2019' FNL 1310' FEL SEC 33, T30N, R10W LAT: 36.770438 °N LONG: 107.884644 °W DATUM: NAD1927 LAT: 36.770443 °N LONG: 107.885264 °W DATUM: NAD1983	SURFACE LOCATION 2481' FNL 432' FEL SEC 33, T30N, R10W LAT: 36.769145 °N LONG: 107.881655 °W DATUM: NAD1927 LAT: 36.769150 °N LONG: 107.882274 °W DATUM: NAD1983



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 11/28/2018 Date

Amanda Walker
Printed Name

mwalker@hilcorp.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: NOVEMBER 27, 2018
Date of Survey: JULY 20, 2018

Signature and Seal of Professional Surveyor

JASON C. EDWARDS NEW MEXICO 15269 REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

Received by OCD: 12/7/2022 6:35:43 AM
Released to Imaging: 1/4/2023 2:57:12 PM

Directions from the Intersection of US Hwy 550 & State Hwy 173

in Aztec, NM to Hilcorp Energy Company Trieb Federal Com 603 #1H

2481' FNL & 432' FEL, Section 33, T30N, R10W, N.M.P.M., San Juan County, NM

Latitude: 36.769150°N Longitude: 107.882274°W Datum: NAD1983

From the intersection of US Hwy 550 & State Hwy 173 in Aztec, NM, travel Easterly on State Hwy 173 for 1.0 mile to fork in roadway;

Go Left (Easterly) remaining on State Hwy 173 for 3.2 miles to State Hwy 575 on right-hand side of roadway @ Mile Marker 4.2;

Go Right (South-easterly) exiting State Hwy 173 onto State Hwy 575 for 3.1 miles to fork in roadway;

Go Left (Northerly) exiting State Hwy 575 onto existing roadway for 0.1 mile to fork in roadway;

Go Right (South-easterly) for 0.2 mile to existing Hilcorp Trieb Federal Com #2B location, with begin proposed access on south edge of existing wellpad continuing for an additional 295.3' to staked Trieb Federal Com 603 #1H location.

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Hilcorp Energy Company **OGRID:** 372171 **Date:** 10/4/2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MMCF/D	Anticipated Produced Water BBL/D
Trieb Federal 601 Com 1H	30-045-35906	H,33,T30N,R10W	2492' FNL & 405' FEL	10	3	10
Trieb Federal 601 Com 2H	30-045-35907	H,33,T30N,R10W	2501' FNL & 417' FEL	10	3	10
Trieb Federal 603 Com 1H	30-045-35908	H,33,T30N,R10W	2481' FNL & 432' FEL	10	3	10

IV. Central Delivery Point Name: Chaco Processing Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Trieb Federal 601 Com 1H	30-045-35906					**2023**
Trieb Federal 601 Com 2H	30-045-35907					**2023**
Trieb Federal 603 Com 1H	30-045-35908					**2023**

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.
If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:
Printed Name: Amanda Walker
Title: Operations Regulatory Tech Sr.
E-mail Address: mwalker@hilcorp.com
Date: 10/4/2022
Phone: 346-237-2177

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

Hilcorp Energy Natural Gas Management Plan Attachments

VI. Separation Equipment

The operator will select separation equipment for the maximum anticipated throughput and pressure to optimize gas capture. Separation equipment is sized according to manufacturer's design specifications. Separation vessels are built following the A.S.M.E. section VII division 1 codes for pressure vessel design, fabrication, inspection, testing and certification. Anticipated well pressures and production rates are evaluated to select separation equipment according to the equipment's designed operating pressure and throughput.

After completion, the operator utilizes flowback equipment, including separators, to manage wellbore fluids and solids during the initial separation period. After the initial flowback period is complete the operator utilizes iterative facility separation equipment to ensure that optimal separation is achieved.

VII. Operational Practices 19.15.27.8 NMAC A through F

A. The operator will maximize the recovery of natural gas and minimize the amount of gas vented or flared when technically and safely feasible as further described and detailed within the following subsections (B-F of 19.15.27.8). In all cases where natural gas venting and flaring requires regulatory reporting, reporting will be submitted accurately and within the required time frames.
B. Venting and flaring during drilling operations:
    a. New Drill HZ Gas Wells: The operator drills wells in the area by utilizing a balanced mud to safely drill the wellbore. This technique prevents gas from coming to surface during the drilling process. If there is an emergency or malfunction and natural gas does come to surface the natural gas will be captured and routed to sales if technically and safely feasible.
C. Venting and flaring during completion or recompletion operations:
    a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from the newly drilled and completed wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible. During initial flowback and initial separation flowback the operator will utilize contracted flowback equipment, including separators, to manage wellbore fluids and solids. The initial flowback period will be minimized and flow will be sent to separation equipment as soon as possible to reduce the amount of gas that is vented to atmosphere. The natural gas will be utilized on site as needed for fuel gas and natural gas will be sold.

D. Venting and flaring during production operations:
    a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from producing wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible.

        Operations will effectively manage the following scenarios to minimize the quantity of natural gas that is vented or flared:

(a) If there is an emergency or malfunction vented or flared natural gas will be reported, if required, and the emergency or malfunction will be resolved as soon as technically and safely feasible.
(b) If the wellbore needs to be unloaded to atmosphere the operator will not vent the well after the well has achieved a stabilized rate and pressure. The operator will remain on site during unloading. Plunger lift systems will be optimized to reduce the amount of natural gas venting. Downhole maintenance, such as workovers, swabbing, etc. will only be conducted as needed and best management practices will be utilized to reduce venting of natural gas.
(c) The operator will minimize the amount of time that natural gas is vented to atmosphere from gauging and sampling a storage tank or low pressure vessel. The formation is only anticipated to produce water and therefore tank emissions are anticipated to be negligible.
(d) The operator will reduce the amount of time needed for loading out liquids from a storage tanks or other low-pressure vessels whenever feasible. Operations will always utilize the water transfer systems when available. Water loading emissions are anticipated to be negligible.
(e) Equipment will be repaired and maintained routinely to minimize the venting or flaring of natural gas. Repairs and maintenance will be conducted in a manner that minimizes the amount of natural gas vented to atmosphere through the isolation of the equipment that is being repaired or maintained.
(f) Electric controllers and pumps will be installed to replace pneumatic controllers whenever feasible. Pneumatic controllers and pumps will be inspected frequently to ensure that no excess gas is vented to atmosphere.
(g) No dehydration or amine units are anticipated to be set on location.
(h) Compressors, compressor engines, turbines, flanges, connectors, valves, storage tanks, and other low-pressure vessels and flanges will be routinely inspected to ensure that no excess venting occurs outside of normal operations.
(i) Regulatory required testing, such as bradenhead and packer testing will be performed in a manner that minimizes the amount of natural gas vented to atmosphere.
(j) If natural gas does not meet gathering pipeline specifications gas samples will be collected twice per week to determine when pipeline specification gas content has been achieved. During this time frame gas will be flared and not vented to atmosphere. Natural gas that meets pipeline specifications will be sold via pipeline and natural gas that can be utilized for fuel gas will be used during this time.
(k) If pipeline, equipment, or facilities need purged of impurities gas losses will be minimized as much as technically and safely feasible.

E. Performance standards:

a. The production facilities are designed to handle the maximum throughput and pressures from producing wellbores and will be designed to minimize waste. The amount of gas vented and flared will be minimized when technically and safely feasible.
b. All tanks that are routed to a control device that is installed after 5/25/2021 will have an automatic gauging system to minimize the amount of vented natural gas.
c. If a flare stack is installed or replaced after 5/25/2021 it will be equipped with an automatic ignitor or continuous pilot. The flare stack will be properly sized and designed to ensure proper combustion efficiency. The flare stack will be located 100 feet away from the nearest wellhead or storage tank.
d. AVO inspections will be conducted weekly for the year after completion and for all wells producing greater than 60,000 cubic feet of natural gas daily. The AVO inspection will include all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated pipeline to identify any leaks and releases by comprehensive auditory, visual, and olfactory inspection. The AVO inspection records will be maintained for 5 years which will be available at the department's request. Identified leaks will be repaired as soon as feasible to minimize the amount of vented natural gas. F. Measurement or estimation of vented and flared natural gas.

a. The volume of natural gas that is vented, flared or consumed for beneficial use will be measured when possible, or estimated, during drilling, completions, or production operations.
b. Equipment will be installed to measure the volume of natural gas flared for all APD's issued after 5/25/2021 on facilities that will have an average daily gas rate greater than 60,000 cubic feet of natural gas. Measurement equipment will conform to API MPMS Chapter 14.10 regulations. The measurement equipment will not have a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment. If metering is not practical then the volume of gas will be estimated.

Hilcorp
Energy Company

Hilcorp Energy Corp.

San Juan, NM NAD27
Trieb Fed Pad
Trieb Federal Com 603 1H

OH
Plan #2

Anticollision Report

09 November, 2018

Scientific Drilling

www.scientificdrilling.com

Scientific Drilling, Intl

Anticollision Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 15,000.00 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 11/9/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,711.72	Plan #2 (OH)	MWD+HDGM	OWSG MWD + HDGM

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Trieb Fed Pad						
Trieb Fed 2B - OH - OH	5,726.33	5,720.71	169.15	33.81	1.250	Level 2, CC, ES, SF
Trieb Fed 2N - OH - OH	6,877.29	6,080.19	730.87	571.35	4.582	CC
Trieb Fed 2N - OH - OH	6,900.00	6,080.26	731.22	571.27	4.571	ES, SF
Trieb Federal Com 601 1H - OH - Plan #2	500.00	500.00	29.36	26.14	9.101	CC, ES
Trieb Federal Com 601 1H - OH - Plan #2	900.00	900.14	42.63	36.52	6.978	SF
Trieb Federal Com 601 2H - OH - Plan #2	500.00	500.00	25.10	21.88	7.780	CC
Trieb Federal Com 601 2H - OH - Plan #2	600.00	600.66	25.47	21.51	6.435	ES
Trieb Federal Com 601 2H - OH - Plan #2	1,000.00	1,002.20	31.88	25.01	4.640	SF
Trieb Federal Com 602 1H - OH - Plan #2	500.00	500.00	101.35	98.12	31.414	CC, ES
Trieb Federal Com 602 1H - OH - Plan #2	800.00	788.46	128.96	123.57	23.926	SF
Trieb Federal Com 602 2H - OH - Plan #2	500.00	500.00	76.64	73.41	23.755	CC, ES
Trieb Federal Com 602 2H - OH - Plan #2	700.00	695.36	88.12	83.47	18.953	SF
Trieb Federal Com 603 2H - OH - Plan #2	500.00	500.00	49.91	46.68	15.469	CC, ES
Trieb Federal Com 603 2H - OH - Plan #2	12,711.72	12,805.16	1,304.71	888.72	3.136	SF
Trieb Federal Com 603 3H - OH - Plan #2	500.00	500.00	15.09	11.86	4.677	CC
Trieb Federal Com 603 3H - OH - Plan #2	600.00	599.76	15.47	11.52	3.919	ES
Trieb Federal Com 603 3H - OH - Plan #2	12,711.72	12,904.15	1,185.25	770.39	2.857	SF
Trieb Federal Com 603 4H - OH - Plan #2	500.00	500.00	75.01	71.78	23.250	CC, ES
Trieb Federal Com 603 4H - OH - Plan #2	12,711.72	13,056.80	2,556.20	2,141.96	6.171	SF
Trieb Federal Strat Test 600 #1 - OH - Plan #1	500.00	500.00	52.28	49.05	16.204	CC, ES
Trieb Federal Strat Test 600 #1 - OH - Plan #1	1,000.00	998.61	83.31	76.50	12.232	SF

Offset Design Trieb Fed Pad - Trieb Fed 2B - OH - OH

Survey Program: 7125-UNKNOWN

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	31.00	31.00	0.00	0.62	-20.29	606.14	-224.06	646.23	645.61	0.62	1,041.969	
100.00	100.00	131.00	131.00	0.18	2.62	-20.29	606.14	-224.06	646.23	643.43	2.80	230.843	
200.00	200.00	231.00	231.00	0.54	4.62	-20.29	606.14	-224.06	646.23	641.07	5.16	125.289	
300.00	300.00	331.00	331.00	0.90	6.62	-20.29	606.14	-224.06	646.23	638.71	7.52	85.976	
400.00	400.00	431.00	431.00	1.25	8.62	-20.29	606.14	-224.06	646.23	636.35	9.87	65.442	
500.00	500.00	531.00	531.00	1.61	10.62	-20.29	606.14	-224.06	646.23	633.99	12.23	52.825	
600.00	599.98	630.98	630.98	1.97	12.62	1.19	606.14	-224.06	644.48	629.89	14.59	44.169	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Fed 2B - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7125-UNKNOWN

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
700.00	699.84	730.84	730.84	2.33	14.62	1.20	606.14	-224.06	639.25	622.30	16.95	37.715	
800.00	799.47	830.47	830.47	2.70	16.61	1.22	606.14	-224.06	630.73	611.43	19.31	32.670	
900.00	899.04	930.04	930.04	3.06	18.60	1.24	606.14	-224.06	621.44	599.79	21.65	28.698	
1,000.00	998.61	1,029.61	1,029.61	3.42	20.59	1.25	606.14	-224.06	612.16	588.15	24.00	25.502	
1,100.00	1,098.17	1,129.17	1,129.17	3.80	22.58	1.27	606.14	-224.06	602.87	576.51	26.36	22.875	
1,200.00	1,197.74	1,228.74	1,228.74	4.17	24.57	1.29	606.14	-224.06	593.58	564.87	28.71	20.677	
1,300.00	1,297.31	1,328.31	1,328.31	4.54	26.57	1.31	606.14	-224.06	584.29	553.23	31.06	18.813	
1,400.00	1,396.88	1,427.88	1,427.88	4.91	28.56	1.34	606.14	-224.06	575.00	541.59	33.41	17.210	
1,500.00	1,496.44	1,527.44	1,527.44	5.29	30.55	1.36	606.14	-224.06	565.71	529.95	35.76	15.818	
1,600.00	1,596.01	1,627.01	1,627.01	5.66	32.54	1.38	606.14	-224.06	556.43	518.31	38.12	14.598	
1,700.00	1,695.58	1,726.58	1,726.58	6.04	34.53	1.40	606.14	-224.06	547.14	506.67	40.47	13.520	
1,800.00	1,795.15	1,826.15	1,826.15	6.41	36.52	1.43	606.14	-224.06	537.85	495.03	42.82	12.560	
1,900.00	1,894.71	1,925.71	1,925.71	6.79	38.51	1.45	606.14	-224.06	528.56	483.39	45.18	11.700	
2,000.00	1,994.28	2,025.28	2,025.28	7.17	40.51	1.48	606.14	-224.06	519.27	471.75	47.53	10.925	
2,100.00	2,093.85	2,124.85	2,124.85	7.54	42.50	1.51	606.14	-224.06	509.99	460.10	49.88	10.224	
2,200.00	2,193.42	2,224.42	2,224.42	7.92	44.49	1.53	606.14	-224.06	500.70	448.46	52.24	9.585	
2,300.00	2,292.98	2,323.98	2,323.98	8.30	46.48	1.56	606.14	-224.06	491.41	436.82	54.59	9.002	
2,400.00	2,392.55	2,423.55	2,423.55	8.67	48.47	1.59	606.14	-224.06	482.13	425.18	56.94	8.467	
2,500.00	2,492.12	2,523.12	2,523.12	9.05	50.46	1.62	606.14	-224.06	472.84	413.54	59.30	7.974	
2,600.00	2,591.69	2,622.69	2,622.69	9.43	52.45	1.66	606.14	-224.06	463.55	401.90	61.65	7.519	
2,700.00	2,691.25	2,722.25	2,722.25	9.81	54.45	1.69	606.14	-224.06	454.26	390.26	64.01	7.097	
2,800.00	2,790.82	2,821.82	2,821.82	10.18	56.44	1.73	606.14	-224.06	444.98	378.62	66.36	6.706	
2,900.00	2,890.39	2,921.39	2,921.39	10.56	58.43	1.76	606.14	-224.06	435.69	366.98	68.71	6.341	
3,000.00	2,989.96	3,020.96	3,020.96	10.94	60.42	1.80	606.14	-224.06	426.41	355.34	71.07	6.000	
3,100.00	3,089.52	3,120.52	3,120.52	11.32	62.41	1.84	606.14	-224.06	417.12	343.70	73.42	5.681	
3,200.00	3,189.09	3,220.09	3,220.09	11.70	64.40	1.88	606.14	-224.06	407.83	332.06	75.78	5.382	
3,300.00	3,288.66	3,319.66	3,319.66	12.07	66.39	1.93	606.14	-224.06	398.55	320.42	78.13	5.101	
3,400.00	3,388.23	3,419.23	3,419.23	12.45	68.38	1.97	606.14	-224.06	389.26	308.78	80.48	4.836	
3,500.00	3,487.79	3,518.79	3,518.79	12.83	70.38	2.02	606.14	-224.06	379.98	297.14	82.84	4.587	
3,600.00	3,587.36	3,618.36	3,618.36	13.21	72.37	2.07	606.14	-224.06	370.69	285.50	85.19	4.351	
3,700.00	3,686.93	3,717.93	3,717.93	13.58	74.36	2.12	606.14	-224.06	361.41	273.86	87.55	4.128	
3,800.00	3,786.50	3,817.50	3,817.50	13.96	76.35	2.18	606.14	-224.06	352.12	262.22	89.90	3.917	
3,900.00	3,886.06	3,917.06	3,917.06	14.34	78.34	2.24	606.14	-224.06	342.84	250.58	92.26	3.716	
4,000.00	3,985.63	4,016.63	4,016.63	14.72	80.33	2.30	606.14	-224.06	333.56	238.95	94.61	3.526	
4,100.00	4,085.20	4,116.20	4,116.20	15.10	82.32	2.37	606.14	-224.06	324.27	227.31	96.96	3.344	
4,200.00	4,184.77	4,215.77	4,215.77	15.48	84.32	2.44	606.14	-224.06	314.99	215.67	99.32	3.172	
4,300.00	4,284.33	4,315.33	4,315.33	15.85	86.31	2.51	606.14	-224.06	305.71	204.04	101.67	3.007	
4,400.00	4,383.90	4,414.90	4,414.90	16.23	88.30	2.59	606.14	-224.06	296.43	192.40	104.03	2.850	
4,500.00	4,483.47	4,514.47	4,514.47	16.61	90.29	2.67	606.14	-224.06	287.15	180.76	106.38	2.699	
4,600.00	4,583.04	4,614.04	4,614.04	16.99	92.28	2.76	606.14	-224.06	277.87	169.13	108.74	2.555	
4,700.00	4,682.60	4,713.60	4,713.60	17.37	94.27	2.86	606.14	-224.06	268.59	157.50	111.09	2.418	
4,800.00	4,782.17	4,813.17	4,813.17	17.74	96.26	2.96	606.14	-224.06	259.31	145.86	113.45	2.286	
4,900.00	4,881.74	4,912.74	4,912.74	18.12	98.25	3.07	606.14	-224.06	250.03	134.23	115.80	2.159	
5,000.00	4,981.31	5,012.31	5,012.31	18.50	100.25	3.19	606.14	-224.06	240.75	122.60	118.16	2.038	
5,100.00	5,080.87	5,111.87	5,111.87	18.88	102.24	3.32	606.14	-224.06	231.48	110.97	120.51	1.921	
5,200.00	5,180.44	5,211.44	5,211.44	19.26	104.23	3.46	606.14	-224.06	222.20	99.34	122.87	1.809	
5,300.00	5,280.01	5,311.01	5,311.01	19.64	106.22	3.61	606.14	-224.06	212.93	87.71	125.22	1.700	
5,400.00	5,379.57	5,410.57	5,410.57	20.01	108.21	11.32	606.14	-224.06	203.64	76.06	127.58	1.596	
5,500.00	5,478.43	5,509.43	5,509.43	20.40	110.19	50.97	606.14	-224.06	192.09	62.16	129.93	1.478	Level 3
5,600.00	5,574.70	5,605.70	5,605.70	20.81	112.11	68.91	606.14	-224.06	178.80	46.52	132.28	1.352	Level 3
5,700.00	5,666.51	5,697.51	5,697.51	21.23	113.95	85.53	606.14	-224.06	169.69	35.01	134.68	1.260	Level 3
5,726.33	5,689.71	5,720.71	5,720.71	21.35	114.41	90.00	606.14	-224.06	169.15	33.81	135.34	1.250	Level 2, CC, ES, SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Fed 2B - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7125-UNKNOWN

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,800.00	5,752.07	5,783.07	5,783.07	21.69	115.66	102.21	606.14	-224.06	174.28	37.13	137.15	1.271	Level 3
5,900.00	5,829.71	5,860.71	5,860.71	22.22	117.21	116.37	606.14	-224.06	200.70	61.27	139.44	1.439	Level 3
6,000.00	5,897.93	5,928.93	5,928.93	22.90	118.58	126.25	606.14	-224.06	249.68	108.37	141.31	1.767	
6,100.00	5,955.40	5,986.40	5,986.40	23.78	119.73	131.77	606.14	-224.06	316.58	173.81	142.77	2.217	
6,200.00	6,001.00	6,032.00	6,032.00	24.91	120.64	133.07	606.14	-224.06	396.32	252.45	143.87	2.755	
6,300.00	6,033.84	6,064.84	6,064.84	26.32	121.30	129.26	606.14	-224.06	484.88	340.25	144.64	3.352	
6,400.00	6,053.28	6,084.28	6,084.28	27.97	121.69	116.52	606.14	-224.06	579.14	434.05	145.09	3.992	
6,500.00	6,059.03	6,090.03	6,090.03	29.82	121.80	90.86	606.14	-224.06	676.43	531.20	145.23	4.658	
6,600.00	6,059.34	6,090.34	6,090.34	31.84	121.81	90.99	606.14	-224.06	774.67	629.42	145.25	5.333	
6,700.00	6,059.65	6,090.65	6,090.65	34.00	121.81	91.12	606.14	-224.06	873.31	728.04	145.27	6.012	
6,800.00	6,059.95	6,090.95	6,090.95	36.29	121.82	91.25	606.14	-224.06	972.23	826.94	145.28	6.692	
6,900.00	6,060.26	6,091.26	6,091.26	38.67	121.83	91.37	606.14	-224.06	1,071.34	926.04	145.30	7.373	
7,000.00	6,060.56	6,091.56	6,091.56	41.14	121.83	91.50	606.14	-224.06	1,170.61	1,025.29	145.32	8.056	
7,100.00	6,060.87	6,091.87	6,091.87	43.68	121.84	91.63	606.14	-224.06	1,269.99	1,124.66	145.34	8.738	
7,200.00	6,061.17	6,092.17	6,092.17	46.27	121.84	91.76	606.14	-224.06	1,369.47	1,224.11	145.36	9.421	
7,300.00	6,061.48	6,092.48	6,092.48	48.91	121.85	91.89	606.14	-224.06	1,469.01	1,323.64	145.38	10.105	
7,400.00	6,061.78	6,092.78	6,092.78	51.60	121.86	92.02	606.14	-224.06	1,568.61	1,423.22	145.40	10.788	
7,500.00	6,062.09	6,093.09	6,093.09	54.31	121.86	92.15	606.14	-224.06	1,668.26	1,522.84	145.42	11.472	
7,600.00	6,062.39	6,093.39	6,093.39	57.06	121.87	92.28	606.14	-224.06	1,767.95	1,622.51	145.44	12.156	
7,700.00	6,062.70	6,093.70	6,093.70	59.83	121.87	92.41	606.14	-224.06	1,867.68	1,722.21	145.47	12.839	
7,800.00	6,063.00	6,094.00	6,094.00	62.63	121.88	92.54	606.14	-224.06	1,967.43	1,821.93	145.49	13.523	
7,900.00	6,063.31	6,094.31	6,094.31	65.44	121.89	92.67	606.14	-224.06	2,067.20	1,921.68	145.52	14.206	
8,000.00	6,063.61	6,094.61	6,094.61	68.27	121.89	92.80	606.14	-224.06	2,167.00	2,021.45	145.54	14.889	
8,100.00	6,063.92	6,094.92	6,094.92	71.11	121.90	92.93	606.14	-224.06	2,266.81	2,121.24	145.57	15.572	
8,200.00	6,064.23	6,095.23	6,095.23	73.97	121.90	93.05	606.14	-224.06	2,366.64	2,221.04	145.60	16.255	
8,300.00	6,064.53	6,095.53	6,095.53	76.84	121.91	93.18	606.14	-224.06	2,466.48	2,320.85	145.63	16.937	
8,400.00	6,064.84	6,095.84	6,095.84	79.72	121.92	93.31	606.14	-224.06	2,566.34	2,420.68	145.66	17.619	
8,500.00	6,065.14	6,096.14	6,096.14	82.61	121.92	93.44	606.14	-224.06	2,666.20	2,520.51	145.69	18.301	
8,600.00	6,065.45	6,096.45	6,096.45	85.51	121.93	93.57	606.14	-224.06	2,766.08	2,620.36	145.72	18.982	
8,700.00	6,065.75	6,096.75	6,096.75	88.42	121.94	93.70	606.14	-224.06	2,865.96	2,720.21	145.75	19.663	
8,800.00	6,066.06	6,097.06	6,097.06	91.33	121.94	93.83	606.14	-224.06	2,965.85	2,820.07	145.79	20.344	
8,900.00	6,066.36	6,097.36	6,097.36	94.25	121.95	93.96	606.14	-224.06	3,065.75	2,919.93	145.82	21.024	
9,000.00	6,066.67	6,097.67	6,097.67	97.17	121.95	94.09	606.14	-224.06	3,165.66	3,019.80	145.86	21.704	
9,100.00	6,066.97	6,097.97	6,097.97	100.10	121.96	94.21	606.14	-224.06	3,265.57	3,119.68	145.89	22.384	
9,200.00	6,067.28	6,098.28	6,098.28	103.04	121.97	94.34	606.14	-224.06	3,365.48	3,219.56	145.93	23.063	
9,300.00	6,067.58	6,098.58	6,098.58	105.98	121.97	94.47	606.14	-224.06	3,465.41	3,319.44	145.97	23.741	
9,400.00	6,067.89	6,098.89	6,098.89	108.92	121.98	94.60	606.14	-224.06	3,565.33	3,419.33	146.00	24.419	
9,500.00	6,068.19	6,099.19	6,099.19	111.86	121.98	94.73	606.14	-224.06	3,665.26	3,519.22	146.04	25.097	
9,600.00	6,068.50	6,099.50	6,099.50	114.81	121.99	94.86	606.14	-224.06	3,765.19	3,619.11	146.08	25.774	
9,700.00	6,068.80	6,099.80	6,099.80	117.77	122.00	94.99	606.14	-224.06	3,865.13	3,719.01	146.12	26.451	
9,800.00	6,069.11	6,100.11	6,100.11	120.72	122.00	95.11	606.14	-224.06	3,965.07	3,818.90	146.17	27.127	
9,900.00	6,069.42	6,100.42	6,100.42	123.68	122.01	95.24	606.14	-224.06	4,065.01	3,918.80	146.21	27.803	
10,000.00	6,069.72	6,100.72	6,100.72	126.64	122.01	95.37	606.14	-224.06	4,164.96	4,018.71	146.25	28.478	
10,100.00	6,070.03	6,101.03	6,101.03	129.60	122.02	95.50	606.14	-224.06	4,264.91	4,118.61	146.30	29.152	
10,200.00	6,070.33	6,101.33	6,101.33	132.57	122.03	95.63	606.14	-224.06	4,364.86	4,218.52	146.34	29.826	
10,300.00	6,070.64	6,101.64	6,101.64	135.54	122.03	95.75	606.14	-224.06	4,464.81	4,318.42	146.39	30.500	
10,400.00	6,070.94	6,101.94	6,101.94	138.51	122.04	95.88	606.14	-224.06	4,564.77	4,418.33	146.44	31.173	
10,500.00	6,071.25	6,102.25	6,102.25	141.48	122.04	96.01	606.14	-224.06	4,664.72	4,518.24	146.48	31.845	
10,600.00	6,071.55	6,102.55	6,102.55	144.45	122.05	96.14	606.14	-224.06	4,764.68	4,618.15	146.53	32.516	
10,700.00	6,071.86	6,102.86	6,102.86	147.42	122.06	96.27	606.14	-224.06	4,864.64	4,718.06	146.58	33.188	
10,800.00	6,072.16	6,103.16	6,103.16	150.40	122.06	96.39	606.14	-224.06	4,964.60	4,817.97	146.63	33.858	
10,900.00	6,072.47	6,103.47	6,103.47	153.38	122.07	96.52	606.14	-224.06	5,064.57	4,917.88	146.68	34.528	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Fed 2B - OH - OH

Survey Program: 7125-UNKNOWN

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,000.00	6,072.77	6,103.77	6,103.77	156.35	122.08	96.65	606.14	-224.06	5,164.53	5,017.80	146.73	35.197	
11,100.00	6,073.08	6,104.08	6,104.08	159.33	122.08	96.78	606.14	-224.06	5,264.50	5,117.71	146.79	35.865	
11,200.00	6,073.38	6,104.38	6,104.38	162.31	122.09	96.91	606.14	-224.06	5,364.46	5,217.62	146.84	36.533	
11,300.00	6,073.69	6,104.69	6,104.69	165.30	122.09	97.03	606.14	-224.06	5,464.43	5,317.54	146.89	37.200	
11,400.00	6,074.00	6,105.00	6,105.00	168.28	122.10	97.16	606.14	-224.06	5,564.40	5,417.45	146.95	37.867	
11,500.00	6,074.30	6,105.30	6,105.30	171.26	122.11	97.29	606.14	-224.06	5,664.37	5,517.37	147.00	38.533	
11,600.00	6,074.61	6,105.61	6,105.61	174.25	122.11	97.41	606.14	-224.06	5,764.34	5,617.28	147.06	39.198	
11,700.00	6,074.91	6,105.91	6,105.91	177.23	122.12	97.54	606.14	-224.06	5,864.32	5,717.20	147.12	39.862	
11,800.00	6,075.22	6,106.22	6,106.22	180.22	122.12	97.67	606.14	-224.06	5,964.29	5,817.12	147.17	40.526	
11,900.00	6,075.52	6,106.52	6,106.52	183.21	122.13	97.80	606.14	-224.06	6,064.26	5,917.03	147.23	41.189	
12,000.00	6,075.83	6,106.83	6,106.83	186.19	122.14	97.92	606.14	-224.06	6,164.24	6,016.95	147.29	41.851	
12,100.00	6,076.13	6,107.13	6,107.13	189.18	122.14	98.05	606.14	-224.06	6,264.21	6,116.86	147.35	42.512	
12,200.00	6,076.44	6,107.44	6,107.44	192.17	122.15	98.18	606.14	-224.06	6,364.19	6,216.78	147.41	43.173	
12,300.00	6,076.74	6,107.74	6,107.74	195.16	122.15	98.30	606.14	-224.06	6,464.17	6,316.70	147.47	43.833	
12,400.00	6,077.05	6,108.05	6,108.05	198.15	122.16	98.43	606.14	-224.06	6,564.15	6,416.61	147.53	44.492	
12,500.00	6,077.35	6,108.35	6,108.35	201.15	122.17	98.56	606.14	-224.06	6,664.12	6,516.53	147.60	45.151	
12,600.00	6,077.66	6,108.66	6,108.66	204.14	122.17	98.68	606.14	-224.06	6,764.10	6,616.44	147.66	45.809	
12,700.00	6,077.96	6,108.96	6,108.96	207.13	122.18	98.81	606.14	-224.06	6,864.08	6,716.36	147.72	46.466	
12,711.72	6,078.00	6,109.00	6,109.00	207.48	122.18	98.82	606.14	-224.06	6,875.80	6,728.07	147.73	46.542	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Fed 2N - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7010-UNKNOWN

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	20.00	20.00	0.00	0.40	-101.64	-260.26	-1,263.85	1,290.37	1,289.97	0.40	3,224.323	
100.00	100.00	120.00	120.00	0.18	2.40	-101.64	-260.26	-1,263.85	1,290.37	1,287.79	2.58	500.254	
200.00	200.00	220.00	220.00	0.54	4.40	-101.64	-260.26	-1,263.85	1,290.37	1,285.43	4.94	261.320	
300.00	300.00	320.00	320.00	0.90	6.40	-101.64	-260.26	-1,263.85	1,290.37	1,283.08	7.30	176.851	
400.00	400.00	420.00	420.00	1.25	8.40	-101.64	-260.26	-1,263.85	1,290.37	1,280.72	9.65	133.650	
500.00	500.00	520.00	520.00	1.61	10.40	-101.64	-260.26	-1,263.85	1,290.37	1,278.36	12.01	107.412	
600.00	599.98	619.98	619.98	1.97	12.40	-80.25	-260.26	-1,263.85	1,290.08	1,275.71	14.37	89.773	
700.00	699.84	719.84	719.84	2.33	14.40	-80.49	-260.26	-1,263.85	1,289.20	1,272.47	16.73	77.082	
800.00	799.47	819.47	819.47	2.70	16.39	-80.88	-260.26	-1,263.85	1,287.82	1,268.74	19.08	67.500	
900.00	899.04	919.04	919.04	3.06	18.38	-81.29	-260.26	-1,263.85	1,286.37	1,264.94	21.44	60.012	
1,000.00	998.61	1,018.61	1,018.61	3.42	20.37	-81.70	-260.26	-1,263.85	1,284.99	1,261.20	23.79	54.004	
1,100.00	1,098.17	1,118.17	1,118.17	3.80	22.36	-82.11	-260.26	-1,263.85	1,283.68	1,257.52	26.16	49.078	
1,200.00	1,197.74	1,217.74	1,217.74	4.17	24.35	-82.52	-260.26	-1,263.85	1,282.43	1,253.91	28.52	44.968	
1,300.00	1,297.31	1,317.31	1,317.31	4.54	26.35	-82.93	-260.26	-1,263.85	1,281.25	1,250.36	30.88	41.488	
1,400.00	1,396.88	1,416.88	1,416.88	4.91	28.34	-83.34	-260.26	-1,263.85	1,280.13	1,246.88	33.25	38.503	
1,500.00	1,496.44	1,516.44	1,516.44	5.29	30.33	-83.75	-260.26	-1,263.85	1,279.08	1,243.47	35.61	35.916	
1,600.00	1,596.01	1,616.01	1,616.01	5.66	32.32	-84.16	-260.26	-1,263.85	1,278.10	1,240.12	37.98	33.652	
1,700.00	1,695.58	1,715.58	1,715.58	6.04	34.31	-84.58	-260.26	-1,263.85	1,277.18	1,236.84	40.35	31.656	
1,800.00	1,795.15	1,815.15	1,815.15	6.41	36.30	-84.99	-260.26	-1,263.85	1,276.34	1,233.62	42.71	29.881	
1,900.00	1,894.71	1,914.71	1,914.71	6.79	38.29	-85.40	-260.26	-1,263.85	1,275.55	1,230.47	45.08	28.295	
2,000.00	1,994.28	2,014.28	2,014.28	7.17	40.29	-85.82	-260.26	-1,263.85	1,274.84	1,227.39	47.45	26.868	
2,100.00	2,093.85	2,113.85	2,113.85	7.54	42.28	-86.23	-260.26	-1,263.85	1,274.19	1,224.38	49.82	25.577	
2,200.00	2,193.42	2,213.42	2,213.42	7.92	44.27	-86.65	-260.26	-1,263.85	1,273.61	1,221.43	52.19	24.406	
2,300.00	2,292.98	2,312.98	2,312.98	8.30	46.26	-87.06	-260.26	-1,263.85	1,273.10	1,218.55	54.55	23.337	
2,400.00	2,392.55	2,412.55	2,412.55	8.67	48.25	-87.48	-260.26	-1,263.85	1,272.66	1,215.73	56.92	22.358	
2,500.00	2,492.12	2,512.12	2,512.12	9.05	50.24	-87.90	-260.26	-1,263.85	1,272.28	1,212.99	59.29	21.458	
2,600.00	2,591.69	2,611.69	2,611.69	9.43	52.23	-88.31	-260.26	-1,263.85	1,271.97	1,210.31	61.66	20.629	
2,700.00	2,691.25	2,711.25	2,711.25	9.81	54.23	-88.73	-260.26	-1,263.85	1,271.73	1,207.70	64.03	19.862	
2,800.00	2,790.82	2,810.82	2,810.82	10.18	56.22	-89.14	-260.26	-1,263.85	1,271.56	1,205.16	66.40	19.150	
2,900.00	2,890.39	2,910.39	2,910.39	10.56	58.21	-89.56	-260.26	-1,263.85	1,271.45	1,202.68	68.77	18.489	
3,000.00	2,989.96	3,009.96	3,009.96	10.94	60.20	-89.98	-260.26	-1,263.85	1,271.41	1,200.28	71.14	17.873	
3,005.18	2,995.11	3,015.11	3,015.11	10.96	60.30	-90.00	-260.26	-1,263.85	1,271.41	1,200.16	71.26	17.842	
3,100.00	3,089.52	3,109.52	3,109.52	11.32	62.19	-90.40	-260.26	-1,263.85	1,271.45	1,197.94	73.51	17.297	
3,200.00	3,189.09	3,209.09	3,209.09	11.70	64.18	-90.81	-260.26	-1,263.85	1,271.54	1,195.67	75.88	16.758	
3,300.00	3,288.66	3,308.66	3,308.66	12.07	66.17	-91.23	-260.26	-1,263.85	1,271.71	1,193.46	78.25	16.253	
3,400.00	3,388.23	3,408.23	3,408.23	12.45	68.16	-91.65	-260.26	-1,263.85	1,271.94	1,191.33	80.61	15.778	
3,500.00	3,487.79	3,507.79	3,507.79	12.83	70.16	-92.06	-260.26	-1,263.85	1,272.25	1,189.26	82.98	15.331	
3,600.00	3,587.36	3,607.36	3,607.36	13.21	72.15	-92.48	-260.26	-1,263.85	1,272.62	1,187.26	85.35	14.910	
3,700.00	3,686.93	3,706.93	3,706.93	13.58	74.14	-92.89	-260.26	-1,263.85	1,273.05	1,185.33	87.72	14.512	
3,800.00	3,786.50	3,806.50	3,806.50	13.96	76.13	-93.31	-260.26	-1,263.85	1,273.56	1,183.46	90.09	14.136	
3,900.00	3,886.06	3,906.06	3,906.06	14.34	78.12	-93.72	-260.26	-1,263.85	1,274.13	1,181.67	92.46	13.780	
4,000.00	3,985.63	4,005.63	4,005.63	14.72	80.11	-94.14	-260.26	-1,263.85	1,274.77	1,179.94	94.83	13.442	
4,100.00	4,085.20	4,105.20	4,105.20	15.10	82.10	-94.55	-260.26	-1,263.85	1,275.48	1,178.28	97.20	13.122	
4,200.00	4,184.77	4,204.77	4,204.77	15.48	84.10	-94.97	-260.26	-1,263.85	1,276.25	1,176.68	99.57	12.818	
4,300.00	4,284.33	4,304.33	4,304.33	15.85	86.09	-95.38	-260.26	-1,263.85	1,277.09	1,175.15	101.94	12.528	
4,400.00	4,383.90	4,403.90	4,403.90	16.23	88.08	-95.79	-260.26	-1,263.85	1,278.00	1,173.69	104.31	12.252	
4,500.00	4,483.47	4,503.47	4,503.47	16.61	90.07	-96.21	-260.26	-1,263.85	1,278.98	1,172.30	106.68	11.989	
4,600.00	4,583.04	4,603.04	4,603.04	16.99	92.06	-96.62	-260.26	-1,263.85	1,280.02	1,170.97	109.05	11.738	
4,700.00	4,682.60	4,702.60	4,702.60	17.37	94.05	-97.03	-260.26	-1,263.85	1,281.13	1,169.71	111.42	11.499	
4,800.00	4,782.17	4,802.17	4,802.17	17.74	96.04	-97.44	-260.26	-1,263.85	1,282.30	1,168.52	113.79	11.269	
4,900.00	4,881.74	4,901.74	4,901.74	18.12	98.03	-97.85	-260.26	-1,263.85	1,283.54	1,167.39	116.15	11.050	
5,000.00	4,981.31	5,001.31	5,001.31	18.50	100.03	-98.26	-260.26	-1,263.85	1,284.85	1,166.33	118.52	10.840	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Fed 2N - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7010-UNKNOWN

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,080.87	5,100.87	5,100.87	18.88	102.02	-98.67	-260.26	-1,263.85	1,286.22	1,165.33	120.89	10.639	
5,200.00	5,180.44	5,200.44	5,200.44	19.26	104.01	-99.07	-260.26	-1,263.85	1,287.66	1,164.40	123.26	10.447	
5,300.00	5,280.01	5,300.01	5,300.01	19.64	106.00	-99.48	-260.26	-1,263.85	1,289.17	1,163.54	125.63	10.262	
5,400.00	5,379.57	5,399.57	5,399.57	20.01	107.99	-92.43	-260.26	-1,263.85	1,290.68	1,162.68	128.00	10.084	
5,500.00	5,478.43	5,498.43	5,498.43	20.40	109.97	-57.05	-260.26	-1,263.85	1,285.21	1,154.84	130.36	9.859	
5,600.00	5,574.70	5,594.70	5,594.70	20.81	111.89	-48.86	-260.26	-1,263.85	1,268.23	1,135.54	132.70	9.557	
5,700.00	5,666.51	5,686.51	5,686.51	21.23	113.73	-47.26	-260.26	-1,263.85	1,240.44	1,105.48	134.96	9.191	
5,800.00	5,752.07	5,772.07	5,772.07	21.69	115.44	-48.66	-260.26	-1,263.85	1,202.87	1,065.74	137.13	8.772	
5,900.00	5,829.71	5,849.71	5,849.71	22.22	116.99	-52.13	-260.26	-1,263.85	1,156.89	1,017.70	139.19	8.312	
6,000.00	5,897.93	5,917.93	5,917.93	22.90	118.36	-57.34	-260.26	-1,263.85	1,104.23	963.08	141.15	7.823	
6,100.00	5,955.40	5,975.40	5,975.40	23.78	119.51	-63.94	-260.26	-1,263.85	1,046.94	903.90	143.05	7.319	
6,200.00	6,001.00	6,021.00	6,021.00	24.91	120.42	-71.39	-260.26	-1,263.85	987.42	842.49	144.93	6.813	
6,300.00	6,033.84	6,053.84	6,053.84	26.32	121.08	-78.85	-260.26	-1,263.85	928.29	781.43	146.86	6.321	
6,400.00	6,053.28	6,073.28	6,073.28	27.97	121.47	-85.41	-260.26	-1,263.85	872.38	723.52	148.86	5.860	
6,500.00	6,059.03	6,079.03	6,079.03	29.82	121.58	-89.91	-260.26	-1,263.85	822.51	671.58	150.93	5.450	
6,600.00	6,059.34	6,079.34	6,079.34	31.84	121.59	-89.93	-260.26	-1,263.85	781.71	628.55	153.15	5.104	
6,700.00	6,059.65	6,079.65	6,079.65	34.00	121.59	-89.96	-260.26	-1,263.85	752.07	596.53	155.53	4.835	
6,800.00	6,059.95	6,079.95	6,079.95	36.29	121.60	-89.98	-260.26	-1,263.85	734.95	577.07	157.87	4.655	
6,877.29	6,060.19	6,080.19	6,080.19	38.13	121.60	-90.00	-260.26	-1,263.85	730.87	571.35	159.52	4.582	CC
6,900.00	6,060.26	6,080.26	6,080.26	38.67	121.61	-90.01	-260.26	-1,263.85	731.22	571.27	159.95	4.571	ES, SF
7,000.00	6,060.56	6,080.56	6,080.56	41.14	121.61	-90.03	-260.26	-1,263.85	741.10	579.50	161.60	4.586	
7,100.00	6,060.87	6,080.87	6,080.87	43.68	121.62	-90.05	-260.26	-1,263.85	764.05	601.31	162.74	4.695	
7,200.00	6,061.17	6,081.17	6,081.17	46.27	121.62	-90.08	-260.26	-1,263.85	798.94	635.58	163.37	4.891	
7,300.00	6,061.48	6,081.48	6,081.48	48.91	121.63	-90.10	-260.26	-1,263.85	844.31	680.73	163.57	5.162	
7,400.00	6,061.78	6,081.78	6,081.78	51.60	121.64	-90.13	-260.26	-1,263.85	898.55	735.09	163.46	5.497	
7,500.00	6,062.09	6,082.09	6,082.09	54.31	121.64	-90.15	-260.26	-1,263.85	960.17	797.03	163.14	5.886	
7,600.00	6,062.39	6,082.39	6,082.39	57.06	121.65	-90.17	-260.26	-1,263.85	1,027.85	865.16	162.69	6.318	
7,700.00	6,062.70	6,082.70	6,082.70	59.83	121.65	-90.20	-260.26	-1,263.85	1,100.46	938.28	162.18	6.786	
7,800.00	6,063.00	6,083.00	6,083.00	62.63	121.66	-90.22	-260.26	-1,263.85	1,177.10	1,015.46	161.64	7.282	
7,900.00	6,063.31	6,083.31	6,083.31	65.44	121.67	-90.24	-260.26	-1,263.85	1,257.02	1,095.92	161.10	7.803	
8,000.00	6,063.61	6,083.61	6,083.61	68.27	121.67	-90.27	-260.26	-1,263.85	1,339.64	1,179.06	160.58	8.342	
8,100.00	6,063.92	6,083.92	6,083.92	71.11	121.68	-90.29	-260.26	-1,263.85	1,424.49	1,264.40	160.09	8.898	
8,200.00	6,064.23	6,084.23	6,084.23	73.97	121.68	-90.32	-260.26	-1,263.85	1,511.20	1,351.56	159.63	9.467	
8,300.00	6,064.53	6,084.53	6,084.53	76.84	121.69	-90.34	-260.26	-1,263.85	1,599.45	1,440.25	159.20	10.047	
8,400.00	6,064.84	6,084.84	6,084.84	79.72	121.70	-90.36	-260.26	-1,263.85	1,689.02	1,530.21	158.81	10.636	
8,500.00	6,065.14	6,085.14	6,085.14	82.61	121.70	-90.39	-260.26	-1,263.85	1,779.70	1,621.25	158.45	11.232	
8,600.00	6,065.45	6,085.45	6,085.45	85.51	121.71	-90.41	-260.26	-1,263.85	1,871.33	1,713.22	158.11	11.836	
8,700.00	6,065.75	6,085.75	6,085.75	88.42	121.72	-90.44	-260.26	-1,263.85	1,963.77	1,805.97	157.80	12.444	
8,800.00	6,066.06	6,086.06	6,086.06	91.33	121.72	-90.46	-260.26	-1,263.85	2,056.93	1,899.41	157.52	13.058	
8,900.00	6,066.36	6,086.36	6,086.36	94.25	121.73	-90.48	-260.26	-1,263.85	2,150.69	1,993.43	157.26	13.676	
9,000.00	6,066.67	6,086.67	6,086.67	97.17	121.73	-90.51	-260.26	-1,263.85	2,245.00	2,087.98	157.02	14.297	
9,100.00	6,066.97	6,086.97	6,086.97	100.10	121.74	-90.53	-260.26	-1,263.85	2,339.78	2,182.97	156.80	14.922	
9,200.00	6,067.28	6,087.28	6,087.28	103.04	121.75	-90.56	-260.26	-1,263.85	2,434.97	2,278.37	156.60	15.549	
9,300.00	6,067.58	6,087.58	6,087.58	105.98	121.75	-90.58	-260.26	-1,263.85	2,530.54	2,374.12	156.42	16.178	
9,400.00	6,067.89	6,087.89	6,087.89	108.92	121.76	-90.60	-260.26	-1,263.85	2,626.44	2,470.19	156.25	16.809	
9,500.00	6,068.19	6,088.19	6,088.19	111.86	121.76	-90.63	-260.26	-1,263.85	2,722.63	2,566.54	156.09	17.443	
9,600.00	6,068.50	6,088.50	6,088.50	114.81	121.77	-90.65	-260.26	-1,263.85	2,819.09	2,663.14	155.95	18.077	
9,700.00	6,068.80	6,088.80	6,088.80	117.77	121.78	-90.68	-260.26	-1,263.85	2,915.78	2,759.97	155.81	18.713	
9,800.00	6,069.11	6,089.11	6,089.11	120.72	121.78	-90.70	-260.26	-1,263.85	3,012.69	2,857.00	155.69	19.350	
9,900.00	6,069.42	6,089.42	6,089.42	123.68	121.79	-90.72	-260.26	-1,263.85	3,109.80	2,954.22	155.58	19.988	
10,000.00	6,069.72	6,089.72	6,089.72	126.64	121.79	-90.75	-260.26	-1,263.85	3,207.08	3,051.61	155.48	20.627	
10,100.00	6,070.03	6,090.03	6,090.03	129.60	121.80	-90.77	-260.26	-1,263.85	3,304.53	3,149.15	155.38	21.267	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Fed 2N - OH - OH

Survey Program: 7010-UNKNOWN

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	6,070.33	6,090.33	6,090.33	132.57	121.81	-90.80	-260.26	-1,263.85	3,402.13	3,246.83	155.30	21.907	
10,300.00	6,070.64	6,090.64	6,090.64	135.54	121.81	-90.82	-260.26	-1,263.85	3,499.86	3,344.64	155.22	22.548	
10,400.00	6,070.94	6,090.94	6,090.94	138.51	121.82	-90.84	-260.26	-1,263.85	3,597.71	3,442.57	155.15	23.189	
10,500.00	6,071.25	6,091.25	6,091.25	141.48	121.82	-90.87	-260.26	-1,263.85	3,695.68	3,540.60	155.08	23.831	
10,600.00	6,071.55	6,091.55	6,091.55	144.45	121.83	-90.89	-260.26	-1,263.85	3,793.76	3,638.74	155.02	24.473	
10,700.00	6,071.86	6,091.86	6,091.86	147.42	121.84	-90.91	-260.26	-1,263.85	3,891.93	3,736.97	154.96	25.115	
10,800.00	6,072.16	6,092.16	6,092.16	150.40	121.84	-90.94	-260.26	-1,263.85	3,990.20	3,835.28	154.91	25.757	
10,900.00	6,072.47	6,092.47	6,092.47	153.38	121.85	-90.96	-260.26	-1,263.85	4,088.55	3,933.68	154.87	26.400	
11,000.00	6,072.77	6,092.77	6,092.77	156.35	121.86	-90.99	-260.26	-1,263.85	4,186.97	4,032.14	154.83	27.042	
11,100.00	6,073.08	6,093.08	6,093.08	159.33	121.86	-91.01	-260.26	-1,263.85	4,285.47	4,130.68	154.79	27.685	
11,200.00	6,073.38	6,093.38	6,093.38	162.31	121.87	-91.03	-260.26	-1,263.85	4,384.04	4,229.28	154.76	28.327	
11,300.00	6,073.69	6,093.69	6,093.69	165.30	121.87	-91.06	-260.26	-1,263.85	4,482.67	4,327.94	154.74	28.970	
11,400.00	6,074.00	6,094.00	6,094.00	168.28	121.88	-91.08	-260.26	-1,263.85	4,581.36	4,426.65	154.71	29.612	
11,500.00	6,074.30	6,094.30	6,094.30	171.26	121.89	-91.11	-260.26	-1,263.85	4,680.11	4,525.42	154.69	30.254	
11,600.00	6,074.61	6,094.61	6,094.61	174.25	121.89	-91.13	-260.26	-1,263.85	4,778.91	4,624.23	154.67	30.896	
11,700.00	6,074.91	6,094.91	6,094.91	177.23	121.90	-91.15	-260.26	-1,263.85	4,877.75	4,723.09	154.66	31.538	
11,800.00	6,075.22	6,095.22	6,095.22	180.22	121.90	-91.18	-260.26	-1,263.85	4,976.65	4,822.00	154.65	32.180	
11,900.00	6,075.52	6,095.52	6,095.52	183.21	121.91	-91.20	-260.26	-1,263.85	5,075.58	4,920.94	154.64	32.821	
12,000.00	6,075.83	6,095.83	6,095.83	186.19	121.92	-91.23	-260.26	-1,263.85	5,174.56	5,019.92	154.64	33.463	
12,100.00	6,076.13	6,096.13	6,096.13	189.18	121.92	-91.25	-260.26	-1,263.85	5,273.58	5,118.94	154.63	34.103	
12,200.00	6,076.44	6,096.44	6,096.44	192.17	121.93	-91.27	-260.26	-1,263.85	5,372.63	5,217.99	154.64	34.744	
12,300.00	6,076.74	6,096.74	6,096.74	195.16	121.93	-91.30	-260.26	-1,263.85	5,471.71	5,317.08	154.64	35.384	
12,400.00	6,077.05	6,097.05	6,097.05	198.15	121.94	-91.32	-260.26	-1,263.85	5,570.83	5,416.19	154.64	36.024	
12,500.00	6,077.35	6,097.35	6,097.35	201.15	121.95	-91.35	-260.26	-1,263.85	5,669.98	5,515.33	154.65	36.663	
12,600.00	6,077.66	6,097.66	6,097.66	204.14	121.95	-91.37	-260.26	-1,263.85	5,769.16	5,614.51	154.66	37.302	
12,700.00	6,077.96	6,097.96	6,097.96	207.13	121.96	-91.39	-260.26	-1,263.85	5,868.37	5,713.70	154.67	37.941	
12,711.72	6,078.00	6,098.00	6,098.00	207.48	121.96	-91.40	-260.26	-1,263.85	5,880.00	5,725.33	154.67	38.016	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 601 1H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	113.38	-11.65	26.95	29.36				
100.00	100.00	100.00	100.00	0.18	0.18	113.38	-11.65	26.95	29.36	29.00	0.36	81.909	
200.00	200.00	200.00	200.00	0.54	0.54	113.38	-11.65	26.95	29.36	28.29	1.08	27.303	
300.00	300.00	300.00	300.00	0.90	0.90	113.38	-11.65	26.95	29.36	27.57	1.79	16.382	
400.00	400.00	400.00	400.00	1.25	1.25	113.38	-11.65	26.95	29.36	26.85	2.51	11.701	
500.00	500.00	500.00	500.00	1.61	1.61	113.38	-11.65	26.95	29.36	26.14	3.23	9.101	CC, ES
600.00	599.98	600.19	600.17	1.97	1.97	133.93	-9.94	27.33	30.26	26.32	3.94	7.675	
700.00	699.84	700.31	700.15	2.33	2.33	131.47	-4.81	28.45	33.00	28.34	4.66	7.082	
800.00	799.47	800.31	799.76	2.70	2.70	127.96	3.71	30.32	37.55	32.17	5.38	6.978	
900.00	899.04	900.14	898.97	3.06	3.06	122.91	14.53	32.69	42.63	36.52	6.11	6.978	SF
1,000.00	998.61	999.94	998.15	3.42	3.43	118.87	25.41	35.07	47.96	41.12	6.85	7.007	
1,100.00	1,098.17	1,099.75	1,097.34	3.80	3.80	115.65	36.30	37.46	53.49	45.91	7.59	7.050	
1,200.00	1,197.74	1,199.56	1,196.52	4.17	4.18	113.04	47.19	39.84	59.16	50.83	8.33	7.099	
1,300.00	1,297.31	1,299.36	1,295.70	4.54	4.56	110.89	58.07	42.23	64.93	55.84	9.08	7.150	
1,400.00	1,396.88	1,399.17	1,394.88	4.91	4.93	109.10	68.96	44.61	70.77	60.94	9.83	7.199	
1,500.00	1,496.44	1,498.98	1,494.07	5.29	5.31	107.58	79.84	47.00	76.67	66.09	10.58	7.245	
1,600.00	1,596.01	1,598.78	1,593.25	5.66	5.70	106.27	90.73	49.38	82.62	71.28	11.33	7.289	
1,700.00	1,695.58	1,698.59	1,692.43	6.04	6.08	105.14	101.61	51.77	88.60	76.51	12.09	7.330	
1,800.00	1,795.15	1,798.40	1,791.61	6.41	6.46	104.16	112.50	54.16	94.61	81.77	12.84	7.368	
1,900.00	1,894.71	1,898.20	1,890.80	6.79	6.84	103.29	123.39	56.54	100.65	87.06	13.59	7.404	
2,000.00	1,994.28	1,998.01	1,989.98	7.17	7.22	102.52	134.27	58.93	106.71	92.36	14.35	7.437	
2,100.00	2,093.85	2,097.82	2,089.16	7.54	7.61	101.84	145.16	61.31	112.79	97.68	15.10	7.467	
2,200.00	2,193.42	2,197.62	2,188.34	7.92	7.99	101.22	156.04	63.70	118.88	103.02	15.86	7.496	
2,300.00	2,292.98	2,297.43	2,287.53	8.30	8.37	100.67	166.93	66.08	124.98	108.37	16.61	7.522	
2,400.00	2,392.55	2,397.24	2,386.71	8.67	8.76	100.16	177.81	68.47	131.10	113.73	17.37	7.547	
2,500.00	2,492.12	2,497.04	2,485.89	9.05	9.14	99.70	188.70	70.85	137.22	119.09	18.13	7.570	
2,600.00	2,591.69	2,596.85	2,585.07	9.43	9.53	99.28	199.59	73.24	143.35	124.47	18.88	7.592	
2,700.00	2,691.25	2,696.66	2,684.26	9.81	9.91	98.90	210.47	75.62	149.49	129.85	19.64	7.612	
2,800.00	2,790.82	2,796.46	2,783.44	10.18	10.30	98.54	221.36	78.01	155.63	135.24	20.39	7.631	
2,900.00	2,890.39	2,896.27	2,882.62	10.56	10.68	98.22	232.24	80.39	161.78	140.63	21.15	7.649	
3,000.00	2,989.96	2,996.08	2,981.80	10.94	11.07	97.91	243.13	82.78	167.94	146.03	21.91	7.666	
3,100.00	3,089.52	3,095.88	3,080.99	11.32	11.45	97.63	254.02	85.16	174.10	151.43	22.66	7.681	
3,200.00	3,189.09	3,195.69	3,180.17	11.70	11.84	97.37	264.90	87.55	180.26	156.84	23.42	7.696	
3,300.00	3,288.66	3,295.50	3,279.35	12.07	12.22	97.12	275.79	89.93	186.42	162.25	24.18	7.710	
3,400.00	3,388.23	3,395.30	3,378.53	12.45	12.61	96.89	286.67	92.32	192.59	167.66	24.93	7.724	
3,500.00	3,487.79	3,495.11	3,477.72	12.83	12.99	96.67	297.56	94.71	198.77	173.07	25.69	7.737	
3,600.00	3,587.36	3,594.92	3,576.90	13.21	13.38	96.47	308.44	97.09	204.94	178.49	26.45	7.749	
3,700.00	3,686.93	3,694.72	3,676.08	13.58	13.76	96.28	319.33	99.48	211.12	183.91	27.21	7.760	
3,800.00	3,786.50	3,794.53	3,775.26	13.96	14.15	96.10	330.22	101.86	217.30	189.34	27.96	7.771	
3,900.00	3,886.06	3,894.34	3,874.45	14.34	14.53	95.93	341.10	104.25	223.48	194.76	28.72	7.781	
4,000.00	3,985.63	3,994.14	3,973.63	14.72	14.92	95.77	351.99	106.63	229.66	200.19	29.48	7.791	
4,100.00	4,085.20	4,093.95	4,072.81	15.10	15.30	95.62	362.87	109.02	235.85	205.61	30.23	7.801	
4,200.00	4,184.77	4,193.76	4,171.99	15.48	15.69	95.47	373.76	111.40	242.04	211.04	30.99	7.810	
4,300.00	4,284.33	4,293.56	4,271.18	15.85	16.07	95.34	384.64	113.79	248.22	216.48	31.75	7.818	
4,400.00	4,383.90	4,393.37	4,370.36	16.23	16.46	95.20	395.53	116.17	254.41	221.91	32.51	7.827	
4,500.00	4,483.47	4,493.18	4,469.54	16.61	16.85	95.08	406.42	118.56	260.60	227.34	33.26	7.835	
4,600.00	4,583.04	4,592.98	4,568.72	16.99	17.23	94.96	417.30	120.94	266.80	232.78	34.02	7.842	
4,700.00	4,682.60	4,692.79	4,667.91	17.37	17.62	94.85	428.19	123.33	272.99	238.21	34.78	7.849	
4,800.00	4,782.17	4,792.60	4,767.09	17.74	18.00	94.74	439.07	125.71	279.18	243.65	35.54	7.856	
4,900.00	4,881.74	4,892.40	4,866.27	18.12	18.39	94.64	449.96	128.10	285.38	249.09	36.29	7.863	
5,000.00	4,981.31	4,992.21	4,965.45	18.50	18.77	94.54	460.85	130.49	291.58	254.52	37.05	7.870	
5,100.00	5,080.87	5,092.02	5,064.64	18.88	19.16	94.44	471.73	132.87	297.77	259.96	37.81	7.876	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 601 1H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	5,191.82	5,163.82	19.26	19.55	94.35	482.62	135.26	303.97	265.40	38.57	7.882	
5,300.00	5,280.01	5,291.63	5,263.00	19.64	19.93	94.26	493.50	137.64	310.17	270.85	39.32	7.888	
5,400.00	5,379.57	5,391.43	5,362.18	20.01	20.32	101.62	504.39	140.03	316.43	276.35	40.08	7.895	
5,500.00	5,478.43	5,460.41	5,430.56	20.40	20.59	137.78	511.89	144.81	334.92	294.48	40.45	8.280	
5,600.00	5,574.70	5,522.27	5,491.23	20.81	20.83	147.69	518.55	154.71	374.57	334.07	40.50	9.249	
5,700.00	5,666.51	5,574.21	5,541.37	21.23	21.03	151.60	524.05	167.06	432.73	392.40	40.33	10.731	
5,800.00	5,752.07	5,614.81	5,579.87	21.69	21.19	152.70	528.27	179.24	505.91	465.86	40.05	12.632	
5,900.00	5,829.71	5,650.00	5,612.63	22.22	21.33	151.65	531.86	191.56	590.43	550.48	39.95	14.780	
6,000.00	5,897.93	5,663.30	5,624.85	22.90	21.38	145.72	533.20	196.64	682.61	643.05	39.56	17.255	
6,100.00	5,955.40	5,673.53	5,634.19	23.78	21.42	128.94	534.23	200.70	779.54	740.09	39.45	19.760	
6,200.00	6,001.00	5,676.26	5,636.66	24.91	21.43	76.90	534.50	201.80	878.58	839.13	39.45	22.273	
6,300.00	6,033.84	5,672.75	5,633.47	26.32	21.42	29.24	534.15	200.38	977.58	938.04	39.54	24.724	
6,400.00	6,053.28	5,650.00	5,612.63	27.97	21.33	12.88	531.86	191.56	1,075.00	1,035.58	39.43	27.267	
6,500.00	6,059.03	5,650.00	5,612.63	29.82	21.33	7.81	531.86	191.56	1,168.71	1,128.75	39.95	29.251	
6,600.00	6,059.34	5,650.00	5,612.63	31.84	21.33	7.81	531.86	191.56	1,261.68	1,221.21	40.46	31.183	
6,700.00	6,059.65	5,625.47	5,589.85	34.00	21.23	7.13	529.37	182.80	1,355.00	1,314.52	40.48	33.471	
6,800.00	6,059.95	5,600.00	5,565.90	36.29	21.13	6.48	526.74	174.55	1,449.30	1,408.83	40.48	35.807	
6,900.00	6,060.26	5,600.00	5,565.90	38.67	21.13	6.48	526.74	174.55	1,543.71	1,502.90	40.82	37.821	
7,000.00	6,060.56	5,600.00	5,565.90	41.14	21.13	6.48	526.74	174.55	1,638.79	1,597.68	41.10	39.868	
7,100.00	6,060.87	5,600.00	5,565.90	43.68	21.13	6.48	526.74	174.55	1,734.42	1,693.06	41.35	41.943	
7,200.00	6,061.17	5,577.81	5,544.81	46.27	21.05	5.96	524.43	168.05	1,830.03	1,788.72	41.31	44.301	
7,300.00	6,061.48	5,570.35	5,537.67	48.91	21.02	5.79	523.64	166.02	1,926.16	1,884.73	41.43	46.494	
7,400.00	6,061.78	5,550.00	5,518.11	51.60	20.94	5.36	521.50	160.85	2,022.74	1,981.35	41.39	48.866	
7,500.00	6,062.09	5,550.00	5,518.11	54.31	20.94	5.36	521.50	160.85	2,119.28	2,077.72	41.57	50.987	
7,600.00	6,062.39	5,550.00	5,518.11	57.06	20.94	5.36	521.50	160.85	2,216.13	2,174.41	41.72	53.121	
7,700.00	6,062.70	5,550.00	5,518.11	59.83	20.94	5.36	521.50	160.85	2,313.24	2,271.38	41.86	55.266	
7,800.00	6,063.00	5,550.00	5,518.11	62.63	20.94	5.36	521.50	160.85	2,410.59	2,368.61	41.98	57.419	
7,900.00	6,063.31	5,550.00	5,518.11	65.44	20.94	5.36	521.50	160.85	2,508.15	2,466.05	42.10	59.579	
8,000.00	6,063.61	5,530.32	5,499.06	68.27	20.86	4.96	519.41	156.38	2,605.54	2,563.51	42.04	61.980	
8,100.00	6,063.92	5,525.91	5,494.78	71.11	20.84	4.88	518.94	155.45	2,703.28	2,661.18	42.11	64.202	
8,200.00	6,064.23	5,521.74	5,490.72	73.97	20.83	4.80	518.49	154.60	2,801.15	2,758.98	42.17	66.425	
8,300.00	6,064.53	5,500.00	5,469.49	76.84	20.74	4.40	516.16	150.54	2,899.42	2,857.32	42.09	68.881	
8,400.00	6,064.84	5,500.00	5,469.49	79.72	20.74	4.40	516.16	150.54	2,997.41	2,955.22	42.18	71.054	
8,500.00	6,065.14	5,500.00	5,469.49	82.61	20.74	4.40	516.16	150.54	3,095.52	3,053.25	42.27	73.230	
8,600.00	6,065.45	5,500.00	5,469.49	85.51	20.74	4.40	516.16	150.54	3,193.76	3,151.41	42.35	75.407	
8,700.00	6,065.75	5,500.00	5,469.49	88.42	20.74	4.40	516.16	150.54	3,292.10	3,249.67	42.43	77.585	
8,800.00	6,066.06	5,500.00	5,469.49	91.33	20.74	4.40	516.16	150.54	3,390.54	3,348.03	42.51	79.764	
8,900.00	6,066.36	5,500.00	5,469.49	94.25	20.74	4.40	516.16	150.54	3,489.07	3,446.49	42.58	81.942	
9,000.00	6,066.67	5,500.00	5,469.49	97.17	20.74	4.40	516.16	150.54	3,587.68	3,545.02	42.65	84.119	
9,100.00	6,066.97	5,500.00	5,469.49	100.10	20.74	4.40	516.16	150.54	3,686.36	3,643.64	42.72	86.295	
9,200.00	6,067.28	5,500.00	5,469.49	103.04	20.74	4.40	516.16	150.54	3,785.11	3,742.33	42.78	88.469	
9,300.00	6,067.58	5,500.00	5,469.49	105.98	20.74	4.40	516.16	150.54	3,883.93	3,841.08	42.85	90.641	
9,400.00	6,067.89	5,500.00	5,469.49	108.92	20.74	4.40	516.16	150.54	3,982.80	3,939.89	42.91	92.811	
9,500.00	6,068.19	5,500.00	5,469.49	111.86	20.74	4.40	516.16	150.54	4,081.73	4,038.76	42.98	94.979	
9,600.00	6,068.50	5,500.00	5,469.49	114.81	20.74	4.40	516.16	150.54	4,180.72	4,137.68	43.04	97.143	
9,700.00	6,068.80	5,500.00	5,469.49	117.77	20.74	4.40	516.16	150.54	4,279.74	4,236.65	43.10	99.304	
9,800.00	6,069.11	5,476.97	5,446.88	120.72	20.65	4.00	513.68	146.94	4,378.39	4,335.37	43.02	101.778	
9,900.00	6,069.42	5,475.08	5,445.02	123.68	20.64	3.97	513.48	146.68	4,477.43	4,434.36	43.07	103.960	
10,000.00	6,069.72	5,473.26	5,443.22	126.64	20.64	3.94	513.28	146.43	4,576.51	4,533.39	43.12	106.137	
10,100.00	6,070.03	5,450.00	5,420.27	129.60	20.55	3.57	510.76	143.66	4,675.99	4,632.95	43.04	108.633	
10,200.00	6,070.33	5,450.00	5,420.27	132.57	20.55	3.57	510.76	143.66	4,775.08	4,731.97	43.11	110.777	
10,300.00	6,070.64	5,450.00	5,420.27	135.54	20.55	3.57	510.76	143.66	4,874.20	4,831.04	43.17	112.916	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 601 1H - OH - Plan #2

Survey Program: 0-MWD+HDGM

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	5,450.00	5,420.27	138.51	20.55	3.57	510.76	143.66	4,973.36	4,930.14	43.23	115.051	
10,500.00	6,071.25	5,450.00	5,420.27	141.48	20.55	3.57	510.76	143.66	5,072.56	5,029.27	43.29	117.182	
10,600.00	6,071.55	5,450.00	5,420.27	144.45	20.55	3.57	510.76	143.66	5,171.78	5,128.43	43.35	119.307	
10,700.00	6,071.86	5,450.00	5,420.27	147.42	20.55	3.57	510.76	143.66	5,271.03	5,227.62	43.41	121.426	
10,800.00	6,072.16	5,450.00	5,420.27	150.40	20.55	3.57	510.76	143.66	5,370.32	5,326.85	43.47	123.541	
10,900.00	6,072.47	5,450.00	5,420.27	153.38	20.55	3.57	510.76	143.66	5,469.62	5,426.09	43.53	125.650	
11,000.00	6,072.77	5,450.00	5,420.27	156.35	20.55	3.57	510.76	143.66	5,568.95	5,525.36	43.59	127.753	
11,100.00	6,073.08	5,450.00	5,420.27	159.33	20.55	3.57	510.76	143.66	5,668.31	5,624.66	43.65	129.851	
11,200.00	6,073.38	5,450.00	5,420.27	162.31	20.55	3.57	510.76	143.66	5,767.69	5,723.97	43.71	131.942	
11,300.00	6,073.69	5,450.00	5,420.27	165.30	20.55	3.57	510.76	143.66	5,867.09	5,823.31	43.78	134.028	
11,400.00	6,074.00	5,450.00	5,420.27	168.28	20.55	3.57	510.76	143.66	5,966.51	5,922.67	43.84	136.107	
11,500.00	6,074.30	5,450.00	5,420.27	171.26	20.55	3.57	510.76	143.66	6,065.94	6,022.04	43.90	138.180	
11,600.00	6,074.61	5,450.00	5,420.27	174.25	20.55	3.57	510.76	143.66	6,165.40	6,121.44	43.96	140.246	
11,700.00	6,074.91	5,450.00	5,420.27	177.23	20.55	3.57	510.76	143.66	6,264.87	6,220.85	44.02	142.306	
11,800.00	6,075.22	5,450.00	5,420.27	180.22	20.55	3.57	510.76	143.66	6,364.36	6,320.28	44.09	144.360	
11,900.00	6,075.52	5,450.00	5,420.27	183.21	20.55	3.57	510.76	143.66	6,463.87	6,419.72	44.15	146.406	
12,000.00	6,075.83	5,450.00	5,420.27	186.19	20.55	3.57	510.76	143.66	6,563.39	6,519.18	44.21	148.446	
12,100.00	6,076.13	5,450.00	5,420.27	189.18	20.55	3.57	510.76	143.66	6,662.93	6,618.65	44.28	150.479	
12,200.00	6,076.44	5,450.00	5,420.27	192.17	20.55	3.57	510.76	143.66	6,762.47	6,718.13	44.34	152.504	
12,300.00	6,076.74	5,450.00	5,420.27	195.16	20.55	3.57	510.76	143.66	6,862.04	6,817.63	44.41	154.523	
12,400.00	6,077.05	5,450.00	5,420.27	198.15	20.55	3.57	510.76	143.66	6,961.61	6,917.14	44.47	156.534	
12,500.00	6,077.35	5,450.00	5,420.27	201.15	20.55	3.57	510.76	143.66	7,061.20	7,016.66	44.54	158.538	
12,600.00	6,077.66	5,450.00	5,420.27	204.14	20.55	3.57	510.76	143.66	7,160.80	7,116.19	44.61	160.535	
12,700.00	6,077.96	5,450.00	5,420.27	207.13	20.55	3.57	510.76	143.66	7,260.41	7,215.73	44.67	162.524	
12,711.72	6,078.00	5,450.00	5,420.27	207.48	20.55	3.57	510.76	143.66	7,272.08	7,227.40	44.68	162.757	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 601 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	144.31	-20.39	14.65	25.10				
100.00	100.00	100.00	100.00	0.18	0.18	144.31	-20.39	14.65	25.10	24.74	0.36	70.024	
200.00	200.00	200.00	200.00	0.54	0.54	144.31	-20.39	14.65	25.10	24.03	1.08	23.341	
300.00	300.00	300.00	300.00	0.90	0.90	144.31	-20.39	14.65	25.10	23.31	1.79	14.005	
400.00	400.00	400.00	400.00	1.25	1.25	144.31	-20.39	14.65	25.10	22.59	2.51	10.003	
500.00	500.00	500.00	500.00	1.61	1.61	144.31	-20.39	14.65	25.10	21.88	3.23	7.780	CC
600.00	599.98	600.66	600.64	1.97	1.97	164.17	-18.62	14.79	25.47	21.51	3.96	6.435	ES
700.00	699.84	701.29	701.13	2.33	2.34	159.61	-13.34	15.23	26.67	21.97	4.70	5.678	
800.00	799.47	801.84	801.28	2.70	2.70	152.78	-4.55	15.96	28.83	23.40	5.43	5.307	
900.00	899.04	902.22	900.90	3.06	3.07	142.08	7.71	16.97	30.30	24.15	6.15	4.925	
1,000.00	998.61	1,002.20	999.63	3.42	3.45	126.68	23.37	18.27	31.88	25.01	6.87	4.640	SF
1,100.00	1,098.17	1,101.54	1,097.13	3.80	3.84	108.11	42.32	19.84	35.79	28.16	7.63	4.690	
1,200.00	1,197.74	1,200.00	1,193.06	4.17	4.25	90.27	64.42	21.68	44.00	35.55	8.45	5.207	
1,300.00	1,297.31	1,297.40	1,287.14	4.54	4.67	76.15	89.50	23.75	57.21	47.93	9.28	6.164	
1,400.00	1,396.88	1,393.50	1,379.08	4.91	5.11	65.98	117.35	26.06	75.11	65.03	10.08	7.451	
1,500.00	1,496.44	1,489.43	1,470.00	5.29	5.58	58.82	147.85	28.59	96.88	86.05	10.83	8.943	
1,600.00	1,596.01	1,586.35	1,561.72	5.66	6.07	54.16	179.06	31.18	119.97	108.41	11.56	10.379	
1,700.00	1,695.58	1,683.27	1,653.44	6.04	6.56	51.00	210.27	33.76	143.57	131.29	12.28	11.690	
1,800.00	1,795.15	1,780.19	1,745.16	6.41	7.07	48.74	241.48	36.35	167.47	154.46	13.01	12.877	
1,900.00	1,894.71	1,877.11	1,836.88	6.79	7.58	47.04	272.69	38.94	191.55	177.82	13.73	13.948	
2,000.00	1,994.28	1,974.03	1,928.60	7.17	8.09	45.73	303.90	41.53	215.76	201.29	14.46	14.916	
2,100.00	2,093.85	2,070.95	2,020.32	7.54	8.61	44.67	335.11	44.11	240.05	224.85	15.20	15.793	
2,200.00	2,193.42	2,167.87	2,112.04	7.92	9.14	43.82	366.32	46.70	264.40	248.46	15.94	16.590	
2,300.00	2,292.98	2,264.79	2,203.76	8.30	9.66	43.10	397.53	49.29	288.80	272.12	16.68	17.315	
2,400.00	2,392.55	2,361.70	2,295.48	8.67	10.19	42.50	428.74	51.87	313.24	295.82	17.42	17.978	
2,500.00	2,492.12	2,458.62	2,387.21	9.05	10.72	41.98	459.95	54.46	337.70	319.53	18.17	18.586	
2,600.00	2,591.69	2,555.54	2,478.93	9.43	11.26	41.54	491.16	57.05	362.19	343.27	18.92	19.144	
2,700.00	2,691.25	2,652.46	2,570.65	9.81	11.79	41.15	522.37	59.64	386.70	367.03	19.67	19.659	
2,800.00	2,790.82	2,749.38	2,662.37	10.18	12.33	40.81	553.58	62.22	411.22	390.79	20.42	20.135	
2,900.00	2,890.39	2,846.30	2,754.09	10.56	12.86	40.50	584.79	64.81	435.75	414.57	21.18	20.575	
3,000.00	2,989.96	2,943.22	2,845.81	10.94	13.40	40.23	616.00	67.40	460.29	438.36	21.93	20.985	
3,100.00	3,089.52	3,040.14	2,937.53	11.32	13.94	39.98	647.21	69.98	484.84	462.15	22.69	21.367	
3,200.00	3,189.09	3,137.06	3,029.25	11.70	14.48	39.76	678.42	72.57	509.40	485.95	23.45	21.723	
3,300.00	3,288.66	3,233.98	3,120.97	12.07	15.02	39.56	709.63	75.16	533.96	509.75	24.21	22.056	
3,400.00	3,388.23	3,330.90	3,212.69	12.45	15.56	39.38	740.84	77.75	558.53	533.56	24.97	22.368	
3,500.00	3,487.79	3,427.82	3,304.41	12.83	16.10	39.21	772.05	80.33	583.11	557.38	25.73	22.661	
3,600.00	3,587.36	3,524.74	3,396.13	13.21	16.64	39.06	803.26	82.92	607.69	581.19	26.49	22.936	
3,700.00	3,686.93	3,621.66	3,487.85	13.58	17.19	38.92	834.47	85.51	632.27	605.01	27.26	23.196	
3,800.00	3,786.50	3,718.58	3,579.57	13.96	17.73	38.79	865.68	88.09	656.86	628.84	28.02	23.441	
3,900.00	3,886.06	3,815.50	3,671.29	14.34	18.27	38.66	896.89	90.68	681.45	652.66	28.79	23.672	
4,000.00	3,985.63	3,912.42	3,763.01	14.72	18.82	38.55	928.10	93.27	706.04	676.49	29.55	23.892	
4,100.00	4,085.20	4,009.34	3,854.73	15.10	19.36	38.44	959.31	95.86	730.64	700.32	30.32	24.099	
4,200.00	4,184.77	4,106.26	3,946.45	15.48	19.91	38.35	990.52	98.44	755.23	724.15	31.08	24.296	
4,300.00	4,284.33	4,203.18	4,038.18	15.85	20.45	38.25	1,021.73	101.03	779.83	747.98	31.85	24.484	
4,400.00	4,383.90	4,300.10	4,129.90	16.23	20.99	38.17	1,052.94	103.62	804.43	771.82	32.62	24.662	
4,500.00	4,483.47	4,397.02	4,221.62	16.61	21.54	38.08	1,084.15	106.20	829.04	795.65	33.39	24.832	
4,600.00	4,583.04	4,493.94	4,313.34	16.99	22.09	38.01	1,115.36	108.79	853.64	819.49	34.15	24.994	
4,700.00	4,682.60	4,590.86	4,405.06	17.37	22.63	37.93	1,146.57	111.38	878.25	843.32	34.92	25.148	
4,800.00	4,782.17	4,687.78	4,496.78	17.74	23.18	37.87	1,177.78	113.97	902.85	867.16	35.69	25.296	
4,900.00	4,881.74	4,784.70	4,588.50	18.12	23.72	37.80	1,208.99	116.55	927.46	891.00	36.46	25.437	
5,000.00	4,981.31	4,881.62	4,680.22	18.50	24.27	37.74	1,240.20	119.14	952.07	914.84	37.23	25.573	
5,100.00	5,080.87	4,978.54	4,771.94	18.88	24.82	37.68	1,271.41	121.73	976.68	938.68	38.00	25.702	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 601 2H - OH - Plan #2

Survey Program: 0-MWD+HDGM

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	5,075.46	4,863.66	19.26	25.36	37.62	1,302.62	124.31	1,001.29	962.52	38.77	25.827	
5,300.00	5,280.01	5,172.38	4,955.38	19.64	25.91	37.57	1,333.83	126.90	1,025.90	986.36	39.54	25.946	
5,400.00	5,379.57	5,269.29	5,047.10	20.01	26.46	44.78	1,365.04	129.49	1,050.53	1,010.22	40.31	26.061	
5,500.00	5,478.43	5,365.30	5,137.95	20.40	27.00	79.23	1,395.96	132.05	1,077.32	1,036.20	41.12	26.201	
5,600.00	5,574.70	5,458.41	5,226.07	20.81	27.52	87.69	1,425.94	134.54	1,107.59	1,065.61	41.98	26.385	
5,700.00	5,666.51	5,546.82	5,309.74	21.23	28.02	90.71	1,454.41	136.90	1,141.44	1,098.54	42.90	26.607	
5,800.00	5,752.07	5,628.81	5,387.33	21.69	28.48	91.79	1,480.81	139.09	1,179.16	1,135.26	43.90	26.860	
5,900.00	5,829.71	5,677.61	5,433.47	22.22	28.76	90.96	1,496.51	141.32	1,221.78	1,177.04	44.74	27.306	
6,000.00	5,897.93	5,711.31	5,465.21	22.90	28.95	88.72	1,507.31	144.73	1,270.51	1,224.88	45.63	27.845	
6,100.00	5,955.40	5,734.93	5,487.35	23.78	29.08	85.19	1,514.84	148.06	1,324.88	1,278.27	46.61	28.427	
6,200.00	6,001.00	5,750.00	5,501.41	24.91	29.17	80.47	1,519.63	150.58	1,384.01	1,336.32	47.69	29.021	
6,300.00	6,033.84	5,750.00	5,501.41	26.32	29.17	74.34	1,519.63	150.58	1,446.71	1,397.95	48.76	29.669	
6,400.00	6,053.28	5,750.00	5,501.41	27.97	29.17	67.87	1,519.63	150.58	1,511.56	1,461.59	49.97	30.251	
6,500.00	6,059.03	5,750.00	5,501.41	29.82	29.17	62.13	1,519.63	150.58	1,577.11	1,525.86	51.25	30.773	
6,600.00	6,059.34	5,750.00	5,501.41	31.84	29.17	62.13	1,519.63	150.58	1,644.74	1,592.22	52.51	31.320	
6,700.00	6,059.65	5,750.00	5,501.41	34.00	29.17	62.13	1,519.63	150.58	1,715.53	1,661.83	53.70	31.945	
6,800.00	6,059.95	5,732.67	5,485.24	36.29	29.07	61.32	1,514.13	147.71	1,788.87	1,734.29	54.58	32.773	
6,900.00	6,060.26	5,727.67	5,480.55	38.67	29.04	61.08	1,512.53	146.95	1,864.75	1,809.21	55.54	33.574	
7,000.00	6,060.56	5,723.10	5,476.28	41.14	29.02	60.87	1,511.08	146.29	1,942.78	1,886.36	56.42	34.431	
7,100.00	6,060.87	5,718.92	5,472.35	43.68	28.99	60.67	1,509.74	145.72	2,022.72	1,965.48	57.24	35.340	
7,200.00	6,061.17	5,700.00	5,454.58	46.27	28.89	59.79	1,503.69	143.41	2,104.53	2,046.75	57.78	36.422	
7,300.00	6,061.48	5,700.00	5,454.58	48.91	28.89	59.79	1,503.69	143.41	2,187.58	2,129.07	58.51	37.389	
7,400.00	6,061.78	5,700.00	5,454.58	51.60	28.89	59.79	1,503.69	143.41	2,272.00	2,212.83	59.18	38.394	
7,500.00	6,062.09	5,700.00	5,454.58	54.31	28.89	59.79	1,503.69	143.41	2,357.64	2,297.85	59.79	39.433	
7,600.00	6,062.39	5,700.00	5,454.58	57.06	28.89	59.79	1,503.69	143.41	2,444.37	2,384.02	60.35	40.504	
7,700.00	6,062.70	5,700.00	5,454.58	59.83	28.89	59.79	1,503.69	143.41	2,532.08	2,471.21	60.87	41.601	
7,800.00	6,063.00	5,700.00	5,454.58	62.63	28.89	59.79	1,503.69	143.41	2,620.67	2,559.33	61.34	42.722	
7,900.00	6,063.31	5,700.00	5,454.58	65.44	28.89	59.79	1,503.69	143.41	2,710.05	2,648.27	61.78	43.865	
8,000.00	6,063.61	5,700.00	5,454.58	68.27	28.89	59.79	1,503.69	143.41	2,800.15	2,737.96	62.19	45.027	
8,100.00	6,063.92	5,700.00	5,454.58	71.11	28.89	59.79	1,503.69	143.41	2,890.90	2,828.34	62.56	46.207	
8,200.00	6,064.23	5,700.00	5,454.58	73.97	28.89	59.79	1,503.69	143.41	2,982.25	2,919.33	62.91	47.401	
8,300.00	6,064.53	5,700.00	5,454.58	76.84	28.89	59.79	1,503.69	143.41	3,074.13	3,010.89	63.24	48.610	
8,400.00	6,064.84	5,700.00	5,454.58	79.72	28.89	59.79	1,503.69	143.41	3,166.50	3,102.96	63.54	49.831	
8,500.00	6,065.14	5,700.00	5,454.58	82.61	28.89	59.79	1,503.69	143.41	3,259.33	3,195.50	63.83	51.064	
8,600.00	6,065.45	5,700.00	5,454.58	85.51	28.89	59.79	1,503.69	143.41	3,352.57	3,288.47	64.09	52.306	
8,700.00	6,065.75	5,700.00	5,454.58	88.42	28.89	59.79	1,503.69	143.41	3,446.18	3,381.84	64.34	53.558	
8,800.00	6,066.06	5,679.17	5,434.95	91.33	28.77	58.82	1,497.02	141.44	3,539.80	3,475.49	64.31	55.041	
8,900.00	6,066.36	5,677.84	5,433.69	94.25	28.76	58.75	1,496.59	141.34	3,634.05	3,569.53	64.52	56.327	
9,000.00	6,066.67	5,676.57	5,432.50	97.17	28.75	58.70	1,496.18	141.24	3,728.59	3,663.88	64.71	57.620	
9,100.00	6,066.97	5,675.37	5,431.35	100.10	28.75	58.64	1,495.79	141.15	3,823.40	3,758.51	64.89	58.919	
9,200.00	6,067.28	5,674.21	5,430.26	103.04	28.74	58.59	1,495.42	141.07	3,918.47	3,853.41	65.06	60.224	
9,300.00	6,067.58	5,673.11	5,429.22	105.98	28.73	58.53	1,495.07	140.99	4,013.78	3,948.55	65.23	61.534	
9,400.00	6,067.89	5,672.05	5,428.22	108.92	28.73	58.49	1,494.73	140.91	4,109.31	4,043.93	65.38	62.848	
9,500.00	6,068.19	5,650.00	5,407.38	111.86	28.60	57.46	1,487.64	139.71	4,205.40	4,140.14	65.26	64.442	
9,600.00	6,068.50	5,650.00	5,407.38	114.81	28.60	57.46	1,487.64	139.71	4,301.29	4,235.88	65.41	65.755	
9,700.00	6,068.80	5,650.00	5,407.38	117.77	28.60	57.46	1,487.64	139.71	4,397.37	4,331.81	65.56	67.072	
9,800.00	6,069.11	5,650.00	5,407.38	120.72	28.60	57.46	1,487.64	139.71	4,493.62	4,427.92	65.70	68.393	
9,900.00	6,069.42	5,650.00	5,407.38	123.68	28.60	57.46	1,487.64	139.71	4,590.03	4,524.19	65.84	69.716	
10,000.00	6,069.72	5,650.00	5,407.38	126.64	28.60	57.46	1,487.64	139.71	4,686.60	4,620.63	65.97	71.042	
10,100.00	6,070.03	5,650.00	5,407.38	129.60	28.60	57.46	1,487.64	139.71	4,783.30	4,717.20	66.10	72.369	
10,200.00	6,070.33	5,650.00	5,407.38	132.57	28.60	57.46	1,487.64	139.71	4,880.13	4,813.92	66.22	73.699	
10,300.00	6,070.64	5,650.00	5,407.38	135.54	28.60	57.46	1,487.64	139.71	4,977.09	4,910.76	66.33	75.031	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Scientific Drilling, Intl

Anticollision Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 601 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	5,650.00	5,407.38	138.51	28.60	57.46	1,487.64	139.71	5,074.17	5,007.73	66.45	76.364	
10,500.00	6,071.25	5,650.00	5,407.38	141.48	28.60	57.46	1,487.64	139.71	5,171.36	5,104.81	66.56	77.699	
10,600.00	6,071.55	5,650.00	5,407.38	144.45	28.60	57.46	1,487.64	139.71	5,268.66	5,202.00	66.66	79.035	
10,700.00	6,071.86	5,650.00	5,407.38	147.42	28.60	57.46	1,487.64	139.71	5,366.05	5,299.29	66.77	80.371	
10,800.00	6,072.16	5,650.00	5,407.38	150.40	28.60	57.46	1,487.64	139.71	5,463.54	5,396.68	66.87	81.709	
10,900.00	6,072.47	5,650.00	5,407.38	153.38	28.60	57.46	1,487.64	139.71	5,561.12	5,494.16	66.96	83.047	
11,000.00	6,072.77	5,650.00	5,407.38	156.35	28.60	57.46	1,487.64	139.71	5,658.78	5,591.72	67.06	84.386	
11,100.00	6,073.08	5,650.00	5,407.38	159.33	28.60	57.46	1,487.64	139.71	5,756.52	5,689.37	67.15	85.725	
11,200.00	6,073.38	5,650.00	5,407.38	162.31	28.60	57.46	1,487.64	139.71	5,854.34	5,787.10	67.24	87.064	
11,300.00	6,073.69	5,650.00	5,407.38	165.30	28.60	57.46	1,487.64	139.71	5,952.23	5,884.90	67.33	88.403	
11,400.00	6,074.00	5,650.00	5,407.38	168.28	28.60	57.46	1,487.64	139.71	6,050.19	5,982.78	67.42	89.743	
11,500.00	6,074.30	5,650.00	5,407.38	171.26	28.60	57.46	1,487.64	139.71	6,148.22	6,080.72	67.50	91.082	
11,600.00	6,074.61	5,650.00	5,407.38	174.25	28.60	57.46	1,487.64	139.71	6,246.31	6,178.72	67.59	92.421	
11,700.00	6,074.91	5,650.00	5,407.38	177.23	28.60	57.46	1,487.64	139.71	6,344.46	6,276.79	67.67	93.759	
11,800.00	6,075.22	5,650.00	5,407.38	180.22	28.60	57.46	1,487.64	139.71	6,442.66	6,374.92	67.75	95.098	
11,900.00	6,075.52	5,650.00	5,407.38	183.21	28.60	57.46	1,487.64	139.71	6,540.92	6,473.10	67.83	96.435	
12,000.00	6,075.83	5,650.00	5,407.38	186.19	28.60	57.46	1,487.64	139.71	6,639.23	6,571.33	67.91	97.772	
12,100.00	6,076.13	5,650.00	5,407.38	189.18	28.60	57.46	1,487.64	139.71	6,737.60	6,669.61	67.98	99.109	
12,200.00	6,076.44	5,650.00	5,407.38	192.17	28.60	57.46	1,487.64	139.71	6,836.00	6,767.95	68.06	100.444	
12,300.00	6,076.74	5,650.00	5,407.38	195.16	28.60	57.46	1,487.64	139.71	6,934.46	6,866.33	68.13	101.779	
12,400.00	6,077.05	5,650.00	5,407.38	198.15	28.60	57.46	1,487.64	139.71	7,032.96	6,964.75	68.21	103.113	
12,500.00	6,077.35	5,650.00	5,407.38	201.15	28.60	57.46	1,487.64	139.71	7,131.50	7,063.22	68.28	104.446	
12,600.00	6,077.66	5,650.00	5,407.38	204.14	28.60	57.46	1,487.64	139.71	7,230.08	7,161.73	68.35	105.777	
12,700.00	6,077.96	5,650.00	5,407.38	207.13	28.60	57.46	1,487.64	139.71	7,328.70	7,260.27	68.42	107.108	
12,711.72	6,078.00	5,650.00	5,407.38	207.48	28.60	57.46	1,487.64	139.71	7,340.26	7,271.82	68.43	107.264	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 602 1H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	135.62	-72.44	70.88	101.35				
100.00	100.00	100.00	100.00	0.18	0.18	135.62	-72.44	70.88	101.35	100.99	0.36	282.730	
200.00	200.00	200.00	200.00	0.54	0.54	135.62	-72.44	70.88	101.35	100.28	1.08	94.243	
300.00	300.00	300.00	300.00	0.90	0.90	135.62	-72.44	70.88	101.35	99.56	1.79	56.546	
400.00	400.00	400.00	400.00	1.25	1.25	135.62	-72.44	70.88	101.35	98.84	2.51	40.390	
500.00	500.00	500.00	500.00	1.61	1.61	135.62	-72.44	70.88	101.35	98.12	3.23	31.414	CC, ES
600.00	599.98	597.04	597.02	1.97	1.95	157.94	-74.06	71.18	104.38	100.44	3.93	26.543	
700.00	699.84	693.39	693.25	2.33	2.27	160.19	-78.86	72.06	113.56	108.91	4.65	24.407	
800.00	799.47	788.46	787.97	2.70	2.60	163.20	-86.71	73.51	128.96	123.57	5.39	23.926	SF
900.00	899.04	882.20	881.07	3.06	2.93	166.21	-97.48	75.50	148.35	142.23	6.12	24.246	
1,000.00	998.61	978.10	976.00	3.42	3.28	168.89	-110.82	77.95	170.30	163.49	6.81	25.011	
1,100.00	1,098.17	1,075.34	1,072.24	3.80	3.65	171.01	-124.48	80.47	192.69	185.20	7.48	25.745	
1,200.00	1,197.74	1,172.58	1,168.49	4.17	4.03	172.69	-138.15	82.99	215.27	207.10	8.17	26.347	
1,300.00	1,297.31	1,269.82	1,264.73	4.54	4.41	174.05	-151.82	85.51	238.00	229.14	8.86	26.863	
1,400.00	1,396.88	1,367.07	1,360.98	4.91	4.79	175.18	-165.48	88.03	260.83	251.28	9.55	27.305	
1,500.00	1,496.44	1,464.31	1,457.22	5.29	5.18	176.12	-179.15	90.55	283.74	273.49	10.25	27.687	
1,600.00	1,596.01	1,561.55	1,553.46	5.66	5.57	176.92	-192.82	93.07	306.71	295.77	10.95	28.019	
1,700.00	1,695.58	1,658.79	1,649.71	6.04	5.96	177.61	-206.48	95.59	329.74	318.09	11.65	28.310	
1,800.00	1,795.15	1,756.03	1,745.95	6.41	6.36	178.21	-220.15	98.10	352.80	340.45	12.35	28.567	
1,900.00	1,894.71	1,853.28	1,842.20	6.79	6.75	178.74	-233.82	100.62	375.89	362.84	13.05	28.795	
2,000.00	1,994.28	1,950.52	1,938.44	7.17	7.15	179.20	-247.49	103.14	399.01	385.25	13.76	28.999	
2,100.00	2,093.85	2,047.76	2,034.68	7.54	7.54	179.62	-261.15	105.66	422.16	407.69	14.47	29.182	
2,200.00	2,193.42	2,145.00	2,130.93	7.92	7.94	179.99	-274.82	108.18	445.32	430.14	15.17	29.348	
2,300.00	2,292.98	2,242.25	2,227.17	8.30	8.34	-179.68	-288.49	110.70	468.50	452.61	15.88	29.497	
2,400.00	2,392.55	2,339.49	2,323.42	8.67	8.74	-179.37	-302.15	113.22	491.69	475.10	16.59	29.634	
2,500.00	2,492.12	2,436.73	2,419.66	9.05	9.14	-179.10	-315.82	115.74	514.89	497.59	17.30	29.759	
2,600.00	2,591.69	2,533.97	2,515.90	9.43	9.54	-178.85	-329.49	118.26	538.10	520.09	18.01	29.873	
2,700.00	2,691.25	2,631.21	2,612.15	9.81	9.94	-178.61	-343.15	120.77	561.33	542.60	18.72	29.979	
2,800.00	2,790.82	2,728.46	2,708.39	10.18	10.34	-178.40	-356.82	123.29	584.56	565.12	19.44	30.076	
2,900.00	2,890.39	2,825.70	2,804.64	10.56	10.74	-178.20	-370.49	125.81	607.80	587.65	20.15	30.166	
3,000.00	2,989.96	2,922.94	2,900.88	10.94	11.14	-178.02	-384.15	128.33	631.04	610.18	20.86	30.250	
3,100.00	3,089.52	3,020.18	2,997.12	11.32	11.54	-177.85	-397.82	130.85	654.29	632.72	21.57	30.328	
3,200.00	3,189.09	3,117.43	3,093.37	11.70	11.94	-177.70	-411.49	133.37	677.54	655.26	22.29	30.400	
3,300.00	3,288.66	3,214.67	3,189.61	12.07	12.34	-177.55	-425.16	135.89	700.80	677.80	23.00	30.468	
3,400.00	3,388.23	3,311.91	3,285.86	12.45	12.74	-177.41	-438.82	138.41	724.07	700.35	23.71	30.532	
3,500.00	3,487.79	3,409.15	3,382.10	12.83	13.14	-177.28	-452.49	140.93	747.33	722.90	24.43	30.592	
3,600.00	3,587.36	3,506.39	3,478.35	13.21	13.54	-177.16	-466.16	143.44	770.60	745.46	25.14	30.648	
3,700.00	3,686.93	3,603.64	3,574.59	13.58	13.95	-177.05	-479.82	145.96	793.88	768.02	25.86	30.702	
3,800.00	3,786.50	3,700.88	3,670.83	13.96	14.35	-176.94	-493.49	148.48	817.15	790.58	26.57	30.752	
3,900.00	3,886.06	3,798.12	3,767.08	14.34	14.75	-176.84	-507.16	151.00	840.43	813.14	27.29	30.799	
4,000.00	3,985.63	3,895.36	3,863.32	14.72	15.15	-176.74	-520.82	153.52	863.71	835.71	28.00	30.844	
4,100.00	4,085.20	3,992.61	3,959.57	15.10	15.55	-176.65	-534.49	156.04	887.00	858.28	28.72	30.886	
4,200.00	4,184.77	4,089.85	4,055.81	15.48	15.96	-176.56	-548.16	158.56	910.28	880.85	29.43	30.927	
4,300.00	4,284.33	4,187.09	4,152.05	15.85	16.36	-176.48	-561.82	161.08	933.57	903.42	30.15	30.965	
4,400.00	4,383.90	4,284.33	4,248.30	16.23	16.76	-176.40	-575.49	163.60	956.86	925.99	30.86	31.002	
4,500.00	4,483.47	4,381.57	4,344.54	16.61	17.16	-176.33	-589.16	166.11	980.15	948.57	31.58	31.037	
4,600.00	4,583.04	4,478.82	4,440.79	16.99	17.57	-176.26	-602.82	168.63	1,003.44	971.14	32.30	31.070	
4,700.00	4,682.60	4,576.06	4,537.03	17.37	17.97	-176.19	-616.49	171.15	1,026.73	993.72	33.01	31.101	
4,800.00	4,782.17	4,673.30	4,633.27	17.74	18.37	-176.12	-630.16	173.67	1,050.03	1,016.30	33.73	31.132	
4,900.00	4,881.74	4,770.54	4,729.52	18.12	18.78	-176.06	-643.83	176.19	1,073.32	1,038.88	34.44	31.161	
5,000.00	4,981.31	4,867.79	4,825.76	18.50	19.18	-176.00	-657.49	178.71	1,096.62	1,061.46	35.16	31.188	
5,100.00	5,080.87	4,965.03	4,922.01	18.88	19.58	-175.95	-671.16	181.23	1,119.92	1,084.04	35.88	31.215	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 602 1H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	5,062.27	5,018.25	19.26	19.98	-175.89	-684.83	183.75	1,143.22	1,106.62	36.59	31.241	
5,300.00	5,280.01	5,159.51	5,114.49	19.64	20.39	-175.84	-698.49	186.27	1,166.52	1,129.21	37.31	31.265	
5,400.00	5,379.57	5,256.75	5,210.73	20.01	20.79	-168.15	-712.16	188.78	1,189.84	1,151.81	38.03	31.289	
5,500.00	5,478.43	5,353.08	5,306.08	20.40	21.19	-130.26	-725.70	191.28	1,215.45	1,176.71	38.75	31.369	
5,600.00	5,574.70	5,435.67	5,387.81	20.81	21.53	-118.83	-737.30	193.69	1,244.91	1,205.53	39.38	31.616	
5,700.00	5,666.51	5,490.01	5,441.37	21.23	21.76	-112.74	-744.91	198.66	1,279.94	1,240.15	39.79	32.164	
5,800.00	5,752.07	5,534.90	5,485.23	21.69	21.95	-108.17	-751.13	205.84	1,321.14	1,280.99	40.15	32.906	
5,900.00	5,829.71	5,569.48	5,518.68	22.22	22.09	-103.75	-755.88	213.26	1,368.43	1,327.97	40.46	33.821	
6,000.00	5,897.93	5,600.00	5,547.86	22.90	22.22	-99.13	-760.01	221.16	1,421.38	1,380.55	40.83	34.812	
6,100.00	5,955.40	5,600.00	5,547.86	23.78	22.22	-92.87	-760.01	221.16	1,479.15	1,438.14	41.02	36.060	
6,200.00	6,001.00	5,617.14	5,564.09	24.91	22.29	-87.07	-762.32	226.14	1,540.49	1,498.93	41.56	37.067	
6,300.00	6,033.84	5,618.04	5,564.95	26.32	22.29	-80.38	-762.44	226.41	1,604.22	1,562.11	42.10	38.102	
6,400.00	6,053.28	5,600.00	5,547.86	27.97	22.22	-73.00	-760.01	221.16	1,669.00	1,626.39	42.60	39.175	
6,500.00	6,059.03	5,600.00	5,547.86	29.82	22.22	-67.59	-760.01	221.16	1,733.09	1,689.65	43.44	39.898	
6,600.00	6,059.34	5,600.00	5,547.86	31.84	22.22	-67.59	-760.01	221.16	1,798.73	1,754.40	44.32	40.583	
6,700.00	6,059.65	5,600.00	5,547.86	34.00	22.22	-67.59	-760.01	221.16	1,867.42	1,822.22	45.19	41.321	
6,800.00	6,059.95	5,576.07	5,525.00	36.29	22.12	-66.63	-756.77	214.86	1,938.38	1,892.59	45.80	42.324	
6,900.00	6,060.26	5,568.33	5,517.57	38.67	22.09	-66.32	-755.72	212.99	2,011.90	1,965.36	46.54	43.232	
7,000.00	6,060.56	5,550.00	5,499.88	41.14	22.01	-65.58	-753.21	208.88	2,087.63	2,040.49	47.13	44.293	
7,100.00	6,060.87	5,550.00	5,499.88	43.68	22.01	-65.58	-753.21	208.88	2,165.08	2,117.21	47.87	45.230	
7,200.00	6,061.17	5,550.00	5,499.88	46.27	22.01	-65.58	-753.21	208.88	2,244.32	2,195.76	48.56	46.218	
7,300.00	6,061.48	5,550.00	5,499.88	48.91	22.01	-65.58	-753.21	208.88	2,325.16	2,275.96	49.21	47.254	
7,400.00	6,061.78	5,550.00	5,499.88	51.60	22.01	-65.58	-753.21	208.88	2,407.44	2,357.63	49.81	48.333	
7,500.00	6,062.09	5,550.00	5,499.88	54.31	22.01	-65.58	-753.21	208.88	2,491.02	2,440.64	50.37	49.451	
7,600.00	6,062.39	5,528.54	5,479.05	57.06	21.92	-64.73	-750.25	204.65	2,575.40	2,524.69	50.71	50.787	
7,700.00	6,062.70	5,524.32	5,474.94	59.83	21.90	-64.56	-749.67	203.90	2,661.04	2,609.88	51.17	52.006	
7,800.00	6,063.00	5,520.37	5,471.08	62.63	21.89	-64.40	-749.12	203.21	2,747.64	2,696.04	51.60	53.253	
7,900.00	6,063.31	5,500.00	5,451.17	65.44	21.80	-63.59	-746.30	200.02	2,835.31	2,783.46	51.85	54.683	
8,000.00	6,063.61	5,500.00	5,451.17	68.27	21.80	-63.59	-746.30	200.02	2,923.46	2,871.20	52.26	55.942	
8,100.00	6,063.92	5,500.00	5,451.17	71.11	21.80	-63.59	-746.30	200.02	3,012.36	2,959.71	52.64	57.224	
8,200.00	6,064.23	5,500.00	5,451.17	73.97	21.80	-63.59	-746.30	200.02	3,101.93	3,048.93	53.00	58.526	
8,300.00	6,064.53	5,500.00	5,451.17	76.84	21.80	-63.59	-746.30	200.02	3,192.12	3,138.78	53.34	59.847	
8,400.00	6,064.84	5,500.00	5,451.17	79.72	21.80	-63.59	-746.30	200.02	3,282.87	3,229.22	53.66	61.185	
8,500.00	6,065.14	5,500.00	5,451.17	82.61	21.80	-63.59	-746.30	200.02	3,374.15	3,320.20	53.95	62.538	
8,600.00	6,065.45	5,500.00	5,451.17	85.51	21.80	-63.59	-746.30	200.02	3,465.91	3,411.68	54.24	63.904	
8,700.00	6,065.75	5,500.00	5,451.17	88.42	21.80	-63.59	-746.30	200.02	3,558.12	3,503.62	54.50	65.283	
8,800.00	6,066.06	5,500.00	5,451.17	91.33	21.80	-63.59	-746.30	200.02	3,650.74	3,595.98	54.75	66.674	
8,900.00	6,066.36	5,500.00	5,451.17	94.25	21.80	-63.59	-746.30	200.02	3,743.73	3,688.74	54.99	68.075	
9,000.00	6,066.67	5,500.00	5,451.17	97.17	21.80	-63.59	-746.30	200.02	3,837.08	3,781.86	55.22	69.485	
9,100.00	6,066.97	5,500.00	5,451.17	100.10	21.80	-63.59	-746.30	200.02	3,930.76	3,875.32	55.44	70.904	
9,200.00	6,067.28	5,500.00	5,451.17	103.04	21.80	-63.59	-746.30	200.02	4,024.73	3,969.09	55.64	72.331	
9,300.00	6,067.58	5,500.00	5,451.17	105.98	21.80	-63.59	-746.30	200.02	4,119.00	4,063.16	55.84	73.765	
9,400.00	6,067.89	5,500.00	5,451.17	108.92	21.80	-63.59	-746.30	200.02	4,213.53	4,157.50	56.03	75.205	
9,500.00	6,068.19	5,477.96	5,429.53	111.86	21.71	-62.72	-743.23	197.20	4,307.92	4,251.89	56.03	76.883	
9,600.00	6,068.50	5,476.37	5,427.96	114.81	21.70	-62.66	-743.00	197.03	4,402.87	4,346.68	56.19	78.353	
9,700.00	6,068.80	5,474.84	5,426.46	117.77	21.70	-62.60	-742.79	196.86	4,498.04	4,441.69	56.35	79.828	
9,800.00	6,069.11	5,473.38	5,425.02	120.72	21.69	-62.54	-742.59	196.70	4,593.40	4,536.91	56.49	81.307	
9,900.00	6,069.42	5,471.96	5,423.63	123.68	21.68	-62.48	-742.39	196.55	4,688.96	4,632.32	56.64	82.790	
10,000.00	6,069.72	5,450.00	5,401.97	126.64	21.59	-61.63	-739.31	194.60	4,785.02	4,728.42	56.61	84.527	
10,100.00	6,070.03	5,450.00	5,401.97	129.60	21.59	-61.63	-739.31	194.60	4,880.89	4,824.13	56.75	86.002	
10,200.00	6,070.33	5,450.00	5,401.97	132.57	21.59	-61.63	-739.31	194.60	4,976.91	4,920.02	56.89	87.481	
10,300.00	6,070.64	5,450.00	5,401.97	135.54	21.59	-61.63	-739.31	194.60	5,073.09	5,016.07	57.03	88.962	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 602 1H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	5,450.00	5,401.97	138.51	21.59	-61.63	-739.31	194.60	5,169.42	5,112.26	57.15	90.446	
10,500.00	6,071.25	5,450.00	5,401.97	141.48	21.59	-61.63	-739.31	194.60	5,265.88	5,208.60	57.28	91.931	
10,600.00	6,071.55	5,450.00	5,401.97	144.45	21.59	-61.63	-739.31	194.60	5,362.47	5,305.07	57.40	93.419	
10,700.00	6,071.86	5,450.00	5,401.97	147.42	21.59	-61.63	-739.31	194.60	5,459.18	5,401.66	57.52	94.908	
10,800.00	6,072.16	5,450.00	5,401.97	150.40	21.59	-61.63	-739.31	194.60	5,556.01	5,498.38	57.64	96.398	
10,900.00	6,072.47	5,450.00	5,401.97	153.38	21.59	-61.63	-739.31	194.60	5,652.95	5,595.21	57.75	97.889	
11,000.00	6,072.77	5,450.00	5,401.97	156.35	21.59	-61.63	-739.31	194.60	5,750.00	5,692.14	57.86	99.381	
11,100.00	6,073.08	5,450.00	5,401.97	159.33	21.59	-61.63	-739.31	194.60	5,847.14	5,789.18	57.96	100.874	
11,200.00	6,073.38	5,450.00	5,401.97	162.31	21.59	-61.63	-739.31	194.60	5,944.38	5,886.31	58.07	102.368	
11,300.00	6,073.69	5,450.00	5,401.97	165.30	21.59	-61.63	-739.31	194.60	6,041.71	5,983.54	58.17	103.861	
11,400.00	6,074.00	5,450.00	5,401.97	168.28	21.59	-61.63	-739.31	194.60	6,139.13	6,080.86	58.27	105.355	
11,500.00	6,074.30	5,450.00	5,401.97	171.26	21.59	-61.63	-739.31	194.60	6,236.63	6,178.26	58.37	106.849	
11,600.00	6,074.61	5,450.00	5,401.97	174.25	21.59	-61.63	-739.31	194.60	6,334.20	6,275.74	58.46	108.342	
11,700.00	6,074.91	5,450.00	5,401.97	177.23	21.59	-61.63	-739.31	194.60	6,431.85	6,373.29	58.56	109.836	
11,800.00	6,075.22	5,450.00	5,401.97	180.22	21.59	-61.63	-739.31	194.60	6,529.57	6,470.92	58.65	111.329	
11,900.00	6,075.52	5,450.00	5,401.97	183.21	21.59	-61.63	-739.31	194.60	6,627.36	6,568.62	58.74	112.821	
12,000.00	6,075.83	5,450.00	5,401.97	186.19	21.59	-61.63	-739.31	194.60	6,725.21	6,666.38	58.83	114.313	
12,100.00	6,076.13	5,450.00	5,401.97	189.18	21.59	-61.63	-739.31	194.60	6,823.13	6,764.21	58.92	115.804	
12,200.00	6,076.44	5,450.00	5,401.97	192.17	21.59	-61.63	-739.31	194.60	6,921.11	6,862.10	59.01	117.294	
12,300.00	6,076.74	5,450.00	5,401.97	195.16	21.59	-61.63	-739.31	194.60	7,019.14	6,960.05	59.09	118.783	
12,400.00	6,077.05	5,450.00	5,401.97	198.15	21.59	-61.63	-739.31	194.60	7,117.23	7,058.05	59.18	120.271	
12,500.00	6,077.35	5,450.00	5,401.97	201.15	21.59	-61.63	-739.31	194.60	7,215.37	7,156.11	59.26	121.757	
12,600.00	6,077.66	5,450.00	5,401.97	204.14	21.59	-61.63	-739.31	194.60	7,313.56	7,254.22	59.34	123.243	
12,700.00	6,077.96	5,450.00	5,401.97	207.13	21.59	-61.63	-739.31	194.60	7,411.80	7,352.37	59.42	124.727	
12,711.72	6,078.00	5,450.00	5,401.97	207.48	21.59	-61.63	-739.31	194.60	7,423.31	7,363.88	59.43	124.900	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 602 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	132.79	-52.06	56.24	76.64				
100.00	100.00	100.00	100.00	0.18	0.18	132.79	-52.06	56.24	76.64	76.28	0.36	213.793	
200.00	200.00	200.00	200.00	0.54	0.54	132.79	-52.06	56.24	76.64	75.56	1.08	71.264	
300.00	300.00	300.00	300.00	0.90	0.90	132.79	-52.06	56.24	76.64	74.85	1.79	42.759	
400.00	400.00	400.00	400.00	1.25	1.25	132.79	-52.06	56.24	76.64	74.13	2.51	30.542	
500.00	500.00	500.00	500.00	1.61	1.61	132.79	-52.06	56.24	76.64	73.41	3.23	23.755	CC, ES
600.00	599.98	598.02	598.00	1.97	1.95	155.62	-53.74	56.31	79.45	75.52	3.93	20.207	
700.00	699.84	695.36	695.21	2.33	2.28	159.17	-58.71	56.53	88.12	83.47	4.65	18.953	SF
800.00	799.47	791.41	790.91	2.70	2.61	163.69	-66.86	56.88	102.92	97.54	5.39	19.106	
900.00	899.04	886.12	884.95	3.06	2.94	167.97	-78.02	57.37	121.79	115.67	6.12	19.902	
1,000.00	998.61	979.44	977.20	3.42	3.29	171.67	-92.05	57.98	144.01	137.16	6.85	21.025	
1,100.00	1,098.17	1,071.19	1,067.41	3.80	3.65	174.79	-108.76	58.70	169.55	161.98	7.57	22.408	
1,200.00	1,197.74	1,161.24	1,155.39	4.17	4.02	177.40	-127.97	59.54	198.30	190.03	8.27	23.969	
1,300.00	1,297.31	1,249.46	1,240.94	4.54	4.40	179.58	-149.45	60.47	230.17	221.21	8.96	25.686	
1,400.00	1,396.88	1,335.75	1,323.94	4.91	4.80	-178.59	-172.99	61.49	265.04	255.41	9.63	27.527	
1,500.00	1,496.44	1,420.01	1,404.27	5.29	5.21	-177.05	-198.39	62.59	302.79	292.52	10.27	29.469	
1,600.00	1,596.01	1,500.00	1,479.82	5.66	5.62	-175.77	-224.67	63.73	343.31	332.41	10.89	31.513	
1,700.00	1,695.58	1,582.19	1,556.63	6.04	6.07	-174.63	-253.85	65.00	386.45	374.94	11.50	33.596	
1,800.00	1,795.15	1,663.54	1,631.87	6.41	6.53	-173.63	-284.78	66.34	432.01	419.91	12.10	35.700	
1,900.00	1,894.71	1,751.99	1,713.45	6.79	7.05	-172.74	-318.91	67.82	478.24	465.51	12.74	37.542	
2,000.00	1,994.28	1,840.44	1,795.03	7.17	7.58	-172.00	-353.04	69.31	524.55	511.17	13.39	39.189	
2,100.00	2,093.85	1,928.88	1,876.61	7.54	8.12	-171.38	-387.18	70.79	570.92	556.88	14.04	40.667	
2,200.00	2,193.42	2,017.33	1,958.20	7.92	8.67	-170.85	-421.31	72.27	617.32	602.62	14.70	41.997	
2,300.00	2,292.98	2,105.78	2,039.78	8.30	9.22	-170.40	-455.44	73.75	663.77	648.40	15.37	43.199	
2,400.00	2,392.55	2,194.22	2,121.36	8.67	9.77	-170.00	-489.57	75.23	710.24	694.20	16.04	44.288	
2,500.00	2,492.12	2,282.67	2,202.94	9.05	10.33	-169.66	-523.70	76.71	756.74	740.02	16.71	45.279	
2,600.00	2,591.69	2,371.12	2,284.52	9.43	10.89	-169.35	-557.83	78.20	803.25	785.86	17.39	46.183	
2,700.00	2,691.25	2,459.56	2,366.10	9.81	11.46	-169.08	-591.97	79.68	849.78	831.71	18.08	47.010	
2,800.00	2,790.82	2,548.01	2,447.69	10.18	12.02	-168.83	-626.10	81.16	896.33	877.56	18.76	47.770	
2,900.00	2,890.39	2,636.45	2,529.27	10.56	12.59	-168.61	-660.23	82.64	942.88	923.43	19.45	48.470	
3,000.00	2,989.96	2,724.90	2,610.85	10.94	13.16	-168.41	-694.36	84.12	989.45	969.30	20.15	49.116	
3,100.00	3,089.52	2,813.35	2,692.43	11.32	13.74	-168.23	-728.49	85.60	1,036.02	1,015.18	20.84	49.714	
3,200.00	3,189.09	2,901.79	2,774.01	11.70	14.31	-168.07	-762.62	87.08	1,082.61	1,061.07	21.54	50.269	
3,300.00	3,288.66	2,990.24	2,855.60	12.07	14.88	-167.91	-796.76	88.57	1,129.19	1,106.96	22.24	50.784	
3,400.00	3,388.23	3,078.69	2,937.18	12.45	15.46	-167.77	-830.89	90.05	1,175.79	1,152.85	22.94	51.265	
3,500.00	3,487.79	3,167.13	3,018.76	12.83	16.04	-167.64	-865.02	91.53	1,222.39	1,198.75	23.64	51.714	
3,600.00	3,587.36	3,255.58	3,100.34	13.21	16.61	-167.52	-899.15	93.01	1,268.99	1,244.65	24.34	52.134	
3,700.00	3,686.93	3,344.02	3,181.92	13.58	17.19	-167.41	-933.28	94.49	1,315.60	1,290.55	25.05	52.528	
3,800.00	3,786.50	3,432.47	3,263.50	13.96	17.77	-167.31	-967.41	95.97	1,362.21	1,336.46	25.75	52.898	
3,900.00	3,886.06	3,520.92	3,345.09	14.34	18.35	-167.21	-1,001.55	97.46	1,408.83	1,382.37	26.46	53.247	
4,000.00	3,985.63	3,609.36	3,426.67	14.72	18.93	-167.12	-1,035.68	98.94	1,455.44	1,428.28	27.17	53.575	
4,100.00	4,085.20	3,697.81	3,508.25	15.10	19.51	-167.04	-1,069.81	100.42	1,502.06	1,474.19	27.88	53.884	
4,200.00	4,184.77	3,786.26	3,589.83	15.48	20.09	-166.96	-1,103.94	101.90	1,548.69	1,520.10	28.59	54.177	
4,300.00	4,284.33	3,874.70	3,671.41	15.85	20.67	-166.88	-1,138.07	103.38	1,595.31	1,566.02	29.30	54.454	
4,400.00	4,383.90	3,963.15	3,752.99	16.23	21.25	-166.81	-1,172.20	104.86	1,641.94	1,611.93	30.01	54.716	
4,500.00	4,483.47	4,051.60	3,834.58	16.61	21.84	-166.74	-1,206.34	106.34	1,688.57	1,657.85	30.72	54.965	
4,600.00	4,583.04	4,140.04	3,916.16	16.99	22.42	-166.68	-1,240.47	107.83	1,735.20	1,703.77	31.43	55.202	
4,700.00	4,682.60	4,228.49	3,997.74	17.37	23.00	-166.62	-1,274.60	109.31	1,781.83	1,749.68	32.15	55.427	
4,800.00	4,782.17	4,316.93	4,079.32	17.74	23.58	-166.56	-1,308.73	110.79	1,828.46	1,795.60	32.86	55.641	
4,900.00	4,881.74	4,405.38	4,160.90	18.12	24.17	-166.51	-1,342.86	112.27	1,875.10	1,841.52	33.58	55.845	
5,000.00	4,981.31	4,493.83	4,242.49	18.50	24.75	-166.46	-1,376.99	113.75	1,921.74	1,887.44	34.29	56.040	
5,100.00	5,080.87	4,582.27	4,324.07	18.88	25.34	-166.41	-1,411.13	115.23	1,968.37	1,933.37	35.01	56.226	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 602 2H - OH - Plan #2

Survey Program: 0-MWD+HDGM

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	4,670.72	4,405.65	19.26	25.92	-166.36	-1,445.26	116.72	2,015.01	1,979.29	35.72	56.404	
5,300.00	5,280.01	4,759.17	4,487.23	19.64	26.50	-166.31	-1,479.39	118.20	2,061.65	2,025.21	36.44	56.574	
5,400.00	5,379.57	4,847.61	4,568.81	20.01	27.09	-158.40	-1,513.52	119.68	2,108.30	2,071.14	37.16	56.736	
5,500.00	5,478.43	4,935.29	4,649.68	20.40	27.67	-118.12	-1,547.35	121.15	2,155.73	2,117.85	37.89	56.901	
5,600.00	5,574.70	5,020.44	4,728.22	20.81	28.23	-104.45	-1,580.21	122.57	2,203.94	2,165.32	38.62	57.070	
5,700.00	5,666.51	5,101.40	4,802.91	21.23	28.77	-96.72	-1,611.46	123.93	2,252.33	2,212.98	39.36	57.230	
5,800.00	5,752.07	5,176.61	4,872.28	21.69	29.26	-91.18	-1,640.48	125.19	2,300.52	2,260.41	40.11	57.354	
5,900.00	5,829.71	5,244.59	4,934.98	22.22	29.71	-86.73	-1,666.72	126.33	2,348.22	2,307.31	40.91	57.397	
6,000.00	5,897.93	5,304.03	4,989.81	22.90	30.11	-82.86	-1,689.65	127.32	2,395.23	2,353.44	41.80	57.309	
6,100.00	5,955.40	5,353.77	5,035.68	23.78	30.44	-79.35	-1,708.85	128.16	2,441.37	2,398.57	42.80	57.039	
6,200.00	6,001.00	5,392.83	5,071.71	24.91	30.69	-76.02	-1,723.92	128.81	2,486.41	2,442.45	43.96	56.565	
6,300.00	6,033.84	5,420.46	5,097.20	26.32	30.88	-72.80	-1,734.58	129.27	2,530.06	2,484.80	45.26	55.896	
6,400.00	6,053.28	5,436.12	5,111.64	27.97	30.98	-69.66	-1,740.63	129.54	2,571.95	2,525.26	46.69	55.083	
6,500.00	6,059.03	5,439.59	5,114.84	29.82	31.00	-66.96	-1,741.97	129.59	2,611.62	2,563.44	48.19	54.198	
6,600.00	6,059.34	5,438.21	5,113.57	31.84	30.99	-66.93	-1,741.43	129.57	2,652.22	2,602.48	49.75	53.316	
6,700.00	6,059.65	5,436.83	5,112.30	34.00	30.99	-66.90	-1,740.90	129.55	2,695.92	2,644.56	51.36	52.493	
6,800.00	6,059.95	5,435.44	5,111.02	36.29	30.98	-66.86	-1,740.37	129.53	2,742.57	2,689.58	52.99	51.753	
6,900.00	6,060.26	5,434.06	5,109.75	38.67	30.97	-66.83	-1,739.83	129.50	2,792.02	2,737.39	54.63	51.108	
7,000.00	6,060.56	5,432.68	5,108.47	41.14	30.96	-66.80	-1,739.30	129.48	2,844.13	2,787.88	56.25	50.565	
7,100.00	6,060.87	5,431.30	5,107.20	43.68	30.95	-66.76	-1,738.77	129.46	2,898.75	2,840.92	57.83	50.122	
7,200.00	6,061.17	5,429.92	5,105.93	46.27	30.94	-66.73	-1,738.24	129.43	2,955.75	2,896.37	59.38	49.778	
7,300.00	6,061.48	5,428.54	5,104.65	48.91	30.93	-66.70	-1,737.70	129.41	3,014.99	2,954.11	60.87	49.528	
7,400.00	6,061.78	5,427.16	5,103.38	51.60	30.92	-66.67	-1,737.17	129.39	3,076.33	3,014.02	62.32	49.366	
7,500.00	6,062.09	5,425.78	5,102.10	54.31	30.91	-66.63	-1,736.64	129.36	3,139.67	3,075.96	63.70	49.286	
7,600.00	6,062.39	5,424.40	5,100.83	57.06	30.90	-66.60	-1,736.10	129.34	3,204.87	3,139.84	65.03	49.282	
7,700.00	6,062.70	5,423.01	5,099.56	59.83	30.89	-66.57	-1,735.57	129.32	3,271.83	3,205.52	66.30	49.348	
7,800.00	6,063.00	5,421.63	5,098.28	62.63	30.89	-66.53	-1,735.04	129.29	3,340.43	3,272.92	67.51	49.479	
7,900.00	6,063.31	5,420.25	5,097.01	65.44	30.88	-66.50	-1,734.50	129.27	3,410.60	3,341.93	68.67	49.669	
8,000.00	6,063.61	5,418.87	5,095.73	68.27	30.87	-66.47	-1,733.97	129.25	3,482.22	3,412.45	69.76	49.914	
8,100.00	6,063.92	5,417.49	5,094.46	71.11	30.86	-66.44	-1,733.44	129.22	3,555.20	3,484.40	70.81	50.208	
8,200.00	6,064.23	5,416.11	5,093.19	73.97	30.85	-66.40	-1,732.91	129.20	3,629.48	3,557.68	71.80	50.549	
8,300.00	6,064.53	5,414.73	5,091.91	76.84	30.84	-66.37	-1,732.37	129.18	3,704.97	3,632.22	72.74	50.932	
8,400.00	6,064.84	5,413.35	5,090.64	79.72	30.83	-66.34	-1,731.84	129.15	3,781.59	3,707.95	73.64	51.353	
8,500.00	6,065.14	5,411.97	5,089.37	82.61	30.82	-66.30	-1,731.31	129.13	3,859.28	3,784.79	74.49	51.810	
8,600.00	6,065.45	5,410.58	5,088.09	85.51	30.81	-66.27	-1,730.77	129.11	3,937.98	3,862.68	75.30	52.300	
8,700.00	6,065.75	5,409.20	5,086.82	88.42	30.80	-66.24	-1,730.24	129.09	4,017.63	3,941.56	76.06	52.820	
8,800.00	6,066.06	5,407.82	5,085.54	91.33	30.79	-66.21	-1,729.71	129.06	4,098.16	4,021.37	76.79	53.369	
8,900.00	6,066.36	5,406.44	5,084.27	94.25	30.78	-66.17	-1,729.17	129.04	4,179.54	4,102.06	77.48	53.943	
9,000.00	6,066.67	5,405.06	5,083.00	97.17	30.78	-66.14	-1,728.64	129.02	4,261.71	4,183.57	78.14	54.542	
9,100.00	6,066.97	5,403.68	5,081.72	100.10	30.77	-66.11	-1,728.11	128.99	4,344.63	4,265.87	78.76	55.162	
9,200.00	6,067.28	5,402.30	5,080.45	103.04	30.76	-66.07	-1,727.58	128.97	4,428.25	4,348.90	79.35	55.804	
9,300.00	6,067.58	5,400.92	5,079.17	105.98	30.75	-66.04	-1,727.04	128.95	4,512.54	4,432.62	79.92	56.465	
9,400.00	6,067.89	5,399.54	5,077.90	108.92	30.74	-66.01	-1,726.51	128.92	4,597.46	4,517.00	80.45	57.143	
9,500.00	6,068.19	5,398.16	5,076.63	111.86	30.73	-65.98	-1,725.98	128.90	4,682.97	4,602.00	80.97	57.839	
9,600.00	6,068.50	5,396.77	5,075.35	114.81	30.72	-65.94	-1,725.44	128.88	4,769.05	4,687.59	81.45	58.550	
9,700.00	6,068.80	5,395.39	5,074.08	117.77	30.71	-65.91	-1,724.91	128.85	4,855.66	4,773.74	81.92	59.275	
9,800.00	6,069.11	5,394.01	5,072.80	120.72	30.70	-65.88	-1,724.38	128.83	4,942.77	4,860.41	82.36	60.015	
9,900.00	6,069.42	5,392.63	5,071.53	123.68	30.69	-65.84	-1,723.85	128.81	5,030.37	4,947.58	82.78	60.767	
10,000.00	6,069.72	5,391.25	5,070.26	126.64	30.68	-65.81	-1,723.31	128.78	5,118.41	5,035.23	83.18	61.531	
10,100.00	6,070.03	5,389.87	5,068.98	129.60	30.67	-65.78	-1,722.78	128.76	5,206.89	5,123.32	83.57	62.306	
10,200.00	6,070.33	5,388.49	5,067.71	132.57	30.67	-65.75	-1,722.25	128.74	5,295.78	5,211.84	83.94	63.092	
10,300.00	6,070.64	5,387.11	5,066.44	135.54	30.66	-65.71	-1,721.71	128.72	5,385.06	5,300.77	84.29	63.888	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Scientific Drilling, Intl

Anticollision Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 602 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	5,385.73	5,065.16	138.51	30.65	-65.68	-1,721.18	128.69	5,474.71	5,390.08	84.62	64.694	
10,500.00	6,071.25	5,384.34	5,063.89	141.48	30.64	-65.65	-1,720.65	128.67	5,564.71	5,479.76	84.95	65.508	
10,600.00	6,071.55	5,382.96	5,062.61	144.45	30.63	-65.61	-1,720.11	128.65	5,655.05	5,569.79	85.26	66.331	
10,700.00	6,071.86	5,381.58	5,061.34	147.42	30.62	-65.58	-1,719.58	128.62	5,745.70	5,660.15	85.55	67.161	
10,800.00	6,072.16	5,380.20	5,060.07	150.40	30.61	-65.55	-1,719.05	128.60	5,836.67	5,750.83	85.83	67.999	
10,900.00	6,072.47	5,378.82	5,058.79	153.38	30.60	-65.52	-1,718.52	128.58	5,927.92	5,841.81	86.11	68.844	
11,000.00	6,072.77	5,377.44	5,057.52	156.35	30.59	-65.48	-1,717.98	128.55	6,019.45	5,933.08	86.37	69.695	
11,100.00	6,073.08	5,376.06	5,056.24	159.33	30.58	-65.45	-1,717.45	128.53	6,111.24	6,024.62	86.62	70.553	
11,200.00	6,073.38	5,374.68	5,054.97	162.31	30.57	-65.42	-1,716.92	128.51	6,203.29	6,116.43	86.86	71.417	
11,300.00	6,073.69	5,373.30	5,053.70	165.30	30.57	-65.38	-1,716.38	128.48	6,295.58	6,208.49	87.09	72.286	
11,400.00	6,074.00	5,371.91	5,052.42	168.28	30.56	-65.35	-1,715.85	128.46	6,388.10	6,300.79	87.32	73.161	
11,500.00	6,074.30	5,370.53	5,051.15	171.26	30.55	-65.32	-1,715.32	128.44	6,480.85	6,393.32	87.53	74.040	
11,600.00	6,074.61	5,369.15	5,049.87	174.25	30.54	-65.29	-1,714.78	128.41	6,573.81	6,486.07	87.74	74.925	
11,700.00	6,074.91	5,367.77	5,048.60	177.23	30.53	-65.25	-1,714.25	128.39	6,666.97	6,579.03	87.94	75.814	
11,800.00	6,075.22	5,366.39	5,047.33	180.22	30.52	-65.22	-1,713.72	128.37	6,760.32	6,672.19	88.13	76.708	
11,900.00	6,075.52	5,365.01	5,046.05	183.21	30.51	-65.19	-1,713.19	128.35	6,853.86	6,765.55	88.32	77.605	
12,000.00	6,075.83	5,363.63	5,044.78	186.19	30.50	-65.15	-1,712.65	128.32	6,947.59	6,859.09	88.50	78.507	
12,100.00	6,076.13	5,362.25	5,043.51	189.18	30.49	-65.12	-1,712.12	128.30	7,041.48	6,952.81	88.67	79.412	
12,200.00	6,076.44	5,360.87	5,042.23	192.17	30.48	-65.09	-1,711.59	128.28	7,135.54	7,046.70	88.84	80.321	
12,300.00	6,076.74	5,359.49	5,040.96	195.16	30.47	-65.06	-1,711.05	128.25	7,229.76	7,140.76	89.00	81.234	
12,400.00	6,077.05	5,358.10	5,039.68	198.15	30.46	-65.02	-1,710.52	128.23	7,324.13	7,234.98	89.16	82.149	
12,500.00	6,077.35	5,356.72	5,038.41	201.15	30.46	-64.99	-1,709.99	128.21	7,418.65	7,329.35	89.31	83.068	
12,600.00	6,077.66	5,355.34	5,037.14	204.14	30.45	-64.96	-1,709.46	128.18	7,513.32	7,423.86	89.46	83.989	
12,700.00	6,077.96	5,353.96	5,035.86	207.13	30.44	-64.92	-1,708.92	128.16	7,608.11	7,518.51	89.60	84.913	
12,711.72	6,078.00	5,353.80	5,035.71	207.48	30.44	-64.92	-1,708.86	128.16	7,619.23	7,529.62	89.62	85.022	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	144.06	-40.41	29.29	49.91				
100.00	100.00	100.00	100.00	0.18	0.18	144.06	-40.41	29.29	49.91	49.55	0.36	139.223	
200.00	200.00	200.00	200.00	0.54	0.54	144.06	-40.41	29.29	49.91	48.83	1.08	46.408	
300.00	300.00	300.00	300.00	0.90	0.90	144.06	-40.41	29.29	49.91	48.12	1.79	27.845	
400.00	400.00	400.00	400.00	1.25	1.25	144.06	-40.41	29.29	49.91	47.40	2.51	19.889	
500.00	500.00	500.00	500.00	1.61	1.61	144.06	-40.41	29.29	49.91	46.68	3.23	15.469	CC, ES
600.00	599.98	598.71	598.70	1.97	1.95	167.34	-42.08	28.97	52.80	48.87	3.93	13.422	
700.00	699.84	696.78	696.62	2.33	2.28	171.70	-47.04	28.00	61.73	57.07	4.65	13.261	
800.00	799.47	793.59	793.07	2.70	2.61	176.67	-55.16	26.43	76.90	71.51	5.40	14.250	
900.00	899.04	889.11	887.91	3.06	2.95	-178.97	-66.31	24.27	96.04	89.91	6.13	15.661	
1,000.00	998.61	985.23	983.00	3.42	3.31	-175.39	-80.13	21.59	117.95	111.12	6.84	17.253	
1,100.00	1,098.17	1,082.51	1,079.19	3.80	3.68	-172.85	-94.39	18.82	140.44	132.92	7.52	18.679	
1,200.00	1,197.74	1,179.79	1,175.38	4.17	4.06	-171.01	-108.66	16.06	163.11	154.90	8.21	19.871	
1,300.00	1,297.31	1,277.07	1,271.57	4.54	4.44	-169.62	-122.92	13.29	185.91	177.01	8.90	20.885	
1,400.00	1,396.88	1,374.35	1,367.76	4.91	4.83	-168.53	-137.18	10.53	208.79	199.19	9.60	21.752	
1,500.00	1,496.44	1,471.63	1,463.94	5.29	5.22	-167.66	-151.44	7.76	231.72	221.42	10.30	22.501	
1,600.00	1,596.01	1,568.91	1,560.13	5.66	5.62	-166.94	-165.71	4.99	254.70	243.70	11.00	23.153	
1,700.00	1,695.58	1,666.19	1,656.32	6.04	6.01	-166.35	-179.97	2.23	277.71	266.00	11.71	23.724	
1,800.00	1,795.15	1,763.47	1,752.51	6.41	6.41	-165.84	-194.23	-0.54	300.74	288.33	12.41	24.228	
1,900.00	1,894.71	1,860.75	1,848.70	6.79	6.81	-165.41	-208.50	-3.30	323.79	310.67	13.12	24.676	
2,000.00	1,994.28	1,958.03	1,944.89	7.17	7.21	-165.03	-222.76	-6.07	346.86	333.03	13.83	25.077	
2,100.00	2,093.85	2,055.31	2,041.08	7.54	7.61	-164.70	-237.02	-8.83	369.94	355.39	14.54	25.438	
2,200.00	2,193.42	2,152.59	2,137.27	7.92	8.01	-164.41	-251.29	-11.60	393.03	377.77	15.26	25.763	
2,300.00	2,292.98	2,249.87	2,233.45	8.30	8.41	-164.15	-265.55	-14.37	416.12	400.15	15.97	26.059	
2,400.00	2,392.55	2,347.15	2,329.64	8.67	8.82	-163.92	-279.81	-17.13	439.23	422.54	16.68	26.328	
2,500.00	2,492.12	2,444.43	2,425.83	9.05	9.22	-163.71	-294.08	-19.90	462.34	444.94	17.40	26.574	
2,600.00	2,591.69	2,541.71	2,522.02	9.43	9.62	-163.53	-308.34	-22.66	485.45	467.34	18.11	26.801	
2,700.00	2,691.25	2,638.99	2,618.21	9.81	10.03	-163.35	-322.60	-25.43	508.58	489.75	18.83	27.009	
2,800.00	2,790.82	2,736.27	2,714.40	10.18	10.43	-163.20	-336.87	-28.19	531.70	512.15	19.55	27.202	
2,900.00	2,890.39	2,833.55	2,810.59	10.56	10.84	-163.05	-351.13	-30.96	554.83	534.56	20.26	27.381	
3,000.00	2,989.96	2,930.83	2,906.77	10.94	11.24	-162.92	-365.39	-33.72	577.96	556.98	20.98	27.547	
3,100.00	3,089.52	3,028.11	3,002.96	11.32	11.65	-162.80	-379.65	-36.49	601.09	579.39	21.70	27.701	
3,200.00	3,189.09	3,125.39	3,099.15	11.70	12.05	-162.69	-393.92	-39.26	624.23	601.81	22.42	27.846	
3,300.00	3,288.66	3,222.67	3,195.34	12.07	12.46	-162.58	-408.18	-42.02	647.37	624.23	23.14	27.981	
3,400.00	3,388.23	3,319.95	3,291.53	12.45	12.86	-162.49	-422.44	-44.79	670.51	646.65	23.85	28.108	
3,500.00	3,487.79	3,417.23	3,387.72	12.83	13.27	-162.40	-436.71	-47.55	693.65	669.07	24.57	28.227	
3,600.00	3,587.36	3,514.51	3,483.91	13.21	13.67	-162.31	-450.97	-50.32	716.79	691.50	25.29	28.339	
3,700.00	3,686.93	3,611.79	3,580.10	13.58	14.08	-162.23	-465.23	-53.08	739.94	713.92	26.01	28.445	
3,800.00	3,786.50	3,709.07	3,676.28	13.96	14.49	-162.16	-479.50	-55.85	763.08	736.35	26.73	28.545	
3,900.00	3,886.06	3,806.35	3,772.47	14.34	14.89	-162.09	-493.76	-58.61	786.23	758.78	27.45	28.640	
4,000.00	3,985.63	3,903.63	3,868.66	14.72	15.30	-162.02	-508.02	-61.38	809.38	781.21	28.17	28.729	
4,100.00	4,085.20	4,000.91	3,964.85	15.10	15.71	-161.96	-522.29	-64.15	832.53	803.63	28.89	28.814	
4,200.00	4,184.77	4,098.19	4,061.04	15.48	16.11	-161.90	-536.55	-66.91	855.68	826.06	29.61	28.895	
4,300.00	4,284.33	4,195.47	4,157.23	15.85	16.52	-161.84	-550.81	-69.68	878.83	848.49	30.33	28.972	
4,400.00	4,383.90	4,292.74	4,253.42	16.23	16.93	-161.79	-565.08	-72.44	901.98	870.93	31.05	29.045	
4,500.00	4,483.47	4,390.02	4,349.61	16.61	17.33	-161.74	-579.34	-75.21	925.13	893.36	31.78	29.115	
4,600.00	4,583.04	4,487.30	4,445.79	16.99	17.74	-161.69	-593.60	-77.97	948.28	915.79	32.50	29.181	
4,700.00	4,682.60	4,584.58	4,541.98	17.37	18.15	-161.64	-607.87	-80.74	971.44	938.22	33.22	29.245	
4,800.00	4,782.17	4,681.86	4,638.17	17.74	18.56	-161.60	-622.13	-83.51	994.59	960.65	33.94	29.306	
4,900.00	4,881.74	4,779.14	4,734.36	18.12	18.96	-161.56	-636.39	-86.27	1,017.75	983.09	34.66	29.364	
5,000.00	4,981.31	4,876.42	4,830.55	18.50	19.37	-161.52	-650.65	-89.04	1,040.90	1,005.52	35.38	29.420	
5,100.00	5,080.87	4,973.70	4,926.74	18.88	19.78	-161.48	-664.92	-91.80	1,064.06	1,027.96	36.10	29.473	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	5,070.98	5,022.93	19.26	20.19	-161.44	-679.18	-94.57	1,087.21	1,050.39	36.82	29.524	
5,300.00	5,280.01	5,168.26	5,119.11	19.64	20.59	-161.41	-693.44	-97.33	1,110.37	1,072.82	37.55	29.574	
5,400.00	5,379.57	5,265.54	5,215.30	20.01	21.00	-153.73	-707.71	-100.10	1,133.53	1,095.26	38.27	29.621	
5,500.00	5,478.43	5,362.37	5,311.04	20.40	21.41	-116.00	-721.90	-102.85	1,157.00	1,118.00	39.00	29.666	
5,600.00	5,574.70	5,462.19	5,409.69	20.81	21.82	-105.22	-736.53	-106.78	1,180.85	1,141.06	39.79	29.678	
5,700.00	5,666.51	5,573.19	5,517.97	21.23	22.29	-100.33	-752.59	-124.56	1,204.19	1,163.49	40.70	29.584	
5,800.00	5,752.07	5,689.40	5,626.97	21.69	22.78	-97.41	-768.75	-161.04	1,226.30	1,184.59	41.71	29.400	
5,900.00	5,829.71	5,811.05	5,733.26	22.22	23.29	-95.42	-784.52	-217.77	1,246.60	1,203.74	42.86	29.085	
6,000.00	5,897.93	5,938.08	5,832.45	22.90	23.85	-93.94	-799.23	-295.48	1,264.52	1,220.26	44.26	28.568	
6,100.00	5,955.40	6,069.94	5,919.38	23.78	24.54	-92.77	-812.12	-393.55	1,279.53	1,233.43	46.10	27.756	
6,200.00	6,001.00	6,205.55	5,988.70	24.91	25.52	-91.82	-822.41	-509.41	1,291.15	1,242.59	48.56	26.588	
6,300.00	6,033.84	6,343.30	6,035.74	26.32	27.03	-91.01	-829.39	-638.45	1,299.03	1,247.24	51.80	25.080	
6,400.00	6,053.28	6,481.21	6,057.53	27.97	29.11	-90.33	-832.63	-774.38	1,302.98	1,247.23	55.76	23.368	
6,500.00	6,059.03	6,593.01	6,059.21	29.82	31.11	-90.01	-832.88	-886.15	1,303.61	1,243.84	59.78	21.808	
6,600.00	6,059.34	6,693.01	6,059.51	31.84	33.11	-90.01	-832.93	-986.15	1,303.63	1,239.71	63.91	20.396	
6,700.00	6,059.65	6,793.01	6,059.81	34.00	35.26	-90.01	-832.98	-1,086.15	1,303.65	1,235.31	68.33	19.078	
6,800.00	6,059.95	6,893.01	6,060.11	36.29	37.54	-90.01	-833.03	-1,186.15	1,303.66	1,230.68	72.98	17.863	
6,900.00	6,060.26	6,993.01	6,060.41	38.67	39.92	-90.01	-833.08	-1,286.14	1,303.68	1,225.86	77.82	16.753	
7,000.00	6,060.56	7,093.01	6,060.72	41.14	42.38	-90.01	-833.13	-1,386.14	1,303.70	1,220.89	82.81	15.743	
7,100.00	6,060.87	7,193.01	6,061.02	43.68	44.91	-90.01	-833.18	-1,486.14	1,303.72	1,215.79	87.93	14.826	
7,200.00	6,061.17	7,293.01	6,061.32	46.27	47.50	-90.01	-833.23	-1,586.14	1,303.74	1,210.57	93.16	13.994	
7,300.00	6,061.48	7,393.01	6,061.62	48.91	50.14	-90.01	-833.28	-1,686.14	1,303.75	1,205.27	98.48	13.239	
7,400.00	6,061.78	7,493.01	6,061.92	51.60	52.82	-90.01	-833.33	-1,786.14	1,303.77	1,199.89	103.88	12.551	
7,500.00	6,062.09	7,593.01	6,062.23	54.31	55.53	-90.01	-833.38	-1,886.14	1,303.79	1,194.45	109.34	11.924	
7,600.00	6,062.39	7,693.01	6,062.53	57.06	58.28	-90.01	-833.43	-1,986.14	1,303.81	1,188.95	114.86	11.351	
7,700.00	6,062.70	7,793.01	6,062.83	59.83	61.05	-90.01	-833.48	-2,086.14	1,303.82	1,183.40	120.43	10.827	
7,800.00	6,063.00	7,893.01	6,063.13	62.63	63.84	-90.01	-833.53	-2,186.14	1,303.84	1,177.81	126.03	10.345	
7,900.00	6,063.31	7,993.01	6,063.44	65.44	66.65	-90.01	-833.58	-2,286.14	1,303.86	1,172.18	131.68	9.902	
8,000.00	6,063.61	8,093.01	6,063.74	68.27	69.48	-90.01	-833.63	-2,386.14	1,303.88	1,166.52	137.36	9.493	
8,100.00	6,063.92	8,193.01	6,064.04	71.11	72.32	-90.01	-833.68	-2,486.14	1,303.90	1,160.83	143.06	9.114	
8,200.00	6,064.23	8,293.01	6,064.34	73.97	75.17	-90.01	-833.73	-2,586.14	1,303.91	1,155.12	148.79	8.763	
8,300.00	6,064.53	8,393.01	6,064.64	76.84	78.04	-90.01	-833.78	-2,686.14	1,303.93	1,149.39	154.54	8.437	
8,400.00	6,064.84	8,493.01	6,064.95	79.72	80.92	-90.00	-833.83	-2,786.14	1,303.95	1,143.63	160.32	8.134	
8,500.00	6,065.14	8,593.01	6,065.25	82.61	83.81	-90.00	-833.88	-2,886.14	1,303.97	1,137.86	166.11	7.850	
8,600.00	6,065.45	8,693.01	6,065.55	85.51	86.70	-90.00	-833.93	-2,986.14	1,303.98	1,132.07	171.91	7.585	
8,700.00	6,065.75	8,793.01	6,065.85	88.42	89.61	-90.00	-833.98	-3,086.14	1,304.00	1,126.27	177.73	7.337	
8,800.00	6,066.06	8,893.01	6,066.15	91.33	92.52	-90.00	-834.03	-3,186.14	1,304.02	1,120.46	183.56	7.104	
8,900.00	6,066.36	8,993.01	6,066.46	94.25	95.43	-90.00	-834.08	-3,286.14	1,304.04	1,114.63	189.41	6.885	
9,000.00	6,066.67	9,093.01	6,066.76	97.17	98.36	-90.00	-834.13	-3,386.14	1,304.06	1,108.79	195.27	6.678	
9,100.00	6,066.97	9,193.01	6,067.06	100.10	101.28	-90.00	-834.18	-3,486.13	1,304.07	1,102.94	201.13	6.484	
9,200.00	6,067.28	9,293.01	6,067.36	103.04	104.22	-90.00	-834.23	-3,586.13	1,304.09	1,097.09	207.01	6.300	
9,300.00	6,067.58	9,393.01	6,067.67	105.98	107.15	-90.00	-834.28	-3,686.13	1,304.11	1,091.22	212.89	6.126	
9,400.00	6,067.89	9,493.01	6,067.97	108.92	110.09	-90.00	-834.33	-3,786.13	1,304.13	1,085.35	218.78	5.961	
9,500.00	6,068.19	9,593.01	6,068.27	111.86	113.04	-90.00	-834.38	-3,886.13	1,304.14	1,079.47	224.68	5.805	
9,600.00	6,068.50	9,693.01	6,068.57	114.81	115.99	-90.00	-834.43	-3,986.13	1,304.16	1,073.58	230.58	5.656	
9,700.00	6,068.80	9,793.01	6,068.87	117.77	118.94	-90.00	-834.48	-4,086.13	1,304.18	1,067.69	236.49	5.515	
9,800.00	6,069.11	9,893.01	6,069.18	120.72	121.89	-90.00	-834.53	-4,186.13	1,304.20	1,061.79	242.40	5.380	
9,900.00	6,069.42	9,993.01	6,069.48	123.68	124.85	-90.00	-834.58	-4,286.13	1,304.22	1,055.89	248.33	5.252	
10,000.00	6,069.72	10,093.01	6,069.78	126.64	127.81	-90.00	-834.63	-4,386.13	1,304.23	1,049.98	254.25	5.130	
10,100.00	6,070.03	10,193.01	6,070.08	129.60	130.77	-90.00	-834.68	-4,486.13	1,304.25	1,044.07	260.18	5.013	
10,200.00	6,070.33	10,293.01	6,070.39	132.57	133.73	-90.00	-834.73	-4,586.13	1,304.27	1,038.15	266.11	4.901	
10,300.00	6,070.64	10,393.01	6,070.69	135.54	136.70	-90.00	-834.78	-4,686.13	1,304.29	1,032.23	272.05	4.794	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 2H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	10,493.01	6,070.99	138.51	139.67	-90.00	-834.83	-4,786.13	1,304.30	1,026.31	277.99	4.692	
10,500.00	6,071.25	10,593.01	6,071.29	141.48	142.64	-90.00	-834.88	-4,886.13	1,304.32	1,020.38	283.94	4.594	
10,600.00	6,071.55	10,693.01	6,071.59	144.45	145.61	-90.00	-834.93	-4,986.13	1,304.34	1,014.45	289.89	4.499	
10,700.00	6,071.86	10,793.01	6,071.90	147.42	148.58	-90.00	-834.98	-5,086.13	1,304.36	1,008.52	295.84	4.409	
10,800.00	6,072.16	10,893.01	6,072.20	150.40	151.56	-90.00	-835.03	-5,186.13	1,304.38	1,002.59	301.79	4.322	
10,900.00	6,072.47	10,993.01	6,072.50	153.38	154.53	-90.00	-835.08	-5,286.13	1,304.39	996.65	307.75	4.239	
11,000.00	6,072.77	11,093.01	6,072.80	156.35	157.51	-90.00	-835.13	-5,386.13	1,304.41	990.71	313.71	4.158	
11,100.00	6,073.08	11,193.01	6,073.10	159.33	160.49	-90.00	-835.17	-5,486.13	1,304.43	984.76	319.67	4.081	
11,200.00	6,073.38	11,293.01	6,073.41	162.31	163.47	-90.00	-835.22	-5,586.12	1,304.45	978.82	325.63	4.006	
11,300.00	6,073.69	11,393.01	6,073.71	165.30	166.45	-90.00	-835.27	-5,686.12	1,304.46	972.87	331.60	3.934	
11,400.00	6,074.00	11,493.01	6,074.01	168.28	169.43	-90.00	-835.32	-5,786.12	1,304.48	966.92	337.56	3.864	
11,500.00	6,074.30	11,593.01	6,074.31	171.26	172.42	-90.00	-835.37	-5,886.12	1,304.50	960.97	343.53	3.797	
11,600.00	6,074.61	11,693.01	6,074.62	174.25	175.40	-90.00	-835.42	-5,986.12	1,304.52	955.01	349.50	3.732	
11,700.00	6,074.91	11,793.01	6,074.92	177.23	178.38	-90.00	-835.47	-6,086.12	1,304.54	949.06	355.48	3.670	
11,800.00	6,075.22	11,893.01	6,075.22	180.22	181.37	-90.00	-835.52	-6,186.12	1,304.55	943.10	361.45	3.609	
11,900.00	6,075.52	11,993.01	6,075.52	183.21	184.36	-90.00	-835.57	-6,286.12	1,304.57	937.14	367.43	3.551	
12,000.00	6,075.83	12,093.01	6,075.82	186.19	187.34	-90.00	-835.62	-6,386.12	1,304.59	931.18	373.40	3.494	
12,100.00	6,076.13	12,193.01	6,076.13	189.18	190.33	-90.00	-835.67	-6,486.12	1,304.61	925.22	379.38	3.439	
12,200.00	6,076.44	12,293.01	6,076.43	192.17	193.32	-90.00	-835.72	-6,586.12	1,304.62	919.26	385.36	3.385	
12,300.00	6,076.74	12,393.01	6,076.73	195.16	196.31	-90.00	-835.77	-6,686.12	1,304.64	913.30	391.35	3.334	
12,400.00	6,077.05	12,493.01	6,077.03	198.15	199.30	-90.00	-835.82	-6,786.12	1,304.66	907.33	397.33	3.284	
12,500.00	6,077.35	12,593.01	6,077.33	201.15	202.29	-90.00	-835.87	-6,886.12	1,304.68	901.36	403.31	3.235	
12,600.00	6,077.66	12,693.01	6,077.64	204.14	205.28	-90.00	-835.92	-6,986.12	1,304.70	895.40	409.30	3.188	
12,700.00	6,077.96	12,793.01	6,077.94	207.13	208.27	-90.00	-835.97	-7,086.12	1,304.71	889.43	415.28	3.142	
12,711.72	6,078.00	12,805.16	6,077.98	207.48	208.64	-90.00	-835.98	-7,098.27	1,304.71	888.72	416.00	3.136	SF

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 3H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	54.61	8.74	12.30	15.09	15.09	0.00	N/A	
100.00	100.00	100.00	100.00	0.18	0.18	54.61	8.74	12.30	15.09	14.73	0.36	42.091	
200.00	200.00	200.00	200.00	0.54	0.54	54.61	8.74	12.30	15.09	14.01	1.08	14.030	
300.00	300.00	300.00	300.00	0.90	0.90	54.61	8.74	12.30	15.09	13.30	1.79	8.418	
400.00	400.00	400.00	400.00	1.25	1.25	54.61	8.74	12.30	15.09	12.58	2.51	6.013	
500.00	500.00	500.00	500.00	1.61	1.61	54.61	8.74	12.30	15.09	11.86	3.23	4.677	CC
600.00	599.98	599.76	599.74	1.97	1.97	76.61	10.46	12.05	15.47	11.52	3.95	3.919	ES
700.00	699.84	699.51	699.35	2.33	2.33	78.06	15.61	11.31	16.60	11.93	4.67	3.555	
800.00	799.47	799.24	798.69	2.70	2.69	79.48	24.19	10.08	18.55	13.15	5.40	3.435	
900.00	899.04	898.86	897.57	3.06	3.06	74.24	36.18	8.35	21.85	15.70	6.16	3.550	
1,000.00	998.61	998.14	995.63	3.42	3.43	64.30	51.50	6.14	27.33	20.38	6.95	3.934	
1,100.00	1,098.17	1,096.85	1,092.54	3.80	3.82	53.99	70.06	3.47	35.88	28.13	7.75	4.629	
1,200.00	1,197.74	1,194.77	1,187.97	4.17	4.23	45.49	91.72	0.35	48.01	39.46	8.55	5.614	
1,300.00	1,297.31	1,291.67	1,281.63	4.54	4.65	39.11	116.32	-3.19	63.78	54.45	9.33	6.837	
1,400.00	1,396.88	1,387.35	1,373.23	4.91	5.09	34.45	143.68	-7.13	83.10	73.02	10.08	8.244	
1,500.00	1,496.44	1,484.36	1,465.46	5.29	5.56	31.12	173.43	-11.41	104.81	94.02	10.79	9.716	
1,600.00	1,596.01	1,581.82	1,558.11	5.66	6.05	28.92	203.36	-15.72	126.79	115.30	11.49	11.032	
1,700.00	1,695.58	1,679.28	1,650.76	6.04	6.54	27.37	233.30	-20.03	148.90	136.70	12.20	12.202	
1,800.00	1,795.15	1,776.73	1,743.40	6.41	7.05	26.22	263.23	-24.34	171.08	158.16	12.92	13.243	
1,900.00	1,894.71	1,874.19	1,836.05	6.79	7.55	25.33	293.17	-28.65	193.32	179.68	13.64	14.173	
2,000.00	1,994.28	1,971.65	1,928.70	7.17	8.07	24.63	323.10	-32.96	215.59	201.22	14.37	15.007	
2,100.00	2,093.85	2,069.11	2,021.34	7.54	8.58	24.06	353.03	-37.27	237.88	222.79	15.10	15.758	
2,200.00	2,193.42	2,166.57	2,113.99	7.92	9.11	23.58	382.97	-41.58	260.20	244.37	15.83	16.438	
2,300.00	2,292.98	2,264.02	2,206.64	8.30	9.63	23.18	412.90	-45.89	282.52	265.96	16.57	17.054	
2,400.00	2,392.55	2,361.48	2,299.29	8.67	10.15	22.84	442.84	-50.20	304.86	287.56	17.31	17.616	
2,500.00	2,492.12	2,458.94	2,391.93	9.05	10.68	22.55	472.77	-54.51	327.21	309.16	18.05	18.131	
2,600.00	2,591.69	2,556.40	2,484.58	9.43	11.21	22.29	502.71	-58.82	349.57	330.77	18.79	18.602	
2,700.00	2,691.25	2,653.86	2,577.23	9.81	11.74	22.07	532.64	-63.13	371.93	352.39	19.54	19.036	
2,800.00	2,790.82	2,751.31	2,669.87	10.18	12.27	21.87	562.58	-67.44	394.29	374.01	20.29	19.437	
2,900.00	2,890.39	2,848.77	2,762.52	10.56	12.81	21.69	592.51	-71.75	416.66	395.63	21.03	19.808	
3,000.00	2,989.96	2,946.23	2,855.17	10.94	13.34	21.53	622.44	-76.06	439.04	417.25	21.79	20.153	
3,100.00	3,089.52	3,043.69	2,947.81	11.32	13.87	21.39	652.38	-80.37	461.41	438.87	22.54	20.473	
3,200.00	3,189.09	3,141.15	3,040.46	11.70	14.41	21.25	682.31	-84.68	483.79	460.50	23.29	20.772	
3,300.00	3,288.66	3,238.60	3,133.11	12.07	14.95	21.13	712.25	-88.99	506.17	482.13	24.04	21.051	
3,400.00	3,388.23	3,336.06	3,225.75	12.45	15.48	21.02	742.18	-93.30	528.55	503.75	24.80	21.313	
3,500.00	3,487.79	3,433.52	3,318.40	12.83	16.02	20.92	772.12	-97.61	550.94	525.38	25.56	21.558	
3,600.00	3,587.36	3,530.98	3,411.05	13.21	16.56	20.83	802.05	-101.92	573.33	547.01	26.31	21.789	
3,700.00	3,686.93	3,628.44	3,503.69	13.58	17.10	20.75	831.99	-106.23	595.71	568.64	27.07	22.006	
3,800.00	3,786.50	3,725.90	3,596.34	13.96	17.64	20.67	861.92	-110.54	618.10	590.27	27.83	22.211	
3,900.00	3,886.06	3,823.35	3,688.99	14.34	18.17	20.59	891.85	-114.85	640.49	611.90	28.59	22.405	
4,000.00	3,985.63	3,920.81	3,781.63	14.72	18.71	20.52	921.79	-119.16	662.88	633.53	29.35	22.588	
4,100.00	4,085.20	4,018.27	3,874.28	15.10	19.25	20.46	951.72	-123.47	685.27	655.17	30.11	22.762	
4,200.00	4,184.77	4,115.73	3,966.93	15.48	19.79	20.40	981.66	-127.78	707.66	676.80	30.87	22.927	
4,300.00	4,284.33	4,213.19	4,059.57	15.85	20.33	20.34	1,011.59	-132.09	730.06	698.43	31.63	23.083	
4,400.00	4,383.90	4,310.64	4,152.22	16.23	20.88	20.29	1,041.53	-136.40	752.45	720.06	32.39	23.232	
4,500.00	4,483.47	4,408.10	4,244.87	16.61	21.42	20.24	1,071.46	-140.71	774.84	741.70	33.15	23.374	
4,600.00	4,583.04	4,505.56	4,337.52	16.99	21.96	20.19	1,101.40	-145.02	797.24	763.33	33.91	23.509	
4,700.00	4,682.60	4,603.02	4,430.16	17.37	22.50	20.15	1,131.33	-149.33	819.63	784.96	34.67	23.638	
4,800.00	4,782.17	4,700.48	4,522.81	17.74	23.04	20.10	1,161.27	-153.64	842.03	806.59	35.44	23.762	
4,900.00	4,881.74	4,797.93	4,615.46	18.12	23.58	20.06	1,191.20	-157.95	864.43	828.23	36.20	23.880	
5,000.00	4,981.31	4,895.39	4,708.10	18.50	24.12	20.02	1,221.13	-162.26	886.82	849.86	36.96	23.993	
5,100.00	5,080.87	4,992.85	4,800.75	18.88	24.67	19.99	1,251.07	-166.57	909.22	871.49	37.73	24.101	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 3H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	5,090.31	4,893.40	19.26	25.21	19.95	1,281.00	-170.87	931.62	893.13	38.49	24.204	
5,300.00	5,280.01	5,187.77	4,986.04	19.64	25.75	19.92	1,310.94	-175.18	954.01	914.76	39.25	24.304	
5,400.00	5,379.57	5,285.23	5,078.69	20.01	26.29	27.17	1,340.87	-179.49	976.41	936.39	40.02	24.399	
5,500.00	5,478.43	5,382.36	5,171.03	20.40	26.83	62.01	1,370.71	-183.79	998.53	957.73	40.81	24.468	
5,600.00	5,574.70	5,477.56	5,261.53	20.81	27.36	71.30	1,399.95	-188.00	1,020.20	978.56	41.65	24.496	
5,700.00	5,666.51	5,568.99	5,348.44	21.23	27.87	75.55	1,428.03	-192.04	1,041.81	999.26	42.55	24.485	
5,800.00	5,752.07	5,658.48	5,433.49	21.69	28.37	78.32	1,455.51	-196.53	1,064.12	1,020.54	43.58	24.416	
5,900.00	5,829.71	5,760.12	5,528.99	22.22	28.96	80.56	1,486.35	-212.07	1,087.00	1,042.09	44.91	24.203	
6,000.00	5,897.93	5,872.09	5,630.60	22.90	29.62	82.46	1,519.14	-245.42	1,109.77	1,063.24	46.53	23.852	
6,100.00	5,955.40	5,997.33	5,736.83	23.78	30.39	84.24	1,553.39	-301.89	1,131.65	1,083.21	48.44	23.363	
6,200.00	6,001.00	6,139.17	5,843.74	24.91	31.29	85.97	1,587.81	-388.13	1,151.60	1,100.94	50.67	22.728	
6,300.00	6,033.84	6,300.49	5,942.98	26.32	32.43	87.62	1,619.71	-510.80	1,168.31	1,115.00	53.31	21.916	
6,400.00	6,053.28	6,481.98	6,020.28	27.97	34.01	89.03	1,644.46	-672.59	1,180.20	1,123.61	56.58	20.857	
6,500.00	6,059.03	6,679.61	6,057.66	29.82	36.29	89.94	1,656.27	-865.65	1,185.73	1,125.07	60.66	19.548	
6,600.00	6,059.34	6,801.30	6,059.24	31.84	38.01	90.00	1,656.60	-987.31	1,185.91	1,121.15	64.76	18.312	
6,700.00	6,059.65	6,901.30	6,059.55	34.00	39.63	90.00	1,656.56	-1,087.31	1,185.89	1,116.88	69.02	17.183	
6,800.00	6,059.95	7,001.30	6,059.86	36.29	41.44	90.00	1,656.52	-1,187.31	1,185.88	1,112.36	73.52	16.130	
6,900.00	6,060.26	7,101.30	6,060.17	38.67	43.41	90.00	1,656.47	-1,287.31	1,185.87	1,107.64	78.23	15.159	
7,000.00	6,060.56	7,201.30	6,060.47	41.14	45.51	90.00	1,656.43	-1,387.31	1,185.86	1,102.75	83.11	14.269	
7,100.00	6,060.87	7,301.30	6,060.78	43.68	47.72	90.00	1,656.39	-1,487.31	1,185.85	1,097.72	88.13	13.456	
7,200.00	6,061.17	7,401.30	6,061.09	46.27	50.03	90.00	1,656.34	-1,587.31	1,185.84	1,092.57	93.26	12.715	
7,300.00	6,061.48	7,501.30	6,061.39	48.91	52.42	90.00	1,656.30	-1,687.31	1,185.83	1,087.32	98.50	12.039	
7,400.00	6,061.78	7,601.30	6,061.70	51.60	54.88	90.00	1,656.26	-1,787.31	1,185.82	1,081.99	103.82	11.421	
7,500.00	6,062.09	7,701.30	6,062.01	54.31	57.39	90.00	1,656.21	-1,887.31	1,185.80	1,076.58	109.22	10.857	
7,600.00	6,062.39	7,801.30	6,062.32	57.06	59.96	90.00	1,656.17	-1,987.31	1,185.79	1,071.11	114.68	10.340	
7,700.00	6,062.70	7,901.30	6,062.62	59.83	62.57	90.00	1,656.13	-2,087.31	1,185.78	1,065.59	120.19	9.866	
7,800.00	6,063.00	8,001.30	6,062.93	62.63	65.22	90.00	1,656.08	-2,187.31	1,185.77	1,060.02	125.75	9.430	
7,900.00	6,063.31	8,101.30	6,063.24	65.44	67.90	90.00	1,656.04	-2,287.31	1,185.76	1,054.41	131.35	9.028	
8,000.00	6,063.61	8,201.30	6,063.55	68.27	70.61	90.00	1,656.00	-2,387.31	1,185.75	1,048.77	136.98	8.656	
8,100.00	6,063.92	8,301.30	6,063.85	71.11	73.34	90.00	1,655.95	-2,487.30	1,185.74	1,043.09	142.65	8.312	
8,200.00	6,064.23	8,401.30	6,064.16	73.97	76.10	90.00	1,655.91	-2,587.30	1,185.72	1,037.38	148.34	7.993	
8,300.00	6,064.53	8,501.30	6,064.47	76.84	78.87	90.00	1,655.87	-2,687.30	1,185.71	1,031.65	154.06	7.696	
8,400.00	6,064.84	8,601.30	6,064.78	79.72	81.67	90.00	1,655.82	-2,787.30	1,185.70	1,025.90	159.80	7.420	
8,500.00	6,065.14	8,701.30	6,065.08	82.61	84.48	90.00	1,655.78	-2,887.30	1,185.69	1,020.12	165.57	7.161	
8,600.00	6,065.45	8,801.30	6,065.39	85.51	87.30	90.00	1,655.73	-2,987.30	1,185.68	1,014.33	171.35	6.920	
8,700.00	6,065.75	8,901.30	6,065.70	88.42	90.14	90.00	1,655.69	-3,087.30	1,185.67	1,008.53	177.14	6.693	
8,800.00	6,066.06	9,001.30	6,066.00	91.33	92.99	90.00	1,655.65	-3,187.30	1,185.66	1,002.70	182.95	6.481	
8,900.00	6,066.36	9,101.30	6,066.31	94.25	95.84	90.00	1,655.60	-3,287.30	1,185.65	996.87	188.78	6.281	
9,000.00	6,066.67	9,201.30	6,066.62	97.17	98.71	90.00	1,655.56	-3,387.30	1,185.63	991.02	194.61	6.092	
9,100.00	6,066.97	9,301.30	6,066.93	100.10	101.59	90.00	1,655.52	-3,487.30	1,185.62	985.16	200.46	5.915	
9,200.00	6,067.28	9,401.30	6,067.23	103.04	104.47	90.00	1,655.47	-3,587.30	1,185.61	979.30	206.31	5.747	
9,300.00	6,067.58	9,501.30	6,067.54	105.98	107.36	90.00	1,655.43	-3,687.30	1,185.60	973.42	212.18	5.588	
9,400.00	6,067.89	9,601.30	6,067.85	108.92	110.26	90.00	1,655.39	-3,787.30	1,185.59	967.53	218.05	5.437	
9,500.00	6,068.19	9,701.30	6,068.16	111.86	113.17	90.00	1,655.34	-3,887.30	1,185.58	961.64	223.94	5.294	
9,600.00	6,068.50	9,801.30	6,068.46	114.81	116.08	90.00	1,655.30	-3,987.30	1,185.57	955.74	229.83	5.159	
9,700.00	6,068.80	9,901.30	6,068.77	117.77	118.99	90.00	1,655.26	-4,087.30	1,185.55	949.83	235.72	5.029	
9,800.00	6,069.11	10,001.30	6,069.08	120.72	121.91	90.00	1,655.21	-4,187.30	1,185.54	943.92	241.63	4.907	
9,900.00	6,069.42	10,101.30	6,069.39	123.68	124.83	90.00	1,655.17	-4,287.30	1,185.53	938.00	247.53	4.789	
10,000.00	6,069.72	10,201.30	6,069.69	126.64	127.76	90.00	1,655.13	-4,387.30	1,185.52	932.07	253.45	4.678	
10,100.00	6,070.03	10,301.30	6,070.00	129.60	130.69	90.00	1,655.08	-4,487.30	1,185.51	926.14	259.37	4.571	
10,200.00	6,070.33	10,401.30	6,070.31	132.57	133.63	90.00	1,655.04	-4,587.29	1,185.50	920.21	265.29	4.469	
10,300.00	6,070.64	10,501.30	6,070.61	135.54	136.57	90.00	1,655.00	-4,687.29	1,185.49	914.27	271.22	4.371	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 3H - OH - Plan #2

Survey Program: 0-MWD+HDGM

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	10,601.30	6,070.92	138.51	139.51	90.00	1,654.95	-4,787.29	1,185.48	908.33	277.15	4.277	
10,500.00	6,071.25	10,701.30	6,071.23	141.48	142.46	90.00	1,654.91	-4,887.29	1,185.46	902.38	283.08	4.188	
10,600.00	6,071.55	10,801.30	6,071.54	144.45	145.40	90.00	1,654.87	-4,987.29	1,185.45	896.43	289.02	4.102	
10,700.00	6,071.86	10,901.30	6,071.84	147.42	148.36	90.00	1,654.82	-5,087.29	1,185.44	890.48	294.96	4.019	
10,800.00	6,072.16	11,001.30	6,072.15	150.40	151.31	90.00	1,654.78	-5,187.29	1,185.43	884.52	300.91	3.939	
10,900.00	6,072.47	11,101.30	6,072.46	153.38	154.26	90.00	1,654.74	-5,287.29	1,185.42	878.56	306.86	3.863	
11,000.00	6,072.77	11,201.30	6,072.77	156.35	157.22	90.00	1,654.69	-5,387.29	1,185.41	872.60	312.81	3.790	
11,100.00	6,073.08	11,301.30	6,073.07	159.33	160.18	90.00	1,654.65	-5,487.29	1,185.40	866.63	318.76	3.719	
11,200.00	6,073.38	11,401.30	6,073.38	162.31	163.14	90.00	1,654.61	-5,587.29	1,185.38	860.66	324.72	3.650	
11,300.00	6,073.69	11,501.30	6,073.69	165.30	166.10	90.00	1,654.56	-5,687.29	1,185.37	854.69	330.68	3.585	
11,400.00	6,074.00	11,601.30	6,074.00	168.28	169.07	90.00	1,654.52	-5,787.29	1,185.36	848.72	336.64	3.521	
11,500.00	6,074.30	11,701.30	6,074.30	171.26	172.04	90.00	1,654.48	-5,887.29	1,185.35	842.75	342.60	3.460	
11,600.00	6,074.61	11,801.30	6,074.61	174.25	175.00	90.00	1,654.43	-5,987.29	1,185.34	836.77	348.57	3.401	
11,700.00	6,074.91	11,901.30	6,074.92	177.23	177.97	90.00	1,654.39	-6,087.29	1,185.33	830.79	354.54	3.343	
11,800.00	6,075.22	12,001.30	6,075.23	180.22	180.94	90.00	1,654.35	-6,187.29	1,185.32	824.81	360.51	3.288	
11,900.00	6,075.52	12,101.30	6,075.53	183.21	183.92	90.00	1,654.30	-6,287.29	1,185.31	818.83	366.48	3.234	
12,000.00	6,075.83	12,201.30	6,075.84	186.19	186.89	90.00	1,654.26	-6,387.29	1,185.29	812.85	372.45	3.182	
12,100.00	6,076.13	12,301.30	6,076.15	189.18	189.86	90.00	1,654.21	-6,487.29	1,185.28	806.86	378.42	3.132	
12,200.00	6,076.44	12,401.30	6,076.45	192.17	192.84	90.00	1,654.17	-6,587.29	1,185.27	800.87	384.40	3.083	
12,300.00	6,076.74	12,501.30	6,076.76	195.16	195.82	90.00	1,654.13	-6,687.28	1,185.26	794.89	390.37	3.036	
12,400.00	6,077.05	12,601.30	6,077.07	198.15	198.80	90.00	1,654.08	-6,787.28	1,185.25	788.90	396.35	2.990	
12,500.00	6,077.35	12,701.30	6,077.38	201.15	201.77	90.00	1,654.04	-6,887.28	1,185.24	782.90	402.33	2.946	
12,600.00	6,077.66	12,801.27	6,077.68	204.14	204.75	90.00	1,654.00	-6,987.25	1,185.23	776.91	408.31	2.903	
12,700.00	6,077.96	12,901.27	6,077.99	207.13	207.73	90.00	1,653.96	-7,087.25	1,185.22	770.92	414.29	2.861	
12,702.98	6,077.97	12,904.15	6,078.00	207.22	207.82	90.00	1,653.96	-7,090.13	1,185.22	770.75	414.47	2.860	
12,711.72	6,078.00	12,904.15	6,078.00	207.48	207.82	90.00	1,653.96	-7,090.13	1,185.25	770.39	414.86	2.857 SF	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 4H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	144.15	-60.80	43.93	75.01				
100.00	100.00	100.00	100.00	0.18	0.18	144.15	-60.80	43.93	75.01	74.65	0.36	209.247	
200.00	200.00	200.00	200.00	0.54	0.54	144.15	-60.80	43.93	75.01	73.93	1.08	69.749	
300.00	300.00	300.00	300.00	0.90	0.90	144.15	-60.80	43.93	75.01	73.22	1.79	41.849	
400.00	400.00	400.00	400.00	1.25	1.25	144.15	-60.80	43.93	75.01	72.50	2.51	29.892	
500.00	500.00	500.00	500.00	1.61	1.61	144.15	-60.80	43.93	75.01	71.78	3.23	23.250	CC, ES
600.00	599.98	598.01	597.99	1.97	1.95	166.76	-62.46	43.73	77.97	74.03	3.93	19.825	
700.00	699.84	695.37	695.22	2.33	2.28	169.70	-67.40	43.10	86.99	82.34	4.65	18.701	
800.00	799.47	791.47	790.97	2.70	2.61	173.42	-75.50	42.09	102.17	96.78	5.39	18.959	
900.00	899.04	886.29	885.12	3.06	2.94	177.02	-86.60	40.69	121.23	115.11	6.12	19.810	
1,000.00	998.61	979.74	977.50	3.42	3.29	-179.76	-100.56	38.93	143.47	136.62	6.85	20.948	
1,100.00	1,098.17	1,071.67	1,067.89	3.80	3.65	-176.96	-117.20	36.84	168.89	161.32	7.57	22.320	
1,200.00	1,197.74	1,161.93	1,156.05	4.17	4.02	-174.56	-136.33	34.44	197.42	189.14	8.28	23.856	
1,300.00	1,297.31	1,250.38	1,241.83	4.54	4.41	-172.50	-157.75	31.74	228.99	220.02	8.97	25.540	
1,400.00	1,396.88	1,336.93	1,325.07	4.91	4.80	-170.75	-181.23	28.79	263.51	253.87	9.64	27.343	
1,500.00	1,496.44	1,421.47	1,405.66	5.29	5.21	-169.24	-206.57	25.61	300.88	290.59	10.29	29.245	
1,600.00	1,596.01	1,500.00	1,479.82	5.66	5.61	-168.00	-232.21	22.38	341.01	330.10	10.91	31.263	
1,700.00	1,695.58	1,584.26	1,558.56	6.04	6.07	-166.82	-261.96	18.64	383.73	372.20	11.53	33.291	
1,800.00	1,795.15	1,669.97	1,637.96	6.41	6.56	-165.78	-293.99	14.61	428.47	416.32	12.15	35.262	
1,900.00	1,894.71	1,759.07	1,720.45	6.79	7.08	-164.90	-327.41	10.41	473.44	460.64	12.80	36.992	
2,000.00	1,994.28	1,848.17	1,802.93	7.17	7.60	-164.17	-360.82	6.21	518.49	505.03	13.45	38.538	
2,100.00	2,093.85	1,937.27	1,885.42	7.54	8.13	-163.55	-394.24	2.01	563.59	549.47	14.12	39.924	
2,200.00	2,193.42	2,026.37	1,967.91	7.92	8.67	-163.02	-427.65	-2.19	608.74	593.95	14.79	41.172	
2,300.00	2,292.98	2,115.47	2,050.40	8.30	9.22	-162.57	-461.06	-6.39	653.92	638.46	15.46	42.299	
2,400.00	2,392.55	2,204.57	2,132.89	8.67	9.77	-162.18	-494.48	-10.60	699.13	683.00	16.14	43.321	
2,500.00	2,492.12	2,293.66	2,215.38	9.05	10.32	-161.83	-527.89	-14.80	744.37	727.55	16.82	44.250	
2,600.00	2,591.69	2,382.76	2,297.87	9.43	10.87	-161.53	-561.31	-19.00	789.62	772.11	17.51	45.098	
2,700.00	2,691.25	2,471.86	2,380.36	9.81	11.43	-161.25	-594.72	-23.20	834.89	816.69	18.20	45.875	
2,800.00	2,790.82	2,560.96	2,462.85	10.18	11.99	-161.01	-628.14	-27.40	880.18	861.28	18.89	46.588	
2,900.00	2,890.39	2,650.06	2,545.34	10.56	12.55	-160.78	-661.55	-31.60	925.47	905.88	19.59	47.244	
3,000.00	2,989.96	2,739.16	2,627.83	10.94	13.11	-160.58	-694.96	-35.81	970.78	950.49	20.29	47.851	
3,100.00	3,089.52	2,828.26	2,710.32	11.32	13.68	-160.40	-728.38	-40.01	1,016.09	995.11	20.99	48.412	
3,200.00	3,189.09	2,917.36	2,792.80	11.70	14.24	-160.23	-761.79	-44.21	1,061.42	1,039.72	21.69	48.933	
3,300.00	3,288.66	3,006.46	2,875.29	12.07	14.81	-160.08	-795.21	-48.41	1,106.74	1,084.35	22.40	49.418	
3,400.00	3,388.23	3,095.55	2,957.78	12.45	15.38	-159.94	-828.62	-52.61	1,152.08	1,128.98	23.10	49.870	
3,500.00	3,487.79	3,184.65	3,040.27	12.83	15.95	-159.81	-862.03	-56.81	1,197.42	1,173.61	23.81	50.292	
3,600.00	3,587.36	3,273.75	3,122.76	13.21	16.52	-159.69	-895.45	-61.01	1,242.76	1,218.24	24.52	50.687	
3,700.00	3,686.93	3,362.85	3,205.25	13.58	17.09	-159.57	-928.86	-65.22	1,288.11	1,262.88	25.23	51.057	
3,800.00	3,786.50	3,451.95	3,287.74	13.96	17.66	-159.47	-962.28	-69.42	1,333.46	1,307.52	25.94	51.405	
3,900.00	3,886.06	3,541.05	3,370.23	14.34	18.23	-159.37	-995.69	-73.62	1,378.82	1,352.16	26.65	51.733	
4,000.00	3,985.63	3,630.15	3,452.72	14.72	18.80	-159.28	-1,029.11	-77.82	1,424.17	1,396.81	27.37	52.042	
4,100.00	4,085.20	3,719.25	3,535.21	15.10	19.37	-159.19	-1,062.52	-82.02	1,469.54	1,441.45	28.08	52.333	
4,200.00	4,184.77	3,808.35	3,617.70	15.48	19.95	-159.11	-1,095.93	-86.22	1,514.90	1,486.10	28.80	52.608	
4,300.00	4,284.33	3,897.45	3,700.19	15.85	20.52	-159.04	-1,129.35	-90.42	1,560.26	1,530.75	29.51	52.869	
4,400.00	4,383.90	3,986.54	3,782.67	16.23	21.09	-158.96	-1,162.76	-94.63	1,605.63	1,575.40	30.23	53.116	
4,500.00	4,483.47	4,075.64	3,865.16	16.61	21.67	-158.90	-1,196.18	-98.83	1,651.00	1,620.06	30.95	53.351	
4,600.00	4,583.04	4,164.74	3,947.65	16.99	22.24	-158.83	-1,229.59	-103.03	1,696.37	1,664.71	31.66	53.574	
4,700.00	4,682.60	4,253.84	4,030.14	17.37	22.81	-158.77	-1,263.01	-107.23	1,741.75	1,709.36	32.38	53.786	
4,800.00	4,782.17	4,342.94	4,112.63	17.74	23.39	-158.71	-1,296.42	-111.43	1,787.12	1,754.02	33.10	53.988	
4,900.00	4,881.74	4,432.04	4,195.12	18.12	23.96	-158.66	-1,329.83	-115.63	1,832.50	1,798.67	33.82	54.180	
5,000.00	4,981.31	4,521.14	4,277.61	18.50	24.54	-158.60	-1,363.25	-119.83	1,877.87	1,843.33	34.54	54.364	
5,100.00	5,080.87	4,610.24	4,360.10	18.88	25.12	-158.55	-1,396.66	-124.04	1,923.25	1,887.99	35.26	54.540	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 4H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	4,699.34	4,442.59	19.26	25.69	-158.51	-1,430.08	-128.24	1,968.63	1,932.65	35.98	54.707	
5,300.00	5,280.01	4,788.44	4,525.08	19.64	26.27	-158.46	-1,463.49	-132.44	2,014.01	1,977.30	36.71	54.868	
5,400.00	5,379.57	4,877.54	4,607.57	20.01	26.84	-150.56	-1,496.91	-136.64	2,059.39	2,021.96	37.43	55.021	
5,500.00	5,478.43	4,966.39	4,689.83	20.40	27.42	-110.53	-1,530.23	-140.83	2,104.56	2,066.39	38.17	55.141	
5,600.00	5,574.70	5,053.59	4,770.56	20.81	27.98	-97.33	-1,562.93	-144.94	2,148.87	2,109.94	38.93	55.205	
5,700.00	5,666.51	5,137.43	4,848.18	21.23	28.52	-90.27	-1,594.37	-148.90	2,191.83	2,152.13	39.70	55.204	
5,800.00	5,752.07	5,216.27	4,921.17	21.69	29.03	-85.57	-1,623.94	-152.61	2,233.18	2,192.66	40.52	55.114	
5,900.00	5,829.71	5,288.59	4,988.13	22.22	29.50	-82.08	-1,651.06	-156.02	2,272.81	2,231.41	41.40	54.900	
6,000.00	5,897.93	5,352.98	5,047.74	22.90	29.92	-79.28	-1,675.21	-159.06	2,310.74	2,268.36	42.39	54.518	
6,100.00	5,955.40	5,408.17	5,098.84	23.78	30.28	-76.89	-1,695.91	-161.66	2,347.03	2,303.51	43.52	53.930	
6,200.00	6,001.00	5,453.11	5,140.44	24.91	30.57	-74.72	-1,712.76	-163.78	2,381.73	2,336.90	44.83	53.124	
6,300.00	6,033.84	5,486.91	5,171.74	26.32	30.79	-72.65	-1,725.44	-165.38	2,414.85	2,368.52	46.33	52.127	
6,400.00	6,053.28	5,508.92	5,192.11	27.97	30.93	-70.61	-1,733.69	-166.41	2,446.28	2,398.32	47.97	51.000	
6,500.00	6,059.03	5,518.79	5,201.25	29.82	30.99	-68.82	-1,737.39	-166.88	2,475.86	2,426.17	49.69	49.827	
6,600.00	6,059.34	5,523.80	5,205.89	31.84	31.02	-68.94	-1,739.27	-167.12	2,506.83	2,455.35	51.49	48.689	
6,700.00	6,059.65	5,528.81	5,210.53	34.00	31.06	-69.06	-1,741.15	-167.35	2,541.36	2,488.01	53.35	47.637	
6,800.00	6,059.95	7,144.89	6,059.90	36.29	42.95	-90.00	-2,084.49	-1,185.51	2,555.13	2,481.74	73.39	34.817	
6,900.00	6,060.26	7,244.89	6,060.20	38.67	44.55	-90.00	-2,084.54	-1,285.51	2,555.14	2,477.11	78.04	32.743	
7,000.00	6,060.56	7,344.89	6,060.51	41.14	46.34	-90.00	-2,084.59	-1,385.51	2,555.16	2,472.30	82.86	30.836	
7,100.00	6,060.87	7,444.89	6,060.81	43.68	48.30	-90.00	-2,084.64	-1,485.51	2,555.18	2,467.34	87.84	29.090	
7,200.00	6,061.17	7,544.89	6,061.12	46.27	50.40	-90.00	-2,084.69	-1,585.51	2,555.20	2,462.27	92.93	27.495	
7,300.00	6,061.48	7,644.89	6,061.42	48.91	52.62	-90.00	-2,084.74	-1,685.51	2,555.22	2,457.08	98.13	26.038	
7,400.00	6,061.78	7,744.89	6,061.73	51.60	54.94	-90.00	-2,084.79	-1,785.51	2,555.23	2,451.81	103.43	24.706	
7,500.00	6,062.09	7,844.89	6,062.03	54.31	57.34	-90.00	-2,084.84	-1,885.51	2,555.25	2,446.46	108.79	23.487	
7,600.00	6,062.39	7,944.89	6,062.34	57.06	59.82	-90.00	-2,084.89	-1,985.51	2,555.27	2,441.05	114.22	22.371	
7,700.00	6,062.70	8,044.89	6,062.65	59.83	62.35	-90.00	-2,084.94	-2,085.51	2,555.29	2,435.58	119.71	21.345	
7,800.00	6,063.00	8,144.89	6,062.95	62.63	64.93	-90.00	-2,084.99	-2,185.51	2,555.31	2,430.06	125.25	20.401	
7,900.00	6,063.31	8,244.89	6,063.26	65.44	67.56	-90.00	-2,085.04	-2,285.51	2,555.33	2,424.49	130.83	19.531	
8,000.00	6,063.61	8,344.89	6,063.56	68.27	70.22	-90.00	-2,085.09	-2,385.51	2,555.34	2,418.89	136.45	18.727	
8,100.00	6,063.92	8,444.89	6,063.87	71.11	72.91	-90.00	-2,085.15	-2,485.51	2,555.36	2,413.26	142.10	17.983	
8,200.00	6,064.23	8,544.89	6,064.17	73.97	75.64	-90.00	-2,085.20	-2,585.51	2,555.38	2,407.60	147.78	17.292	
8,300.00	6,064.53	8,644.89	6,064.48	76.84	78.38	-90.00	-2,085.25	-2,685.51	2,555.40	2,401.91	153.49	16.649	
8,400.00	6,064.84	8,744.89	6,064.78	79.72	81.15	-90.00	-2,085.30	-2,785.50	2,555.42	2,396.20	159.22	16.050	
8,500.00	6,065.14	8,844.89	6,065.09	82.61	83.93	-90.00	-2,085.35	-2,885.50	2,555.43	2,390.47	164.97	15.491	
8,600.00	6,065.45	8,944.89	6,065.39	85.51	86.74	-90.00	-2,085.40	-2,985.50	2,555.45	2,384.72	170.74	14.967	
8,700.00	6,065.75	9,044.89	6,065.70	88.42	89.55	-90.00	-2,085.45	-3,085.50	2,555.47	2,378.95	176.52	14.477	
8,800.00	6,066.06	9,144.89	6,066.00	91.33	92.38	-90.00	-2,085.50	-3,185.50	2,555.49	2,373.16	182.32	14.016	
8,900.00	6,066.36	9,244.89	6,066.31	94.25	95.23	-90.00	-2,085.55	-3,285.50	2,555.51	2,367.37	188.14	13.583	
9,000.00	6,066.67	9,344.89	6,066.61	97.17	98.08	-90.00	-2,085.60	-3,385.50	2,555.52	2,361.56	193.97	13.175	
9,100.00	6,066.97	9,444.89	6,066.92	100.10	100.95	-90.00	-2,085.65	-3,485.50	2,555.54	2,355.74	199.81	12.790	
9,200.00	6,067.28	9,544.89	6,067.23	103.04	103.82	-90.00	-2,085.70	-3,585.50	2,555.56	2,349.91	205.66	12.426	
9,300.00	6,067.58	9,644.89	6,067.53	105.98	106.70	-90.00	-2,085.75	-3,685.50	2,555.58	2,344.06	211.52	12.082	
9,400.00	6,067.89	9,744.89	6,067.84	108.92	109.59	-90.00	-2,085.80	-3,785.50	2,555.60	2,338.21	217.38	11.756	
9,500.00	6,068.19	9,844.89	6,068.14	111.86	112.48	-90.00	-2,085.85	-3,885.50	2,555.62	2,332.35	223.26	11.447	
9,600.00	6,068.50	9,944.89	6,068.45	114.81	115.38	-90.00	-2,085.90	-3,985.50	2,555.63	2,326.49	229.14	11.153	
9,700.00	6,068.80	10,044.89	6,068.75	117.77	118.29	-90.00	-2,085.95	-4,085.50	2,555.65	2,320.62	235.04	10.873	
9,800.00	6,069.11	10,144.89	6,069.06	120.72	121.20	-90.00	-2,086.00	-4,185.50	2,555.67	2,314.74	240.93	10.607	
9,900.00	6,069.42	10,244.89	6,069.36	123.68	124.12	-90.00	-2,086.05	-4,285.50	2,555.69	2,308.85	246.84	10.354	
10,000.00	6,069.72	10,344.89	6,069.67	126.64	127.04	-90.00	-2,086.10	-4,385.50	2,555.71	2,302.96	252.75	10.112	
10,100.00	6,070.03	10,444.89	6,069.97	129.60	129.97	-90.00	-2,086.15	-4,485.50	2,555.72	2,297.06	258.66	9.881	
10,200.00	6,070.33	10,544.89	6,070.28	132.57	132.90	-90.00	-2,086.20	-4,585.50	2,555.74	2,291.16	264.58	9.660	
10,300.00	6,070.64	10,644.89	6,070.58	135.54	135.84	-90.00	-2,086.25	-4,685.50	2,555.76	2,285.26	270.50	9.448	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Com 603 4H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	10,744.89	6,070.89	138.51	138.77	-90.00	-2,086.30	-4,785.50	2,555.78	2,279.35	276.43	9.246	
10,500.00	6,071.25	10,844.89	6,071.19	141.48	141.71	-90.00	-2,086.35	-4,885.49	2,555.80	2,273.43	282.36	9.051	
10,600.00	6,071.55	10,944.89	6,071.50	144.45	144.66	-90.00	-2,086.40	-4,985.49	2,555.82	2,267.52	288.30	8.865	
10,700.00	6,071.86	11,044.89	6,071.81	147.42	147.60	-90.00	-2,086.45	-5,085.49	2,555.83	2,261.59	294.24	8.686	
10,800.00	6,072.16	11,144.89	6,072.11	150.40	150.55	-90.00	-2,086.50	-5,185.49	2,555.85	2,255.67	300.18	8.514	
10,900.00	6,072.47	11,244.89	6,072.42	153.38	153.51	-90.00	-2,086.55	-5,285.49	2,555.87	2,249.74	306.13	8.349	
11,000.00	6,072.77	11,344.89	6,072.72	156.35	156.46	-90.00	-2,086.60	-5,385.49	2,555.89	2,243.81	312.08	8.190	
11,100.00	6,073.08	11,444.89	6,073.03	159.33	159.42	-90.00	-2,086.65	-5,485.49	2,555.91	2,237.88	318.03	8.037	
11,200.00	6,073.38	11,544.89	6,073.33	162.31	162.37	-90.00	-2,086.70	-5,585.49	2,555.92	2,231.94	323.98	7.889	
11,300.00	6,073.69	11,644.89	6,073.64	165.30	165.34	-90.00	-2,086.75	-5,685.49	2,555.94	2,226.01	329.94	7.747	
11,400.00	6,074.00	11,744.89	6,073.94	168.28	168.30	-90.00	-2,086.80	-5,785.49	2,555.96	2,220.06	335.90	7.609	
11,500.00	6,074.30	11,844.89	6,074.25	171.26	171.26	-90.00	-2,086.85	-5,885.49	2,555.98	2,214.12	341.86	7.477	
11,600.00	6,074.61	11,944.89	6,074.55	174.25	174.23	-90.00	-2,086.90	-5,985.49	2,556.00	2,208.18	347.82	7.349	
11,700.00	6,074.91	12,044.89	6,074.86	177.23	177.19	-90.00	-2,086.95	-6,085.49	2,556.02	2,202.23	353.78	7.225	
11,800.00	6,075.22	12,144.89	6,075.16	180.22	180.16	-90.00	-2,087.00	-6,185.49	2,556.03	2,196.28	359.75	7.105	
11,900.00	6,075.52	12,244.89	6,075.47	183.21	183.13	-90.00	-2,087.05	-6,285.49	2,556.05	2,190.33	365.72	6.989	
12,000.00	6,075.83	12,344.89	6,075.77	186.19	186.10	-90.00	-2,087.10	-6,385.49	2,556.07	2,184.38	371.69	6.877	
12,100.00	6,076.13	12,444.89	6,076.08	189.18	189.08	-90.00	-2,087.15	-6,485.49	2,556.09	2,178.42	377.66	6.768	
12,200.00	6,076.44	12,544.89	6,076.38	192.17	192.05	-90.00	-2,087.20	-6,585.49	2,556.11	2,172.47	383.64	6.663	
12,300.00	6,076.74	12,644.89	6,076.69	195.16	195.03	-90.00	-2,087.26	-6,685.49	2,556.12	2,166.51	389.61	6.561	
12,400.00	6,077.05	12,744.89	6,077.00	198.15	198.00	-90.00	-2,087.31	-6,785.49	2,556.14	2,160.55	395.59	6.462	
12,500.00	6,077.35	12,844.89	6,077.30	201.15	200.98	-90.00	-2,087.36	-6,885.49	2,556.16	2,154.59	401.57	6.365	
12,600.00	6,077.66	12,944.89	6,077.61	204.14	203.96	-90.00	-2,087.41	-6,985.48	2,556.18	2,148.63	407.55	6.272	
12,700.00	6,077.96	13,045.08	6,077.91	207.13	206.94	-90.00	-2,087.45	-7,085.68	2,556.19	2,142.66	413.53	6.181	
12,711.72	6,078.00	13,056.80	6,077.95	207.48	207.29	-90.00	-2,087.46	-7,097.40	2,556.20	2,141.96	414.23	6.171	SF

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Strat Test 600 #1 - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	127.29	-31.67	41.59	52.28				
100.00	100.00	100.00	100.00	0.18	0.18	127.29	-31.67	41.59	52.28	51.92	0.36	145.834	
200.00	200.00	200.00	200.00	0.54	0.54	127.29	-31.67	41.59	52.28	51.20	1.08	48.611	
300.00	300.00	300.00	300.00	0.90	0.90	127.29	-31.67	41.59	52.28	50.49	1.79	29.167	
400.00	400.00	400.00	400.00	1.25	1.25	127.29	-31.67	41.59	52.28	49.77	2.51	20.833	
500.00	500.00	500.00	500.00	1.61	1.61	127.29	-31.67	41.59	52.28	49.05	3.23	16.204	CC, ES
600.00	599.98	599.98	599.98	1.97	1.97	149.71	-31.67	41.59	53.78	49.83	3.94	13.640	
700.00	699.84	699.84	699.84	2.33	2.33	152.26	-31.67	41.59	58.36	53.70	4.66	12.521	
800.00	799.47	799.47	799.47	2.70	2.69	155.66	-31.67	41.59	66.02	60.64	5.38	12.271	
900.00	899.04	899.04	899.04	3.06	3.04	158.60	-31.67	41.59	74.59	68.49	6.10	12.237	
1,000.00	998.61	998.61	998.61	3.42	3.40	160.93	-31.67	41.59	83.31	76.50	6.81	12.232	SF
1,100.00	1,098.17	1,098.17	1,098.17	3.80	3.76	162.82	-31.67	41.59	92.15	84.62	7.53	12.241	
1,200.00	1,197.74	1,197.74	1,197.74	4.17	4.11	164.37	-31.67	41.59	101.06	92.82	8.24	12.258	
1,300.00	1,297.31	1,297.31	1,297.31	4.54	4.47	165.68	-31.67	41.59	110.04	101.08	8.96	12.278	
1,400.00	1,396.88	1,396.88	1,396.88	4.91	4.83	166.78	-31.67	41.59	119.07	109.39	9.68	12.300	
1,500.00	1,496.44	1,496.44	1,496.44	5.29	5.19	167.73	-31.67	41.59	128.13	117.73	10.40	12.322	
1,600.00	1,596.01	1,596.01	1,596.01	5.66	5.54	168.56	-31.67	41.59	137.23	126.11	11.12	12.344	
1,700.00	1,695.58	1,695.58	1,695.58	6.04	5.90	169.28	-31.67	41.59	146.35	134.51	11.84	12.365	
1,800.00	1,795.15	1,795.15	1,795.15	6.41	6.26	169.91	-31.67	41.59	155.48	142.93	12.55	12.385	
1,900.00	1,894.71	1,894.71	1,894.71	6.79	6.61	170.48	-31.67	41.59	164.64	151.37	13.27	12.404	
2,000.00	1,994.28	1,994.28	1,994.28	7.17	6.97	170.99	-31.67	41.59	173.81	159.82	13.99	12.422	
2,100.00	2,093.85	2,093.85	2,093.85	7.54	7.33	171.44	-31.67	41.59	182.99	168.28	14.71	12.439	
2,200.00	2,193.42	2,193.42	2,193.42	7.92	7.68	171.86	-31.67	41.59	192.19	176.76	15.43	12.456	
2,300.00	2,292.98	2,292.98	2,292.98	8.30	8.04	172.23	-31.67	41.59	201.39	185.24	16.15	12.471	
2,400.00	2,392.55	2,392.55	2,392.55	8.67	8.40	172.57	-31.67	41.59	210.60	193.73	16.87	12.485	
2,500.00	2,492.12	2,492.12	2,492.12	9.05	8.75	172.88	-31.67	41.59	219.82	202.23	17.59	12.498	
2,600.00	2,591.69	2,591.69	2,591.69	9.43	9.11	173.17	-31.67	41.59	229.04	210.73	18.31	12.511	
2,700.00	2,691.25	2,691.25	2,691.25	9.81	9.47	173.44	-31.67	41.59	238.27	219.24	19.03	12.523	
2,800.00	2,790.82	2,790.82	2,790.82	10.18	9.83	173.68	-31.67	41.59	247.50	227.75	19.75	12.534	
2,900.00	2,890.39	2,890.39	2,890.39	10.56	10.18	173.91	-31.67	41.59	256.74	236.27	20.47	12.545	
3,000.00	2,989.96	2,989.96	2,989.96	10.94	10.54	174.12	-31.67	41.59	265.98	244.79	21.18	12.555	
3,100.00	3,089.52	3,089.52	3,089.52	11.32	10.90	174.32	-31.67	41.59	275.22	253.32	21.90	12.565	
3,200.00	3,189.09	3,189.09	3,189.09	11.70	11.25	174.51	-31.67	41.59	284.47	261.84	22.62	12.574	
3,300.00	3,288.66	3,288.66	3,288.66	12.07	11.61	174.68	-31.67	41.59	293.72	270.37	23.34	12.583	
3,400.00	3,388.23	3,388.23	3,388.23	12.45	11.97	174.84	-31.67	41.59	302.97	278.91	24.06	12.591	
3,500.00	3,487.79	3,487.79	3,487.79	12.83	12.32	175.00	-31.67	41.59	312.22	287.44	24.78	12.599	
3,600.00	3,587.36	3,587.36	3,587.36	13.21	12.68	175.14	-31.67	41.59	321.48	295.98	25.50	12.606	
3,700.00	3,686.93	3,686.93	3,686.93	13.58	13.04	175.28	-31.67	41.59	330.74	304.52	26.22	12.613	
3,800.00	3,786.50	3,786.50	3,786.50	13.96	13.39	175.41	-31.67	41.59	340.00	313.06	26.94	12.620	
3,900.00	3,886.06	3,886.06	3,886.06	14.34	13.75	175.53	-31.67	41.59	349.26	321.60	27.66	12.627	
4,000.00	3,985.63	3,985.63	3,985.63	14.72	14.11	175.64	-31.67	41.59	358.52	330.14	28.38	12.633	
4,100.00	4,085.20	4,085.20	4,085.20	15.10	14.47	175.75	-31.67	41.59	367.79	338.69	29.10	12.639	
4,200.00	4,184.77	4,184.77	4,184.77	15.48	14.82	175.86	-31.67	41.59	377.05	347.23	29.82	12.644	
4,300.00	4,284.33	4,284.33	4,284.33	15.85	15.18	175.96	-31.67	41.59	386.32	355.78	30.54	12.650	
4,400.00	4,383.90	4,383.90	4,383.90	16.23	15.54	176.05	-31.67	41.59	395.59	364.33	31.26	12.655	
4,500.00	4,483.47	4,483.47	4,483.47	16.61	15.89	176.14	-31.67	41.59	404.86	372.88	31.98	12.660	
4,600.00	4,583.04	4,583.04	4,583.04	16.99	16.25	176.23	-31.67	41.59	414.13	381.43	32.70	12.665	
4,700.00	4,682.60	4,682.60	4,682.60	17.37	16.61	176.31	-31.67	41.59	423.40	389.98	33.42	12.670	
4,800.00	4,782.17	4,782.17	4,782.17	17.74	16.96	176.39	-31.67	41.59	432.67	398.53	34.14	12.674	
4,900.00	4,881.74	4,881.74	4,881.74	18.12	17.32	176.47	-31.67	41.59	441.95	407.09	34.86	12.678	
5,000.00	4,981.31	4,981.31	4,981.31	18.50	17.68	176.54	-31.67	41.59	451.22	415.64	35.58	12.683	
5,100.00	5,080.87	5,080.87	5,080.87	18.88	18.03	176.61	-31.67	41.59	460.49	424.20	36.30	12.687	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Strat Test 600 #1 - OH - Plan #1

Survey Program: 0-MWD+HDGM

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,180.44	5,180.44	5,180.44	19.26	18.39	176.68	-31.67	41.59	469.77	432.75	37.02	12.690	
5,300.00	5,280.01	5,280.01	5,280.01	19.64	18.75	176.74	-31.67	41.59	479.04	441.31	37.74	12.694	
5,400.00	5,379.57	5,379.57	5,379.57	20.01	19.10	-175.68	-31.67	41.59	488.35	449.89	38.46	12.698	
5,500.00	5,478.43	5,478.43	5,478.43	20.40	19.46	-139.36	-31.67	41.59	501.09	461.91	39.17	12.791	
5,600.00	5,574.70	5,574.70	5,574.70	20.81	19.80	-130.23	-31.67	41.59	519.92	480.04	39.88	13.037	
5,700.00	5,666.51	5,666.51	5,666.51	21.23	20.13	-127.26	-31.67	41.59	545.72	505.16	40.56	13.455	
5,800.00	5,752.07	5,752.07	5,752.07	21.69	20.44	-126.26	-31.67	41.59	579.62	538.41	41.21	14.064	
5,900.00	5,829.71	5,829.71	5,829.71	22.22	20.72	-125.69	-31.67	41.59	622.61	580.78	41.83	14.884	
6,000.00	5,897.93	5,897.93	5,897.93	22.90	20.96	-124.67	-31.67	41.59	675.18	632.77	42.41	15.921	
6,100.00	5,955.40	5,955.40	5,955.40	23.78	21.17	-122.50	-31.67	41.59	737.16	694.22	42.94	17.169	
6,200.00	6,001.00	6,001.00	6,001.00	24.91	21.33	-118.50	-31.67	41.59	807.73	764.33	43.40	18.611	
6,300.00	6,033.84	6,033.84	6,033.84	26.32	21.45	-111.93	-31.67	41.59	885.53	841.74	43.78	20.224	
6,400.00	6,053.28	6,053.28	6,053.28	27.97	21.52	-102.02	-31.67	41.59	968.81	924.73	44.08	21.979	
6,500.00	6,059.03	6,059.03	6,059.03	29.82	21.54	-90.32	-31.67	41.59	1,055.61	1,011.33	44.28	23.840	
6,600.00	6,059.34	6,059.34	6,059.34	31.84	21.54	-90.36	-31.67	41.59	1,144.53	1,100.10	44.43	25.759	
6,700.00	6,059.65	6,059.65	6,059.65	34.00	21.54	-90.39	-31.67	41.59	1,235.15	1,190.58	44.57	27.710	
6,800.00	6,059.95	6,059.95	6,059.95	36.29	21.54	-90.43	-31.67	41.59	1,327.12	1,282.41	44.71	29.686	
6,900.00	6,060.26	6,060.26	6,060.26	38.67	21.55	-90.46	-31.67	41.59	1,420.17	1,375.35	44.82	31.683	
7,000.00	6,060.56	6,060.56	6,060.56	41.14	21.55	-90.50	-31.67	41.59	1,514.11	1,469.18	44.93	33.696	
7,100.00	6,060.87	6,060.87	6,060.87	43.68	21.55	-90.53	-31.67	41.59	1,608.78	1,563.75	45.04	35.722	
7,200.00	6,061.17	6,061.17	6,061.17	46.27	21.55	-90.57	-31.67	41.59	1,704.06	1,658.93	45.13	37.760	
7,300.00	6,061.48	6,061.48	6,061.48	48.91	21.55	-90.60	-31.67	41.59	1,799.85	1,754.63	45.22	39.806	
7,400.00	6,061.78	6,061.78	6,061.78	51.60	21.55	-90.64	-31.67	41.59	1,896.08	1,850.78	45.30	41.859	
7,500.00	6,062.09	6,062.09	6,062.09	54.31	21.55	-90.67	-31.67	41.59	1,992.67	1,947.30	45.37	43.918	
7,600.00	6,062.39	6,062.39	6,062.39	57.06	21.55	-90.71	-31.67	41.59	2,089.59	2,044.15	45.44	45.981	
7,700.00	6,062.70	6,062.70	6,062.70	59.83	21.55	-90.74	-31.67	41.59	2,186.79	2,141.27	45.51	48.048	
7,800.00	6,063.00	6,063.00	6,063.00	62.63	21.55	-90.78	-31.67	41.59	2,284.22	2,238.65	45.58	50.117	
7,900.00	6,063.31	6,063.31	6,063.31	65.44	21.56	-90.81	-31.67	41.59	2,381.87	2,336.23	45.64	52.189	
8,000.00	6,063.61	6,063.61	6,063.61	68.27	21.56	-90.84	-31.67	41.59	2,479.71	2,434.01	45.70	54.262	
8,100.00	6,063.92	6,063.92	6,063.92	71.11	21.56	-90.88	-31.67	41.59	2,577.71	2,531.96	45.76	56.335	
8,200.00	6,064.23	6,064.23	6,064.23	73.97	21.56	-90.91	-31.67	41.59	2,675.86	2,630.05	45.81	58.409	
8,300.00	6,064.53	6,064.53	6,064.53	76.84	21.56	-90.95	-31.67	41.59	2,774.15	2,728.28	45.87	60.482	
8,400.00	6,064.84	6,064.84	6,064.84	79.72	21.56	-90.98	-31.67	41.59	2,872.55	2,826.63	45.92	62.555	
8,500.00	6,065.14	6,065.14	6,065.14	82.61	21.56	-91.02	-31.67	41.59	2,971.05	2,925.08	45.97	64.627	
8,600.00	6,065.45	6,065.45	6,065.45	85.51	21.56	-91.05	-31.67	41.59	3,069.66	3,023.64	46.02	66.697	
8,700.00	6,065.75	6,065.75	6,065.75	88.42	21.56	-91.09	-31.67	41.59	3,168.35	3,122.28	46.07	68.766	
8,800.00	6,066.06	6,066.06	6,066.06	91.33	21.57	-91.12	-31.67	41.59	3,267.12	3,221.00	46.12	70.833	
8,900.00	6,066.36	6,066.36	6,066.36	94.25	21.57	-91.16	-31.67	41.59	3,365.97	3,319.79	46.17	72.898	
9,000.00	6,066.67	6,066.67	6,066.67	97.17	21.57	-91.19	-31.67	41.59	3,464.88	3,418.65	46.22	74.961	
9,100.00	6,066.97	6,066.97	6,066.97	100.10	21.57	-91.23	-31.67	41.59	3,563.85	3,517.58	46.27	77.021	
9,200.00	6,067.28	6,067.28	6,067.28	103.04	21.57	-91.26	-31.67	41.59	3,662.87	3,616.55	46.32	79.078	
9,300.00	6,067.58	6,067.58	6,067.58	105.98	21.57	-91.30	-31.67	41.59	3,761.95	3,715.58	46.37	81.133	
9,400.00	6,067.89	6,067.89	6,067.89	108.92	21.57	-91.33	-31.67	41.59	3,861.08	3,814.66	46.42	83.184	
9,500.00	6,068.19	6,068.19	6,068.19	111.86	21.57	-91.37	-31.67	41.59	3,960.25	3,913.78	46.46	85.232	
9,600.00	6,068.50	6,068.50	6,068.50	114.81	21.57	-91.40	-31.67	41.59	4,059.46	4,012.95	46.51	87.277	
9,700.00	6,068.80	6,068.80	6,068.80	117.77	21.58	-91.44	-31.67	41.59	4,158.71	4,112.15	46.56	89.318	
9,800.00	6,069.11	6,069.11	6,069.11	120.72	21.58	-91.47	-31.67	41.59	4,257.99	4,211.38	46.61	91.355	
9,900.00	6,069.42	6,069.42	6,069.42	123.68	21.58	-91.51	-31.67	41.59	4,357.31	4,310.65	46.66	93.388	
10,000.00	6,069.72	6,069.72	6,069.72	126.64	21.58	-91.54	-31.67	41.59	4,456.65	4,409.95	46.71	95.417	
10,100.00	6,070.03	6,070.03	6,070.03	129.60	21.58	-91.58	-31.67	41.59	4,556.03	4,509.27	46.76	97.442	
10,200.00	6,070.33	6,070.33	6,070.33	132.57	21.58	-91.61	-31.67	41.59	4,655.43	4,608.62	46.81	99.463	
10,300.00	6,070.64	6,070.64	6,070.64	135.54	21.58	-91.64	-31.67	41.59	4,754.86	4,708.00	46.86	101.479	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Trieb Fed Pad - Trieb Federal Strat Test 600 #1 - OH - Plan #1

Survey Program: 0-MWD+HDGM

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	6,070.94	6,070.94	6,070.94	138.51	21.58	-91.68	-31.67	41.59	4,854.31	4,807.40	46.91	103.491	
10,500.00	6,071.25	6,071.25	6,071.25	141.48	21.58	-91.71	-31.67	41.59	4,953.78	4,906.82	46.96	105.499	
10,600.00	6,071.55	6,071.55	6,071.55	144.45	21.59	-91.75	-31.67	41.59	5,053.27	5,006.27	47.01	107.501	
10,700.00	6,071.86	6,071.86	6,071.86	147.42	21.59	-91.78	-31.67	41.59	5,152.79	5,105.73	47.06	109.499	
10,800.00	6,072.16	6,072.16	6,072.16	150.40	21.59	-91.82	-31.67	41.59	5,252.32	5,205.21	47.11	111.492	
10,900.00	6,072.47	6,072.47	6,072.47	153.38	21.59	-91.85	-31.67	41.59	5,351.87	5,304.71	47.16	113.479	
11,000.00	6,072.77	6,072.77	6,072.77	156.35	21.59	-91.89	-31.67	41.59	5,451.43	5,404.22	47.21	115.462	
11,100.00	6,073.08	6,073.08	6,073.08	159.33	21.59	-91.92	-31.67	41.59	5,551.01	5,503.75	47.27	117.440	
11,200.00	6,073.38	6,073.38	6,073.38	162.31	21.59	-91.96	-31.67	41.59	5,650.61	5,603.29	47.32	119.412	
11,300.00	6,073.69	6,073.69	6,073.69	165.30	21.59	-91.99	-31.67	41.59	5,750.22	5,702.85	47.37	121.379	
11,400.00	6,074.00	6,074.00	6,074.00	168.28	21.59	-92.03	-31.67	41.59	5,849.84	5,802.42	47.43	123.340	
11,500.00	6,074.30	6,074.30	6,074.30	171.26	21.60	-92.06	-31.67	41.59	5,949.48	5,902.00	47.48	125.296	
11,600.00	6,074.61	6,074.61	6,074.61	174.25	21.60	-92.10	-31.67	41.59	6,049.13	6,001.59	47.54	127.246	
11,700.00	6,074.91	6,074.91	6,074.91	177.23	21.60	-92.13	-31.67	41.59	6,148.79	6,101.19	47.59	129.191	
11,800.00	6,075.22	6,075.22	6,075.22	180.22	21.60	-92.17	-31.67	41.59	6,248.46	6,200.81	47.65	131.129	
11,900.00	6,075.52	6,075.52	6,075.52	183.21	21.60	-92.20	-31.67	41.59	6,348.14	6,300.43	47.71	133.062	
12,000.00	6,075.83	6,075.83	6,075.83	186.19	21.60	-92.24	-31.67	41.59	6,447.83	6,400.06	47.77	134.990	
12,100.00	6,076.13	6,076.13	6,076.13	189.18	21.60	-92.27	-31.67	41.59	6,547.53	6,499.70	47.82	136.911	
12,200.00	6,076.44	6,076.44	6,076.44	192.17	21.60	-92.31	-31.67	41.59	6,647.24	6,599.35	47.88	138.826	
12,300.00	6,076.74	6,076.74	6,076.74	195.16	21.60	-92.34	-31.67	41.59	6,746.95	6,699.01	47.94	140.735	
12,400.00	6,077.05	6,077.05	6,077.05	198.15	21.61	-92.37	-31.67	41.59	6,846.68	6,798.68	48.00	142.638	
12,500.00	6,077.35	6,077.35	6,077.35	201.15	21.61	-92.41	-31.67	41.59	6,946.41	6,898.35	48.06	144.535	
12,600.00	6,077.66	6,077.66	6,077.66	204.14	21.61	-92.44	-31.67	41.59	7,046.15	6,998.03	48.12	146.426	
12,700.00	6,077.96	6,077.96	6,077.96	207.13	21.61	-92.48	-31.67	41.59	7,145.90	7,097.72	48.18	148.310	
12,711.72	6,078.00	6,078.00	6,078.00	207.48	21.61	-92.48	-31.67	41.59	7,157.59	7,109.40	48.19	148.530	

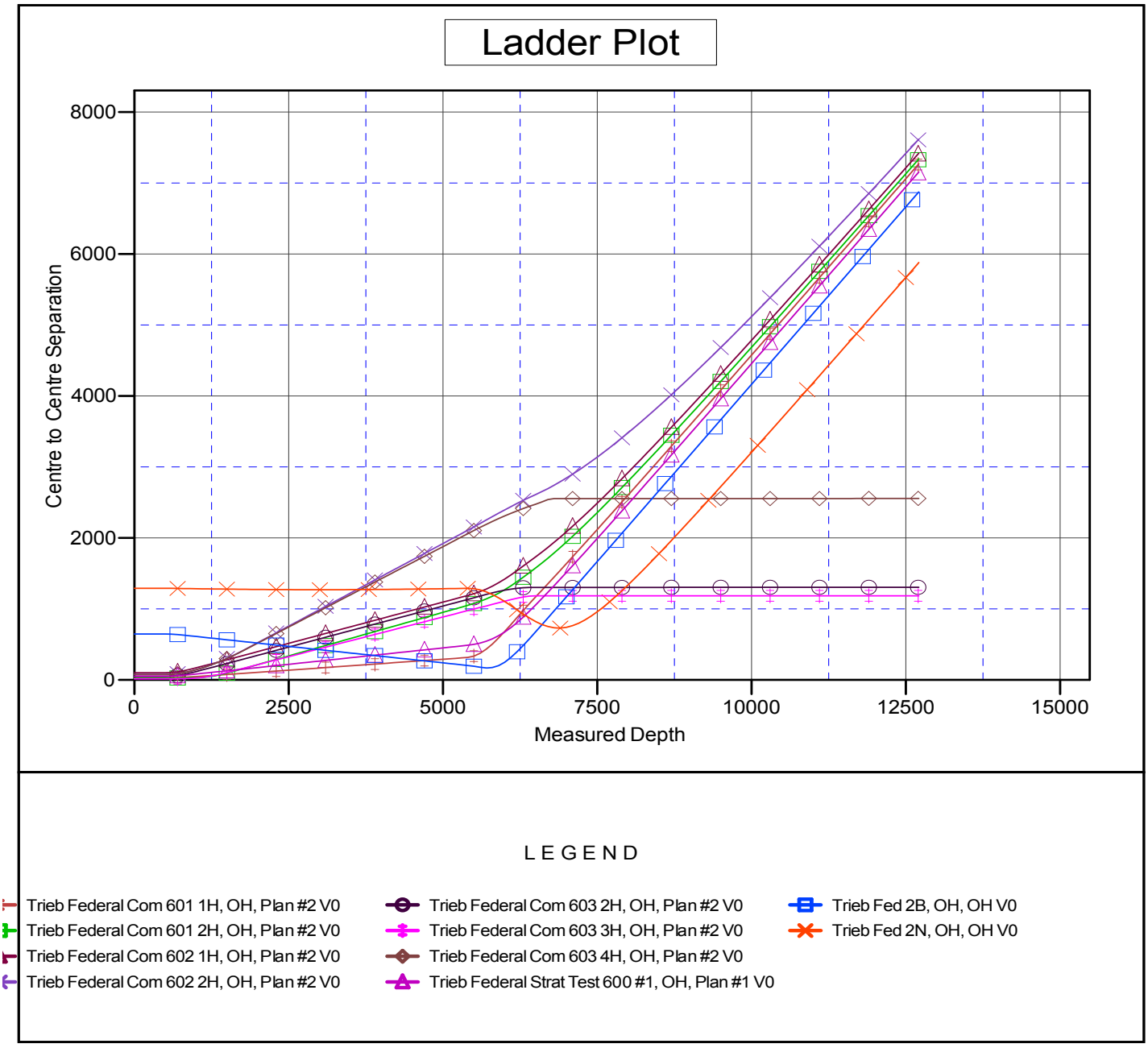
Scientific Drilling, Intl

Anticollision Report

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
Reference Site:	Trieb Fed Pad	**MD Reference:**	GL 6050 @ 6050.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 6050 @ 6050.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: Trieb Federal Com 603 1H - Slot A01
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: -0.03°



CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050 @ 6050.00usft
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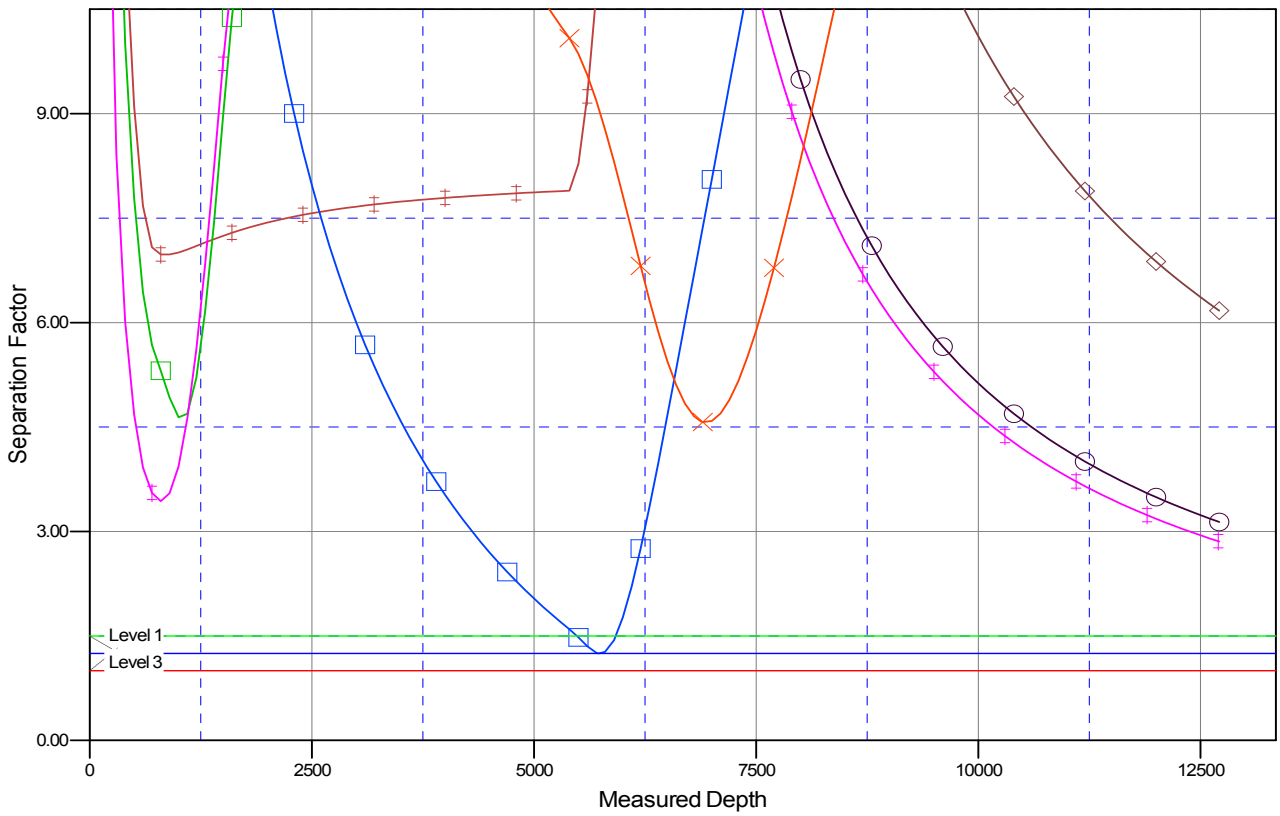
Reference Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Grand Junction District
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 6050 @ 6050.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: Trieb Federal Com 603 1H - Slot A01
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: -0.03°

Separation Factor Plot

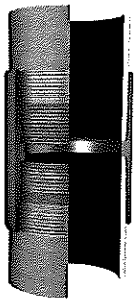


L E G E N D

- Trieb Federal Com 601 1H, OH, Plan #2 V0
- Trieb Federal Com 601 2H, OH, Plan #2 V0
- Trieb Federal Com 602 1H, OH, Plan #2 V0
- Trieb Federal Com 602 2H, OH, Plan #2 V0
- Trieb Federal Com 603 2H, OH, Plan #2 V0
- Trieb Federal Com 603 3H, OH, Plan #2 V0
- Trieb Federal Com 603 4H, OH, Plan #2 V0
- Trieb Federal Strat Test 600 #1, OH, Plan #1 V0
- Trieb Fed 2B, OH, OH V0
- Trieb Fed 2N, OH, OH V0

Tenaris

TXP® BTC



Coupling	Pipe Body
Grade: P110	Grade: P110
Body: White	1st Band: White
1st Band: -	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	9.625 in.	Wall Thickness	0.395 in.	Grade	P110
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry

Nominal OD	9.625 in.	Wall Thickness	0.395 in.
Nominal Weight	40 lb/ft	Plain End Weight	38.97 lb/ft
Drift	8.679 in.	OD Tolerance	API
Nominal ID	8.835 in.		

Performance

Body Yield Strength	1260 x1000 lb
Min. Internal Yield Pressure	7900 psi
SMYS	110,000 psi
Collapse Pressure	3470 psi

Connection Data

Geometry

Connection OD	10.625 in.
Coupling Length	10.825 in.
Connection ID	8.823 in.
Make-up Loss	4.891 in.
Threads per inch	5
Connection OD Option	Regular

Performance

Tension Efficiency	100 %
Joint Yield Strength	1260 x1000 lb
Internal Pressure Capacity	7900 psi
Compression Efficiency	100 %
Compression Strength	1260 x1000 lb
Max. Allowable Bending	52 °/100 ft
External Pressure Capacity	3470 psi

Make-Up Torques

Minimum	19,650 ft-lb
Optimum	21,830 ft-lb
Maximum	24,010 ft-lb

Operation Limit Torques

Operating Torque	45,600 ft-lb
Yield Torque	53,000 ft-lb

Notes

This connection is fully interchangeable with:
TXP® BTC - 9.625 in. - 0.352 / 0.435 / 0.472 / 0.545 / 0.595 in.
Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

For the lastest performance data, always visit our website: www.tenaris.com
For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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Trieb Federal Com 603 1H

Hilcorp Energy Company

Hilcorp Energy Company
Technical Plan

1. Location

TRIEB FEDERAL COM 603 1H
SHL: 2481’ FNL, 432’ FEL -- T 30N, R 10W, Sec 33
BHL: 1990’ FNL, 2338’ FEL -- T 30N, R 10W, Sec 32
GL: 6050’

2. Geological Markers

Anticipated formation tops with comments of any possible water, gas, or oil shows are indicated below:

Formation	(TVD)	(MD)	Remarks
San Jose	Surface	Surface	Wet
Ojo Alamo	1354’	1358'	Wet
Kirtland	1484’	1488'	Wet
Fruitland	2116’	2122'	Possible Gas/Water
Pictured Cliffs	2612’	2620'	Wet
Lewis Shale	3500’	3512'	
Massive Cliffhouse	3947’	3961'	Possible Gas/Water
Menefee	4358’	4374'	Possible Gas/Water
Point Lookout	4852’	4870'	Possible Gas/Water
Mancos	5282’	5302'	Oil/Gas
Mancos Lateral Target	6051’	6223'	Oil/Gas

3. Pressure Control Equipment

See Attached BOPE & Choke Manifold Schematic for a diagram of pressure control equipment.

- BOPE will be nippled up on top of wellhead after surface casing is set and cemented.
- Pressure control configuration will be designed to meet and exceed 5M standards.
- All equipment will have 5M pressure ratings.
- A rotating head will be rigged up on top of annular as seen in attached diagram.

4. Casing & Cement Program

Hilcorp Energy Company

Trieb Federal Com 603 1H

A) The proposed casing program is outlined below:

Proposed Casing				
Casing	**Hole Size**	**Casing Size**	**Weight/Grade**	**Depth**
Surface	17-1/2"	13-3/8"	54.5#, J-55, BTC, New	0' - 400' (MD)
Intermediate	12-1/4"	9-5/8"	40.0#, P-110 IC, LTC, New	0' – 5,320' (MD)
Production	8-1/2"	5-1/2"	20.0#, P-110, BTC, New	0' – 12712' (MD)

The production casing will be run from total MD to surface. If the 8-1/2" hole is not drilled to total MD, the production casing setting depth and length will be adjusted accordingly. A toe initiation sliding sleeve will be installed at the toe of the production casing.

B) The proposed cement program is shown below:

Cement Program						
Interval	**Depth (MD)**	**Sacks**	**Slurry**	**Excess**	**Volume**	**Planned Cement Top**
Surface	400'	503	Lead Cmt: Premium Cement 2% CaCl, 0.125 lb/sk Poley E flake 1.175 ft^3/sk -- 5.14 gal/sk, 15.8 ppg	100%	591 ft^3	Surface
Intermediate	4314'	904	Lead Cmt: Halcem Sytem 0.3% HR-5, 0.125 lb/sk Poly E flake, 1.974 ft^3/sk -- 10.28 gal/sk, 12.3 ppg	30%	1784 ft^3	Surface
	5320'	328	Tail Cmt: Varicem Cement 0.1% HR-5, 0.125 lb/sk Poly E flake, 1.295 ft^3/sk -- 5.69 gal/sk, 13.5 ppg	30%	424 ft^3	4314'
Production	12712'	1712	Tail Cmt: Bondcem 0.3% Super CBL, 0.1% HR -601, 6.08 gal/sk FW. 13.3 ppg, 1.356 ft^3/sk	10%	2337 ft^3	4000'

Actual cement volumes will be determined and may be adjusted onsite based on well conditions. For the intermediate hole, a 2-stage cement job may be performed if hole conditions indicate during operations. Stage tool will be placed appropriately as conditions indicate.

C) The proposed centralizer program is shown below:

Centralizer Program

Trieb Federal Com 603 1H

Hilcorp Energy Company

Interval	Centralizers
Surface	1 per joint on bottom 3 joints
Intermediate	1 above intermediate shoe joint with collar clamp 1 every 3rd joint to surface
Production	1 per joint in horizontal section of production interval 1 every 3rd joint in vertical section of production interval

To allow adequate time for cement to achieve a minimum of 500 psi compressive strength, a minimum of 8 hours wait on cement time for each hole section will be observed. The wellhead will not be installed, casing will not be tested, and the prior casing shoe will not be drilled out until adequate wait on cement time is achieved.

5. Drilling Fluids

A) The proposed drilling fluid program is outlined below:

Mud Program					
Interval	**Mud Type**	**Weight (ppg)**	**Fluid Loss (cc)**	**Invert Ratio (Diesel/Brine)**	**Depth (MD)**
Surface	Water / Gel System	8.3 - 9.2	NC		0-400’
Intermediate	LSND / Gel system	8.4 - 9	<6		400 – 5320’
Production	Oil Based Mud	10 - 12	6-8	70/30 – 75/25	5320 – TD’

Oil based mud will be an Invert Mud. Base fluid will be diesel. Brine fluid will be CaCl or KCl.

LCM may be added to the mud system if hole conditions indicate.

B) Closed loop equipment will be utilized for solids control. Cuttings from surface, intermediate, and production hole will be hauled to an approved disposal site.

Trieb Federal Com 603 1H

Hilcorp Energy Company

6. Abnormal Pressures & Hazards

- No over-pressured intervals expected.
- Estimated Reservoir Pressure = 1875 psi. (Based on a pore pressure gradient of 0.31 psi/ft from layer pressure tests of Mancos formation in offset well)
- There is some offset Fruitland Coal, Mesa Verde, and Picture Cliffs production within the area which could result in these respective formations being under pressured.
- No hydrogen sulfide gas is expected based on nearby well production.

7. Testing, Logging, Coring

- Mud Logs: Mud loggers will be rigged up from KOP to production hole TD.
- MWD: Directional tools from KOP to production hole TD.
- LWD: Gamma Ray will be utilized in production hole for well placement.
- Cased Hole Logs: A Temp Survey or CBL will be ran on the intermediate hole if cement is not circulated to surface during intermediate cement job.

8. Directional Plan

The planned wellbore directional plan and plot is attached.

The planned directional plan is built off geological targets from offset wells. The production hole will be landed and drilled within target formation horizontally utilizing LWD equipment to help steer the wellbore. On site adjustments will be made to the directional plan as formation and hole indicates.

Trieb Federal Com 603 1H

Hilcorp Energy Company

9. Completion

a) Pressure Test

- Pressure test 5-1/2" production casing to allowable frac pressure. Hold test for 30 minutes. Cycle pressure to activate toe sleeve

b) Stimulation

- Stimulate with approximately 10,000,000 pounds of proppant in 200,000 bbls of water; the number of stages and amount of proppant will be adjusted based on real-time pumping conditions during the stimulation
- Stages will be perforated using wireline and isolated using frac plugs
- Plugs will be drilled out and stimulation fluid will be flowed back

c) Running Tubing

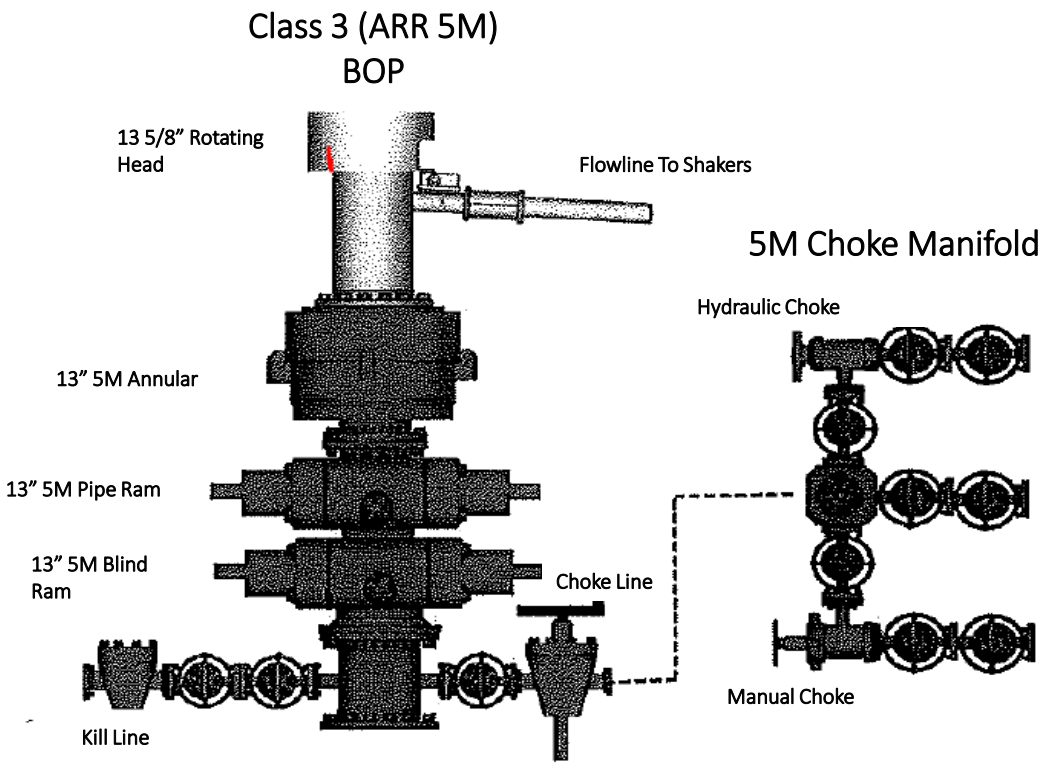
- Production tubing will be run and landed at the top of the horizontal section of the well

Hilcorp Energy Company

Trieb Federal Com 603 1H

BOPE & Choke Manifold Schematic

13-5/8" BOPE



Released to Imaging: 1/4/2023 2:57:12 PM

Received by OCD: 1/3/2022 6:35:43 AM

Hilcorp Energy Company

Company: Hilcorp Energy Corp.
Project: San Juan, NM NAD27
Site: Trieb Fed Pad
Well: Trieb Federal Com 603 1H
Wellbore: OH
Design: Plan #2

PROJECT DETAILS: San Juan, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003
System Datum: Mean Sea Level
Local North: True

Scientific Drilling

T M

Azimuths to True North
Magnetic North: 9.[illegible]

Magnetic Field
Strength: 49807.1[illegible]
Dip Angle: 63.[illegible]
Date: 9/12/2[illegible]
Model: HDGM

WELL DETAILS: Trieb Federal Com 603 1H

GL 6050 @ 6050.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	2099229.77	485846.79	36.7691450	-107.8816550	A01

Plan: Plan #2 (Trieb Federal Com 603 1H/OH)

Created By: Janie Collins Date: 13:56, November 09 2018

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Trieb 603 1H LP	6059.00	470.73	-875.38	2099700.94	484971.65	36.7704380	-107.8846438
Trieb 603 1H BHL	6078.00	468.74	-7098.49	2099702.09	478748.54	36.7704301	-107.9058909

SECTION DETAILS

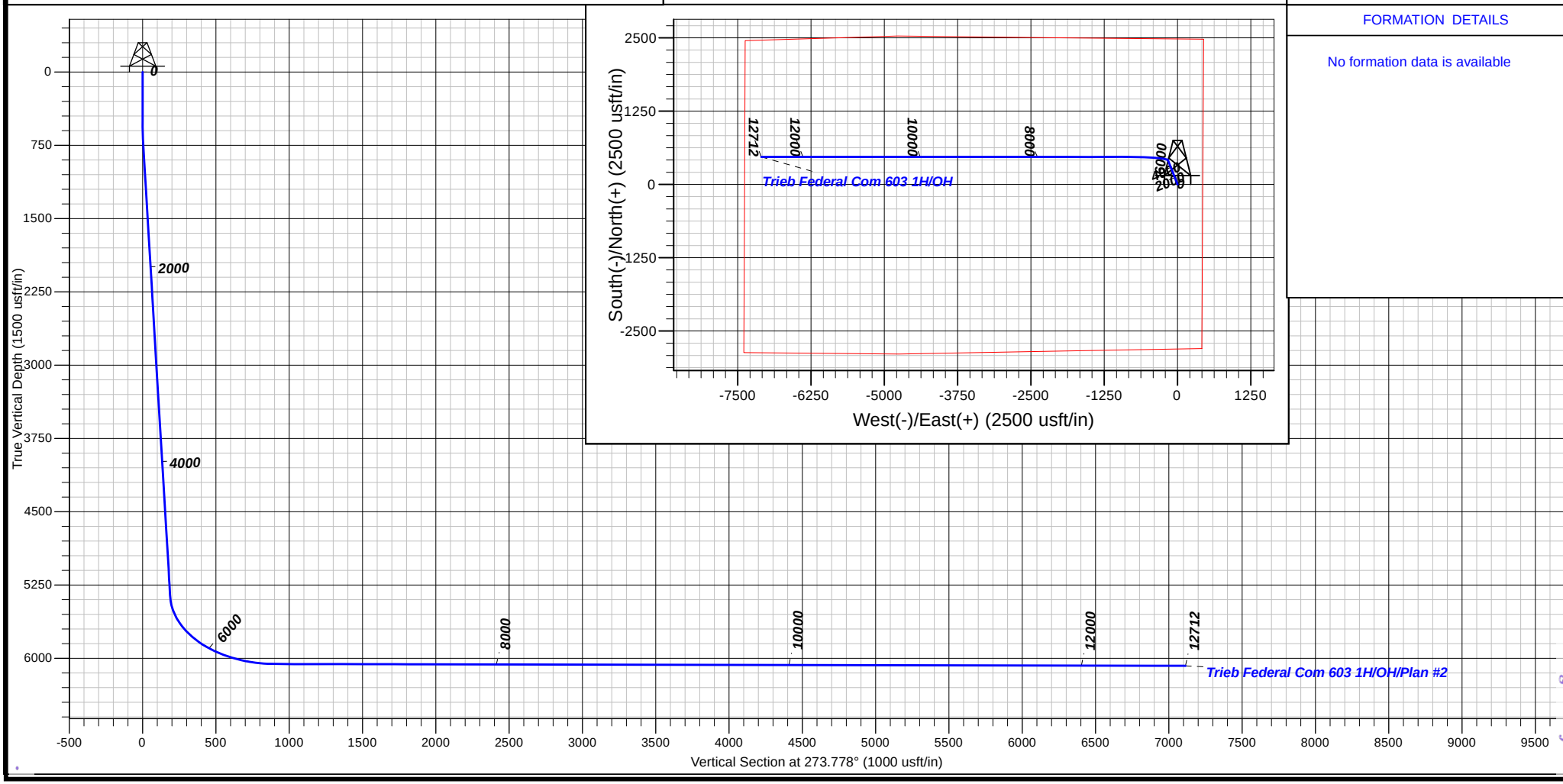
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	
766.54	5.33	338.530	766.16	11.53	-4.54	2.00	338.53	5.28	
5390.10	5.33	338.530	5369.72	411.28	-161.76	0.00	0.00	188.50	
6488.58	89.83	269.982	6059.00	470.73	-875.38	8.00	-68.65	904.50	Trieb 603 1H LP
12711.72	89.83	269.982	6078.00	468.74	-7098.49	0.00	0.00	7113.95	Trieb 603 1H BHL

CASING DETAILS

No casing data is available

FORMATION DETAILS

No formation data is available



Hilcorp
Energy Company

Hilcorp Energy Corp.

San Juan, NM NAD27
Trieb Fed Pad
Trieb Federal Com 603 1H - Slot A01

OH

Plan: Plan #2

Standard Planning Report

09 November, 2018

Scientific Drilling

www.scientificdrilling.com

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

Scientific Drilling

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6050 @ 6050.00usft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6050 @ 6050.00usft
Site:	Trieb Fed Pad	**North Reference:**	True
Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project San Juan, NM NAD27

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site Trieb Fed Pad

Site Position:		**Northing:**	2,099,223.94 usft	**Latitude:**	36.7691290
From:	Map	**Easting:**	485,838.88 usft	**Longitude:**	-107.8816820
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	-0.03 °

Well Trieb Federal Com 603 1H - Slot A01

Well Position	**+N/-S**	5.83 usft	**Northing:**	2,099,229.76 usft	**Latitude:**	36.7691450
	+E/-W	7.91 usft	**Easting:**	485,846.79 usft	**Longitude:**	-107.8816550
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,050.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/12/2018	9.02	63.30	49,807

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	273.778

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
766.54	5.33	338.530	766.16	11.53	-4.54	2.00	2.00	0.00	338.53	
5,390.10	5.33	338.530	5,369.72	411.28	-161.76	0.00	0.00	0.00	0.00	
6,488.58	89.83	269.982	6,059.00	470.73	-875.38	8.00	7.69	-6.24	-68.65	Trieb 603 1H LP
12,711.72	89.83	269.982	6,078.00	468.74	-7,098.49	0.00	0.00	0.00	0.00	Trieb 603 1H BHL

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

Scientific Drilling

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6050 @ 6050.00usft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6050 @ 6050.00usft
Site:	Trieb Fed Pad	**North Reference:**	True
Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	2.00	338.530	599.98	1.62	-0.64	0.74	2.00	2.00	0.00
700.00	4.00	338.530	699.84	6.49	-2.55	2.98	2.00	2.00	0.00
766.54	5.33	338.530	766.16	11.53	-4.54	5.28	2.00	2.00	0.00
800.00	5.33	338.530	799.47	14.42	-5.67	6.61	0.00	0.00	0.00
900.00	5.33	338.530	899.04	23.07	-9.07	10.57	0.00	0.00	0.00
1,000.00	5.33	338.530	998.61	31.72	-12.47	14.54	0.00	0.00	0.00
1,100.00	5.33	338.530	1,098.17	40.36	-15.87	18.50	0.00	0.00	0.00
1,200.00	5.33	338.530	1,197.74	49.01	-19.27	22.46	0.00	0.00	0.00
1,300.00	5.33	338.530	1,297.31	57.65	-22.68	26.42	0.00	0.00	0.00
1,400.00	5.33	338.530	1,396.88	66.30	-26.08	30.39	0.00	0.00	0.00
1,500.00	5.33	338.530	1,496.44	74.95	-29.48	34.35	0.00	0.00	0.00
1,600.00	5.33	338.530	1,596.01	83.59	-32.88	38.31	0.00	0.00	0.00
1,700.00	5.33	338.530	1,695.58	92.24	-36.28	42.28	0.00	0.00	0.00
1,800.00	5.33	338.530	1,795.15	100.88	-39.68	46.24	0.00	0.00	0.00
1,900.00	5.33	338.530	1,894.71	109.53	-43.08	50.20	0.00	0.00	0.00
2,000.00	5.33	338.530	1,994.28	118.18	-46.48	54.16	0.00	0.00	0.00
2,100.00	5.33	338.530	2,093.85	126.82	-49.88	58.13	0.00	0.00	0.00
2,200.00	5.33	338.530	2,193.42	135.47	-53.28	62.09	0.00	0.00	0.00
2,300.00	5.33	338.530	2,292.98	144.11	-56.68	66.05	0.00	0.00	0.00
2,400.00	5.33	338.530	2,392.55	152.76	-60.08	70.01	0.00	0.00	0.00
2,500.00	5.33	338.530	2,492.12	161.41	-63.48	73.98	0.00	0.00	0.00
2,600.00	5.33	338.530	2,591.69	170.05	-66.88	77.94	0.00	0.00	0.00
2,700.00	5.33	338.530	2,691.25	178.70	-70.28	81.90	0.00	0.00	0.00
2,800.00	5.33	338.530	2,790.82	187.34	-73.68	85.87	0.00	0.00	0.00
2,900.00	5.33	338.530	2,890.39	195.99	-77.08	89.83	0.00	0.00	0.00
3,000.00	5.33	338.530	2,989.96	204.64	-80.48	93.79	0.00	0.00	0.00
3,100.00	5.33	338.530	3,089.52	213.28	-83.88	97.75	0.00	0.00	0.00
3,200.00	5.33	338.530	3,189.09	221.93	-87.28	101.72	0.00	0.00	0.00
3,300.00	5.33	338.530	3,288.66	230.57	-90.68	105.68	0.00	0.00	0.00
3,400.00	5.33	338.530	3,388.23	239.22	-94.08	109.64	0.00	0.00	0.00
3,500.00	5.33	338.530	3,487.79	247.87	-97.48	113.60	0.00	0.00	0.00
3,600.00	5.33	338.530	3,587.36	256.51	-100.89	117.57	0.00	0.00	0.00
3,700.00	5.33	338.530	3,686.93	265.16	-104.29	121.53	0.00	0.00	0.00
3,800.00	5.33	338.530	3,786.50	273.80	-107.69	125.49	0.00	0.00	0.00
3,900.00	5.33	338.530	3,886.06	282.45	-111.09	129.46	0.00	0.00	0.00
4,000.00	5.33	338.530	3,985.63	291.10	-114.49	133.42	0.00	0.00	0.00
4,100.00	5.33	338.530	4,085.20	299.74	-117.89	137.38	0.00	0.00	0.00
4,200.00	5.33	338.530	4,184.77	308.39	-121.29	141.34	0.00	0.00	0.00
4,300.00	5.33	338.530	4,284.33	317.03	-124.69	145.31	0.00	0.00	0.00
4,400.00	5.33	338.530	4,383.90	325.68	-128.09	149.27	0.00	0.00	0.00
4,500.00	5.33	338.530	4,483.47	334.33	-131.49	153.23	0.00	0.00	0.00
4,600.00	5.33	338.530	4,583.04	342.97	-134.89	157.19	0.00	0.00	0.00
4,700.00	5.33	338.530	4,682.60	351.62	-138.29	161.16	0.00	0.00	0.00
4,800.00	5.33	338.530	4,782.17	360.26	-141.69	165.12	0.00	0.00	0.00
4,900.00	5.33	338.530	4,881.74	368.91	-145.09	169.08	0.00	0.00	0.00
5,000.00	5.33	338.530	4,981.31	377.56	-148.49	173.05	0.00	0.00	0.00
5,100.00	5.33	338.530	5,080.87	386.20	-151.89	177.01	0.00	0.00	0.00
5,200.00	5.33	338.530	5,180.44	394.85	-155.29	180.97	0.00	0.00	0.00

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

Scientific Drilling

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6050 @ 6050.00usft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6050 @ 6050.00usft
Site:	Trieb Fed Pad	**North Reference:**	True
Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	5.33	338.530	5,280.01	403.49	-158.69	184.93	0.00	0.00	0.00
5,390.10	5.33	338.530	5,369.72	411.28	-161.76	188.50	0.00	0.00	0.00
5,400.00	5.67	331.040	5,379.57	412.14	-162.16	188.96	8.00	3.40	-75.66
5,500.00	11.82	294.494	5,478.43	420.72	-173.89	201.23	8.00	6.15	-36.55
5,600.00	19.36	284.277	5,574.70	429.07	-199.31	227.15	8.00	7.54	-10.22
5,700.00	27.16	279.713	5,666.51	437.02	-237.94	266.22	8.00	7.80	-4.56
5,800.00	35.05	277.080	5,752.07	444.42	-289.01	317.67	8.00	7.89	-2.63
5,900.00	42.97	275.316	5,829.71	451.13	-351.54	380.50	8.00	7.92	-1.76
6,000.00	50.91	274.012	5,897.93	457.01	-424.31	453.50	8.00	7.94	-1.30
6,100.00	58.87	272.974	5,955.40	461.95	-505.90	535.23	8.00	7.95	-1.04
6,200.00	66.83	272.097	6,001.00	465.86	-594.72	624.12	8.00	7.96	-0.88
6,300.00	74.80	271.319	6,033.84	468.66	-689.04	718.43	8.00	7.97	-0.78
6,400.00	82.77	270.598	6,053.28	470.29	-787.04	816.32	8.00	7.97	-0.72
6,488.58	89.83	269.982	6,059.00	470.73	-875.38	904.50	8.00	7.97	-0.70
6,500.00	89.83	269.982	6,059.03	470.73	-886.80	915.89	0.00	0.00	0.00
6,600.00	89.83	269.982	6,059.34	470.70	-986.80	1,015.67	0.00	0.00	0.00
6,700.00	89.83	269.982	6,059.65	470.67	-1,086.80	1,115.45	0.00	0.00	0.00
6,800.00	89.83	269.982	6,059.95	470.63	-1,186.80	1,215.23	0.00	0.00	0.00
6,900.00	89.83	269.982	6,060.26	470.60	-1,286.80	1,315.01	0.00	0.00	0.00
7,000.00	89.83	269.982	6,060.56	470.57	-1,386.79	1,414.79	0.00	0.00	0.00
7,100.00	89.83	269.982	6,060.87	470.54	-1,486.79	1,514.57	0.00	0.00	0.00
7,200.00	89.83	269.982	6,061.17	470.50	-1,586.79	1,614.35	0.00	0.00	0.00
7,300.00	89.83	269.982	6,061.48	470.47	-1,686.79	1,714.13	0.00	0.00	0.00
7,400.00	89.83	269.982	6,061.78	470.44	-1,786.79	1,813.91	0.00	0.00	0.00
7,500.00	89.83	269.982	6,062.09	470.41	-1,886.79	1,913.69	0.00	0.00	0.00
7,600.00	89.83	269.982	6,062.39	470.38	-1,986.79	2,013.47	0.00	0.00	0.00
7,700.00	89.83	269.982	6,062.70	470.34	-2,086.79	2,113.25	0.00	0.00	0.00
7,800.00	89.83	269.982	6,063.00	470.31	-2,186.79	2,213.03	0.00	0.00	0.00
7,900.00	89.83	269.982	6,063.31	470.28	-2,286.79	2,312.81	0.00	0.00	0.00
8,000.00	89.83	269.982	6,063.61	470.25	-2,386.79	2,412.59	0.00	0.00	0.00
8,100.00	89.83	269.982	6,063.92	470.22	-2,486.79	2,512.37	0.00	0.00	0.00
8,200.00	89.83	269.982	6,064.23	470.18	-2,586.79	2,612.15	0.00	0.00	0.00
8,300.00	89.83	269.982	6,064.53	470.15	-2,686.79	2,711.93	0.00	0.00	0.00
8,400.00	89.83	269.982	6,064.84	470.12	-2,786.79	2,811.71	0.00	0.00	0.00
8,500.00	89.83	269.982	6,065.14	470.09	-2,886.79	2,911.49	0.00	0.00	0.00
8,600.00	89.83	269.982	6,065.45	470.06	-2,986.79	3,011.27	0.00	0.00	0.00
8,700.00	89.83	269.982	6,065.75	470.02	-3,086.79	3,111.05	0.00	0.00	0.00
8,800.00	89.83	269.982	6,066.06	469.99	-3,186.79	3,210.83	0.00	0.00	0.00
8,900.00	89.83	269.982	6,066.36	469.96	-3,286.79	3,310.61	0.00	0.00	0.00
9,000.00	89.83	269.982	6,066.67	469.93	-3,386.79	3,410.39	0.00	0.00	0.00
9,100.00	89.83	269.982	6,066.97	469.90	-3,486.79	3,510.17	0.00	0.00	0.00
9,200.00	89.83	269.982	6,067.28	469.86	-3,586.78	3,609.95	0.00	0.00	0.00
9,300.00	89.83	269.982	6,067.58	469.83	-3,686.78	3,709.73	0.00	0.00	0.00
9,400.00	89.83	269.982	6,067.89	469.80	-3,786.78	3,809.51	0.00	0.00	0.00
9,500.00	89.83	269.982	6,068.19	469.77	-3,886.78	3,909.29	0.00	0.00	0.00
9,600.00	89.83	269.982	6,068.50	469.73	-3,986.78	4,009.07	0.00	0.00	0.00
9,700.00	89.83	269.982	6,068.80	469.70	-4,086.78	4,108.85	0.00	0.00	0.00
9,800.00	89.83	269.982	6,069.11	469.67	-4,186.78	4,208.63	0.00	0.00	0.00
9,900.00	89.83	269.982	6,069.42	469.64	-4,286.78	4,308.41	0.00	0.00	0.00
10,000.00	89.83	269.982	6,069.72	469.61	-4,386.78	4,408.19	0.00	0.00	0.00
10,100.00	89.83	269.982	6,070.03	469.57	-4,486.78	4,507.97	0.00	0.00	0.00
10,200.00	89.83	269.982	6,070.33	469.54	-4,586.78	4,607.75	0.00	0.00	0.00
10,300.00	89.83	269.982	6,070.64	469.51	-4,686.78	4,707.53	0.00	0.00	0.00
10,400.00	89.83	269.982	6,070.94	469.48	-4,786.78	4,807.31	0.00	0.00	0.00

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

Scientific Drilling

Database:	Grand Junction District	**Local Co-ordinate Reference:**	Well Trieb Federal Com 603 1H - Slot A01
Company:	Hilcorp Energy Corp.	**TVD Reference:**	GL 6050 @ 6050.00usft
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6050 @ 6050.00usft
Site:	Trieb Fed Pad	**North Reference:**	True
Well:	Trieb Federal Com 603 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.00	89.83	269.982	6,071.25	469.45	-4,886.78	4,907.09	0.00	0.00	0.00
10,600.00	89.83	269.982	6,071.55	469.41	-4,986.78	5,006.87	0.00	0.00	0.00
10,700.00	89.83	269.982	6,071.86	469.38	-5,086.78	5,106.65	0.00	0.00	0.00
10,800.00	89.83	269.982	6,072.16	469.35	-5,186.78	5,206.43	0.00	0.00	0.00
10,900.00	89.83	269.982	6,072.47	469.32	-5,286.78	5,306.21	0.00	0.00	0.00
11,000.00	89.83	269.982	6,072.77	469.29	-5,386.78	5,405.99	0.00	0.00	0.00
11,100.00	89.83	269.982	6,073.08	469.25	-5,486.78	5,505.77	0.00	0.00	0.00
11,200.00	89.83	269.982	6,073.38	469.22	-5,586.78	5,605.55	0.00	0.00	0.00
11,300.00	89.83	269.982	6,073.69	469.19	-5,686.77	5,705.33	0.00	0.00	0.00
11,400.00	89.83	269.982	6,074.00	469.16	-5,786.77	5,805.11	0.00	0.00	0.00
11,500.00	89.83	269.982	6,074.30	469.13	-5,886.77	5,904.89	0.00	0.00	0.00
11,600.00	89.83	269.982	6,074.61	469.09	-5,986.77	6,004.67	0.00	0.00	0.00
11,700.00	89.83	269.982	6,074.91	469.06	-6,086.77	6,104.45	0.00	0.00	0.00
11,800.00	89.83	269.982	6,075.22	469.03	-6,186.77	6,204.23	0.00	0.00	0.00
11,900.00	89.83	269.982	6,075.52	469.00	-6,286.77	6,304.01	0.00	0.00	0.00
12,000.00	89.83	269.982	6,075.83	468.96	-6,386.77	6,403.79	0.00	0.00	0.00
12,100.00	89.83	269.982	6,076.13	468.93	-6,486.77	6,503.57	0.00	0.00	0.00
12,200.00	89.83	269.982	6,076.44	468.90	-6,586.77	6,603.35	0.00	0.00	0.00
12,300.00	89.83	269.982	6,076.74	468.87	-6,686.77	6,703.13	0.00	0.00	0.00
12,400.00	89.83	269.982	6,077.05	468.84	-6,786.77	6,802.91	0.00	0.00	0.00
12,500.00	89.83	269.982	6,077.35	468.80	-6,886.77	6,902.69	0.00	0.00	0.00
12,600.00	89.83	269.982	6,077.66	468.77	-6,986.77	7,002.47	0.00	0.00	0.00
12,700.00	89.83	269.982	6,077.96	468.74	-7,086.77	7,102.25	0.00	0.00	0.00
12,711.72	89.83	269.982	6,078.00	468.74	-7,098.49	7,113.95	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Trieb 603 1H LP - plan hits target center - Point	0.00	0.000	6,059.00	470.73	-875.38	2,099,700.94	484,971.65	36.7704380	-107.8846438
Trieb 603 1H BHL - plan hits target center - Point	0.00	0.000	6,078.00	468.74	-7,098.49	2,099,702.08	478,748.54	36.7704301	-107.9058910

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd, Suite A
Farmington, New Mexico 87402

In Reply Refer To:
3162.3-1(NMF0110)

* HILCORP ENERGY COMPANY

#001H TRIEB FEDERAL 603 COM

Lease: NMSF78204A Agreement: TBD
SH: Lot 8 Section 33, T. 30 N., R. 10 W.
San Juan County, New Mexico
BH: SW¼NE¼ Section 32, T. 30 N., R. 10 W.
San Juan County, New Mexico
***Above Data Required on Well Sign**

GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

The following special requirements apply and are effective when **checked**:

A. ☒ Note all surface/drilling conditions of approval attached.

B. ☒ The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated

C. ☐ Test the surface casing to a minimum of _____ psi for 30 minutes.

D. ☐ Test all casing strings below the surface casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield burst) for a minimum of 30 minutes.

E. ☒ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, New Mexico State Office, Reservoir Management Group, 301 Dinosaur Trail, Santa Fe, New Mexico 87508.
The effective date of the agreement must be **prior** to any sales.

F. ☒ The use of co-flex hose is authorized contingent upon the following:
1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

I. GENERAL

A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.

B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).

C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.

D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report (Form 3160-4) is filed. The report should be on 8-1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.

E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).

F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to at Virgil Lucero at 505-793-1836.**

G. The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.

H. Unless drilling operations are commenced within two years, approval of the Application for Permit to Drill will expire. A written request for a two years extension may be granted if submitted prior to expiration.

I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.

J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

II. REPORTING REQUIREMENTS

A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.

B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.

1 .Original and three copies on Federal and an Original and five copies on Indian leases of Sundry Notice (Form 3150-5), giving complete information concerning.

a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.

b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.

c. Subsequent Report of Abandonment, show the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.

2. Well Completion Report (Form 3160-4) will be submitted with 30 days after well has been completed.

a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.

3. Submit a cement evaluation log, if cement is not circulated to surface.

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of * Days or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

*30 days, unless a longer test period is specifically approved by the authorized officer. The 30-day period will commence upon the first gas to surface.

V. SAFETY

A. All rig heating stoves are to be of the explosion-proof type.

B. Rig safety lines are to be installed.

C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.

B. If the well is dry, it is to be plugged in accordance with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1c.

C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

VII. PHONE NUMBERS

A. For BOPE tests, cementing, and plugging operations the phone number is 505-564-7750 and must be called 24 hours in advance in order that a BLM representative may witness the operations.

B. Emergency program changes after hours contact:

Virgil Lucero (505) 793-1836

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 164669

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 164669
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	1/4/2023
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	1/4/2023
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	1/4/2023
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	1/4/2023
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	1/4/2023