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.
30-045-35906

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: 08/01/2022

Additional Operator Remarks

Location of Well

0. SHL: LOT 8 / 2492 FNL / 405 FEL / TWSP: 30N / RANGE: 10W / SECTION: 33 / LAT: 36.769118 / LONG: -107.882183 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 1891 FNL / 420 FWL / TWSP: 30N / RANGE: 10W / SECTION: 34 / LAT: 36.70745 / LONG: -107.879358 (TVD: 6050 feet, MD: 6806 feet)

PPP: LOT 8 / 2492 FNL / 405 FEL / TWSP: 30N / RANGE: 10W / SECTION: 33 / LAT: 36.769118 / LONG: -107.882183 (TVD: 6050 feet, MD: 6806 feet)

BHL: SENW / 1878 FNL / 2329 FWL / TWSP: 30N / RANGE: 10W / SECTION: 35 / LAT: 36.770742 / LONG: -107.85499 (TVD: 6108 feet, MD: 13944 feet)

BLM Point of Contact

Name: RYAN JOYNER
Title: Physical Scientist
Phone: (970) 385-1242
Email: rjoyner@blm.gov

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
30-045-35906	97232	BASIN MANCOS

4 Property Code	5 Property Name	6 Well Number
	TRIEB FEDERAL 601 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	2492	NORTH	405	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
F	35	30N	10W	6	1878	NORTH	2329	WEST	SAN JUAN

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
476.76	N/2 - Section 34 NW/4 - Section 35			

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

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.

Priscilla Shorty 7/19/19
Signature Date

Priscilla Shorty
Printed Name

pshorty@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: JULY 16, 2019
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

A — SURFACE LOCATION
2492' FNL 405' FEL
SEC 33, T30N, R10W
LAT: 36.769113 'N
LONG: 107.881563 'W
DATUM: NAD1927

LAT: 36.769118 'N
LONG: 107.882183 'W
DATUM: NAD1983

B — PROPOSED PILOT HOLE
2492' FNL 405' FEL
SEC 33, T30N, R10W
LAT: 36.769113 'N
LONG: 107.881563 'W
DATUM: NAD1927

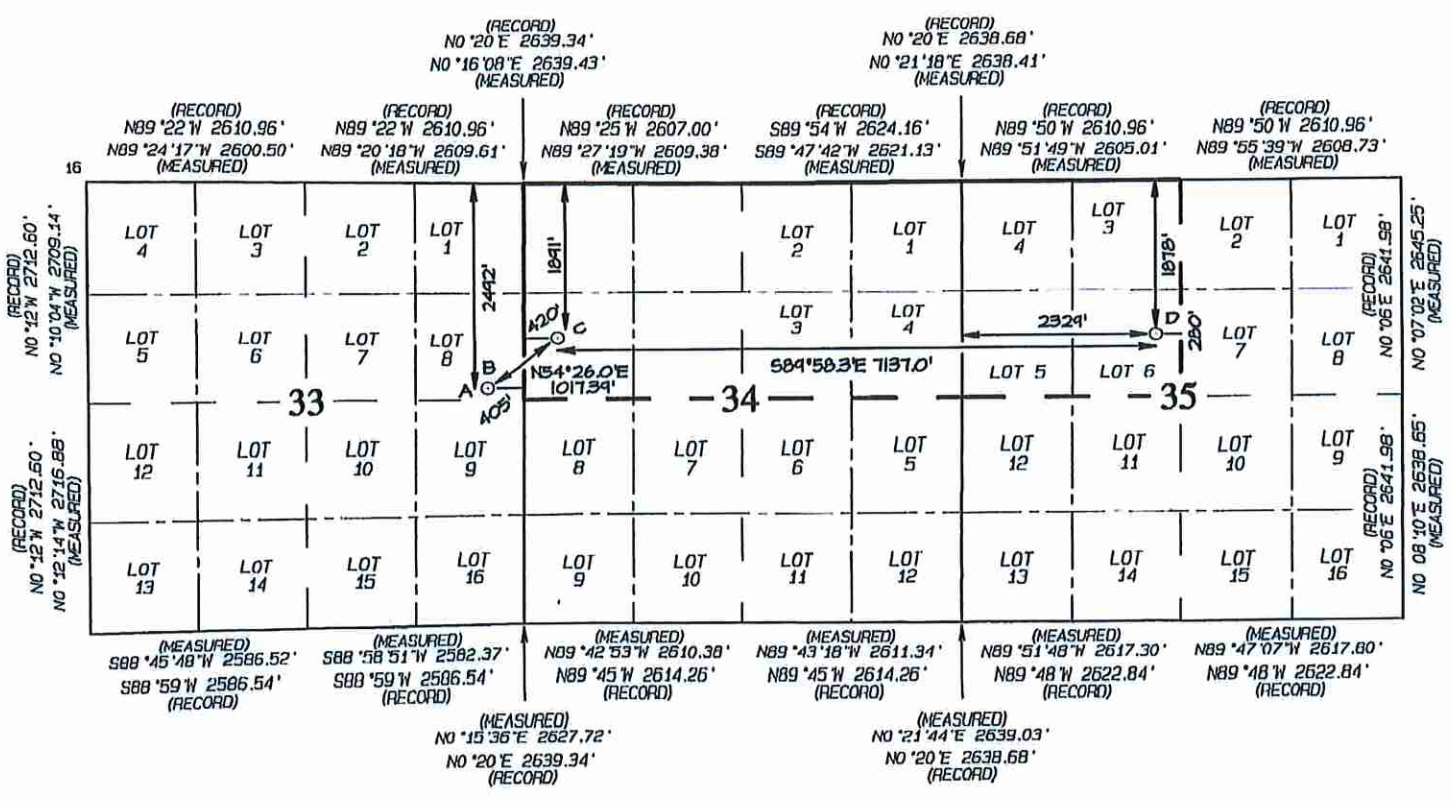
LAT: 36.769118 'N
LONG: 107.882183 'W
DATUM: NAD1983

C — LANDING POINT / POE
1891' FNL 420' FWL
SEC 34, T30N, R10W
LAT: 36.770740 'N
LONG: 107.878739 'W
DATUM: NAD1927

LAT: 36.770745 'N
LONG: 107.879358 'W
DATUM: NAD1983

D — PROPOSED BOTTOM HOLE
1878' FNL 2329' FWL
SEC 35, T30N, R10W
LAT: 36.770737 'N
LONG: 107.854371 'W
DATUM: NAD1927

LAT: 36.770742 'N
LONG: 107.854990 'W
DATUM: NAD1983



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

in Aztec, NM to Hilcorp Energy Company Trieb Federal Com 601 #1H

2492' FNL & 405' FEL, Section 33, T30N, R10W, N.M.P.M., San Juan County, NM

Latitude: 36.769118°N Longitude: 107.882183°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 601 #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 601 1H

OH
Plan #2

Anticollision Report

09 November, 2018

Scientific Drilling

www.scientificdrilling.com

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	13,636.27	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						
Grenier A3 - OH - OH	9,656.23	6,007.40	367.96	132.27	1.561	CC, ES, SF
Grenier A8 - OH - OH	12,760.83	6,160.67	423.18	91.93	1.278	Level 3, CC, ES, SF
Trieb Federal Com 601 2H - OH - Plan #2	500.00	500.00	15.09	11.86	4.677	CC
Trieb Federal Com 601 2H - OH - Plan #2	1,000.00	1,001.40	16.97	10.09	2.466	ES
Trieb Federal Com 601 2H - OH - Plan #2	13,636.27	13,882.67	1,128.07	659.51	2.408	SF
Trieb Federal Com 602 1H - OH - Plan #2	500.00	500.00	75.00	71.78	23.247	CC, ES
Trieb Federal Com 602 1H - OH - Plan #2	13,636.27	13,604.82	1,409.99	942.67	3.017	SF
Trieb Federal Com 602 2H - OH - Plan #2	500.00	500.00	49.91	46.68	15.470	CC, ES
Trieb Federal Com 602 2H - OH - Plan #2	13,636.27	14,001.38	2,712.14	2,243.03	5.781	SF
Trieb Federal Com 603 1H - OH - Plan #2	500.00	500.00	29.36	26.14	9.101	CC, ES
Trieb Federal Com 603 1H - OH - Plan #2	800.00	797.83	37.49	32.08	6.932	SF
Trieb Federal Com 603 2H - OH - Plan #2	500.00	500.00	28.85	25.63	8.943	CC, ES
Trieb Federal Com 603 2H - OH - Plan #2	600.00	598.92	32.20	28.25	8.160	SF
Trieb Federal Com 603 3H - OH - Plan #2	500.00	500.00	25.11	21.88	7.782	CC
Trieb Federal Com 603 3H - OH - Plan #2	600.00	599.22	25.48	21.52	6.440	ES
Trieb Federal Com 603 3H - OH - Plan #2	900.00	896.67	32.53	26.33	5.243	SF
Trieb Federal Com 603 4H - OH - Plan #2	500.00	500.00	52.00	48.77	16.117	CC, ES
Trieb Federal Com 603 4H - OH - Plan #2	700.00	695.86	64.43	59.75	13.784	SF
Trieb Federal Strat Test 600 #1 - OH - Plan #1	500.00	500.00	24.80	21.58	7.688	CC, ES
Trieb Federal Strat Test 600 #1 - OH - Plan #1	700.00	699.84	29.88	25.22	6.411	SF

Offset Design Trieb Fed Pad - Grenier A3 - OH - OH

Survey Program: 7120-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	0.00	0.00	0.00	0.00	76.45	960.28	3,984.12	4,098.65				
100.00	100.00	40.00	40.00	0.18	0.80	76.45	960.28	3,984.12	4,098.21	4,097.23	0.98	4,184.261	
200.00	200.00	140.00	140.00	0.54	2.80	76.45	960.28	3,984.12	4,098.21	4,094.87	3.34	1,227.780	
300.00	300.00	240.00	240.00	0.90	4.80	76.45	960.28	3,984.12	4,098.21	4,092.51	5.70	719.442	
400.00	400.00	340.00	340.00	1.25	6.80	76.45	960.28	3,984.12	4,098.21	4,090.16	8.05	508.788	
500.00	500.00	440.00	440.00	1.61	8.80	76.45	960.28	3,984.12	4,098.21	4,087.80	10.41	393.555	
600.00	599.98	539.98	539.98	1.97	10.80	64.12	960.28	3,984.12	4,097.45	4,084.68	12.77	320.846	
700.00	699.84	639.84	639.84	2.33	12.80	64.23	960.28	3,984.12	4,095.17	4,080.04	15.13	270.732	

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 601 1H - Slot B02
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 601 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 - Grenier A3 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7120-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
800.00	799.45	739.45	739.45	2.70	14.79	64.41	960.28	3,984.12	4,091.38	4,073.90	17.48	234.064	
900.00	898.83	838.83	838.83	3.06	16.78	64.57	960.28	3,984.12	4,086.58	4,066.74	19.83	206.048	
1,000.00	998.21	938.21	938.21	3.43	18.76	64.71	960.28	3,984.12	4,081.77	4,059.58	22.19	183.952	
1,100.00	1,097.58	1,037.58	1,037.58	3.80	20.75	64.85	960.28	3,984.12	4,076.99	4,052.44	24.55	166.079	
1,200.00	1,196.96	1,136.96	1,136.96	4.18	22.74	64.99	960.28	3,984.12	4,072.23	4,045.32	26.91	151.329	
1,300.00	1,296.33	1,236.33	1,236.33	4.56	24.73	65.13	960.28	3,984.12	4,067.50	4,038.22	29.27	138.952	
1,400.00	1,395.71	1,335.71	1,335.71	4.94	26.71	65.27	960.28	3,984.12	4,062.79	4,031.15	31.64	128.420	
1,500.00	1,495.08	1,435.08	1,435.08	5.32	28.70	65.42	960.28	3,984.12	4,058.11	4,024.11	34.00	119.350	
1,600.00	1,594.46	1,534.46	1,534.46	5.70	30.69	65.56	960.28	3,984.12	4,053.45	4,017.08	36.37	111.457	
1,700.00	1,693.83	1,633.83	1,633.83	6.08	32.68	65.70	960.28	3,984.12	4,048.82	4,010.09	38.73	104.528	
1,800.00	1,793.21	1,733.21	1,733.21	6.46	34.66	65.85	960.28	3,984.12	4,044.21	4,003.11	41.10	98.396	
1,900.00	1,892.58	1,832.58	1,832.58	6.85	36.65	65.99	960.28	3,984.12	4,039.63	3,996.17	43.47	92.931	
2,000.00	1,991.96	1,931.96	1,931.96	7.23	38.64	66.13	960.28	3,984.12	4,035.08	3,989.24	45.84	88.030	
2,100.00	2,091.33	2,031.33	2,031.33	7.62	40.63	66.28	960.28	3,984.12	4,030.55	3,982.35	48.21	83.611	
2,200.00	2,190.71	2,130.71	2,130.71	8.00	42.61	66.42	960.28	3,984.12	4,026.05	3,975.47	50.57	79.606	
2,300.00	2,290.08	2,230.08	2,230.08	8.38	44.60	66.57	960.28	3,984.12	4,021.57	3,968.63	52.94	75.959	
2,400.00	2,389.46	2,329.46	2,329.46	8.77	46.59	66.71	960.28	3,984.12	4,017.12	3,961.81	55.31	72.625	
2,500.00	2,488.83	2,428.83	2,428.83	9.15	48.58	66.86	960.28	3,984.12	4,012.70	3,955.01	57.68	69.565	
2,600.00	2,588.20	2,528.20	2,528.20	9.54	50.56	67.00	960.28	3,984.12	4,008.30	3,948.25	60.05	66.746	
2,700.00	2,687.58	2,627.58	2,627.58	9.92	52.55	67.15	960.28	3,984.12	4,003.93	3,941.50	62.42	64.142	
2,800.00	2,786.95	2,726.95	2,726.95	10.31	54.54	67.30	960.28	3,984.12	3,999.58	3,934.79	64.79	61.728	
2,900.00	2,886.33	2,826.33	2,826.33	10.70	56.53	67.44	960.28	3,984.12	3,995.26	3,928.10	67.16	59.485	
3,000.00	2,985.70	2,925.70	2,925.70	11.08	58.51	67.59	960.28	3,984.12	3,990.97	3,921.44	69.53	57.396	
3,100.00	3,085.08	3,025.08	3,025.08	11.47	60.50	67.74	960.28	3,984.12	3,986.70	3,914.80	71.91	55.444	
3,200.00	3,184.45	3,124.45	3,124.45	11.85	62.49	67.89	960.28	3,984.12	3,982.47	3,908.19	74.28	53.617	
3,300.00	3,283.83	3,223.83	3,223.83	12.24	64.48	68.04	960.28	3,984.12	3,978.25	3,901.61	76.65	51.903	
3,400.00	3,383.20	3,323.20	3,323.20	12.62	66.46	68.18	960.28	3,984.12	3,974.07	3,895.05	79.02	50.293	
3,500.00	3,482.58	3,422.58	3,422.58	13.01	68.45	68.33	960.28	3,984.12	3,969.91	3,888.52	81.39	48.776	
3,600.00	3,581.95	3,521.95	3,521.95	13.40	70.44	68.48	960.28	3,984.12	3,965.78	3,882.02	83.76	47.346	
3,700.00	3,681.33	3,621.33	3,621.33	13.78	72.43	68.63	960.28	3,984.12	3,961.67	3,875.54	86.13	45.995	
3,800.00	3,780.70	3,720.70	3,720.70	14.17	74.41	68.78	960.28	3,984.12	3,957.60	3,869.09	88.50	44.716	
3,900.00	3,880.08	3,820.08	3,820.08	14.55	76.40	68.93	960.28	3,984.12	3,953.55	3,862.67	90.88	43.505	
4,000.00	3,979.45	3,919.45	3,919.45	14.94	78.39	69.08	960.28	3,984.12	3,949.52	3,856.28	93.25	42.355	
4,100.00	4,078.82	4,018.82	4,018.82	15.33	80.38	69.23	960.28	3,984.12	3,945.53	3,849.91	95.62	41.262	
4,200.00	4,178.20	4,118.20	4,118.20	15.71	82.36	69.38	960.28	3,984.12	3,941.56	3,843.57	97.99	40.223	
4,300.00	4,277.57	4,217.57	4,217.57	16.10	84.35	69.53	960.28	3,984.12	3,937.62	3,837.26	100.37	39.233	
4,400.00	4,376.95	4,316.95	4,316.95	16.49	86.34	69.69	960.28	3,984.12	3,933.71	3,830.97	102.74	38.289	
4,500.00	4,476.32	4,416.32	4,416.32	16.87	88.33	69.84	960.28	3,984.12	3,929.83	3,824.72	105.11	37.388	
4,600.00	4,575.70	4,515.70	4,515.70	17.26	90.31	69.99	960.28	3,984.12	3,925.97	3,818.49	107.48	36.527	
4,700.00	4,675.07	4,615.07	4,615.07	17.65	92.30	70.14	960.28	3,984.12	3,922.14	3,812.29	109.86	35.703	
4,800.00	4,774.45	4,714.45	4,714.45	18.03	94.29	70.29	960.28	3,984.12	3,918.34	3,806.12	112.23	34.914	
4,900.00	4,873.82	4,813.82	4,813.82	18.42	96.28	70.45	960.28	3,984.12	3,914.57	3,799.97	114.60	34.158	
5,000.00	4,973.20	4,913.20	4,913.20	18.80	98.26	70.60	960.28	3,984.12	3,910.83	3,793.86	116.97	33.433	
5,100.00	5,072.57	5,012.57	5,012.57	19.19	100.25	70.75	960.28	3,984.12	3,907.11	3,787.77	119.35	32.738	
5,200.00	5,171.95	5,111.95	5,111.95	19.58	102.24	70.91	960.28	3,984.12	3,903.43	3,781.71	121.72	32.069	
5,300.00	5,271.32	5,211.32	5,211.32	19.96	104.23	71.06	960.28	3,984.12	3,899.77	3,775.68	124.09	31.426	
5,400.00	5,370.69	5,310.69	5,310.69	20.35	106.21	66.67	960.28	3,984.12	3,896.11	3,769.64	126.47	30.808	
5,500.00	5,469.49	5,409.49	5,409.49	20.74	108.19	26.07	960.28	3,984.12	3,884.68	3,755.85	128.82	30.155	
5,600.00	5,565.90	5,505.90	5,505.90	21.13	110.12	13.06	960.28	3,984.12	3,859.65	3,728.53	131.12	29.437	
5,700.00	5,658.06	5,598.06	5,598.06	21.53	111.96	7.22	960.28	3,984.12	3,821.50	3,688.20	133.30	28.668	
5,800.00	5,744.16	5,684.16	5,684.16	21.93	113.68	3.73	960.28	3,984.12	3,770.96	3,635.63	135.33	27.865	
5,900.00	5,822.53	5,762.53	5,762.53	22.38	115.25	1.11	960.28	3,984.12	3,709.02	3,571.85	137.17	27.040	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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 - Grenier A3 - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 7120-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
6,000.00	5,891.65	5,831.65	5,831.65	22.93	116.63	-1.35	960.28	3,984.12	3,636.86	3,498.09	138.78	26.207	
6,100.00	5,950.17	5,890.17	5,890.17	23.68	117.80	-4.22	960.28	3,984.12	3,555.90	3,415.78	140.12	25.378	
6,200.00	5,996.95	5,936.95	5,936.95	24.69	118.74	-8.39	960.28	3,984.12	3,467.72	3,326.55	141.17	24.563	
6,300.00	6,031.08	5,971.08	5,971.08	25.98	119.42	-16.02	960.28	3,984.12	3,374.04	3,232.11	141.92	23.773	
6,400.00	6,051.90	5,991.90	5,991.90	27.55	119.84	-34.94	960.28	3,984.12	3,276.70	3,134.33	142.36	23.017	
6,500.00	6,059.00	5,999.00	5,999.00	29.33	119.98	-88.69	960.28	3,984.12	3,177.60	3,035.11	142.49	22.301	
6,600.00	6,059.27	5,999.27	5,999.27	31.29	119.99	-88.73	960.28	3,984.12	3,078.29	2,935.83	142.46	21.608	
6,700.00	6,059.53	5,999.53	5,999.53	33.41	119.99	-88.77	960.28	3,984.12	2,979.03	2,836.59	142.45	20.913	
6,800.00	6,059.80	5,999.80	5,999.80	35.66	120.00	-88.82	960.28	3,984.12	2,879.83	2,737.39	142.44	20.218	
6,900.00	6,060.07	6,000.07	6,000.07	38.01	120.00	-88.86	960.28	3,984.12	2,780.68	2,638.23	142.44	19.522	
7,000.00	6,060.33	6,000.33	6,000.33	40.45	120.01	-88.90	960.28	3,984.12	2,681.59	2,539.13	142.46	18.824	
7,100.00	6,060.60	6,000.60	6,000.60	42.97	120.01	-88.94	960.28	3,984.12	2,582.57	2,440.08	142.49	18.124	
7,200.00	6,060.87	6,000.87	6,000.87	45.54	120.02	-88.98	960.28	3,984.12	2,483.63	2,341.09	142.55	17.423	
7,300.00	6,061.13	6,001.13	6,001.13	48.17	120.02	-89.02	960.28	3,984.12	2,384.78	2,242.16	142.63	16.721	
7,400.00	6,061.40	6,001.40	6,001.40	50.84	120.03	-89.06	960.28	3,984.12	2,286.03	2,143.30	142.74	16.016	
7,500.00	6,061.66	6,001.66	6,001.66	53.55	120.03	-89.11	960.28	3,984.12	2,187.40	2,044.51	142.88	15.309	
7,600.00	6,061.93	6,001.93	6,001.93	56.28	120.04	-89.15	960.28	3,984.12	2,088.89	1,945.81	143.08	14.599	
7,700.00	6,062.20	6,002.20	6,002.20	59.05	120.04	-89.19	960.28	3,984.12	1,990.53	1,847.20	143.33	13.887	
7,800.00	6,062.46	6,002.46	6,002.46	61.83	120.05	-89.23	960.28	3,984.12	1,892.34	1,748.69	143.66	13.172	
7,900.00	6,062.73	6,002.73	6,002.73	64.64	120.05	-89.27	960.28	3,984.12	1,794.36	1,650.29	144.07	12.454	
8,000.00	6,063.00	6,003.00	6,003.00	67.46	120.06	-89.31	960.28	3,984.12	1,696.61	1,552.01	144.60	11.733	
8,100.00	6,063.26	6,003.26	6,003.26	70.30	120.07	-89.35	960.28	3,984.12	1,599.14	1,453.87	145.26	11.009	
8,200.00	6,063.53	6,003.53	6,003.53	73.16	120.07	-89.40	960.28	3,984.12	1,502.00	1,355.90	146.10	10.281	
8,300.00	6,063.79	6,003.79	6,003.79	76.02	120.08	-89.44	960.28	3,984.12	1,405.26	1,258.10	147.15	9.550	
8,400.00	6,064.06	6,004.06	6,004.06	78.90	120.08	-89.48	960.28	3,984.12	1,309.01	1,160.53	148.48	8.816	
8,500.00	6,064.33	6,004.33	6,004.33	81.79	120.09	-89.52	960.28	3,984.12	1,213.37	1,063.22	150.14	8.081	
8,600.00	6,064.59	6,004.59	6,004.59	84.68	120.09	-89.56	960.28	3,984.12	1,118.49	966.25	152.24	7.347	
8,700.00	6,064.86	6,004.86	6,004.86	87.59	120.10	-89.60	960.28	3,984.12	1,024.58	869.70	154.89	6.615	
8,800.00	6,065.13	6,005.13	6,005.13	90.50	120.10	-89.65	960.28	3,984.12	931.95	773.71	158.23	5.890	
8,900.00	6,065.39	6,005.39	6,005.39	93.41	120.11	-89.69	960.28	3,984.12	841.00	678.52	162.48	5.176	
9,000.00	6,065.66	6,005.66	6,005.66	96.33	120.11	-89.73	960.28	3,984.12	752.35	584.47	167.88	4.481	
9,100.00	6,065.92	6,005.92	6,005.92	99.26	120.12	-89.77	960.28	3,984.12	666.92	492.16	174.77	3.816	
9,200.00	6,066.19	6,006.19	6,006.19	102.20	120.12	-89.81	960.28	3,984.12	586.13	402.62	183.51	3.194	
9,300.00	6,066.46	6,006.46	6,006.46	105.13	120.13	-89.85	960.28	3,984.12	512.15	317.75	194.40	2.635	
9,400.00	6,066.72	6,006.72	6,006.72	108.07	120.13	-89.89	960.28	3,984.12	448.39	241.06	207.33	2.163	
9,500.00	6,066.99	6,006.99	6,006.99	111.02	120.14	-89.94	960.28	3,984.12	399.76	178.76	221.00	1.809	
9,600.00	6,067.25	6,007.25	6,007.25	113.97	120.15	-89.98	960.28	3,984.12	372.23	140.10	232.13	1.604	
9,656.23	6,067.40	6,007.40	6,007.40	115.63	120.15	-90.00	960.28	3,984.12	367.96	132.27	235.69	1.561	CC, ES, SF
9,700.00	6,067.52	6,007.52	6,007.52	116.92	120.15	-90.02	960.28	3,984.12	370.56	133.85	236.70	1.565	
9,800.00	6,067.79	6,007.79	6,007.79	119.87	120.16	-90.06	960.28	3,984.12	395.05	161.45	233.60	1.691	
9,900.00	6,068.05	6,008.05	6,008.05	122.83	120.16	-90.10	960.28	3,984.12	441.38	215.76	225.63	1.956	
10,000.00	6,068.32	6,008.32	6,008.32	125.79	120.17	-90.14	960.28	3,984.12	503.56	287.30	216.26	2.329	
10,100.00	6,068.59	6,008.59	6,008.59	128.75	120.17	-90.18	960.28	3,984.12	576.48	369.03	207.45	2.779	
10,200.00	6,068.85	6,008.85	6,008.85	131.71	120.18	-90.23	960.28	3,984.12	656.57	456.70	199.87	3.285	
10,300.00	6,069.12	6,009.12	6,009.12	134.68	120.18	-90.27	960.28	3,984.12	741.51	547.96	193.55	3.831	
10,400.00	6,069.38	6,009.38	6,009.38	137.65	120.19	-90.31	960.28	3,984.12	829.81	641.47	188.33	4.406	
10,500.00	6,069.65	6,009.65	6,009.65	140.62	120.19	-90.35	960.28	3,984.12	920.51	736.48	184.02	5.002	
10,600.00	6,069.92	6,009.92	6,009.92	143.59	120.20	-90.39	960.28	3,984.12	1,012.96	832.52	180.44	5.614	
10,700.00	6,070.18	6,010.18	6,010.18	146.56	120.20	-90.43	960.28	3,984.12	1,106.73	929.30	177.43	6.238	
10,800.00	6,070.45	6,010.45	6,010.45	149.54	120.21	-90.47	960.28	3,984.12	1,201.50	1,026.61	174.88	6.870	
10,900.00	6,070.72	6,010.72	6,010.72	152.52	120.21	-90.52	960.28	3,984.12	1,297.05	1,124.34	172.71	7.510	
11,000.00	6,070.98	6,010.98	6,010.98	155.49	120.22	-90.56	960.28	3,984.12	1,393.23	1,222.39	170.84	8.155	

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 601 1H - Slot B02
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 601 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 - Grenier A3 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7120-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
11,100.00	6,071.25	6,011.25	6,011.25	158.47	120.22	-90.60	960.28	3,984.12	1,489.92	1,320.69	169.23	8.804	
11,200.00	6,071.51	6,011.51	6,011.51	161.45	120.23	-90.64	960.28	3,984.12	1,587.01	1,419.19	167.82	9.457	
11,300.00	6,071.78	6,011.78	6,011.78	164.43	120.24	-90.68	960.28	3,984.12	1,684.44	1,517.86	166.58	10.112	
11,400.00	6,072.05	6,012.05	6,012.05	167.42	120.24	-90.72	960.28	3,984.12	1,782.16	1,616.68	165.49	10.769	
11,500.00	6,072.31	6,012.31	6,012.31	170.40	120.25	-90.76	960.28	3,984.12	1,880.12	1,715.60	164.52	11.428	
11,600.00	6,072.58	6,012.58	6,012.58	173.38	120.25	-90.81	960.28	3,984.12	1,978.28	1,814.63	163.66	12.088	
11,700.00	6,072.85	6,012.85	6,012.85	176.37	120.26	-90.85	960.28	3,984.12	2,076.62	1,913.74	162.88	12.749	
11,800.00	6,073.11	6,013.11	6,013.11	179.36	120.26	-90.89	960.28	3,984.12	2,175.11	2,012.92	162.19	13.411	
11,900.00	6,073.38	6,013.38	6,013.38	182.34	120.27	-90.93	960.28	3,984.12	2,273.73	2,112.17	161.56	14.073	
12,000.00	6,073.64	6,013.64	6,013.64	185.33	120.27	-90.97	960.28	3,984.12	2,372.47	2,211.47	161.00	14.736	
12,100.00	6,073.91	6,013.91	6,013.91	188.32	120.28	-91.01	960.28	3,984.12	2,471.31	2,310.82	160.49	15.399	
12,200.00	6,074.18	6,014.18	6,014.18	191.31	120.28	-91.05	960.28	3,984.12	2,570.23	2,410.21	160.02	16.062	
12,300.00	6,074.44	6,014.44	6,014.44	194.30	120.29	-91.10	960.28	3,984.12	2,669.24	2,509.65	159.60	16.725	
12,400.00	6,074.71	6,014.71	6,014.71	197.29	120.29	-91.14	960.28	3,984.12	2,768.32	2,609.11	159.21	17.388	
12,500.00	6,074.98	6,014.98	6,014.98	200.28	120.30	-91.18	960.28	3,984.12	2,867.47	2,708.61	158.85	18.051	
12,600.00	6,075.24	6,015.24	6,015.24	203.27	120.30	-91.22	960.28	3,984.12	2,966.67	2,808.14	158.53	18.714	
12,700.00	6,075.51	6,015.51	6,015.51	206.26	120.31	-91.26	960.28	3,984.12	3,065.92	2,907.69	158.23	19.376	
12,800.00	6,075.77	6,015.77	6,015.77	209.26	120.32	-91.30	960.28	3,984.12	3,165.22	3,007.26	157.96	20.038	
12,900.00	6,076.04	6,016.04	6,016.04	212.25	120.32	-91.34	960.28	3,984.12	3,264.56	3,106.85	157.71	20.700	
13,000.00	6,076.31	6,016.31	6,016.31	215.24	120.33	-91.39	960.28	3,984.12	3,363.94	3,206.47	157.48	21.362	
13,100.00	6,076.57	6,016.57	6,016.57	218.24	120.33	-91.43	960.28	3,984.12	3,463.36	3,306.10	157.26	22.023	
13,200.00	6,076.84	6,016.84	6,016.84	221.23	120.34	-91.47	960.28	3,984.12	3,562.81	3,405.74	157.07	22.683	
13,300.00	6,077.10	6,017.10	6,017.10	224.23	120.34	-91.51	960.28	3,984.12	3,662.29	3,505.40	156.89	23.344	
13,400.00	6,077.37	6,017.37	6,017.37	227.22	120.35	-91.55	960.28	3,984.12	3,761.79	3,605.07	156.72	24.003	
13,500.00	6,077.64	6,017.64	6,017.64	230.22	120.35	-91.59	960.28	3,984.12	3,861.33	3,704.76	156.57	24.662	
13,600.00	6,077.90	6,017.90	6,017.90	233.21	120.36	-91.63	960.28	3,984.12	3,960.88	3,804.46	156.43	25.321	
13,636.27	6,078.00	6,018.00	6,018.00	234.30	120.36	-91.65	960.28	3,984.12	3,996.99	3,840.62	156.38	25.560	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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 - Grenier A8 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7225-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	85.00	85.00	0.00	1.70	81.85	1,015.49	7,088.70	7,161.07	7,159.37	1.70	4,211.903	
100.00	100.00	185.00	185.00	0.18	3.70	81.85	1,015.49	7,088.70	7,161.07	7,157.19	3.88	1,845.907	
200.00	200.00	285.00	285.00	0.54	5.70	81.85	1,015.49	7,088.70	7,161.07	7,154.83	6.24	1,147.993	
300.00	300.00	385.00	385.00	0.90	7.70	81.85	1,015.49	7,088.70	7,161.07	7,152.47	8.60	833.034	
400.00	400.00	485.00	485.00	1.25	9.70	81.85	1,015.49	7,088.70	7,161.07	7,150.11	10.95	653.690	
500.00	500.00	585.00	585.00	1.61	11.70	81.85	1,015.49	7,088.70	7,161.07	7,147.75	13.31	537.888	
600.00	599.98	684.98	684.98	1.97	13.70	69.51	1,015.49	7,088.70	7,160.46	7,144.79	15.67	456.933	
700.00	699.84	784.84	784.84	2.33	15.70	69.59	1,015.49	7,088.70	7,158.63	7,140.60	18.03	397.129	
800.00	799.45	884.45	884.45	2.70	17.69	69.71	1,015.49	7,088.70	7,155.58	7,135.20	20.38	351.120	
900.00	898.83	983.83	983.83	3.06	19.68	69.81	1,015.49	7,088.70	7,151.73	7,128.99	22.73	314.596	
1,000.00	998.21	1,083.21	1,083.21	3.43	21.66	69.89	1,015.49	7,088.70	7,147.86	7,122.77	25.09	284.886	
1,100.00	1,097.58	1,182.58	1,182.58	3.80	23.65	69.97	1,015.49	7,088.70	7,144.01	7,116.56	27.45	260.252	
1,200.00	1,196.96	1,281.96	1,281.96	4.18	25.64	70.06	1,015.49	7,088.70	7,140.17	7,110.36	29.81	239.502	
1,300.00	1,296.33	1,381.33	1,381.33	4.56	27.63	70.14	1,015.49	7,088.70	7,136.35	7,104.17	32.18	221.788	
1,400.00	1,395.71	1,480.71	1,480.71	4.94	29.61	70.22	1,015.49	7,088.70	7,132.54	7,098.00	34.54	206.491	
1,500.00	1,495.08	1,580.08	1,580.08	5.32	31.60	70.31	1,015.49	7,088.70	7,128.75	7,091.84	36.91	193.151	
1,600.00	1,594.46	1,679.46	1,679.46	5.70	33.59	70.39	1,015.49	7,088.70	7,124.97	7,085.70	39.27	181.414	
1,700.00	1,693.83	1,778.83	1,778.83	6.08	35.58	70.48	1,015.49	7,088.70	7,121.21	7,079.57	41.64	171.009	
1,800.00	1,793.21	1,878.21	1,878.21	6.46	37.56	70.56	1,015.49	7,088.70	7,117.47	7,073.46	44.01	161.722	
1,900.00	1,892.58	1,977.58	1,977.58	6.85	39.55	70.65	1,015.49	7,088.70	7,113.74	7,067.36	46.38	153.382	
2,000.00	1,991.96	2,076.96	2,076.96	7.23	41.54	70.73	1,015.49	7,088.70	7,110.03	7,061.28	48.75	145.852	
2,100.00	2,091.33	2,176.33	2,176.33	7.62	43.53	70.81	1,015.49	7,088.70	7,106.33	7,055.21	51.12	139.019	
2,200.00	2,190.71	2,275.71	2,275.71	8.00	45.51	70.90	1,015.49	7,088.70	7,102.65	7,049.16	53.49	132.791	
2,300.00	2,290.08	2,375.08	2,375.08	8.38	47.50	70.98	1,015.49	7,088.70	7,098.98	7,043.12	55.86	127.091	
2,400.00	2,389.46	2,474.46	2,474.46	8.77	49.49	71.07	1,015.49	7,088.70	7,095.33	7,037.10	58.23	121.855	
2,500.00	2,488.83	2,573.83	2,573.83	9.15	51.48	71.15	1,015.49	7,088.70	7,091.69	7,031.10	60.60	117.028	
2,600.00	2,588.20	2,673.20	2,673.20	9.54	53.46	71.24	1,015.49	7,088.70	7,088.07	7,025.11	62.97	112.565	
2,700.00	2,687.58	2,772.58	2,772.58	9.92	55.45	71.32	1,015.49	7,088.70	7,084.47	7,019.13	65.34	108.425	
2,800.00	2,786.95	2,871.95	2,871.95	10.31	57.44	71.41	1,015.49	7,088.70	7,080.88	7,013.17	67.71	104.576	
2,900.00	2,886.33	2,971.33	2,971.33	10.70	59.43	71.49	1,015.49	7,088.70	7,077.31	7,007.23	70.08	100.986	
3,000.00	2,985.70	3,070.70	3,070.70	11.08	61.41	71.58	1,015.49	7,088.70	7,073.75	7,001.30	72.45	97.632	
3,100.00	3,085.08	3,170.08	3,170.08	11.47	63.40	71.66	1,015.49	7,088.70	7,070.21	6,995.39	74.82	94.491	
3,200.00	3,184.45	3,269.45	3,269.45	11.85	65.39	71.75	1,015.49	7,088.70	7,066.69	6,989.49	77.20	91.542	
3,300.00	3,283.83	3,368.83	3,368.83	12.24	67.38	71.83	1,015.49	7,088.70	7,063.18	6,983.61	79.57	88.770	
3,400.00	3,383.20	3,468.20	3,468.20	12.62	69.36	71.92	1,015.49	7,088.70	7,059.69	6,977.75	81.94	86.158	
3,500.00	3,482.58	3,567.58	3,567.58	13.01	71.35	72.01	1,015.49	7,088.70	7,056.21	6,971.90	84.31	83.693	
3,600.00	3,581.95	3,666.95	3,666.95	13.40	73.34	72.09	1,015.49	7,088.70	7,052.75	6,966.07	86.68	81.363	
3,700.00	3,681.33	3,766.33	3,766.33	13.78	75.33	72.18	1,015.49	7,088.70	7,049.31	6,960.25	89.05	79.157	
3,800.00	3,780.70	3,865.70	3,865.70	14.17	77.31	72.26	1,015.49	7,088.70	7,045.88	6,954.45	91.43	77.066	
3,900.00	3,880.08	3,965.08	3,965.08	14.55	79.30	72.35	1,015.49	7,088.70	7,042.46	6,948.66	93.80	75.080	
4,000.00	3,979.45	4,064.45	4,064.45	14.94	81.29	72.44	1,015.49	7,088.70	7,039.07	6,942.90	96.17	73.193	
4,100.00	4,078.82	4,163.82	4,163.82	15.33	83.28	72.52	1,015.49	7,088.70	7,035.69	6,937.14	98.54	71.397	
4,200.00	4,178.20	4,263.20	4,263.20	15.71	85.26	72.61	1,015.49	7,088.70	7,032.32	6,931.41	100.92	69.685	
4,300.00	4,277.57	4,362.57	4,362.57	16.10	87.25	72.69	1,015.49	7,088.70	7,028.97	6,925.68	103.29	68.052	
4,400.00	4,376.95	4,461.95	4,461.95	16.49	89.24	72.78	1,015.49	7,088.70	7,025.64	6,919.98	105.66	66.492	
4,500.00	4,476.32	4,561.32	4,561.32	16.87	91.23	72.87	1,015.49	7,088.70	7,022.32	6,914.29	108.03	65.001	
4,600.00	4,575.70	4,660.70	4,660.70	17.26	93.21	72.95	1,015.49	7,088.70	7,019.02	6,908.62	110.41	63.575	
4,700.00	4,675.07	4,760.07	4,760.07	17.65	95.20	73.04	1,015.49	7,088.70	7,015.74	6,902.96	112.78	62.208	
4,800.00	4,774.45	4,859.45	4,859.45	18.03	97.19	73.13	1,015.49	7,088.70	7,012.47	6,897.32	115.15	60.898	
4,900.00	4,873.82	4,958.82	4,958.82	18.42	99.18	73.21	1,015.49	7,088.70	7,009.22	6,891.70	117.52	59.641	
5,000.00	4,973.20	5,058.20	5,058.20	18.80	101.16	73.30	1,015.49	7,088.70	7,005.99	6,886.09	119.90	58.433	
5,100.00	5,072.57	5,157.57	5,157.57	19.19	103.15	73.39	1,015.49	7,088.70	7,002.77	6,880.50	122.27	57.273	

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 601 1H - Slot B02
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 601 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 - Grenier A8 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7225-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
5,200.00	5,171.95	5,256.95	5,256.95	19.58	105.14	73.48	1,015.49	7,088.70	6,999.57	6,874.92	124.64	56.157	
5,300.00	5,271.32	5,356.32	5,356.32	19.96	107.13	73.56	1,015.49	7,088.70	6,996.38	6,869.36	127.02	55.083	
5,400.00	5,370.69	5,455.69	5,455.69	20.35	109.11	69.10	1,015.49	7,088.70	6,993.18	6,863.79	129.39	54.048	
5,500.00	5,469.49	5,554.49	5,554.49	20.74	111.09	28.49	1,015.49	7,088.70	6,982.17	6,850.42	131.75	52.997	
5,600.00	5,565.90	5,650.90	5,650.90	21.13	113.02	15.52	1,015.49	7,088.70	6,957.48	6,823.44	134.04	51.905	
5,700.00	5,658.06	5,743.06	5,743.06	21.53	114.86	9.80	1,015.49	7,088.70	6,919.61	6,783.38	136.23	50.793	
5,800.00	5,744.16	5,829.16	5,829.16	21.93	116.58	6.52	1,015.49	7,088.70	6,869.28	6,731.01	138.27	49.681	
5,900.00	5,822.53	5,907.53	5,907.53	22.38	118.15	4.23	1,015.49	7,088.70	6,807.46	6,667.35	140.11	48.585	
6,000.00	5,891.65	5,976.65	5,976.65	22.93	119.53	2.30	1,015.49	7,088.70	6,735.36	6,593.63	141.73	47.522	
6,100.00	5,950.17	6,035.17	6,035.17	23.68	120.70	0.28	1,015.49	7,088.70	6,654.38	6,511.29	143.09	46.506	
6,200.00	5,996.95	6,081.95	6,081.95	24.69	121.64	-2.41	1,015.49	7,088.70	6,566.09	6,421.93	144.16	45.549	
6,300.00	6,031.08	6,116.08	6,116.08	25.98	122.32	-7.18	1,015.49	7,088.70	6,472.21	6,327.29	144.92	44.660	
6,400.00	6,051.90	6,136.90	6,136.90	27.55	122.74	-20.14	1,015.49	7,088.70	6,374.58	6,229.21	145.37	43.850	
6,500.00	6,059.00	6,144.00	6,144.00	29.33	122.88	-87.74	1,015.49	7,088.70	6,275.09	6,129.58	145.51	43.125	
6,600.00	6,059.27	6,144.27	6,144.27	31.29	122.89	-87.78	1,015.49	7,088.70	6,175.32	6,029.83	145.49	42.444	
6,700.00	6,059.53	6,144.53	6,144.53	33.41	122.89	-87.82	1,015.49	7,088.70	6,075.56	5,930.08	145.48	41.762	
6,800.00	6,059.80	6,144.80	6,144.80	35.66	122.90	-87.85	1,015.49	7,088.70	5,975.81	5,830.34	145.47	41.080	
6,900.00	6,060.07	6,145.07	6,145.07	38.01	122.90	-87.89	1,015.49	7,088.70	5,876.06	5,730.60	145.46	40.397	
7,000.00	6,060.33	6,145.33	6,145.33	40.45	122.91	-87.92	1,015.49	7,088.70	5,776.33	5,630.87	145.45	39.712	
7,100.00	6,060.60	6,145.60	6,145.60	42.97	122.91	-87.96	1,015.49	7,088.70	5,676.60	5,531.15	145.45	39.027	
7,200.00	6,060.87	6,145.87	6,145.87	45.54	122.92	-88.00	1,015.49	7,088.70	5,576.88	5,431.43	145.45	38.341	
7,300.00	6,061.13	6,146.13	6,146.13	48.17	122.92	-88.03	1,015.49	7,088.70	5,477.18	5,331.72	145.46	37.655	
7,400.00	6,061.40	6,146.40	6,146.40	50.84	122.93	-88.07	1,015.49	7,088.70	5,377.48	5,232.02	145.47	36.967	
7,500.00	6,061.66	6,146.66	6,146.66	53.55	122.93	-88.10	1,015.49	7,088.70	5,277.80	5,132.32	145.48	36.278	
7,600.00	6,061.93	6,146.93	6,146.93	56.28	122.94	-88.14	1,015.49	7,088.70	5,178.13	5,032.63	145.50	35.588	
7,700.00	6,062.20	6,147.20	6,147.20	59.05	122.94	-88.18	1,015.49	7,088.70	5,078.47	4,932.94	145.53	34.897	
7,800.00	6,062.46	6,147.46	6,147.46	61.83	122.95	-88.21	1,015.49	7,088.70	4,978.82	4,833.27	145.56	34.205	
7,900.00	6,062.73	6,147.73	6,147.73	64.64	122.95	-88.25	1,015.49	7,088.70	4,879.19	4,733.60	145.59	33.512	
8,000.00	6,063.00	6,148.00	6,148.00	67.46	122.96	-88.28	1,015.49	7,088.70	4,779.58	4,633.94	145.64	32.818	
8,100.00	6,063.26	6,148.26	6,148.26	70.30	122.97	-88.32	1,015.49	7,088.70	4,679.98	4,534.29	145.69	32.122	
8,200.00	6,063.53	6,148.53	6,148.53	73.16	122.97	-88.36	1,015.49	7,088.70	4,580.40	4,434.64	145.76	31.425	
8,300.00	6,063.79	6,148.79	6,148.79	76.02	122.98	-88.39	1,015.49	7,088.70	4,480.84	4,335.01	145.83	30.727	
8,400.00	6,064.06	6,149.06	6,149.06	78.90	122.98	-88.43	1,015.49	7,088.70	4,381.29	4,235.38	145.91	30.027	
8,500.00	6,064.33	6,149.33	6,149.33	81.79	122.99	-88.46	1,015.49	7,088.70	4,281.77	4,135.76	146.01	29.325	
8,600.00	6,064.59	6,149.59	6,149.59	84.68	122.99	-88.50	1,015.49	7,088.70	4,182.28	4,036.16	146.12	28.622	
8,700.00	6,064.86	6,149.86	6,149.86	87.59	123.00	-88.54	1,015.49	7,088.70	4,082.80	3,936.56	146.25	27.917	
8,800.00	6,065.13	6,150.13	6,150.13	90.50	123.00	-88.57	1,015.49	7,088.70	3,983.35	3,836.97	146.39	27.211	
8,900.00	6,065.39	6,150.39	6,150.39	93.41	123.01	-88.61	1,015.49	7,088.70	3,883.93	3,737.38	146.55	26.502	
9,000.00	6,065.66	6,150.66	6,150.66	96.33	123.01	-88.64	1,015.49	7,088.70	3,784.55	3,637.81	146.73	25.792	
9,100.00	6,065.92	6,150.92	6,150.92	99.26	123.02	-88.68	1,015.49	7,088.70	3,685.19	3,538.25	146.94	25.080	
9,200.00	6,066.19	6,151.19	6,151.19	102.20	123.02	-88.72	1,015.49	7,088.70	3,585.87	3,438.70	147.17	24.365	
9,300.00	6,066.46	6,151.46	6,151.46	105.13	123.03	-88.75	1,015.49	7,088.70	3,486.59	3,339.16	147.43	23.648	
9,400.00	6,066.72	6,151.72	6,151.72	108.07	123.03	-88.79	1,015.49	7,088.70	3,387.35	3,239.62	147.73	22.929	
9,500.00	6,066.99	6,151.99	6,151.99	111.02	123.04	-88.82	1,015.49	7,088.70	3,288.16	3,140.10	148.06	22.208	
9,600.00	6,067.25	6,152.25	6,152.25	113.97	123.05	-88.86	1,015.49	7,088.70	3,189.02	3,040.58	148.43	21.484	
9,700.00	6,067.52	6,152.52	6,152.52	116.92	123.05	-88.90	1,015.49	7,088.70	3,089.93	2,941.08	148.85	20.758	
9,800.00	6,067.79	6,152.79	6,152.79	119.87	123.06	-88.93	1,015.49	7,088.70	2,990.90	2,841.58	149.32	20.030	
9,900.00	6,068.05	6,153.05	6,153.05	122.83	123.06	-88.97	1,015.49	7,088.70	2,891.94	2,742.09	149.85	19.298	
10,000.00	6,068.32	6,153.32	6,153.32	125.79	123.07	-89.00	1,015.49	7,088.70	2,793.06	2,642.61	150.45	18.565	
10,100.00	6,068.59	6,153.59	6,153.59	128.75	123.07	-89.04	1,015.49	7,088.70	2,694.26	2,543.14	151.12	17.829	
10,200.00	6,068.85	6,153.85	6,153.85	131.71	123.08	-89.08	1,015.49	7,088.70	2,595.55	2,443.67	151.87	17.090	
10,300.00	6,069.12	6,154.12	6,154.12	134.68	123.08	-89.11	1,015.49	7,088.70	2,496.94	2,344.22	152.72	16.350	

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 601 1H - Slot B02
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 601 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 - Grenier A8 - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 7225-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
10,400.00	6,069.38	6,154.38	6,154.38	137.65	123.09	-89.15	1,015.49	7,088.70	2,398.44	2,244.77	153.68	15.607	
10,500.00	6,069.65	6,154.65	6,154.65	140.62	123.09	-89.19	1,015.49	7,088.70	2,300.08	2,145.32	154.76	14.863	
10,600.00	6,069.92	6,154.92	6,154.92	143.59	123.10	-89.22	1,015.49	7,088.70	2,201.87	2,045.89	155.97	14.117	
10,700.00	6,070.18	6,155.18	6,155.18	146.56	123.10	-89.26	1,015.49	7,088.70	2,103.82	1,946.47	157.35	13.370	
10,800.00	6,070.45	6,155.45	6,155.45	149.54	123.11	-89.29	1,015.49	7,088.70	2,005.96	1,847.05	158.91	12.623	
10,900.00	6,070.72	6,155.72	6,155.72	152.52	123.11	-89.33	1,015.49	7,088.70	1,908.33	1,747.65	160.69	11.876	
11,000.00	6,070.98	6,155.98	6,155.98	155.49	123.12	-89.37	1,015.49	7,088.70	1,810.96	1,648.25	162.70	11.130	
11,100.00	6,071.25	6,156.25	6,156.25	158.47	123.12	-89.40	1,015.49	7,088.70	1,713.88	1,548.88	165.00	10.387	
11,200.00	6,071.51	6,156.51	6,156.51	161.45	123.13	-89.44	1,015.49	7,088.70	1,617.17	1,449.53	167.64	9.647	
11,300.00	6,071.78	6,156.78	6,156.78	164.43	123.14	-89.47	1,015.49	7,088.70	1,520.88	1,350.22	170.66	8.912	
11,400.00	6,072.05	6,157.05	6,157.05	167.42	123.14	-89.51	1,015.49	7,088.70	1,425.10	1,250.94	174.16	8.183	
11,500.00	6,072.31	6,157.31	6,157.31	170.40	123.15	-89.55	1,015.49	7,088.70	1,329.94	1,151.74	178.21	7.463	
11,600.00	6,072.58	6,157.58	6,157.58	173.38	123.15	-89.58	1,015.49	7,088.70	1,235.55	1,052.62	182.93	6.754	
11,700.00	6,072.85	6,157.85	6,157.85	176.37	123.16	-89.62	1,015.49	7,088.70	1,142.11	953.65	188.47	6.060	
11,800.00	6,073.11	6,158.11	6,158.11	179.36	123.16	-89.65	1,015.49	7,088.70	1,049.88	854.88	195.00	5.384	
11,900.00	6,073.38	6,158.38	6,158.38	182.34	123.17	-89.69	1,015.49	7,088.70	959.22	756.44	202.77	4.731	
12,000.00	6,073.64	6,158.64	6,158.64	185.33	123.17	-89.73	1,015.49	7,088.70	870.59	658.53	212.06	4.105	
12,100.00	6,073.91	6,158.91	6,158.91	188.32	123.18	-89.76	1,015.49	7,088.70	784.71	561.48	223.23	3.515	
12,200.00	6,074.18	6,159.18	6,159.18	191.31	123.18	-89.80	1,015.49	7,088.70	702.57	465.92	236.65	2.969	
12,300.00	6,074.44	6,159.44	6,159.44	194.30	123.19	-89.83	1,015.49	7,088.70	625.65	372.97	252.68	2.476	
12,400.00	6,074.71	6,159.71	6,159.71	197.29	123.19	-89.87	1,015.49	7,088.70	556.12	284.76	271.36	2.049	
12,500.00	6,074.98	6,159.98	6,159.98	200.28	123.20	-89.91	1,015.49	7,088.70	497.10	205.19	291.91	1.703	
12,600.00	6,075.24	6,160.24	6,160.24	203.27	123.20	-89.94	1,015.49	7,088.70	452.71	140.85	311.86	1.452	Level 3
12,700.00	6,075.51	6,160.51	6,160.51	206.26	123.21	-89.98	1,015.49	7,088.70	427.53	100.77	326.75	1.308	Level 3
12,760.83	6,075.67	6,160.67	6,160.67	208.08	123.21	-90.00	1,015.49	7,088.70	423.18	91.93	331.25	1.278	Level 3, CC, ES, SF
12,800.00	6,075.77	6,160.77	6,160.77	209.26	123.22	-90.01	1,015.49	7,088.70	424.99	93.04	331.94	1.280	Level 3
12,900.00	6,076.04	6,161.04	6,161.04	212.25	123.22	-90.05	1,015.49	7,088.70	445.48	119.19	326.28	1.365	Level 3
13,000.00	6,076.31	6,161.31	6,161.31	215.24	123.23	-90.09	1,015.49	7,088.70	486.09	173.02	313.07	1.553	
13,100.00	6,076.57	6,161.57	6,161.57	218.24	123.23	-90.12	1,015.49	7,088.70	542.33	245.47	296.86	1.827	
13,200.00	6,076.84	6,161.84	6,161.84	221.23	123.24	-90.16	1,015.49	7,088.70	609.88	329.06	280.81	2.172	
13,300.00	6,077.10	6,162.10	6,162.10	224.23	123.24	-90.19	1,015.49	7,088.70	685.41	419.04	266.37	2.573	
13,400.00	6,077.37	6,162.37	6,162.37	227.22	123.25	-90.23	1,015.49	7,088.70	766.56	512.66	253.90	3.019	
13,500.00	6,077.64	6,162.64	6,162.64	230.22	123.25	-90.27	1,015.49	7,088.70	851.74	608.42	243.32	3.501	
13,600.00	6,077.90	6,162.90	6,162.90	233.21	123.26	-90.30	1,015.49	7,088.70	939.83	705.47	234.36	4.010	
13,636.27	6,078.00	6,163.00	6,163.00	234.30	123.26	-90.32	1,015.49	7,088.70	972.35	740.89	231.47	4.201	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	-125.37	-8.73	-12.31	15.09	15.09	0.00	N/A	
100.00	100.00	100.00	100.00	0.18	0.18	-125.37	-8.73	-12.31	15.09	14.73	0.36	42.097	
200.00	200.00	200.00	200.00	0.54	0.54	-125.37	-8.73	-12.31	15.09	14.02	1.08	14.032	
300.00	300.00	300.00	300.00	0.90	0.90	-125.37	-8.73	-12.31	15.09	13.30	1.79	8.419	
400.00	400.00	400.00	400.00	1.25	1.25	-125.37	-8.73	-12.31	15.09	12.58	2.51	6.014	
500.00	500.00	500.00	500.00	1.61	1.61	-125.37	-8.73	-12.31	15.09	11.86	3.23	4.677	CC
600.00	599.98	600.34	600.32	1.97	1.97	-137.10	-6.98	-12.16	15.25	11.30	3.95	3.859	
700.00	699.84	700.68	700.51	2.33	2.34	-135.30	-1.73	-11.73	15.76	11.07	4.69	3.361	
800.00	799.45	801.01	800.45	2.70	2.70	-132.56	7.01	-11.00	16.63	11.20	5.43	3.064	
900.00	898.83	901.30	899.99	3.06	3.07	-126.34	19.23	-9.99	17.22	11.06	6.16	2.795	
995.52	993.76	996.93	994.44	3.41	3.43	-110.87	34.11	-8.75	16.97	10.12	6.85	2.478	
1,000.00	998.21	1,001.40	998.84	3.43	3.44	-109.89	34.88	-8.69	16.97	10.09	6.88	2.466	ES
1,100.00	1,097.58	1,101.04	1,096.64	3.80	3.84	-83.60	53.87	-7.12	18.61	10.96	7.65	2.432	
1,200.00	1,196.96	1,200.00	1,193.06	4.18	4.25	-58.28	76.07	-5.28	25.32	16.81	8.51	2.975	
1,300.00	1,296.33	1,298.06	1,287.78	4.56	4.67	-41.90	101.33	-3.18	37.54	28.20	9.34	4.020	
1,400.00	1,395.71	1,394.99	1,380.51	4.94	5.12	-32.33	129.46	-0.85	54.33	44.22	10.11	5.372	
1,500.00	1,495.08	1,491.80	1,472.24	5.32	5.59	-26.56	160.26	1.70	74.65	63.81	10.84	6.886	
1,600.00	1,594.46	1,589.41	1,564.62	5.70	6.08	-23.17	191.70	4.31	95.78	84.23	11.55	8.295	
1,700.00	1,693.83	1,687.03	1,657.01	6.08	6.58	-21.01	223.13	6.91	117.11	104.85	12.26	9.555	
1,800.00	1,793.21	1,784.65	1,749.39	6.46	7.09	-19.51	254.57	9.52	138.55	125.58	12.97	10.680	
1,900.00	1,892.58	1,882.27	1,841.77	6.85	7.61	-18.41	286.00	12.13	160.06	146.36	13.69	11.688	
2,000.00	1,991.96	1,979.89	1,934.16	7.23	8.13	-17.58	317.44	14.73	181.61	167.19	14.42	12.592	
2,100.00	2,091.33	2,077.51	2,026.54	7.62	8.65	-16.92	348.87	17.34	203.19	188.04	15.15	13.408	
2,200.00	2,190.71	2,175.13	2,118.92	8.00	9.18	-16.39	380.31	19.94	224.79	208.90	15.89	14.147	
2,300.00	2,290.08	2,272.75	2,211.31	8.38	9.71	-15.95	411.74	22.55	246.41	229.78	16.63	14.817	
2,400.00	2,389.46	2,370.37	2,303.69	8.77	10.24	-15.58	443.18	25.16	268.04	250.66	17.37	15.429	
2,500.00	2,488.83	2,467.99	2,396.07	9.15	10.77	-15.27	474.62	27.76	289.67	271.56	18.12	15.988	
2,600.00	2,588.20	2,565.61	2,488.45	9.54	11.31	-15.00	506.05	30.37	311.32	292.45	18.87	16.502	
2,700.00	2,687.58	2,663.23	2,580.84	9.92	11.85	-14.76	537.49	32.97	332.97	313.35	19.62	16.974	
2,800.00	2,786.95	2,760.85	2,673.22	10.31	12.39	-14.56	568.92	35.58	354.62	334.25	20.37	17.411	
2,900.00	2,886.33	2,858.47	2,765.60	10.70	12.93	-14.38	600.36	38.18	376.28	355.16	21.12	17.815	
3,000.00	2,985.70	2,956.09	2,857.99	11.08	13.47	-14.21	631.79	40.79	397.94	376.06	21.88	18.190	
3,100.00	3,085.08	3,053.71	2,950.37	11.47	14.01	-14.07	663.23	43.40	419.60	396.97	22.63	18.539	
3,200.00	3,184.45	3,151.33	3,042.75	11.85	14.56	-13.94	694.67	46.00	441.27	417.88	23.39	18.864	
3,300.00	3,283.83	3,248.95	3,135.14	12.24	15.10	-13.82	726.10	48.61	462.94	438.79	24.15	19.169	
3,400.00	3,383.20	3,346.57	3,227.52	12.62	15.65	-13.71	757.54	51.21	484.61	459.70	24.91	19.454	
3,500.00	3,482.58	3,444.19	3,319.90	13.01	16.19	-13.61	788.97	53.82	506.28	480.61	25.67	19.721	
3,600.00	3,581.95	3,541.81	3,412.29	13.40	16.74	-13.52	820.41	56.43	527.95	501.52	26.43	19.973	
3,700.00	3,681.33	3,639.43	3,504.67	13.78	17.29	-13.44	851.84	59.03	549.63	522.43	27.20	20.210	
3,800.00	3,780.70	3,737.05	3,597.05	14.17	17.83	-13.36	883.28	61.64	571.30	543.34	27.96	20.433	
3,900.00	3,880.08	3,834.67	3,689.44	14.55	18.38	-13.29	914.72	64.24	592.98	564.26	28.72	20.644	
4,000.00	3,979.45	3,932.29	3,781.82	14.94	18.93	-13.22	946.15	66.85	614.66	585.17	29.49	20.844	
4,100.00	4,078.82	4,029.91	3,874.20	15.33	19.48	-13.16	977.59	69.46	636.33	606.08	30.25	21.033	
4,200.00	4,178.20	4,127.53	3,966.59	15.71	20.02	-13.10	1,009.02	72.06	658.01	626.99	31.02	21.213	
4,300.00	4,277.57	4,225.15	4,058.97	16.10	20.57	-13.04	1,040.46	74.67	679.69	647.91	31.79	21.383	
4,400.00	4,376.95	4,322.77	4,151.35	16.49	21.12	-12.99	1,071.89	77.27	701.37	668.82	32.55	21.546	
4,500.00	4,476.32	4,420.39	4,243.74	16.87	21.67	-12.95	1,103.33	79.88	723.05	689.73	33.32	21.700	
4,600.00	4,575.70	4,518.01	4,336.12	17.26	22.22	-12.90	1,134.77	82.48	744.73	710.64	34.09	21.848	
4,700.00	4,675.07	4,615.63	4,428.50	17.65	22.77	-12.86	1,166.20	85.09	766.41	731.56	34.86	21.988	
4,800.00	4,774.45	4,713.25	4,520.88	18.03	23.32	-12.82	1,197.64	87.70	788.09	752.47	35.62	22.123	
4,900.00	4,873.82	4,810.87	4,613.27	18.42	23.87	-12.78	1,229.07	90.30	809.77	773.38	36.39	22.251	
5,000.00	4,973.20	4,908.49	4,705.65	18.80	24.42	-12.74	1,260.51	92.91	831.46	794.30	37.16	22.374	

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 601 1H - Slot B02
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 601 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
5,100.00	5,072.57	5,006.11	4,798.03	19.19	24.97	-12.71	1,291.94	95.51	853.14	815.21	37.93	22.492	
5,200.00	5,171.95	5,103.73	4,890.42	19.58	25.52	-12.68	1,323.38	98.12	874.82	836.12	38.70	22.605	
5,300.00	5,271.32	5,201.35	4,982.80	19.96	26.07	-12.65	1,354.82	100.73	896.50	857.03	39.47	22.714	
5,400.00	5,370.69	5,298.97	5,075.18	20.35	26.62	-17.05	1,386.25	103.33	918.19	877.95	40.24	22.818	
5,500.00	5,469.49	5,396.23	5,167.23	20.74	27.17	-56.37	1,417.57	105.93	939.86	898.83	41.03	22.908	
5,600.00	5,565.90	5,491.52	5,257.40	21.13	27.71	-68.74	1,448.26	108.47	961.54	919.69	41.85	22.976	
5,700.00	5,658.06	5,582.98	5,343.96	21.53	28.23	-74.38	1,477.71	110.91	983.65	940.93	42.72	23.025	
5,800.00	5,744.16	5,674.54	5,430.57	21.93	28.74	-77.94	1,507.18	114.14	1,006.95	963.21	43.73	23.024	
5,900.00	5,822.53	5,781.72	5,530.84	22.38	29.34	-80.74	1,541.29	129.96	1,030.95	985.90	45.05	22.884	
6,000.00	5,891.65	5,900.58	5,638.01	22.93	29.99	-83.02	1,577.73	165.74	1,054.74	1,008.14	46.60	22.634	
6,100.00	5,950.17	6,034.20	5,749.93	23.68	30.68	-85.05	1,615.75	227.64	1,077.35	1,029.00	48.35	22.281	
6,200.00	5,996.95	6,185.72	5,861.16	24.69	31.43	-86.89	1,653.52	322.91	1,097.55	1,047.24	50.31	21.817	
6,300.00	6,031.08	6,357.06	5,960.91	25.98	32.30	-88.48	1,687.34	457.53	1,113.79	1,061.18	52.61	21.170	
6,400.00	6,051.90	6,546.72	6,032.64	27.55	33.47	-89.60	1,711.59	630.82	1,124.42	1,068.79	55.63	20.212	
6,500.00	6,059.00	6,746.40	6,059.00	29.33	35.28	-90.00	1,720.39	827.90	1,128.07	1,068.42	59.65	18.911	
6,600.00	6,059.27	6,846.40	6,059.27	31.29	36.53	-90.00	1,720.39	927.90	1,128.07	1,064.54	63.53	17.757	
6,700.00	6,059.53	6,946.40	6,059.54	33.41	38.03	-90.00	1,720.39	1,027.90	1,128.07	1,060.37	67.70	16.663	
6,800.00	6,059.80	7,046.40	6,059.80	35.66	39.76	-90.00	1,720.39	1,127.90	1,128.07	1,055.94	72.13	15.639	
6,900.00	6,060.07	7,146.40	6,060.07	38.01	41.68	-90.00	1,720.39	1,227.90	1,128.07	1,051.29	76.78	14.692	
7,000.00	6,060.33	7,246.40	6,060.33	40.45	43.77	-90.00	1,720.39	1,327.90	1,128.07	1,046.46	81.61	13.822	
7,100.00	6,060.60	7,346.40	6,060.60	42.97	45.99	-90.00	1,720.39	1,427.90	1,128.07	1,041.48	86.59	13.028	
7,200.00	6,060.87	7,446.40	6,060.87	45.54	48.31	-90.00	1,720.39	1,527.89	1,128.07	1,036.38	91.70	12.302	
7,300.00	6,061.13	7,546.40	6,061.13	48.17	50.72	-90.00	1,720.39	1,627.89	1,128.07	1,031.17	96.90	11.641	
7,400.00	6,061.40	7,646.40	6,061.40	50.84	53.21	-90.00	1,720.39	1,727.89	1,128.07	1,025.87	102.20	11.038	
7,500.00	6,061.66	7,746.40	6,061.66	53.55	55.75	-90.00	1,720.39	1,827.89	1,128.07	1,020.49	107.58	10.486	
7,600.00	6,061.93	7,846.40	6,061.93	56.28	58.34	-90.00	1,720.39	1,927.89	1,128.07	1,015.05	113.02	9.981	
7,700.00	6,062.20	7,946.40	6,062.20	59.05	60.98	-90.00	1,720.39	2,027.89	1,128.07	1,009.56	118.52	9.518	
7,800.00	6,062.46	8,046.40	6,062.46	61.83	63.65	-90.00	1,720.39	2,127.89	1,128.07	1,004.01	124.06	9.093	
7,900.00	6,062.73	8,146.40	6,062.73	64.64	66.35	-90.00	1,720.39	2,227.89	1,128.07	998.42	129.65	8.701	
8,000.00	6,063.00	8,246.40	6,062.99	67.46	69.08	-90.00	1,720.39	2,327.89	1,128.07	992.80	135.27	8.339	
8,100.00	6,063.26	8,346.40	6,063.26	70.30	71.84	-90.00	1,720.39	2,427.89	1,128.07	987.14	140.93	8.004	
8,200.00	6,063.53	8,446.40	6,063.53	73.16	74.61	-90.00	1,720.39	2,527.89	1,128.07	981.45	146.62	7.694	
8,300.00	6,063.79	8,546.40	6,063.79	76.02	77.41	-90.00	1,720.39	2,627.89	1,128.07	975.74	152.33	7.405	
8,400.00	6,064.06	8,646.40	6,064.06	78.90	80.22	-90.00	1,720.39	2,727.89	1,128.07	970.01	158.07	7.137	
8,500.00	6,064.33	8,746.40	6,064.32	81.79	83.05	-90.00	1,720.39	2,827.89	1,128.07	964.25	163.82	6.886	
8,600.00	6,064.59	8,846.40	6,064.59	84.68	85.89	-90.00	1,720.39	2,927.89	1,128.07	958.47	169.60	6.651	
8,700.00	6,064.86	8,946.40	6,064.86	87.59	88.74	-90.00	1,720.39	3,027.89	1,128.07	952.68	175.39	6.432	
8,800.00	6,065.13	9,046.40	6,065.12	90.50	91.60	-90.00	1,720.39	3,127.89	1,128.07	946.88	181.20	6.226	
8,900.00	6,065.39	9,146.40	6,065.39	93.41	94.47	-90.00	1,720.39	3,227.89	1,128.07	941.06	187.02	6.032	
9,000.00	6,065.66	9,246.40	6,065.65	96.33	97.35	-90.00	1,720.39	3,327.89	1,128.07	935.22	192.85	5.850	
9,100.00	6,065.92	9,346.40	6,065.92	99.26	100.24	-90.00	1,720.39	3,427.89	1,128.07	929.38	198.69	5.677	
9,200.00	6,066.19	9,446.40	6,066.19	102.20	103.14	-90.00	1,720.39	3,527.89	1,128.07	923.53	204.55	5.515	
9,300.00	6,066.46	9,546.40	6,066.45	105.13	106.04	-90.00	1,720.39	3,627.89	1,128.07	917.66	210.41	5.361	
9,400.00	6,066.72	9,646.40	6,066.72	108.07	108.95	-90.00	1,720.39	3,727.89	1,128.07	911.79	216.28	5.216	
9,500.00	6,066.99	9,746.40	6,066.98	111.02	111.86	-90.00	1,720.39	3,827.89	1,128.07	905.91	222.16	5.078	
9,600.00	6,067.25	9,846.40	6,067.25	113.97	114.78	-90.00	1,720.39	3,927.89	1,128.07	900.02	228.05	4.947	
9,700.00	6,067.52	9,946.40	6,067.52	116.92	117.70	-90.00	1,720.39	4,027.89	1,128.07	894.13	233.94	4.822	
9,800.00	6,067.79	10,046.40	6,067.78	119.87	120.63	-90.00	1,720.39	4,127.89	1,128.07	888.23	239.85	4.703	
9,900.00	6,068.05	10,146.40	6,068.05	122.83	123.56	-90.00	1,720.39	4,227.89	1,128.07	882.32	245.75	4.590	
10,000.00	6,068.32	10,246.40	6,068.31	125.79	126.50	-90.00	1,720.39	4,327.88	1,128.07	876.41	251.66	4.482	
10,100.00	6,068.59	10,346.40	6,068.58	128.75	129.44	-90.00	1,720.39	4,427.88	1,128.07	870.49	257.58	4.379	
10,200.00	6,068.85	10,446.40	6,068.85	131.71	132.38	-90.00	1,720.39	4,527.88	1,128.07	864.57	263.50	4.281	

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 601 1H - Slot B02
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 601 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
10,300.00	6,069.12	10,546.40	6,069.11	134.68	135.33	-90.00	1,720.39	4,627.88	1,128.07	858.64	269.43	4.187	
10,400.00	6,069.38	10,646.40	6,069.38	137.65	138.28	-90.00	1,720.39	4,727.88	1,128.07	852.71	275.36	4.097	
10,500.00	6,069.65	10,746.40	6,069.64	140.62	141.23	-90.00	1,720.39	4,827.88	1,128.07	846.78	281.30	4.010	
10,600.00	6,069.92	10,846.40	6,069.91	143.59	144.18	-90.00	1,720.39	4,927.88	1,128.07	840.84	287.23	3.927	
10,700.00	6,070.18	10,946.40	6,070.18	146.56	147.14	-90.00	1,720.39	5,027.88	1,128.07	834.90	293.18	3.848	
10,800.00	6,070.45	11,046.40	6,070.44	149.54	150.10	-90.00	1,720.39	5,127.88	1,128.07	828.95	299.12	3.771	
10,900.00	6,070.72	11,146.40	6,070.71	152.52	153.06	-90.00	1,720.39	5,227.88	1,128.07	823.00	305.07	3.698	
11,000.00	6,070.98	11,246.40	6,070.97	155.49	156.02	-90.00	1,720.39	5,327.88	1,128.07	817.05	311.02	3.627	
11,100.00	6,071.25	11,346.40	6,071.24	158.47	158.99	-90.00	1,720.39	5,427.88	1,128.07	811.10	316.97	3.559	
11,200.00	6,071.51	11,446.40	6,071.51	161.45	161.95	-90.00	1,720.39	5,527.88	1,128.07	805.14	322.93	3.493	
11,300.00	6,071.78	11,546.40	6,071.77	164.43	164.92	-90.00	1,720.39	5,627.88	1,128.07	799.18	328.89	3.430	
11,400.00	6,072.05	11,646.40	6,072.04	167.42	167.89	-90.00	1,720.39	5,727.88	1,128.07	793.22	334.85	3.369	
11,500.00	6,072.31	11,746.40	6,072.30	170.40	170.86	-90.00	1,720.39	5,827.88	1,128.07	787.26	340.81	3.310	
11,600.00	6,072.58	11,846.40	6,072.57	173.38	173.83	-90.00	1,720.39	5,927.88	1,128.07	781.29	346.78	3.253	
11,700.00	6,072.85	11,946.40	6,072.84	176.37	176.81	-90.00	1,720.39	6,027.88	1,128.07	775.33	352.74	3.198	
11,800.00	6,073.11	12,046.40	6,073.10	179.36	179.78	-90.00	1,720.39	6,127.88	1,128.07	769.36	358.71	3.145	
11,900.00	6,073.38	12,146.40	6,073.37	182.34	182.76	-90.00	1,720.39	6,227.88	1,128.07	763.39	364.68	3.093	
12,000.00	6,073.64	12,246.40	6,073.63	185.33	185.74	-90.00	1,720.39	6,327.88	1,128.07	757.42	370.65	3.043	
12,100.00	6,073.91	12,346.40	6,073.90	188.32	188.72	-90.00	1,720.39	6,427.88	1,128.07	751.44	376.63	2.995	
12,200.00	6,074.18	12,446.40	6,074.17	191.31	191.70	-90.00	1,720.39	6,527.88	1,128.07	745.47	382.60	2.948	
12,300.00	6,074.44	12,546.40	6,074.43	194.30	194.68	-90.00	1,720.39	6,627.88	1,128.07	739.49	388.58	2.903	
12,400.00	6,074.71	12,646.40	6,074.70	197.29	197.66	-90.00	1,720.39	6,727.88	1,128.07	733.51	394.56	2.859	
12,500.00	6,074.98	12,746.40	6,074.96	200.28	200.64	-90.00	1,720.39	6,827.88	1,128.07	727.53	400.54	2.816	
12,600.00	6,075.24	12,846.40	6,075.23	203.27	203.62	-90.00	1,720.39	6,927.88	1,128.07	721.55	406.52	2.775	
12,700.00	6,075.51	12,946.40	6,075.50	206.26	206.61	-90.00	1,720.39	7,027.88	1,128.07	715.57	412.50	2.735	
12,800.00	6,075.77	13,046.40	6,075.76	209.26	209.59	-90.00	1,720.39	7,127.88	1,128.07	709.59	418.48	2.696	
12,900.00	6,076.04	13,146.40	6,076.03	212.25	212.58	-90.00	1,720.39	7,227.87	1,128.07	703.60	424.47	2.658	
13,000.00	6,076.31	13,246.40	6,076.29	215.24	215.56	-90.00	1,720.39	7,327.87	1,128.07	697.62	430.45	2.621	
13,100.00	6,076.57	13,346.40	6,076.56	218.24	218.55	-90.00	1,720.39	7,427.87	1,128.07	691.63	436.44	2.585	
13,200.00	6,076.84	13,446.40	6,076.83	221.23	221.54	-90.00	1,720.39	7,527.87	1,128.07	685.64	442.43	2.550	
13,300.00	6,077.10	13,546.40	6,077.09	224.23	224.53	-90.00	1,720.39	7,627.87	1,128.07	679.66	448.41	2.516	
13,400.00	6,077.37	13,646.40	6,077.36	227.22	227.51	-90.00	1,720.39	7,727.87	1,128.07	673.67	454.40	2.483	
13,500.00	6,077.64	13,746.40	6,077.62	230.22	230.50	-90.00	1,720.39	7,827.87	1,128.07	667.68	460.39	2.450	
13,600.00	6,077.90	13,846.41	6,077.89	233.21	233.49	-90.00	1,720.39	7,927.88	1,128.07	661.69	466.38	2.419	
13,619.42	6,077.96	13,865.83	6,077.94	233.80	234.08	-90.00	1,720.39	7,947.30	1,128.07	660.52	467.55	2.413	
13,636.27	6,078.00	13,882.67	6,077.99	234.30	234.58	-90.00	1,720.39	7,964.15	1,128.07	659.51	468.56	2.408	SF

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	144.15	-60.79	43.93	75.00				
100.00	100.00	100.00	100.00	0.18	0.18	144.15	-60.79	43.93	75.00	74.64	0.36	209.227	
200.00	200.00	200.00	200.00	0.54	0.54	144.15	-60.79	43.93	75.00	73.93	1.08	69.742	
300.00	300.00	300.00	300.00	0.90	0.90	144.15	-60.79	43.93	75.00	73.21	1.79	41.845	
400.00	400.00	400.00	400.00	1.25	1.25	144.15	-60.79	43.93	75.00	72.49	2.51	29.890	
500.00	500.00	500.00	500.00	1.61	1.61	144.15	-60.79	43.93	75.00	71.78	3.23	23.247	CC, ES
600.00	599.98	597.58	597.56	1.97	1.95	133.21	-62.42	44.23	77.73	73.79	3.94	19.741	
700.00	699.84	694.49	694.35	2.33	2.27	136.90	-67.28	45.13	86.16	81.50	4.67	18.465	
800.00	799.45	790.10	789.61	2.70	2.60	141.60	-75.22	46.59	100.82	95.41	5.41	18.628	
900.00	898.83	884.05	882.90	3.06	2.93	146.10	-86.07	48.59	121.19	115.03	6.16	19.683	
1,000.00	998.21	979.82	977.71	3.43	3.29	149.56	-99.41	51.05	144.53	137.69	6.84	21.121	
1,100.00	1,097.58	1,076.70	1,073.59	3.80	3.66	152.09	-113.02	53.56	168.37	160.86	7.51	22.417	
1,200.00	1,196.96	1,173.59	1,169.48	4.18	4.03	154.00	-126.64	56.07	192.45	184.26	8.19	23.492	
1,300.00	1,296.33	1,270.47	1,265.37	4.56	4.41	155.48	-140.26	58.58	216.69	207.81	8.88	24.410	
1,400.00	1,395.71	1,367.36	1,361.26	4.94	4.80	156.66	-153.87	61.09	241.03	231.46	9.57	25.195	
1,500.00	1,495.08	1,464.24	1,457.15	5.32	5.18	157.63	-167.49	63.60	265.45	255.19	10.26	25.872	
1,600.00	1,594.46	1,561.12	1,553.04	5.70	5.57	158.43	-181.11	66.10	289.93	278.97	10.96	26.461	
1,700.00	1,693.83	1,658.01	1,648.93	6.08	5.96	159.11	-194.72	68.61	314.46	302.80	11.66	26.978	
1,800.00	1,793.21	1,754.89	1,744.82	6.46	6.35	159.69	-208.34	71.12	339.02	326.66	12.36	27.433	
1,900.00	1,892.58	1,851.77	1,840.71	6.85	6.75	160.19	-221.96	73.63	363.61	350.55	13.06	27.838	
2,000.00	1,991.96	1,948.66	1,936.60	7.23	7.14	160.63	-235.57	76.14	388.22	374.45	13.77	28.200	
2,100.00	2,091.33	2,045.54	2,032.49	7.62	7.53	161.02	-249.19	78.65	412.85	398.38	14.47	28.525	
2,200.00	2,190.71	2,142.42	2,128.38	8.00	7.93	161.36	-262.80	81.16	437.50	422.32	15.18	28.818	
2,300.00	2,290.08	2,239.31	2,224.26	8.38	8.33	161.66	-276.42	83.67	462.16	446.27	15.89	29.085	
2,400.00	2,389.46	2,336.19	2,320.15	8.77	8.72	161.94	-290.04	86.18	486.83	470.23	16.60	29.327	
2,500.00	2,488.83	2,433.08	2,416.04	9.15	9.12	162.19	-303.65	88.69	511.51	494.20	17.31	29.549	
2,600.00	2,588.20	2,529.96	2,511.93	9.54	9.52	162.41	-317.27	91.20	536.20	518.18	18.02	29.753	
2,700.00	2,687.58	2,626.84	2,607.82	9.92	9.92	162.62	-330.89	93.71	560.90	542.17	18.73	29.940	
2,800.00	2,786.95	2,723.73	2,703.71	10.31	10.32	162.81	-344.50	96.22	585.60	566.16	19.45	30.114	
2,900.00	2,886.33	2,820.61	2,799.60	10.70	10.72	162.98	-358.12	98.73	610.31	590.15	20.16	30.274	
3,000.00	2,985.70	2,917.49	2,895.49	11.08	11.11	163.14	-371.74	101.24	635.02	614.15	20.87	30.423	
3,100.00	3,085.08	3,014.38	2,991.38	11.47	11.51	163.29	-385.35	103.75	659.74	638.15	21.59	30.562	
3,200.00	3,184.45	3,111.26	3,087.27	11.85	11.91	163.43	-398.97	106.26	684.46	662.16	22.30	30.692	
3,300.00	3,283.83	3,208.14	3,183.16	12.24	12.31	163.55	-412.59	108.77	709.19	686.17	23.02	30.813	
3,400.00	3,383.20	3,305.03	3,279.05	12.62	12.71	163.67	-426.20	111.28	733.91	710.18	23.73	30.927	
3,500.00	3,482.58	3,401.91	3,374.94	13.01	13.11	163.78	-439.82	113.79	758.64	734.20	24.45	31.034	
3,600.00	3,581.95	3,498.80	3,470.82	13.40	13.51	163.89	-453.44	116.30	783.38	758.22	25.16	31.135	
3,700.00	3,681.33	3,595.68	3,566.71	13.78	13.91	163.98	-467.05	118.81	808.11	782.24	25.88	31.230	
3,800.00	3,780.70	3,692.56	3,662.60	14.17	14.31	164.08	-480.67	121.32	832.85	806.26	26.59	31.319	
3,900.00	3,880.08	3,789.45	3,758.49	14.55	14.71	164.16	-494.29	123.82	857.59	830.28	27.31	31.404	
4,000.00	3,979.45	3,886.33	3,854.38	14.94	15.12	164.25	-507.90	126.33	882.33	854.30	28.02	31.484	
4,100.00	4,078.82	3,983.21	3,950.27	15.33	15.52	164.32	-521.52	128.84	907.07	878.33	28.74	31.560	
4,200.00	4,178.20	4,080.10	4,046.16	15.71	15.92	164.40	-535.14	131.35	931.82	902.36	29.46	31.633	
4,300.00	4,277.57	4,176.98	4,142.05	16.10	16.32	164.47	-548.75	133.86	956.56	926.39	30.17	31.701	
4,400.00	4,376.95	4,273.86	4,237.94	16.49	16.72	164.53	-562.37	136.37	981.31	950.42	30.89	31.767	
4,500.00	4,476.32	4,370.75	4,333.83	16.87	17.12	164.59	-575.98	138.88	1,006.05	974.45	31.61	31.829	
4,600.00	4,575.70	4,467.63	4,429.72	17.26	17.52	164.65	-589.60	141.39	1,030.80	998.48	32.32	31.889	
4,700.00	4,675.07	4,564.52	4,525.61	17.65	17.92	164.71	-603.22	143.90	1,055.55	1,022.51	33.04	31.946	
4,800.00	4,774.45	4,661.40	4,621.49	18.03	18.32	164.77	-616.83	146.41	1,080.30	1,046.54	33.76	32.000	
4,900.00	4,873.82	4,758.28	4,717.38	18.42	18.72	164.82	-630.45	148.92	1,105.06	1,070.58	34.48	32.052	
5,000.00	4,973.20	4,855.17	4,813.27	18.80	19.13	164.87	-644.07	151.43	1,129.81	1,094.61	35.19	32.102	
5,100.00	5,072.57	4,952.05	4,909.16	19.19	19.53	164.91	-657.68	153.94	1,154.56	1,118.65	35.91	32.150	

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 601 1H - Slot B02
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 601 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	5,171.95	5,048.93	5,005.05	19.58	19.93	164.96	-671.30	156.45	1,179.32	1,142.69	36.63	32.196	
5,300.00	5,271.32	5,145.82	5,100.94	19.96	20.33	165.00	-684.92	158.96	1,204.07	1,166.72	37.35	32.240	
5,400.00	5,370.69	5,242.70	5,196.83	20.35	20.73	160.36	-698.53	161.47	1,228.82	1,190.76	38.07	32.282	
5,500.00	5,469.49	5,339.23	5,292.36	20.74	21.13	118.14	-712.10	163.97	1,253.15	1,214.37	38.79	32.308	
5,600.00	5,565.90	5,433.35	5,385.51	21.13	21.52	104.29	-725.33	166.62	1,276.67	1,237.16	39.51	32.312	
5,700.00	5,658.06	5,526.31	5,476.88	21.53	21.91	98.05	-738.29	177.30	1,299.50	1,259.24	40.26	32.278	
5,800.00	5,744.16	5,623.01	5,569.63	21.93	22.32	94.52	-751.45	200.98	1,321.39	1,280.30	41.09	32.157	
5,900.00	5,822.53	5,724.10	5,662.29	22.38	22.74	92.30	-764.58	238.99	1,341.92	1,299.86	42.06	31.907	
6,000.00	5,891.65	5,830.27	5,752.88	22.93	23.19	90.87	-777.40	292.65	1,360.67	1,317.44	43.23	31.473	
6,100.00	5,950.17	5,942.12	5,838.73	23.68	23.70	89.98	-789.54	363.13	1,377.20	1,332.47	44.73	30.787	
6,200.00	5,996.95	6,060.07	5,916.33	24.69	24.34	89.51	-800.50	451.10	1,391.06	1,344.35	46.71	29.781	
6,300.00	6,031.08	6,184.25	5,981.43	25.98	25.29	89.37	-809.66	556.27	1,401.82	1,352.50	49.32	28.424	
6,400.00	6,051.90	6,314.31	6,029.29	27.55	26.73	89.50	-816.36	676.82	1,409.05	1,356.39	52.66	26.758	
6,500.00	6,059.00	6,449.29	6,055.31	29.33	28.76	89.85	-819.96	809.02	1,412.40	1,355.69	56.71	24.905	
6,600.00	6,059.27	6,568.84	6,059.13	31.29	30.91	89.99	-820.41	928.45	1,412.72	1,351.73	60.99	23.162	
6,700.00	6,059.53	6,668.84	6,059.40	33.41	32.91	89.99	-820.37	1,028.45	1,412.68	1,347.45	65.24	21.655	
6,800.00	6,059.80	6,768.84	6,059.67	35.66	35.06	89.99	-820.33	1,128.45	1,412.65	1,342.91	69.74	20.256	
6,900.00	6,060.07	6,868.84	6,059.93	38.01	37.34	89.99	-820.29	1,228.45	1,412.61	1,338.15	74.46	18.972	
7,000.00	6,060.33	6,968.84	6,060.20	40.45	39.72	89.99	-820.25	1,328.45	1,412.57	1,333.22	79.35	17.802	
7,100.00	6,060.60	7,068.84	6,060.47	42.97	42.18	89.99	-820.21	1,428.45	1,412.53	1,328.14	84.39	16.738	
7,200.00	6,060.87	7,168.84	6,060.74	45.54	44.72	89.99	-820.17	1,528.45	1,412.49	1,322.94	89.55	15.773	
7,300.00	6,061.13	7,268.84	6,061.01	48.17	47.31	89.99	-820.14	1,628.45	1,412.45	1,317.63	94.82	14.896	
7,400.00	6,061.40	7,368.84	6,061.28	50.84	49.94	89.99	-820.10	1,728.44	1,412.41	1,312.24	100.17	14.101	
7,500.00	6,061.66	7,468.84	6,061.54	53.55	52.62	90.00	-820.06	1,828.44	1,412.37	1,306.78	105.59	13.376	
7,600.00	6,061.93	7,568.84	6,061.81	56.28	55.34	90.00	-820.02	1,928.44	1,412.33	1,301.26	111.07	12.715	
7,700.00	6,062.20	7,668.84	6,062.08	59.05	58.08	90.00	-819.98	2,028.44	1,412.29	1,295.68	116.61	12.111	
7,800.00	6,062.46	7,768.84	6,062.35	61.83	60.85	90.00	-819.94	2,128.44	1,412.26	1,290.06	122.19	11.558	
7,900.00	6,062.73	7,868.84	6,062.62	64.64	63.64	90.00	-819.90	2,228.44	1,412.22	1,284.40	127.82	11.049	
8,000.00	6,063.00	7,968.84	6,062.88	67.46	66.45	90.00	-819.86	2,328.44	1,412.18	1,278.70	133.47	10.580	
8,100.00	6,063.26	8,068.84	6,063.15	70.30	69.28	90.00	-819.82	2,428.44	1,412.14	1,272.98	139.16	10.147	
8,200.00	6,063.53	8,168.84	6,063.42	73.16	72.12	90.00	-819.78	2,528.44	1,412.10	1,267.22	144.88	9.747	
8,300.00	6,063.79	8,268.84	6,063.69	76.02	74.98	90.00	-819.75	2,628.44	1,412.06	1,261.44	150.62	9.375	
8,400.00	6,064.06	8,368.84	6,063.96	78.90	77.85	90.00	-819.71	2,728.44	1,412.02	1,255.64	156.38	9.030	
8,500.00	6,064.33	8,468.84	6,064.23	81.79	80.73	90.00	-819.67	2,828.44	1,411.98	1,249.83	162.16	8.708	
8,600.00	6,064.59	8,568.84	6,064.49	84.68	83.61	90.00	-819.63	2,928.44	1,411.94	1,243.99	167.95	8.407	
8,700.00	6,064.86	8,668.84	6,064.76	87.59	86.51	90.00	-819.59	3,028.44	1,411.90	1,238.14	173.77	8.125	
8,800.00	6,065.13	8,768.84	6,065.03	90.50	89.41	90.00	-819.55	3,128.44	1,411.87	1,232.27	179.59	7.862	
8,900.00	6,065.39	8,868.84	6,065.30	93.41	92.33	90.00	-819.51	3,228.44	1,411.83	1,226.40	185.43	7.614	
9,000.00	6,065.66	8,968.84	6,065.57	96.33	95.24	90.00	-819.47	3,328.44	1,411.79	1,220.51	191.28	7.381	
9,100.00	6,065.92	9,068.84	6,065.83	99.26	98.17	90.00	-819.43	3,428.44	1,411.75	1,214.61	197.14	7.161	
9,200.00	6,066.19	9,168.84	6,066.10	102.20	101.09	90.00	-819.39	3,528.44	1,411.71	1,208.70	203.01	6.954	
9,300.00	6,066.46	9,268.84	6,066.37	105.13	104.03	90.00	-819.36	3,628.44	1,411.67	1,202.78	208.89	6.758	
9,400.00	6,066.72	9,368.84	6,066.64	108.07	106.96	90.00	-819.32	3,728.44	1,411.63	1,196.86	214.77	6.573	
9,500.00	6,066.99	9,468.84	6,066.91	111.02	109.91	90.00	-819.28	3,828.44	1,411.59	1,190.93	220.67	6.397	
9,600.00	6,067.25	9,568.84	6,067.18	113.97	112.85	90.00	-819.24	3,928.44	1,411.55	1,184.99	226.57	6.230	
9,700.00	6,067.52	9,668.84	6,067.44	116.92	115.80	90.00	-819.20	4,028.44	1,411.51	1,179.04	232.47	6.072	
9,800.00	6,067.79	9,768.84	6,067.71	119.87	118.75	90.00	-819.16	4,128.44	1,411.48	1,173.09	238.39	5.921	
9,900.00	6,068.05	9,868.84	6,067.98	122.83	121.71	90.00	-819.12	4,228.44	1,411.44	1,167.13	244.30	5.777	
10,000.00	6,068.32	9,968.84	6,068.25	125.79	124.66	90.00	-819.08	4,328.44	1,411.40	1,161.17	250.23	5.640	
10,100.00	6,068.59	10,068.84	6,068.52	128.75	127.62	90.00	-819.04	4,428.43	1,411.36	1,155.20	256.15	5.510	
10,200.00	6,068.85	10,168.84	6,068.78	131.71	130.58	90.00	-819.00	4,528.43	1,411.32	1,149.23	262.09	5.385	
10,300.00	6,069.12	10,268.84	6,069.05	134.68	133.55	90.00	-818.97	4,628.43	1,411.28	1,143.26	268.02	5.266	

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 601 1H - Slot B02
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 601 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	6,069.38	10,368.84	6,069.32	137.65	136.51	90.00	-818.93	4,728.43	1,411.24	1,137.28	273.96	5.151	
10,500.00	6,069.65	10,468.84	6,069.59	140.62	139.48	90.00	-818.89	4,828.43	1,411.20	1,131.30	279.90	5.042	
10,600.00	6,069.92	10,568.84	6,069.86	143.59	142.45	90.00	-818.85	4,928.43	1,411.16	1,125.31	285.85	4.937	
10,700.00	6,070.18	10,668.84	6,070.13	146.56	145.42	90.00	-818.81	5,028.43	1,411.12	1,119.33	291.80	4.836	
10,800.00	6,070.45	10,768.84	6,070.39	149.54	148.40	90.00	-818.77	5,128.43	1,411.09	1,113.33	297.75	4.739	
10,900.00	6,070.72	10,868.84	6,070.66	152.52	151.37	90.00	-818.73	5,228.43	1,411.05	1,107.34	303.71	4.646	
11,000.00	6,070.98	10,968.84	6,070.93	155.49	154.35	90.00	-818.69	5,328.43	1,411.01	1,101.34	309.66	4.557	
11,100.00	6,071.25	11,068.84	6,071.20	158.47	157.33	90.00	-818.65	5,428.43	1,410.97	1,095.34	315.62	4.470	
11,200.00	6,071.51	11,168.84	6,071.47	161.45	160.31	90.00	-818.61	5,528.43	1,410.93	1,089.34	321.59	4.387	
11,300.00	6,071.78	11,268.84	6,071.74	164.43	163.29	90.00	-818.58	5,628.43	1,410.89	1,083.34	327.55	4.307	
11,400.00	6,072.05	11,368.84	6,072.00	167.42	166.27	90.00	-818.54	5,728.43	1,410.85	1,077.33	333.52	4.230	
11,500.00	6,072.31	11,468.84	6,072.27	170.40	169.25	90.00	-818.50	5,828.43	1,410.81	1,071.33	339.49	4.156	
11,600.00	6,072.58	11,568.84	6,072.54	173.38	172.23	90.00	-818.46	5,928.43	1,410.77	1,065.32	345.46	4.084	
11,700.00	6,072.85	11,668.84	6,072.81	176.37	175.22	90.00	-818.42	6,028.43	1,410.73	1,059.31	351.43	4.014	
11,800.00	6,073.11	11,768.84	6,073.08	179.36	178.20	90.00	-818.38	6,128.43	1,410.70	1,053.29	357.40	3.947	
11,900.00	6,073.38	11,868.84	6,073.34	182.34	181.19	90.00	-818.34	6,228.43	1,410.66	1,047.28	363.38	3.882	
12,000.00	6,073.64	11,968.84	6,073.61	185.33	184.17	90.00	-818.30	6,328.43	1,410.62	1,041.26	369.36	3.819	
12,100.00	6,073.91	12,068.84	6,073.88	188.32	187.16	90.00	-818.26	6,428.43	1,410.58	1,035.24	375.33	3.758	
12,200.00	6,074.18	12,168.84	6,074.15	191.31	190.15	90.00	-818.22	6,528.43	1,410.54	1,029.23	381.31	3.699	
12,300.00	6,074.44	12,268.84	6,074.42	194.30	193.14	90.00	-818.19	6,628.43	1,410.50	1,023.21	387.30	3.642	
12,400.00	6,074.71	12,368.84	6,074.69	197.29	196.13	90.00	-818.15	6,728.43	1,410.46	1,017.18	393.28	3.586	
12,500.00	6,074.98	12,468.84	6,074.95	200.28	199.12	90.00	-818.11	6,828.43	1,410.42	1,011.16	399.26	3.533	
12,600.00	6,075.24	12,568.84	6,075.22	203.27	202.11	90.00	-818.07	6,928.43	1,410.38	1,005.14	405.25	3.480	
12,700.00	6,075.51	12,668.84	6,075.49	206.26	205.10	90.00	-818.03	7,028.43	1,410.34	999.11	411.23	3.430	
12,800.00	6,075.77	12,768.84	6,075.76	209.26	208.09	90.00	-817.99	7,128.42	1,410.31	993.09	417.22	3.380	
12,900.00	6,076.04	12,868.84	6,076.03	212.25	211.09	90.00	-817.95	7,228.42	1,410.27	987.06	423.21	3.332	
13,000.00	6,076.31	12,968.84	6,076.29	215.24	214.08	90.00	-817.91	7,328.42	1,410.23	981.03	429.19	3.286	
13,100.00	6,076.57	13,068.84	6,076.56	218.24	217.07	90.00	-817.87	7,428.42	1,410.19	975.00	435.18	3.240	
13,200.00	6,076.84	13,168.84	6,076.83	221.23	220.07	90.00	-817.83	7,528.42	1,410.15	968.97	441.18	3.196	
13,300.00	6,077.10	13,268.84	6,077.10	224.23	223.06	90.00	-817.80	7,628.42	1,410.11	962.94	447.17	3.153	
13,400.00	6,077.37	13,368.84	6,077.37	227.22	226.06	90.00	-817.76	7,728.42	1,410.07	956.91	453.16	3.112	
13,500.00	6,077.64	13,468.84	6,077.64	230.22	229.05	90.00	-817.72	7,828.42	1,410.03	950.88	459.15	3.071	
13,600.00	6,077.90	13,568.73	6,077.90	233.21	232.05	90.00	-817.68	7,928.31	1,410.00	944.86	465.14	3.031	
13,636.27	6,078.00	13,604.82	6,078.00	234.30	233.13	90.00	-817.67	7,964.40	1,409.99	942.67	467.31	3.017 SF	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

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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 601 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	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	139.226	
200.00	200.00	200.00	200.00	0.54	0.54	144.06	-40.41	29.29	49.91	48.83	1.08	46.409	
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	15.470	CC, ES
600.00	599.98	598.45	598.43	1.97	1.95	134.08	-42.10	29.36	52.55	48.61	3.94	13.344	
700.00	699.84	696.21	696.06	2.33	2.28	139.90	-47.12	29.58	60.93	56.26	4.67	13.050	
800.00	799.45	792.61	792.10	2.70	2.61	146.56	-55.33	29.94	75.85	70.43	5.42	13.994	
900.00	898.83	887.27	886.09	3.06	2.94	152.18	-66.52	30.42	96.76	90.59	6.17	15.687	
1,000.00	998.21	980.40	978.15	3.43	3.29	156.05	-80.56	31.03	121.51	114.61	6.90	17.616	
1,100.00	1,097.58	1,071.84	1,068.05	3.80	3.65	158.73	-97.24	31.76	149.71	142.10	7.61	19.680	
1,200.00	1,196.96	1,161.46	1,155.60	4.18	4.02	160.62	-116.36	32.59	181.14	172.83	8.30	21.815	
1,300.00	1,296.33	1,249.15	1,240.64	4.56	4.40	161.99	-137.71	33.51	215.62	206.64	8.98	24.016	
1,400.00	1,395.71	1,334.81	1,323.04	4.94	4.80	162.99	-161.07	34.53	253.02	243.38	9.63	26.268	
1,500.00	1,495.08	1,418.35	1,402.71	5.32	5.20	163.75	-186.21	35.62	293.19	282.92	10.26	28.562	
1,600.00	1,594.46	1,500.00	1,479.82	5.70	5.62	164.32	-213.02	36.78	336.02	325.14	10.88	30.894	
1,700.00	1,693.83	1,578.90	1,553.57	6.08	6.05	164.76	-240.99	38.00	381.38	369.92	11.47	33.262	
1,800.00	1,793.21	1,658.78	1,627.47	6.46	6.50	165.12	-271.29	39.31	429.10	417.05	12.05	35.614	
1,900.00	1,892.58	1,746.27	1,708.17	6.85	7.02	165.43	-305.05	40.78	477.48	464.80	12.67	37.673	
2,000.00	1,991.96	1,833.76	1,788.88	7.23	7.54	165.68	-338.82	42.24	525.86	512.55	13.31	39.511	
2,100.00	2,091.33	1,921.26	1,869.58	7.62	8.07	165.90	-372.58	43.71	574.25	560.30	13.95	41.156	
2,200.00	2,190.71	2,008.75	1,950.28	8.00	8.61	166.08	-406.34	45.17	622.65	608.05	14.60	42.636	
2,300.00	2,290.08	2,096.24	2,030.98	8.38	9.16	166.23	-440.11	46.64	671.05	655.79	15.26	43.971	
2,400.00	2,389.46	2,183.74	2,111.69	8.77	9.71	166.36	-473.87	48.10	719.46	703.53	15.92	45.180	
2,500.00	2,488.83	2,271.23	2,192.39	9.15	10.26	166.48	-507.64	49.57	767.86	751.27	16.59	46.279	
2,600.00	2,588.20	2,358.72	2,273.09	9.54	10.81	166.58	-541.40	51.04	816.27	799.01	17.26	47.281	
2,700.00	2,687.58	2,446.22	2,353.79	9.92	11.37	166.67	-575.16	52.50	864.68	846.74	17.94	48.199	
2,800.00	2,786.95	2,533.71	2,434.50	10.31	11.93	166.75	-608.93	53.97	913.09	894.48	18.62	49.040	
2,900.00	2,886.33	2,621.20	2,515.20	10.70	12.49	166.83	-642.69	55.43	961.51	942.21	19.30	49.815	
3,000.00	2,985.70	2,708.69	2,595.90	11.08	13.06	166.89	-676.45	56.90	1,009.92	989.94	19.99	50.530	
3,100.00	3,085.08	2,796.19	2,676.60	11.47	13.62	166.95	-710.22	58.36	1,058.34	1,037.66	20.67	51.192	
3,200.00	3,184.45	2,883.68	2,757.31	11.85	14.19	167.01	-743.98	59.83	1,106.76	1,085.39	21.36	51.806	
3,300.00	3,283.83	2,971.17	2,838.01	12.24	14.76	167.06	-777.75	61.29	1,155.17	1,133.12	22.06	52.377	
3,400.00	3,383.20	3,058.67	2,918.71	12.62	15.33	167.11	-811.51	62.76	1,203.59	1,180.84	22.75	52.909	
3,500.00	3,482.58	3,146.16	2,999.41	13.01	15.90	167.15	-845.27	64.23	1,252.01	1,228.56	23.44	53.405	
3,600.00	3,581.95	3,233.65	3,080.12	13.40	16.47	167.19	-879.04	65.69	1,300.43	1,276.29	24.14	53.870	
3,700.00	3,681.33	3,321.15	3,160.82	13.78	17.04	167.22	-912.80	67.16	1,348.85	1,324.01	24.84	54.306	
3,800.00	3,780.70	3,408.64	3,241.52	14.17	17.61	167.26	-946.57	68.62	1,397.27	1,371.73	25.54	54.715	
3,900.00	3,880.08	3,496.13	3,322.22	14.55	18.19	167.29	-980.33	70.09	1,445.69	1,419.45	26.24	55.100	
4,000.00	3,979.45	3,583.62	3,402.93	14.94	18.76	167.32	-1,014.09	71.55	1,494.11	1,467.17	26.94	55.463	
4,100.00	4,078.82	3,671.12	3,483.63	15.33	19.33	167.35	-1,047.86	73.02	1,542.53	1,514.89	27.64	55.805	
4,200.00	4,178.20	3,758.61	3,564.33	15.71	19.91	167.37	-1,081.62	74.48	1,590.95	1,562.60	28.34	56.128	
4,300.00	4,277.57	3,846.10	3,645.03	16.10	20.48	167.40	-1,115.38	75.95	1,639.37	1,610.32	29.05	56.434	
4,400.00	4,376.95	3,933.60	3,725.74	16.49	21.06	167.42	-1,149.15	77.42	1,687.79	1,658.04	29.75	56.724	
4,500.00	4,476.32	4,021.09	3,806.44	16.87	21.64	167.44	-1,182.91	78.88	1,736.21	1,705.75	30.46	57.000	
4,600.00	4,575.70	4,108.58	3,887.14	17.26	22.21	167.46	-1,216.68	80.35	1,784.63	1,753.47	31.17	57.261	
4,700.00	4,675.07	4,196.08	3,967.84	17.65	22.79	167.48	-1,250.44	81.81	1,833.06	1,801.18	31.87	57.510	
4,800.00	4,774.45	4,283.57	4,048.55	18.03	23.36	167.50	-1,284.20	83.28	1,881.48	1,848.90	32.58	57.746	
4,900.00	4,873.82	4,371.06	4,129.25	18.42	23.94	167.52	-1,317.97	84.74	1,929.90	1,896.61	33.29	57.972	
5,000.00	4,973.20	4,458.55	4,209.95	18.80	24.52	167.54	-1,351.73	86.21	1,978.32	1,944.32	34.00	58.187	
5,100.00	5,072.57	4,546.05	4,290.65	19.19	25.10	167.55	-1,385.49	87.67	2,026.75	1,992.04	34.71	58.393	

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 601 1H - Slot B02
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 601 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
5,200.00	5,171.95	4,633.54	4,371.36	19.58	25.67	167.57	-1,419.26	89.14	2,075.17	2,039.75	35.42	58.589	
5,300.00	5,271.32	4,721.03	4,452.06	19.96	26.25	167.58	-1,453.02	90.61	2,123.59	2,087.46	36.13	58.777	
5,400.00	5,370.69	4,808.53	4,532.76	20.35	26.83	162.76	-1,486.79	92.07	2,172.01	2,135.17	36.84	58.957	
5,500.00	5,469.49	4,895.64	4,613.12	20.74	27.41	117.97	-1,520.40	93.53	2,220.24	2,182.69	37.56	59.118	
5,600.00	5,565.90	4,980.89	4,691.75	21.13	27.97	101.40	-1,553.30	94.96	2,267.62	2,229.35	38.27	59.250	
5,700.00	5,658.06	5,062.62	4,767.13	21.53	28.51	92.67	-1,584.84	96.33	2,313.59	2,274.61	38.99	59.341	
5,800.00	5,744.16	5,139.23	4,837.80	21.93	29.02	86.93	-1,614.41	97.61	2,357.82	2,318.11	39.72	59.367	
5,900.00	5,822.53	5,209.24	4,902.37	22.38	29.48	82.71	-1,641.42	98.78	2,400.13	2,359.64	40.49	59.284	
6,000.00	5,891.65	5,271.28	4,959.59	22.93	29.89	79.36	-1,665.36	99.82	2,440.42	2,399.08	41.34	59.035	
6,100.00	5,950.17	5,324.14	5,008.35	23.68	30.24	76.55	-1,685.76	100.71	2,478.68	2,436.36	42.32	58.566	
6,200.00	5,996.95	5,366.79	5,047.70	24.69	30.52	74.07	-1,702.22	101.42	2,514.88	2,471.40	43.48	57.843	
6,300.00	6,031.08	5,398.41	5,076.86	25.98	30.73	71.80	-1,714.42	101.95	2,548.94	2,504.13	44.82	56.876	
6,400.00	6,051.90	5,418.38	5,095.28	27.55	30.86	69.65	-1,722.13	102.29	2,580.72	2,534.40	46.32	55.720	
6,500.00	6,059.00	5,426.31	5,102.59	29.33	30.92	67.62	-1,725.19	102.42	2,609.95	2,562.03	47.92	54.460	
6,600.00	6,059.27	5,428.23	5,104.36	31.29	30.93	67.66	-1,725.93	102.45	2,639.60	2,589.98	49.62	53.196	
6,700.00	6,059.53	5,430.15	5,106.14	33.41	30.94	67.70	-1,726.67	102.48	2,672.65	2,621.25	51.40	51.997	
6,800.00	6,059.80	5,432.07	5,107.91	35.66	30.95	67.75	-1,727.41	102.52	2,708.99	2,655.77	53.23	50.896	
6,900.00	6,060.07	7,276.89	6,060.08	38.01	46.02	90.00	-2,123.87	1,229.54	2,716.19	2,638.46	77.72	34.947	
7,000.00	6,060.33	7,376.89	6,060.35	40.45	47.84	90.00	-2,123.81	1,329.54	2,716.13	2,633.57	82.56	32.899	
7,100.00	6,060.60	7,476.89	6,060.62	42.97	49.80	90.00	-2,123.75	1,429.54	2,716.07	2,628.52	87.54	31.026	
7,200.00	6,060.87	7,576.89	6,060.88	45.54	51.90	90.00	-2,123.69	1,529.54	2,716.01	2,623.36	92.65	29.316	
7,300.00	6,061.13	7,676.89	6,061.15	48.17	54.11	90.00	-2,123.63	1,629.54	2,715.94	2,618.09	97.86	27.754	
7,400.00	6,061.40	7,776.89	6,061.42	50.84	56.42	90.00	-2,123.57	1,729.54	2,715.88	2,612.73	103.15	26.328	
7,500.00	6,061.66	7,876.89	6,061.68	53.55	58.81	90.00	-2,123.51	1,829.54	2,715.82	2,607.30	108.53	25.024	
7,600.00	6,061.93	7,976.89	6,061.95	56.28	61.26	90.00	-2,123.45	1,929.53	2,715.76	2,601.80	113.97	23.829	
7,700.00	6,062.20	8,076.89	6,062.22	59.05	63.78	90.00	-2,123.39	2,029.53	2,715.70	2,596.24	119.46	22.733	
7,800.00	6,062.46	8,176.89	6,062.48	61.83	66.34	90.00	-2,123.33	2,129.53	2,715.64	2,590.64	125.00	21.724	
7,900.00	6,062.73	8,276.89	6,062.75	64.64	68.95	90.00	-2,123.27	2,229.53	2,715.58	2,584.99	130.59	20.795	
8,000.00	6,063.00	8,376.89	6,063.02	67.46	71.59	90.00	-2,123.21	2,329.53	2,715.52	2,579.31	136.21	19.936	
8,100.00	6,063.26	8,476.89	6,063.28	70.30	74.27	90.00	-2,123.14	2,429.53	2,715.46	2,573.59	141.87	19.141	
8,200.00	6,063.53	8,576.89	6,063.55	73.16	76.97	90.00	-2,123.08	2,529.53	2,715.40	2,567.85	147.55	18.403	
8,300.00	6,063.79	8,676.89	6,063.81	76.02	79.70	90.00	-2,123.02	2,629.53	2,715.34	2,562.08	153.26	17.717	
8,400.00	6,064.06	8,776.89	6,064.08	78.90	82.45	90.00	-2,122.96	2,729.53	2,715.28	2,556.28	158.99	17.078	
8,500.00	6,064.33	8,876.89	6,064.35	81.79	85.22	90.00	-2,122.90	2,829.53	2,715.22	2,550.47	164.75	16.481	
8,600.00	6,064.59	8,976.89	6,064.61	84.68	88.01	90.00	-2,122.84	2,929.53	2,715.16	2,544.64	170.52	15.923	
8,700.00	6,064.86	9,076.89	6,064.88	87.59	90.81	90.00	-2,122.78	3,029.53	2,715.10	2,538.79	176.31	15.400	
8,800.00	6,065.13	9,176.89	6,065.15	90.50	93.63	90.00	-2,122.72	3,129.53	2,715.04	2,532.92	182.11	14.908	
8,900.00	6,065.39	9,276.89	6,065.41	93.41	96.46	90.00	-2,122.66	3,229.53	2,714.98	2,527.05	187.93	14.447	
9,000.00	6,065.66	9,376.89	6,065.68	96.33	99.30	90.00	-2,122.60	3,329.53	2,714.92	2,521.16	193.76	14.012	
9,100.00	6,065.92	9,476.89	6,065.95	99.26	102.15	90.00	-2,122.54	3,429.53	2,714.86	2,515.25	199.60	13.601	
9,200.00	6,066.19	9,576.89	6,066.21	102.20	105.02	90.00	-2,122.48	3,529.53	2,714.80	2,509.34	205.45	13.214	
9,300.00	6,066.46	9,676.89	6,066.48	105.13	107.89	90.00	-2,122.42	3,629.53	2,714.74	2,503.42	211.32	12.847	
9,400.00	6,066.72	9,776.89	6,066.75	108.07	110.77	90.00	-2,122.36	3,729.53	2,714.67	2,497.49	217.19	12.499	
9,500.00	6,066.99	9,876.89	6,067.01	111.02	113.65	90.00	-2,122.30	3,829.53	2,714.61	2,491.55	223.06	12.170	
9,600.00	6,067.25	9,976.89	6,067.28	113.97	116.54	90.00	-2,122.24	3,929.53	2,714.55	2,485.60	228.95	11.856	
9,700.00	6,067.52	10,076.89	6,067.54	116.92	119.44	90.00	-2,122.18	4,029.53	2,714.49	2,479.65	234.84	11.559	
9,800.00	6,067.79	10,176.89	6,067.81	119.87	122.35	90.00	-2,122.12	4,129.53	2,714.43	2,473.69	240.74	11.275	
9,900.00	6,068.05	10,276.89	6,068.08	122.83	125.25	90.00	-2,122.06	4,229.53	2,714.37	2,467.72	246.65	11.005	
10,000.00	6,068.32	10,376.89	6,068.34	125.79	128.17	90.00	-2,122.00	4,329.53	2,714.31	2,461.75	252.56	10.747	
10,100.00	6,068.59	10,476.89	6,068.61	128.75	131.09	90.00	-2,121.94	4,429.53	2,714.25	2,455.78	258.47	10.501	
10,200.00	6,068.85	10,576.89	6,068.88	131.71	134.01	90.00	-2,121.88	4,529.52	2,714.19	2,449.80	264.39	10.266	
10,300.00	6,069.12	10,676.89	6,069.14	134.68	136.94	90.00	-2,121.81	4,629.52	2,714.13	2,443.81	270.32	10.040	

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 601 1H - Slot B02
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 601 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	6,069.38	10,776.89	6,069.41	137.65	139.87	90.00	-2,121.75	4,729.52	2,714.07	2,437.82	276.25	9.825	
10,500.00	6,069.65	10,876.89	6,069.68	140.62	142.80	90.00	-2,121.69	4,829.52	2,714.01	2,431.83	282.18	9.618	
10,600.00	6,069.92	10,976.89	6,069.94	143.59	145.74	90.00	-2,121.63	4,929.52	2,713.95	2,425.83	288.12	9.420	
10,700.00	6,070.18	11,076.89	6,070.21	146.56	148.68	90.00	-2,121.57	5,029.52	2,713.89	2,419.83	294.06	9.229	
10,800.00	6,070.45	11,176.89	6,070.48	149.54	151.63	90.00	-2,121.51	5,129.52	2,713.83	2,413.83	300.00	9.046	
10,900.00	6,070.72	11,276.89	6,070.74	152.52	154.57	90.00	-2,121.45	5,229.52	2,713.77	2,407.82	305.95	8.870	
11,000.00	6,070.98	11,376.89	6,071.01	155.49	157.52	90.00	-2,121.39	5,329.52	2,713.71	2,401.81	311.90	8.701	
11,100.00	6,071.25	11,476.89	6,071.27	158.47	160.47	90.00	-2,121.33	5,429.52	2,713.65	2,395.80	317.85	8.537	
11,200.00	6,071.51	11,576.89	6,071.54	161.45	163.42	90.00	-2,121.27	5,529.52	2,713.59	2,389.78	323.81	8.380	
11,300.00	6,071.78	11,676.89	6,071.81	164.43	166.38	90.00	-2,121.21	5,629.52	2,713.53	2,383.76	329.76	8.229	
11,400.00	6,072.05	11,776.89	6,072.07	167.42	169.34	90.00	-2,121.15	5,729.52	2,713.47	2,377.74	335.72	8.082	
11,500.00	6,072.31	11,876.89	6,072.34	170.40	172.30	90.00	-2,121.09	5,829.52	2,713.41	2,371.72	341.68	7.941	
11,600.00	6,072.58	11,976.89	6,072.61	173.38	175.26	90.00	-2,121.03	5,929.52	2,713.34	2,365.70	347.65	7.805	
11,700.00	6,072.85	12,076.89	6,072.87	176.37	178.22	90.00	-2,120.97	6,029.52	2,713.28	2,359.67	353.61	7.673	
11,800.00	6,073.11	12,176.89	6,073.14	179.36	181.19	90.00	-2,120.91	6,129.52	2,713.22	2,353.64	359.58	7.546	
11,900.00	6,073.38	12,276.89	6,073.41	182.34	184.15	90.00	-2,120.85	6,229.52	2,713.16	2,347.61	365.55	7.422	
12,000.00	6,073.64	12,376.89	6,073.67	185.33	187.12	90.00	-2,120.79	6,329.52	2,713.10	2,341.58	371.52	7.303	
12,100.00	6,073.91	12,476.89	6,073.94	188.32	190.09	90.00	-2,120.73	6,429.52	2,713.04	2,335.55	377.49	7.187	
12,200.00	6,074.18	12,576.89	6,074.20	191.31	193.06	90.00	-2,120.67	6,529.52	2,712.98	2,329.51	383.47	7.075	
12,300.00	6,074.44	12,676.89	6,074.47	194.30	196.03	90.00	-2,120.61	6,629.52	2,712.92	2,323.48	389.44	6.966	
12,400.00	6,074.71	12,776.89	6,074.74	197.29	199.00	90.00	-2,120.54	6,729.52	2,712.86	2,317.44	395.42	6.861	
12,500.00	6,074.98	12,876.89	6,075.00	200.28	201.98	90.00	-2,120.48	6,829.52	2,712.80	2,311.40	401.40	6.758	
12,600.00	6,075.24	12,976.89	6,075.27	203.27	204.95	90.00	-2,120.42	6,929.52	2,712.74	2,305.36	407.38	6.659	
12,700.00	6,075.51	13,076.89	6,075.54	206.26	207.93	90.00	-2,120.36	7,029.52	2,712.68	2,299.32	413.36	6.563	
12,800.00	6,075.77	13,176.89	6,075.80	209.26	210.90	90.00	-2,120.30	7,129.51	2,712.62	2,293.28	419.34	6.469	
12,900.00	6,076.04	13,276.89	6,076.07	212.25	213.88	90.00	-2,120.24	7,229.51	2,712.56	2,287.23	425.33	6.378	
13,000.00	6,076.31	13,376.89	6,076.34	215.24	216.86	90.00	-2,120.18	7,329.51	2,712.50	2,281.19	431.31	6.289	
13,100.00	6,076.57	13,476.89	6,076.60	218.24	219.84	90.00	-2,120.12	7,429.51	2,712.44	2,275.14	437.30	6.203	
13,200.00	6,076.84	13,576.89	6,076.87	221.23	222.82	90.00	-2,120.06	7,529.51	2,712.38	2,269.10	443.28	6.119	
13,300.00	6,077.10	13,676.89	6,077.14	224.23	225.80	90.00	-2,120.00	7,629.51	2,712.32	2,263.05	449.27	6.037	
13,400.00	6,077.37	13,776.89	6,077.40	227.22	228.79	90.00	-2,119.94	7,729.51	2,712.26	2,257.00	455.26	5.958	
13,500.00	6,077.64	13,876.89	6,077.67	230.22	231.77	90.00	-2,119.88	7,829.51	2,712.20	2,250.95	461.25	5.880	
13,600.00	6,077.90	13,976.71	6,077.93	233.21	234.75	90.00	-2,119.82	7,929.33	2,712.14	2,244.91	467.23	5.805	
13,626.13	6,077.97	14,001.38	6,078.00	234.00	235.48	90.00	-2,119.81	7,954.01	2,712.13	2,243.37	468.76	5.786	
13,636.27	6,078.00	14,001.38	6,078.00	234.30	235.48	90.00	-2,119.81	7,954.01	2,712.14	2,243.03	469.11	5.781	SF

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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 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	-66.62	11.65	-26.95	29.36				
100.00	100.00	100.00	100.00	0.18	0.18	-66.62	11.65	-26.95	29.36	29.00	0.36	81.909	
200.00	200.00	200.00	200.00	0.54	0.54	-66.62	11.65	-26.95	29.36	28.29	1.08	27.303	
300.00	300.00	300.00	300.00	0.90	0.90	-66.62	11.65	-26.95	29.36	27.57	1.79	16.382	
400.00	400.00	400.00	400.00	1.25	1.25	-66.62	11.65	-26.95	29.36	26.85	2.51	11.701	
500.00	500.00	500.00	500.00	1.61	1.61	-66.62	11.65	-26.95	29.36	26.14	3.23	9.101	CC, ES
600.00	599.98	599.27	599.25	1.97	1.97	-79.87	13.25	-27.58	30.25	26.30	3.95	7.660	
700.00	699.84	698.48	698.33	2.33	2.33	-82.26	18.05	-29.47	32.97	28.29	4.68	7.041	
800.00	799.45	797.83	797.31	2.70	2.69	-85.65	25.89	-32.55	37.49	32.08	5.41	6.932	SF
900.00	898.83	897.64	896.69	3.06	3.05	-90.70	34.52	-35.94	42.56	36.44	6.12	6.950	
1,000.00	998.21	997.44	996.06	3.43	3.42	-94.75	43.15	-39.34	47.90	41.04	6.85	6.990	
1,100.00	1,097.58	1,097.25	1,095.44	3.80	3.78	-97.97	51.78	-42.73	53.42	45.84	7.59	7.041	
1,200.00	1,196.96	1,197.06	1,194.81	4.18	4.16	-100.59	60.41	-46.13	59.09	50.76	8.33	7.094	
1,300.00	1,296.33	1,296.86	1,294.19	4.56	4.53	-102.74	69.03	-49.52	64.85	55.78	9.07	7.147	
1,400.00	1,395.71	1,396.67	1,393.56	4.94	4.90	-104.54	77.66	-52.91	70.69	60.87	9.82	7.197	
1,500.00	1,495.08	1,496.48	1,492.94	5.32	5.27	-106.07	86.29	-56.31	76.59	66.02	10.57	7.245	
1,600.00	1,594.46	1,596.28	1,592.31	5.70	5.65	-107.38	94.92	-59.70	82.54	71.22	11.32	7.289	
1,700.00	1,693.83	1,696.09	1,691.69	6.08	6.02	-108.51	103.55	-63.09	88.53	76.45	12.08	7.331	
1,800.00	1,793.21	1,795.90	1,791.06	6.46	6.40	-109.49	112.18	-66.49	94.54	81.71	12.83	7.369	
1,900.00	1,892.58	1,895.70	1,890.44	6.85	6.77	-110.36	120.81	-69.88	100.58	86.99	13.58	7.404	
2,000.00	1,991.96	1,995.51	1,989.81	7.23	7.15	-111.13	129.44	-73.28	106.64	92.30	14.34	7.437	
2,100.00	2,091.33	2,095.32	2,089.19	7.62	7.53	-111.82	138.07	-76.67	112.71	97.62	15.09	7.468	
2,200.00	2,190.71	2,195.12	2,188.56	8.00	7.90	-112.43	146.70	-80.06	118.80	102.95	15.85	7.496	
2,300.00	2,290.08	2,294.93	2,287.94	8.38	8.28	-112.99	155.33	-83.46	124.91	108.30	16.60	7.523	
2,400.00	2,389.46	2,394.74	2,387.31	8.77	8.65	-113.49	163.96	-86.85	131.02	113.66	17.36	7.547	
2,500.00	2,488.83	2,494.54	2,486.69	9.15	9.03	-113.95	172.59	-90.25	137.14	119.03	18.12	7.570	
2,600.00	2,588.20	2,594.35	2,586.06	9.54	9.41	-114.37	181.22	-93.64	143.27	124.40	18.87	7.592	
2,700.00	2,687.58	2,694.16	2,685.43	9.92	9.78	-114.76	189.84	-97.03	149.41	129.78	19.63	7.612	
2,800.00	2,786.95	2,793.96	2,784.81	10.31	10.16	-115.12	198.47	-100.43	155.56	135.17	20.39	7.631	
2,900.00	2,886.33	2,893.77	2,884.18	10.70	10.54	-115.44	207.10	-103.82	161.70	140.56	21.14	7.648	
3,000.00	2,985.70	2,993.58	2,983.56	11.08	10.92	-115.75	215.73	-107.21	167.86	145.96	21.90	7.665	
3,100.00	3,085.08	3,093.38	3,082.93	11.47	11.29	-116.03	224.36	-110.61	174.02	151.36	22.66	7.681	
3,200.00	3,184.45	3,193.19	3,182.31	11.85	11.67	-116.29	232.99	-114.00	180.18	156.77	23.41	7.696	
3,300.00	3,283.83	3,293.00	3,281.68	12.24	12.05	-116.54	241.62	-117.40	186.35	162.18	24.17	7.710	
3,400.00	3,383.20	3,392.80	3,381.06	12.62	12.42	-116.77	250.25	-120.79	192.52	167.59	24.93	7.723	
3,500.00	3,482.58	3,492.61	3,480.43	13.01	12.80	-116.99	258.88	-124.18	198.69	173.00	25.68	7.736	
3,600.00	3,581.95	3,592.42	3,579.81	13.40	13.18	-117.19	267.51	-127.58	204.86	178.42	26.44	7.748	
3,700.00	3,681.33	3,692.22	3,679.18	13.78	13.56	-117.38	276.14	-130.97	211.04	183.84	27.20	7.759	
3,800.00	3,780.70	3,792.03	3,778.56	14.17	13.93	-117.56	284.77	-134.37	217.22	189.27	27.96	7.770	
3,900.00	3,880.08	3,891.84	3,877.93	14.55	14.31	-117.73	293.40	-137.76	223.40	194.69	28.71	7.780	
4,000.00	3,979.45	3,991.64	3,977.31	14.94	14.69	-117.89	302.03	-141.15	229.59	200.12	29.47	7.790	
4,100.00	4,078.82	4,091.45	4,076.68	15.33	15.06	-118.04	310.65	-144.55	235.77	205.54	30.23	7.800	
4,200.00	4,178.20	4,191.26	4,176.06	15.71	15.44	-118.19	319.28	-147.94	241.96	210.97	30.99	7.809	
4,300.00	4,277.57	4,291.06	4,275.43	16.10	15.82	-118.33	327.91	-151.34	248.15	216.40	31.74	7.817	
4,400.00	4,376.95	4,390.87	4,374.81	16.49	16.20	-118.46	336.54	-154.73	254.34	221.84	32.50	7.826	
4,500.00	4,476.32	4,490.68	4,474.18	16.87	16.57	-118.58	345.17	-158.12	260.53	227.27	33.26	7.833	
4,600.00	4,575.70	4,590.48	4,573.56	17.26	16.95	-118.70	353.80	-161.52	266.72	232.70	34.02	7.841	
4,700.00	4,675.07	4,690.29	4,672.93	17.65	17.33	-118.81	362.43	-164.91	272.91	238.14	34.77	7.848	
4,800.00	4,774.45	4,790.10	4,772.31	18.03	17.71	-118.92	371.06	-168.30	279.11	243.58	35.53	7.855	
4,900.00	4,873.82	4,889.90	4,871.68	18.42	18.08	-119.03	379.69	-171.70	285.30	249.01	36.29	7.862	
5,000.00	4,973.20	4,989.71	4,971.06	18.80	18.46	-119.13	388.32	-175.09	291.50	254.45	37.05	7.868	
5,100.00	5,072.57	5,089.52	5,070.43	19.19	18.84	-119.22	396.95	-178.49	297.69	259.89	37.80	7.875	

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 601 1H - Slot B02
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 601 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 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	5,171.95	5,189.32	5,169.81	19.58	19.22	-119.31	405.58	-181.88	303.89	265.33	38.56	7.881	
5,300.00	5,271.32	5,289.13	5,269.18	19.96	19.59	-119.40	414.21	-185.27	310.09	270.77	39.32	7.886	
5,400.00	5,370.69	5,388.93	5,368.56	20.35	19.97	-124.04	422.83	-188.67	316.32	276.24	40.08	7.893	
5,500.00	5,469.49	5,457.76	5,436.88	20.74	20.24	-164.72	428.77	-194.20	334.46	294.01	40.45	8.269	
5,600.00	5,565.90	5,519.75	5,497.70	21.13	20.48	-177.57	434.04	-204.79	373.78	333.29	40.49	9.232	
5,700.00	5,658.06	5,571.86	5,547.98	21.53	20.69	176.59	438.40	-217.75	431.67	391.39	40.28	10.716	
5,800.00	5,744.16	5,612.64	5,586.59	21.93	20.86	172.48	441.75	-230.43	504.63	464.68	39.95	12.631	
5,900.00	5,822.53	5,650.00	5,621.27	22.38	21.01	168.40	444.75	-243.97	589.04	549.18	39.85	14.780	
6,000.00	5,891.65	5,650.00	5,621.27	22.93	21.01	158.98	444.75	-243.97	681.26	642.26	39.00	17.470	
6,100.00	5,950.17	5,671.82	5,641.19	23.68	21.11	142.48	446.48	-252.71	777.94	738.78	39.16	19.867	
6,200.00	5,996.95	5,674.66	5,643.76	24.69	21.12	90.26	446.70	-253.89	876.96	837.87	39.09	22.436	
6,300.00	6,031.08	5,671.24	5,640.67	25.98	21.11	41.39	446.43	-252.47	975.98	936.85	39.12	24.947	
6,400.00	6,051.90	5,650.00	5,621.27	27.55	21.01	24.48	444.75	-243.97	1,073.39	1,034.41	38.98	27.535	
6,500.00	6,059.00	5,650.00	5,621.27	29.33	21.01	18.74	444.75	-243.97	1,167.16	1,127.69	39.47	29.571	
6,600.00	6,059.27	5,650.00	5,621.27	31.29	21.01	18.74	444.75	-243.97	1,259.71	1,219.76	39.95	31.528	
6,700.00	6,059.53	5,623.20	5,596.46	33.41	20.90	18.04	442.60	-234.07	1,352.56	1,312.63	39.93	33.874	
6,800.00	6,059.80	5,600.00	5,574.70	35.66	20.81	17.48	440.72	-226.26	1,446.39	1,406.44	39.95	36.205	
6,900.00	6,060.07	5,600.00	5,574.70	38.01	20.81	17.48	440.72	-226.26	1,540.50	1,500.22	40.28	38.242	
7,000.00	6,060.33	5,600.00	5,574.70	40.45	20.81	17.48	440.72	-226.26	1,635.31	1,594.74	40.56	40.314	
7,100.00	6,060.60	5,582.22	5,557.86	42.97	20.73	17.07	439.26	-220.76	1,730.39	1,689.80	40.59	42.628	
7,200.00	6,060.87	5,573.90	5,549.92	45.54	20.70	16.89	438.57	-218.33	1,825.92	1,785.20	40.72	44.840	
7,300.00	6,061.13	5,550.00	5,527.01	48.17	20.60	16.40	436.58	-211.86	1,922.04	1,881.38	40.66	47.266	
7,400.00	6,061.40	5,550.00	5,527.01	50.84	20.60	16.40	436.58	-211.86	2,018.04	1,977.19	40.85	49.397	
7,500.00	6,061.66	5,550.00	5,527.01	53.55	20.60	16.40	436.58	-211.86	2,114.41	2,073.39	41.02	51.544	
7,600.00	6,061.93	5,550.00	5,527.01	56.28	20.60	16.40	436.58	-211.86	2,211.10	2,169.93	41.17	53.704	
7,700.00	6,062.20	5,550.00	5,527.01	59.05	20.60	16.40	436.58	-211.86	2,308.07	2,266.76	41.31	55.875	
7,800.00	6,062.46	5,550.00	5,527.01	61.83	20.60	16.40	436.58	-211.86	2,405.29	2,363.86	41.43	58.055	
7,900.00	6,062.73	5,529.60	5,507.28	64.64	20.52	16.00	434.87	-206.95	2,502.36	2,460.98	41.38	60.474	
8,000.00	6,063.00	5,524.75	5,502.57	67.46	20.50	15.91	434.46	-205.87	2,599.80	2,558.35	41.45	62.719	
8,100.00	6,063.26	5,520.18	5,498.13	70.30	20.48	15.83	434.08	-204.88	2,697.39	2,655.87	41.52	64.966	
8,200.00	6,063.53	5,500.00	5,478.43	73.16	20.40	15.47	432.37	-200.84	2,795.33	2,753.87	41.47	67.407	
8,300.00	6,063.79	5,500.00	5,478.43	76.02	20.40	15.47	432.37	-200.84	2,893.09	2,851.52	41.57	69.604	
8,400.00	6,064.06	5,500.00	5,478.43	78.90	20.40	15.47	432.37	-200.84	2,990.99	2,949.33	41.66	71.803	
8,500.00	6,064.33	5,500.00	5,478.43	81.79	20.40	15.47	432.37	-200.84	3,089.02	3,047.28	41.74	74.005	
8,600.00	6,064.59	5,500.00	5,478.43	84.68	20.40	15.47	432.37	-200.84	3,187.18	3,145.36	41.82	76.208	
8,700.00	6,064.86	5,500.00	5,478.43	87.59	20.40	15.47	432.37	-200.84	3,285.45	3,243.55	41.90	78.412	
8,800.00	6,065.13	5,500.00	5,478.43	90.50	20.40	15.47	432.37	-200.84	3,383.82	3,341.84	41.97	80.617	
8,900.00	6,065.39	5,500.00	5,478.43	93.41	20.40	15.47	432.37	-200.84	3,482.28	3,440.24	42.05	82.821	
9,000.00	6,065.66	5,500.00	5,478.43	96.33	20.40	15.47	432.37	-200.84	3,580.83	3,538.71	42.12	85.025	
9,100.00	6,065.92	5,500.00	5,478.43	99.26	20.40	15.47	432.37	-200.84	3,679.46	3,637.27	42.18	87.227	
9,200.00	6,066.19	5,500.00	5,478.43	102.20	20.40	15.47	432.37	-200.84	3,778.15	3,735.91	42.25	89.428	
9,300.00	6,066.46	5,500.00	5,478.43	105.13	20.40	15.47	432.37	-200.84	3,876.92	3,834.61	42.31	91.627	
9,400.00	6,066.72	5,478.20	5,457.03	108.07	20.32	15.11	430.51	-197.10	3,975.36	3,933.10	42.25	94.083	
9,500.00	6,066.99	5,475.90	5,454.77	111.02	20.31	15.07	430.32	-196.75	4,074.15	4,031.85	42.30	96.305	
9,600.00	6,067.25	5,473.69	5,452.59	113.97	20.30	15.04	430.13	-196.41	4,173.00	4,130.65	42.36	98.522	
9,700.00	6,067.52	5,471.57	5,450.51	116.92	20.29	15.00	429.95	-196.10	4,271.90	4,229.49	42.41	100.736	
9,800.00	6,067.79	5,450.00	5,429.20	119.87	20.21	14.67	428.10	-193.24	4,371.14	4,328.79	42.36	103.201	
9,900.00	6,068.05	5,450.00	5,429.20	122.83	20.21	14.67	428.10	-193.24	4,470.06	4,427.65	42.42	105.381	
10,000.00	6,068.32	5,450.00	5,429.20	125.79	20.21	14.67	428.10	-193.24	4,569.03	4,526.55	42.48	107.557	
10,100.00	6,068.59	5,450.00	5,429.20	128.75	20.21	14.67	428.10	-193.24	4,668.04	4,625.50	42.54	109.729	
10,200.00	6,068.85	5,450.00	5,429.20	131.71	20.21	14.67	428.10	-193.24	4,767.09	4,724.49	42.60	111.897	
10,300.00	6,069.12	5,450.00	5,429.20	134.68	20.21	14.67	428.10	-193.24	4,866.18	4,823.52	42.66	114.060	

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 601 1H - Slot B02
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 601 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 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	6,069.38	5,450.00	5,429.20	137.65	20.21	14.67	428.10	-193.24	4,965.31	4,922.58	42.72	116.219	
10,500.00	6,069.65	5,450.00	5,429.20	140.62	20.21	14.67	428.10	-193.24	5,064.47	5,021.68	42.78	118.373	
10,600.00	6,069.92	5,450.00	5,429.20	143.59	20.21	14.67	428.10	-193.24	5,163.66	5,120.82	42.84	120.522	
10,700.00	6,070.18	5,450.00	5,429.20	146.56	20.21	14.67	428.10	-193.24	5,262.89	5,219.98	42.90	122.665	
10,800.00	6,070.45	5,450.00	5,429.20	149.54	20.21	14.67	428.10	-193.24	5,362.14	5,319.17	42.96	124.803	
10,900.00	6,070.72	5,450.00	5,429.20	152.52	20.21	14.67	428.10	-193.24	5,461.42	5,418.39	43.03	126.935	
11,000.00	6,070.98	5,450.00	5,429.20	155.49	20.21	14.67	428.10	-193.24	5,560.72	5,517.64	43.09	129.062	
11,100.00	6,071.25	5,450.00	5,429.20	158.47	20.21	14.67	428.10	-193.24	5,660.05	5,616.91	43.15	131.182	
11,200.00	6,071.51	5,450.00	5,429.20	161.45	20.21	14.67	428.10	-193.24	5,759.41	5,716.20	43.21	133.297	
11,300.00	6,071.78	5,450.00	5,429.20	164.43	20.21	14.67	428.10	-193.24	5,858.78	5,815.52	43.27	135.405	
11,400.00	6,072.05	5,450.00	5,429.20	167.42	20.21	14.67	428.10	-193.24	5,958.18	5,914.85	43.33	137.507	
11,500.00	6,072.31	5,450.00	5,429.20	170.40	20.21	14.67	428.10	-193.24	6,057.60	6,014.20	43.39	139.603	
11,600.00	6,072.58	5,450.00	5,429.20	173.38	20.21	14.67	428.10	-193.24	6,157.03	6,113.58	43.45	141.692	
11,700.00	6,072.85	5,450.00	5,429.20	176.37	20.21	14.67	428.10	-193.24	6,256.48	6,212.97	43.52	143.774	
11,800.00	6,073.11	5,450.00	5,429.20	179.36	20.21	14.67	428.10	-193.24	6,355.95	6,312.38	43.58	145.849	
11,900.00	6,073.38	5,450.00	5,429.20	182.34	20.21	14.67	428.10	-193.24	6,455.44	6,411.80	43.64	147.918	
12,000.00	6,073.64	5,450.00	5,429.20	185.33	20.21	14.67	428.10	-193.24	6,554.94	6,511.24	43.71	149.979	
12,100.00	6,073.91	5,450.00	5,429.20	188.32	20.21	14.67	428.10	-193.24	6,654.46	6,610.69	43.77	152.034	
12,200.00	6,074.18	5,450.00	5,429.20	191.31	20.21	14.67	428.10	-193.24	6,753.99	6,710.16	43.83	154.081	
12,300.00	6,074.44	5,450.00	5,429.20	194.30	20.21	14.67	428.10	-193.24	6,853.54	6,809.64	43.90	156.121	
12,400.00	6,074.71	5,450.00	5,429.20	197.29	20.21	14.67	428.10	-193.24	6,953.10	6,909.13	43.96	158.154	
12,500.00	6,074.98	5,450.00	5,429.20	200.28	20.21	14.67	428.10	-193.24	7,052.67	7,008.64	44.03	160.179	
12,600.00	6,075.24	5,450.00	5,429.20	203.27	20.21	14.67	428.10	-193.24	7,152.25	7,108.15	44.10	162.197	
12,700.00	6,075.51	5,450.00	5,429.20	206.26	20.21	14.67	428.10	-193.24	7,251.84	7,207.68	44.16	164.207	
12,800.00	6,075.77	5,450.00	5,429.20	209.26	20.21	14.67	428.10	-193.24	7,351.45	7,307.22	44.23	166.210	
12,900.00	6,076.04	5,450.00	5,429.20	212.25	20.21	14.67	428.10	-193.24	7,451.06	7,406.77	44.30	168.204	
13,000.00	6,076.31	5,450.00	5,429.20	215.24	20.21	14.67	428.10	-193.24	7,550.69	7,506.32	44.37	170.191	
13,100.00	6,076.57	5,450.00	5,429.20	218.24	20.21	14.67	428.10	-193.24	7,650.33	7,605.89	44.43	172.171	
13,200.00	6,076.84	5,450.00	5,429.20	221.23	20.21	14.67	428.10	-193.24	7,749.97	7,705.47	44.50	174.142	
13,300.00	6,077.10	5,450.00	5,429.20	224.23	20.21	14.67	428.10	-193.24	7,849.62	7,805.05	44.57	176.105	
13,400.00	6,077.37	5,450.00	5,429.20	227.22	20.21	14.67	428.10	-193.24	7,949.29	7,904.64	44.64	178.061	
13,500.00	6,077.64	5,426.64	5,406.05	230.22	20.12	14.34	426.09	-190.88	8,048.54	8,003.92	44.62	180.375	
13,600.00	6,077.90	5,425.97	5,405.39	233.21	20.11	14.33	426.03	-190.82	8,148.20	8,103.51	44.69	182.326	
13,636.27	6,078.00	5,425.74	5,405.15	234.30	20.11	14.33	426.01	-190.80	8,184.34	8,139.63	44.72	183.032	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	175.35	-28.76	2.34	28.85				
100.00	100.00	100.00	100.00	0.18	0.18	175.35	-28.76	2.34	28.85	28.49	0.36	80.486	
200.00	200.00	200.00	200.00	0.54	0.54	175.35	-28.76	2.34	28.85	27.78	1.08	26.829	
300.00	300.00	300.00	300.00	0.90	0.90	175.35	-28.76	2.34	28.85	27.06	1.79	16.097	
400.00	400.00	400.00	400.00	1.25	1.25	175.35	-28.76	2.34	28.85	26.34	2.51	11.498	
500.00	500.00	500.00	500.00	1.61	1.61	175.35	-28.76	2.34	28.85	25.63	3.23	8.943	CC, ES
600.00	599.98	598.92	598.90	1.97	1.95	164.69	-30.43	2.01	32.20	28.25	3.95	8.160	SF
700.00	699.84	697.13	696.97	2.33	2.28	168.16	-35.41	1.05	42.33	37.64	4.69	9.032	
800.00	799.45	793.94	793.42	2.70	2.62	171.28	-43.55	-0.53	59.31	53.87	5.44	10.905	
900.00	898.83	888.97	887.78	3.06	2.95	173.44	-54.64	-2.68	81.99	75.81	6.18	13.260	
1,000.00	998.21	984.41	982.19	3.43	3.31	174.80	-68.36	-5.34	107.49	100.62	6.87	15.645	
1,100.00	1,097.58	1,081.01	1,077.70	3.80	3.68	175.65	-82.52	-8.09	133.31	125.78	7.53	17.701	
1,200.00	1,196.96	1,177.60	1,173.21	4.18	4.05	176.23	-96.68	-10.83	159.15	150.94	8.21	19.394	
1,300.00	1,296.33	1,274.19	1,268.72	4.56	4.43	176.64	-110.84	-13.58	185.00	176.12	8.89	20.819	
1,400.00	1,395.71	1,370.78	1,364.23	4.94	4.82	176.96	-125.01	-16.32	210.86	201.29	9.57	22.031	
1,500.00	1,495.08	1,467.38	1,459.74	5.32	5.21	177.20	-139.17	-19.07	236.73	226.46	10.26	23.071	
1,600.00	1,594.46	1,563.97	1,555.25	5.70	5.60	177.40	-153.33	-21.82	262.59	251.64	10.95	23.973	
1,700.00	1,693.83	1,660.56	1,650.76	6.08	5.99	177.56	-167.49	-24.56	288.46	276.81	11.65	24.762	
1,800.00	1,793.21	1,757.16	1,746.27	6.46	6.38	177.70	-181.66	-27.31	314.33	301.99	12.35	25.457	
1,900.00	1,892.58	1,853.75	1,841.78	6.85	6.78	177.81	-195.82	-30.05	340.21	327.16	13.05	26.073	
2,000.00	1,991.96	1,950.34	1,937.29	7.23	7.18	177.91	-209.98	-32.80	366.08	352.33	13.75	26.624	
2,100.00	2,091.33	2,046.94	2,032.80	7.62	7.58	177.99	-224.14	-35.55	391.95	377.50	14.45	27.119	
2,200.00	2,190.71	2,143.53	2,128.31	8.00	7.97	178.07	-238.31	-38.29	417.83	402.67	15.16	27.565	
2,300.00	2,290.08	2,240.12	2,223.81	8.38	8.37	178.13	-252.47	-41.04	443.70	427.84	15.86	27.970	
2,400.00	2,389.46	2,336.71	2,319.32	8.77	8.77	178.19	-266.63	-43.79	469.58	453.01	16.57	28.339	
2,500.00	2,488.83	2,433.31	2,414.83	9.15	9.17	178.25	-280.79	-46.53	495.46	478.18	17.28	28.676	
2,600.00	2,588.20	2,529.90	2,510.34	9.54	9.57	178.29	-294.96	-49.28	521.33	503.35	17.99	28.985	
2,700.00	2,687.58	2,626.49	2,605.85	9.92	9.97	178.34	-309.12	-52.02	547.21	528.52	18.69	29.271	
2,800.00	2,786.95	2,723.09	2,701.36	10.31	10.38	178.38	-323.28	-54.77	573.09	553.69	19.40	29.534	
2,900.00	2,886.33	2,819.68	2,796.87	10.70	10.78	178.41	-337.44	-57.52	598.97	578.85	20.11	29.778	
3,000.00	2,985.70	2,916.27	2,892.38	11.08	11.18	178.44	-351.61	-60.26	624.85	604.02	20.82	30.005	
3,100.00	3,085.08	3,012.87	2,987.89	11.47	11.58	178.47	-365.77	-63.01	650.72	629.19	21.54	30.216	
3,200.00	3,184.45	3,109.46	3,083.40	11.85	11.98	178.50	-379.93	-65.75	676.60	654.36	22.25	30.414	
3,300.00	3,283.83	3,206.05	3,178.91	12.24	12.39	178.53	-394.09	-68.50	702.48	679.52	22.96	30.598	
3,400.00	3,383.20	3,302.64	3,274.42	12.62	12.79	178.55	-408.26	-71.25	728.36	704.69	23.67	30.771	
3,500.00	3,482.58	3,399.24	3,369.93	13.01	13.19	178.57	-422.42	-73.99	754.24	729.86	24.38	30.934	
3,600.00	3,581.95	3,495.83	3,465.44	13.40	13.60	178.59	-436.58	-76.74	780.12	755.02	25.09	31.087	
3,700.00	3,681.33	3,592.42	3,560.95	13.78	14.00	178.61	-450.74	-79.48	806.00	780.19	25.81	31.232	
3,800.00	3,780.70	3,689.02	3,656.46	14.17	14.40	178.63	-464.91	-82.23	831.88	805.36	26.52	31.368	
3,900.00	3,880.08	3,785.61	3,751.97	14.55	14.81	178.65	-479.07	-84.98	857.75	830.52	27.23	31.497	
4,000.00	3,979.45	3,882.20	3,847.48	14.94	15.21	178.67	-493.23	-87.72	883.63	855.69	27.95	31.619	
4,100.00	4,078.82	3,978.80	3,942.99	15.33	15.61	178.68	-507.39	-90.47	909.51	880.85	28.66	31.735	
4,200.00	4,178.20	4,075.39	4,038.50	15.71	16.02	178.69	-521.55	-93.21	935.39	906.02	29.37	31.845	
4,300.00	4,277.57	4,171.98	4,134.01	16.10	16.42	178.71	-535.72	-95.96	961.27	931.18	30.09	31.950	
4,400.00	4,376.95	4,268.58	4,229.52	16.49	16.83	178.72	-549.88	-98.71	987.15	956.35	30.80	32.050	
4,500.00	4,476.32	4,365.17	4,325.03	16.87	17.23	178.73	-564.04	-101.45	1,013.03	981.52	31.51	32.145	
4,600.00	4,575.70	4,461.76	4,420.54	17.26	17.63	178.75	-578.20	-104.20	1,038.91	1,006.68	32.23	32.236	
4,700.00	4,675.07	4,558.35	4,516.05	17.65	18.04	178.76	-592.37	-106.95	1,064.79	1,031.85	32.94	32.322	
4,800.00	4,774.45	4,654.95	4,611.56	18.03	18.44	178.77	-606.53	-109.69	1,090.67	1,057.01	33.66	32.405	
4,900.00	4,873.82	4,751.54	4,707.07	18.42	18.85	178.78	-620.69	-112.44	1,116.55	1,082.18	34.37	32.484	
5,000.00	4,973.20	4,848.13	4,802.58	18.80	19.25	178.79	-634.85	-115.18	1,142.43	1,107.34	35.09	32.560	
5,100.00	5,072.57	4,944.73	4,898.09	19.19	19.66	178.80	-649.02	-117.93	1,168.31	1,132.51	35.80	32.633	

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 601 1H - Slot B02
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 601 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	5,171.95	5,041.32	4,993.60	19.58	20.06	178.80	-663.18	-120.68	1,194.19	1,157.67	36.52	32.703	
5,300.00	5,271.32	5,137.91	5,089.10	19.96	20.47	178.81	-677.34	-123.42	1,220.07	1,182.84	37.23	32.770	
5,400.00	5,370.69	5,234.50	5,184.61	20.35	20.87	174.13	-691.50	-126.17	1,245.95	1,208.01	37.95	32.835	
5,500.00	5,469.49	5,330.31	5,279.34	20.74	21.27	131.64	-705.55	-128.89	1,273.22	1,234.56	38.66	32.936	
5,600.00	5,565.90	5,422.70	5,370.70	21.13	21.66	117.23	-719.10	-131.52	1,302.80	1,263.45	39.35	33.107	
5,700.00	5,658.06	5,484.31	5,431.47	21.53	21.92	110.02	-728.11	-135.92	1,335.65	1,295.84	39.81	33.547	
5,800.00	5,744.16	5,534.80	5,480.85	21.93	22.13	105.18	-735.43	-143.44	1,372.99	1,332.78	40.20	34.150	
5,900.00	5,822.53	5,573.57	5,518.33	22.38	22.30	100.95	-740.99	-151.60	1,415.10	1,374.56	40.54	34.905	
6,000.00	5,891.65	5,600.00	5,543.61	22.93	22.41	96.54	-744.74	-158.33	1,461.93	1,421.08	40.86	35.782	
6,100.00	5,950.17	5,618.22	5,560.89	23.68	22.48	91.77	-747.30	-163.52	1,513.00	1,471.77	41.23	36.693	
6,200.00	5,996.95	5,626.74	5,568.92	24.69	22.52	86.47	-748.49	-166.10	1,567.45	1,525.76	41.69	37.594	
6,300.00	6,031.08	5,627.97	5,570.08	25.98	22.53	80.82	-748.66	-166.48	1,624.17	1,581.89	42.28	38.418	
6,400.00	6,051.90	5,623.20	5,565.59	27.55	22.51	75.07	-748.00	-165.02	1,681.91	1,638.93	42.98	39.130	
6,500.00	6,059.00	5,600.00	5,543.61	29.33	22.41	69.02	-744.74	-158.33	1,739.54	1,695.89	43.65	39.854	
6,600.00	6,059.27	5,600.00	5,543.61	31.29	22.41	69.02	-744.74	-158.33	1,798.20	1,753.56	44.64	40.281	
6,700.00	6,059.53	5,600.00	5,543.61	33.41	22.41	69.02	-744.74	-158.33	1,860.38	1,814.75	45.64	40.766	
6,800.00	6,059.80	5,583.17	5,527.54	35.66	22.34	68.38	-742.36	-153.94	1,925.55	1,879.11	46.44	41.463	
6,900.00	6,060.07	5,574.89	5,519.59	38.01	22.30	68.07	-741.18	-151.91	1,993.54	1,946.24	47.30	42.146	
7,000.00	6,060.33	5,567.32	5,512.32	40.45	22.27	67.79	-740.10	-150.15	2,064.04	2,015.91	48.13	42.886	
7,100.00	6,060.60	5,550.00	5,495.59	42.97	22.20	67.14	-737.62	-146.40	2,136.90	2,088.09	48.82	43.774	
7,200.00	6,060.87	5,550.00	5,495.59	45.54	22.20	67.14	-737.62	-146.40	2,211.68	2,162.05	49.63	44.567	
7,300.00	6,061.13	5,550.00	5,495.59	48.17	22.20	67.14	-737.62	-146.40	2,288.38	2,237.99	50.39	45.418	
7,400.00	6,061.40	5,550.00	5,495.59	50.84	22.20	67.14	-737.62	-146.40	2,366.82	2,315.72	51.09	46.322	
7,500.00	6,061.66	5,550.00	5,495.59	53.55	22.20	67.14	-737.62	-146.40	2,446.83	2,395.07	51.76	47.275	
7,600.00	6,061.93	5,550.00	5,495.59	56.28	22.20	67.14	-737.62	-146.40	2,528.27	2,475.89	52.37	48.272	
7,700.00	6,062.20	5,528.55	5,474.76	59.05	22.11	66.33	-734.53	-142.32	2,610.64	2,557.88	52.76	49.481	
7,800.00	6,062.46	5,524.45	5,470.77	61.83	22.09	66.17	-733.94	-141.61	2,694.38	2,641.12	53.26	50.585	
7,900.00	6,062.73	5,520.61	5,467.02	64.64	22.07	66.03	-733.38	-140.97	2,779.18	2,725.45	53.74	51.719	
8,000.00	6,063.00	5,500.00	5,446.87	67.46	21.98	65.26	-730.39	-137.88	2,865.17	2,811.14	54.02	53.034	
8,100.00	6,063.26	5,500.00	5,446.87	70.30	21.98	65.26	-730.39	-137.88	2,951.72	2,897.25	54.47	54.191	
8,200.00	6,063.53	5,500.00	5,446.87	73.16	21.98	65.26	-730.39	-137.88	3,039.10	2,984.22	54.88	55.373	
8,300.00	6,063.79	5,500.00	5,446.87	76.02	21.98	65.26	-730.39	-137.88	3,127.24	3,071.97	55.27	56.578	
8,400.00	6,064.06	5,500.00	5,446.87	78.90	21.98	65.26	-730.39	-137.88	3,216.07	3,160.43	55.64	57.804	
8,500.00	6,064.33	5,500.00	5,446.87	81.79	21.98	65.26	-730.39	-137.88	3,305.54	3,249.56	55.98	59.048	
8,600.00	6,064.59	5,500.00	5,446.87	84.68	21.98	65.26	-730.39	-137.88	3,395.60	3,339.29	56.30	60.309	
8,700.00	6,064.86	5,500.00	5,446.87	87.59	21.98	65.26	-730.39	-137.88	3,486.19	3,429.59	56.61	61.586	
8,800.00	6,065.13	5,500.00	5,446.87	90.50	21.98	65.26	-730.39	-137.88	3,577.29	3,520.40	56.89	62.878	
8,900.00	6,065.39	5,500.00	5,446.87	93.41	21.98	65.26	-730.39	-137.88	3,668.86	3,611.69	57.16	64.182	
9,000.00	6,065.66	5,500.00	5,446.87	96.33	21.98	65.26	-730.39	-137.88	3,760.85	3,703.43	57.42	65.498	
9,100.00	6,065.92	5,500.00	5,446.87	99.26	21.98	65.26	-730.39	-137.88	3,853.24	3,795.58	57.66	66.824	
9,200.00	6,066.19	5,500.00	5,446.87	102.20	21.98	65.26	-730.39	-137.88	3,946.00	3,888.11	57.89	68.161	
9,300.00	6,066.46	5,500.00	5,446.87	105.13	21.98	65.26	-730.39	-137.88	4,039.11	3,981.00	58.11	69.506	
9,400.00	6,066.72	5,500.00	5,446.87	108.07	21.98	65.26	-730.39	-137.88	4,132.54	4,074.22	58.32	70.860	
9,500.00	6,066.99	5,500.00	5,446.87	111.02	21.98	65.26	-730.39	-137.88	4,226.27	4,167.75	58.52	72.221	
9,600.00	6,067.25	5,500.00	5,446.87	113.97	21.98	65.26	-730.39	-137.88	4,320.29	4,261.58	58.71	73.589	
9,700.00	6,067.52	5,478.04	5,425.31	116.92	21.89	64.44	-727.19	-135.23	4,414.19	4,355.47	58.71	75.182	
9,800.00	6,067.79	5,476.57	5,423.86	119.87	21.89	64.38	-726.98	-135.07	4,508.66	4,449.78	58.88	76.579	
9,900.00	6,068.05	5,475.15	5,422.46	122.83	21.88	64.33	-726.77	-134.93	4,603.36	4,544.33	59.03	77.981	
10,000.00	6,068.32	5,473.79	5,421.12	125.79	21.87	64.28	-726.57	-134.79	4,698.28	4,639.09	59.18	79.387	
10,100.00	6,068.59	5,472.48	5,419.83	128.75	21.87	64.23	-726.38	-134.66	4,793.40	4,734.07	59.33	80.798	
10,200.00	6,068.85	5,450.00	5,397.67	131.71	21.77	63.40	-723.10	-132.81	4,889.06	4,829.77	59.29	82.457	
10,300.00	6,069.12	5,450.00	5,397.67	134.68	21.77	63.40	-723.10	-132.81	4,984.52	4,925.08	59.44	83.864	

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 601 1H - Slot B02
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 601 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	6,069.38	5,450.00	5,397.67	137.65	21.77	63.40	-723.10	-132.81	5,080.15	5,020.57	59.58	85.273	
10,500.00	6,069.65	5,450.00	5,397.67	140.62	21.77	63.40	-723.10	-132.81	5,175.94	5,116.23	59.71	86.686	
10,600.00	6,069.92	5,450.00	5,397.67	143.59	21.77	63.40	-723.10	-132.81	5,271.89	5,212.06	59.84	88.101	
10,700.00	6,070.18	5,450.00	5,397.67	146.56	21.77	63.40	-723.10	-132.81	5,367.99	5,308.03	59.97	89.518	
10,800.00	6,070.45	5,450.00	5,397.67	149.54	21.77	63.40	-723.10	-132.81	5,464.23	5,404.15	60.09	90.938	
10,900.00	6,070.72	5,450.00	5,397.67	152.52	21.77	63.40	-723.10	-132.81	5,560.61	5,500.40	60.21	92.360	
11,000.00	6,070.98	5,450.00	5,397.67	155.49	21.77	63.40	-723.10	-132.81	5,657.11	5,596.79	60.32	93.784	
11,100.00	6,071.25	5,450.00	5,397.67	158.47	21.77	63.40	-723.10	-132.81	5,753.72	5,693.29	60.43	95.209	
11,200.00	6,071.51	5,450.00	5,397.67	161.45	21.77	63.40	-723.10	-132.81	5,850.46	5,789.91	60.54	96.635	
11,300.00	6,071.78	5,450.00	5,397.67	164.43	21.77	63.40	-723.10	-132.81	5,947.30	5,886.65	60.65	98.062	
11,400.00	6,072.05	5,450.00	5,397.67	167.42	21.77	63.40	-723.10	-132.81	6,044.24	5,983.49	60.75	99.490	
11,500.00	6,072.31	5,450.00	5,397.67	170.40	21.77	63.40	-723.10	-132.81	6,141.28	6,080.43	60.85	100.919	
11,600.00	6,072.58	5,450.00	5,397.67	173.38	21.77	63.40	-723.10	-132.81	6,238.41	6,177.46	60.95	102.349	
11,700.00	6,072.85	5,450.00	5,397.67	176.37	21.77	63.40	-723.10	-132.81	6,335.64	6,274.59	61.05	103.778	
11,800.00	6,073.11	5,450.00	5,397.67	179.36	21.77	63.40	-723.10	-132.81	6,432.95	6,371.80	61.14	105.208	
11,900.00	6,073.38	5,450.00	5,397.67	182.34	21.77	63.40	-723.10	-132.81	6,530.34	6,469.10	61.24	106.639	
12,000.00	6,073.64	5,450.00	5,397.67	185.33	21.77	63.40	-723.10	-132.81	6,627.80	6,566.47	61.33	108.069	
12,100.00	6,073.91	5,450.00	5,397.67	188.32	21.77	63.40	-723.10	-132.81	6,725.35	6,663.93	61.42	109.499	
12,200.00	6,074.18	5,450.00	5,397.67	191.31	21.77	63.40	-723.10	-132.81	6,822.96	6,761.45	61.51	110.928	
12,300.00	6,074.44	5,450.00	5,397.67	194.30	21.77	63.40	-723.10	-132.81	6,920.64	6,859.05	61.59	112.357	
12,400.00	6,074.71	5,450.00	5,397.67	197.29	21.77	63.40	-723.10	-132.81	7,018.39	6,956.71	61.68	113.786	
12,500.00	6,074.98	5,450.00	5,397.67	200.28	21.77	63.40	-723.10	-132.81	7,116.20	7,054.43	61.76	115.214	
12,600.00	6,075.24	5,450.00	5,397.67	203.27	21.77	63.40	-723.10	-132.81	7,214.07	7,152.22	61.85	116.642	
12,700.00	6,075.51	5,450.00	5,397.67	206.26	21.77	63.40	-723.10	-132.81	7,311.99	7,250.06	61.93	118.068	
12,800.00	6,075.77	5,450.00	5,397.67	209.26	21.77	63.40	-723.10	-132.81	7,409.98	7,347.96	62.01	119.494	
12,900.00	6,076.04	5,450.00	5,397.67	212.25	21.77	63.40	-723.10	-132.81	7,508.01	7,445.92	62.09	120.919	
13,000.00	6,076.31	5,450.00	5,397.67	215.24	21.77	63.40	-723.10	-132.81	7,606.10	7,543.93	62.17	122.343	
13,100.00	6,076.57	5,450.00	5,397.67	218.24	21.77	63.40	-723.10	-132.81	7,704.23	7,641.98	62.25	123.765	
13,200.00	6,076.84	5,450.00	5,397.67	221.23	21.77	63.40	-723.10	-132.81	7,802.42	7,740.09	62.33	125.186	
13,300.00	6,077.10	5,450.00	5,397.67	224.23	21.77	63.40	-723.10	-132.81	7,900.65	7,838.24	62.40	126.606	
13,400.00	6,077.37	5,450.00	5,397.67	227.22	21.77	63.40	-723.10	-132.81	7,998.92	7,936.44	62.48	128.025	
13,500.00	6,077.64	5,450.00	5,397.67	230.22	21.77	63.40	-723.10	-132.81	8,097.23	8,034.68	62.55	129.442	
13,600.00	6,077.90	5,450.00	5,397.67	233.21	21.77	63.40	-723.10	-132.81	8,195.59	8,132.96	62.63	130.858	
13,636.27	6,078.00	5,450.00	5,397.67	234.30	21.77	63.40	-723.10	-132.81	8,231.27	8,168.61	62.66	131.371	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	-35.70	20.39	-14.65	25.11				
100.00	100.00	100.00	100.00	0.18	0.18	-35.70	20.39	-14.65	25.11	24.75	0.36	70.040	
200.00	200.00	200.00	200.00	0.54	0.54	-35.70	20.39	-14.65	25.11	24.03	1.08	23.347	
300.00	300.00	300.00	300.00	0.90	0.90	-35.70	20.39	-14.65	25.11	23.31	1.79	14.008	
400.00	400.00	400.00	400.00	1.25	1.25	-35.70	20.39	-14.65	25.11	22.60	2.51	10.006	
500.00	500.00	500.00	500.00	1.61	1.61	-35.70	20.39	-14.65	25.11	21.88	3.23	7.782	CC
600.00	599.98	599.22	599.21	1.97	1.97	-49.16	22.09	-14.89	25.48	21.52	3.96	6.440	ES
700.00	699.84	698.43	698.27	2.33	2.33	-52.29	27.19	-15.63	26.66	21.95	4.70	5.667	
800.00	799.45	797.59	797.05	2.70	2.69	-56.89	35.67	-16.85	28.78	23.32	5.45	5.277	
900.00	898.83	896.67	895.41	3.06	3.05	-60.59	47.53	-18.56	32.53	26.33	6.20	5.243	SF
1,000.00	998.21	995.53	993.06	3.43	3.42	-60.17	62.70	-20.74	38.94	31.97	6.97	5.585	
1,100.00	1,097.58	1,093.92	1,089.67	3.80	3.81	-57.28	81.11	-23.39	48.06	40.31	7.75	6.200	
1,200.00	1,196.96	1,191.62	1,184.92	4.18	4.21	-53.48	102.62	-26.49	60.08	51.55	8.53	7.040	
1,300.00	1,296.33	1,288.41	1,278.50	4.56	4.64	-49.67	127.09	-30.01	75.20	65.89	9.31	8.078	
1,400.00	1,395.71	1,384.09	1,370.12	4.94	5.08	-46.25	154.35	-33.94	93.50	83.44	10.07	9.287	
1,500.00	1,495.08	1,481.22	1,462.48	5.32	5.55	-43.44	184.12	-38.22	114.10	103.31	10.79	10.573	
1,600.00	1,594.46	1,578.93	1,555.37	5.70	6.03	-41.47	214.13	-42.54	134.95	123.44	11.51	11.723	
1,700.00	1,693.83	1,676.65	1,648.26	6.08	6.53	-40.03	244.14	-46.86	155.91	143.68	12.24	12.742	
1,800.00	1,793.21	1,774.36	1,741.15	6.46	7.03	-38.92	274.15	-51.19	176.94	163.98	12.97	13.647	
1,900.00	1,892.58	1,872.07	1,834.04	6.85	7.54	-38.06	304.17	-55.51	198.03	184.33	13.70	14.454	
2,000.00	1,991.96	1,969.79	1,926.93	7.23	8.06	-37.36	334.18	-59.83	219.14	204.71	14.44	15.177	
2,100.00	2,091.33	2,067.50	2,019.82	7.62	8.58	-36.78	364.19	-64.15	240.29	225.11	15.18	15.828	
2,200.00	2,190.71	2,165.21	2,112.71	8.00	9.10	-36.30	394.21	-68.47	261.45	245.52	15.93	16.416	
2,300.00	2,290.08	2,262.93	2,205.60	8.38	9.62	-35.89	424.22	-72.79	282.63	265.95	16.68	16.949	
2,400.00	2,389.46	2,360.64	2,298.48	8.77	10.15	-35.53	454.23	-77.11	303.82	286.39	17.43	17.434	
2,500.00	2,488.83	2,458.35	2,391.37	9.15	10.68	-35.22	484.24	-81.43	325.02	306.84	18.18	17.877	
2,600.00	2,588.20	2,556.07	2,484.26	9.54	11.21	-34.95	514.26	-85.75	346.22	327.29	18.94	18.284	
2,700.00	2,687.58	2,653.78	2,577.15	9.92	11.74	-34.71	544.27	-90.08	367.44	347.74	19.69	18.658	
2,800.00	2,786.95	2,751.49	2,670.04	10.31	12.27	-34.50	574.28	-94.40	388.66	368.20	20.45	19.002	
2,900.00	2,886.33	2,849.21	2,762.93	10.70	12.81	-34.31	604.30	-98.72	409.88	388.67	21.21	19.321	
3,000.00	2,985.70	2,946.92	2,855.82	11.08	13.34	-34.14	634.31	-103.04	431.11	409.13	21.98	19.617	
3,100.00	3,085.08	3,044.63	2,948.71	11.47	13.88	-33.98	664.32	-107.36	452.34	429.60	22.74	19.893	
3,200.00	3,184.45	3,142.35	3,041.60	11.85	14.42	-33.84	694.33	-111.68	473.57	450.07	23.50	20.149	
3,300.00	3,283.83	3,240.06	3,134.49	12.24	14.95	-33.71	724.35	-116.00	494.81	470.54	24.27	20.389	
3,400.00	3,383.20	3,337.77	3,227.38	12.62	15.49	-33.59	754.36	-120.32	516.05	491.01	25.04	20.613	
3,500.00	3,482.58	3,435.48	3,320.27	13.01	16.03	-33.48	784.37	-124.64	537.29	511.49	25.80	20.823	
3,600.00	3,581.95	3,533.20	3,413.16	13.40	16.57	-33.38	814.39	-128.97	558.53	531.96	26.57	21.021	
3,700.00	3,681.33	3,630.91	3,506.05	13.78	17.11	-33.29	844.40	-133.29	579.78	552.44	27.34	21.207	
3,800.00	3,780.70	3,728.62	3,598.94	14.17	17.65	-33.20	874.41	-137.61	601.02	572.91	28.11	21.383	
3,900.00	3,880.08	3,826.34	3,691.82	14.55	18.19	-33.12	904.42	-141.93	622.27	593.39	28.88	21.548	
4,000.00	3,979.45	3,924.05	3,784.71	14.94	18.73	-33.04	934.44	-146.25	643.51	613.87	29.65	21.705	
4,100.00	4,078.82	4,021.76	3,877.60	15.33	19.27	-32.97	964.45	-150.57	664.76	634.34	30.42	21.854	
4,200.00	4,178.20	4,119.48	3,970.49	15.71	19.82	-32.90	994.46	-154.89	686.01	654.82	31.19	21.994	
4,300.00	4,277.57	4,217.19	4,063.38	16.10	20.36	-32.84	1,024.48	-159.21	707.26	675.30	31.96	22.128	
4,400.00	4,376.95	4,314.90	4,156.27	16.49	20.90	-32.78	1,054.49	-163.53	728.51	695.78	32.73	22.255	
4,500.00	4,476.32	4,412.62	4,249.16	16.87	21.44	-32.73	1,084.50	-167.86	749.77	716.26	33.51	22.377	
4,600.00	4,575.70	4,510.33	4,342.05	17.26	21.98	-32.67	1,114.51	-172.18	771.02	736.74	34.28	22.492	
4,700.00	4,675.07	4,608.04	4,434.94	17.65	22.53	-32.63	1,144.53	-176.50	792.27	757.22	35.05	22.602	
4,800.00	4,774.45	4,705.76	4,527.83	18.03	23.07	-32.58	1,174.54	-180.82	813.53	777.70	35.83	22.707	
4,900.00	4,873.82	4,803.47	4,620.72	18.42	23.61	-32.53	1,204.55	-185.14	834.78	798.18	36.60	22.808	
5,000.00	4,973.20	4,901.18	4,713.61	18.80	24.16	-32.49	1,234.56	-189.46	856.03	818.66	37.37	22.904	
5,100.00	5,072.57	4,998.90	4,806.50	19.19	24.70	-32.45	1,264.58	-193.78	877.29	839.14	38.15	22.997	

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 601 1H - Slot B02
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 601 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	5,171.95	5,096.61	4,899.39	19.58	25.24	-32.41	1,294.59	-198.10	898.54	859.62	38.92	23.085	
5,300.00	5,271.32	5,194.32	4,992.27	19.96	25.79	-32.37	1,324.60	-202.42	919.80	880.10	39.70	23.170	
5,400.00	5,370.69	5,292.03	5,085.16	20.35	26.33	-36.78	1,354.62	-206.75	941.07	900.59	40.47	23.251	
5,500.00	5,469.49	5,388.83	5,177.18	20.74	26.87	-75.97	1,384.35	-211.03	964.91	923.63	41.28	23.373	
5,600.00	5,565.90	5,482.67	5,266.39	21.13	27.39	-87.78	1,413.17	-215.18	993.25	951.11	42.14	23.568	
5,700.00	5,658.06	5,571.73	5,351.05	21.53	27.89	-92.41	1,440.52	-219.11	1,026.24	983.18	43.06	23.830	
5,800.00	5,744.16	5,645.19	5,420.88	21.93	28.30	-94.15	1,463.09	-222.50	1,064.35	1,020.38	43.97	24.207	
5,900.00	5,822.53	5,687.41	5,460.87	22.38	28.54	-93.52	1,476.00	-226.45	1,109.50	1,064.78	44.72	24.812	
6,000.00	5,891.65	5,719.25	5,490.85	22.93	28.72	-91.23	1,485.69	-231.06	1,162.03	1,116.51	45.52	25.526	
6,100.00	5,950.17	5,750.00	5,519.59	23.68	28.90	-87.78	1,494.97	-236.84	1,221.25	1,174.73	46.52	26.253	
6,200.00	5,996.95	5,750.00	5,519.59	24.69	28.90	-81.55	1,494.97	-236.84	1,285.77	1,238.46	47.31	27.178	
6,300.00	6,031.08	5,750.00	5,519.59	25.98	28.90	-74.39	1,494.97	-236.84	1,354.32	1,306.06	48.26	28.063	
6,400.00	6,051.90	5,750.00	5,519.59	27.55	28.90	-66.78	1,494.97	-236.84	1,425.08	1,375.74	49.34	28.882	
6,500.00	6,059.00	5,750.00	5,519.59	29.33	28.90	-59.27	1,494.97	-236.84	1,496.46	1,445.96	50.50	29.632	
6,600.00	6,059.27	5,750.00	5,519.59	31.29	28.90	-59.27	1,494.97	-236.84	1,569.28	1,517.63	51.65	30.385	
6,700.00	6,059.53	5,750.00	5,519.59	33.41	28.90	-59.27	1,494.97	-236.84	1,644.95	1,592.24	52.71	31.209	
6,800.00	6,059.80	5,731.72	5,502.54	35.66	28.79	-58.32	1,489.46	-233.25	1,722.82	1,669.38	53.44	32.236	
6,900.00	6,060.07	5,725.81	5,497.00	38.01	28.76	-58.01	1,487.67	-232.18	1,802.92	1,748.66	54.26	33.225	
7,000.00	6,060.33	5,720.41	5,491.94	40.45	28.73	-57.73	1,486.04	-231.25	1,884.88	1,829.86	55.01	34.262	
7,100.00	6,060.60	5,700.00	5,472.75	42.97	28.61	-56.68	1,479.84	-228.10	1,968.66	1,913.16	55.50	35.473	
7,200.00	6,060.87	5,700.00	5,472.75	45.54	28.61	-56.68	1,479.84	-228.10	2,053.56	1,997.38	56.18	36.551	
7,300.00	6,061.13	5,700.00	5,472.75	48.17	28.61	-56.68	1,479.84	-228.10	2,139.77	2,082.97	56.81	37.667	
7,400.00	6,061.40	5,700.00	5,472.75	50.84	28.61	-56.68	1,479.84	-228.10	2,227.14	2,169.76	57.38	38.816	
7,500.00	6,061.66	5,700.00	5,472.75	53.55	28.61	-56.68	1,479.84	-228.10	2,315.52	2,257.63	57.90	39.993	
7,600.00	6,061.93	5,700.00	5,472.75	56.28	28.61	-56.68	1,479.84	-228.10	2,404.82	2,346.44	58.38	41.195	
7,700.00	6,062.20	5,700.00	5,472.75	59.05	28.61	-56.68	1,479.84	-228.10	2,494.93	2,436.12	58.81	42.420	
7,800.00	6,062.46	5,700.00	5,472.75	61.83	28.61	-56.68	1,479.84	-228.10	2,585.77	2,526.55	59.22	43.665	
7,900.00	6,062.73	5,700.00	5,472.75	64.64	28.61	-56.68	1,479.84	-228.10	2,677.26	2,617.67	59.59	44.928	
8,000.00	6,063.00	5,700.00	5,472.75	67.46	28.61	-56.68	1,479.84	-228.10	2,769.33	2,709.40	59.93	46.206	
8,100.00	6,063.26	5,700.00	5,472.75	70.30	28.61	-56.68	1,479.84	-228.10	2,861.94	2,801.69	60.25	47.498	
8,200.00	6,063.53	5,679.50	5,453.39	73.16	28.49	-55.63	1,473.59	-225.52	2,954.69	2,894.39	60.30	48.999	
8,300.00	6,063.79	5,677.31	5,451.33	76.02	28.48	-55.52	1,472.92	-225.28	3,048.14	2,987.59	60.55	50.340	
8,400.00	6,064.06	5,675.25	5,449.37	78.90	28.47	-55.41	1,472.29	-225.06	3,141.99	3,081.21	60.79	51.690	
8,500.00	6,064.33	5,673.29	5,447.52	81.79	28.46	-55.31	1,471.69	-224.85	3,236.20	3,175.20	61.00	53.049	
8,600.00	6,064.59	5,671.43	5,445.77	84.68	28.45	-55.22	1,471.13	-224.67	3,330.74	3,269.54	61.21	54.416	
8,700.00	6,064.86	5,650.00	5,425.44	87.59	28.32	-54.13	1,464.56	-222.83	3,425.91	3,364.75	61.16	56.017	
8,800.00	6,065.13	5,650.00	5,425.44	90.50	28.32	-54.13	1,464.56	-222.83	3,520.98	3,459.62	61.36	57.381	
8,900.00	6,065.39	5,650.00	5,425.44	93.41	28.32	-54.13	1,464.56	-222.83	3,616.32	3,554.77	61.55	58.752	
9,000.00	6,065.66	5,650.00	5,425.44	96.33	28.32	-54.13	1,464.56	-222.83	3,711.91	3,650.18	61.73	60.128	
9,100.00	6,065.92	5,650.00	5,425.44	99.26	28.32	-54.13	1,464.56	-222.83	3,807.72	3,745.82	61.91	61.509	
9,200.00	6,066.19	5,650.00	5,425.44	102.20	28.32	-54.13	1,464.56	-222.83	3,903.75	3,841.68	62.07	62.894	
9,300.00	6,066.46	5,650.00	5,425.44	105.13	28.32	-54.13	1,464.56	-222.83	3,999.96	3,937.74	62.22	64.284	
9,400.00	6,066.72	5,650.00	5,425.44	108.07	28.32	-54.13	1,464.56	-222.83	4,096.36	4,033.99	62.37	65.677	
9,500.00	6,066.99	5,650.00	5,425.44	111.02	28.32	-54.13	1,464.56	-222.83	4,192.93	4,130.42	62.51	67.073	
9,600.00	6,067.25	5,650.00	5,425.44	113.97	28.32	-54.13	1,464.56	-222.83	4,289.66	4,227.01	62.65	68.472	
9,700.00	6,067.52	5,650.00	5,425.44	116.92	28.32	-54.13	1,464.56	-222.83	4,386.53	4,323.75	62.78	69.873	
9,800.00	6,067.79	5,650.00	5,425.44	119.87	28.32	-54.13	1,464.56	-222.83	4,483.54	4,420.64	62.90	71.276	
9,900.00	6,068.05	5,650.00	5,425.44	122.83	28.32	-54.13	1,464.56	-222.83	4,580.68	4,517.65	63.02	72.681	
10,000.00	6,068.32	5,650.00	5,425.44	125.79	28.32	-54.13	1,464.56	-222.83	4,677.94	4,614.80	63.14	74.088	
10,100.00	6,068.59	5,650.00	5,425.44	128.75	28.32	-54.13	1,464.56	-222.83	4,775.31	4,712.06	63.25	75.497	
10,200.00	6,068.85	5,650.00	5,425.44	131.71	28.32	-54.13	1,464.56	-222.83	4,872.79	4,809.43	63.36	76.906	
10,300.00	6,069.12	5,650.00	5,425.44	134.68	28.32	-54.13	1,464.56	-222.83	4,970.37	4,906.90	63.47	78.316	

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 601 1H - Slot B02
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 601 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
10,400.00	6,069.38	5,650.00	5,425.44	137.65	28.32	-54.13	1,464.56	-222.83	5,068.04	5,004.47	63.57	79.727	
10,500.00	6,069.65	5,650.00	5,425.44	140.62	28.32	-54.13	1,464.56	-222.83	5,165.80	5,102.13	63.67	81.139	
10,600.00	6,069.92	5,650.00	5,425.44	143.59	28.32	-54.13	1,464.56	-222.83	5,263.65	5,199.88	63.76	82.551	
10,700.00	6,070.18	5,650.00	5,425.44	146.56	28.32	-54.13	1,464.56	-222.83	5,361.57	5,297.72	63.86	83.964	
10,800.00	6,070.45	5,650.00	5,425.44	149.54	28.32	-54.13	1,464.56	-222.83	5,459.57	5,395.63	63.95	85.376	
10,900.00	6,070.72	5,650.00	5,425.44	152.52	28.32	-54.13	1,464.56	-222.83	5,557.65	5,493.61	64.04	86.788	
11,000.00	6,070.98	5,650.00	5,425.44	155.49	28.32	-54.13	1,464.56	-222.83	5,655.79	5,591.66	64.12	88.201	
11,100.00	6,071.25	5,650.00	5,425.44	158.47	28.32	-54.13	1,464.56	-222.83	5,753.99	5,689.78	64.21	89.613	
11,200.00	6,071.51	5,650.00	5,425.44	161.45	28.32	-54.13	1,464.56	-222.83	5,852.25	5,787.96	64.29	91.024	
11,300.00	6,071.78	5,650.00	5,425.44	164.43	28.32	-54.13	1,464.56	-222.83	5,950.58	5,886.20	64.38	92.435	
11,400.00	6,072.05	5,650.00	5,425.44	167.42	28.32	-54.13	1,464.56	-222.83	6,048.95	5,984.50	64.46	93.846	
11,500.00	6,072.31	5,641.36	5,417.24	170.40	28.28	-53.69	1,461.91	-222.27	6,147.33	6,082.89	64.43	95.409	
11,600.00	6,072.58	5,640.78	5,416.69	173.38	28.27	-53.66	1,461.73	-222.24	6,245.80	6,181.29	64.50	96.830	
11,700.00	6,072.85	5,640.21	5,416.15	176.37	28.27	-53.63	1,461.56	-222.20	6,344.32	6,279.74	64.57	98.251	
11,800.00	6,073.11	5,639.66	5,415.62	179.36	28.27	-53.61	1,461.39	-222.17	6,442.88	6,378.24	64.64	99.670	
11,900.00	6,073.38	5,630.95	5,407.35	182.34	28.22	-53.17	1,458.71	-221.73	6,541.54	6,476.93	64.61	101.244	
12,000.00	6,073.64	5,630.95	5,407.35	185.33	28.22	-53.17	1,458.71	-221.73	6,640.18	6,575.49	64.69	102.653	
12,100.00	6,073.91	5,630.95	5,407.35	188.32	28.22	-53.17	1,458.71	-221.73	6,738.86	6,674.10	64.76	104.060	
12,200.00	6,074.18	5,630.95	5,407.35	191.31	28.22	-53.17	1,458.71	-221.73	6,837.58	6,772.75	64.83	105.467	
12,300.00	6,074.44	5,630.95	5,407.35	194.30	28.22	-53.17	1,458.71	-221.73	6,936.34	6,871.44	64.90	106.872	
12,400.00	6,074.71	5,630.95	5,407.35	197.29	28.22	-53.17	1,458.71	-221.73	7,035.13	6,970.16	64.97	108.275	
12,500.00	6,074.98	5,630.95	5,407.35	200.28	28.22	-53.17	1,458.71	-221.73	7,133.96	7,068.91	65.05	109.677	
12,600.00	6,075.24	5,630.95	5,407.35	203.27	28.22	-53.17	1,458.71	-221.73	7,232.82	7,167.70	65.12	111.078	
12,700.00	6,075.51	5,630.95	5,407.35	206.26	28.22	-53.17	1,458.71	-221.73	7,331.71	7,266.52	65.18	112.476	
12,800.00	6,075.77	5,630.95	5,407.35	209.26	28.22	-53.17	1,458.71	-221.73	7,430.62	7,365.37	65.25	113.873	
12,900.00	6,076.04	5,630.95	5,407.35	212.25	28.22	-53.17	1,458.71	-221.73	7,529.57	7,464.25	65.32	115.269	
13,000.00	6,076.31	5,630.95	5,407.35	215.24	28.22	-53.17	1,458.71	-221.73	7,628.55	7,563.16	65.39	116.662	
13,100.00	6,076.57	5,630.95	5,407.35	218.24	28.22	-53.17	1,458.71	-221.73	7,727.55	7,662.09	65.46	118.054	
13,200.00	6,076.84	5,630.95	5,407.35	221.23	28.22	-53.17	1,458.71	-221.73	7,826.57	7,761.05	65.53	119.443	
13,300.00	6,077.10	5,630.95	5,407.35	224.23	28.22	-53.17	1,458.71	-221.73	7,925.63	7,860.03	65.59	120.831	
13,400.00	6,077.37	5,630.95	5,407.35	227.22	28.22	-53.17	1,458.71	-221.73	8,024.70	7,959.04	65.66	122.217	
13,500.00	6,077.64	5,630.95	5,407.35	230.22	28.22	-53.17	1,458.71	-221.73	8,123.80	8,058.07	65.73	123.600	
13,600.00	6,077.90	5,630.95	5,407.35	233.21	28.22	-53.17	1,458.71	-221.73	8,222.92	8,157.12	65.79	124.982	
13,636.27	6,078.00	5,630.95	5,407.35	234.30	28.22	-53.17	1,458.71	-221.73	8,258.87	8,193.05	65.82	125.482	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	160.94	-49.14	16.98	52.00				
100.00	100.00	100.00	100.00	0.18	0.18	160.94	-49.14	16.98	52.00	51.64	0.36	145.049	
200.00	200.00	200.00	200.00	0.54	0.54	160.94	-49.14	16.98	52.00	50.92	1.08	48.350	
300.00	300.00	300.00	300.00	0.90	0.90	160.94	-49.14	16.98	52.00	50.20	1.79	29.010	
400.00	400.00	400.00	400.00	1.25	1.25	160.94	-49.14	16.98	52.00	49.49	2.51	20.721	
500.00	500.00	500.00	500.00	1.61	1.61	160.94	-49.14	16.98	52.00	48.77	3.23	16.117	CC, ES
600.00	599.98	598.28	598.26	1.97	1.95	150.25	-50.82	16.77	55.05	51.11	3.94	13.970	
700.00	699.84	695.86	695.71	2.33	2.28	154.30	-55.78	16.15	64.43	59.75	4.67	13.784	SF
800.00	799.45	792.07	791.56	2.70	2.61	158.87	-63.90	15.13	80.49	75.07	5.42	14.843	
900.00	898.83	886.52	885.35	3.06	2.94	162.76	-74.98	13.74	102.35	96.18	6.17	16.597	
1,000.00	998.21	979.42	977.18	3.43	3.29	165.53	-88.85	11.99	127.73	120.83	6.89	18.532	
1,100.00	1,097.58	1,070.63	1,066.86	3.80	3.65	167.51	-105.34	9.92	156.37	148.77	7.60	20.579	
1,200.00	1,196.96	1,160.01	1,154.18	4.18	4.01	168.96	-124.24	7.54	188.14	179.84	8.29	22.687	
1,300.00	1,296.33	1,247.45	1,239.00	4.56	4.39	170.05	-145.34	4.89	222.89	213.92	8.97	24.860	
1,400.00	1,395.71	1,332.85	1,321.17	4.94	4.78	170.89	-168.42	1.99	260.50	250.88	9.62	27.084	
1,500.00	1,495.08	1,416.14	1,400.61	5.32	5.19	171.54	-193.25	-1.14	300.87	290.62	10.25	29.355	
1,600.00	1,594.46	1,500.00	1,479.82	5.70	5.61	172.06	-220.56	-4.57	343.88	333.01	10.87	31.649	
1,700.00	1,693.83	1,576.18	1,551.05	6.08	6.03	172.46	-247.35	-7.94	389.39	377.94	11.45	34.016	
1,800.00	1,793.21	1,659.33	1,628.10	6.46	6.50	172.81	-278.35	-11.84	436.96	424.92	12.05	36.276	
1,900.00	1,892.58	1,747.13	1,709.39	6.85	7.01	173.12	-311.28	-15.98	484.78	472.11	12.67	38.251	
2,000.00	1,991.96	1,834.93	1,790.67	7.23	7.52	173.37	-344.20	-20.12	532.61	519.30	13.31	40.012	
2,100.00	2,091.33	1,922.73	1,871.96	7.62	8.05	173.58	-377.13	-24.26	580.44	566.48	13.96	41.589	
2,200.00	2,190.71	2,010.53	1,953.25	8.00	8.58	173.75	-410.06	-28.40	628.28	613.67	14.61	43.006	
2,300.00	2,290.08	2,098.33	2,034.53	8.38	9.11	173.91	-442.98	-32.54	676.12	660.85	15.27	44.285	
2,400.00	2,389.46	2,186.13	2,115.82	8.77	9.65	174.04	-475.91	-36.68	723.97	708.04	15.93	45.443	
2,500.00	2,488.83	2,273.92	2,197.11	9.15	10.20	174.15	-508.84	-40.82	771.82	755.22	16.60	46.496	
2,600.00	2,588.20	2,361.72	2,278.39	9.54	10.74	174.26	-541.76	-44.96	819.67	802.40	17.27	47.456	
2,700.00	2,687.58	2,449.52	2,359.68	9.92	11.29	174.35	-574.69	-49.10	867.52	849.57	17.95	48.335	
2,800.00	2,786.95	2,537.32	2,440.96	10.31	11.84	174.43	-607.62	-53.24	915.37	896.75	18.63	49.141	
2,900.00	2,886.33	2,625.12	2,522.25	10.70	12.39	174.50	-640.55	-57.38	963.23	943.92	19.31	49.884	
3,000.00	2,985.70	2,712.92	2,603.54	11.08	12.95	174.57	-673.47	-61.52	1,011.09	991.09	19.99	50.569	
3,100.00	3,085.08	2,800.72	2,684.82	11.47	13.50	174.63	-706.40	-65.66	1,058.94	1,038.26	20.68	51.203	
3,200.00	3,184.45	2,888.52	2,766.11	11.85	14.06	174.68	-739.33	-69.80	1,106.80	1,085.43	21.37	51.792	
3,300.00	3,283.83	2,976.32	2,847.39	12.24	14.62	174.73	-772.25	-73.94	1,154.66	1,132.60	22.06	52.339	
3,400.00	3,383.20	3,064.12	2,928.68	12.62	15.18	174.78	-805.18	-78.08	1,202.52	1,179.77	22.75	52.849	
3,500.00	3,482.58	3,151.92	3,009.97	13.01	15.74	174.82	-838.11	-82.22	1,250.38	1,226.93	23.45	53.325	
3,600.00	3,581.95	3,239.72	3,091.25	13.40	16.30	174.86	-871.03	-86.36	1,298.24	1,274.10	24.14	53.771	
3,700.00	3,681.33	3,327.52	3,172.54	13.78	16.86	174.90	-903.96	-90.50	1,346.10	1,321.26	24.84	54.189	
3,800.00	3,780.70	3,415.32	3,253.83	14.17	17.42	174.93	-936.89	-94.64	1,393.96	1,368.42	25.54	54.581	
3,900.00	3,880.08	3,503.12	3,335.11	14.55	17.99	174.97	-969.81	-98.78	1,441.82	1,415.59	26.24	54.951	
4,000.00	3,979.45	3,590.92	3,416.40	14.94	18.55	175.00	-1,002.74	-102.92	1,489.69	1,462.75	26.94	55.299	
4,100.00	4,078.82	3,678.72	3,497.68	15.33	19.11	175.02	-1,035.67	-107.06	1,537.55	1,509.91	27.64	55.627	
4,200.00	4,178.20	3,766.52	3,578.97	15.71	19.68	175.05	-1,068.60	-111.20	1,585.41	1,557.07	28.34	55.938	
4,300.00	4,277.57	3,854.32	3,660.26	16.10	20.24	175.08	-1,101.52	-115.34	1,633.27	1,604.23	29.05	56.231	
4,400.00	4,376.95	3,942.12	3,741.54	16.49	20.81	175.10	-1,134.45	-119.48	1,681.14	1,651.39	29.75	56.510	
4,500.00	4,476.32	4,029.92	3,822.83	16.87	21.37	175.12	-1,167.38	-123.62	1,729.00	1,698.55	30.45	56.774	
4,600.00	4,575.70	4,117.71	3,904.11	17.26	21.94	175.14	-1,200.30	-127.76	1,776.86	1,745.71	31.16	57.025	
4,700.00	4,675.07	4,205.51	3,985.40	17.65	22.50	175.16	-1,233.23	-131.90	1,824.73	1,792.86	31.87	57.264	
4,800.00	4,774.45	4,293.31	4,066.69	18.03	23.07	175.18	-1,266.16	-136.04	1,872.59	1,840.02	32.57	57.492	
4,900.00	4,873.82	4,381.11	4,147.97	18.42	23.64	175.20	-1,299.08	-140.18	1,920.46	1,887.18	33.28	57.708	
5,000.00	4,973.20	4,468.91	4,229.26	18.80	24.20	175.22	-1,332.01	-144.32	1,968.32	1,934.33	33.99	57.915	
5,100.00	5,072.57	4,556.71	4,310.54	19.19	24.77	175.23	-1,364.94	-148.46	2,016.19	1,981.49	34.69	58.112	

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 601 1H - Slot B02
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 601 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	5,171.95	4,644.51	4,391.83	19.58	25.34	175.25	-1,397.86	-152.60	2,064.05	2,028.65	35.40	58.301	
5,300.00	5,271.32	4,732.31	4,473.12	19.96	25.90	175.26	-1,430.79	-156.74	2,111.91	2,075.80	36.11	58.482	
5,400.00	5,370.69	4,820.11	4,554.40	20.35	26.47	170.44	-1,463.72	-160.89	2,159.78	2,122.96	36.82	58.655	
5,500.00	5,469.49	4,907.03	4,634.87	20.74	27.03	125.62	-1,496.31	-164.98	2,208.38	2,170.86	37.53	58.845	
5,600.00	5,565.90	4,991.19	4,712.79	21.13	27.58	108.80	-1,527.88	-168.95	2,257.76	2,219.54	38.22	59.070	
5,700.00	5,658.06	5,070.96	4,786.64	21.53	28.09	99.60	-1,557.79	-172.71	2,307.31	2,268.41	38.90	59.315	
5,800.00	5,744.16	5,144.79	4,854.99	21.93	28.57	93.21	-1,585.48	-176.20	2,356.62	2,317.05	39.57	59.553	
5,900.00	5,822.53	5,211.23	4,916.51	22.38	29.00	88.19	-1,610.40	-179.33	2,405.38	2,365.11	40.27	59.738	
6,000.00	5,891.65	5,269.00	4,969.99	22.93	29.37	83.92	-1,632.06	-182.05	2,453.34	2,412.32	41.02	59.809	
6,100.00	5,950.17	5,316.97	5,014.40	23.68	29.69	80.10	-1,650.05	-184.31	2,500.29	2,458.41	41.88	59.704	
6,200.00	5,996.95	5,354.21	5,048.88	24.69	29.93	76.54	-1,664.02	-186.07	2,545.97	2,503.09	42.88	59.377	
6,300.00	6,031.08	5,379.99	5,072.75	25.98	30.09	73.17	-1,673.69	-187.29	2,590.06	2,546.03	44.03	58.825	
6,400.00	6,051.90	5,393.81	5,085.54	27.55	30.18	69.94	-1,678.87	-187.94	2,632.13	2,586.81	45.32	58.083	
6,500.00	6,059.00	5,395.40	5,087.02	29.33	30.19	66.89	-1,679.47	-188.01	2,671.67	2,624.98	46.69	57.222	
6,600.00	6,059.27	5,390.93	5,082.88	31.29	30.16	66.79	-1,677.79	-187.80	2,711.37	2,663.23	48.14	56.328	
6,700.00	6,059.53	5,386.46	5,078.74	33.41	30.14	66.69	-1,676.11	-187.59	2,754.11	2,704.46	49.65	55.469	
6,800.00	6,059.80	5,382.00	5,074.60	35.66	30.11	66.58	-1,674.44	-187.38	2,799.77	2,748.57	51.21	54.678	
6,900.00	6,060.07	5,377.53	5,070.47	38.01	30.08	66.48	-1,672.76	-187.17	2,848.21	2,795.44	52.77	53.974	
7,000.00	6,060.33	5,373.06	5,066.33	40.45	30.05	66.38	-1,671.09	-186.96	2,899.28	2,844.95	54.33	53.366	
7,100.00	6,060.60	5,368.59	5,062.19	42.97	30.02	66.27	-1,669.41	-186.75	2,952.85	2,896.98	55.86	52.859	
7,200.00	6,060.87	5,364.12	5,058.05	45.54	29.99	66.17	-1,667.73	-186.54	3,008.78	2,951.41	57.36	52.451	
7,300.00	6,061.13	5,359.65	5,053.92	48.17	29.96	66.07	-1,666.06	-186.33	3,066.94	3,008.12	58.82	52.140	
7,400.00	6,061.40	5,355.18	5,049.78	50.84	29.93	65.96	-1,664.38	-186.12	3,127.22	3,066.99	60.23	51.920	
7,500.00	6,061.66	5,350.71	5,045.64	53.55	29.90	65.86	-1,662.71	-185.91	3,189.48	3,127.90	61.59	51.787	
7,600.00	6,061.93	5,346.24	5,041.50	56.28	29.87	65.76	-1,661.03	-185.70	3,253.63	3,190.74	62.89	51.733	
7,700.00	6,062.20	5,341.77	5,037.37	59.05	29.85	65.65	-1,659.35	-185.48	3,319.54	3,255.40	64.14	51.754	
7,800.00	6,062.46	5,337.30	5,033.23	61.83	29.82	65.55	-1,657.68	-185.27	3,387.11	3,321.78	65.33	51.843	
7,900.00	6,062.73	5,332.84	5,029.09	64.64	29.79	65.45	-1,656.00	-185.06	3,456.25	3,389.78	66.47	51.996	
8,000.00	6,063.00	5,328.37	5,024.95	67.46	29.76	65.34	-1,654.33	-184.85	3,526.87	3,459.32	67.55	52.208	
8,100.00	6,063.26	5,323.90	5,020.82	70.30	29.73	65.24	-1,652.65	-184.64	3,598.87	3,530.29	68.58	52.473	
8,200.00	6,063.53	5,319.43	5,016.68	73.16	29.70	65.14	-1,650.97	-184.43	3,672.18	3,602.62	69.56	52.789	
8,300.00	6,063.79	5,314.96	5,012.54	76.02	29.67	65.03	-1,649.30	-184.22	3,746.72	3,676.23	70.49	53.150	
8,400.00	6,064.06	5,310.49	5,008.40	78.90	29.64	64.93	-1,647.62	-184.01	3,822.42	3,751.04	71.38	53.553	
8,500.00	6,064.33	5,306.02	5,004.27	81.79	29.61	64.83	-1,645.95	-183.80	3,899.21	3,826.99	72.21	53.995	
8,600.00	6,064.59	5,301.55	5,000.13	84.68	29.59	64.72	-1,644.27	-183.59	3,977.02	3,904.01	73.01	54.474	
8,700.00	6,064.86	5,297.08	4,995.99	87.59	29.56	64.62	-1,642.59	-183.38	4,055.80	3,982.04	73.76	54.985	
8,800.00	6,065.13	5,292.61	4,991.85	90.50	29.53	64.52	-1,640.92	-183.17	4,135.50	4,061.02	74.48	55.528	
8,900.00	6,065.39	5,288.14	4,987.72	93.41	29.50	64.41	-1,639.24	-182.96	4,216.05	4,140.90	75.15	56.100	
9,000.00	6,065.66	5,283.68	4,983.58	96.33	29.47	64.31	-1,637.57	-182.74	4,297.42	4,221.62	75.80	56.698	
9,100.00	6,065.92	5,279.21	4,979.44	99.26	29.44	64.21	-1,635.89	-182.53	4,379.55	4,303.15	76.40	57.321	
9,200.00	6,066.19	5,274.74	4,975.30	102.20	29.41	64.10	-1,634.21	-182.32	4,462.41	4,385.43	76.98	57.967	
9,300.00	6,066.46	5,270.27	4,971.17	105.13	29.38	64.00	-1,632.54	-182.11	4,545.96	4,468.43	77.53	58.636	
9,400.00	6,066.72	5,265.80	4,967.03	108.07	29.35	63.90	-1,630.86	-181.90	4,630.15	4,552.10	78.05	59.324	
9,500.00	6,066.99	5,261.33	4,962.89	111.02	29.33	63.79	-1,629.19	-181.69	4,714.96	4,636.41	78.54	60.031	
9,600.00	6,067.25	5,256.86	4,958.75	113.97	29.30	63.69	-1,627.51	-181.48	4,800.34	4,721.33	79.01	60.756	
9,700.00	6,067.52	5,252.39	4,954.62	116.92	29.27	63.59	-1,625.83	-181.27	4,886.28	4,806.83	79.45	61.498	
9,800.00	6,067.79	5,247.92	4,950.48	119.87	29.24	63.48	-1,624.16	-181.06	4,972.74	4,892.86	79.88	62.256	
9,900.00	6,068.05	5,243.45	4,946.34	122.83	29.21	63.38	-1,622.48	-180.85	5,059.69	4,979.42	80.28	63.028	
10,000.00	6,068.32	5,238.99	4,942.20	125.79	29.18	63.28	-1,620.81	-180.64	5,147.12	5,066.46	80.66	63.814	
10,100.00	6,068.59	5,234.52	4,938.07	128.75	29.15	63.18	-1,619.13	-180.43	5,234.99	5,153.97	81.02	64.613	
10,200.00	6,068.85	5,230.05	4,933.93	131.71	29.12	63.07	-1,617.45	-180.22	5,323.28	5,241.92	81.36	65.425	
10,300.00	6,069.12	5,225.58	4,929.79	134.68	29.09	62.97	-1,615.78	-180.01	5,411.98	5,330.29	81.69	66.249	

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 601 1H - Slot B02
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 601 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	6,069.38	5,221.11	4,925.65	137.65	29.06	62.87	-1,614.10	-179.79	5,501.06	5,419.06	82.00	67.083	
10,500.00	6,069.65	5,216.64	4,921.52	140.62	29.04	62.76	-1,612.43	-179.58	5,590.51	5,508.21	82.30	67.928	
10,600.00	6,069.92	5,212.17	4,917.38	143.59	29.01	62.66	-1,610.75	-179.37	5,680.31	5,597.73	82.58	68.784	
10,700.00	6,070.18	5,207.70	4,913.24	146.56	28.98	62.56	-1,609.07	-179.16	5,770.44	5,687.59	82.85	69.648	
10,800.00	6,070.45	5,203.23	4,909.10	149.54	28.95	62.46	-1,607.40	-178.95	5,860.88	5,777.78	83.11	70.522	
10,900.00	6,070.72	5,198.76	4,904.97	152.52	28.92	62.35	-1,605.72	-178.74	5,951.63	5,868.28	83.35	71.404	
11,000.00	6,070.98	5,194.29	4,900.83	155.49	28.89	62.25	-1,604.05	-178.53	6,042.67	5,959.08	83.58	72.295	
11,100.00	6,071.25	5,189.83	4,896.69	158.47	28.86	62.15	-1,602.37	-178.32	6,133.98	6,050.17	83.81	73.193	
11,200.00	6,071.51	5,185.36	4,892.55	161.45	28.83	62.05	-1,600.69	-178.11	6,225.56	6,141.54	84.02	74.099	
11,300.00	6,071.78	5,180.89	4,888.41	164.43	28.80	61.94	-1,599.02	-177.90	6,317.38	6,233.17	84.22	75.012	
11,400.00	6,072.05	5,176.42	4,884.28	167.42	28.78	61.84	-1,597.34	-177.69	6,409.45	6,325.04	84.41	75.932	
11,500.00	6,072.31	5,171.95	4,880.14	170.40	28.75	61.74	-1,595.67	-177.48	6,501.76	6,417.16	84.59	76.858	
11,600.00	6,072.58	5,167.48	4,876.00	173.38	28.72	61.64	-1,593.99	-177.27	6,594.28	6,509.51	84.77	77.791	
11,700.00	6,072.85	5,163.01	4,871.86	176.37	28.69	61.53	-1,592.31	-177.05	6,687.01	6,602.08	84.94	78.729	
11,800.00	6,073.11	5,158.54	4,867.73	179.36	28.66	61.43	-1,590.64	-176.84	6,779.95	6,694.86	85.10	79.674	
11,900.00	6,073.38	5,154.07	4,863.59	182.34	28.63	61.33	-1,588.96	-176.63	6,873.09	6,787.84	85.25	80.623	
12,000.00	6,073.64	5,149.60	4,859.45	185.33	28.60	61.23	-1,587.29	-176.42	6,966.41	6,881.01	85.40	81.579	
12,100.00	6,073.91	5,145.13	4,855.31	188.32	28.57	61.13	-1,585.61	-176.21	7,059.91	6,974.38	85.53	82.539	
12,200.00	6,074.18	5,140.67	4,851.18	191.31	28.54	61.02	-1,583.93	-176.00	7,153.58	7,067.92	85.67	83.504	
12,300.00	6,074.44	5,136.20	4,847.04	194.30	28.52	60.92	-1,582.26	-175.79	7,247.42	7,161.63	85.79	84.474	
12,400.00	6,074.71	5,131.73	4,842.90	197.29	28.49	60.82	-1,580.58	-175.58	7,341.43	7,255.51	85.92	85.448	
12,500.00	6,074.98	5,127.26	4,838.76	200.28	28.46	60.72	-1,578.91	-175.37	7,435.58	7,349.55	86.03	86.427	
12,600.00	6,075.24	5,122.79	4,834.63	203.27	28.43	60.62	-1,577.23	-175.16	7,529.88	7,443.74	86.14	87.410	
12,700.00	6,075.51	5,118.32	4,830.49	206.26	28.40	60.51	-1,575.55	-174.95	7,624.33	7,538.08	86.25	88.397	
12,800.00	6,075.77	5,113.85	4,826.35	209.26	28.37	60.41	-1,573.88	-174.74	7,718.91	7,632.56	86.35	89.388	
12,900.00	6,076.04	5,109.38	4,822.21	212.25	28.34	60.31	-1,572.20	-174.53	7,813.63	7,727.18	86.45	90.383	
13,000.00	6,076.31	5,104.91	4,818.08	215.24	28.31	60.21	-1,570.53	-174.32	7,908.47	7,821.92	86.54	91.381	
13,100.00	6,076.57	5,100.44	4,813.94	218.24	28.28	60.11	-1,568.85	-174.10	8,003.43	7,916.80	86.63	92.383	
13,200.00	6,076.84	5,095.97	4,809.80	221.23	28.26	60.01	-1,567.17	-173.89	8,098.52	8,011.80	86.72	93.389	
13,300.00	6,077.10	5,091.51	4,805.66	224.23	28.23	59.90	-1,565.50	-173.68	8,193.72	8,106.92	86.80	94.397	
13,400.00	6,077.37	5,087.04	4,801.53	227.22	28.20	59.80	-1,563.82	-173.47	8,289.03	8,202.15	86.88	95.409	
13,500.00	6,077.64	5,082.57	4,797.39	230.22	28.17	59.70	-1,562.15	-173.26	8,384.44	8,297.49	86.95	96.424	
13,600.00	6,077.90	5,078.10	4,793.25	233.21	28.14	59.60	-1,560.47	-173.05	8,479.96	8,392.94	87.03	97.442	
13,636.27	6,078.00	5,076.48	4,791.75	234.30	28.13	59.56	-1,559.86	-172.97	8,514.63	8,427.58	87.05	97.812	

Hilcorp Energy Company

Scientific Drilling, Intl

Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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	143.82	-20.02	14.64	24.80				
100.00	100.00	100.00	100.00	0.18	0.18	143.82	-20.02	14.64	24.80	24.44	0.36	69.188	
200.00	200.00	200.00	200.00	0.54	0.54	143.82	-20.02	14.64	24.80	23.73	1.08	23.063	
300.00	300.00	300.00	300.00	0.90	0.90	143.82	-20.02	14.64	24.80	23.01	1.79	13.838	
400.00	400.00	400.00	400.00	1.25	1.25	143.82	-20.02	14.64	24.80	22.29	2.51	9.884	
500.00	500.00	500.00	500.00	1.61	1.61	143.82	-20.02	14.64	24.80	21.58	3.23	7.688	CC, ES
600.00	599.98	599.98	599.98	1.97	1.97	134.33	-20.02	14.64	25.99	22.05	3.94	6.591	
700.00	699.84	699.84	699.84	2.33	2.33	141.47	-20.02	14.64	29.88	25.22	4.66	6.411	SF
800.00	799.45	799.45	799.45	2.70	2.69	149.80	-20.02	14.64	37.11	31.72	5.38	6.894	
900.00	898.83	898.83	898.83	3.06	3.04	156.59	-20.02	14.64	47.04	40.93	6.10	7.709	
1,000.00	998.21	998.21	998.21	3.43	3.40	161.02	-20.02	14.64	57.46	50.64	6.82	8.428	
1,100.00	1,097.58	1,097.58	1,097.58	3.80	3.76	164.07	-20.02	14.64	68.12	60.59	7.53	9.041	
1,200.00	1,196.96	1,196.96	1,196.96	4.18	4.11	166.30	-20.02	14.64	78.92	70.67	8.25	9.564	
1,300.00	1,296.33	1,296.33	1,296.33	4.56	4.47	167.98	-20.02	14.64	89.82	80.85	8.97	10.013	
1,400.00	1,395.71	1,395.71	1,395.71	4.94	4.82	169.31	-20.02	14.64	100.77	91.08	9.69	10.401	
1,500.00	1,495.08	1,495.08	1,495.08	5.32	5.18	170.37	-20.02	14.64	111.76	101.35	10.41	10.739	
1,600.00	1,594.46	1,594.46	1,594.46	5.70	5.54	171.24	-20.02	14.64	122.78	111.66	11.13	11.036	
1,700.00	1,693.83	1,693.83	1,693.83	6.08	5.89	171.97	-20.02	14.64	133.83	121.99	11.85	11.298	
1,800.00	1,793.21	1,793.21	1,793.21	6.46	6.25	172.58	-20.02	14.64	144.90	132.33	12.56	11.532	
1,900.00	1,892.58	1,892.58	1,892.58	6.85	6.61	173.11	-20.02	14.64	155.98	142.69	13.28	11.742	
2,000.00	1,991.96	1,991.96	1,991.96	7.23	6.96	173.57	-20.02	14.64	167.07	153.06	14.00	11.930	
2,100.00	2,091.33	2,091.33	2,091.33	7.62	7.32	173.97	-20.02	14.64	178.17	163.44	14.72	12.101	
2,200.00	2,190.71	2,190.71	2,190.71	8.00	7.67	174.33	-20.02	14.64	189.28	173.83	15.44	12.256	
2,300.00	2,290.08	2,290.08	2,290.08	8.38	8.03	174.64	-20.02	14.64	200.39	184.23	16.16	12.397	
2,400.00	2,389.46	2,389.46	2,389.46	8.77	8.39	174.93	-20.02	14.64	211.51	194.63	16.88	12.527	
2,500.00	2,488.83	2,488.83	2,488.83	9.15	8.74	175.18	-20.02	14.64	222.64	205.03	17.60	12.646	
2,600.00	2,588.20	2,588.20	2,588.20	9.54	9.10	175.41	-20.02	14.64	233.76	215.44	18.32	12.757	
2,700.00	2,687.58	2,687.58	2,687.58	9.92	9.45	175.62	-20.02	14.64	244.90	225.85	19.05	12.859	
2,800.00	2,786.95	2,786.95	2,786.95	10.31	9.81	175.81	-20.02	14.64	256.03	236.27	19.77	12.953	
2,900.00	2,886.33	2,886.33	2,886.33	10.70	10.17	175.99	-20.02	14.64	267.17	246.68	20.49	13.041	
3,000.00	2,985.70	2,985.70	2,985.70	11.08	10.52	176.15	-20.02	14.64	278.31	257.10	21.21	13.123	
3,100.00	3,085.08	3,085.08	3,085.08	11.47	10.88	176.30	-20.02	14.64	289.45	267.52	21.93	13.200	
3,200.00	3,184.45	3,184.45	3,184.45	11.85	11.24	176.43	-20.02	14.64	300.59	277.95	22.65	13.272	
3,300.00	3,283.83	3,283.83	3,283.83	12.24	11.59	176.56	-20.02	14.64	311.74	288.37	23.37	13.340	
3,400.00	3,383.20	3,383.20	3,383.20	12.62	11.95	176.68	-20.02	14.64	322.88	298.80	24.09	13.403	
3,500.00	3,482.58	3,482.58	3,482.58	13.01	12.30	176.79	-20.02	14.64	334.03	309.22	24.81	13.463	
3,600.00	3,581.95	3,581.95	3,581.95	13.40	12.66	176.89	-20.02	14.64	345.18	319.65	25.53	13.520	
3,700.00	3,681.33	3,681.33	3,681.33	13.78	13.02	176.99	-20.02	14.64	356.33	330.08	26.25	13.573	
3,800.00	3,780.70	3,780.70	3,780.70	14.17	13.37	177.08	-20.02	14.64	367.48	340.51	26.97	13.624	
3,900.00	3,880.08	3,880.08	3,880.08	14.55	13.73	177.17	-20.02	14.64	378.63	350.94	27.69	13.672	
4,000.00	3,979.45	3,979.45	3,979.45	14.94	14.09	177.25	-20.02	14.64	389.79	361.37	28.41	13.718	
4,100.00	4,078.82	4,078.82	4,078.82	15.33	14.44	177.33	-20.02	14.64	400.94	371.80	29.14	13.761	
4,200.00	4,178.20	4,178.20	4,178.20	15.71	14.80	177.40	-20.02	14.64	412.09	382.24	29.86	13.802	
4,300.00	4,277.57	4,277.57	4,277.57	16.10	15.15	177.47	-20.02	14.64	423.25	392.67	30.58	13.842	
4,400.00	4,376.95	4,376.95	4,376.95	16.49	15.51	177.53	-20.02	14.64	434.40	403.11	31.30	13.879	
4,500.00	4,476.32	4,476.32	4,476.32	16.87	15.87	177.59	-20.02	14.64	445.56	413.54	32.02	13.915	
4,600.00	4,575.70	4,575.70	4,575.70	17.26	16.22	177.65	-20.02	14.64	456.72	423.98	32.74	13.950	
4,700.00	4,675.07	4,675.07	4,675.07	17.65	16.58	177.71	-20.02	14.64	467.87	434.41	33.46	13.982	
4,800.00	4,774.45	4,774.45	4,774.45	18.03	16.94	177.76	-20.02	14.64	479.03	444.85	34.18	14.014	
4,900.00	4,873.82	4,873.82	4,873.82	18.42	17.29	177.81	-20.02	14.64	490.19	455.28	34.90	14.044	
5,000.00	4,973.20	4,973.20	4,973.20	18.80	17.65	177.86	-20.02	14.64	501.34	465.72	35.62	14.073	
5,100.00	5,072.57	5,072.57	5,072.57	19.19	18.00	177.91	-20.02	14.64	512.50	476.16	36.35	14.101	

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 601 1H - Slot B02
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 601 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
5,200.00	5,171.95	5,171.95	5,171.95	19.58	18.36	177.95	-20.02	14.64	523.66	486.59	37.07	14.128	
5,300.00	5,271.32	5,271.32	5,271.32	19.96	18.72	178.00	-20.02	14.64	534.82	497.03	37.79	14.153	
5,400.00	5,370.69	5,370.69	5,370.69	20.35	19.07	173.43	-20.02	14.64	545.98	507.48	38.51	14.178	
5,500.00	5,469.49	5,469.49	5,469.49	20.74	19.43	132.64	-20.02	14.64	558.56	519.34	39.23	14.239	
5,600.00	5,565.90	5,565.90	5,565.90	21.13	19.77	120.62	-20.02	14.64	574.02	534.09	39.93	14.374	
5,700.00	5,658.06	5,658.06	5,658.06	21.53	20.10	116.66	-20.02	14.64	593.45	552.83	40.62	14.609	
5,800.00	5,744.16	5,744.16	5,744.16	21.93	20.41	115.51	-20.02	14.64	618.42	577.13	41.29	14.976	
5,900.00	5,822.53	5,822.53	5,822.53	22.38	20.69	115.28	-20.02	14.64	650.56	608.61	41.95	15.509	
6,000.00	5,891.65	5,891.65	5,891.65	22.93	20.94	114.92	-20.02	14.64	691.15	648.57	42.58	16.230	
6,100.00	5,950.17	5,950.17	5,950.17	23.68	21.15	113.72	-20.02	14.64	740.87	697.67	43.20	17.149	
6,200.00	5,996.95	5,996.95	5,996.95	24.69	21.32	111.09	-20.02	14.64	799.57	755.79	43.78	18.263	
6,300.00	6,031.08	6,031.08	6,031.08	25.98	21.44	106.52	-20.02	14.64	866.38	822.08	44.30	19.559	
6,400.00	6,051.90	6,051.90	6,051.90	27.55	21.52	99.57	-20.02	14.64	939.81	895.09	44.73	21.013	
6,500.00	6,059.00	6,059.00	6,059.00	29.33	21.54	90.20	-20.02	14.64	1,018.01	972.96	45.05	22.597	
6,600.00	6,059.27	6,059.27	6,059.27	31.29	21.54	90.23	-20.02	14.64	1,099.54	1,054.23	45.31	24.266	
6,700.00	6,059.53	6,059.53	6,059.53	33.41	21.54	90.25	-20.02	14.64	1,183.91	1,138.36	45.55	25.993	
6,800.00	6,059.80	6,059.80	6,059.80	35.66	21.54	90.28	-20.02	14.64	1,270.55	1,224.79	45.76	27.767	
6,900.00	6,060.07	6,060.07	6,060.07	38.01	21.54	90.30	-20.02	14.64	1,359.02	1,313.08	45.95	29.578	
7,000.00	6,060.33	6,060.33	6,060.33	40.45	21.55	90.33	-20.02	14.64	1,449.00	1,402.88	46.12	31.420	
7,100.00	6,060.60	6,060.60	6,060.60	42.97	21.55	90.35	-20.02	14.64	1,540.21	1,493.94	46.27	33.289	
7,200.00	6,060.87	6,060.87	6,060.87	45.54	21.55	90.38	-20.02	14.64	1,632.45	1,586.04	46.41	35.178	
7,300.00	6,061.13	6,061.13	6,061.13	48.17	21.55	90.40	-20.02	14.64	1,725.56	1,679.03	46.53	37.085	
7,400.00	6,061.40	6,061.40	6,061.40	50.84	21.55	90.43	-20.02	14.64	1,819.39	1,772.75	46.64	39.006	
7,500.00	6,061.66	6,061.66	6,061.66	53.55	21.55	90.45	-20.02	14.64	1,913.86	1,867.11	46.75	40.940	
7,600.00	6,061.93	6,061.93	6,061.93	56.28	21.55	90.48	-20.02	14.64	2,008.85	1,962.01	46.84	42.884	
7,700.00	6,062.20	6,062.20	6,062.20	59.05	21.55	90.50	-20.02	14.64	2,104.31	2,057.38	46.93	44.836	
7,800.00	6,062.46	6,062.46	6,062.46	61.83	21.55	90.53	-20.02	14.64	2,200.18	2,153.16	47.02	46.796	
7,900.00	6,062.73	6,062.73	6,062.73	64.64	21.55	90.55	-20.02	14.64	2,296.40	2,249.30	47.09	48.761	
8,000.00	6,063.00	6,063.00	6,063.00	67.46	21.55	90.58	-20.02	14.64	2,392.92	2,345.76	47.17	50.731	
8,100.00	6,063.26	6,063.26	6,063.26	70.30	21.56	90.60	-20.02	14.64	2,489.73	2,442.49	47.24	52.705	
8,200.00	6,063.53	6,063.53	6,063.53	73.16	21.56	90.63	-20.02	14.64	2,586.77	2,539.47	47.31	54.682	
8,300.00	6,063.79	6,063.79	6,063.79	76.02	21.56	90.65	-20.02	14.64	2,684.03	2,636.66	47.37	56.661	
8,400.00	6,064.06	6,064.06	6,064.06	78.90	21.56	90.68	-20.02	14.64	2,781.49	2,734.06	47.43	58.642	
8,500.00	6,064.33	6,064.33	6,064.33	81.79	21.56	90.70	-20.02	14.64	2,879.12	2,831.63	47.49	60.624	
8,600.00	6,064.59	6,064.59	6,064.59	84.68	21.56	90.73	-20.02	14.64	2,976.91	2,929.36	47.55	62.607	
8,700.00	6,064.86	6,064.86	6,064.86	87.59	21.56	90.75	-20.02	14.64	3,074.84	3,027.23	47.60	64.591	
8,800.00	6,065.13	6,065.13	6,065.13	90.50	21.56	90.78	-20.02	14.64	3,172.90	3,125.24	47.66	66.574	
8,900.00	6,065.39	6,065.39	6,065.39	93.41	21.56	90.80	-20.02	14.64	3,271.07	3,223.36	47.71	68.557	
9,000.00	6,065.66	6,065.66	6,065.66	96.33	21.56	90.83	-20.02	14.64	3,369.36	3,321.59	47.77	70.539	
9,100.00	6,065.92	6,065.92	6,065.92	99.26	21.57	90.85	-20.02	14.64	3,467.74	3,419.92	47.82	72.520	
9,200.00	6,066.19	6,066.19	6,066.19	102.20	21.57	90.88	-20.02	14.64	3,566.21	3,518.34	47.87	74.499	
9,300.00	6,066.46	6,066.46	6,066.46	105.13	21.57	90.90	-20.02	14.64	3,664.77	3,616.85	47.92	76.477	
9,400.00	6,066.72	6,066.72	6,066.72	108.07	21.57	90.92	-20.02	14.64	3,763.40	3,715.43	47.97	78.454	
9,500.00	6,066.99	6,066.99	6,066.99	111.02	21.57	90.95	-20.02	14.64	3,862.10	3,814.08	48.02	80.428	
9,600.00	6,067.25	6,067.25	6,067.25	113.97	21.57	90.97	-20.02	14.64	3,960.86	3,912.80	48.07	82.400	
9,700.00	6,067.52	6,067.52	6,067.52	116.92	21.57	91.00	-20.02	14.64	4,059.69	4,011.57	48.12	84.369	
9,800.00	6,067.79	6,067.79	6,067.79	119.87	21.57	91.02	-20.02	14.64	4,158.57	4,110.41	48.17	86.336	
9,900.00	6,068.05	6,068.05	6,068.05	122.83	21.57	91.05	-20.02	14.64	4,257.51	4,209.29	48.22	88.300	
10,000.00	6,068.32	6,068.32	6,068.32	125.79	21.57	91.07	-20.02	14.64	4,356.49	4,308.23	48.27	90.261	
10,100.00	6,068.59	6,068.59	6,068.59	128.75	21.57	91.10	-20.02	14.64	4,455.52	4,407.21	48.31	92.219	
10,200.00	6,068.85	6,068.85	6,068.85	131.71	21.58	91.12	-20.02	14.64	4,554.59	4,506.23	48.36	94.174	
10,300.00	6,069.12	6,069.12	6,069.12	134.68	21.58	91.15	-20.02	14.64	4,653.70	4,605.29	48.41	96.125	

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 601 1H - Slot B02
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 601 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
10,400.00	6,069.38	6,069.38	6,069.38	137.65	21.58	91.17	-20.02	14.64	4,752.85	4,704.39	48.46	98.073	
10,500.00	6,069.65	6,069.65	6,069.65	140.62	21.58	91.20	-20.02	14.64	4,852.04	4,803.52	48.51	100.018	
10,600.00	6,069.92	6,069.92	6,069.92	143.59	21.58	91.22	-20.02	14.64	4,951.25	4,902.69	48.56	101.958	
10,700.00	6,070.18	6,070.18	6,070.18	146.56	21.58	91.25	-20.02	14.64	5,050.50	5,001.89	48.61	103.895	
10,800.00	6,070.45	6,070.45	6,070.45	149.54	21.58	91.27	-20.02	14.64	5,149.78	5,101.11	48.66	105.827	
10,900.00	6,070.72	6,070.72	6,070.72	152.52	21.58	91.30	-20.02	14.64	5,249.08	5,200.37	48.71	107.756	
11,000.00	6,070.98	6,070.98	6,070.98	155.49	21.58	91.32	-20.02	14.64	5,348.41	5,299.65	48.76	109.680	
11,100.00	6,071.25	6,071.25	6,071.25	158.47	21.58	91.35	-20.02	14.64	5,447.76	5,398.95	48.81	111.600	
11,200.00	6,071.51	6,071.51	6,071.51	161.45	21.59	91.37	-20.02	14.64	5,547.14	5,498.27	48.87	113.516	
11,300.00	6,071.78	6,071.78	6,071.78	164.43	21.59	91.40	-20.02	14.64	5,646.54	5,597.62	48.92	115.427	
11,400.00	6,072.05	6,072.05	6,072.05	167.42	21.59	91.42	-20.02	14.64	5,745.96	5,696.99	48.97	117.334	
11,500.00	6,072.31	6,072.31	6,072.31	170.40	21.59	91.45	-20.02	14.64	5,845.40	5,796.38	49.02	119.236	
11,600.00	6,072.58	6,072.58	6,072.58	173.38	21.59	91.47	-20.02	14.64	5,944.86	5,895.78	49.08	121.134	
11,700.00	6,072.85	6,072.85	6,072.85	176.37	21.59	91.50	-20.02	14.64	6,044.34	5,995.20	49.13	123.026	
11,800.00	6,073.11	6,073.11	6,073.11	179.36	21.59	91.52	-20.02	14.64	6,143.83	6,094.64	49.18	124.914	
11,900.00	6,073.38	6,073.38	6,073.38	182.34	21.59	91.55	-20.02	14.64	6,243.34	6,194.10	49.24	126.796	
12,000.00	6,073.64	6,073.64	6,073.64	185.33	21.59	91.57	-20.02	14.64	6,342.86	6,293.57	49.29	128.674	
12,100.00	6,073.91	6,073.91	6,073.91	188.32	21.59	91.60	-20.02	14.64	6,442.40	6,393.05	49.35	130.547	
12,200.00	6,074.18	6,074.18	6,074.18	191.31	21.59	91.62	-20.02	14.64	6,541.96	6,492.55	49.41	132.414	
12,300.00	6,074.44	6,074.44	6,074.44	194.30	21.60	91.65	-20.02	14.64	6,641.52	6,592.06	49.46	134.276	
12,400.00	6,074.71	6,074.71	6,074.71	197.29	21.60	91.67	-20.02	14.64	6,741.10	6,691.59	49.52	136.133	
12,500.00	6,074.98	6,074.98	6,074.98	200.28	21.60	91.70	-20.02	14.64	6,840.70	6,791.12	49.58	137.985	
12,600.00	6,075.24	6,075.24	6,075.24	203.27	21.60	91.72	-20.02	14.64	6,940.30	6,890.67	49.63	139.831	
12,700.00	6,075.51	6,075.51	6,075.51	206.26	21.60	91.75	-20.02	14.64	7,039.92	6,990.22	49.69	141.671	
12,800.00	6,075.77	6,075.77	6,075.77	209.26	21.60	91.77	-20.02	14.64	7,139.54	7,089.79	49.75	143.506	
12,900.00	6,076.04	6,076.04	6,076.04	212.25	21.60	91.80	-20.02	14.64	7,239.18	7,189.37	49.81	145.336	
13,000.00	6,076.31	6,076.31	6,076.31	215.24	21.60	91.82	-20.02	14.64	7,338.82	7,288.95	49.87	147.160	
13,100.00	6,076.57	6,076.57	6,076.57	218.24	21.60	91.85	-20.02	14.64	7,438.48	7,388.55	49.93	148.978	
13,200.00	6,076.84	6,076.84	6,076.84	221.23	21.60	91.87	-20.02	14.64	7,538.14	7,488.15	49.99	150.791	
13,300.00	6,077.10	6,077.10	6,077.10	224.23	21.61	91.90	-20.02	14.64	7,637.82	7,587.77	50.05	152.598	
13,400.00	6,077.37	6,077.37	6,077.37	227.22	21.61	91.92	-20.02	14.64	7,737.50	7,687.39	50.11	154.398	
13,500.00	6,077.64	6,077.64	6,077.64	230.22	21.61	91.95	-20.02	14.64	7,837.19	7,787.01	50.18	156.194	
13,600.00	6,077.90	6,077.90	6,077.90	233.21	21.61	91.97	-20.02	14.64	7,936.89	7,886.65	50.24	157.983	
13,636.27	6,078.00	6,078.00	6,078.00	234.30	21.61	91.98	-20.02	14.64	7,973.05	7,922.78	50.26	158.630	

Hilcorp Energy Company

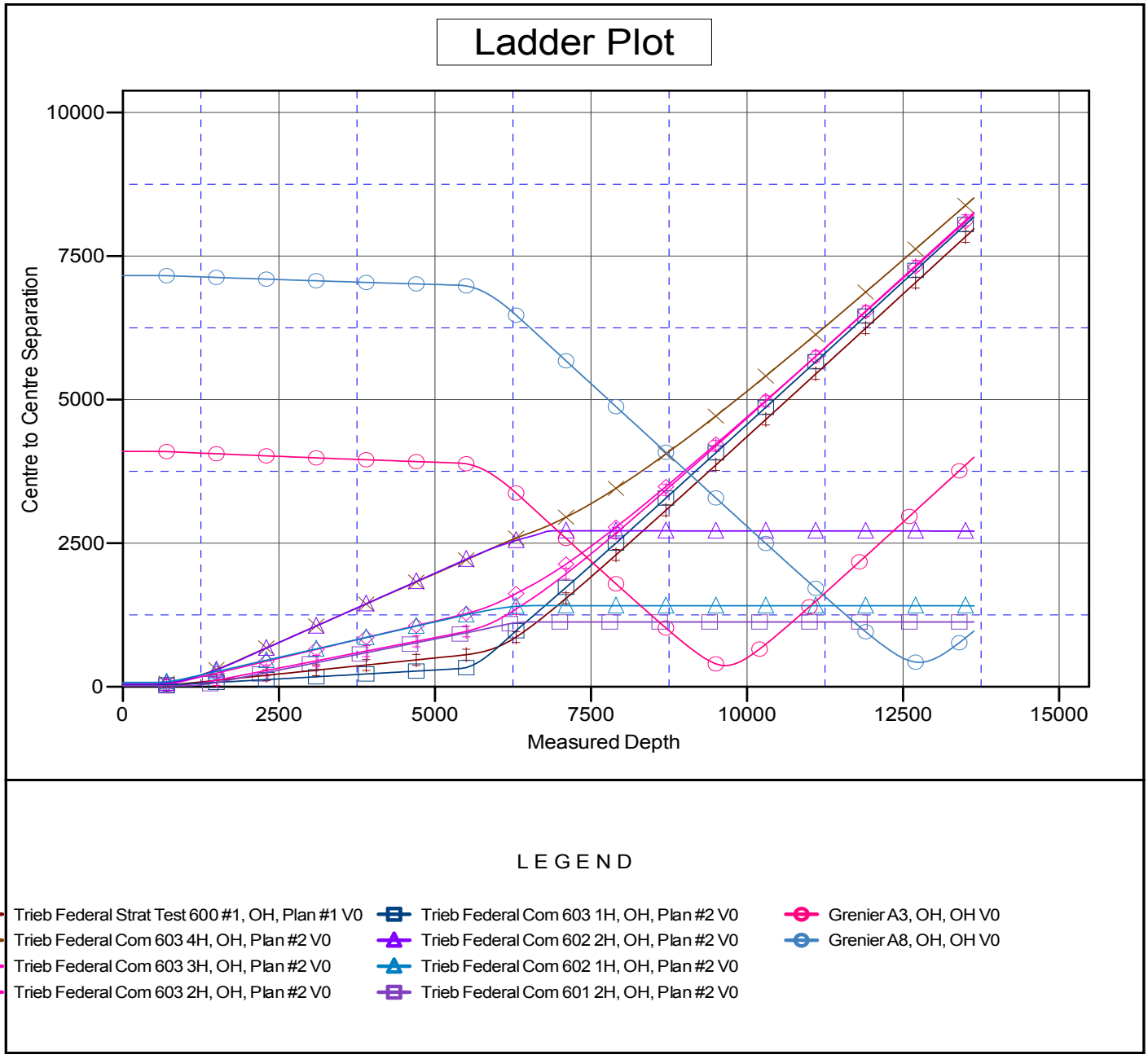
Scientific Drilling, Intl
Anticollision Report

Scientific Drilling

Company:	Hilcorp Energy Corp.	**Local Co-ordinate Reference:**	Well Trieb Federal Com 601 1H - Slot B02
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 601 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 601 1H - Slot B02
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: -0.03°



Hilcorp Energy Company

Scientific Drilling, Intl
Anticollision Report

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Project:	San Juan, NM NAD27	**TVD Reference:**	GL 6050' @ 6050.00usft
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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

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Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
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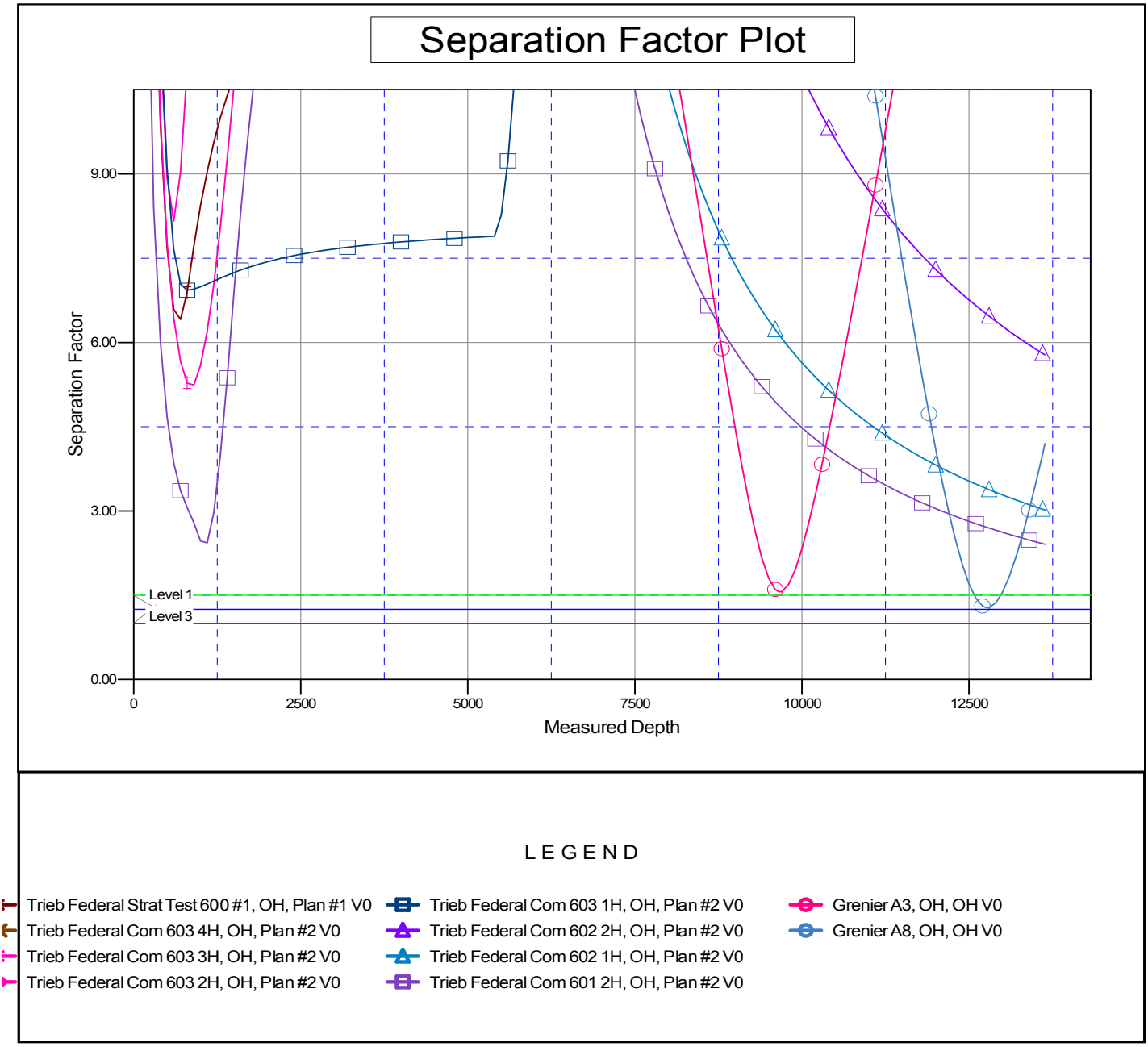


Trieb Federal Com 601 1H

Hilcorp Energy Company

Hilcorp Energy Company

Technical Plan (7-22-19)

1. Location

TRIEB FEDERAL COM 601 1H
SHL: 2492' FNL, 405' FEL -- T 30N, R 10W, Sec 33
BHL: 1878' FNL, 2329' FWL -- T 30N, R 10W, Sec 35
GL: 6050'

2. Geological Markers

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

Formation	(TVD)	Remarks
San Jose	Surface	Wet
Ojo Alamo	1354'	Wet
Kirtland	1484'	Wet
Fruitland	2116'	Possible Gas/Water
Pictured Cliffs	2612'	Wet
Lewis Shale	3500'	
Massive Cliffhouse	3947'	Possible Gas/Water
Menefee	4358'	Possible Gas/Water
Point Lookout	4852'	Possible Gas/Water
Mancos	5282'	Oil/Gas
Mancos Lateral Target	6050'	Oil/Gas
Greenhorn – Pilot Hole	6753'	
TD of Pilot Hole	7100'	

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 for intermediate section will be designed to meet and exceed 2M standards.
- Pressure control configuration for pilot section and production section will be designed to meet and exceed 5M standards.
- A rotating head will be rigged up on top of annular as seen in attached diagram.

4. Casing & Cement Program

A) The proposed casing program is outlined below:

Proposed Casing				
Casing	**Hole Size**	**Casing Size**	**Weight/Grade**	**Depth**
Surface	24"	20"	106.5#, J-55, BTC, New	0' – 350' (MD)
Intermediate (Contingency)	17-1/2"	13-3/8"	68.0#, J-55, BTC, New	0' – 3,500'
Intermediate	12-1/4"	9-5/8"	40.0#, P-110, BTC, New	0' – 5,300' (MD)
Production	8-1/2"	5-1/2"	20.0#, P-110, BTC, New	0' – 13,944' (MD)

The 13-3/8" Intermediate casing string will be run only as contingency if losses occur in the Fruitland Coal section. If no losses are occurred, the hole will be downsized and the 9-5/8" Intermediate casing string will be the only intermediate casing string. 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	350'	639	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%	751 ft^3	Surface
Intermediate	4300'	1507	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	70%	2973 ft^3	Surface
	5300'	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	4300'
Production	13944'	1866	Tail Cmt: Bondcem 0.3% Super CBL, 0.1% HR -601, 6.08 gal/sk FW. 13.3 ppg, 1.365 ft^3/sk	10%	2547 ft^3	4000'

Actual cement volumes will be determined and may be adjusted onsite based on well conditions. Cement volumes for the contingency intermediate casing string will be determined if needed. 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.

Trieb Federal Com 601 1H

Hilcorp Energy Company

C) The proposed centralizer program is shown below:

Centralizer Program	
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		0-350'
Intermediate	LSND / Gel system	8.4 - 9	<6		350 – 5300'
Pilot Hole	LSND / Gel system	9 – 11	<6		5300' – 7100'
Production	Oil Based Mud	10 - 12	6-8	70/30 – 75/25	5300– 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.

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. Pilot Hole

- Pilot Hole will be drilled through Mancos Section from intermediate casing at 5300' MD to planned TD of 7100'
- Whole core, sidewall cores, and Openhole logs are planned in the pilot hole section.
- After coring and Openhole logging have been completed, three cement plugs with viscous gel spacers will be pumped and the top of cement will be at ~5100'. Will utilize cement plugs to kick off and begin drilling production interval.
- Plug 1 will be from TD to 6500'. The second plug will be from 6500- 5900'. The third plug will be from 5900-5200'.

8. 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.
- Core: Whole Core and Sidewall Cores planned in Pilot Hole section of well
- Logs: Triple Combo, Dipole Sonic, and image log planned in the Pilot Hole Section of well
- 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.

9. 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.

10. 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

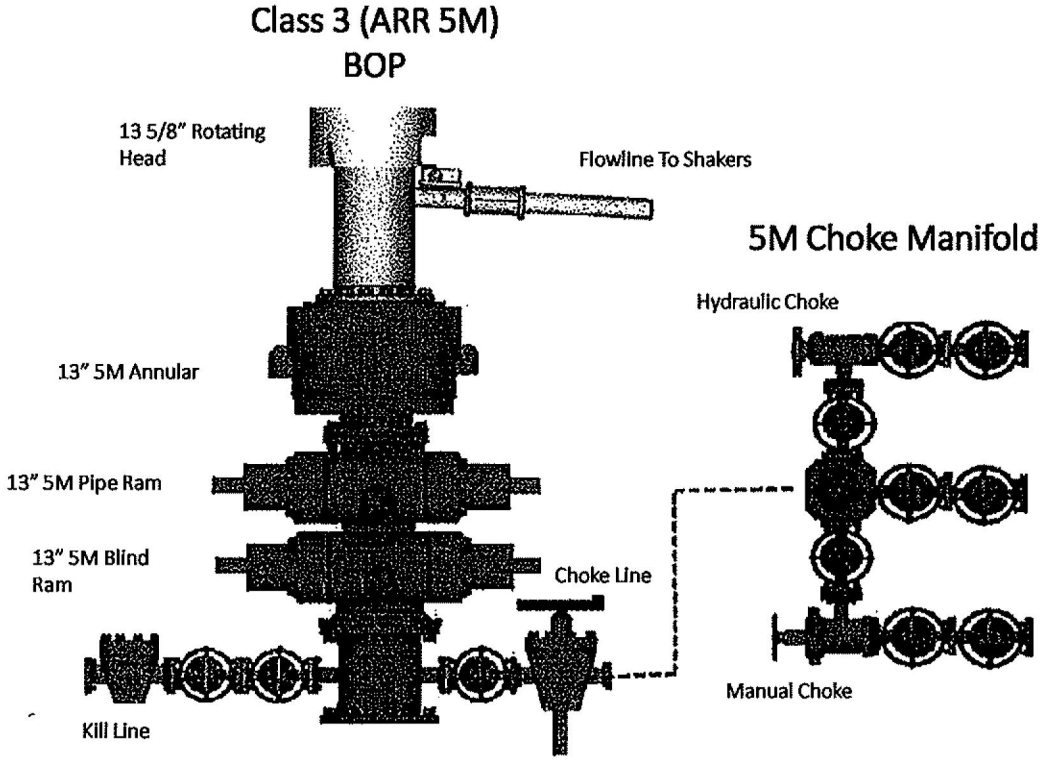
- Production tubing will be run and landed at the top of the horizontal section of the well

Trieb Federal Com 601 1H

Hilcorp Energy Company

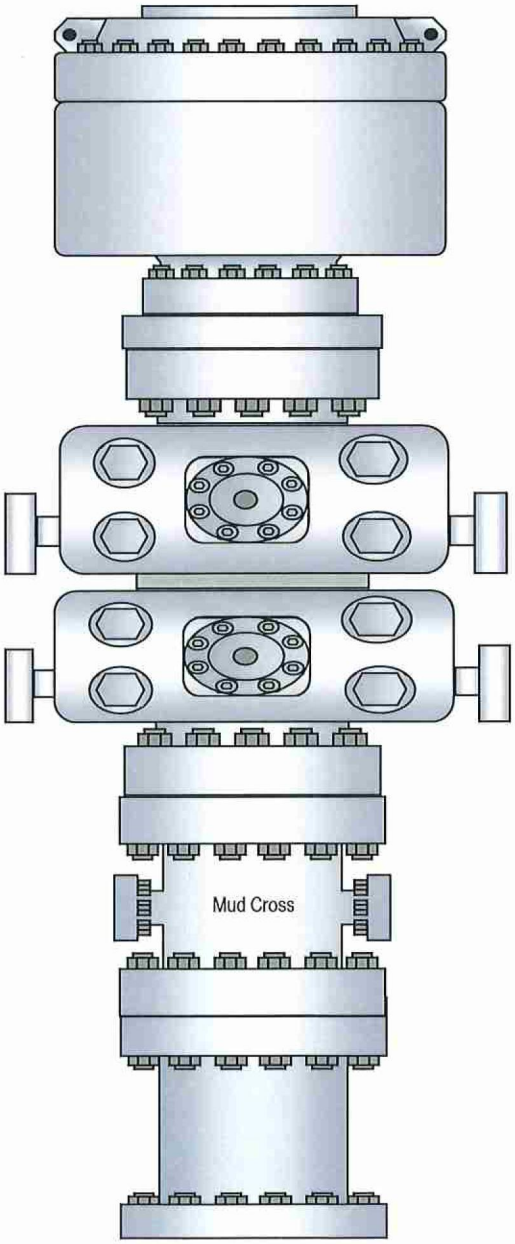
BOPE & Choke Manifold Schematic

13-5/8" BOPE



KNIGHT
ENERGY SERVICES

2M BOP



21-1/4" 2M Hydril Annular - 53"

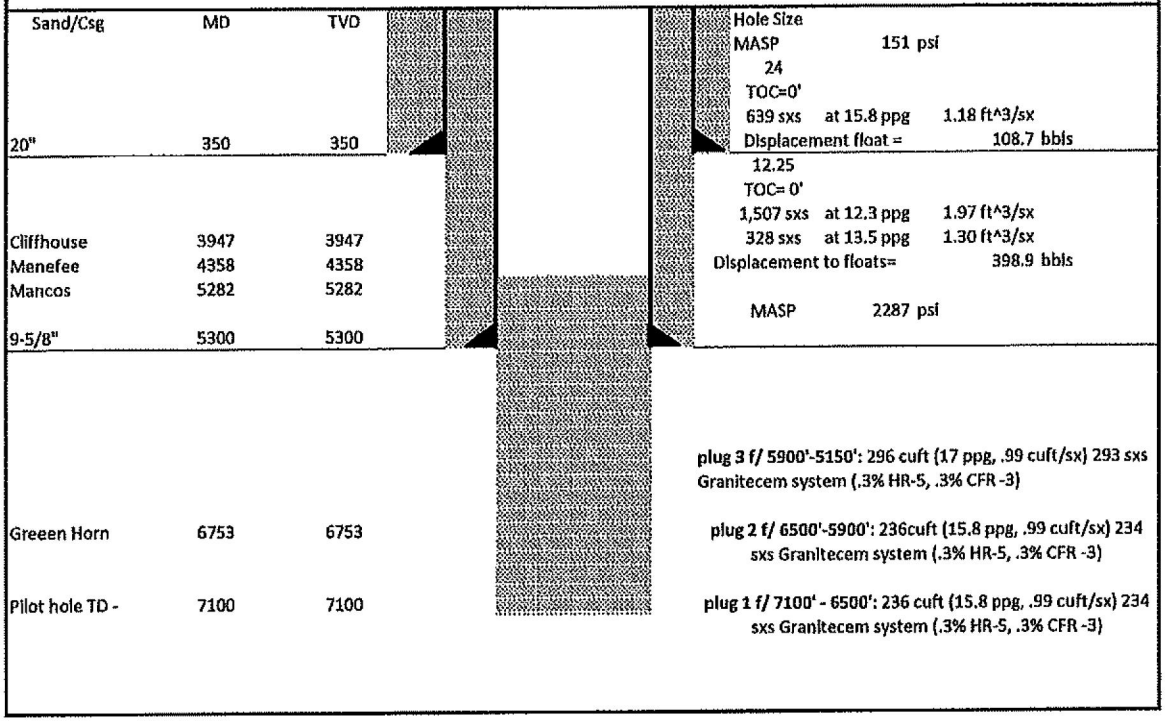
DSA 20-3/4" 3M x 21-1/4" 2M

20-3/4" 3M LWS Double BOP - 63"

20-3/4" 3M Drilling Spool 31-3/4"

20-3/4" 3M Spacer Spool - 5'

Trieb Federal COM 601 #1H - Pilot Hole Wellbore Diagram



	Size	Wt	Depth	Grade	Cxn	Design Factors	Collapse	Burst	Tension
Surface	20.000	106.5	350	J55	BTC	Rating	770	2410	913000
						SF	4.45	13.53	6.65
Int	9.625	40.0	5300	P110	BTC	Rating	3470.00	7910.00	988000.00
						SF	1.33	3.02	3.17

Csg		ID	Drift	Capacity (bpf)	Displacement BPF Closed end	Open end
Surface		19	18.81	0.3507	0.3886	0.0379
Int		8.835	8.679	0.0758	0.0900	0.0142

Hilcorp Energy Company

Company: Hilcorp Energy Corp.
Project: San Juan, NM NAD27
Site: Trieb Fed Pad
Well: Trieb Federal Com 601 1H
Wellbore: Pilot
Design: Plan #2

Scientific Drilling

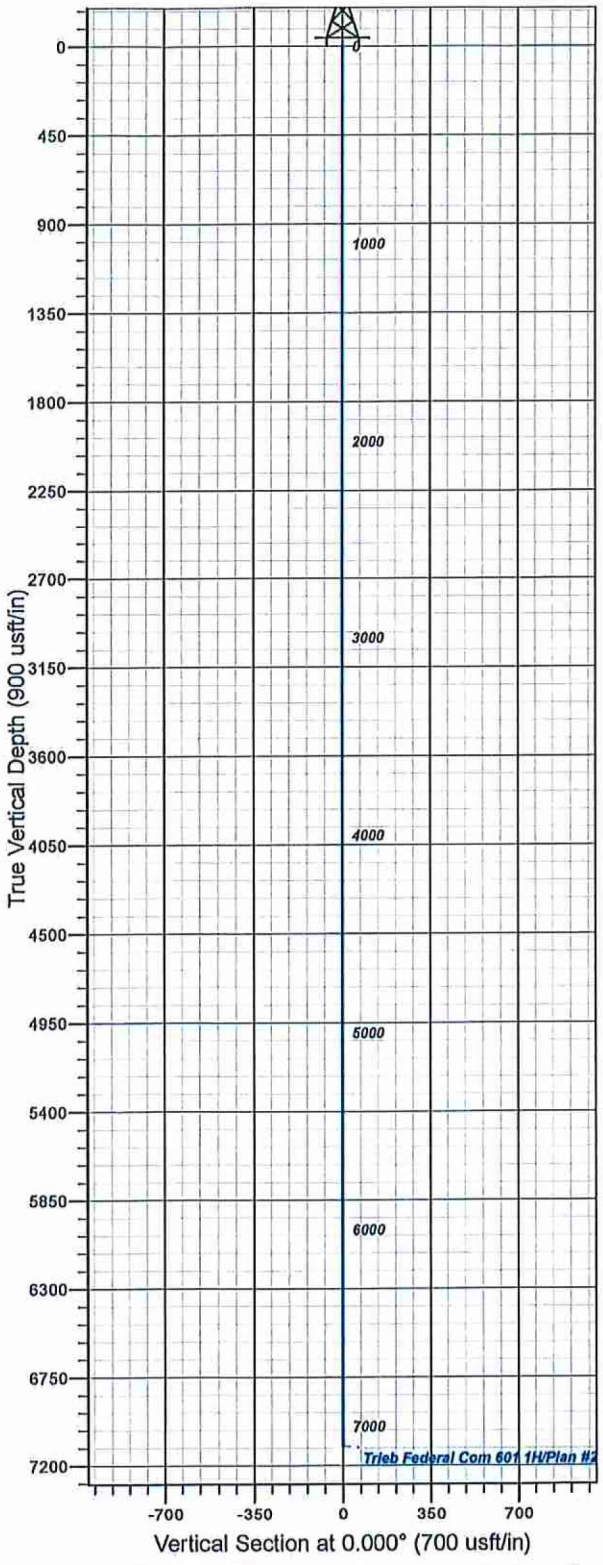
Well Details: Trieb Federal Com 601 1H

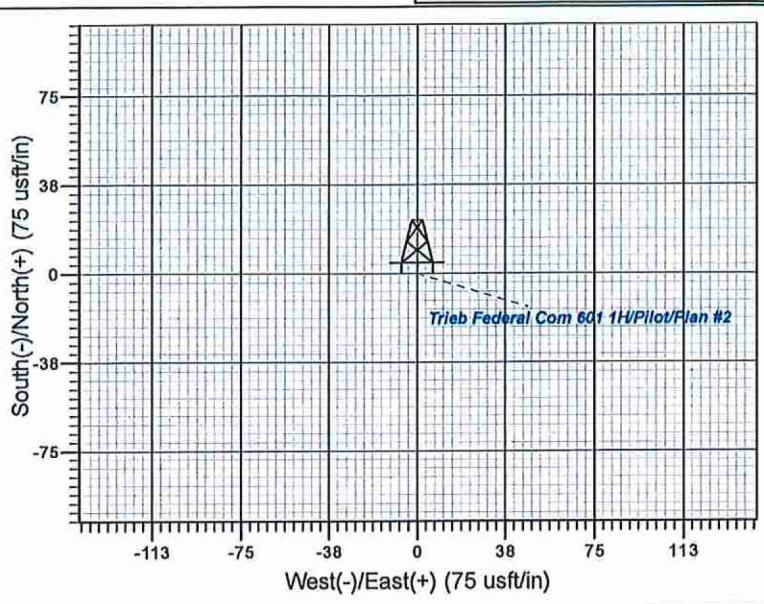
GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2099218.10	485873.74	36.7691130	-107.8815630	B02

Azimuths to True North
Magnetic North: 8.92°

Magnetic Field
Strength: 49724.0snT
Dip Angle: 63.27°
Date: 7/9/2019
Model: HDGM





FORMATION TOP DETAILS

No formation data is available

CASING DETAILS

No casing data is available

Plan: Plan #2

12:08, July 10 2019
Created By: Janie Collins

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	7100.00	0.00	0.000	7100.00	0.00	0.00	0.00	0.00	0.00	

DESIGN TARGET DETAILS

No target data is available.

Hilcorp
Energy Company

Hilcorp Energy Corp.

San Juan, NM NAD27
Trieb Fed Pad
Trieb Federal Com 601 1H - Slot B02

Pilot

Plan: Plan #2

Standard Planning Report

10 July, 2019

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 601 1H - Slot B02
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Project:	San Juan, NM NAD27	MD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	North Reference:	True
Well:	Trieb Federal Com 601 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
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 601 1H - Slot B02					
Well Position	+N/-S	-5.82 usft	Northing:	2,099,218.10 usft	Latitude:	36.7691130
	+E/-W	34.86 usft	Easting:	485,873.74 usft	Longitude:	-107.8815630
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,050.00 usft

Wellbore	Pilot				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/9/2019	8.92	63.27	49,724

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	0.000	

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	
7,100.00	0.00	0.000	7,100.00	0.00	0.00	0.00	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 601 1H - Slot B02
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Project:	San Juan, NM NAD27	MD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	North Reference:	True
Well:	Trieb Federal Com 601 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
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	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.000	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.000	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.000	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.000	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.000	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.000	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.000	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.000	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.000	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.000	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.000	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.000	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.000	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.000	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.000	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.000	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.000	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.000	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.000	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.000	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.000	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.000	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.000	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.000	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.000	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.000	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.000	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.000	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.000	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.000	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.000	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.000	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.000	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.000	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.000	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.000	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.000	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.000	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.000	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

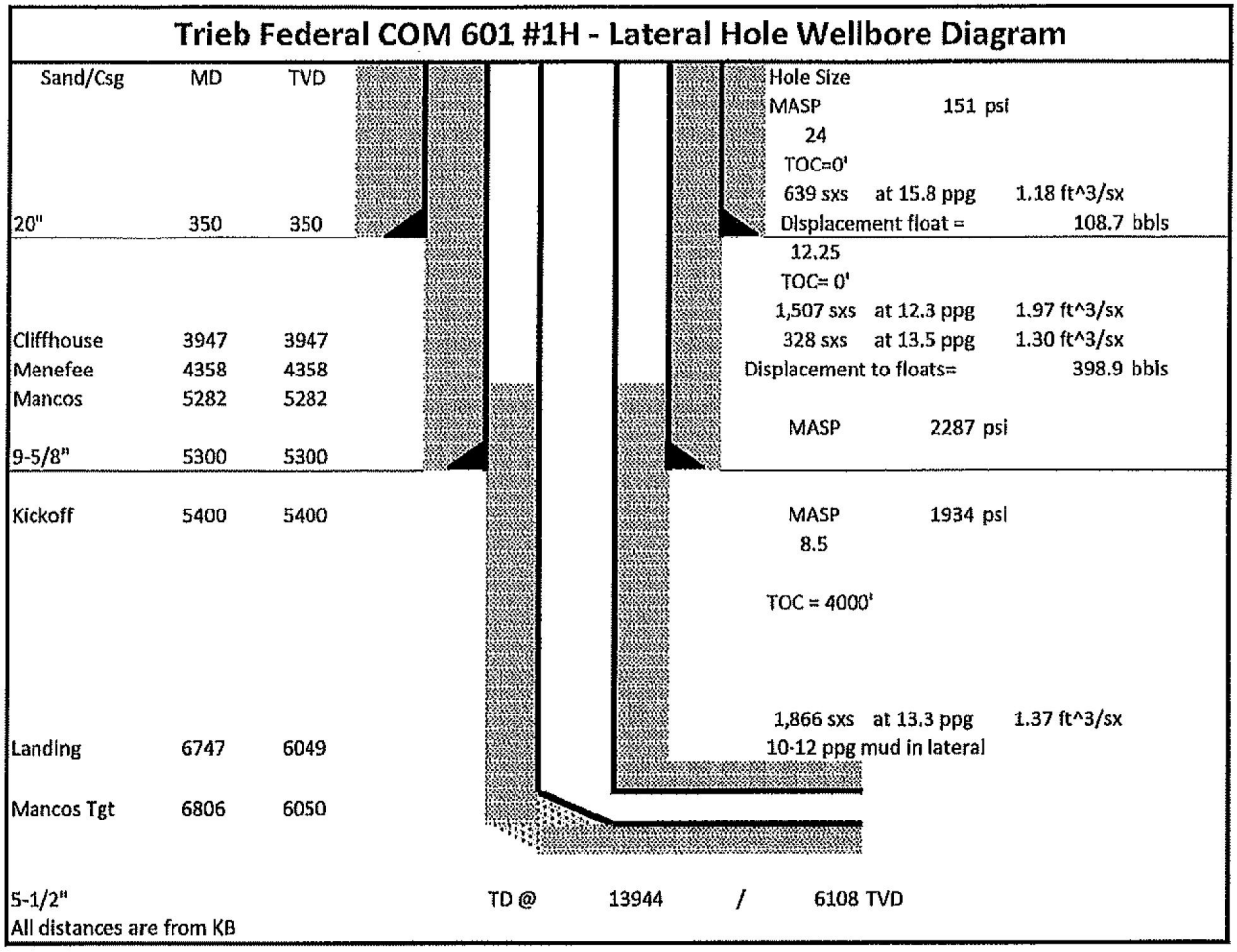
Scientific Drilling

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Trieb Federal Com 601 1H - Slot B02
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Project:	San Juan, NM NAD27	MD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	North Reference:	True
Well:	Trieb Federal Com 601 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
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)
5,200.00	0.00	0.000	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.000	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.000	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.000	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.000	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.000	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.000	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.000	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.000	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.000	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.000	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.000	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.000	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.000	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.000	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.000	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.000	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.000	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.000	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.000	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00

Trieb Federal COM 601 #1H - Lateral Hole Wellbore Diagram



						Design Factors			
	Size	Wt	Depth	Grade	Cxn		Collapse	Burst	Tension
Surface	20.000	106.5	350	J55	BTC	Rating	770	2410	913000
						SF	4.45	13.53	6.65
Int	9.625	40.0	5300	P110	BTC	Rating	3470.00	7910.00	988000.00
						SF	1.33	3.02	3.17
Prod	5.500	20.0	13944	P110	TXP BTC	Rating	11000	12530	548000
						SF	3.30	3.84	1.45

					Displacement BPF	
Csg		ID	Drift	Capacity (bpf)	Closed end	Open end
Surface		19	18.81	0.3507	0.3886	0.0379
Int		8.835	8.679	0.0758	0.0900	0.0142
Prod		4.778	4.653	0.0222	0.0294	0.0072

Hilcorp Energy Company

Company: Hilcorp Energy Corp.
Project: San Juan, NM NAD27
Site: Trieb Fed Pad
Well: Trieb Federal Com 601 1H
Wellbore: Lateral
Design: Plan #4

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

Azimuths to True North
Magnetic North: 8.92°

Magnetic Field
Strength: 49726.9snT
Dip Angle: 63.27°
Date: 6/29/2019
Model: HDGM

WELL DETAILS: Trieb Federal Com 601 1H

GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	2099218.10	485873.74	36.7691130	-107.8815630	B02

Plan: Plan #4 (Trieb Federal Com 601 1H/Lateral)

Created By: Janie Collins Date: 12:01, July 10 2019

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Trieb 601 1H LP	6050.00	592.32	827.22	2099810.00	486701.26	36.7707400	-107.8787366
Trieb 601 1H BHL	6106.00	592.31	7964.14	2099806.40	493838.17	36.7707369	-107.8543714

SECTION DETAILS

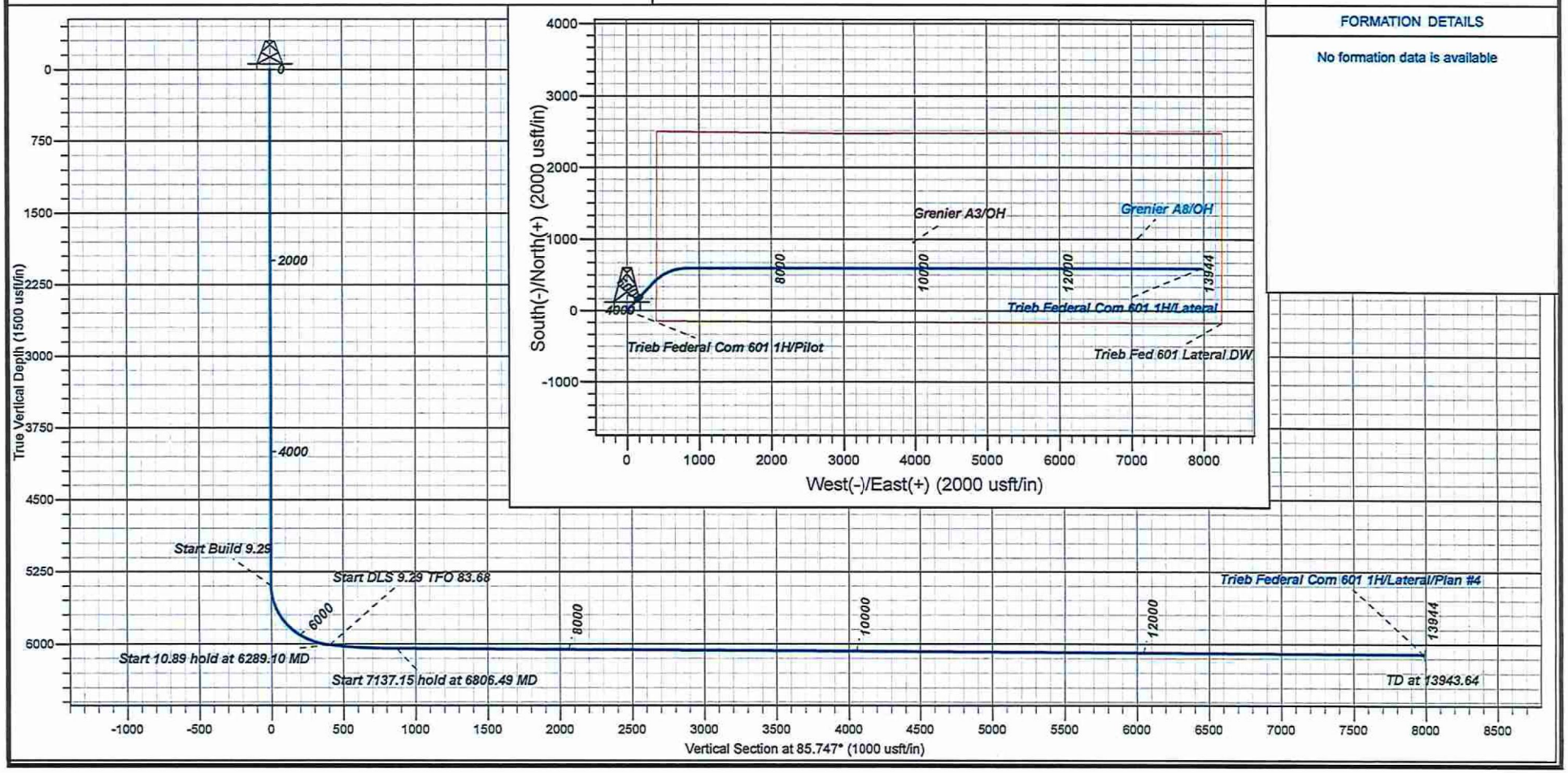
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
5400.00	0.00	0.000	5400.00	0.00	0.00	0.00	0.00	0.00	
6289.10	82.58	43.328	6011.72	390.78	368.61	9.29	43.33	396.58	
6299.98	82.58	43.328	6013.13	398.63	376.02	0.00	0.00	404.55	
6806.49	89.53	90.000	6050.00	592.32	827.22	9.29	83.68	868.87	Trieb 601 1H LP
13943.64	89.53	90.000	6106.00	592.31	7964.14	0.00	0.00	7986.13	Trieb 601 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 601 1H - Slot B02

Lateral

Plan: Plan #4

Standard Planning Report

10 July, 2019

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 601 1H - Slot B02
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Project:	San Juan, NM NAD27	MD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	North Reference:	True
Well:	Trieb Federal Com 601 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #4		

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 601 1H - Slot B02					
Well Position	+N/-S	-5.82 usft	Northing:	2,099,218.10 usft	Latitude:	36.7691130
	+E/-W	34.86 usft	Easting:	485,873.74 usft	Longitude:	-107.8815630
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,050.00 usft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/29/2019	8.92	63.27	49,727

Design	Plan #4				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	5,400.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	85.747	

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
5,400.00	0.00	0.000	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,289.10	82.58	43.328	6,011.72	390.78	368.61	9.29	9.29	0.00	43.33	
6,299.98	82.58	43.328	6,013.13	398.63	376.02	0.00	0.00	0.00	0.00	
6,806.49	89.53	90.000	6,050.00	592.32	827.22	9.29	1.37	9.21	83.68	Trieb 601 1H LP
13,943.64	89.53	90.000	6,108.00	592.31	7,964.14	0.00	0.00	0.00	0.00	Trieb 601 1H BHL

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

Scientific Drilling

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Trieb Federal Com 601 1H - Slot B02
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Project:	San Juan, NM NAD27	MD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	North Reference:	True
Well:	Trieb Federal Com 601 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #4		

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)
5,400.00	0.00	0.000	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	9.29	43.328	5,499.56	5.88	5.55	5.97	9.29	9.29	0.00
5,600.00	18.58	43.328	5,596.51	23.38	22.05	23.73	9.29	9.29	0.00
5,700.00	27.86	43.328	5,688.31	52.03	49.07	52.80	9.29	9.29	0.00
5,800.00	37.15	43.328	5,772.55	91.08	85.91	92.43	9.29	9.29	0.00
5,900.00	46.44	43.328	5,847.03	139.50	131.59	141.58	9.29	9.29	0.00
6,000.00	55.73	43.328	5,909.78	196.04	184.92	198.95	9.29	9.29	0.00
6,100.00	65.01	43.328	5,959.16	259.20	244.50	263.05	9.29	9.29	0.00
6,200.00	74.30	43.328	5,993.89	327.33	308.77	332.20	9.29	9.29	0.00
6,289.10	82.58	43.328	6,011.72	390.78	368.61	396.58	9.29	9.29	0.00
6,299.98	82.58	43.328	6,013.13	398.63	376.02	404.55	0.00	0.00	0.00
6,300.00	82.58	43.328	6,013.13	398.64	376.03	404.56	0.00	0.00	0.00
6,400.00	83.69	52.617	6,025.11	465.03	449.70	482.96	9.29	1.11	9.29
6,500.00	84.97	61.862	6,035.01	518.81	533.30	570.31	9.29	1.28	9.24
6,600.00	86.38	71.069	6,042.57	558.57	624.62	664.33	9.29	1.41	9.21
6,700.00	87.86	80.247	6,047.59	583.28	721.28	762.55	9.29	1.50	9.18
6,800.00	89.43	89.406	6,049.94	592.28	820.73	862.40	9.29	1.55	9.16
6,806.49	89.53	90.000	6,050.00	592.32	827.22	868.87	9.29	1.57	9.15
6,900.00	89.53	90.000	6,050.76	592.32	920.73	962.12	0.00	0.00	0.00
7,000.00	89.53	90.000	6,051.57	592.32	1,020.73	1,061.84	0.00	0.00	0.00
7,100.00	89.53	90.000	6,052.39	592.32	1,120.72	1,161.57	0.00	0.00	0.00
7,200.00	89.53	90.000	6,053.20	592.32	1,220.72	1,261.29	0.00	0.00	0.00
7,300.00	89.53	90.000	6,054.01	592.32	1,320.72	1,361.01	0.00	0.00	0.00
7,400.00	89.53	90.000	6,054.82	592.32	1,420.71	1,460.73	0.00	0.00	0.00
7,500.00	89.53	90.000	6,055.64	592.32	1,520.71	1,560.45	0.00	0.00	0.00
7,600.00	89.53	90.000	6,056.45	592.32	1,620.71	1,660.17	0.00	0.00	0.00
7,700.00	89.53	90.000	6,057.26	592.32	1,720.70	1,759.89	0.00	0.00	0.00
7,800.00	89.53	90.000	6,058.07	592.32	1,820.70	1,859.62	0.00	0.00	0.00
7,900.00	89.53	90.000	6,058.89	592.32	1,920.70	1,959.34	0.00	0.00	0.00
8,000.00	89.53	90.000	6,059.70	592.32	2,020.69	2,059.06	0.00	0.00	0.00
8,100.00	89.53	90.000	6,060.51	592.32	2,120.69	2,158.78	0.00	0.00	0.00
8,200.00	89.53	90.000	6,061.32	592.32	2,220.69	2,258.50	0.00	0.00	0.00
8,300.00	89.53	90.000	6,062.14	592.32	2,320.68	2,358.22	0.00	0.00	0.00
8,400.00	89.53	90.000	6,062.95	592.32	2,420.68	2,457.94	0.00	0.00	0.00
8,500.00	89.53	90.000	6,063.76	592.32	2,520.68	2,557.66	0.00	0.00	0.00
8,600.00	89.53	90.000	6,064.58	592.32	2,620.67	2,657.39	0.00	0.00	0.00
8,700.00	89.53	90.000	6,065.39	592.32	2,720.67	2,757.11	0.00	0.00	0.00
8,800.00	89.53	90.000	6,066.20	592.32	2,820.67	2,856.83	0.00	0.00	0.00
8,900.00	89.53	90.000	6,067.01	592.32	2,920.66	2,956.55	0.00	0.00	0.00
9,000.00	89.53	90.000	6,067.83	592.32	3,020.66	3,056.27	0.00	0.00	0.00
9,100.00	89.53	90.000	6,068.64	592.32	3,120.66	3,155.99	0.00	0.00	0.00
9,200.00	89.53	90.000	6,069.45	592.32	3,220.65	3,255.71	0.00	0.00	0.00
9,300.00	89.53	90.000	6,070.26	592.31	3,320.65	3,355.43	0.00	0.00	0.00
9,400.00	89.53	90.000	6,071.08	592.31	3,420.65	3,455.16	0.00	0.00	0.00
9,500.00	89.53	90.000	6,071.89	592.31	3,520.64	3,554.88	0.00	0.00	0.00
9,600.00	89.53	90.000	6,072.70	592.31	3,620.64	3,654.60	0.00	0.00	0.00
9,700.00	89.53	90.000	6,073.51	592.31	3,720.64	3,754.32	0.00	0.00	0.00
9,800.00	89.53	90.000	6,074.33	592.31	3,820.63	3,854.04	0.00	0.00	0.00
9,900.00	89.53	90.000	6,075.14	592.31	3,920.63	3,953.76	0.00	0.00	0.00
10,000.00	89.53	90.000	6,075.95	592.31	4,020.63	4,053.48	0.00	0.00	0.00
10,100.00	89.53	90.000	6,076.76	592.31	4,120.62	4,153.20	0.00	0.00	0.00
10,200.00	89.53	90.000	6,077.58	592.31	4,220.62	4,252.93	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 601 1H - Slot B02
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Project:	San Juan, NM NAD27	MD Reference:	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	North Reference:	True
Well:	Trieb Federal Com 601 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #4		

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)
10,300.00	89.53	90.000	6,078.39	592.31	4,320.62	4,352.65	0.00	0.00	0.00
10,400.00	89.53	90.000	6,079.20	592.31	4,420.61	4,452.37	0.00	0.00	0.00
10,500.00	89.53	90.000	6,080.02	592.31	4,520.61	4,552.09	0.00	0.00	0.00
10,600.00	89.53	90.000	6,080.83	592.31	4,620.61	4,651.81	0.00	0.00	0.00
10,700.00	89.53	90.000	6,081.64	592.31	4,720.60	4,751.53	0.00	0.00	0.00
10,800.00	89.53	90.000	6,082.45	592.31	4,820.60	4,851.25	0.00	0.00	0.00
10,900.00	89.53	90.000	6,083.27	592.31	4,920.60	4,950.98	0.00	0.00	0.00
11,000.00	89.53	90.000	6,084.08	592.31	5,020.59	5,050.70	0.00	0.00	0.00
11,100.00	89.53	90.000	6,084.89	592.31	5,120.59	5,150.42	0.00	0.00	0.00
11,200.00	89.53	90.000	6,085.70	592.31	5,220.59	5,250.14	0.00	0.00	0.00
11,300.00	89.53	90.000	6,086.52	592.31	5,320.58	5,349.86	0.00	0.00	0.00
11,400.00	89.53	90.000	6,087.33	592.31	5,420.58	5,449.58	0.00	0.00	0.00
11,500.00	89.53	90.000	6,088.14	592.31	5,520.58	5,549.30	0.00	0.00	0.00
11,600.00	89.53	90.000	6,088.95	592.31	5,620.57	5,649.02	0.00	0.00	0.00
11,700.00	89.53	90.000	6,089.77	592.31	5,720.57	5,748.75	0.00	0.00	0.00
11,800.00	89.53	90.000	6,090.58	592.31	5,820.57	5,848.47	0.00	0.00	0.00
11,900.00	89.53	90.000	6,091.39	592.31	5,920.56	5,948.19	0.00	0.00	0.00
12,000.00	89.53	90.000	6,092.21	592.31	6,020.56	6,047.91	0.00	0.00	0.00
12,100.00	89.53	90.000	6,093.02	592.31	6,120.56	6,147.63	0.00	0.00	0.00
12,200.00	89.53	90.000	6,093.83	592.31	6,220.55	6,247.35	0.00	0.00	0.00
12,300.00	89.53	90.000	6,094.64	592.31	6,320.55	6,347.07	0.00	0.00	0.00
12,400.00	89.53	90.000	6,095.46	592.31	6,420.55	6,446.79	0.00	0.00	0.00
12,500.00	89.53	90.000	6,096.27	592.31	6,520.54	6,546.52	0.00	0.00	0.00
12,600.00	89.53	90.000	6,097.08	592.31	6,620.54	6,646.24	0.00	0.00	0.00
12,700.00	89.53	90.000	6,097.89	592.31	6,720.54	6,745.96	0.00	0.00	0.00
12,800.00	89.53	90.000	6,098.71	592.31	6,820.53	6,845.68	0.00	0.00	0.00
12,900.00	89.53	90.000	6,099.52	592.31	6,920.53	6,945.40	0.00	0.00	0.00
13,000.00	89.53	90.000	6,100.33	592.31	7,020.53	7,045.12	0.00	0.00	0.00
13,100.00	89.53	90.000	6,101.14	592.31	7,120.52	7,144.84	0.00	0.00	0.00
13,200.00	89.53	90.000	6,101.96	592.31	7,220.52	7,244.56	0.00	0.00	0.00
13,300.00	89.53	90.000	6,102.77	592.31	7,320.52	7,344.29	0.00	0.00	0.00
13,400.00	89.53	90.000	6,103.58	592.31	7,420.51	7,444.01	0.00	0.00	0.00
13,500.00	89.53	90.000	6,104.39	592.31	7,520.51	7,543.73	0.00	0.00	0.00
13,600.00	89.53	90.000	6,105.21	592.31	7,620.51	7,643.45	0.00	0.00	0.00
13,700.00	89.53	90.000	6,106.02	592.31	7,720.50	7,743.17	0.00	0.00	0.00
13,800.00	89.53	90.000	6,106.83	592.31	7,820.50	7,842.89	0.00	0.00	0.00
13,900.00	89.53	90.000	6,107.65	592.31	7,920.50	7,942.61	0.00	0.00	0.00
13,943.64	89.53	90.000	6,108.00	592.31	7,964.14	7,986.13	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 601 1H LP - plan hits target center - Point	0.00	0.000	6,050.00	592.32	827.22	2,099,809.99	486,701.26	36.7707400	-107.8787387
Trieb 601 1H BHL - plan hits target center - Point	0.00	0.000	6,108.00	592.31	7,964.14	2,099,806.40	493,838.18	36.7707369	-107.8543714

Hilcorp Energy Company

Scientific Drilling, Intl
Planning Report

Scientific Drilling

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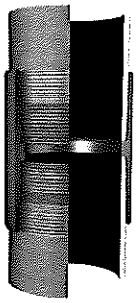
Project:	San Juan, NM NAD27	**MD Reference:**	GL 6050' & RKB 25' @ 6075.00usft (Aztec 1000)
Site:	Trieb Fed Pad	**North Reference:**	True
Well:	Trieb Federal Com 601 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #4		

Printed on: 06/20/2022

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

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 601 COM

Lease: NMSF78204A
SH: Lot 8 Section 33, T. 30 N., R. 10 W.
San Juan County, New Mexico
BH: Lot 6 Section 35, 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

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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 150073

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 150073
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Will require a administrative order for non-standard location prior to placing the well on production	10/20/2022
kpickford	Notify OCD 24 hours prior to casing & cement	10/20/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	10/20/2022
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	10/20/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	10/20/2022
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	10/20/2022